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Department of Regional NSW



Compliance audit program

EL6699 Tallebung Tin Exploration Project

Stannum Pty Ltd

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1. Introduction

1.1. Background

Exploration licence 6699 (EL6699) was granted to Stannum Pty Ltd on 10 January 2007. Stannum Pty Ltd is a wholly owned subsidiary of Sky Metals Pty Ltd.

The exploration area is in the area of the abandoned Tallebung Tin Mine about 70 kilometres north-west of Condobolin in central NSW.

As part of the compliance audit program, an audit of the exploration activities associated with the Tallebung Tin exploration project within EL6699 was undertaken on 1 August 2023 by the NSW Resources Regulator within the Department of Regional NSW.

1.2. Audit objectives

The objectives of the audit were to:

- undertake a compliance audit of the Stannum exploration activities against the requirements of the *Mining Act 1992* and the conditions of the exploration licences and activity approvals issued pursuant to that Act.
- assess the operational performance of the exploration activities and the ability of the licence holder and/or its operator 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 Tallebung Tin exploration project including:
 - exploration activities within EL6699 including a selected sample of exploration drillholes
 - borehole sealing and rehabilitation activities for selected drilling activities undertaken since January 2020
- a review of documents and records pertaining to the exploration activities

The assessment of compliance for the period commencing 1 August 2021 and ending 1 August 2023.

1.4. Audit criteria

The audit criteria against which compliance was assessed included:

- *Mining Act 1992*, specifically, Sections 5, 30, 140, 163C to 163E, 163G, 378D
- Mining Regulation 2016, specifically clauses 59 to 68
- Conditions attached to EL6699 (granted 10 January 2007 and last renewed 30 March 2021)

- Assessable prospecting operations application dated 23 May 2023 for the Tallebung Tin project consisting of up to 37 reverse circulation holes, and associated approval dated 5 June 2023 (APO0001430)
- Assessable prospecting operations application dated 27 October 2022 for the Tallebung Tin project consisting of 4 reverse circulation holes, and associated approval dated 28 October 2022 (APO0001308)
- Assessable prospecting operations application dated 8 September 2022 for the Tallebung Tin project consisting of 6 diamond drill holes, and associated approval dated 28 September 2022 (APO0001277)
- Assessable prospecting operations application dated 26 May 2022 for the Tallebung Tin project consisting of 20 reverse circulation holes, and associated approval dated 2 June 2022 (APO0001230)
- Exploration code of practice: Environmental management (Version 4, June 2021 and Version 5, March 2022)
- Exploration code of practice: Rehabilitation (Version 4, June 2021 and Version 5, March 2022)
- Exploration code of practice: Community consultation (Version 2.0, October 2022 and Version 2.1, May 2023)
- Exploration code of practice: Produced water management, storage and transfer (Version 3, September 2017, Version 4, June 2021 and Version 5, March 2022)
- Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales (Version 3, October 2021 and Version 4, January 2022)
- Exploration Guideline: Annual activity reporting for prospecting titles (Version 3.0, December 2020 and Version 4, October 2022) published by Department of Regional NSW

1.5. Publishing and disclosure of information

This audit report was published on the Regulator's website consistent with:

- Section 365 of the *Mining Act 1992*
- Resources Regulator's [Public comment policy](#)
- *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 licence holder and/or operator 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 onsite on 1 August 2023. 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.

2.2. Site interviews and inspections

2.2.1. Data collection and verification

Where possible, documents and data provided during the audit process were reviewed electronically on the day. Several documents were unable to be reviewed on the day and were provided following the remote audit.

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 records, including site photographs, 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 exploration activities:

- RC drill hole TBRC056 – drilling completed, rehabilitation not commenced
- RC drill hole TBRC066 – drilling completed, rig moving off site
- Access track between TBRC056 and TBRC066
- Site for RC hole TBRC067 – rig move in progress
- Diamond drill hole TBD006 – drilling in progress
- RC hole TBRC021 – rehabilitation completed but not signed off

2.3. Closing meeting

A closing meeting was held on site on 1 August 2023. The objectives of this meeting were to discuss any outstanding matters, present preliminary findings and outline the process for finalising the audit report.

2.4. Compliance assessment definitions

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

Table 1 Compliance assessment definitions

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> <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>
Observation of concern	<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>
Suggestion for improvement	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.
Not determined	<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>
Not applicable	The circumstances of the authorisation or licence holder have changed and are no longer relevant (e.g. no longer mining, mining equipment and plant has been removed).

Assessment	Criteria
	An invoking element in the criteria was not activated within the scope of the audit.

2.5. Reporting

Following completion of the 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 site in relation to the exploration activities and identify any non-compliances or observations of concern noted by the auditors during the documentation review and interviews.

The draft audit findings were forwarded to Stannum 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. Work program

Condition 1 of EL6699 required the licence holder to carry out the operations described in the approved work program. Work program, WP-EL6699-2021-2027, was in force during the audit period.

Evidence was available to confirm that exploration activities were progressing. Annual reports for the 2022 and 2023 reporting periods were reviewed for EL6699. Exploration completed included:

- scoping study on Tallebung Tin Mining field
- biogeochemical survey of cypress pine tree needles around the historic Blue Shaft
- collection and analysis of rock chip samples from outcrops and mullock piles associated with historic workings
- collection and analysis of soil samples using a pXRF as a mineralisation occurrence indicator
- drilling of 33 reverse circulation (RC) holes
- drilling of one diamond hole.

It was noted that both RC and diamond drilling were in progress during the site inspection.

Stannum used the annual reporting process to review and monitor the work programs on each tenement. Exploration data was noted to be maintained by the Stannum geologists and submitted to Mining, Exploration and Geoscience (MEG) with the annual activity reports as required.

3.2. Access arrangements

Section 140 of the *Mining Act 1992* stated, 'the holder of a prospecting title must not carry out prospecting operations on any particular area of land except in accordance with an access arrangement or arrangements applying to that area of land'. The access arrangement was required to be agreed in writing between the holder of the prospecting title and each landholder of that area of land.

Evidence was provided to confirm that written land access agreements were in place for the exploration activities undertaken on EL6699. All exploration activities were undertaken within Crown Reserve No. 70962. A land access agreement with Crown Lands was in place for the drilling programs in progress.

3.3. Native title and exempted areas

Condition 2 of EL6699 required the licence holder to obtain the prior written consent of the Minister before carrying out any activities on land on which native title had not been extinguished. Similarly, Section 30 of the *Mining Act 1992* required the consent of the Minister before a licence holder undertook any activities within an exempted area.

The Tallebung tin exploration program was being conducted within Crown Reserve No. 70962, which was classified as an exempted area under section 30 of the Act. Evidence was available to

demonstrate that Stannum sought and was granted Ministerial consent in June 2019 for exploration activities conducted in the area. It was noted that Ministerial consent under section 30 was not required after October 2022 provided a land access agreement was in force under the provisions of section 140 of the Act. Evidence was available to confirm an access agreement was in place with Crown Lands to facilitate the exploration program.

Evidence of native title extinguishment on part of EL6699 was provided to the department in 2018. The department was satisfied sufficient evidence existed that native title was extinguished for that part of the licence area. The exploration activities were being conducted on the area to which native title was extinguished, so further approval under condition 2 of the licence was not required.

It was noted that a right to negotiate process for the remainder of the Crown land within EL6699 was in progress.

3.4. Community consultation

Condition 3 of EL6699 required the licence holder to carry out community consultation in relation to the planning and conduct of exploration activities. Community consultation was required to be carried out in accordance with the requirements of Exploration code of practice: Community Consultation.

An assessment against the mandatory requirements of the code of practice was undertaken as documented in the following sections.

3.4.1. Risk assessment

Mandatory requirement 1 of the code of practice required the licence holder to conduct a risk assessment to identify and consider the range of opportunities and potential threats associated with community consultation and engagement.

Stannum documented the activity impact level assessment as part of the community consultation strategy. The activity impact level was assessed as low. The auditor concurs with that assessment. It was noted that no further risk assessment was undertaken.

Stannum exploration personnel advised that the consultation strategy was to be updated as the project progressed. As suggestion for improvement no. 1, it is recommended that Stannum prepare a comprehensive community consultation risk assessment to reflect the development of the project and the engagement of a broader range of stakeholders.

3.4.2. Community consultation strategy

Mandatory requirement 2 required the preparation of a community consultation strategy to manage the risks identified in the risk assessment. Mandatory requirement 3 set out the requirements for preparation of the community consultation strategy.

Stannum prepared a community consultation strategy for exploration activities for the Tallebung project on EL6699. The strategy was noted to be brief but adequate for the low activity impact level and the remote nature of the exploration program. A review of the strategy found it generally addressed the mandatory requirements of the code of practice. For example, the strategy was noted to include:

- objectives for consultation
- a description of stakeholders
- mechanisms for consultation which included meetings, phone calls and emails with landholders and a community information flyer to inform the general public
- processes for collation and retention of consultation records
- processes for analysis of consultation findings and review of the consultation strategy.

As noted above, the consultation strategy was to be updated to reflect project development.

3.4.3. Implementation and reporting

Mandatory requirement 4 required the licence holder to implement, monitor and report annually on the community consultation strategy.

Evidence was available to confirm implementation of the consultation strategy. The Stannum senior geologist said detailed diary notes were kept when liaising with neighbouring landowners. Text messages were saved and recorded in an Excel spreadsheet consultation log.

Up until the change to the code of practice in October 2022, annual community consultation reports were prepared and submitted by Stannum, generally in accordance with the reporting guidance in Appendix 2 of the code of practice.

3.5. Exploration activity approvals

Section 23A of the *Mining Act 1992* required the holder of an exploration licence to obtain an activity approval before carrying out assessable prospecting operations.

Evidence was available to confirm that exploration activity approvals were sought and granted for exploration activities. Exploration activity approvals granted included:

- assessable prospecting operations application dated 23 May 2023 for the Tallebung Tin project consisting of up to 37 reverse circulation holes, and associated approval dated 5 June 2023 (APO0001430)
- assessable prospecting operations application dated 27 October 2022 for the Tallebung Tin project consisting of 4 reverse circulation holes, and associated approval dated 28 October 2022 (APO0001308)
- assessable prospecting operations application dated 8 September 2022 for the Tallebung Tin project consisting of 6 diamond drill holes, and associated approval dated 28 September 2022 (APO0001277)
- assessable prospecting operations application dated 26 May 2022 for the Tallebung Tin project consisting of 20 reverse circulation holes, and associated approval dated 2 June 2022 (APO0001230).

Generally, evidence was provided to indicate the exploration activities were carried out in accordance with the description provided in the applications and in accordance with the approvals given.

3.6. Environmental management

Condition 4 of EL6699 required the licence holder to prevent or minimise so far as is reasonably practicable, any harm to the environment arising from the activities carried out under the licence. Condition 2 of the exploration activity approval required the licence holder to carry out the activity in compliance with Part B of the Exploration code of practice: Environmental management.

An assessment against the Exploration code of practice: Environmental management was completed for the exploration activities in progress on EL6699 as documented in the following sections. It was observed that both a diamond drilling program and a reverse circulation (RC) drilling program were in progress on the site. The RC drill rig finished hole TBRC066 and was moving to hole TBRC067. The diamond drill rig was drilling hole TBD006 (Figure 1).

Figure 1 Diamond drill rig on hole TBD096



3.6.1. Use of chemicals, fuels and lubricants

Mandatory requirements 1.1 to 1.4 identified the requirements for the management of chemicals, fuels and lubricants used during exploration activities.

Rig nappies were observed under each of the drilling rigs. Where fuels and drilling additives were stored and used at the diamond drilling site, it was observed that secondary containment was provided. The drilling additives were noted to be non-hazardous. Safety data sheets were available electronically for the products used.

A spill kit was observed at the diamond drill rig (Figure 2). A spill kit was reported to be available for the RC rig, but this was stored on the support vehicle for the rig move. A very small hydrocarbon stain (less than 50 cm diameter) was noted when the RC drill rig moved off site, but this was cleaned up immediately by the drillers when packing up the rig nappy.

Figure 2 Spill kit, rig nappy, and secondary containment for pump fuel container at the diamond drilling site



3.6.2. Water

Mandatory requirements 2.1 and 2.2 required the licence holder to implement all measures to prevent, so far as reasonably practicable, causing adverse impacts on water quality and quantity, including groundwater levels and pressure.

Water was not required for the RC drilling operations. The Stannum exploration staff said small volumes of groundwater were sometimes encountered during the RC drilling, and small, shallow sumps were dug for each RC hole as a precaution in case water was encountered. Where water was generated from RC drilling, the sumps were left to evaporate and then filled in during site rehabilitation.

Water required for the diamond drilling was observed to be sourced onsite from small dams or natural areas of water ponding. Above ground sumps provided water management for the diamond drilling. When required, the above ground sumps were emptied using a vacuum truck and taken to a disposal facility in Parkes.

3.6.3. Noise and vibration

Mandatory requirement 3.1 required the licence holder to implement all practicable noise management measures to ensure that noise levels meet acceptable noise criteria for sensitive receivers.

It was noted the drilling was being conducted in a highly modified old tin mine, remote from any sensitive receptors. Noise was assessed as part of the environmental risk assessment and the risk of adverse impacts was assessed as low. Stannum considered no specific controls were required to be implemented.

3.6.4. Air quality

Mandatory requirement 4.1 required the licence holder to implement all measures to prevent, so far as practicable, pollution caused by dust and other air pollutants.

It was noted the drilling was being conducted in a highly modified old tin mine, remote from any sensitive receptors. Air quality impacts were assessed as part of the environmental risk assessment and the risk of adverse impacts was assessed as low. It was noted traffic management measures to

minimise dust generation were included as a dust management control in the risk assessment. These measures were observed to be included in the site induction given to the drillers and other personnel on site.

3.6.5. Waste management

Mandatory requirement 5.1 required the licence holder to manage all waste in a manner that did not, as far as practicable, cause harm to the environment.

Waste streams generated from the exploration activities included:

- general domestic waste
- sample bags
- drill cuttings and fluids.

Generally, domestic waste was removed from the drill sites for disposal at the Condobolin waste management facility. Drilling fluids were removed from site using a vacuum truck for disposal at a licenced facility in Parkes.

Drill cuttings from the RC program were temporarily stored on a hard stand area associated with the former tin mine processing area. This area was bunded to contain run off. Waste characterisation testing was undertaken on the drill cuttings which were found to contain sulphides and arsenic. Testing showed that the leachability of arsenic was low. Based on the testing, Stannum concluded that the sulphides were weathered and reasonably inert. Stannum was investigating disposal options for the drill cuttings, including disposal by burial on site. Any change to the disposal method will require a modification to the approval for assessable prospecting operations. The management of drill cuttings was raised as an observation of concern. Stannum must advise the Regulator of the progress in addressing the management of drill cuttings.

Records of waste management activities were noted to be recorded in the drillers' plods.

3.6.6. Vegetation clearance and surface disturbance

Mandatory requirements 6.1 to 6.4 required the licence holder to:

- minimise the extent of any vegetation clearing and surface disturbance to as low as practicable
- implement all measures to prevent, so far as practicable:
 - adverse impacts to fauna caused by vegetation clearing or surface disturbance
 - causing any land degradation or pollution of land and water
 - harm to the environment when disturbing land in areas of potential or actual acid sulfate soils.

The RC and diamond drilling programs were conducted in the highly modified landscape of the former Tallebung tin mine. It was noted Stannum was previously non-compliant in relation to excessive clearing for drilling operations on EL6699. The Stannum senior geologist on site said since that time, Stannum had initiated changes to the drill site set-up process to clearly mark the approved boundaries for vegetation clearing.

Typically, a 20 metre by 20 metre drill pad was established for each drill site. Stannum personnel were on site for any vegetation clearing operations and repositioned holes where required to avoid clearing larger trees. Given the previous mining operations, much of the vegetation required to be cleared was regrowth and woody weeds.

Erosion and sediment controls were not required for the drill sites inspected. Stannum staff advised that sediment fencing was available on site and was installed on sites where it was required.

3.6.7. Roads and tracks

Mandatory requirements 7.1 to 7.5 required the licence holder to:

- consult with relevant landholders before establishing any new roads or tracks
- plan, design, construct and use roads and tracks in a manner that minimised the area and duration of disturbance
- construct any crossing of rivers, permanent and intermittent water lands and wetlands to prevent impacts on fish habitats
- refrain from using any unsealed road or track during wet conditions to prevent damage to that road or track
- repair all damage to existing roads and tracks resulting from exploration activities.

The Stannum geologist said Crown Lands (as the landholder) was given the drill program work plan that included using access tracks.

It was observed there were numerous unsealed roads and tracks associated with the former tin mining operations. Generally, these tracks were used to access drill sites. Short lengths of track were pushed in to access some drill pads (Figure 3).

Restricting the use of tracks in wet weather was noted to be included in the site induction provided to the drillers. The Stannum geologist monitored the council website during any periods of wet weather to check for road closures.

Figure 3 Short section of track pushed in to access drill pad TBRC66



3.6.8. Weeds, pest animals and disease

Mandatory requirement 8.1 required the licence holder to implement all practicable measures to prevent the introduction and spread of weeds, pest animals and animal and plant diseases.

It was noted the former mine site had significant weed incursion. The risk of weeds was identified in the rehabilitation risk assessment. A 'come clean – go clean' protocol was listed as a control measure. It was noted the weed protocol was included in the site induction provided to the drillers.

3.6.9. Livestock protection

Mandatory requirement 9.1 required the licence holder to implement all measures to prevent, as far as practicable, causing adverse impacts to livestock.

It was observed there were no livestock in the area during the drilling programs. No specific controls were required.

3.6.10. Cultural heritage

Mandatory requirement 10.1 required the licence holder to implement all measures to prevent, so far as practicable, harm to Aboriginal cultural heritage and non-indigenous cultural heritage.

Searches of the aboriginal heritage information system (AHIMS) were conducted as part of the preparation of applications for exploration activity approvals. No items of cultural heritage were identified within the areas proposed for drilling. No specific controls were identified by Stannum as being required.

Observations made during the site inspection confirmed that the drilling programs were conducted in an area highly modified by historic mining operations. The potential for artefacts was likely to be very low.

3.6.11. Fire prevention

Mandatory requirement 11.1 required the licence holder to implement all measures to prevent, as far as practicable, the ignition and spread of fire.

Stannum staff advised that fire weather was monitored during the bushfire danger period. Fire suppression was required on all drill rigs and fire extinguishers were available on the drill rigs, support vehicles and light vehicles.

3.6.12. Risk assessment

Mandatory requirement 12.1 required the licence holder to monitor the risks associated with activities and, if the risk associated with an activity changes, implement revised environmental management controls.

Stannum prepared a comprehensive environmental risk assessment for the drilling programs which was documented as part of an environmental management prepared for each program. Where required, environmental controls were identified to mitigate any high and medium risks. The environmental risk assessment was noted to address the mandatory requirements of the code of practice.

3.7. Security deposit

Condition 5 of EL6699 required the licence holder to provide a security deposit to secure funding for the fulfilment of obligations under the licence.

The security amount required for EL6699 was \$57,000, which department records confirmed was held. The approved drilling programs triggered a review of security for the site and the security deposit was increased to \$57,000 as a result.

3.8. Rehabilitation

Condition 6 of EL6699 required the licence holder to carry out rehabilitation of all disturbance caused by activities carried out under the licence in accordance with the requirements of the Exploration code of practice: Rehabilitation.

An assessment against the mandatory requirements of the code of practice was undertaken for the exploration activities as documented in the following sections.

3.8.1. Risk assessment

Mandatory requirement 1 required the licence holder to conduct a risk assessment to evaluate the range of potential threats and opportunities associated with rehabilitating disturbed areas to a condition that could support the intended final land use.

Stannum prepared a comprehensive rehabilitation risk assessment that was noted to be documented as part of an environmental management prepared for each drilling program. Where required, controls were identified to mitigate any high and medium risks.

3.8.2. Rehabilitation objectives and completion criteria

Mandatory requirement 2 required the licence holder, not later than 14 days before the commencement of surface disturbing activities, to provide to the Secretary a copy of clear, specific, achievable and measurable rehabilitation objectives and completion criteria (ROCC). For higher risk prospecting operations, a rehabilitation management plan was required to be prepared and submitted with the rehabilitation objectives and completion criteria.

The exploration activity approval applications lodged by Stannum indicated the combined total surface disturbance area was less than 5 hectares. The drilling programs did not fall within the definition of a higher risk activity under the code of practice and a rehabilitation management plan was not required to be developed.

Evidence was available in department records to confirm that ROCCs were submitted for each drilling program as part of the application for assessable prospecting operations. It was noted that the ROCCs submitted were generally based on the template provided in Appendix 2 of the code of practice.

3.8.3. Rehabilitation program

Mandatory requirement 3 required the licence holder to develop, implement and complete a rehabilitation program (which includes a monitoring program) to rehabilitate disturbed areas to a

condition that could support the intended final land use. Mandatory requirement 4 required the licence holder to commence rehabilitation of a site as soon as reasonably practicable following the completion of activities on that site.

The rehabilitation process was noted to include:

- removal of equipment and wastes
- landform restored (if required)
- topsoil replaced (if required)
- site ripped
- branches and vegetation debris respread
- revegetated (if required)

Typically, rehabilitated drill sites are monitored at 3-monthly intervals. A photographic record is maintained for each rehabilitation monitoring inspection completed. A drill site environmental monitoring checklist was completed for each site, which checks the rehabilitation progress against the nominated rehabilitation objectives and completion criteria.

Figure 4 shows the rehabilitation of completed hole TBRC021 that was drilled in May 2022.

Figure 4 Rehabilitation of hole TBRC021 drilled in May 2022



3.9. Annual activity reporting

Section 163C of the *Mining Act 1992*, clause 59 of the *Mining Regulation 2016* and condition 8 of EL6699 required the licence holder to submit an activity report annually within one calendar month following grant anniversary date. Annual activity reports were required to be prepared in accordance with the *Exploration guideline: Annual activity reporting for prospecting titles*.

During the audit scope period, Stannum submitted annual activity reports comprising:

- annual geological report
- environmental rehabilitation and compliance report
- community consultation report (up to October 2022).

Generally, reports were found to be in accordance with the MEG and/or Resources Regulator templates and guidance material.

3.10. Core and sample storage

Clause 65 of the Mining Regulation 2016 required the holder of an authority to, so far as is reasonably practicable, collect, retain and preserve:

- all drill cores remaining after sampling
- characteristic samples of the rock or strata encountered in any drill holes.

All core and samples collected were required to be labelled, stored and managed in a manner that preserved the integrity of the core or samples.

The Stannum senior geologist said the main core storage was in Orange. The Orange core yard was not inspected during the audit.

Core from the diamond drilling in progress was available on site for inspection. It was observed that core was stored in plastic core trays, labelled with hole number, tray number, start and finish depths and downhole direction (Figure 5).

Figure 5 Core trays for the diamond drill hole TBD0006



3.11. Record keeping

Sections 163D and 163E of the *Mining Act 1992* related to the creation and maintenance of records required under the Act, the Regulations, or a condition of title. Records must be kept in a legible form for production to any inspector and must be maintained for a period of four years after the expiry or cancellation of the title. Specific requirements for the types of records to be maintained for exploration activities were detailed in the mandatory requirements of the exploration codes of practice as follows:

- mandatory requirement 6 of the rehabilitation code of practice
- mandatory requirement 13.1 of the environmental management code of practice
- mandatory requirement 5 of the community consultation code of practice.

Records reviewed during the audit demonstrated that Stannum had generally maintained records as required by the licence conditions and the exploration codes of practice. It was noted relevant documents and records were readily retrievable upon request.

Examples of records reviewed included:

- land access agreements
- drilling database
- environmental management plans including environmental risk assessments
- rehabilitation tracking spreadsheet
- rehabilitation objectives and completion criteria
- rehabilitation risk assessment
- pre, during and post drilling photos
- community consultation records
- annual activity reporting.

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 (for example, the *Mining Act 1992*)
- conditions imposed on the grant, renewal, or transfer of exploration licences
- exploration activity approvals
- exploration codes of practice
- specific commitments made by the organisation (for example, commitments made in the approved exploration activity application).

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

The Stannum exploration staff generally had a good understanding of the compliance requirements for exploration, including the conditions of the exploration licence, the mandatory requirements of the exploration codes of practice, and the commitments for assessable prospecting operations.

It was noted Stannum was given an official caution for a non-compliance relating to excessive clearing of vegetation in 2019. Following that incident, Stannum implemented revised procedures for drill site set-up. It was noted the drill site environmental monitoring sheet included whether tracks were new or existing and where vegetation clearance was required, the amount of vegetation to be cleared.

It was noted records were generally being maintained to demonstrate compliance.

4.2. Subcontractor management

Contractors are often used to undertake specialist tasks, for example, exploration drilling. While 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.

Stannum was using contract drillers to complete the exploration drilling programs. The contract drilling operator for the diamond drilling program was inspected during the audit. It was noted that the driller had a reasonable understanding of the environmental management controls required for drilling operations and had implemented relevant environmental controls. Contract drilling operations were supervised on a daily basis by Stannum exploration personnel

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.

Stannum staff established an inspection and monitoring process that was suitable for the low impact nature of the exploration activities being conducted. As part of the environmental management plan for each drilling program, drill site environmental monitoring sheets were prepared for each hole drilled. These sheets included checklists for general and statutory approvals, site and water management, rehabilitation and site monitoring, and drill site photographs.

It was also noted the monitoring sheets cross-referenced the planned hole ID, as approved in the application for assessable prospecting activities, to the actual ID of the hole when drilled.

The environmental and rehabilitation risk assessments prepared by Stannum were noted to include risks related to exploration activities and risk controls were in place. However, as suggestion for improvement no. 2, Stannum should consider expanding its risk assessment process to include a post drilling review to assess the performance of the control measures and make any recommendations for future drilling programs, where those controls were shown to be not effective in addressing the risk.

5. Audit conclusions

From the evidence reviewed during the audit, it was concluded that the exploration operations undertaken by Stannum were generally well managed. Evidence was available to demonstrate systems and processes were developed to identify and manage compliance requirements. It was observed records were being maintained as required to demonstrate compliance.

Stannum was compliant with the requirements of the exploration licence, exploration activity approvals and the environmental management, rehabilitation, and community consultation exploration codes of practice, for the elements reviewed. No non-compliances were identified.

One issue of concern in relation to the management of sulphidic drill cuttings was identified during the audit. Drill cuttings were being temporarily stored in a bunded area of the old tin mine site, but a more suitable disposal option was required. One observation of concern and 2 suggestions for improvement were identified as summarised in Table 2 and Table 3 respectively.

Table 2 Summary of non-compliances

Observation of concern No.	Description of Issue	Recommendation
1	Sample bags and drill cuttings from the RC program were temporarily stored on a hard stand area associated with the former tin mine processing area. This area was bunded to contain run-off. Waste characterisation testing was undertaken on the drill cuttings, which were found to contain sulphides and arsenic. Testing showed the leachability of arsenic was low. Stannum concluded the sulphides were weathered and reasonably inert.	Stannum was investigating disposal options for drill cuttings, including disposal by burial on site. Any change to the disposal method will require a modification to the approval for assessable prospecting operations. Stannum must advise the Regulator of the progress in addressing the management of drill cuttings.

Table 3 Summary of suggestions for improvement

Suggestion for Improvement No.	Description of Issue
1	Stannum exploration personnel advised that the consultation strategy was to be updated as the project progressed. It is recommended that Stannum prepare a comprehensive community consultation risk assessment to reflect the development of the project and the engagement of a broader range of stakeholders.
2	The environmental and rehabilitation risk assessments prepared by Stannum were noted to include risks related to exploration activities and risk controls were in place. However, Stannum should consider expanding its risk assessment process to include a post drilling review to assess the performance of the control measures and make any recommendations for future drilling programs, where those controls were shown to be not effective in addressing the risk.