

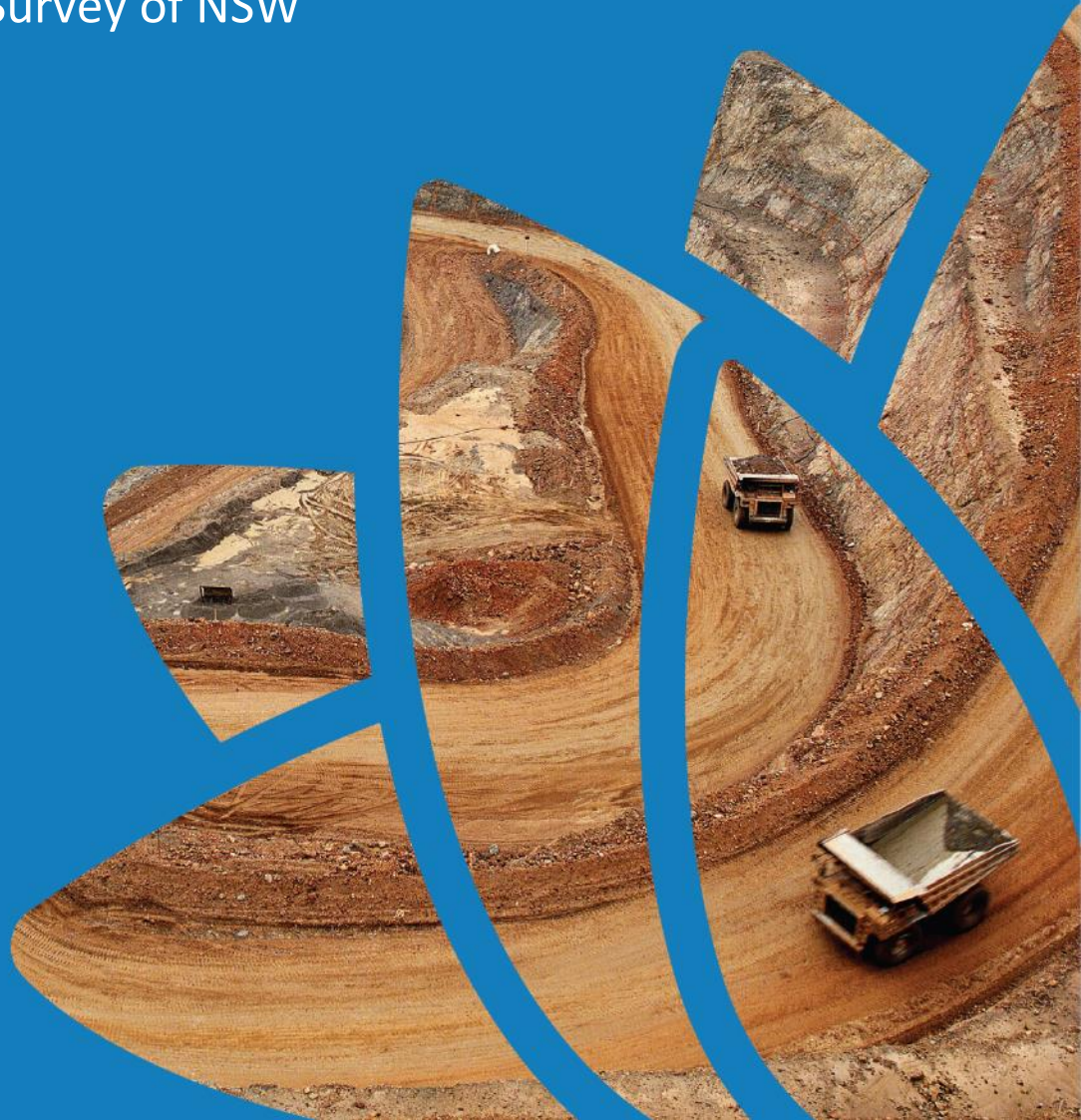


**NSW
Resources
Regulator**

COMPLIANCE AUDIT PROGRAM

EL9040 STOCKTON SAND EXPLORATION PROJECT

Geological Survey of NSW



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1. Introduction

1.1. Background

Exploration Licence 9040 (EL9040) was granted under the *Offshore Minerals Act 1999* on 5 February 2021 to the Crown in right of the State of New South Wales acting through the Executive Director, Geological Survey of New South Wales, Regional NSW. The licence area extends from the mouth of the Hunter River estuary just south of Newcastle Harbour, up to the north eastern end of Stockton Beach at the boundary of the Port Stephens, Great Lakes Marine Park. The licence area is entirely within the marine environment.

The Stockton Beach coastal zone has been impacted from coastal hazards such as beach erosion and shoreline recession over several years. Desktop studies have identified that the medium-grained, quartzose sands of the Newcastle inner shelf sand sheet (ISSS) on the floor of Stockton Bight appear to be suitable for beach renourishment and represent the largest potential sand resource in Stockton Bight.

A sampling program was required to better characterise a suitable sediment source for Stockton Beach renourishment. A review of environmental factors (REF) was prepared for the Stockton offshore sand exploration project, with approval granted for the project through the granting of EL9040, subject to a range of conditions.

As part of the Regulator's compliance audit program, an audit of the exploration activities associated with the Stockton offshore sand exploration project was undertaken on 10 March 2021 and 7 April 2021.

1.2. Audit objectives

The objectives of the audit were to:

- undertake a compliance audit of the Crown in right of the State of New South Wales exploration activities against the requirements of the *Offshore Minerals Act 1999* and the conditions of the exploration licence and activity approvals issued pursuant to that Act
- assess the operational performance of the exploration activities and the ability of the title holder to implement management systems and controls to provide for sustainable management of the operations.

1.3. Audit scope

The scope of the audit included:

- the exploration activities associated with the Stockton Offshore Sand exploration project, including mitigation measures utilised during exploration sampling activities
- a review of documents and records pertaining to the exploration activities
- the assessment of compliance for the period commencing 10 February 2021 and ending 7 April 2021.

1.4. Audit criteria

The audit criteria against which compliance was assessed included:

- *Offshore Minerals Act 1999*
- Conditions attached to EL9040 (granted 9 February 2021)
- Stockton Offshore Sand Exploration Project Review of Environmental Factors (October 2020), prepared by GHD for NSW Geological Survey
- Stockton Offshore Sand Exploration Project Review of Environmental Factors Addendum (26 October 2020), prepared by GHD for NSW Geological Survey
- Stockton Offshore Sand Exploration Project Marine Survey Environmental Management Plan (February 2021), prepared by GHD for NSW Geological Survey
- *Exploration Code of Practice: Community Consultation* (Version 1.1, May 2016)
- *Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales* (Version 2, March 2016).

1.5. Publishing and disclosure of information

This audit report will be published on the Regulator's website consistent with Section 365 of the *Mining Act 1992*.

This audit report may be publicly disclosed consistent with the *Government Information (Public Access) Act 2009*.

2. Audit methods

The audit process involved the interview of site personnel, a review of documentation and samples of records provided by the title holder and/or operator, and a site inspection of the operations to determine the level of compliance of the operations and assess the status of the operational performance. The audit process and methodology are described in more detail in the sections below.

2.1. Opening meeting

An opening meeting was held on 10 March 2021 for the desktop component of the audit. The audit team was introduced, and the scope of their responsibilities was conveyed to the auditees. The objectives and scope of the audit were outlined. The methods to be used by the team to conduct the audit were explained, including the interview of personnel, review of documentation, examination of records and a site inspection to assess specific compliance requirements. The site inspection component was held on 7 April 2021, where a further briefing was provided to the boat crew to outline the purpose of the audit.

2.2. Site interviews and inspections

2.2.1. Data collection and verification

Where possible, documents and data collected during the audit process were reviewed on site. Several documents were unable to be reviewed on site and were provided following the site visit.

All information obtained during the audit process was verified by the audit team where possible. For example, statements made by site personnel were verified by viewing documentation and/or site inspections where possible. Where suitable verification could not be provided, this has been identified in the audit findings as not determined.

2.2.2. Site inspections

A site inspection was undertaken of the following sampling sites and facilities:

- sampling site A38 – currents were too strong to deploy the sampling rig, so no sample was taken
- sampling site A45 - currents were too strong to deploy the sampling rig, so no sample was taken

- sampling point A33 - currents were too strong to deploy the sampling rig, so no sample was taken
- sampling site A26 - currents were too strong to deploy the sampling rig, so no sample was taken
- sampling site A50 – sampling rig deployed, and sample taken
- sampling site A51 – sampling rig deployed, and sample taken
- core and sample preparation at the Ausbarge yard on Kooragang Island.

2.3. Closing meeting

A closing meeting, for the desktop component of the audit, was held on 10 March 2021. The objectives of this meeting were to discuss any outstanding matters, present preliminary findings and outline the process for finalising the audit report. Geological Survey’s project manager was provided with a brief closing meeting following completion of the site inspection on 7 April 2021.

2.4. Compliance assessment definitions

The reporting of results from the compliance audit was determined based on the definitions presented in Table 1.

Table 1 Audit assessment categories

ASSESSMENT	CRITERIA
Compliance	Sufficient and appropriate evidence is available to demonstrate the particular requirement has been complied with.
Non-compliance	<p>Clear evidence has been collected to demonstrate the particular requirement has not been complied with. There are three subcategories of non-compliance reflecting the severity and level of risk associated with the non-compliance:</p> <p>NC1 – the absence of planning or implementation of a required operational element which has the potential to result in a significant risk.</p> <p>NC2 – an isolated lapse or absence of control in the implementation of an operational element which is unlikely to result in a significant risk.</p> <p>NC3 – an administrative or reporting non-compliance which does not have a direct environmental or safety significance.</p>

ASSESSMENT	CRITERIA
	<p>Note: The identification of a non-compliance in this audit may or may not constitute a breach of, or offence under, the <i>Mining Act 1992</i>. Non-compliances identified in this audit report may be further investigated by the Regulator and regulatory actions may be undertaken.</p>
<p>Observation of concern</p>	<p>Where an auditee may be compliant at the time of the audit but there are issues that exist that could result in the potential for future non-compliance if not addressed.</p> <p>Observation of concern was also used where an issue may not have particular compliance requirements, but which was not conducive to good management or best practice.</p>
<p>Suggestion for improvement</p>	<p>Where changes in processes or activities inspected or evaluated at the time of the audit could deliver improvement in relation to risk minimisation, sustainable outcomes and management practices.</p>
<p>Not determined</p>	<p>The necessary evidence has not been collected to enable an assessment of compliance to be made within the scope of the audit.</p> <p>Reasons why the audit team could not collect the required information include:</p> <ul style="list-style-type: none"> ■ insufficient information on the file relating to the period covered by the audit or insufficient evidence collected to reach a conclusion ■ the wording on the criteria (approval condition) meant that no evidence could be gathered, or it was too difficult to gather the evidence. <p>A ‘not determined’ assessment was also made where the condition was outside the scope of the audit.</p>
<p>Not applicable</p>	<p>The circumstances of the authorisation or titleholder have changed and are no longer relevant (e.g. no longer mining, mining equipment and plant has been removed).</p> <p>An invoking element in the criteria was not activated within the scope of the audit.</p>

2.5. Reporting

Following completion of the site audit, the audit checklists were completed, and audit notes were reviewed to compile a list of outstanding matters to be noted in the audit report. This report was prepared to provide an overview of the operational performance of the exploration activities and identify any non-compliances or observations of concern noted by the auditors during the site inspections and interviews.

The draft audit findings were forwarded to the Geological Survey for comment. Consideration was given to the representations made during the finalisation of the audit report as discussed in the audit findings.

3. Audit findings

3.1. Exploration activities

3.1.1. Area of operations

Condition 1 of EL9040 requires the title holder to ensure that exploration activities are only carried out within the licence area. Condition 2 identifies certain areas within the licence area where activities may not be carried out, although passage through these areas to access other parts of the licence area is permitted by condition 3.

The Geological Survey has prepared maps of the area using geographic information system (GIS) software. This mapping clearly delineates the licence area, and the specific areas within the licence area where activities may not be carried out, including the port area and the Pinnacles. This mapping has been provided to the contractors undertaking the survey and sampling works.

The master of the Alkira survey vessel undertaking the coring activities confirmed he was aware of the no-go zones and had been provided information on the extent of the licence area and the sampling locations. It was observed that the sampling location data had been inputted to the vessel's GPS to allow accurate location of the sampling points (Figure 1 and Figure 2).

Figure 1 Onboard navigation screen for sampling point A38

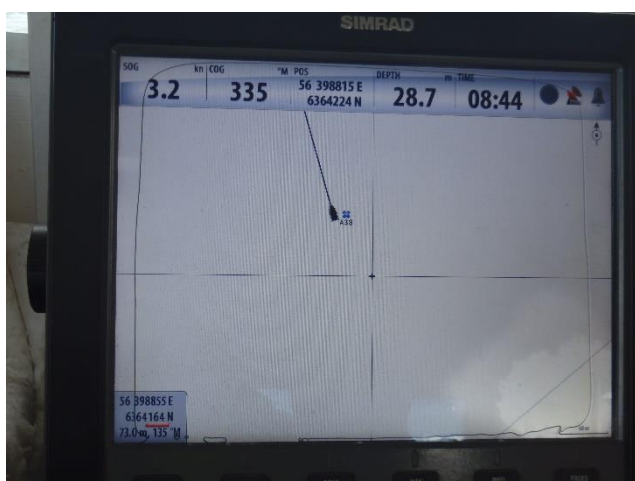


Figure 2 Onboard navigation screen for sampling point A51



3.1.2. Work program

Condition 4 of EL9040 requires the licence holder to carry out the activities in accordance with:

- the conditions of the licence
- the Work Program, as in force from time to time
- the Review of Environmental Factors (REF), including but not limited to the mitigation measures
- the Environmental Management Plan (EMP).

Condition 5 provides the requirements for amendments to the approved work program. Condition 6 provides an order of precedence in the event of an inconsistency between the conditions of licence and the associated documentation specified in condition 4.

The approved work program has not been varied since the grant of the title. Geological Survey's project manager advised that a variation to the work program may be sought when the program recommences in December 2021 to utilise a new survey method. This variation may also require an amendment to the REF and EMP.

It was noted that the REF indicated that survey activities could be timed to occur outside of the peak migration months to reduce overlap with migratory movements, with all survey activities to cease by the end of April at the latest. Given that there is an inconsistency between this and the conditions of the EL9040, the conditions will take precedence in accordance with condition 6 and all survey activities must cease by 15 April each year. It was noted that the 15 April date was referenced in the EMP.

3.1.3. Hours of operation

Condition 7 of EL9040 requires all activities to be carried out only during daylight hours, being anytime between sunrise and sunset, but may occur up to seven days per week.

Geological Survey's project manager advised that these requirements were communicated to the contractor staff during the induction. It was noted that the times for sunrise and sunset were recorded on the reports from the marine mammal observer on board each vessel. These reports also recorded the start and finish times for the exploration activities. It was noted that these reports confirmed that activities have been carried out within the hours of operation stipulated in the licence conditions. This was verified during the audit site inspection, with the Alkira survey vessel leaving the Kooragang Island wharf at approximately 8am on Wednesday 7 April 2021 and returning to the wharf at approximately 2.30pm.

To avoid the marine mammal migration season, Condition 8 of EL9040 requires that activities under the licence must not be carried out between 15 April and 30 November each year. Geological Survey's project manager advised that sampling would be ongoing up to 14 April this year but would cease from 15 April. The requirement to cease activities from April 15 has been communicated to the contractor staff through the project induction.

3.2. Consultation and notification

3.2.1. Community consultation

Condition 9 of EL9040 requires the licence holder to carry out community consultation, including with relevant Aboriginal representatives (the Worimi Aboriginal people, the Worimi Conservation Lands Board of Management, and the Worimi Local Aboriginal Land Council) and the Stockton Beach Taskforce, in relation to the planning and conduct of activities under the licence. Condition 10 of the licence requires this consultation to be conducted generally in accordance with the Exploration code of practice: Community consultation, including the preparation of an appropriate community consultation strategy.

A communication strategy has been prepared for the sand exploration project. This strategy was reviewed by the auditor and was noted to be generally consistent with the requirements of the code of practice, and included:

- the purpose and objectives of the communication strategy
- an identification of key stakeholders and the target audience for communication
- the key messages to be communicated
- how those key messages are to be communicated, including the timing of consultation activities
- measures to gauge the effectiveness of the consultation activities.

Evidence was available to confirm that consultation and communication has generally been implemented in accordance with the strategy. For example:

- the Stockton offshore sand exploration website has been established
- frequently asked questions have been prepared and uploaded to the website
- a central email address has been established for enquiries or complaints

- letters and emails to various stakeholders have been sent.

Consultation with relevant aboriginal groups has commenced by letter and email, however the Geological Survey's project manager advised that limited response has been received to date. Project team members are planning to give a presentation on the project to the April meeting of the Worimi Local Aboriginal Land Council (WLALC) board.

3.2.2. Consultation with government agencies

Conditions 11 and 12 of EL9040 specify requirements for consultation with government agencies during the project. Condition 13 requires the EMP to be updated if any additional mitigation or management measures are identified during the consultation.

Evidence, in the form of emails and letters, was provided to confirm that consultation had been undertaken as required. This consultation was noted to include:

- Department of Primary Industries – Fisheries
- Heritage NSW and relevant aboriginal representatives
- the Harbour Master of the Port of Newcastle
- the proper officer of the Port of Newcastle Operations Pty Ltd.

No additional mitigation or management measures have been identified to date as a result of this consultation, and no updates to the EMP have been required.

3.2.3. Cumulative impact

Conditions 14 to 16 of EL9040 specify requirements for the identification, assessment and notification of any potential cumulative impacts that could arise during the project, as a result of activities that are carried out concurrently by other operators (i.e. harbour channel dredging activities, Navy exercises, seismic surveys for other projects).

Email evidence was available to confirm that the Geological Survey's project manager has been consulting with the Harbour Master on a fortnightly basis to identify any other activities within the project area that may give rise to a cumulative impact. No cumulative impacts have been identified to date and no cumulative impact assessments or notifications have been required.

3.2.4. Notification to commercial fishing operators

Condition 17 of EL9040 requires all commercial fishing operators identified during the consultation with the Department of Primary Industries — Fisheries under condition 11 be notified in writing two weeks in advance of the carrying out of any seismic survey operations.

The Geological Survey's project manager advised that, during consultation with Fisheries under condition 11, it was agreed that Fisheries would send out the notification letter to the commercial fishing operators. The Geological Survey prepared the notification letter dated 15 February 2021, which was noted to include a description of the works and a map of the project area. Survey activities commenced on 2 March 2021, indicating that the notification to fishing operators was completed two weeks prior to the survey activities.

The project email address for enquiries was included in the letter. The Geological Survey's project manager advised that two enquiry emails were received following the notification letter. One enquiry provided some further information on shipwrecks in the area. Neither enquiry required any changes to the sampling program.

3.3. Licences and permits under other legislation

Conditions 18 and 19 of EL9040 require the licence holder to obtain any relevant approvals under other legislation for the offshore exploration activities and provide notifications in accordance with those requirements.

It was noted that Section 5.3 of the Review of Environmental Factors for the project, prepared by GHD, identified the potential for three additional approvals for the project:

- an exploration licence under Part 2.2 of the Offshore Minerals Act – exploration licence 9040 (EL9040) was issued for the exploration project area
- approval would be required from Crown Lands as the landowner to conduct the proposed works
- under the Fisheries Management Act, written notice of the proposed works must be provided to the Minister for Primary Industries, with the notification to and consultation with the Department of Primary Industries – Fisheries undertaken.

The Geological Survey's project manager advised that no other approvals have been identified as being required to date and no notifications under other legislation have been required.

3.4. Environmental management

Condition 20 of EL9040 requires the licence holder to prevent, or if that is not reasonably practicable, minimise so far as is reasonably practicable, any harm to the environment arising from activities carried out under the licence. Conditions 21, 22 and 24 identify specific requirements for environmental protection. Condition 23 requires the licence holder to prepare and submit to the Minister an exploration environmental management plan prior to commencing activities under the licence. Compliance with these requirements is discussed in the following sections.

3.4.1. Environmental protection

Conditions 20 to 22 require the licence holder to take all reasonable steps to protect the marine environment during operations. The mitigation measures to achieve this are specified in the approval conditions and are reflected in the environmental management plan prepared under Condition 23.

The vibracoring activities were observed during the audit. No environmental impacts were observed as a result of the sampling program.

3.4.2. Exploration environmental management plan

The Geological Survey contracted consulting firm GHD to prepare the exploration environmental management plan. The plan was submitted to the Minister by email on 28 February 2021 prior to commencing operations on 2 March 2021.

The specific requirements for the EMP, and how they have been addressed in the EMP that has been prepared and submitted, are discussed below.

Section 6 of the EMP outlines the environmental objectives for the project which are consistent with the environmental protection and environmental management requirements of the licence conditions. Sections 6.2 to 6.6 outline the mitigation measures, the performance criteria and the monitoring and reporting requirements for the key environmental risks including:

- marine fauna and flora impacts
- air and noise impacts
- waste, hazardous material and other pollution impacts
- cultural impacts
- access and public safety.

A review of the EMP by the audit team confirmed that the mitigation measures generally reflect the commitments in the REF and the requirements of the licence conditions.

Appendix B of the EMP contains the sediment sampling and analysis plan which describes the sampling program including:

- the design of the sediment sampling program
- sample collection methodologies including both core sampling and grab sampling
- collection of field information and logging of samples
- sample processing
- analytical parameters to be sampled including identification of potential contaminants of concern
- QA/QC program for the sampling processes
- data analysis and reporting.

3.5. Boat launch facilities, parking of vehicles and related facilities

Conditions 25 and 26 relate to the use of ancillary facilities for the sampling program. These conditions restrict the licence holder to using existing facilities within the City of Newcastle local government area (LGA) and subject to any conditions of consent or operating licence conditions of those facilities.

The coring program was in progress at the time of the audit site inspection. The boat used for the coring program (workboat Alkira) was moored at the Ausbarge wharf facility on Kooragang Island (Figure 3). This facility was observed to have parking available on site which was used by the boat crew and the sample logging team. An area was also in use for the processing, logging and sampling of the cores brought in from the sampling program. No additional conditions of consent or operating licence conditions were identified by the Geological Survey's project manager for the use of these facilities. It was also noted that these facilities are within the City of Newcastle LGA.

Figure 3 The Alkira berthing at the Ausbarge wharf facility on Kooragang Island



3.6. Marine mammal and other fauna

Conditions 27 to 35 stipulate the requirements for managing impacts on marine mammals and other fauna. These requirements were noted to have been included in the EMP. Some of these requirements were not able to be verified during the audit because of limitations on passenger numbers for the vessels operating the survey equipment. This meant that the sub-bottom profiling operations could not be observed.

Condition 27 requires the licence holder to deploy sonar technology (such as a fish finder) whenever an exploration survey vessel is surveying (that is carrying out activities other than grab sampling or vibracoring). The Geological Survey's project manager advised that the exploration survey vessel was using the multi-beam, instead of the fish finder, but the outcome for both was similar. The vessel master on the Alkira core sampling boat advised that a fish finder was available for use but was not required to be used for the coring program.

Condition 28 requires a dedicated marine mammal observer to be on board whenever an exploration survey vessel is operating, with the sole function of observing marine mammals. The Geological Survey has contracted Blue Planet Marine to provide marine mammal observation services. A team of marine mammal observers have been used with one marine mammal observer on each survey boat in use each day. The marine mammal observer on the Alkira, on the day of the audit site inspection, confirmed that her only job was to act as marine mammal observer and record any marine mammal sightings in relation to the boat's activities.

Detailed daily logs are provided each day by Blue Planet Marine to the Geological Survey's project manager. These detailed daily logs confirm compliance with condition 30 that requires all marine mammal sightings or detected white sharks be logged and reported to the Minister along with details of actions taken to avoid impacts.

The marine mammal observer on the Alkira was aware of the requirements of conditions 29, 31, 32 and 33, and further requirements identified in the EMP. These requirements relate to the interaction of exploration survey vessels with marine mammals and the mitigative measures required to avoid or minimise impacts whenever a marine mammal sighting occurs.

A seal was observed at sampling point A50 during the audit site inspection (Figure 4). The presence of the seal was logged by the marine mammal observer, who also noted the seal's behaviour and the timeframe for the interaction. The activities on board the boat at the time of the sighting were also logged. No mitigative actions were required because the boat was at anchor at point A50 and not underway when the seal was observed. This was noted to be consistent with the requirements of conditions 29, 31 and 32. Condition 33 relates specifically to the operation of the seismic survey vessel and was not applicable to coring activities on board the Alkira at the time of the seal sighting.

Figure 4 Seal sighting at sampling point A50



Condition 34 requires the licence holder to consider the use of passive acoustic monitoring (PAM) concurrently with any seismic survey operation to address residual concerns with regards to the effects of seismic survey on marine mammals.

Blue Planet Marine provided a report (version 1.1 dated 26 February 2021) to the Geological Survey's project manager, which detailed a review of the use of PAM to detect marine mammals during the Stockton offshore sand project. The review concluded that the use of PAM was not recommended for the Stockton offshore sand project hydrographic survey for several reasons, including:

- surveys will only be undertaken during daylight hours
- the marine mammal species expected to be present are generally readily detectable during visual surveys
- the size and configuration of the survey vessel make the use of PAM systems logistically difficult for the Stockton project.

Condition 35 requires the collection of conductivity-temperature-depth profiles concurrently with any seismic surveys, to capture local information on prevailing conditions that might inter-relate with the seismic survey. The Geological Survey's project manager advised that conductivity-temperature-depth profiles were being collected, as this data was needed to calibrate the multi-beam data.

3.7. Heritage

Condition 36 of EL9040 requires the licence holder to have implemented an 'Unexpected Finds Procedure' for any items of Aboriginal heritage, non-Aboriginal heritage and human skeletal remains. An unexpected finds procedure was noted to be documented in Appendix C of the EMP prepared for the project under condition 23.

The Geological Survey's project manager advised that no unexpected finds had been identified during the survey and sampling operations completed to date, although an unusual and unexpected carbonaceous layer was identified in one sample core, which is undergoing further analysis.

3.8. Environmental incident reporting and audit

Condition 37 requires the licence holder to provide any pollution incident notifications to the Minister no later than seven days after any such notification is given to the relevant authority under the *Protection of the Environment Operations Act 1997*.

The Geological Survey's project manager advised that no pollution incidents had occurred during the exploration survey operations and no notifications had been made to any relevant authorities.

Condition 38 requires, by the end of 2021 and every year thereafter, that the licence holder commission, commence and pay the full cost of an independent environmental audit of the activities carried out under the licence. The requirement for this condition has not yet been triggered. An audit will be required prior to the end of 2021.

3.9. Geological and final reporting

Conditions 39 and 40 of EL9040 relate to annual and final geological reporting. These requirements have not yet been triggered. An annual geological report will be required by March 2022.

3.10. Non-compliance reporting

Condition 41 of EL9040 requires the licence holder to notify the Minister upon becoming aware of any breach of the conditions of the licence or breaches of the *Offshore Minerals Act 1999*. The Geological

Survey's project manager advised that no breaches have been identified to date and no breaches were identified during the audit. No notifications have been required to be made.

3.11. Samples and records

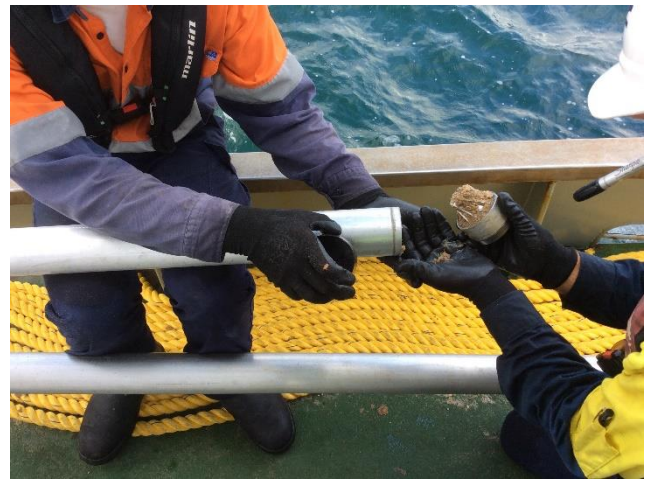
Conditions 42 and 43 set out the requirements for the collection of geological samples and records in accordance with the exploration EMP, and the submission of that data with the annual geological report required under condition 39.

Sub-bottom profiling data has been collected and analysed as the first stage of the project. This data was used to refine the sampling locations for the second stage of the program. Both grab samples and core samples have been collected. The coring activities at sampling points A50 and A51 were observed during the audit (Figure 5 and Figure 6).

Figure 5 Lowering the core sampling rig



Figure 6 Core retrieved from sampling point A51



The logging and sampling of core obtained on previous days was in progress on the day of the audit site inspection. The cores were halved, with samples being extracted from one half of the core (Figure 7), whilst the other half (Figure 8) was wrapped in plastic clingwrap for storage or further analysis, if required.

All samples collected were dispatched to the ALS laboratory for analysis. In accordance with the requirements of the exploration EMP, 100% of the samples are analysed for particle size distribution, whilst 25% of the samples are subject to chemical analysis.

Figure 7 Sampling from one half of the cores



Figure 8 Completed half cores ready to be plastic wrapped



3.12. REF and EMP Commitments

The specific requirements for mitigation measures outlined in the conditions attached to EL9040 were noted to be generally addressed in either the REF or the EMP or both. As discussed in earlier sections of this report, generally, evidence was available to confirm implementation of the mitigation measures required by the conditions.

The REF and the EMP included commitments for further mitigation measures to support the sampling program. Generally, evidence was available to confirm implementation of these measures, including:

- oil spill kits were noted to be available on the Alkira exploration survey vessel and the vessel master and crew could explain the use of the kits
- generally, no chemicals, fuels and oils were observed aboard the Alkira, other than those required for the operation of the vessel (i.e. the grease gun for the onboard crane)
- the Alkira exploration survey vessel was sourced from Sydney to minimise the potential for biosecurity impacts

- the marine mammal observer on board the Alkira advised that she had recommended mitigative measures when required which were readily accepted by the boat crew and implemented
- vessel crews have undertaken marine mammal observation training (refer to Section 4.4)
- a noise trial using hydrophones was conducted prior to survey work commencing, documented in field notes provided to the Geological Survey's project manager
- further noise trials were proposed to assist in redefining the mitigation measures for small scale surveys
- the Ausbarge vessel master was completing a Vessel Daily Logbook for each day of exploration survey activities
- records of daily marine mammal sightings were being maintained by the marine mammal observers and documented in the Blue Planet Marine daily logs provided to the Geological Survey's project manager
- the Geological Survey's project manager has conducted induction training with all boat crews and the marine mammal observers, which included information on the general requirements of the project, the licence condition requirements, and the mitigation measures required
- pre-start meetings are run and documented by the boat crew each morning
- sampling records are maintained by the coring contractor.

4. Compliance management

4.1. Identifying compliance obligations

Identifying compliance obligations is a critical step in the development of an effective compliance management system. Compliance obligations for an exploration project can include:

- regulatory requirements (i.e. *Offshore Minerals Act 1999*)
- conditions imposed on the grant, renewal, or transfer of exploration licences
- exploration activity approvals
- exploration codes of practice
- specific commitments made by the organisation (i.e. commitments made in the REF or the EMP).

Once identified, compliance obligations should be reviewed periodically to identify any changes in those obligations (i.e. changes in legislation).

Discussions with the Geological Survey's project team and the boat crews confirmed that project personnel have a good understanding of the compliance requirements for the Stockton sand project. It was noted that systems and processes have generally been developed to address the compliance requirements.

4.2. Subcontractor management

Contractors are often used to undertake specialist tasks (i.e. exploration drilling). Whilst the responsibility for compliance or the implementation of environmental controls is often passed to the contractor, the licence holder will retain accountability for compliance with its licence conditions and other compliance obligations. It is important that the licence holder exercises management control of its contractors by specifying contract requirements, providing oversight of contracted works and evaluating the performance of the contractor during the contracted works.

The Geological Survey has contracted out the sea floor mapping, sampling work and the marine mammal observation activities. Evidence was available to indicate that the contractors are aware of the restrictions and mitigative measures required for the offshore exploration works. Discussion with the marine mammal observer and the contract marine geologist onboard the *Alkira* showed that both had a good knowledge of the requirements of the project, the key issues and the mitigative measures required to complete the works in accordance with the licence conditions.

The Geological Survey's project manager maintains contact with the contractors either in person or through emails and phone calls, generally daily. Both the marine mammal observer and the contract marine geologist provide a daily report to the Geological Survey's project manager.

4.3. Inspections, monitoring and evaluation

An effective inspection, monitoring and evaluation process is required to:

- monitor the implementation of the risk controls
- evaluate the effectiveness of those controls based on an assessment of inspection and monitoring data
- implement an adaptive management approach if monitoring shows that controls may be ineffective.

Given the nature of the exploration survey works, a typical inspection program is not relevant. It was noted that the marine mammal observer on the Alkira was monitoring the implementation of the marine mammal mitigative measures. Review of the daily reports by the Geological Survey's project manager is used to monitor the progress of the exploration activities and the implementation of the mitigative controls.

4.4. Training and competency

The key issue for the Stockton offshore sand project is the potential for interaction with marine mammals. In addition to the dedicated marine mammal observers on board each exploration survey vessel, Blue Planet Marine also provided a marine mammal observation/awareness training session for the grab sampling boat crews.

The training provided background to the importance of compliance and ecological areas, the EMP and why it was important and required. The key learnings of the training session included:

- the difficulties in observing marine mammals and other species (i.e. sharks)
- potential impacts with vessels
- effective communication
- why the marine mammal observer (MMO) is a dedicated position
- procedures to follow for the MMO and response flowchart

- sighting cues to identify marine mammal species
- distance estimation techniques
- data recording.

At the completion of the training, a competency assessment was undertaken to ensure the boat crews had a full understanding of the role and responsibilities of the marine mammal observer. The training session was attended by an audit team member who found the training to be highly informative. It was concluded that the training would allow any participant to be able to perform the MMO role.

4.5. Title holder response to draft audit findings

The Geological Survey was provided with a copy of the draft audit report and invited to submit a response to the draft audit findings.

Following the Geological Survey's response to the draft audit report, minor amendments were made to the technical description of works. No changes were made to the draft audit findings.

5. Audit conclusions

From the evidence gathered during the audit, and observations made on site during the audit site inspection, it was concluded that the Geological Survey has achieved a high level of compliance with the requirements of the exploration licence, exploration activity approval and the exploration codes of practice.

Both the Geological Survey staff and the contractors working on the project had a good knowledge of the environmental issues and controls associated with the exploration activities. Evidence was available to confirm implementation of the controls.

No non-compliances were identified during the audit.