UPDATED MITIGATION MEASURES TABLE	
APPLICATION NUMBER: SSD-70557215 – HILLVIEW HARD ROCK QUARRY	
KEY ISSUES	**MITIGATION MEASURES**
Biodiversity	A Flora and Fauna Management Plan (FFMP) will be developed following approval of the SSD application and prior to commencement that will incorporate all mitigation measures outlined in the BDAR, including timing, responsibility, and performance criteria. The FFMP will include a monitoring programme and allowance for adaptive management and response as a result of ongoing monitoring of threatened entities that could utilise the site, for which impacts are difficult to predict.
	Erosion Control: o Installation of erosion and sediment control measures prior to any works. o Regular inspection of erosion and sediment control measures, particularly following rainfall events, to ensure their ongoing functionality. o The immediate removal offsite of excavated material.
	Stockpiling: o Avoid stockpiling of materials adjacent to native vegetation, but instead use areas that are already cleared/disturbed. o Undertake maintenance of silt fences and other mitigation measures to isolate runoff.
	Dust Control: o Set maximum speed limits for all traffic within the subject land to limit dust generation. o Use a water tanker or similar to spray unpaved access tracks during the construction phase where required. o Apply dust suppressants or covers on soil stockpiles.
	Chemical Spill Control: o All chemicals must be kept in clearly marked bunded areas. o Regularly inspect vehicles and mechanical plant for leakage of fuel or oil. o No refuelling of vehicles, washing of vehicles or maintenance of vehicles and plant to be undertaken within 20m of natural drainage lines.
	Pre-clearing surveys: A suitably qualified ecologist must complete a preclearing survey at least one week prior to clearing of vegetation to identify fauna habitats present on site, followed by a final pre-clearing check 24 hours prior to clearing operations. These surveys are to be repeated should clearing be delayed for longer than one week. The Project Ecologist will conduct pre-clearing surveys to identify: o Resident native fauna (including threatened fauna species, where present), including nesting birds, arboreal fauna (e.g. possums, gliders, micro-bats, reptiles) occupying tree hollows and ground dwelling fauna (e.g. burrowing animals, such as wombats, bandicoots, etc.). o Fauna species likely to be encountered during construction and potential impacts to fauna during vegetation clearing. o Preferred locations to relocate fauna species and habitat features that can be retained following construction. o Surveys are to be identify and clearly demarcate important habitat features such as HBTs nests, potential shelter sites, ground habitat debris piles, rocks, coarse woody debris, epiphytes, crevices and/or standing dead trees.
	Dam Dewatering Protocols: o An Ecologist should be present during the dam dewatering process, to ensure all fish and fauna are safely and appropriately relocated downstream, outside of the clearing area. o Snags should be relocated in an appropriate, nearby watercourse. o Dewatering activities should be closely monitored by a suitably qualified person to prevent pollution in the form of sediment, toxic materials, or petroleum products. Sediment controls should be established, and testing of ground water should be

	undertaken before commencement of dewatering activities. o Water leaving the site through the dewatering of the two smaller dams must comply with the criteria in the Development consent and /or the ANZECC Water Quality Guidelines (2000). o Polluted water to be treated on-site before being discharged to the stormwater system, as required.
	Vegetation Clearing Protocols: o A Project Ecologist is to be present on site during all vegetation clearing operations. o Areas of vegetation outside the development footprint are to be clearly demarcated with high visibility tape to prevent accidental clearing during the construction phase. o Vegetation should be cleared in a way that will allow fauna species living in or near the clearing site enough time to move out of the area without additional human intervention. o No clearing should occur during the early evening or at night, as this is when fauna species are most likely to be on the move and are more vulnerable to injury. o Habitat links must be maintained during clearing to allow fauna species to move safely from the site to adjacent areas. o Clearing should begin in the area that is furthest from vegetation to be retained. o The direction of clearing should also ensure that fauna species are directed away from threats such as roads, developed areas or disturbed areas. o Sequential clearing should not create an 'island' of habitat that is isolated from adjoining habitat by roads or cleared and disturbed areas. o An unexpected threatened species finds protocol should be developed prior to the construction phase. o Best endeavours will be made to avoid clearing at temperatures greater than 35°C. o If any fauna species, nest, or roost is located during development works, then works should cease until safe relocation can be advised. o Clearing is to occur in outside breeding months for species present or likely present on site. The FFMP will provide further detail on vegetation clearing protocols to be implemented.
	Habitat Tree Removal: Habitat trees shall be carefully felled under the supervision of the Project Ecologist, following best practice guidelines including: o All habitat trees to be cleared are to be surveyed and marked with high visibility tape prior to clearing. o Hollows removed within the disturbance footprint are to be replaced at 1:1 ratio and located in suitable habitat within the project site. o Habitat trees are to be mechanically shaken or agitated prior to felling to encourage any remaining animals to either leave the tree or show themselves and subsequently be removed by the Project Ecologist prior to felling. o Felling will involve gently pushing the tree and lowering or felling using a forestry harvester to avoid sudden falling as this is likely to injure wildlife. o Following felling, habitat trees will be systematically checked from the ground by the Project Ecologist for any remaining fauna. o Any hollow-bearing trees unable to be thoroughly inspected shall be felled in one to two metre sections, beginning at the top of the crown. o Hollow bearing trees to be removed progressively prior to the start of vegetation removal, allowing a minimum of 48hrs once soft felled, for fauna to relocate at their discretion. o If any hollow-bearing tree is found or suspected to contain any threatened species, the tree should be left in place for a minimum of two days and, if possible, be reinspected no more than two hours prior to felling.

	Management of displaced fauna: o All handling of fauna species should be conducted by the Project Ecologist. o In the event that arboreal animals do not move, or they cannot be captured because the tree hollow to be removed is too large, too high or its recovery would breach OH&S requirements then the tree will be felled (i.e. in the direction of other tree debris if possible) and animals recovered and relocated to suitable adjacent habitat. o Animals are to be removed and relocated to the adjacent bushland/nest boxes within the Western Offset Area prior to felling or the tree shall be sectioned and dismantled under the supervision of the Project Ecologist before relocating the animals. o Nocturnal fauna species, such as microbats, are to be 'soft released' using bat boxes placed in adjacent habitat. o Nocturnal fauna species, such as gliders and possums, are to be secured in suitable enclosures and kept in a quiet, dark and cool environment until they can be released into suitable habitat after dark. o If any injured fauna species are found during the construction period, construction must stop immediately so that the injured animal can be taken to a vet or wildlife carer.
	Weed Management: Several weed species, including High Threat Weeds, were identified within the subject land. Accordingly, measures to prevent the spread of weeds should include the following hygiene procedures: o Induction materials containing detailed information pertaining to the identification of high threat weeds should be prepared by a suitably trained ecologist or bush regenerator. These materials should be provided to contractors who will carry out construction works within the subject land. o All vehicles, equipment, footwear and clothing should be clean and free of weed propagules prior to entering the subject land. o Any weeds that are removed during the construction phase should be disposed of via an appropriate waste facility.
	Monitoring and Adaptive Management: A monitoring program will be included in the FFMP that will provide for surveillance of threatened entities within retained bushland adjoining the subject land, including: o Dry rainforest patch located north of the subject land (PCT 3076), which represents Lower Hunter Dry Rainforest VEC, and could be subject to indirect impacts and prescribed impacts (see Section 8.3.2.1 and Section 8.6.2). o Riparian vegetation along Double Creek (PCT 3436 and 3074), which represents River-flat Foerst EEC and could be subject to indirect impacts and prescribed impacts (see Section 8.3.2.1 and Section 8.6.2). o Vehicle strikes on mobile threatened fauna (see Section 8.6). **The monitoring program will include:** o Passive surveillance of fauna (e.g. using infra-red cameras). o Records of fauna sightings from site staff. o Vegetation monitoring via establishment of permanent plots (using the Ecological Monitoring Method, or EMM) at selected locations within retained vegetation adjacent to the subject land. o Inspections of fauna habitats, including features relocated during site establishment, fauna crossing structures, nest boxes and other features.
	Time works to avoid critical life cycle events such as breeding or nursing.
	Implement clearing protocols (including pre-clearing surveys, daily surveys and staged clearing) and utilise trained ecologists or licensed wildlife handlers during clearing events.
	Relocate habitat features (e.g. fallen timber, hollow logs) from the development or clearing site to adjacent retained vegetation.

	Implement clearing protocols that identify vegetation to be retained, prevent inadvertent damage and reduce soil disturbance.
	Utilise adaptive dust management and monitoring programs to control air quality.
	Schedule the timing of construction activities to avoid impacts (e.g. timing the construction for when migratory species are not at the site, or when particular species are not at the site, or when particular species known to, or likely to use the habitat on the site, are not breeding or nesting).
	Erect temporary fencing to protect significant environmental features, such as native vegetation and riparian zones.
	Use hygiene protocols to prevent the spread of weeds or pathogens between infected and uninfected areas.
	Train staff and conduct site briefings to communicate environmental features to be protected and measures to be implemented.
	Prepare a vegetation management plan to regulate activity in vegetation and habitats adjacent to residential developments.
	Provide for the ecological restoration, rehabilitation and/or ongoing maintenance of retained native vegetation habitat on, or adjacent to, the development or clearing site.
	Install nestboxes within suitable host trees within areas of retained native vegetation onsite to replace tree hollows removed.
	Undertake ecological pre-clearance surveys of native vegetations areas.
	Vegetation clearing is to be staged (e.g. only one hectare is cleared at a time and allowing one week between clearing each hectare).
	No clearing should occur during the early evening or at night, when nocturnal fauna species are most likely to be active. The direction of clearing should also ensure that fauna species are directed away from threats such as roads, developed areas or disturbed areas (e.g. clearing direction from road at west end of site to vegetation at east end of the subject land.
	Ensure the direction of clearing directs fauna species away from threats such as roads, developed areas or disturbed areas. Stages clearing areas are to be mapped and numbered consecutively to allow for clearing to begin at disturbance end, with clearing works to be documented in post-construction report.
	Supervision of tree felling – the project ecologist or licensed wildlife handler is to be onsite during all native vegetation clearance.
	Pre-clearance surveys of vegetation within the subject land is to identify suitable habitat features for salvage (e.g. tree hollows, nests, fallen timber or hollow logs).
	Relocate and place salvaged habitat features into retained bushland on the subject land.
	Identify and mark areas of vegetation to be retained outside of the subject land with temporary chain mesh fencing lined with sediment fencing.
	Set maximum speed limits for all traffic within the subject land to limit dust generation.
	Utilise water tankers and spray unpaved access tracks during the construction phase where required.
	Apply dust suppressants or covers on soil stockpiles.
	Conduct pre-clearing surveys of retained native vegetation for evidence of breeding/nesting.
	Temporary fencing – areas of vegetation outside of the subject land are to be clearly demarcated with temporary chain mesh fencing to prevent accidental clearing during the construction phase.
	Weed management – all vehicles, equipment, footwear and clothing should be clean and free of weed propagules prior to entering the construction site. Construct a truck wheel wash at the site entrance.
	Any weeds removed during the construction phase should be disposed of appropriately.
	Onsite briefings – sensitive environmental areas (i.e. retained vegetation) are to be identified and communicated to quarry staff (and contractors) prior to starting work.
	A Flora and Fauna Management Plan is to be implemented for retained vegetation within the site.
	A Vegetation Management Plan is to be implemented to ensure weed removal and planting works over a minimum of 3 years. The VMP will aim to monitor retained vegetation against benchmark values (refer BioNet Vegetation Classification).

	Conduct annual inspections of nest boxes installed within trees within the site.
	Schedule the timing of construction activities to avoid critical life cycle events (e.g. timing construction activities to avoid migratory species on site, or using the site).
	Instigate clearing protocols, including pre-clearing surveys, daily surveys and staged clearing, and using a trained ecologist or licensed wildlife handler during clearing, construction and maintenance activities for human-made structures and non-native vegetation.
	Retain habitat features (e.g. fallen timber, hollow logs, rocks) within the subject land, or relocating them to adjacent retained remnant vegetation.
	Install artificial connectivity measures (e.g. glider poles, rope crossings, habitat bridges) to re-establish connections between habitat and favoured transport corridors.
	Erect temporary fencing to protect significant environmental features, such as karst, caves, rock outcrops and water bodies.
	Replace habitat provided by human-made structures and non-native vegetation with alternative habitat.
	Use sediment barriers or sedimentation ponds to control the quality of water released from the site into the receiving environment.
	Train staff and conduct site briefings to communicate environmental features to be protected and measures to be implemented to protect them.
	Ecologists to be present during dam de-watering activities.
	Implement monitoring of retained TEC vegetation to ensure no long-term decline in ecosystem processes and condition, within Lower Hunter Dry Rainforest VEC and Riverflat Forest EEC. Include performance criteria and TARP in FFMP.
	Implement regular testing of water quality of Double Creek and its tributaries prior to construction, during construction, post construction and at other times if deemed necessary.
	An ecologist is to be present during dam de-watering activities.
	Monitoring of fauna movements through potential corridors is to be conducted.
	An ecological monitoring program is to be implemented as part of the FFMP, monitoring Lower Hunter Dry Rainforest VEC and River Flat Forest EEC.
	A Rehabilitation Management Plan (RMP) will also be prepared to guide the staged soil management and planting of disturbed areas over the life of the project
	Adaptive Management Plan: An AMP must be prepared to address any remaining impacts where mitigation measures have not been proposed. In the case of the Project, the indirect and prescribed impacts on adjacent vegetation and fauna that will require adaptive management measures are: o Changes to hydrological regime for dry rainforest patch (Hunter Valley Whalebone Dry Rainforest, PCT 3076), which represents Lower Hunter Dry Rainforest VEC, as listed under the BC Act. The potential indirect impacts on this community, which lies outside of the development footprint, but within the site (indirect impact). o Vehicle strikes on mobile threatened fauna (prescribed impact). To minimise the risk of ongoing or long-term adverse effects on these two threatened entities, a 'Trigger-Action-Response-Plan' (TARP) will be included in the FFMP. The TARP will be based on monitoring results and data collected as part of ecological monitoring conducted prior to and during the construction and operation phases of the Project. The TARP will set out performance criteria, which will be related to the condition of vegetation in the dry rainforest patch and the number of animal sightings and collisions (if any) along the haul road, and associated actions and responses when criteria meet certain thresholds. The TARP will be updated as necessary over the implementation period of the FFMP.

Aquatic Ecology	An aquatic ecology monitoring program is to be development and implemented to verify impact predictions and trigger adaptive management if required. This monitoring is to focus on Double Creek and Brewers Creek and include: o Surface Water Monitoring: Continuation of baseline monitoring for water quality and flow rates to detect changes associated with quarry operations. o Biological Monitoring: Periodic sampling of macroinvertebrates (using SIGNAL2 and AUSRIVAS protocols) and fish assemblages to assess ecosystem health. o Habitat Assessment: Ongoing visual inspection of channel stability and riparian vegetation condition.
	A Dam Dewatering Plan is be prepared as part of the CEMP to manage the safe removal and relocation of aquatic fauna (such as eels and turtles) from farm dams located within the disturbance footprint prior to their decommissioning. Measures to prevent the proliferation of aquatic pest species (e.g. Gambusia) within site water storages should also be incorporated into site management plans.
Channel Stability and Stream Health	Double Creek, Brewers Creek and Cromarty Creek: o If deemed necessary, the proponent should adopt a risk-based approach for actioning any restoration or improvement works at identified erosion sites. o If possible, reduce or relocate the cattle grazing area away from riparian corridors to minimise trampling and grazing impacts. o Conduct weed management practices and Treatment of priority weeds in future land management works. Following commencement of quarry construction and then operation, the condition of creeks should be assessed and reported annually, particularly if there is degradation of condition attributable to the quarry.
Biosecurity	**Pest Management:** The Project will consider biosecurity management of pest animals generally in line with the 8 principles of the *Australian Pest Animal Strategy 2017-2027*. The procedures for management are to be established in the CEMP, OEMP and RMP, and in accordance with the management programs provided in the most recent version of the Hunter RSPAMP. The controlling of feral animals would be undertaken in line with the following processes: 1. Monitor the abundance of feral animals. 2. Identify suitable control methods for target species (e.g. trapping and/or baiting for European Rabbits and European Red Foxes). 3. Implement the selected control methods on the target species. 4. Re-monitor the abundance of feral animals to evaluate the effectiveness of the control methods. 5. Follow-up control where previous control has been sub-optimal. The control of feral animals is intended to be adaptive and will be informed/reviewed based on monitoring. A selection of the control techniques detailed in table 6 of the BMRA or additional techniques may be undertaken depending on the feral animal species which is in an abundance that requires control (as determined through monitoring) and the success of these control techniques. The control of feral animals is intended to be adaptive and will be informed/reviewed based on monitoring, and undertaken in accordance with relevant literature, including the Vertebrate Pest Control Manual (DPI, 2014), the NSW Threat Abatement Plan for Predation by The Red Fox (Vulpes vulpes) (OEH, 2011), and the Threat abatement plan for competition and land

	degradation by rabbits (DEE, 2016). Suitable approvals/permits must be obtained through the relevant authority prior to implementation of control methods. Feral animal control is to also be undertaken in consultation with neighbouring landholders. Programs to control feral animals would include the determination of appropriate control practices, consultation with appropriate authorities, obtaining appropriate approvals, implementing control practices, and undertaking follow-up monitoring and control as required. If a substantial increase in the numbers of any known feral fauna species, or the occurrence of a previously unrecorded feral fauna species, is discovered, advice would be sought from a suitably qualified and experienced person on the management and control options for that species and appropriate measures for mitigating any impacts caused by its management on native species.
	Weed Management: Weed control, if required, will be undertaken in a manner to minimise soil disturbance. Any use of herbicides would be carried out in accordance with the regulatory requirements, and with the mandatory management requirements of each weed as listed in the most recent version of the Hunter RSWMP available through the LLS. Records would be maintained of weed infestations and control programs would be implemented according to best management practice for the weed species concerned. These control programs are to be detailed in the CEMP, OEMP and RMP, or equivalent. Measures to prevent the spread of weeds should include the following hygiene procedures: o Induction materials containing detailed information pertaining to the identification of high threat weeds should be prepared by a suitably trained ecologist or bush regenerator. These materials should be provided to contractors who will carry out construction, operation and rehabilitation works within the subject land. o All vehicles, equipment, footwear and clothing should be clean and free of weed propagules prior to entering the subject land. This should include a truck wheel wash at entrance to quarry. o Any weeds that are removed during the construction, operation and rehabilitation phase should be disposed of via an appropriate waste facility. o Flora and Fauna Management Plan to include hygiene protocols to prevent the spread of weeds and pathogens. o Ongoing vegetation monitoring during operation documented in Flora and Fauna Management Plan reporting. o Six-monthly weed survey of retained vegetation during construction. Outcomes documented in post-clearing report. o Bush regeneration contractor to be engaged to undertake weed removal in the event weeds are detected in higher numbers (new species, HTEs, outbreaks, expansion of extent) retained native vegetation. o Annual vegetation monitoring including weed survey and review of planting to monitor vegetation for 3 years postconstruction, i.e. operation and rehabilitation. Outcomes to be reported annually.
	Disease Management: o **Controlled access to site:** Controlled access limits biosecurity risk by reducing the potential for introduction and spread of diseases from external sources. This would be achieved on the Project site by controlling who can access the site, maintaining an access log for all visitors, reducing transmission routes by limiting access to one main entry and exit point whenever possible, and promoting awareness of biosecurity issues for site visitors through signage at the site entry, and induction requirements prior to site access. The Project is to also limit the entry of non-Project related vehicles, machinery, and equipment into areas of the Project site beyond the specified delivery areas. A designated parking area for vehicles visiting the site must also be provided. All visitors would be required to park their vehicles inside the designated parking area unless it is essential that the vehicle be taken on-site. Any vehicle requiring access to site would be inspected and washed, if necessary, prior to entry.

	o **Vehicle wash down facilities:** Wash down facilities would be available on-site and available for use for all Project and non-Project related vehicles. All contractors would be required to 'arrive clean' and pass an inspection for weeds, seeds and pathogens, or otherwise utilise the washdown facilities prior to driving on-site to limit the spread of soil-borne diseases. o **Secure fencing:** Secure fencing would be installed around key project infrastructure areas to limit the movement of both pest and native animals which may carry or spread disease. o **Waste management facilities:** Waste management facilities would be provided on-site and emptied regularly to avoid garbage attracting vermin and flies, which can carry diseases. o **Site Maintenance:** The Project site would be maintained in a clean and tidy state to minimize areas where disease-causing organisms can thrive. This includes removing standing water, clearing away debris, providing for the regular removal of waste, and performing regular maintenance on all infrastructure and any buildings on-site. o **Training and inductions:** All workers and visitors would be subject to a site induction process prior to entering the Project site, which would determine their biosecurity risk prior to being granted access to the Project site. This process would consider the potential for visitors to have been previously exposed to a disease and the subsequent potential for them to introduce a disease on the Project site. The induction would also be used to communicate the biosecurity risks and associated mitigation obligations expected of all staff/contractors/visitors to site. Regular training and awareness of biosecurity risks and measures would be provided for staff in annual toolbox talks.
	Responsibilities: In accordance with the *Australian Pest Animal Strategy 2017–2027* (Invasive Plants and Animals Committee 2016) lists the following biosecurity responsibilities for landholders (public and private): o Detect and report new pest animal occurrences. o Control and manage established pest animals to mitigate, as necessary, the impacts on their own assets, or as required by regulation. o Take reasonable steps to minimise the impacts of established pest animals on other landholders, particularly through participation in programs of collective industry or community-led action, and on people and the broader environment. o Identify and manage all biosecurity risks, including risks associated with goods, vehicles and people entering the property. o Implement weed seed hygiene procedures to minimise establishment or spread of high risk weed species. o Cooperate with and plan pest animal management activities jointly with neighbours, as well as state, territory and local governments, within a landscape scale/cross-tenure approach. o Apply knowledge and skills to improve pest animal management and understand the need to use multiple approaches (e.g. chemical, physical, and biological) to prevent pest animals from adapting to existing controls. The *Australian Weeds Strategy 2017–2027* identify the following responsibilities for landholders (public and private) in managing weeds and plant diseases: o Control and manage weeds to mitigate, as necessary, the impacts on their own assets, or as required by regulation. o Take reasonable steps to minimise the impacts of weeds on other landholders, particularly through participation in programs of collective industry or community-led action, and on people and the broader environment. o Identify and manage all biosecurity risks, including risks associated with goods, vehicles and people entering the property.

	o Implement weed seed hygiene procedures to minimise establishment or spread of high risk weed species. o Cooperate with and plan weed management activities jointly with neighbours, including state, territory and local governments, within a landscape scale/cross-tenure approach. o Apply knowledge and skills to improve weed management and understand the need to use multiple approaches (e.g. chemical, physical, biological) to prevent weeds from adapting to existing controls The Project would be ultimately responsible for managing, monitoring, and implementing the biosecurity management activities of the Project in line with these responsibilities, including: o Reviewing and updating this BMRA. o Delivery of biosecurity training and information to Project personnel and any relevant contractors accessing the Project site, through use of inductions, toolbox talks, pre-start meetings, etc. o Recording and reporting on biosecurity matters or incidents as they relate to the Project.
	Training: The Project would undertake training to ensure that all project personnel are aware of the importance of biosecurity on-site, and their role in maintaining biosecurity integrity. This training would primarily be delivered through on-site induction training undertaken prior to work on-site. The Project would also facilitate on-going initiatives to maintain biosecurity awareness, including maintaining signage on-site and annual toolbox talks to reiterate the responsibilities of all personnel associated with the Project.
	Auditing and Reporting: The risk assessment process is to be audited on-site following any biosecurity incidents, and as required by direction from the Regulator. A summary of any required monitoring or operational data related to biosecurity is to be recorded and reported to Mid-Coast Council or the regulator, as requested. Incident notification and reporting is to be provided to the Department of Agriculture, Fisheries and Forestry as soon as reasonably practical. In the event of an emergency, in addition to notification of Mid-Coast Council, reporting is to also be made to the following agencies as necessary: o Emergency animal diseases: Hotline - 1800 675 888 (24 hours). o Emergency plant pest reporting: Hotline - 1800 084 881. o Aquatic pests and diseases: Hotline - (02) 4916 3877 (recorded 24 hour hotline). o LLS: To report locusts and agricultural damage in natural disasters call 1300 795 299. o Department of Agriculture, Fisheries and Forestry Biosecurity reporting line: 1800 798 636. Internal incident reporting and record keeping is to also be undertaken, including: o supply chain inspection reports. o records of disposal of biosecurity waste. o training records.

	o audit outcome records. o key performance indicators and compliance records. o processes implemented to mitigate additional and ongoing contamination events. o processes for managing non-conformities and corrective action.
	Contingency Planning: A Contingency Plan is to be developed as part of the CEMP, OEMP and RMP to be developed for the project, building on the following commitments: o Staff would be trained to recognise, report, and where possible limit the spread of priority invasive species and pest animals in the region. o In the event of an outbreak or discovery of a priority invasive species or pest animal, increased surveillance and monitoring measures would be implemented to detect and isolate affected areas wherever possible. o Emergency control measures such as quarantine procedures or intensified pest and weed management strategies, as advised by the Central Tablelands LLS, would be implemented. o A notification protocol would be established to promptly notify relevant authorities and stakeholders, ensuring coordinated efforts in managing the situation. Regular review and refinement of the contingency plan based on lessons learned from incidents is essential to continuously improve biosecurity resilience and minimise disruptions to operations and environmental health.
Noise and Blasting	Works will be carried out over the standard construction hours.
	Noise impacts are to be minimised. Community consultation would be ongoing for residences within close proximity to the works. The information would include details of the proposed works with the duration and nature of the works during construction.
	Alternatives to reversing alarms: o Avoid use of reversing alarms by designing site layout to avoid reversing. o Where reasonable and feasible, install less alternative typical 'beeper' alarms, whilst taking into account the requirements of the OHS legislation.
	Plan traffic flow, parking, and loading/unloading areas to minimise reversing movements within the site.
	Examine and implement (where feasible) alternative work practices and equipment use which would generate less noise, such as the use of electrical equipment instead of diesel or petrol powered equipment.
	Turn off plant and equipment when not in use.
	Ensure plant/equipment is regularly maintained and repair or replace equipment that becomes noisy.
	Equipment to be fitted with appropriate silencers and be in good working order.
	Communicate with construction workers (toolbox talks) about minimising noise and the potential to impact residents through their actions, including the use of equipment, use of radios during non-standard hours, avoiding shouting, minimal talking loudly and restrict the slamming or vehicles doors.
	Where noise is above the Highly Noise Affected 75 dB(A) the works may require respite periods by restricting the hours that the very noisy activities can occur, taking into account – times identified by the community when they are less sensitive to noise (such as mid mornings or mid-afternoons for work near residents), if the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.
	Minimise the duration of concurrent plant/machinery operating which could lead to exceedances in the Highly Noise Affected Level.

	Management Measures: o Any project specific mitigation measures identified in the environmental impacts assessment documentation or approval or licence conditions must be implemented. o Community consultation measures include: - Community based forums periodic notification (monthly letterbox drop or advertisement in papers). - Project info-line and construction response line - Email distribution list. - Signage. - Specific notifications – letterbox dropped or hand delivered to the identified stakeholder a week before events. Used to support periodic notifications, or to advertise unscheduled work. - Phone calls. - Individual briefings. - Project specific respite offers. - Alternative accommodation options. o All employees, contractors and subcontractors are to receive an environmental induction at least including: - All relevant project specific and standard noise and vibration mitigation measures. - Relevant licence and approval conditions. - Permissible hours of work. - Any limitations on high noise generating activities. - Location of nearest sensitive receivers. - Construction employee parking areas. - Designated loading/unloading areas and procedures. - Site opening/closing times (including deliveries). - Environmental incident procedures. o No swearing or unnecessary shouting or loud stereos/radios on site. No dropping of materials from height, throwing of metal items and doors slams. o A noise monitoring program is to be carried out for the duration of the work where required by the Construction Noise and Vibration Management Plan and any approval and licence conditions.
	Source Controls: o Where feasible and reasonable, limit construction to only the standard daytime working hours or even daylight hours. o Work generating high noise and/or vibration levels should be scheduled during less sensitive time periods. In conjunction with implementing respite periods with low noise/vibration-producing construction activities. o Where possible, concentrate noisy activities at one location and move to another as quickly as possible. o High noise and/or vibration generating activities may only be carried out in continuous blocks, not exceeding three hours each, with a minimum respite period of one hour between each block. o Use quieter and less vibration emitting construction plant, equipment and methods where feasible and reasonable. o Use only necessarily sized and power rated plant items required. Ensure equipment has quality mufflers installed. o Limit the operational noise levels of plant and equipment Sound Power Levels to be compliant with the noise emission limits used in the site Construction Noise and Vibration Management Plan (CNVMP). Noise emission limits should guide choice of any rental plant items. Implement a noise monitoring audit program to ensure equipment remains within specified limits. o Only have necessary equipment on site. Simultaneous operation of noisy plant within discernible range of a sensitive

	receiver is to be avoided. Maximise the offset distance between noisy plant and nearby sensitive receivers. Plant used intermittently to be throttled down or shut down when not in use. The loudest noise-emitting side of plant items should be orientated away from sensitive receivers. o Plan traffic flow, parking, and loading/unloading areas to minimise reversing movements within the site. o Consider the use of non-tonal reversing beepers (or an equivalent mechanism such as broadband alarms) fitted and used on construction vehicles and mobile plant regularly used on site. Other alternatives include manually adjustable or ambient noise sensitive types ("smart" reversing alarms) and closed-circuit TV systems. o Incorporate the following recommendations as part of the project Traffic Management Plan: - Loading and unloading of materials/deliveries is to occur as far as possible from sensitive receivers. - Dedicated loading/unloading areas to be shielded if close to sensitive receivers. - Delivery vehicles to be fitted with straps rather than chains for unloading, wherever possible. o Incorporate the following recommendations as part of the project Traffic Management Plan: - Vehicle movements outside construction hours, including loading and unloading operations, should be minimised, and avoided where possible. - The development site should be laid out so there is direct flow of mobile plant through the site to minimise or preclude, if possible, any required reversing. o Ensure equipment is well maintained and fitted with adequately maintained silencers which meet the design specifications. o Implement worksite induction training, educating staff on noise sensitive issues and the need to make as little noise as possible.
	Path Controls: o Consider installing temporary construction noise barriers. Install any permanent noise barriers required to minimise road traffic noise as early as possible in the construction process. Locate equipment to take advantage of the noise barriers provided by existing site features and structures, such as embankments, storage sheds and fences. Consider site topography and line of sight when situating plant. o Install noise-control kits for noisy mobile equipment and shrouds around stationary plant, as necessary, while ensuring WHS of workers is maintained (refer AS2436). o Locate noisy plant as far away from noise-sensitive receptors as possible.
	Receptor Controls: o Community consultation, information, participation, and complaint responses are essential aspects of all construction noise management programs. They typically involve: - A community information program before construction and/or high-risk activities are started. This usually involves a leaflet distribution and direct discussions and negotiations with affected residents, explaining the type, time, and duration of expected noise emissions. - The involvement of affected residents in the development of acceptable noise management strategies. - A nominated community liaison officer with a contact telephone number. - A complaints hotline. - Timely responses to complaints, providing information on planned actions and progress towards the resolution of concerns.

	Stage 4a: Northern haul road and RL105m RoM Pad development: o Development works associated with the construction of the RL105m RoM pad are to be limited to the day period (7am to 6pm). Predicted Stage 4a emitted noise levels to sensitive receivers adjacent to the development indicate compliance once dozer operations associated with development activities at the RL 105m RoM pad are restricted to day period operations only.
	Stage 5a: Development of Box Cut and Extraction at RL 206m: o The evening and night period noise goals can be achieved if blast preparation (drilling and dozer) is restricted to the day period. That is, only extraction of blasted material, haulage to the RoM pad and processing occurring after 6pm.
	Stage 5b: Extraction at RL 195m following initial quarry development: o The evening and night period PNTL can be achieved if blast preparation is restricted to the day period. That is, only extraction of blast material, haulage to the RoM and processing occurring after 6pm.
	Stage 6: Extraction from RL 158m to RL 126m and Progressive Final Landform Works: o The evening and night period PNTL can be achieved when blast preparation (drilling) and progressive final landforms works (dozer operations) at exposed locations are restricted to the day period. That is, only extraction of blasted material, haulage to the RoM and processing occurring after 6pm.
	Stage 7: Extraction down to RL95m and final landform: o Given the uncertainty relating to the design of the mine plan and details relating to the operation of processing plant and RoM areas once mining of the RL 105m RoM pad commences, it is recommended that specific amendments to the Noise Management Plan (NMP) for the site be developed and implemented following commencement of Stage 7, but prior to mining through of the RL 105m RoM pad. Mitigation and management actions specific to the issue may include: - Monitoring and/or review of noise complaints to ascertain whether minor exceedance of the PMTL may result in material impact at receivers R18 and R19. - Consideration of temporary noise barriers to minimise emission of noise from the processing plant. - Commitment to carry out processing activities only during the day period (as modelling indicates that the PNTL is achieved at this time).
	Blasting: o Reduce the maximum instantaneous charge and use of appropriate delays; o Establish blast times in accordance with prevailing meteorological conditions. o Optimise blast design. o Orientate blasts away from receivers (where possible). Notify neighbours of planned blasts and monitoring of overpressure and ground vibration of blasts as they occur.
	No trucks are to enter or queue near or on Maytoms Lane prior to 7:00am.
Air Quality	An Air Quality Management Plan (AQMP) is to be prepared to ensure effective management and measurement of particulate emissions.
	Dust monitoring near impacted sensitive receptors, in conjunction with reactive management of adverse dust levels by site management must be conducted. The existing monitoring network and capabilities should be expanded to include monitoring of the dust fractions that may result in health-related impacts (from the inhalation of fine particulates), e.g. PM_{10} and at the locations where exceedances occurred in air quality assessment modelling, which are: o Receptor R12: 2035 The Bucketts Way. o Receptor R19: 29B Booral-Washpool Road.

	o Receptor R20: 400 Washpool Creek Road.
	Enforce a maximum speed of 40km/h on unsealed haul and internal roads.
	Apply water sprays on trafficable areas (approximate rate 2 L/m^2/h) as required during normal operations.
	Increase water sprays (greater than rate 2 L/m^2/h) during periods of peak export to roads.
	Apply water sprays or other suitable alternatives on processing plant and equipment to maintain material in a moistened state.
	Investigate additional dust controls on equipment, and for the machinery not shown to contribute the highest portions of dust (e.g. excavators).
	Route Planning should include: o Choice of route which avoids constant uphill and downhill driving or city driving with many stops and starts which may increase fuel consumption by more than 50%. o Avoidance of driving into a headwind as an additional 10m/s may increase fuel consumption by 18%. o Choice of roads with reduced rolling surfaces as increased rolling resistance may increase fuel consumption by 10-20%. o Avoidance of additional stops: A stop very 10km increases fuel consumption by approximately 35%. o The use of GPS may improve choice of route to ensure the most direct and efficient route is chosen.
	Reduction of Scope 1 GHG Emissions: o Review energy usage equipment – consideration should be given to the lifecycle cost advantages of using energy efficient equipment. o Review operational initiatives such as turning off idle equipment and workshop/office appliances. o Review settings of air conditioning equipment if appropriate in office building. o Review the us of automatic lighting in amenity and meeting rooms.
Water	**A Water Management Plan is to be prepared which includes:** o Sediment and Erosion Control Plan. o Site Water Balance. o Surface Water Management Plan. o Groundwater Management Plan. o Dewatering Management Plan.
Surface water	<u>Baseflow Reductions</u> The proponent is to secure adequate WSP licence allocations for groundwater source zones predicted to experience water take.
	<u>Runoff Water Quality</u> **Construction Phase:** An Erosion and Sediment Control Plan (ESCP) will be prepared as part of the site Construction Environmental Management Plan (CEMP). The ESCP and CEMP will prescribe requirements for: o Physical mitigation measures as outlined within Section 8 of the Surface Water Assessment by SLR. o Water quality in the sediment basin will be tested following rainfall and prior to release from site and treated to achieve the required water quality. o Inspection of ESC measures following heavy rainfall. o Water quality monitoring and reporting requirements. o Providing an appropriate level of resourcing for environmental management and monitoring.

	Operational Phase: A Water Management Plan (WMP) will prescribe requirements for: o Monitoring and reporting of surface water quality in accordance with the EPL. o Monitoring and treatment of water quality in sediment basin prior to release from site and treated to achieve the required water quality. o Procedures for erosion and sediment controls for ground disturbance activities. o Requirements for storage and use of hydrocarbon and chemicals, and a Spill Management Plan (SMP).
	<u>Chemical or Hydrocarbon Spills</u> The following requirements will be captured in the CEMP during the construction phase and a WMP during the quarrying operations: o Fuel tanks – diesel tanks must not be located proximate to watercourses or overland flow paths. All fuel storage tanks must be located within a bund or be self-bunded tanks. o Hazardous materials – hazardous materials and equipment will be stored in accordance with Australian Standard AS/NZS 4452:1997, in bunded areas under roof and located away from watercourses. o Spillage – spill kits will be kept on site, and staff trained in their use. o Spill Management Plan – during construction and operations, the site will have a Spill Management Plan (SMP) which details the emergency response and reporting requirements in the event of a spill. Water Quality Monitoring of sediment dams will include a visual check for the presence of hydrocarbons (coloration, oil sheen/film).
	<u>Catchment Yield and Environmental Flows</u> The following requirements will be captured in the CEMP during the construction phase and a WMP during the quarrying operations: o A discharge point will be established to release clean water to Double Creek to maintain flows. o A WMS will be developed which includes an array of water storages to contain an control runoff at the project. The WMS is to be strategically designed to ensure poor quality water does not leave the site an interact with Double Creek and the downstream catchment. o A WMP will be in place to ensure water quality at the site is tracked and within national/site-specific standards, and an investigation will be conducted in the event non-compliant water quality is detected to mitigate impacts to the catchment and downstream flows. Water Quality Monitoring of sediment dams will include a visual check for the presence of hydrocarbons (coloration, oil sheen/film).
	<u>Dredging / Reclamation Activities and Proximity to Oyster Aquaculture</u> An ESCP will be prepared as part of the site CEMP. The ESCP and CEMP will prescribe requirements for: o Physical mitigation measures as outlined in Section 8.0 of the Surface Water Report by SLR. o Inspection of ESC measures following heavy rainfall. o Water Quality monitoring and reporting requirements .

	Construction Phase Any potential impacts to surface water quality from runoff from the quarry are to be adequately managed by sequencing construction, progressive revegetation of disturbed areas, and implementation of erosion and sediment control measures. Control measures will include sediment dams located downslope of the extraction area which collect runoff from the staged clearing of the extraction area, and the final landform surface of the quarry. Sediment dams will contain runoff from a 5-day, 95th percentile design storm. Controls during construction will be managed in accordance with a CEMP.
	For surface water, minimum requirements for inclusion within the WMP include: o Water quality monitoring from the three locations. Water quality monitoring is to include monitoring at the two background locations in addition to water quality monitoring at the LDP to be established at the Farm Dam. The Project water quality monitoring will initially be only from the existing Farm Dam, on the basis that this will be representative of all activities associated with the quarry. o A Surface Water Monitoring Program to incorporate water quality testing for the suite of analytes identified in Table 32 and Section 11.4.2 of the Surface Water Report by SLR. o Quarterly data review of monitoring results, and comparison to the trigger and background water quality. o Annual reporting of monitoring results, and comparison to the trigger and background water quality. o ESCP for ground disturbance activities. Requirements for storage and use of hydrocarbons and chemicals, and a Spill Management Plan.
	Operational Phase ESC measures and site management practices during operation should include: o The controlled release of water during extended wet weather to reduce the possibility of unplanned discharge of untreated water overtopping site storages. o A wheel wash/vehicle wash for all exiting vehicles or access road to reduce tracking of dirt and mud onto the access road. o Access road surface should be sealed. o Progressive revegetation of disturbed surfaces.
	Monitoring, plans and programs are to be undertaken in accordance with Section 11.0 of the Surface Water Report prepared by SLR, including: o Water Management Plan. o Surface Water Monitoring Program. o Surface Water Monitoring Trigger Value. o Surface Water Response Plan. o Pre-extraction Channel and Bank Stability Monitoring Program. o Storage and Use of Hydrocarbons and Chemicals. o Nitrates from Explosives. o Containment within Infrastructure Area. o Unplanned Discharges. o Post Extraction Monitoring and Management.

	All materials stored on site which have potential to adversely impact water quality in the downstream receiving environment will be stored: o Under roof, and if stored within a bund, the bund will have a capacity of at least 110% of the stored volume; and/or o If not under roof, within a bund that has a capacity of at least 110% of the stored volume plus rainfall from a 10-year 72-hour rainfall event, and suitable arrangements to treat captured water/liquid; and/or o In accordance with best practice and the Australian Standard for the storage and handling of toxic substances AS/NZS 4452:1997. Requirements will be fully described in the CEMP and WMP.
	A Flood Emergency Response Plan (FERP) should be prepared as part of operational management documentation – noting that the haul road may be inundated during extreme flow events along Double Creek, and that the quarry extraction area is not within a flood prone area and provides safe refuge during extreme flood events.
	A Dam Dewatering Plan will be prepared as part of the CEMP. The plan will identify the proposed method(s) to dewater the dam, treat any water that will be discharged to Double Creek and provide Ecologist supervision.
	The storage capacity of sediment dams will be actively managed in order to comply with the 'Blue Book' requirements. The following operations and maintenance actions will be carried out to ensure compliance: o the dams must be dewatered within 5 days following rainfall, to ensure the available storage capacity is equal to the 'settling zone' volume. o the dams must be desilted when the volume of accumulated sediments exceeds the 'sediment storage zone' volume. The following actions should also be undertaken to assist in the operation and maintenance of site sediment dams: o Installation of depth markers (volume-stage) to indicate key dam levels/storages (so levels can be easily identified to prompt management actions at target depths). o Inspections of the sediment dams will be carried out following heavy rainfalls.
	During extended dry periods (e.g. 10th percentile rainfall), implementation of the following strategies should be implemented to safeguard water availability and enhance resilience: o Reduce process water demand by lowering production rates. o Minimise the dust generating footprint by restricting trafficable areas and applying dust suppressants or mulch. o Truck in water to supplement onsite supplies.
	<u>Closure Phase</u> An ESCP will be prepared for the closure activities, and will consider controls such as: o Staging of works to limit disturbance area. o Perimeter sediment controls. o Temporary drainage works such as contour banks to limit the lengths of overland flow. o The use of cover crops and/or mulches to provide temporary ground cover.
Groundwater	Acquire a Water Access Licence to cover the inflow from the Myall Volcanics.
	A Dewatering Management Plan (DMP) will be prepared outlining responsibilities, controls and procedures to mitigate potential environmental impacts with operational dewatering.

	A Water Management Plan (WMP) with Groundwater Management Plan (GWMP) appendix will be created prior to operation to provide appropriate mitigation for the groundwater environment and to prevent significant adverse impacts.
	Develop and implement an Environmental Management Plan (EMP) to sufficiently manage the risk of water quality impacts, including mobilisation of contaminants, accidental spills, disturbance of sediment and/or stormwater mismanagement during the construction/operational and rehabilitation phase of the project, such that there is negligible impact to water quality. The EMP will include appropriate sub-plans for Soil and Water Management and Stormwater and Erosion Control Management. These sub-plans will identify all reasonably foreseeable risks relating water pollution, soil erosion and stormwater pollution, soil erosion and stormwater pollution associated with the project; describe how these risks will be managed and minimized during construction and include arrangements for managing pollution risks associated with contamination, spillage, soil erosion and stormwater management within the vicinity of the Project. The plans and their requirements are detailed further in the Surface Water Assessment.
Heritage	General – The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Regulation 2019, under the National Parks and Wildlife Act 1974.
	An Unexpected Finds Procedure for cultural materials and human remains (Appendix C) will be implemented during all works.
	Should any Aboriginal objects be uncovered during works; all work will cease in that location immediately and the Unexpected Finds Procedure followed and the Environmental Line contacted.
Traffic and Transport	A detailed Construction Traffic Management Plan is to be prepared at the construction certificate stage prior to construction, to be approved by Council.
	Regular understorey trimming of trees located within the road reserve is to occur to ensure unobstructed sight lines are provided.
	A Driver Code of Conduct and Operational Management Plan is to be implemented to ensure that during holiday periods, all trucks turn left out onto the Pacific Highway and use the Karuah interchange to turn around and travel south.
	Right turns on to Pacific Highway/Bucketts Way are to be reviewed prior to 2031 to determine if right turns onto the Pacific Highway are to continue or all heavy vehicles need to turn left out onto The Bucketts Way and utilise the alternate travel route (Karuah Interchange) in conjunction with other approved quarries.
Land Resources	Appropriate erosion and sediment control measures are recommended for the whole site.
	A Flora and Fauna Management Plan (FFMP) will be developed following approval of the SSD application and prior to commencement that will incorporate all mitigation measures outlined in the BDAR, including timing, responsibility, and performance criteria.
	Develop and implement an Environmental Management Plan (EMP) to sufficiently manage the risk of water quality impacts, including mobilisation of contaminants, accidental spills, disturbance of sediment and/or stormwater mismanagement during the construction/operational and rehabilitation phase of the project, such that there is negligible impact to water quality.
	Vegetation clearing protocols are to be implemented.
	Sheild mobile equipment behind the active edge of the processing pad (where possible).
	Retain vegetation around disturbance area and along road frontages.
	Maintain the site in a clean and tidy condition.

Waste Management	Waste streams will be classified and managed in accordance with the principles of the waste management hierarchy and EPA guidelines.
	All waste or redundant materials generated by the project would be reused or recycled where feasible and reasonable.
	All wastes will be stored in appropriate containers/receptacles that are lidded where practical, within designated waste storage areas.
	All wastes will be collected for reuse/recycling/disposal by appropriately licensed waste contractors.
	Transport of wastes to recycling or waste disposal facilities would be undertaken by appropriately licensed waste contractors.
	Overburden would be re-used at the site for fill or bunding or will be stored at the site for reuse during rehabilitation.
	Any waste oils, greases and lubricants would be stored in designated drums prior to their removal for recycling or disposal.
	Any soils contaminated through fuel or chemical spills would be excavated and transported to a licensed waste facility and the resulting excavation would be filled with suitable clean soil.
	Any weed species that area cleared for the proposal would be disposed of at a licensed green waste disposal facility or landfill.
	General wastes will be segregated into recyclable and on-recyclable streams through the provisions of appropriate split receptacles bins.
	Site inductions for employees and contractors will include waste management information.
	Appropriate signage will be provided at all waste storage areas to clearly identify waste segregation and recycling procedures.
	This WMP will be retained on-site during the excavation and construction phases of the development, along with other waste management documentation (e.g. contracts with waste service providers). Responsibility for the WMP, waste documentation and processes during the excavation and construction phases will be with the site manager or builder. A logbook that records waste management and collection will be maintained on site, with entries including: o Time and date of collections. o Description of waste and quantity. o Waste/processing facility that will receive the waste. o Vehicle registration and company name.
Waste Water	Operation – Treatment System Reduce the potential for sludge build up and impacts in the treatment tank by: o Using sink drainers and scraping plates before washing to reduce food scraps entering the system. o Minimising disposal of oils and fats down the sink. o Disposing of hygiene products appropriately. Reduce Impacts on the biological processes within the treatment system and LAA by: o Using soaps and detergents that are biodegradable, low-phosphorus and low in sodium. o Avoiding the use of bleaches and disinfectants. o Not putting chemicals down the drain. o Installing water conservations fixtures in the amenities. o Reducing the volume of water used within the amenities. o Using water conserving shower heads and toilets.

	<u>Maintenance – Treatment System</u> o Engage the services of a reputable company to periodically service the secondary treatment system on a frequency specified in the NSW Health accreditation for the system. o Monitor the alarm panel for problems with the aeration blower or irrigation pump and contact the service technician if it activates. o Monitor the treatment system for unusual sounds, smells or vibration and contact the service technician if it a problem is detected. o Periodically clean the irrigation filter if advised by the service technician.
	<u>Maintenance – Land Application Area</u> o Periodically mow the irrigation area and remove the grass clipping. o Monitor the irrigation equipment for signs of damage or failure. Replace or repair as required or discuss with the service technician. o Monitor the condition of the LAA for surface ponding and wet spots and discuss with the service technician if observed. o Ensure that the appropriate effluent warning signs remain in place and visible to persons entering the LAA. o Avoid the placement of seating or recreational equipment within the LAA. o Restrict access to the LAA from vehicles and other mobile equipment.
Bushfire	Land within a radius of not less than 50m around the office and weighbridge structures is to be established and maintained as an Asset Protection Zone (APZ).
	The APZ is to be maintained in accordance with the requirements for an Inner Protection Area (IPA) as described in Appendix 4 of Planning for Bushfire Protection 2019. When established and maintaining an IPA the following requirements apply: o Tree canopy cover should be less than 15% at maturity. o Trees at maturity should not touch overhang the building. o Lower limbs should be removed up to a height of 2m above the ground. o Tree canopies should be separated by 2m to 5m. o Preference should be given to smooth-barked and evergreen trees. o Large discontinuities or gaps in vegetation should be provided to slow down or break the progress of fire towards buildings. o Shrubs should not be located under trees. o Shrubs should not form more than 10% ground cover. o Clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation. o Grass should be kept mowed (as a guide, grass should be kept to no more than 100mm in height). o Leaves and vegetation debris should be removed.
	Construction of the office and any other buildings/structures proposed on the land is to be wholly non-combustible construction.
	A Bushfire Management Plan (BMP) is to be prepared and implemented prior to the commencement of works on the proposed development.

	A Bushfire Emergency Management and Evacuation Plan (BEMEP) is to be prepared and implemented prior to the commissioning of the proposed hard rock quarry. The BEMEP is to be prepared consistent with the NSW RFS document: A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan. A copy of the BEMEP is to be provided to the Local Emergency Management Committee for its information prior to commissioning of the development.
	A 20,000L fire fighting water supply shall be provided adjacent to the office building. The water supply shall comply with the requirements of Table 7.4a of 'Planning for Bushfire Protection 2019'.
	A Bushfire Emergency Management and Operational Plan (BFEM&OP) shall be prepared for the hard rock quarry development. A copy of the BFEM&OP shall be located at the quarry office. The BFEM&OP shall include: o 24 hour emergency contact details including alternative telephone contact including a provision for the details to be displayed on the entrance gate. o Site infrastructure plan – road, voids, buildings etc. o Firefighting operations plan including: - Type and location of hazardous materials. - Location and access to on-site firefighting water supply. - Detailed measures to prevent or mitigate fires igniting. - Work that should not be carried out during total fire bans. - Availability of fire suppression equipment, access and water. - Appropriate bushfire emergency management planning.
Explosives	All contractors transporting explosives will be suitably licensed to handle an transport explosive materials, in accordance with SafeWork NSW requirements. All explosives are to be transported to the site in accordance with the 'Australian Explosives Code', 'Australian Dangerous Goods Code' and 'NSW Explosives Regulation 2024'.
Drinking Water	In accordance with the Public Health Act 2010 and Public Health Regulation 2022, a Quality Assurance Program (or drinking water management system) is to be developed and adhered to. The completed Quality Assurance Program is to be submitted to Hunter New England Health.
Hazardous and Offensive Development	As explosives will be transported to site for use (but not stored) the Department of Planning, Housing and Infrastructure should be consulted for advice. This advice may also include information included within the specialist advice reports (i.e. noise, air quality and emissions).
	The dangerous goods shall be stored in a manner which complies with the applicable storage standards and regulations (i.e. AS/NZS 3833:2007 – The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers, AS 1940-2017 – the storage and handling of flammable and combustible liquids, AS 3780:2023 – Storage and handling of corrosive substances, NOHSC:2017(2001) – National Code of Practice for the Storage and Handling of Workplace Dangerous Goods).
	The documentation required by the Work Health and Safety Regulation 2017, applicable to the site dangerous goods storage(s), shall be prepared for the site prior to occupation.
	Review of the dangerous good storage design against applicable Australian Standards to ensure that the risks posed have been managed 'So Far As Is Reasonably Practicable (SFARP).

	Where flammable gases or liquids are stored, a hazardous area classification in accordance with AS/NZS 60079.10.1:2002 – Explosive atmospheres Classification of areas – Explosive gas atmospheres, shall be prepared to ensure that an ignition source does not enter a hazardous atmosphere as required by the WHS Regulations.
Visual	To the greatest extent practicable, the site will be quarried in a manner that enables mobile equipment to remain shielded behind the active edge of the processing pad.
	Vegetated areas will be retained around the disturbance area and along road frontages.
	Lighting will be directed downwards and away from residential dwellings and public roads in accordance with relevant Australian Standards (AS4282 – Control of the Obtrusive Effects of Outdoor Lighting).
	The site will always be maintained in a clean and tidy condition.
Social and Economic	Ongoing Community Engagement: The applicant should develop and implement community/stakeholder engagement plans and structures during all stages of the proposed development. During the development/construction stage, it is recommended that provision for keeping immediate land occupants advised on activity can be included in a more general management plan for these works. This may need to be extended to include other part of the community with respect to any planned disruptions during work on the Maytoms Land/The Bucketts Way intersection.
	Complaints Handling Mechanism: The engagement structure should also include the mechanism for the receipt, management and resolution (where possible) of complaints from the public.
	Community Consultative Committee: During the operational life of the quarry, the applicant may consider the establishment of a Community Consultative Committee (CCC) as an effective structure for regular, formal engagement with the community. Should it be determined that a CCC should be established for the quarry, it is recommended that an independent chair be appointed, as the arbiter of the CCC's charter/rules of operation.
	Recommendations of Technical Reports: To the extent that they may contribute to avoidance, minimisation or mitigation of social impacts, the recommendations proposed in specialist technical reports forming parts of the EIS are endorsed. These should be implemented as recommended by the respective technical specialists.
	Economic: o Where feasible, employ a locally and/or regionally based workforce. o Endeavour to conduct procurement activity within NSW. o Voluntary contributions to the local community, should be undertaken in consultation with relevant community representatives, to ensure community value is maximised.
Rehabilitation	A Rehabilitation Management Plan will be developed prior to the commencement of operations, consistent with relevant guidelines and in compliance with the required rehabilitation outcomes outlined within conditions of the development consent.
	Opportunities to implement progressive rehabilitation will be identified as part of annual rehabilitation planning processes.
	Prior to the commencement of operations, or as required by the conditions of consent, the proponent will develop a Conceptual Closure Plan (CCP). The CPP will incorporate a detailed Final Land Use Options Assessment of the PFLU and other final land use options. The CCP and final land uses will be progressively refined during the life of the operation.
	The rehabilitation and disturbance schedule for implementation will be incorporated into the RMP and reviewed annually.
	Detailed rehabilitation methodologies will be documented within the RMP and site procedures prior to the commencement of operations.

	A Ground Disturbance Permit (GDP) process will be established and implemented for all ground disturbance works within the Project Approval boundary in accordance with the GDP Procedure. All clearing activities will be undertaken in accordance with the site approval conditions, site management plans/standards and the conditions contained in the GDP. All works are to be undertaken in an environmentally responsible manner to ensure the conservation of the natural environment as far as practicable.
	Prior to clearance activities commencing as part of the GDP process, suitably qualified personnel would conduct a fauna survey to minimise the risk of any resident fauna becoming displaced or injured. Additionally, the presence of a trained ecological or licensed wildlife handler would be maintained during native vegetation clearance and clearance of rock areas.
	A rehabilitation monitoring program will be undertaken in accordance with best practice standards. Early intervention and adaptive management to minimise the potential for rehabilitation failure will be implemented. The RMP developed for the project will include a rehabilitation Trigger Action Response Plan (TARP).
	A rehabilitation quality assurance process (RQAP) will be developed and incorporated into the RMP. The RQAP will be implemented through every phase of rehabilitation. The RQAP will also include an inspection protocol to ensure that each phase of decommissioning and rehabilitation has been completed.