

Environmental Management Strategy

For the Brandy Hill Quarry Expansion



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Contents

1. Introduction	5
1.1 Scope	5
1.2 Objective and Outcomes	6
1.3 Consultation	7
2. Approved Activities	8
3. Legal and other Requirements	9
3.1 Introduction	9
3.2 Legislation	9
3.3 Approvals, Licences and Permits	10
3.4 Development Consent SSD 5899	10
3.5 Statement of Commitments	11
4. Surrounding Residences and Buffer Lands	12
5. Environmental Management System	14
5.1 Strategic Framework	14
5.2 Roles and Responsibilities	15
5.3 Competence Training and Awareness	16
5.4 Complaints Handling and Response	16
5.4.1 How Complaints May be Made	16
5.4.2 Complaint Investigation and Response	17
5.4.3 Complaints and Independent Review of Operations	17
5.4.4 Complaints Register	18
5.5 Corrective and Preventative Actions	18
5.6 Dispute Resolution	18
6. Management of Compliance	19
6.1 Incident Management	19
6.1.1 Incident Identification	19
6.1.2 Incident Notification and Investigation	21
6.1.3 Pollution Incident	21
6.1.4 Incident Reporting	22
6.2 Evaluation of Compliance	22
6.3 Annual Review	22
6.4 Annual Compliance Reporting to DAWE	23
6.5 Independent Environmental Audit	23
6.6 Continual Improvement	24
7. Community and Stakeholder Engagement Plan	25
7.1 Introduction	25
7.2 Engagement Approach	25
7.3 Statement of Commitments	25
7.4 Stakeholder Identification and Engagement Methods	26
8. Environmental Monitoring	30
8.1 Overview of Environmental Monitoring	30
9. Publicly Available Documents	35
10. Emergency Response	36
11. Review	37

APPENDICES

Appendix 1	Government Agency Consultation Correspondence
Appendix 2	Statement of Commitments

FIGURES

Figure 1	Land Ownership and Residences	13
Figure 2	Independent Dispute Resolution Process	20
Figure 3	Community Notification Area.....	29
Figure 4	Environmental Monitoring Locations	34

TABLES

Table 1	Objectives and Key Performance Outcomes	6
Table 2	Austen Quarry Approvals, Licenses and Permits.....	10
Table 3	Conditions of consent associated with the Environmental Management Strategy	10
Table 4	Roles and Responsibilities for Environmental Management	15
Table 5	Brandy Hill Quarry – Stakeholders and Methods for Engagement.....	26
Table 6	Overview of Environmental Monitoring.....	31
Table 7	Emergency Response Procedures	36

1. Introduction

1.1 Scope

This Environmental Management Strategy (EMS) has been prepared by R W Corkery & Co Pty Limited (RWC) on behalf of Hanson Pty Ltd (Hanson) for the Brandy Hill Quarry (the Quarry). The Quarry Site is located approximately 3.5km to the east of Seaham, 15km northeast of Maitland and 30km north of Newcastle in the Port Stephens Local Government Area (LGA). The Quarry is an open cut hard rock extraction operation with associated crushing and screening, product stockpiling, associated infrastructure and other ancillary activities required for product preparation and despatch. Access to the Quarry is via the public road network at a dedicated intersection with Clarence Town Road and Brandy Hill Drive.

This document has been prepared in satisfaction of *Condition D1* of Development Consent SSD 5899 and describes the following:

- The activities approved under SSD 5899.
- The legal and other statutory requirements that apply to the operations.
- The setting of the Quarry including neighbouring properties.
- Key strategies for environmental management including:
 - Objectives and performance outcomes for environmental management.
 - The roles and responsibilities of key Hanson personnel in relation to the environmental management of the operation.
 - The management of competence and training for environmental management.
 - The management of complaints, incidents and disputes.
 - Corrective and preventative actions.
 - Reporting of environmental management measures and progress.
 - Measures for ongoing evaluation and improvement.
- Measures for ongoing community engagement.
- An overview of environmental monitoring for the development.
- Emergency response measures.
- Measures for the publication of reporting, monitoring data and any other documents required to be publicly accessible under SSD 5899.

The Project is fully described in the following documents and no further background information is provided as part of the Plan:

- *Environmental Impact Statement Report Brandy Hill Expansion Project*, prepared by Hanson Construction Materials Pty Ltd, dated February 2017 (Hanson, 2017); and
- *Amended Response to Submissions*, prepared by R.W Corkery and Co Pty Limited, dated September 2019 (RWC, 2019).

In addition, a range of management plans have been prepared to guide operations within the Quarry. These include the following:

- Air Quality Management Plan;
- Biodiversity and Rehabilitation Management Plan;
- Blast Management Plan;
- Traffic Management Plan
- Water Management Plan; and
- Noise Management Plan.

A copy of this Plan and each of the above documents are available from the Hanson website. The plan must be implemented as approved by the Planning Secretary. Stage 1 of the development will not commence until this management plan has been approved by the Planning Secretary.

1.2 Objective and Outcomes

Table 1 presents the objectives and key performance outcomes for the development and operation of the Quarry. Objectives and key performance outcomes for specific areas of environmental management components are also presented in the environmental management plan relevant to that components.

Table 1
Objectives and Key Performance Outcomes

Page 1 of 2

OBJECTIVES	KEY PERFORMANCE OUTCOMES
Environmental Management	
(a) To ensure compliance with all relevant Development Consent and Environment Protection Licence criteria and reasonable community expectations.	(i) Compliance is achieved with all relevant criteria nominated in the Development Consent and Environment Protection Licence and reasonable community expectations.
(b) To implement an appropriate complaints handling and response protocol.	(ii) Complaints (if any) are handled and responded to in an appropriate and timely manner.
(c) To implement continual improvement for investigating, implementing and reporting on reasonable and feasible measures.	(iii) An appropriate continual improvement program has been implemented.
(d) To implement an appropriate incident reporting program, if required.	(iv) Incidents (if any) are reported in an appropriate and timely manner.
(e) To implement an appropriate environmental monitoring program to establish compliance or otherwise with relevant criteria during all stages of the Quarry.	(v) All identified monitoring is undertaken in accordance with the relevant procedures and at the relevant intervals
(f) To proactively publish environmental management reporting, monitoring results and other relevant documents to ensure that information is available to the general public.	(vi) Annual Review documents are published annually once accepted by the Department of Planning, Industry and Environment. (vii) Monitoring results are published and reported annually within the Annual Review.
Rehabilitation and Landscape	
(g) To implement appropriate progressive rehabilitation and landscape management and mitigation measures during all stages of the Quarry	(viii) All identified rehabilitation and landscape management and mitigation measures are implemented in a timely manner.
(h) To appropriately manage site preparation works to ensure that suitable rehabilitation material remain for rehabilitation operations during all stages of the Quarry	(ix) Sufficient, viable rehabilitation materials are available for rehabilitation operations throughout all stages of the Quarry
(i) To ensure that the visual amenity of residences and public vantage points is not unacceptably impacted by Quarry-related activities.	(x) Visual amenity management measures are effective and implemented in a timely manner.
(j) To establish a final landform that is consistent with that identified in SSD 5899.	(xi) Final landform is safe, stable, secure and non-polluting,
(k) To establish an appropriate final soil profile and vegetation community on the final landform	(xii) Final soil cover and vegetation has similar soil viability/microbial activity, litter depth, species composition as nearby agricultural land.
(l) To establish an appropriate beneficial final land use consistent with surrounding land uses.	(xiii) Final landform is suitable for an appropriate beneficial land use that is consistent with surrounding land uses at the time of Quarry closure.
(m) To appropriately manage those sections of the Site that would not be used for Quarry-related activities.	(xiv) Identified areas are managed in a manner that ensures appropriate beneficial use of that land.
(n) To implement appropriate weed, pest and bushfire management measures	(xv) Weeds, pests and bushfire risks are appropriately managed in consultation with neighbouring landholders.
Noise	
(o) To implement appropriate noise management and mitigation measures during all stages of the Quarry.	(xvi) All identified noise management and mitigation measures are implemented to the extent required.

Table 1 (Cont'd)
Objectives and Key Performance Outcomes

Page 2 of 2

OBJECTIVES	KEY PERFORMANCE OUTCOMES
Blast	
(p) To implement appropriate blast management and mitigation measures during all stages of the Project.	(xvii) All identified blast management and mitigation measures are implemented to the extent required.
Air Quality	
(q) To implement appropriate air quality management and mitigation measures during all stages of Quarry development.	(xviii) All identified air quality management and mitigation measures are implemented to the extent required.
Air Quality	
(r) To implement appropriate water management and mitigation measures during all stages of the Quarry so as to ensure that harm to the environment is minimised as far as possible.	(xix) No discharge of water in breach of EPL 1879 criteria. (xx) No reportable incidents related to water management or pollution.
Aboriginal Culture Heritage	
(s) To avoid unexpected harm to Aboriginal objects or sites.	(xxi) Demonstrate due diligence in efforts to identify Aboriginal sites or objects within the Quarry Site. (xxii) All limits on disturbance and stop work procedures are implemented.
Traffic	
(t) To effectively manage Quarry-related traffic to minimise conflict between vehicles using public roads.	(xxiii) Effective management of traffic in a manner that ensures that there is minimal conflict between vehicles using public roads.
(u) To ensure that Quarry-related traffic does not result in unacceptable noise related impacts.	(xxiv) Effective management of traffic in a manner that ensures that noise impacts are reduced to the greatest extent practicable.
(v) All drivers working for or on behalf of the Quarry are suitably trained in traffic mitigation measures and are aware of the importance of minimising the risk of traffic-related impacts.	(xxv) All persons inducted at the Quarry or who regularly operate vehicles for the Quarry have signed on to the Driver's Code of Conduct.

1.3 Consultation

A draft copy of this EMS was provided to the Department of Planning and Environment (the DPE) on 6 May 2021. Feedback was received on 21 May 2021. All feedback received as part of the consultation process has been incorporated, where required, into the final EMS. A copy of comments received during consultation and actions taken to address the comments are provided as **Appendix 1**. There are no outstanding matters of contention as identified in the comments received.

2. Approved Activities

Under SSD 5899, Hanson is approved to extract, process and transport from the Quarry up to 1 500 000t per year of quarry products and 15 000m³ per year of pre-mixed concrete (concrete batching) for use principally in the Hunter, Central Coast and Sydney regions. The Quarry may also receive up to 20 000t per year of concrete washout material per annum (principally from concrete batching plants) for recycling. Further information regarding approved activities is available in the *Environmental Impact Statement* (Hanson, 2017) and the *Amended Response to Submissions* (RWC, 2019).

The progressive development of the Quarry will occur over five operational stages resulting in a total disturbance area of 97.7 hectares (ha). In summary, the development stages of the Quarry will be as follows:

- Stage 1 – deepening of the existing Extraction Area and lateral extension to the west and south. Extraction would progress to an elevation of approximately 22m AHD. Topsoil and overburden salvaged during this stage would be used to develop an amenity bund at the southern end of the final disturbance area.
- Stage 2 – progression towards the south west corner of the Extraction Area as its footprint is expanded and deepened to approximately -8m AHD. Topsoil salvaged during site preparation would be temporarily stockpiled or applied directly to rehabilitate the terminal benches above approximately 20m AHD.
- Stage 3 – progression of the Extraction Area towards the existing Processing and Stockpiling Area and to a depth of -38m AHD. Topsoil and overburden salvaged during this stage would be directly applied to terminal benches for progressive rehabilitation.
- Stage 4 – relocation of the Processing and Stockpiling Area to the south of its existing location. The extraction area footprint is expanded towards the eastern boundary and deepened to approximately -58m AHD. Topsoil and overburden salvaged during this stage would continue to be directly applied to terminal benches for progressive rehabilitation.
- Stage 5 – completion of the Extraction Area to the south east resulting in a final floor elevation of -72m AHD.
- Closure – closure and predicted recovery of groundwater levels in Extraction Area void.

3. Legal and other Requirements

3.1 Introduction

The Quarry operates in accordance with a range of approvals, licenses and consents with each prescribing requirements for components of the environmental management of the Quarry. The following subsections present the statutory commitments relevant to environmental management of the Quarry. It is noted that non-environmental aspects of the operation such as occupational health and safety are beyond the scope of this document and are not addressed here.

3.2 Legislation

Legislation (and associated regulation) relevant to environmental management of the Quarry includes the following. Except where expressly stated, all legislation is NSW legislation.

- *Environmental Planning and Assessment Act 1979*

This Act regulates matters relevant to the development consent. SSD5899 was issued under Part 4 of the Act and the conditions therein are enforceable by the NSW Department of Planning, Industry and Environment.

- *Protection of the Environment Operations Act 1997*

This Act regulates matters related to pollution and waste in NSW. EPL11879 was issued under that Act and the conditions therein are enforceable by the Environment Protection Authority. EPL11879 principally regulates matters associated with "pollution." This licence also regulates the discharge of water from the Quarry at dedicated discharge points.

- *Water Management Act 2000*

This Act regulates access to water resources. The various water access licences and water supply works approvals held for the Quarry operation were issued under this Act and the conditions therein are enforceable under the Act.

- *Biodiversity Conservation Act 2016*

This Act regulates the protection and conservation of biodiversity values within the terrestrial environment in NSW. The act provides listings and the basis for the protection of threatened flora and fauna as well as providing provisions for the management of native ecosystems. The Biodiversity Offset Scheme is legislated through this Act. As the Quarry development would result in residual impacts to native vegetation communities and the Koala the biodiversity offsetting obligations specified in Condition 58 of SSD 5899 must be satisfied in accordance with the Biodiversity Offset Scheme.

- *National Parkes and Wildlife Act 1974*

This Act regulates disturbance to Aboriginal objects. No Aboriginal objects are known within the Quarry, however, unanticipated finds retain their protection under the Act.

- *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*

This Commonwealth Act regulates matters of National Environmental Significance. Development of the Quarry is subject to satisfying the conditions of Approval EPBC 2015/7453 issued by the Department of Agriculture, Water and the Environment. The identified matters of National Environmental Significance relevant to the operation of the Quarry refer to potential impacts to threatened native fauna including the Koala.

3.3 Approvals, Licences and Permits

Table 2 presents the approvals, licenses and permits that apply to the development of the Quarry.

Table 2
Austen Quarry Approvals, Licenses and Permits

Licence/Permit	Type	Authority	Expiry Date
Development Consent (SSD 5899)	N/A	DPE	16 July 2050
Environment Protection Licence 1879	N/A	EPA	Nil
EPBC 2015/7453	N/A	DAWE	31 December 2055
Water Access Licence (WAL) 43564 and associated Water Supply Works Approval	Aquifer	Water NSW	Nil

3.4 Development Consent SSD 5899

Hanson has been the owner and operator of the Quarry since 2001, initially under Development Application No 1920 (DA1920) which was originally granted in 1983 to the Hunter Valley Mining Corporation Pty Ltd by Port Stephens Shire Council. In July 2020 the NSW Independent Planning Commission granted SSD 5899 which allows for an expansion and subsequent continuation of operations at the Quarry. Development Consent SSD 5899 was granted on 16 July 2020 by the Independent Planning Commission and is subject to a number of conditional requirements. *Condition D1* requires that an *Environmental Management Strategy* be prepared to guide environmental management at the Quarry Site. **Table 3** identifies the conditional requirements of SSD 5899 and where they are addressed in this EMS.

Table 3
Conditions of consent associated with the Environmental Management Strategy

Cond No.	Conditions of Consent	Document Reference
D1	An Environmental Management Strategy must be prepared for the development to the satisfaction of the Planning Secretary. This strategy must:	
	(a) provide the strategic framework for environmental management of the development;	5
	(b) identify the statutory approvals that apply to the development;	3
	(c) set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	5.2
	(d) set out the procedures to be implemented to:	
	(i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;	7
	(ii) receive record, handle and respond to complaints;	5.4
	(iii) resolve any disputes that may arise during the course of the development;	5.6
	(iv) respond to any non-compliance and any incident;	6
	(v) respond to emergencies; and	10
	(e) include:	5.1
	(i) references to any strategies, plans and programs approved under the conditions of this consent; and	
	(ii) a clear plan depicting all the monitoring to be carried out under the conditions of this consent.	8
D2	The Applicant must not commence quarrying operations until the Environmental Management Strategy is approved by the Planning Secretary.	Noted
D3	The Applicant must implement the Environmental Management Strategy as approved by the Planning Secretary.	Noted

3.5 Statement of Commitments

A complete list of the Statement of Commitments presented originally in the EIS (Hanson, 2017) and then updated in the Amended RTS (RWC, 2019) are provided as **Appendix 2**.

Although not specified as conditions of consent presented in SSD 5899, Hanson will endeavour to operate in accordance with the commitments presented in **Appendix 2**, unless the commitment is not consistent with the conditions of any legislation, approval or licence relevant to the development.

In general, the statement of commitments is intended to support compliance with:

- Development Consent SSD 5899;
- Environment Protection Licence 1879;
- Approval EPBC 2015/7453; and
- the Water Access Licences for the operation.

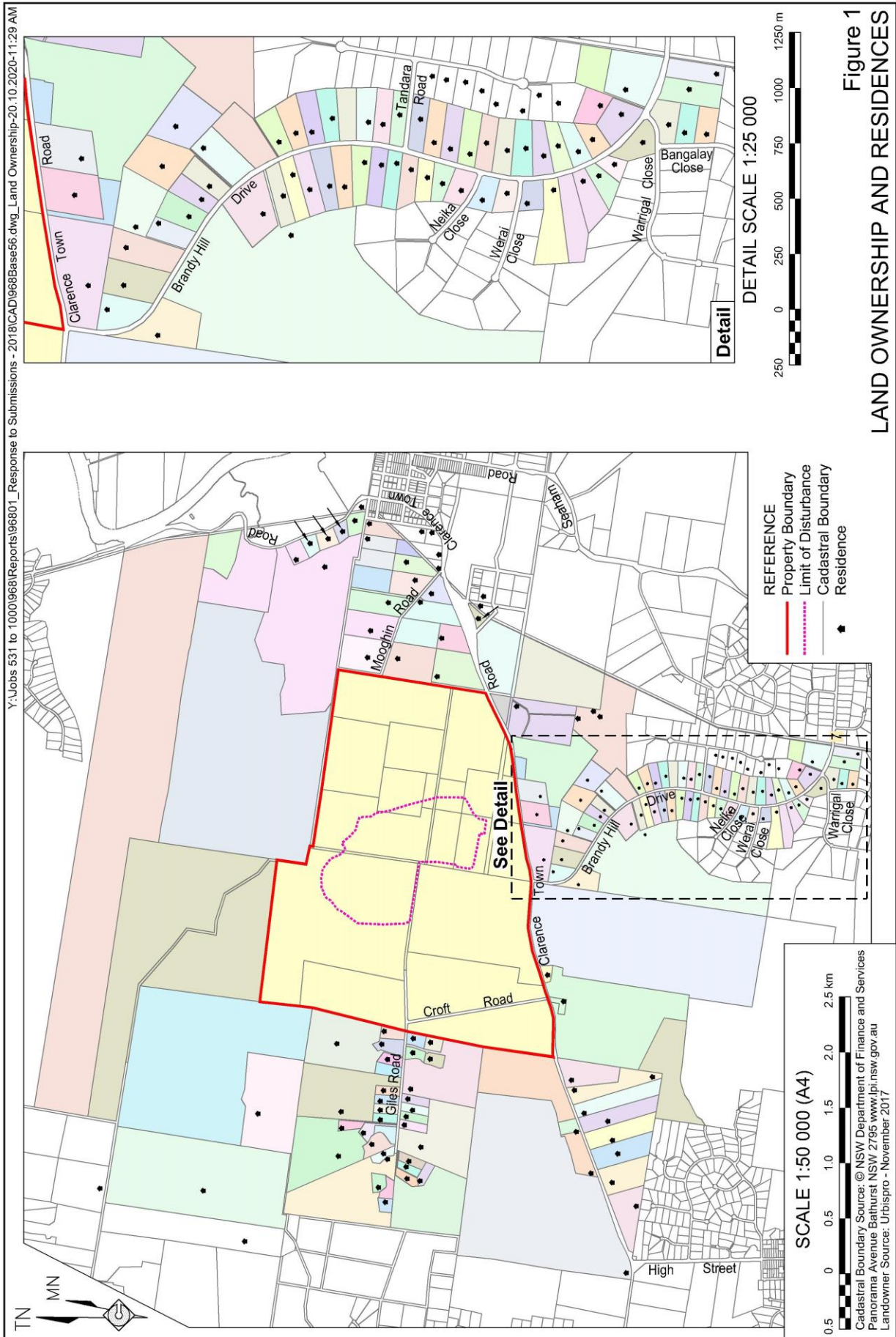
4. Surrounding Residences and Buffer Lands

Quarrying activities at Brandy Hill have been occurring since 1983 with the extraction, processing and associated transportation activities co-existing with the progressive development of rural residential living in the local area. Brandy Hill Drive was built to service the Quarry and land along this road was progressively subdivided and developed in the presence of an operating Quarry.

It is important that personnel recognise the proximity of the operation to residences and the potential for quarrying activities to adversely impact neighbours. **Figure 1** presents the locations of residences to the west, east and south of the Quarry as well as along the closest stretch of Brandy Hill Drive. The closest residences to the operation are located on the following roads.

- Giles Road to the west.
- Mooghin Road to the east.
- Clarence Town Road and Brandy Hill Drive to the south.

In order to mitigate for any potential amenity impacts from the operations, land owned by Hanson that is not to be cleared must remain as buffer lands for the life of the development



5. Environmental Management System

5.1 Strategic Framework

This EMS forms part of an integrated Environmental Management System for the Quarry. It describes the overall framework for environmental management for the ongoing operation of the Quarry. The EMS addresses the principal strategies to be adopted by Hanson, including compliance management and monitoring, dispute resolution and consultation / information dissemination processes.

The EMS is supported by a range of management plans and monitoring programs. These are, in turn, supported by a range of detailed operational procedures that describe in detail the tasks to be undertaken to ensure appropriate management of the Quarry. The Environmental Management System for the Quarry comprises the following principal documents.

- Environmental Management Strategy (EMS) (this document).
- Air Quality Management Plan.
- Noise Management Plan.
- Blast Management Plan.
- Traffic Management Plan.
- Water Management Plan.
- Biodiversity and Rehabilitation and Management Plan.

In addition, EPBC 2015/7453 requires the preparation and implementation of the following.

- A Koala Protection Plan.
- A Koala Habitat Replanting and Protection Plan

Each of the management plans that form a component of the Environmental Management System provide a practical summary of environmental management for the subject matter of the plan. It is intended that each plan may be referenced by Quarry personnel to seek guidance how to comply with the Conditions of Development Consent SSD 5899, Conditions within Environment Protection Licence 1879, EPBC 2015/7453. The plans also provide guidance on the appropriate actions to manage environmental risks. In accordance with Condition D4, Schedule 2 of Development Consent SSD 5899, each management plan required under Development Consent SSD 5899 will be prepared in accordance with the relevant guidelines and include the following:

- a summary of relevant background or baseline data;
- details of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures and criteria;
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the Quarry or any management measures;
- a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;
- a program to monitor and report on the:
 - impacts and environmental performance of the development; and
 - effectiveness of the management measures set out pursuant to Condition D4, Schedule 2 of Development Consent SSD 5899;

- a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
- a program to investigate and implement ways to improve the environmental performance of the Quarry over time;
- a protocol for managing and reporting any:
 - incident, non-compliance or exceedance of the impact assessment criteria or performance criteria;
 - complaint; or
 - failure to comply with statutory requirements; and
 - a protocol for periodic review of each plan.

Hanson's environmental performance at the Quarry will be assessed by the satisfaction of the Conditions of Development Consent SSD 5899, Conditions within Environment Protection Licence 1879, EPBC 2015/7453 and other approvals or licences. Each of the management plans or programs required by Development Consent SSD 5899 and EPBC 2015/7453 incorporate a range of mitigation measures that will be implemented to ensure environmental performance. The assessment of environmental performance would either be quantitative and/or qualitative and reported in each relevant Annual Review.

5.2 Roles and Responsibilities

Table 4 presents the roles and responsibilities for environmental management at the Quarry.

Table 4
Roles and Responsibilities for Environmental Management

Roles	Responsibility
Operations Manager	Ensure adequate resources are available to enable implementation of this Strategy and all Environmental Management Plans.
Environment, Planning and Compliance Coordinator	Responsible for the overall environmental management of the Quarry, including the following. ▪ Evaluation of compliance. ▪ Incident notification and reporting. ▪ Dispute resolution. ▪ Publication of plans, reports and monitoring outcomes. ▪ Review of this EMS.
Quarry Manager	Accountable for the overall environmental performance of the Mine, including the following. ▪ Key performance outcomes of this Strategy. ▪ Ongoing consultation and notifications. ▪ Emergency response and investigation. ▪ Ensure employees are competent through training and awareness programs. ▪ Environmental monitoring. ▪ Complaints management and response. ▪ Corrective and preventative actions.
All personnel	Ensure compliance with this EMS and other environmental management plans.

5.3 Competence Training and Awareness

All personnel shall undergo environmental management awareness training as a component of the competency-based site induction program. All training will be relevant to the roles expected of each personnel. The following areas will be covered in site inductions.

- Noise management
- Blast management
- Air quality management
- Water management
- Traffic management
- Hydrocarbon and chemical management
- Biodiversity constraints and landscape management including vegetation clearing protocols
- Protocols for unexpected finds of Aboriginal heritage items or places
- Reporting of incidents

More detailed training and awareness matters required for the above are presented in the management plan relevant to that component. The Quarry Manager will be responsible for ensuring the appropriate environmental management training is included in the induction.

More general matters of environmental management awareness such as Koala management, would be discussed in monthly Toolbox Talk meetings.

5.4 Complaints Handling and Response

5.4.1 How Complaints May be Made

Complaints may be received through one of the following methods.

- Directly via Hanson's 24-hour, 7 day per week general Emergency Line (1800 882 478). This number will be advertised on signage at the Quarry entrance and on Hanson's website.
- Directly via the customer feedback / complaint / incident portal on the Hanson website.
- Indirectly via a government agency.

In addition, consultation will be held with the community as part of Hanson's standard consultation procedures, namely informal meetings with surrounding landholders as required and meetings of the Community Consultative Committee. These meetings will provide a further forum at which complaints may be received.

All complaints will be registered in a database and initiate an investigation and response managed by the Quarry Manager. The following information will be recorded (where it can be reasonably obtained) in the database.

- The date / time the complaint was made
- The method by which the complaint was made
- Complainant's name
- Complainant's telephone number and/or email address
- Nature of complaint

5.4.2 Complaint Investigation and Response

Following receipt of any complaint, the following procedure will be implemented.

1. The complaint will be reviewed by the Quarry Manager or their delegate to determine the nature, date and time of the complaint. This will include contacting and meeting with the complainant, as required.
2. Relevant monitoring data will be reviewed. Should the monitoring results indicate that no exceedance of the assessment criteria, the Quarry Manager will continue to consult with the complainant in relation to managing impacts associated with the Quarry.
3. The investigation will consider the following.
 - (i) What activities and / or equipment were occurring or in use at the time of the complaint.
 - (ii) Whether any particular or unusual activities were being conducted at the time of the complaint.
 - (iii) Whether on-site equipment and / or activities were the potential source of the complaint (or whether other activities in the locality may have contributed to the complaint).
 - (iv) What actions may be carried out to resolve the complaint and minimise the likelihood of further complaints.
4. Should the investigation result in additional monitoring, Hanson will make the results of the monitoring available for viewing by the complainant, on request.
5. Should the monitoring indicate an exceedance of the relevant criteria, the Quarry Manager will notify DPE and the EPA and will implement corrective and preventive measures. In addition, the Quarry Manager will continue to consult with the complainant, as required, in relation to the complaint, until the issue is resolved.
6. In the event that multiple complaints are received from the same individual(s) and the Quarry can demonstrate:
 - (i) at least three complaints from the complainant, with demonstrated compliance with the relevant criteria in each case; and
 - (ii) there is documented evidence of a genuine attempt by the Quarry to discuss the issue and seek a resolution with the complainant without success.
7. The Quarry may, in consultation with the relevant government agencies, limit responses to further complaints in this case.

5.4.3 Complaints and Independent Review of Operations

Condition C3 permits landowners who believe that noise level criteria exceedances are or have occurred from the Quarry to request from Government (DPE) an independent review of the impacts of the operation on their land. Should DPE consider that a review is not warranted it will notify the landowner of this decision and the reasons for it within 21 days of the request.

However, if DPE determine that the review is warranted and notifies Hanson of the decision, within 3 months of notification Hanson must:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been endorsed by DPE, to:
 - (i) consult with the landowner to determine their concerns;
 - (ii) conduct monitoring to determine whether the development is complying with the relevant criteria; and
 - (iii) if the development is not complying with that criteria, identify measures that could be implemented to ensure compliance with the relevant criteria;
- (b) Provide DPE and landowner a copy of the independent review; and
- (c) comply with any written requests made by DPE to implement any findings of the review.

The outcomes of any independent review will be published in the Annual Review and on the Hanson website.

5.4.4 Complaints Register

Hanson will continue to maintain and update the existing complaints register. The register is a record of all complaints made to Hanson directly or via a Government agency. Details of that record includes but is not limited to the following.

- The date and time of complaints.
- The method of which the complaint was made.
- Any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note of that effect.
- The nature of the complaint.
- The action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant.
- If no action was taken by the licensee, the reasons why no action is taken.
- A copy of the complaint report will be supplied to the complainant, if requested.

The complaints database will be updated on the Company's website monthly and a summary of the complaints received in each 12 month period will also be included in each Annual Review. The Quarry Manager will be responsible for the recording of the complaint, response action requirements and updating of the database and website.

5.5 Corrective and Preventative Actions

Where an exceedance of the relevant assessment criteria is observed, the Quarry Manager, or their delegate, will identify a range of corrective and preventative actions in accordance with the procedures identified in the relevant management plan.

Corrective and/or preventative actions will be assigned to relevant Company personnel. Actions will be communicated by the Quarry Manager, or their delegate, internally through planning meetings and toolbox talks and outstanding actions will be monitored for their effectiveness upon completion.

A copy of the investigation report and regular updates on the status of the identified corrective and/or preventative actions will be provided to the relevant government agencies and, if required, any complainant. In addition, a copy of all reports will be included in the Annual Review.

5.6 Dispute Resolution

In the event that any complainant does not consider that the response or reactions adequately address their concerns, the following procedure will be adopted.

1. A meeting will be convened with the Quarry Manager or other senior Company personnel to seek resolution of the matter. The complainant will be provided with a written response, detailing the results of investigations undertaken and the agreed actions to be taken regarding the measures to be implemented.
2. On implementation of the nominated measures, a further meeting will be convened to seek advice of satisfaction, or otherwise, regarding the outcomes.

If, after 21 days following Steps 1 and 2, the complainant believes the matter remains unresolved and no further agreement can be reached as to additional measures to be undertaken, the matter will be referred to an independent Dispute Facilitator for independent review **Figure 2**.

6. Management of Compliance

6.1 Incident Management

6.1.1 Incident Identification

In accordance with Condition D7 of SSD 5899, Hanson will notify DPE and any other relevant agencies immediately after becoming aware of an incident. The notification will be in writing through the Department's Major Projects website and identify the development (including the development application number and name) and set out the location and nature of the incident. In this case an incident is defined as an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance.

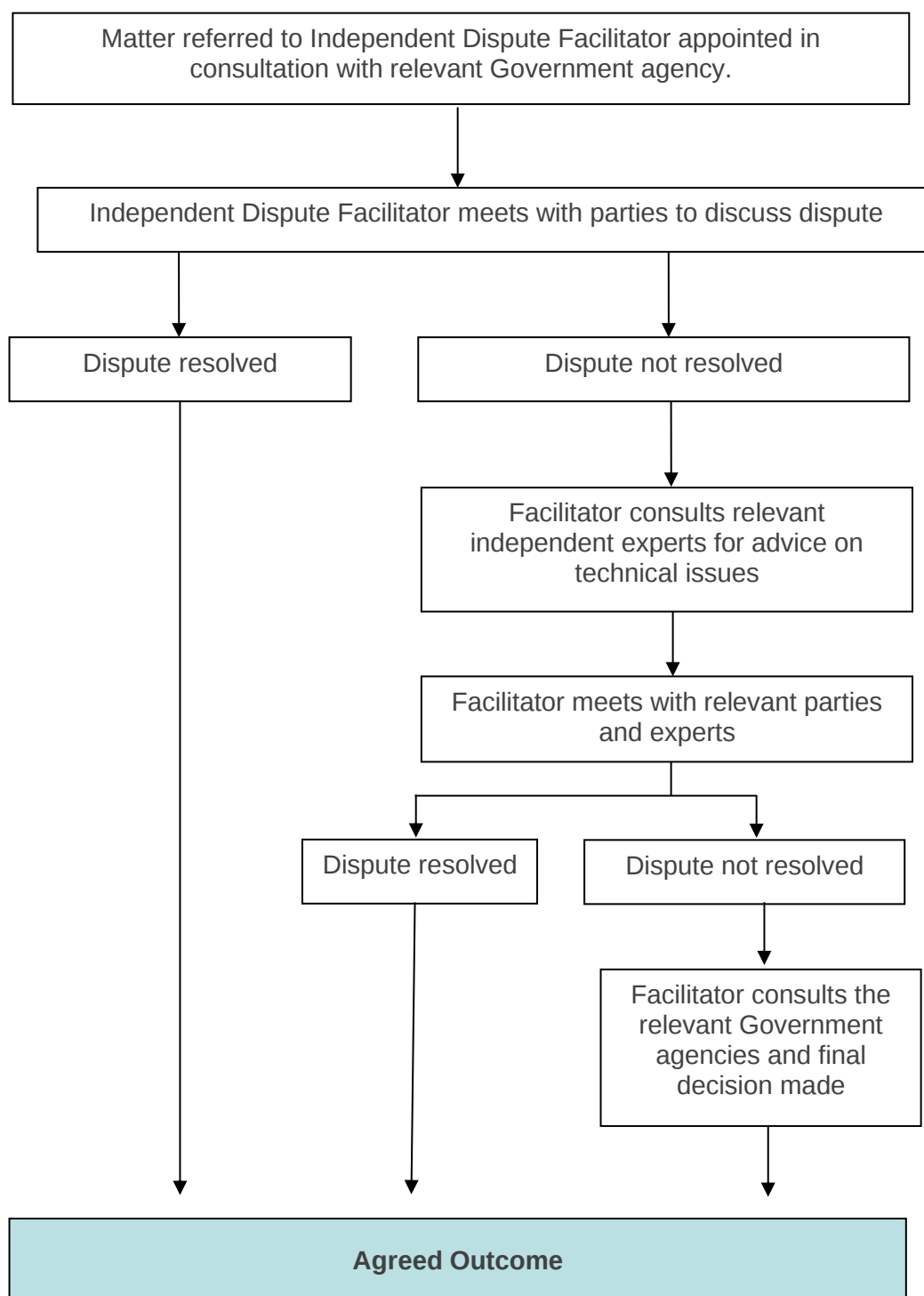
Similarly, in accordance with Condition R2 of EPL 1879, the Quarry will notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident.

For the purpose of environmental management at the Quarry, material harm is harm that:

- involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial; or
- results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).

An incident which causes or threatens to cause material harm to the environment (and may or may not result in an exceedance of discharge quality criteria) is referred to as a **Pollution Incident**.

Figure 2 Independent Dispute Resolution Process



An incident which is only as a result of an exceedance of discharge quality criterion, is referred to as a **Non-compliance Incident**.

Substantiated complaints received by the Quarry will not be considered incidents but will trigger an investigation and subsequent feedback to the complainant.

6.1.2 Incident Notification and Investigation

On identification of a non-compliance against the conditions of SSD 5899, which may follow receipt of a complaint, the following protocol would be implemented.

1. The Quarry Manager will be notified of the incident.
2. Hanson will immediately investigate the source of the incident, review the activities undertaken at the time and if necessary amend operations to resolve the cause of the incident.
3. DPE and the EPA would be notified immediately of the potential incident.
4. An investigation into the potential incident would be instigated, with the objective of identifying the following, where appropriate:
 - the date and time of the incident;
 - the duration of the incident;
 - whether the non-compliance incident was directly related to operations within the Quarry or if any other factors contributed to the incident;
 - the primary cause of the incident;
 - any contributing factors which led to the incident;
 - whether appropriate controls were implemented to prevent the incident; and
 - corrective and preventative measures that may be implemented to prevent a recurrence of incident.
5. Within 2 business days of identification of an incident with Conditions B48, B49, B50, B51, B52 or B53 of SSD 5899 or any of the requirements of EPBC 2015/7453, Hanson will notify DAWE of the incident as described in Section 6.1.4.
6. Within 7 days of the date of identifying the non-compliance incident Hanson will provide a detailed report to DPE and the EPA through the Major Projects website, as described in Section 6.1.4.
7. Within 7 days of obtaining any data showing an exceedance of noise criteria, Hanson will notify in writing any affected residents in accordance with Condition C1 of SSD 5899.

Following completion of the investigation, Hanson will:

1. Provide a copy of the completed investigation report to DPE, the EPA and affected residents.
2. Implement the corrective and preventative actions identified in the investigation report.
3. Publish the investigation report on its website and present the findings to the CCC.

Any exceedance of the approved criteria will be reported to EPA in the Annual Return (where relevant) and to DPE in the Annual Review.

6.1.3 Pollution Incident

In the event of an incident which is deemed a Pollution Incident, the Quarry Manager will be notified, who will immediately notify DPE and the EPA (using the Environmental Line 131 555). Following notification, the Quarry Manager will initiate an investigation into the cause of the pollution incident and once identified the Quarry Manager or delegate will implement corrective measures (to be identified as part of the investigation).

Corrective and/or preventative actions will be assigned to relevant Hanson personnel. Actions will be communicated internally through planning meetings and toolbox talks and outstanding actions will be monitored for their effectiveness upon completion.

6.1.4 Incident Reporting

In the event that an initial investigation concludes that an exceedance of an environmental criterion was directly attributed to activities associated with the Quarry, an incident report will be prepared. Within 7 days of identifying the incident, Hanson will submit a written report and then provide regular updates on the status of any additional mitigation actions to DPE, EPA and, where relevant, the affected landholder(s). In addition, a copy of all reports will be provided to the CCC, made publicly available on the Hanson website and will be included in the Annual Review.

Where an incident is associated with Conditions B48, B49, B50, B51, B52 or B53 of SSD 5899 or any of the requirements of EPBC 2015/7453, Hanson must notify DAWE in writing no later than two business days after becoming aware of the incident or non-compliance. The notification must specify:

- (a) any condition which is or may be in breach;
- (b) a short description of the incident and/or non-compliance; and
- (c) the location (including co-ordinates), date, and time of the incident and/or non-compliance.

The Environment, Planning and Compliance Coordinator or their delegate will be responsible for incident notification and reporting.

6.2 Evaluation of Compliance

An important component of environmental management of the Quarry will be the monitoring, review and evaluation of compliance with the relevant requirements of the operation.

- The number and nature of complaints received at the Quarry are an indicator of the community's impression of compliance and general attitude towards the development. A summary of any complaints and measures undertaken to investigate and resolve those complaints would be published monthly.
- Following each monitoring program, a monitoring report will be prepared by either the relevant specialist consultant, monitoring contractor or Company personnel. The Quarry Manager, or their delegate, will review all reports and associated monitoring results against the relevant assessment criteria and implement the relevant actions identified in the following Section in the event that exceedances of the assessment criteria are identified.
- A review of all environmental management will be presented in the Annual Review and will include management outcomes and performance including identification of any trends in the data as well as comparison with the predictions made in assessment for the operation.

6.3 Annual Review

In accordance with Condition D9 and D10 of SSD 5899, by the end of March in each year after the commencement of development, or other timeframe agreed with the Planning Secretary, an Annual Review will be submitted to the Department reviewing the environmental performance of the development. The review will:

- describe the development (including any rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;
- review any feedback on previous reporting or Independent Environmental Audit;
- review and evaluate environmental management and performance over the previous calendar year including review of the monitoring results over the previous calendar year and a comparison of these results against the:
 - relevant statutory requirements, limits or performance measures/criteria;
 - requirements of any plan or program required under SSD 5899;

- monitoring results of previous years; and
- relevant predictions in assessment documents (EIS, RTS or other relevant assessment).
- identify any trends in the monitoring data over the life of the development;
- identify any complaints records and non-compliance or incident that occurred in the previous calendar year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;
- identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
- describe what measures will be implemented over the next calendar year to improve the environmental performance of the development.

Copies of the Annual Review will be available from the Hanson website. Each year a copy of the Annual Review will be submitted via the Major Projects Portal and electronically submitted to Council. Copies will be made available to the CCC and any interested person upon request.

6.4 Annual Compliance Reporting to DAWE

Annual compliance reporting is required under EPBC 2017/7453 that addresses compliance with the EPBC approval and includes reference to compliance with the biodiversity-related conditions of SSD 5978 (specifically Condition B48, B49, B50, B51, B52 and B53). Written compliance reports that are consistent with the DAWE's Annual Compliance Report Guidelines (Commonwealth of Australia 2014) are to be prepared annually, involving the following.

- Publishing the annual report on the Hanson website within 60 business days of the end of the reporting period (3 months).
- Email notification to DAWE that the report has been published.
- Procedures to redact and notify DAWE of any sensitive ecological data.
- Accurate and complete details of compliance, incidents, and non-compliance with the conditions and the plans.
- A shapefile of any clearance of any protected matters, or their habitat, undertaken within the relevant 12-month period.
- Annexing a schedule of all plans prepared and in existence, in relation to the conditions during the relevant 12-month period.

It is anticipated that the requirements for annual compliance reporting to DAWE will be satisfied through preparation of the Annual Review described in Section 6.3.

Annual compliance reports will be notified to DAWE via email to post.approvals@environment.gov.au.

6.5 Independent Environmental Audit

Within one year of the commencement of Stage 1 of operations, and every three years thereafter, unless the Planning Secretary directs otherwise, Hanson will commission an Independent Environmental Audit of the development.

The audit will:

- be conducted by a suitably qualified, experienced and independent expert whose appointment has been endorsed by the Planning Secretary;
- involve consultation with the relevant agencies and the CCC;
- assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and water licences for the development (including any assessment, strategy, plan or program required under the relevant approvals);
- review the adequacy of any approved strategy, plan or program reviewed for the audit;

- recommend appropriate measures or actions to improve the environmental performance of the development and any reviewed assessment, strategy, plan or program; and
- be conducted and reported to the satisfaction of the Planning Secretary.

Within three months of commencing an Independent Environmental Audit, or within another timeframe agreed by the Planning Secretary, Hanson will submit a copy of the audit report to the Planning Secretary, and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations.

Any recommendations agreed through the audit process will be implemented by Hanson consistent with the timetable approved by the Planning Secretary.

6.6 Continual Improvement

Opportunities for improvement of environmental management at the Quarry will be discussed internally at toolbox meetings, in conjunction with all Quarry personnel. These opportunities would be presented to the Quarry Manager for consideration and any changes to operations as a result reported on as part of the *Annual Review* or, where relevant, reflected in an updated to the relevant environmental management plan.

7. Community and Stakeholder Engagement Plan

7.1 Introduction

Community engagement during the operation of the Brandy Hill Quarry will remain an important component of environmental management.

Engagement by Hanson will have three main objectives.

1. To inform the community and stakeholders of development progress and provide updates.
2. To demonstrate compliance with the approved conditions of consent including environmental performance criteria.
3. To listen to community feedback in order to understand how the development is effecting the community so that management may be adapted, where feasible.

The following subsections describe the commitments made by Hanson relating to community engagement, how stakeholders will be identified and the proposed methods for engagement.

7.2 Engagement Approach

Community engagement will be focused on communicating accurate information, facilitating positive relationships and effectively managing community concerns or issues.

The key elements of the strategy are:

1. **ACCESSIBLE INFORMATION:** preparation of accurate and easy-to-access information related to the Quarry operations.
2. **TWO-WAY COMMUNICATION:** targeted distribution of information and receipt of feedback to ensure an informed community and discussion.
3. **VALUED RELATIONSHIPS:** opportunities for stakeholders to meet the SFQ team, discuss issues, and work in partnership or be supported.
4. **EFFECTIVE MONITORING AND RESPONSE:** timely and measured monitoring and response to community concerns and issues.

7.3 Statement of Commitments

During the development application process for the approved Project Hanson made a range of commitments to management that were compiled as a Statement of Commitments. The following commitments relate to community engagement for the Project.

- Prepare and implement a detailed Community and Stakeholder Engagement Plan to provide a channel of communication, demonstrate environmental management performance and accountability and build trust with the local community.
- Support and be involved in a Community Consultative Committee (CCC) with scheduled CCC meetings every three months (the frequency of meetings may be reduced at the request of the CCC). Additional important information to be relayed to relevant parties via fact sheets, e-mail correspondence, written correspondence or via face to face exchange, when relevant.

- Establish communication mechanisms through or beyond the CCC, with local businesses and other residents, particularly near neighbours as described within the Community and Stakeholder Engagement Plan.
- Implement a Community Support and Sponsorship Policy.
- Establish and maintain public access to monitoring data, monitoring locations and management documents on the Hanson website.
- Form partnerships with local employment providers, including Indigenous organisations, to source new employees for the Quarry. This would include approaching local school career advisors about presenting to school-leavers about employment with Hanson.
- Establish a set percentage target for employees from within the local government areas of Port Stephens and Maitland and report against the target on the Hanson website.

The following commitments relate to environmental management and includes those matters that may impact stakeholders and will therefore remain a component of engagement processes.

- In the event of non-compliance, any exceedance will be recorded, investigated, and reported to relevant parties. Non-compliance incidents and their management will be published in the Annual Review.
- Maintain a complaints register with firm commitment to feedback and closing investigations.

7.4 Stakeholder Identification and Engagement Methods

Hanson has collated a detailed list of stakeholders for the Project during engagement to date. A summary of the stakeholders identified for engagement are presented in **Table 5**. Where additional stakeholders are identified through engagement, they will be added to the stakeholder summary.

Table 5
Brandy Hill Quarry – Stakeholders and Methods for Engagement

Page 1 of 2

Project Role	Stakeholder	Engagement Responsibility	Methods and Frequency
Regulating Compliance	Government ▪ NSW Department of Planning, Industry and Environment; ▪ NSW Environment Protection Authority; ▪ Resources Regulator ▪ Commonwealth Department of Agriculture, Water and the Environment;	Environment, Planning and Compliance Coordinator	Response to requests for engagement; Annual reporting; Monthly monitoring summaries via the website (see Section 8); Response to complaints as they arise (see Section 5.4); Government audits and site visits as requested; Independent Environmental Auditing and reporting every three years.
Local compliance; Road maintenance contributions; Planning Agreement implementation	▪ Port Stephens Shire Council ▪ Maitland City Council;	Environment, Planning and Compliance Coordinator	Response to requests for engagement; Response to complaints as they arise (see Section 5.4); Payment of road maintenance contributions; Implementation of Planning Agreement terms
Biodiversity Offsetting	▪ DPE Biodiversity Conservation Division (BCD);	Environment, Planning and Compliance Coordinator	Engagement with BCD to demonstrate satisfaction of offsetting obligations of SSD 5798.

Table 5 (Cont'd)
Brandy Hill Quarry – Stakeholders and Methods for Engagement

Page 2 of 2

Project Role	Stakeholder	Engagement Responsibility	Methods and Frequency
Local Input	Near Neighbours / Local Community - Property owners adjoining the Quarry site. - Brandy Hill Drive, Clarence Town Road, Giles Road and Mooghin Road residents in proximity to the Quarry (see Figure 3) - Those members of the community that request to be included in consultation activities. - Local schools, childcare centres and sporting organisations. - Broader Brandy Hill community (through CCC)	Quarry Manager	Response to community concerns and complaints as they arise (see Section 5.4); Monthly monitoring summaries via the website (see Section 8) Regular communications to be established including: - Bi-Annual CCC meetings; - Informal 'Have a Chat' evenings; - Blasting notifications; - Website
	Community Groups - Brandy Hill / Seaham Action Group - Voice of Wallalong and Woodville Inc.	Quarry Manager	Ongoing consultation and briefings with the same tools used for the broader community.
	Local schools, childcare centres and sporting organisations.	Quarry Manager	Implementation of Community Support and Sponsorship Policy
Aboriginal Cultural Heritage Knowledge Holders	Registered Aboriginal Stakeholders Relevant stakeholders to be contacted and relevant groups established, as needed. The following groups are currently registered - Worimi Local Aboriginal Land Council - Gomeri Namoi - Lower Hunter Aboriginal Incorporated - Maaialgal Aboriginal Heritage - Mur-roo-ma Inc - Nur-Run-Gee Pty Ltd	Quarry Manager	As needed direct engagement for any Aboriginal heritage related matters such as personnel training, unexpected finds protocols or events.
Operational Input and Management	Internal Stakeholders - BHQ local staff - Contracted truck drivers	Quarry Manager	Training on environmental management obligations through induction, training activities and 'Toolbox Talks'; Training and involvement in Drivers Code of Conduct requirements.

Key methods of community engagement will require initial registration and ongoing maintenance of contacts to ensure that community engagement is up to date and relevant to the people living in the locality. These methods include the following.

Community Consultative Committee

A Community Consultative Committee (CCC) has been established for the assessment phase of the development and has provided valuable input from the community on matters considered for assessment of the Project. The CCC would be renewed upon commencement of the Project in accordance with Condition A21 of SSD 5899 which requires that within 6 months of the date of commencement of the Project that a CCC be established in accordance with the *Community Consultative Committee Guidelines: State Significant Projects (DPIE 2019)*. The CCC must comprise the following membership.

- An independent chairperson
- Up to seven community and stakeholder representatives

- A Council representative for each the local government areas concerned
- Up to three representatives of Hanson including the Environment, Planning and Compliance Coordinator.

The CCC will meet every six months with an agenda to be provided in advance of the meeting and meeting minutes to be kept. The agenda for the meetings may include but will not be limited to:

- Status updates on the development including implementation of conditions of consent and management plans and any proposed changes to the development, as approved.
- Status updates on the implementation of the Planning Agreement including the construction progress of the shared pathway.
- A summary of the outcomes of environmental monitoring and performance.
- Community feedback on the Project including a summary of complaints received and their resolution.
- Updates on community sponsorship initiatives.

CCC agendas and meeting minutes will be made available from the Hanson website so that interested parties not involved in the meetings can review the meeting discussion items and outcomes (see Section 8).

The feedback from the CCC members will provide an important link between Hanson and the community with the matters raised at the meetings reported in the Annual Review for the Project.

Aboriginal Community Engagement

Local Aboriginal community groups were consulted in preparation of the Aboriginal Cultural Heritage Assessment for the Project. Ongoing engagement with these groups is not expected to occur regularly, however would be necessary in the event of unexpected finds of Aboriginal cultural items or areas or where advice on personnel training is sought.

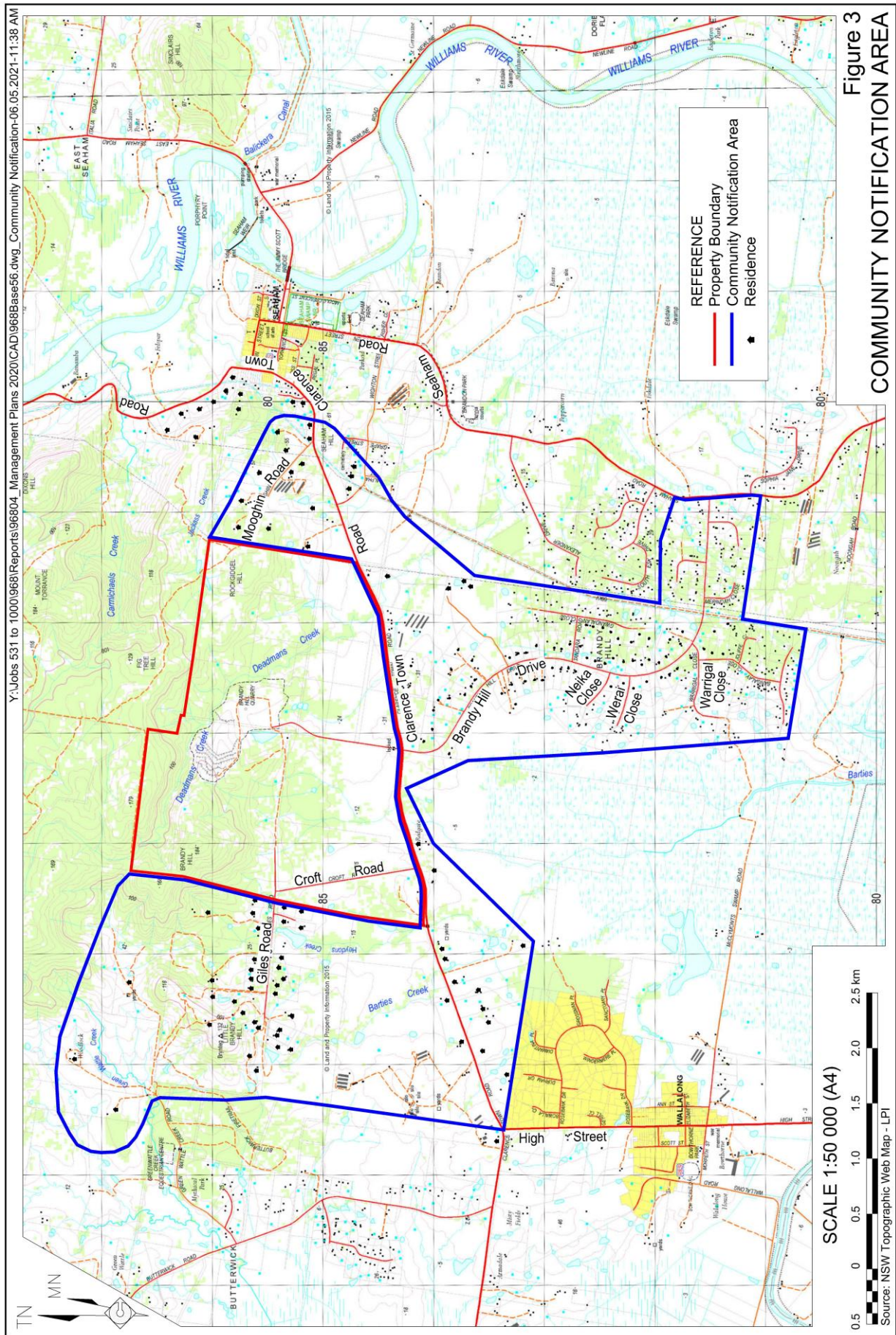
Aboriginal community members are encouraged to register for CCC participation and for community updates as per the above.

Registered Community Updates and Involvement

Hanson is not proposing to engage with all members of the local community as this is both impractical and would become a nuisance to some community members. It is therefore proposed to focus on the areas presented in **Figure 3** for initial expressions of interest for engagement. This would involve a letterbox drop that requests community members to register for updates on the following.

- Blasting notification (SMS or email) - Blasting notifications would involve no less than 24 hours notice of intended blasting events in order to inform interested community members in advance of blasting occurring.
- Attendance at Have-a-Chat Evenings – Hanson would host an informal Have-a-Chat evening every six months that would most likely involve a community barbeque or other event that would give interested community members the opportunity to meet with Hanson personnel to discuss the Project. One of these meeting would occur in the first quarter of every year (January to March) and involve a brief presentation on the Project status, environmental performance and monitoring outcomes over the previous 12 month period. Feedback on the community experience of the Project would be sought at this meeting and a summary of the feedback reported in the Annual Review documentation.
- General community updates on the Project – Updates on the Project may be provided in the form of newsletters, as needed. Topics may include updates on regeneration in the Koala Habitat Area, formalisation of Biodiversity Offsetting Areas or an update on the stage or status of development.

All community members are encouraged to register for the above updates regardless of where they may reside. However, Hanson will actively seek the involvement of only those people residing in the areas presented in **Figure 3**.



8. Environmental Monitoring

8.1 Overview of Environmental Monitoring

The objectives of environmental monitoring at the Quarry are generally to:

- facilitate the Environmental Management System by providing feedback to Quarry personnel regarding environmental management performance and inform adaptive (proactive) management;
- demonstrate compliance with the relevant conditional and licence requirements of the Project; and
- provide triggers for reactive management, where required.

The various management plans identified in Section 5.1 describe the monitoring program to be implemented relevant to the matter that is the subject of the management plan.

Table 6 and **Figure 4** present an overview of the environmental monitoring to be undertaken over the life of the Quarry.

Table 6
Overview of Environmental Monitoring

Page 1 of 3

Parameter	Units	Location	Equipment	Frequency	Comment
Meteorology					
Rainfall	mm	South of Amenity Barrier (see Figure 4)	Automated Weather Station	Continuous and real-time	
Sigma theta	°				
Air Temperature (2m and 10m)	°C				
Wind Direction (10m)	°				
Wind Speed (10m)	m/s				
Relative Humidity					
Net Solar Radiation					
Air Quality Management					
Total PM ₁₀	µg/m ³	South of Amenity Barrier	TSI Dusttrak II Desktop	Continuous and real-time	For the purpose of demonstrating compliance with the air quality criteria for Total Suspended particulates and PM _{2.5} , continuous PM ₁₀ monitoring data will be used as a surrogate.
Deposited dust • Total insoluble solids	g/m ² /month	BHQ-1 Giles Road BHQ-2 Access Road BHQ-3 South-East	Deposited dust gauge	30±2 days	Deposited dust monitoring has occurred for the Quarry operation since 2011.
Noise Management					
Attended Operational Noise Monitoring	dBA	N1 N2 N3 (see Figure 4) Additional locations as required	Independent, suitably qualified acoustic consultant	Quarterly for two years and then reviewed.	Monitoring will establish compliance with noise criteria (L _{Aeq15mins}) in daytime and evening periods.
Unattended Traffic Noise Monitoring	dBA	Location N2 (see Figure 4)		Bi-Annually	Monitoring will occur for a minimum of seven days. Monitoring will establish the average weekday and weekend road noise levels for daytime and night time periods.

Table 6 (Cont'd)
Overview of Environmental Monitoring

Page 2 of 3

Parameter	Units	Location	Equipment	Frequency	Comment
Blast Management					
Ground vibration Air blast overpressure	mm/s dBL	Location B1 Location B2 Location B3	Mobile blast monitors managed by blasting contractors	Every blast	
Blast Fume Monitoring	None	At blast location	Video recording and visual inspection by blasting contractors	Every blast	Blast fume will be monitored for but is not expected to occur.
Water Management					
Surface Water Quality • pH • Oil and Grease • Total Suspended Solids	pH units mg/L mg/L	Upstream Downstream (see Figure 4)	Field water quality meter	Monthly	
Surface Water Quality • pH • Oil and Grease • Total Suspended Solids	pH units mg/L mg/L	EPL ID4 EPL ID5 EPL ID6	Field water quality meter	Daily during discharge	
Groundwater level	m below ground level	BH400 BH401 BH401A BH1401 BH1403 BH1405 BH1407 BH1404 BH1406	Automated Logger	Quarterly download of data	
Groundwater Inflow	ML	Extraction Area	Manual reading and simple water balance	Quarterly	

Table 6 (Cont'd)
Overview of Environmental Monitoring

Page 3 of 3

Parameter	Units	Location	Equipment	Frequency	Comment
Traffic Management					
Vehicle movements	Number	Weighbridge records		Hourly and Daily	
Biodiversity and Rehabilitation Management					
Hollow Monitoring	Hollow condition Evidence of Use	Hollows re-hung in remnant vegetation	Various as required by commissioned arborist	Annually after placement for the first two years and then every five years thereafter	
Koala monitoring	Surveys for species	Hanson property incorporating Quarry Site, Koala Habitat Area and Stewardship Site	Field survey by qualified ecologist	Every five years	Methodology to be selected based on best practice at the time of monitoring.
Rehabilitation and Revegetation Condition	Survey of vegetation	Rehabilitated areas of the Quarry and Koala Habitat Area	Field survey by bushland regeneration contractor	Annually	Rehabilitated areas and replanted areas would be visually monitored for dieback, weed presence and other parameters that would inform annual rehabilitation and vegetation management programs.

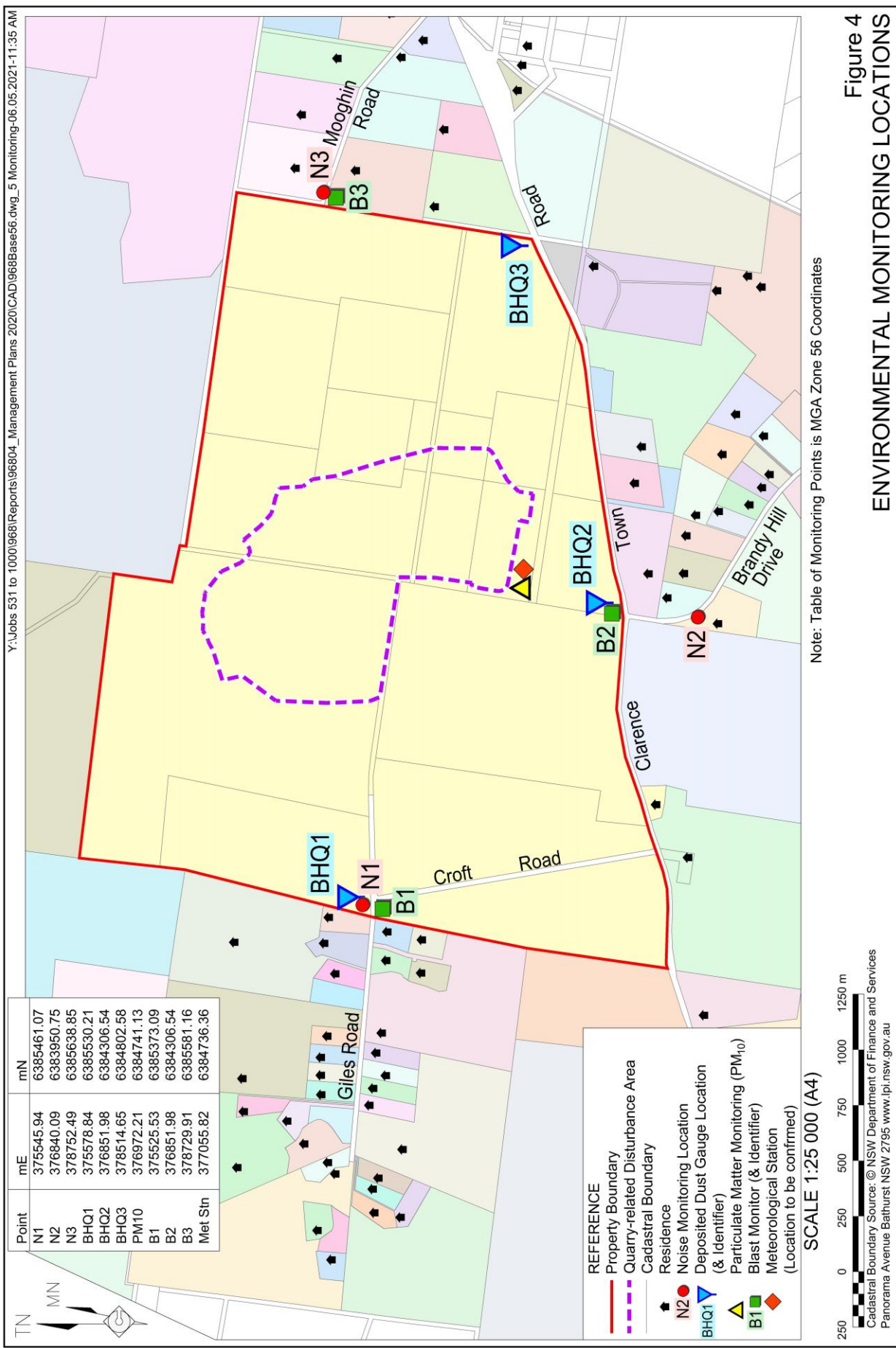


Figure 4
ENVIRONMENTAL MONITORING LOCATIONS

9. Publicly Available Documents

Condition D15 of SSD 5899 requires that prior to commencement of construction until the completion of all rehabilitation required under SSD 5899, the following documents must be made publicly available via the Hanson website with information kept up to date on a quarterly basis, unless otherwise specified.

- All documents associated with the Project development application including:
 - The Environmental Impact Statement titled “Brandy Hill Quarry Expansion Project”, prepared by Hanson Construction Materials Pty Ltd dated February 2017;
 - The Amended Response to Submissions for the Brandy Hill Quarry Expansion Project, dated September 2019;
 - correspondence associated with the application dated 18 June 2020 and 6 July 2020; and
 - any additional information provided by Hanson in support of the application.
- All current statutory approvals for the development.
- All approved strategies, plans and programs required under SSD 5899 and EPBC 2015/7453.
- Minutes of CCC meetings.
- Regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of SSD 5899.
- A comprehensive summary of the monitoring results of the development, reported in accordance with the specifications of SSD 5899, or any approved plans and programs.
- A summary of the current stage and progress of the development.
- Contact details to enquire about the development or to make a complaint.
- A complaints register (updated monthly).
- The Annual Reviews of the development and annual compliance reporting required under EPBC 2015/7453.
- Audit reports prepared as part of any Independent Environmental Audit of the development and Hanson’s response to the recommendations in any audit report.
- Any other matter required by the Planning Secretary.

The Environment, Planning and Compliance Coordinator will be responsible for maintain the document register on the Hanson website.

10. Emergency Response

Table 7 presents the procedures that will be implemented in the event of an emergency within the Site. It is noted that emergency preparedness will be managed through Hanson's standard quarry planning, design and operational standards and the investigation and reporting in relation to the emergency will be managed through the incident reporting and review process identified in Section 5.7. As a result, **Table 7** presents the immediate and recovery stage responses only.

Table 7
Emergency Response Procedures

Emergency	Response - Immediate	Response – recovery stage
Fire-related Emergency		
Plant fire (mobile or fixed)	- Evacuate and account for all personnel - Notify Emergency Services - Fight fire (if safe to do so) - Isolate power/fuel supply	- Restrict access to plant to allow investigation. - Ensure any hydrocarbon or other leaks managed.
Bushfire – initiation on Site	- Evacuate and account for all personnel - Notify Emergency Services - Use Site water cart and other equipment to extinguish or isolate fire (if safe to do so). - Evacuate stock (if present)	- Check and manage welfare of stock (if present). - Monitor burnt area for re-ignition under guidance of the Rural Fire Service
Bushfire – encroachment from off site	- Advise personnel and prepare to evacuate if required. - Contact Emergency Services and offer assistance. - Use mobile plant to create/upgrade fire break (if required and safe to do so)	- Check and manage welfare of stock (if present). - Monitor burnt area for re-ignition under guidance of the Rural Fire Service
Medical Emergency		
Life-threatening medical emergency	- Administer first aid if safe to do. - Contact Emergency Services.	- Notify and assist patient's family. - Provide counselling for co-workers (if required)
Non-life threatening medical emergency	Administer first aid.	
Ground stability/collapse Emergency		
Failure of Quarry highwall	Evacuate relevant section of the Extraction Area	Maintain a suitable exclusion zone until advised otherwise by a suitably qualified specialist.
Chemical Spill Emergency		
Major Hydrocarbon Spill	- Deploy spill control equipment to contain and isolate the spill - Control the source of the spill (i.e. close valves) if practicable and safe to do so.	- Clean up spill material and dispose of appropriately. - Implement decontamination/ clean up procedures.

The Quarry Manager will be responsible for all emergency preparation, response and investigation-related activities.

11. Review

In accordance with *Condition D5*, this Plan will be reviewed within three months of:

- (a) the submission of an incident report under condition D7;
- (b) the submission of an Annual Review under condition D9;
- (c) the submission of an Independent Environmental Audit under condition D11;
- (d) the approval of any modification of the conditions of this consent;
- (e) notification of a change in development stage under condition A15; or
- (f) the issue of a direction of the Planning Secretary under condition A2(b) which requires a review,
- (g) The Reviewed plan will be submitted to the Planning Secretary for approval within six weeks of finalisation of the review.

In addition, this EMS will be reviewed and updated, should it be required, at the commencement of a new operational stage of development.

If necessary, this Plan will be revised to:

- improve the environmental performance of the development
- cater for a modification
- comply with a direction

to the satisfaction of the Planning Secretary and submitted for approval within six weeks of the review.

The Environment, Planning and Compliance Coordinator will be responsible for review of the Plan.

Appendices

(Total No. of pages including blank pages = 25)

Appendix 1	Government Agency Consultation Correspondence
Appendix 2	Statement of Commitments

Appendix 1

Government Agency Consultation Correspondence

(Total No. of pages including blank pages = 18)

Ms Belinda Pignone
Environmental Planning & Compliance Coordinator
Hanson Construction Materials Pty Ltd
Level 18
2-12 Macquarie Street
Parramatta, NSW, 2150

28/05/2021

Dear Ms Pignone,

**Brandy Hill Quarry Expansion Project (SSD 5899)
Environmental Management Strategy - request for additional information**

We require additional information relating to the Environmental Management Strategy submitted under the conditions of consent for the Brandy Hill Quarry Expansion Project (SSD 5899).

Please submit a revised document that addresses the requirements under Attachment A.

Please provide the information or notify us that you will not provide the information by Friday 18 June 2021. If this timeframe is not achievable, please provide and commit to an alternative timeframe for providing this information.

If you have any questions, please contact Callum Firth at Callum.Firth@dpie.nsw.gov.au.

Yours sincerely



Matthew Sprott
Director
Resource Assessments (Coal & Quarries)

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

EMS, Condition D1, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
An Environmental Management Strategy must be prepared for the development to the satisfaction of the Planning Secretary.	Yes	This plan		
This strategy must: (a) provide the strategic framework for environmental management of the development;	Yes	Section 5.1 describes the strategic framework and the operational procedures for the management plans and monitoring programs.		
(b) identify the statutory approvals that apply to the development;	Yes	Section 3.2 sets out the relevant legislation for the project. Section 3.3 sets out the approvals, licenses and permits that apply to the development of the Quarry. Section 3.4 sets out the development consent conditions. Section 3.5 sets out the statement of commitments.		
(c) set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	Yes	Section 5.2, Table 4 sets out the roles and responsibilities for the environmental management of the quarry.		
(d) set out the procedures to be implemented to: (i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;	Yes	Chapter 6 includes a detailed approach for keeping the local community and relevant agencies informed about the operation and environmental performance of the development.		

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

(ii) receive, record, handle and respond to complaints;	Yes	Section 5.4.1 details how complaints may be made (phone line, website/e-mail, indirectly through agency) Section 5.4.1 details how complaints will be recorded in a database. Section 5.4.2 details how complaints will be investigated and responded to.		
(iii) resolve any disputes that may arise during the course of the development;	Yes	Section 5.6 and Figure 2 detail the dispute resolution process, which includes the potential for escalation to an independent dispute facilitator for independent review.		
(iv) respond to any non-compliance and any incident;	Partial	Section 5.7.1 sets out the incident identification criteria. Section 5.7.2 sets out the protocol for responding to a non-compliance incident. Section 5.7.3 summarises the response protocol for a pollution incident. Section 5.7.4 summarises the incident notification and reporting process. Section 5.8 summarises the protocol for the evaluation of compliance.	This will be satisfied when condition D7 and D8 are amended.	

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

(v) respond to emergencies; and	Yes	Section 9, Table 7 details the emergency response procedures.		
(e) include: (i) references to any strategies, plans and programs approved under the conditions of this consent; and	Yes	Section 5.1 lists the strategies and plans approved under the conditions of this consent.		
(ii) a clear plan depicting all the monitoring to be carried out under the conditions of this consent.	Yes	Section 7, Table 6 provides a plan detailing the parameter, units, location, equipment, frequency and comments on the monitoring to be carried out under the conditions of consent.		
EMS, Condition D2, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
The Applicant must not commence quarrying operations until the Environmental Management Strategy is approved by the Planning Secretary.	Yes	Table 3 'notes' this condition.		
EMS, Condition D3, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
The Applicant must implement the Environmental Management Strategy as approved by the Planning Secretary.	Partial	Table 3 'notes' this condition. This should be committed to in the EMS.	Please specifically commit to implementing the EMS as approved by the Planning Secretary.	Commitment included in Section 1.1

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

EMS, Condition D4, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
Management plans required under this consent must be prepared in accordance with relevant guidelines	No	The preference for meeting this condition is: - a brief, 1-2 paragraph summary of how this condition is met for each management plan within that management plan <u>For this EMS:</u> a strategic summary for how management plans will be prepared and what they will include (as stipulated by this condition, D4).	Include a strategic summary for how management plans will be prepared and what they will include (as stipulated by this condition, D4).	Additional text included in Section 5.1
and include: (a) a summary of relevant background or baseline data;	No	As above	As above	As above
(b) details of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);	No	As above	As above	As above
(ii) any relevant limits or performance measures and criteria; and	No	As above	As above	As above
(iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;	No	As above	As above	As above

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

(c) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	No	As above	As above	As above
(d) a program to monitor and report on the:	No	As above	As above	As above
(i) impacts and environmental performance of the development; and	No	As above	As above	As above
(ii) effectiveness of the management measures set out pursuant to condition D4;	No	As above	As above	As above
(e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	No	As above	As above	As above
(f) a program to investigate and implement ways to improve the environmental performance of the development over time;	No	As above	As above	As above
(g) a protocol for managing and reporting any:	No	As above	As above	As above
(i) incident, non-compliance or exceedance of the impact assessment criteria or performance criteria;	No	As above	As above	As above
(ii) complaint; or	No	As above	As above	As above
(iii) failure to comply with statutory requirements; and	No	As above	As above	As above

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

(h) a protocol for periodic review of the plan.	No	As above	As above	As above
Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.	No	As above	As above	As above
EMS, Condition D5, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
Within three months of: (a) the submission of an incident report under condition D7; (b) the submission of an Annual Review under condition D9; (c) the submission of an Independent Environmental Audit under condition D11; (d) the approval of any modification of the conditions of this consent; (e) notification of a change in development stage under condition A15; or (f) the issue of a direction of the Planning Secretary under condition A2(b) which requires a review, the suitability of existing strategies, plans and programs required under this consent must be reviewed by the Applicant.	Yes	Section 10 commits to this.		

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

EMS, Condition D6, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
If necessary, to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary and submitted to the Planning Secretary for approval within six weeks of the review.	Yes	Section 10 commits to this.		
EMS, Condition D7, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
The Applicant must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be in writing through the Department's Major Projects website and identify the development (including the development application number and name) and set out the location and nature of the incident.	Partial	Section 5.7.1 has all the correct details for incident notification. However, the condition is quoted rather than committed to.	Please strengthen the language of the commitment. i.e. "Hanson will notify DPIE and any other agencies immediately... the notification will be in writing.	Additional text included in Section 6.1.1
EMS, Condition D8, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be in writing to through the	Partial	Section 5.7.2 summarise the non-compliance notification protocol. It states that DPIE and EPA will be immediately notified of the potential non-compliance. It is not clear whether	Clearly commit to notifying the Department within seven days of	Additional text included in Section 6.1.2

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

Department's Major Projects website and identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance		this initial notification would include all of the components required to be provided to DPIE, as set out in this condition D8. Section 5.7.4 includes commitment to incident notification which covers condition D7, however all of the relevant parts of this condition D8 are not committed to in one place. Please commit to all of the components.	becoming aware of a non-compliance. Commit to providing the notification in writing to through the Department's Major Projects website and identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.	
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**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

EMS, Condition D9, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
By the end of March in each year after the commencement of development, or other timeframe agreed by the Planning Secretary, a report must be submitted to the Department reviewing the environmental performance of the development, to the satisfaction of the Planning Secretary.	No	There is no single section summarising an annual review for the project reviewing the environmental performance of the development, detailing what it would include and when it would be submitted. A single section covering this is preferred for clarity.	Please create a new subsection summarising the annual review process and detailing what will be included.	See new Section 6.3
This review must: (a) describe the development (including any rehabilitation) that was carried out in the previous calendar, and the development that is proposed to be carried out over the current calendar year;	No	As above	As above	As above
(b) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, including a comparison of these results against the: (i) relevant statutory requirements, limits or performance measures/criteria;	No	Note – this section can sometimes be interpreted incorrectly. Please commit to including in the annual review a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, including a comparison of these results against (i), (ii), (iii) and (iv).	As above	As above
(ii) requirements of any plan or program required under this consent;	No	As above	As above	As above

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

(iii) monitoring results of previous years; and	No	As above	As above	As above
(iv) relevant predictions in the documents listed condition A2(c).	No	As above	As above	As above
(c) identify any non-compliance or incident which occurred in the previous calendar year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;	No	As above	As above	As above
(d) evaluate and report on:	No	As above	As above	As above
(i) the effectiveness of the noise and air quality management systems; and	No	As above	As above	As above
(ii) compliance with the performance measures, criteria and operating conditions in this consent;	No	As above	As above	As above
(e) identify any trends in the monitoring data over the life of the development;	No	As above	As above	As above
(f) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and	No	As above	As above	As above
(g) describe what measures will be implemented over the next calendar year to improve the environmental performance of the development.	No	As above	As above	As above

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

EMS, Condition D10, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
Copies of the Annual Review must be submitted to Council and made available to the CCC and any interested person upon request.	No		Suggest including this in annual review section.	As above
EMS, Condition D11, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
Within one year of the commencement any development under this consent, and every three years after, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development.	No	The Independent Environmental Audit is referred to but not summarised in enough detail.	Please create a new subsection summarising and committing to the commissioning and payment of an IEA of the development. It should clearly detail all of the components of this conditions D11, D12 and D13 below.	See new Section 6.5
The audit must: (a) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Planning Secretary;	No	As above	As above	As above
(b) be carried out in consultation with the relevant agencies and the CCC;	No	As above	As above	As above

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

(c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent, water licences and mining leases for the development (including any assessment, strategy, plan or program required under these approvals);	No	As above	As above	As above
(d) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals and this consent;	No	As above	As above	As above
(e) recommend appropriate measures or actions to improve the environmental performance of the development and any assessment, strategy, plan or program required under the abovementioned approvals and this consent; and	No	As above	As above	As above
(f) be conducted and reported to the satisfaction of the Planning Secretary.	No	As above	As above	As above
EMS, Condition D12, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
Within three months of commencing an Independent Environmental Audit, or within another timeframe agreed by the Planning Secretary, the Applicant must submit a copy of the audit report to the Planning Secretary, and any other NSW agency that requests it, together with its response to any recommendations	No	Section 8 commits to making audit reports public on their website. No commitment to submitting the audit report to the Planning Secretary consistent with this condition.	Please commit to submitting a copy of the audit report to the Planning Secretary, and any other NSW agency that requests it, together with its response to any	See Section 6.5

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.			recommendations contained in the audit report, and a timetable for the implementation of the recommendations within 3 months or as otherwise agreed with the planning secretary. The recommendations must be implemented to the satisfaction of the Planning Secretary.	
Note: The audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Planning Secretary	No		Suggest including this commitment in new IEA subsection.	As above
EMS, Condition D13, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance report and independent audit.	Noted			

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

For the purposes of this condition, as set out in the EP&A Act, “monitoring” is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an “environmental audit” is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.				
EMS, Condition D15, Schedule 2	Sufficient (Yes/No/Partial)	Document reference and comment	Action Required	Company Response
Before the commencement of construction until the completion of all rehabilitation required under this consent, the Applicant must: (a) make the following information and documents (as they are obtained, approved or as otherwise stipulated within the conditions of this consent) publicly available on its website:	Partial	Section 8 does not commit to making all documents public on the website prior to construction and until the completion of all rehabilitation required under this consent.		Additional text included in Section 9
(i) the document/s listed in condition A2(c);	Yes	Section 8 commits to making public all documents associated with the DA including the EIS.		
(ii) all current statutory approvals for the development;	Yes	Included		

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

(iii) all approved strategies, plans and programs required under the conditions of this consent;	Yes	Included		
(iv) minutes of CCC meetings;	Yes	Included		
(v) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;	Yes	Included		
(vi) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;	Yes	Included		
(vii) a summary of the current stage and progress of the development;	Yes	Included		
(viii) contact details to enquire about the development or to make a complaint;	Yes	Included		
(ix) a complaints register, updated monthly;	Partial	Included, but not committed to updating monthly.	Please commit to ensuring that the public complaints register on the website is updated monthly.	Additional text included in Section 9
(x) the Annual Reviews of the development;	Yes	Included		

**Brandy Hill Expansion Project
Post Approval Review**



Document: Environmental Management Strategy

Revision: 1 dated 6 May 2021

Reviewed: by Callum Firth on 28 May 2021

(xi) audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant's response to the recommendations in any audit report;	Yes	Included		
(xii) any other matter required by the Planning Secretary; and	No	Not included.	Please include in this list "any other matter required by the Planning Secretary"	Additional text included in Section 9
(b) keep such information up to date, to the satisfaction of the Planning Secretary	No	A specific, timed commitment is to the satisfaction of the Planning Secretary.	Commit to keeping information up to date in a specific, regular interval e.g. monthly.	Additional text included in Section 9

Appendix 2

Statement of Commitments

(Total No. of pages including blank pages = 7)

Section 7 of the EIS presented a Statement of Commitments for the Project. The commitments have been updated following comprehensive review of the Project and ongoing operational requirements. The following subsections present an updated Statement of Commitments that summarises the proposed management and mitigation that Hanson would implement.

It should be noted that many of these commitments are standard operating conditions for a State significant extractive industry development, however, are provided here for the benefit of informing the local community. Each of these commitments would be reflected in the conditions of consent or described in environmental management plans for the operation. The management plans would be submitted to DPE for approval before being implemented.

The following commitments would apply to the operation of the Quarry, unless modified by conditions of consent, licence conditions or post-approval documentation approved by the Secretary of the Department of Planning and Environment. It is noted that the conditions of consent take precedence in the event of any conflict.

Project Operation

- Approval has been sought for a period of 30 years which is expected to be reflected in the terms of consent of the Project Approval.
- Rehabilitation upon quarry closure will be undertaken in accordance with the activities described in the EIS or this Amended Response to Submissions unless modified by a Biodiversity and Rehabilitation Management Plan or Closure Plan for the Quarry. As is standard practice, rehabilitation works may be undertaken outside of the approved operational period.
- Ensure no more than 1.5Mt of hard rock is transported from the quarry annually. Concrete production would not exceed 15 000m³ per annum using an on-site concrete batching plant. Up to 20 000t per annum of hardened washout concrete material may be received at the Quarry for recycling.
- Ensure all site operations are undertaken in accordance with the approved hours of operation.
- The Project will remain within the extraction boundary identified in **Figure 7**, which is an area of 78.5ha, and a maximum depth of -78 m AHD. These boundaries will be mapped using digital software and made available to both site management and regional management.
- Install enclosures on all fixed processing equipment from the commencement of Stage 1 of operations.
- Partially enclose conveyor transfer points from Stage 4 of operations.
- Partially enclose the mobile crusher to be used for concrete recycling from the commencement of Stage 1 of operations.
- Maintain all equipment on site in good working order to maximise efficiency and to include appropriate exhaust and fire suppression systems.
- Product despatch from the Quarry would be limited to the following levels.
 - No more than 301 laden loads between 7:00am and 10:00pm.
 - No more than 58 laden loads between 10:00pm and 7:00am.
- Hourly product despatch would be limited as follows
 - 5:00am to 6:00am – 9 laden loads.
 - 6:00am to 7:00am – 12 laden loads.
 - 7:00am to 10:00pm – 30 laden loads per hour.
 - 10:00pm to 5:00am – 5 laden loads per hour.
- Night time despatch (between the hours of 10:00pm and 5:00am) would occur on a maximum of 20 days per calendar year.
- Community members who have registered for notifications would receive seven days' notice of any night time product despatch activities.
- Construct an earthen amenity barrier between 18m and 20m high to the south of the Processing and Stockpiling Area (see **Figure 5**).

- Temporarily construct earthen amenity barriers of various lengths and heights for each stage of operations, strategically located with the Processing and Stockpiling Area.
- Maintain the Quarry Access Road to limit noise sources such as potholes or edgewear as well as ensuring safe access around the site.
- Carry out all demolition work in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.
- Obtain and maintain all relevant licences and approvals throughout the Project life.

Non-Compliance and Complaints

- In the event of non-compliance, any exceedance will be recorded, investigated, and reported to relevant parties. Non-compliance incidents and their management will be published in the *Annual Review*.
- Maintain a complaints register with firm commitment to feedback and closing investigations.

Social Impact

- Prepare and implement a detailed Community and Stakeholder Engagement Plan to provide a channel of communication, demonstrate environmental management performance and accountability and build trust with the local community.
- Support and be involved in a Community Consultative Committee (CCC) with scheduled CCC meetings every three months (the frequency of meetings may be reduced at the request of the CCC). Additional important information to be relayed to relevant parties via fact sheets, e-mail correspondence, written correspondence or via face to face exchange, when relevant.
- Establish communication mechanisms through or beyond the CCC, with local businesses and other residents, particularly near neighbours as described within the Community and Stakeholder Engagement Plan.
- Implement a Community Support and Sponsorship Policy (Appendix 11).
- Establish and maintain public access to monitoring data, monitoring locations and management documents on the Hanson website.
- Form partnerships with local employment providers, including Indigenous organisations, to source new employees for the Quarry. This would include approaching local school career advisors about presenting to school-leavers about employment with Hanson.
- Establish a set percentage target for employees from within the local government areas of Port Stephens and Maitland and report against the target on the Hanson website.

Noise and Blasting

- Ensure stockpiles and ancillary equipment are positioned to mitigate potential noise impacts.
- Maintain all equipment located on site to adhere to existing noise standards and ensure that noise generated by equipment is not exacerbated.
- Modify operations at exposed locations and under unfavourable weather conditions, where necessary and without compromising safety, to reduce potential noise-related impacts.
- Maintain the internal road network to reduce body noise from empty trucks.
- Construct an acoustic barrier along the Quarry Access Road to mitigate noise generated by heavy vehicles on the Quarry Access Road.
- Establish noise monitoring at sensitive receptors and/or locations as stipulated in a Noise Management Plan.
- Implement an operational noise monitoring program, in consultation with DPE, involving quarterly monitoring for a two-year period at the locations to the south, east and west of the Quarry. After an initial two years of monitoring, the frequency of monitoring would be reduced to bi-annual, assuming that there are no identifiable seasonal trends in results.
- Undertake bi-annual monitoring of road traffic noise on Brandy Hill Drive. The location of monitoring will be established in the Noise Management Plan.

- Undertake an annual survey of sound power levels for all mobile equipment to demonstrate equipment is not exceeding noted levels within the Updated Noise Impact Assessment (Appendix 5).
- Design all blasts within the extraction area to meet airblast overpressure and ground vibration criteria at all monitoring locations.
- Blasts would occur no more than once per week, except in the event of a misfire.
- Provide notification of blasts via the website, email and/or SMS (subject to individual arrangements).
- Prepare and implement a site Noise and Blast Management Plan and/or monitoring program for the life of the Project. Regularly review and update the plan in accordance with the requirements of the Project Approval.

Air Quality

- Implement routine watering or similarly effective dust suppression treatment of internal roads and unsealed surfaces (including stockpiles and stockpile transfer points) during operations and at an increased frequency during adverse climate conditions.
- Modify operations during unfavourable weather conditions and in areas with high potential for dust dispersion, where necessary, to reduce dust generation.
- Stabilise the earthen amenity barrier (once constructed) to the south of the Quarry Site with groundcover vegetation as soon as practical following completion.
- Stabilise disturbed areas within the Quarry Site that are no longer required for operations with groundcover vegetation as soon as practical following completion.
- Maintain the internal road network through surfacing with well graded materials to reduce dust generation.
- Limit vehicle speed on internal roads to 30km/hr to reduce potential dust lift off.
- Minimise dump heights from trucks, front-end loaders and conveyors, where practical.
- Where feasible and practical, and in accordance with safe use of explosive practices, schedule blasts (or re-schedule) to avoid windy conditions.
- Install a continuous particulate matter monitor at a location identified in the Air Quality Management Plan incorporating a trigger mechanism to notify Quarry personnel when 24-hour particulate matter levels approaches the guideline. Notifications to be provided by SMS and/or email to key Quarry personnel.
- Prepare and implement a site Air Quality Management Plan for the life of the Project. Regularly review and update the plan in accordance with the requirements of the Project Approval.

Biodiversity and Rehabilitation

- Engage in progressive rehabilitation as soon as practical after disturbance, in conjunction with the Biodiversity and Rehabilitation Management Plan.
- Document all rehabilitation works on site with yearly progress presented in the *Annual Review*.
- Only utilise flora species identified in the Biodiversity and Rehabilitation Management Plan for rehabilitation.
- Develop a Quarry Closure Plan a minimum of two years prior to the cessation of quarrying activities.
- Stockpile topsoils for rehabilitation and landscaping uses. Topsoil stockpiles will be no greater than 2m in height, not driven over and have a stabilising groundcover to limit dust lift-off and erosion.
- Design and construct watercourses and drainage features in the final landform to ensure long-term stability.
- Commission pre-clearance surveys by a suitably qualified and experienced person of the proposed disturbance area prior to vegetation clearance, to identify the presence of any threatened species, with particular attention given to the koala. If a koala or other threatened species are identified, operations will cease and appropriate authorities or regional animal care groups will be contacted for the safe removal and relocation of the koala(s) or other species identified.
- Implement a Biodiversity Offset Strategy to mitigate project impacts that cannot otherwise be managed.

- Implement a protocol for hollow-bearing tree removal and rehanging of hollows, as described in the Biodiversity and Rehabilitation Management Plan.
- Develop a Threatened Species Management Plan with attention given to threatened species on site, particularly the Koala. Additional attention will also be given to Endangered Ecological Communities found within the site: Spotted Gum-Ironbark Forest, Hunter Lowland Redgum Forest and Swamp Sclerophyll Forest on Coastal Floodplains.
- Management of sediment and erosion in accordance with the following:
 - Regeneration/replanting of exposed areas as soon as practical following exposure to enhance soil stability and eliminate run off,
 - Installation of erosion/sediment diversion bunds if required; and
- Application of sedimentation dams to collect “dirty water” on site, allow sediment to settle and then release “clean” water to EPA standards at the EPL approved discharge points.
- Prepare and implement a site Biodiversity and Rehabilitation Management Plan and/or monitoring program for the life of the Project. Regularly review and update the plan in accordance with the requirements of the Project Approval.

Waste, Surface Water and Groundwater

- Monitor groundwater levels in monitoring bores through use of continual monitoring equipment. Data will be extracted approximately every 6 months and reported upon in the *Annual Review*.
- Groundwater bore monitoring will include depth and temperature.
- Continual maintenance of the condition of existing settlement dams and the closed water system management.
- Installation of new settlement dams as required throughout the life of the Project.
- Any water discharge will be in compliance with Environmental Protection Licence (EPL) conditions.
- Obtain any required Water Access Licences.
- Monitor potential drawdown at nearby boreholes and the development of measures to address loss of bore yield, if any.
- Manage wastewater in accordance with the mitigation measures detailed in the Wastewater Impact Assessment.
- Update the effluent and wastewater management system during plant relocation in Stage Four. Any additional upgrades stipulated by the EPA or Council will be adhered to.
- Prepare and implement a Water Management Plan for the life of the Project. Regularly review and update the plan in accordance with the requirements of the Project Approval.

Transport

- Optimise Quarry design to minimise travel distances for equipment and the need for rehandling of overburden and aggregate materials.
- Reduce truck queuing, unnecessary idling of trucks and unnecessary trips through logistical planning, where possible.
- Compliance with the maximum number of truck movements per day nominated in consent conditions.
- Regularly service mobile equipment including optimising fuel economy for vehicles and maximum energy efficiency for other site equipment.
- Implement driver training to ensure all vehicles and machinery are operated at maximum efficiency.
- Ensure all drivers review and sign a Drivers Code of Conduct that directs driver behaviour during transportation activities. Issues addressed in the code of conduct would include:
 - advice for quiet driving practices and measures to reduce vehicle noise;
 - limiting the use of compression braking unless required for safety reasons;
 - advice for management of driver fatigue;
 - load covering for all laden vehicles;

- timing for departure and arrival to remain within approved limits and avoid convoying;
- management of breakdowns and incidents;
- awareness of school buses, school zones, pedestrians and cyclists on roads;
- use of preferred transportation routes; and
- limiting the use of local roads unless directed by emergency services.
- Breach of the Drivers Code of Conduct would result in, after two warnings, dismissal or cancellation of contract.
- Ensure the Drivers Code of Conduct is accessible on the Hanson website and the CCC is informed of compliance issues.
- Ensure heavy vehicle drivers use the transport routes presented in the EIS and the Drivers Code of Conduct with a requirement to avoid short cuts and unnecessary alternative routes while maintaining flexibility to use local roads for local deliveries only.
- Review the Drivers Code of Conduct from time to time in conjunction with the CCC to ensure alignment with community expectations.
- Prepare and implement a site Transport Management Plan and/or monitoring program for the life of the Project. Regularly review and update the plan in accordance with the requirements of the Project Approval.

Lighting

- Direct stationary/fixed lighting downwards with the height of the light source minimised. Where appropriate, full cut-off fittings would be provided to ensure only localised areas are illuminated.
- Position stationary/fixed lighting to direct light away from the surrounding vegetation.
- Position all lighting within the Processing and Stockpiling Area in locations/elevations that would maximise the illumination of the operational area yet minimises the amount of reflected light and light directed off site.
- Minimise light generation through the selection of bulbs generating yellow light rather than blue/white light. The selection would be guided largely by safety considerations.

Aboriginal and European Heritage

- Should any Aboriginal objects be encountered during works associated with the Project, works will cease in the vicinity and the find will not be moved until assessed by a qualified archaeologist.
- Works will immediately cease if suspected human remains are discovered. The NSW Police Force and the BCD's Environmental Line (131 555) will be contacted as soon as practical and provided with details and location of the remains. Work will not re-commence in this location unless authorised in writing by BCD and clearance provided by the Police, if required. If skeletal remains are deemed to be of Aboriginal origin, a representative of the local Aboriginal Community and the BCD are to be contacted.
- Inform key relevant Aboriginal stakeholders of any unanticipated discoveries for the life of the Project.
- If required, prepare and implement an Aboriginal Cultural Heritage Management Plan (ACHMP), which will detail the findings and management initiatives from the EIS Heritage Impact Assessment. Should archaeological deposits or sites be identified during the Project's life, salvage of features, retrieval of information through excavation or collection and interpretation will be investigated.

Greenhouse Gas and Energy

- Document and evaluate energy use of the Project in the Annual Review.
- Ensure the use of appropriately sized, high efficiency motors on all pumps, crushers & equipment.
- Variable speed drives will be provided on electric motors in order to ensure energy savings and to deal with the results of varying loads on equipment.
- Apply timer switches, where possible, to relevant electrical appliances and sensor lights installed where possible to reduce energy use.

- Consider fuel economy and energy use when sourcing company vehicles.
- Incorporate the use of alternative fuels when feasible and available.

Hazards

- Comply with objectives under State Environmental Planning Policy 33 – Hazardous and Offensive Development (SEPP 33) including the storage of hazardous chemicals or other materials.
- Ensure all Quarry-related activities are undertaken, where practicable, in cleared areas.
- Inspect all mobile equipment working in vegetated areas to ensure that they do not pose a risk of starting a bushfire. This will include inspection of exhaust and electrical systems, including, in the case of vehicles using unleaded petrol, catalytic converters.
- Ensure mobile equipment working in vegetated areas will not be left unattended with the engine running.

Bushfire

- Actively maintain vegetation to reduce fuel loads within the operational areas of the Quarry and in the vicinity of site infrastructure.
- Maintain an asset protection zone in accordance with the assessment of bush fire hazard.
- Ensure that mobile equipment is regularly maintained and inspected and avoids unnecessary access of vegetated areas where there may be a risk of igniting a fire.
- Provide access to strategic areas on the site and water for firefighting.
- Stockpile cleared vegetation with a minimum 10m cleared buffer zone.
- Create and maintain fire breaks in strategic locations for access and infrastructure.

Geotechnical

- Maintain Quarry pit slopes in accordance with geotechnical report submitted with the Project EIS and updated over the life of the quarry where adjustments are advised.
- Ensure benches are graded to ensure stormwater, seepage, and groundwater is drained off the bench towards the on-site water collection points (i.e. settlement dams).
- If batter slopes exhibit failure signs then all excavations will cease in the affected area and a geotechnical engineer will be consulted to determine the appropriate course of action.
- Construct batter slopes accordance with site geotechnical modelling.

Contamination

- Engage an accredited asbestos consultant to conduct a formal site audit prior to any demolition or works being undertaken on the site. The audit will:
 - Determine if there is any asbestos (and the precise location/extent of asbestos) in accordance with Australian Standard 4964 – “Method For the Qualitative Identification of Asbestos in Bulk Samples”.
 - Focus on maintenance areas, the storage shed and office, where appropriate.
- Undertake regular visual inspections to assess the state of pesticide storage and heavy metal storage on site to ensure compliance with hazardous materials storage management as outlined in Section 5.15.
- Undertake regular visual inspections to assess and ensure drums, containers and intermediate bulk containers (IBCs) are in a safe and suitable condition. Structural assessments will be conducted as and when required.
- Maintain above ground storage tanks (AST) in a safe and suitable condition and visually inspected regularly by site personnel. Structural assessments will be conducted as and when required.