APPLICATION Mining Act 1971 and Mining Regulations 2011

Government of South Australia
Department of State Development

EXPLORATION PROGRAM FOR ENVIRONMENT PROTECTION AND REHABILITATION (PEPR)

USE THIS FORM TO:	Apply to conduct mineral exploration activities not covered by the generic PEPR (Ministerial Determination 001) for a 12-month period on one or more exploration licences (ELs), retention leases (RLs) or mineral claims (MCs) in South Australia.

Refer to the determination for exploration PEPRs (Ministerial Determination 013) when completing this application. Further information on exploration requirements in South Australia is available on the Department of State Development (DSD) Minerals website <www.minerals.statedevelopment.sa.gov.au>.

SECTION A – GENERAL DETAILS

PEPR approval period	**12-month approval period, with an additional 3 months to complete all rehabilitation** This PEPR is suited to explorers that have not worked in an area before and are more likely to conduct short-term or intermittent exploration programs. For further information refer to Minerals Regulatory Guidelines MG22, *Guidelines for conducting mineral exploration in South Australia*.			
Tenement details	Retention Lease 132 (previously Mineral Claim 4405) and Extractive Minerals Lease 5713			
Tenement holder(s) (for each tenement)	Hanson Construction Materials Pty Ltd			
Operating company	Hanson Construction Materials Pty Ltd			
Agency agreement (if applicable)	NA			
Project supervisor/contact person(s)	James Rowe – South Australian Manager, Groundwork Plus (Quarry Consultant) South Australian Quarry Managers Certificate of Competency (No 521) Western Australian Quarry Managers Certificate of Competency (Cert – 901 – 049050) South Australian Blasters Licence (3078) Certified Practising Quarry Manager (CPQM) Institute of Quarrying (Fellow) and Vice Chairman of the South Australian Branch			
Project/prospect name	Kanmantoo Bluestone Quarry			
Location details	Proctor Road, Kanmantoo			
Project description, commodity type and mineralisation model	Exploration drilling for dolomite deposit within RL 132 and EML 5713. Seed Hole Blasting and monitoring of drilled holes in order to obtain vibration and air overpressure data used in modelling potential environmental impact of full scale quarry blasting events to sensitive receivers. Related to risk assessment of blasting for Mining Lease Proposal.			
Proposed project schedule	Start date	03/04/2017	End date	03/03/2019

Note: Where rehabilitation is not completed within 3 months after the expiry of the 12-month approval period, adequate justification must be provided within the annual exploration compliance report. For further information, refer to Minerals Regulatory Guidelines MG22.

DECLARATION

In accordance with regulation 65(8), the information contained in this application is to the best of my knowledge true and accurate.

Name	James Rowe
Position	South Australian Manager
Company	Groundwork Plus
Email	jrowe@groundwork.com.au
Phone	0448 392 576
Date	January 2019

I agree ☒

SECTION B – PROGRAM PREPARATION AND ACCESS TO LAND

Work undertaken in preparing the proposal

Summarise the research and fieldwork undertaken in preparing the proposal including:

- desktop reviews of existing information
- field visits for reconnaissance and landowner consultation purposes
- contractor consultation (i.e. equipment scale, type)
- other information used when planning the proposed program.

1. Notice of Entry (NoE) gained from landowner (Mrs Beverley Faulkner) and EL holder (Hillgrove Resources).
2. Additional meetings both on the phone and in person with ElectraNET and DSD have been undertaken to give clarity of the proposed works to be undertaken on the site.
3. Updated Local Council (Mount Barker) on plans to drill the area
4. Consultation with blast and drilling consultants to understand scope of work in regard to drilling and blasting on the tenement
5. Desktop Groundwater Assessment by Australian Groundwater Technologies (AGT) to understand groundwater levels within exploratory drilling / future extraction areas. (MLP expected to follow).

Land use and tenure

Using the table below, select the land tenure and land use that the proposed exploration activities will occur in. Include additional information where prompted.

Land tenure	Applicable
Freehold	☒
Pastoral lease	☐
Perpetual lease	☐
Crown land	☐
Mining reserve	☐
Aboriginal land (e.g. Anangu Pitjantjatjara Yankunytjatjara and Maralinga Tjarutja lands)	☐
Forestry reserve	☐
Marine reserve	☐
National parks, conservation parks, conservation reserves, regional reserves*	☐
<If national parks is selected, please provide the name of the park here.>	
Other*	☐
<If other is selected, describe the land tenure here.>	

Land use	Applicable
Grazing	☒
Cereal/cropping	☐
Residential	☐
Township	☐
Industrial	☐
Tourism	☐
Conservation	☐
Defence – Woomera Prohibited Area (WPA)	☐
Defence – Cultana	☐
Road reserve	☐
Native vegetation heritage agreements*	☐
<Provide the name of the area here.>	
Orchard/vineyard	☐
European heritage sites	☐
<Provide the name of the site here.>	
Sites of scientific significance (geological monuments, fossil reserves etc.)	☐
Other (e.g. historic mining)	☐

* Indicates more information required in field immediately below.

Provide any additional information, if required.

Drill Rig boom approximately 5m (height). Electricity transmission lines >10m height. Travelling under electricity transmission lines will occur with boom in down position. No drilling within 80m buffer of transmission lines. No risk of striking transmission lines.

Woomera Prohibited Area (WPA)

Will activities be conducted within the WPA? If yes, indicate if you have an access permit in place.	Yes ☐	No ☒
<If yes, include text here.>		
What is the expiry date of the access permit?	<Include date here.>	
Identify closure periods that may impact on the exploration program.		
<Include text here.>		

Native title

Using the table below, describe how you have complied with the requirements of Part 9B of the Mining Act for each tenement (for further information refer to Minerals Regulatory Guidelines MG22).

Native title			
Is the proposed area of exploration located on native title land?		Yes ☐ No ☒ (If no, no further information in this section is required.)	
Are there registered native title party/parties in the area of proposed exploration?	Yes ☐ No ☒	<Provide the names of the determined/claimant group here.>	If no, an Environment, Resources and Development (ERD) Court determination is required.
Have you negotiated a native title mining agreement?	Yes ☐ No ☒	Is the agreement registered?* Yes ☐ No ☐	
		Is the agreement registered?* Yes ☐ No ☐	<List the tenements covered by the determination here.>
		Is the agreement registered?* Yes ☐ No ☐	<List the tenements covered by the determination here.>
Have you accepted an Indigenous land use agreement (ILUA)?	Yes ☐ No ☒	Is the ILUA registered?* Yes ☐ No ☐	<List the tenements covered by the determination here.>
		Is the ILUA registered?* Yes ☐ No ☐	<List the tenements covered by the determination here.>
		Is the ILUA registered?* Yes ☐ No ☐	<List the tenements covered by the determination here.>
Have you obtained ERD Court determination?†	Yes ☐ No ☒	Is the determination registered?* Yes ☐ No ☐	<List the tenements covered by the determination here.>
		Is the determination registered?* Yes ☐ No ☐	<List the tenements covered by the determination here.>
		Is the determination registered?* Yes ☐ No ☐	<List the tenements covered by the determination here.>

* The registration date refers to the date the agreement, determination or ILUA was registered with DSD.

† An ERD Court determination cannot be conjunctive (i.e. cannot apply to subsequent licences).

SECTION C – DESCRIPTION OF THE ENVIRONMENT (r. 65(1)(a))

The following elements of the existing environment need only be described to the extent that they may be considered in assessing the potential impacts of the proposed operations. If an element is unlikely to be affected by the operation, include a statement to that effect.

Where possible, photographs and other relevant information obtained during site visits should be attached to help describe relevant environmental aspects.

Proximity to infrastructure and housing

Information is required to determine if existing infrastructure (both public and private) may be affected by the program, and to determine the extent of impact on the public from noise, dust etc. The following information is required:

- Settlements – indicate the name and distance of the nearest town, and distance to houses and homesteads from the proposed exploration activity.

- Other human infrastructure (e.g. schools, hospitals, commercial or industrial sites, roads, sheds, bores, dams, ruins, pumps, scenic lookouts, railway lines, transmission lines, gas and water pipelines, communication lines (e.g. fibre optic cables)) should be considered if these may be impacted by the exploration activity.

Where possible, provide this information on a locality plan.

Drawing **1916.DRG.002R1 Exempt Land** attached identifies exempt land within proximity of the exploration area. Proposed drilling and blasting activity has been planned to occur upon receipt of waivers required. Waivers will be obtained prior to commencing exploration activities.

Hanson and Groundwork Plus have maintained regular contact with ElectraNET regarding the blasting analysis (blasting activities) within proximity to power assets. ElectraNET have supported the programmed activities proposed within this document.

Landform and topography

Describe the topography of the general area affected by the exploration program. Include the susceptibility to erosion and visual attributes (steep or undulating slopes, plains, rocky outcrops, dunes, salt pans, clay pans etc.).

The Site is surrounded by North-West to East West trending ridgelines. Ridgelines located to the West, South and East are shown on drawing **1916.DRG.001A Orthophoto** (displays topography and drainage).

Soil and surface cover

Describe soil types and soil surface cover (e.g. gibber, rocky) in the general area affected by the exploration program. Include details on the susceptibility to compaction, erosion, dust, runoff and any other aspects that may be an issue for disturbance and rehabilitation.

Light soil covering rock outcrop. The proposed drilling method involves using an 89 or 114mm hammer drill, anticipated impact is considered to be negligible. Drill rig to travel overland as per access track detailed in **1916.DRG.009R3 – Proposed Drilling** location plan on approximately 3km (Length) x 2.47m (Wide) track.

Hydrology

Will the proposed program interfere with natural drainage (e.g. drainage lines, creeks, floodplains)? If yes, describe the potential interference.	Yes ☒	No ☐
Use of existing creek crossing for access refer **1916.DRG.009R3 – Proposed Drilling** location plan. Earthworks are not required to cross creek line or maintain the existing crossing.		
Is the program area located within water protection areas defined under the *River Murray Act 2003*? If yes, provide the name(s).	Yes ☒	No ☐
River Murray Protection Area		
Is the program area located within any prescribed watercourses or prescribed surface water areas under the *Natural Resources Management Act 2004* (NRM Act)? If yes, provide the name(s).	Yes ☒	No ☐
Eastern Mount Lofty Ranges Prescribed Water Resources Area		

Groundwater

Is groundwater likely to be intersected when conducting the exploration program? If yes, use the table below to describe the expected groundwater (hydrogeological) conditions, and identify groundwater aquifers in the exploration area(s) that may be affected. Copy and paste a new table for each area where different groundwater conditions may be encountered.	Yes ☐	No ☒

Description of the locality/area where different groundwater conditions may be encountered
Kanmantoo Group – Fractured Rock Aquifer Interception of groundwater is not expected during drilling as the weathered zone is not anticipated to be penetrated. Exploration drillholes to 30 m are not expected to strike water given water strike is consistently reported > 30 m below ground (AGT, 2016). Further more drilling will occur higher in the landscape where groundwater levels are expected to be deeper compared to the existing quarry well (6627-7681) which is located next to a drainage line). Should water be intercepted during drilling backfilling will occur with cuttings as per Class 1 Bore permit conditions for drilling in single aquifers in fractured rock environments. Backfilling with cuttings presents a low risk as: • Groundwater is expected to be struck at depths from 30-50 m below ground (as per nearest regional wells). • Yields of regional wells in Kanmantoo Rocks are very low yielding (typically less than 1 L/s – AGT, 2016). This is due to the altered nature of the metamorphic rocks - biotite schists generally have poorly developed fractures. • There is no risk of flowing wells or artesian conditions based on regional wells reporting groundwater levels consistently greater than 10 m below ground (bar wells constructed adjacent to drainage lines). • Cross contamination of aquifers is not possible as there is only 1 aquifer on site – a regional fractured rock aquifer.

Formation age and/or stratigraphic unit	Stratigraphic intervals (depth range) (m)	Aquifer formation name	Aquifer interval/thickness (from–to) (m)	Type of aquifer(s) intersected (e.g. unconfined, confined, artesian)	Provide aquifer salinity, depth to water level and any other relevant comments
Kanmantoo Group – Cambrian in age	Surface outcrop to > 100m.	Kanmantoo Group: Tappanappa Formation	Fractured rock aquifer. Top of aquifer (water strike) encountered at ~160 mAHD at existing on site well (6627-7681). Ground elevations for proposed exploration drillholes range between 210-250 mAHD suggesting top of aquifer will not be intercepted.	Confined. Rocks are weathered at surface extending to fresh at depth. Water struck in fresh rock at approx. 160 mAHD (6627-7681). Water is under pressure and behaves in a "confined manner", however it is a single aquifer system and no overlying or underlying aquifer is present. This represents a low risk for cross contamination should groundwater be intercepted inadvertently. .	Top of aquifer (6627-7681) > 30m however aquifer is under pressure and water levels rise to ~ 7 m below ground (186 mAHD). Salinity recorded at 1,586 mg/L which is brackish in nature (AGT, 2016). On-site bore very low yielding < 0.5 L/s which is consistent with low yields in Kanmantoo Rocks.
					<Tab to add rows.>

Is the proposed program located within a prescribed wells area or prescribed water resource area? If yes, provide the name of the area.	Yes ☒	No ☐
Eastern Mount Lofty Ranges Prescribed Water Resources Area		

Provide any additional information, if required.

DH 11, DH 14, DH 36, DH 37 drilling depth restricted to 16m, 17m, 18m and 27m respectively to ensure 3m buffer is maintained from groundwater. Detonation of explosives takes path of least resistance with a maximum over break of 500mm below base of drill hole. All explosives will be consumed during detonation. Drill holes are logged and any holes with identified cavities will not be loaded with explosives.

Holes intercepting groundwater will be backfilled with cuttings and/or competent aggregate material (10-20mm) and capped with (bagged) cement over the upper 5 m. There is a low risk of adopting this approach as artesian conditions (flowing wells) are highly unlikely and there is low potential for groundwater wastage or cross contamination of aquifers given the single aquifer environment. Capping of wells with cement prevents a direct conduit for surface water infiltration directly to the groundwater system thereby avoiding potential contamination.

Native vegetation

Will you be working within areas of native vegetation? If yes, provide the following information: • description of the formation and structure of vegetation in the area (e.g. woodland, shrubland, grassland) • list of the dominant species.	Yes ☒	No ☐
Refer to **1916.DRG.009R3 – Proposed Drilling** for location of vegetation. Highly modified Eucalyptus camendulensis grassy woodland over extensive stands of native and weedy grasses (pasture grasses). Isolated patches or isolated plants of native shrub species are present with occasional herbs, sedges and climbers.		

Significant habitats and flora

If you are working within areas of native vegetation, use the table below to list any significant habitats and any rare or endangered flora species located or reported to have been in the area that may be impacted by the proposed program. Include known sightings of listed species on a locality plan/map.

Species/habitat	Common name	NPW Act rating*	EPBC Act rating†
Stipa oligostachya	Fine-head Spear Grass	Endangered	N/A

* *National Parks and Wildlife Act 1972* (NPW Act) conservation status includes extinct, endangered, vulnerable, threatened and rare.

† *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) listings include extinct, extinct in the wild, critically endangered, endangered, vulnerable and conservation dependent.

Weeds, plants and pathogens

Provide information of the extent the area is affected or potentially affected by pathogens and weeds (e.g. phytophthora; buffel grass, *Cenchrus ciliaris*).

NA. Vegetation survey conducted December 2016 confirmed there is no evidence of phytophthora or buffel grass present on site.

Fauna

Describe the native and feral fauna that may be present in the application area, including feral species.

NATIVE SPECIES: Euro, Western Grey Kangaroo, Common Brush-tailed Possum, Little Corella, Galah, Crimson Rosella, Yellow-tailed Black Cockatoo, Nankeen Kestral, Australian Magpie, Raven, Australian Wood Duck, White Faced Heron, Rainbow Bee-eater, Brown songlark, Willie wagtail, Tree Martin, New Holland Honey eater, Yellow rumped thornbill, Buff-rumped thornbill, Superb fairy wren,

PEST SPECIES: European Goldfinch, Starling, Rabbit, Sheep, Fox, (EWC&R, 2016).

Significant fauna

Where possible, using the table below, list any rare or endangered fauna species located or reported to have been in the area that may be impacted by the proposed program. Include known sightings of listed species on a locality plan/map.

Species	Common name	NPW Act rating	EPBC Act rating
Trichosurus vulpercula	Common Brush-tailed Possum	Rare	N/A
Calyptorhynchus funereus	Yellow-tailed Black Cockatoo	Vulnerable	N/A

Note: NPW Act conservation status includes extinct, endangered, vulnerable, threatened and rare.
EPBC Act listings include extinct, extinct in the wild, critically endangered, endangered, vulnerable and conservation dependent.

Environmentally sensitive locations

Are there any environmentally sensitive locations within or close to the proposed exploration area (e.g. areas having particular ecological, cultural, scientific, aesthetic or conservation value)? If yes, provide a description of identified environmentally sensitive location(s). Mark these areas on a locality plan to identify any areas of conflict so that access roads or other activities can be planned and located effectively.	Yes ☒	No ☐
Austrostipa oligostachya (Fine-head Spear-grass) listed Endangered under the *National Parks and Wildlife Act 1972.* Located in creek running east/west (parallel to Proctor Road) approximately 90m in length running along the creek-line to approximately 2m northwards / up slope.		
Are you likely to impact on the environmentally sensitive area? If yes, detail the likely effects the proposed program may have.	Yes ☐	No ☒
No activity proposed in the area mentioned above. Refer **1916.DRG.009R3 – Proposed Drilling**.		

SECTION D – DESCRIPTION OF PROPOSED EXPLORATION OPERATIONS

Equipment and personnel requirements

Using the table below, describe the equipment, size and composition of field crews, and proposed working hours/days required to conduct the proposed program.

Type of personnel	Number	Name of contractor (if applicable)
Geologists	1	Groundwork Plus
Land access/environmental	1	Groundwork Plus
Field assistants/technicians	2	APlus Blast Management, Blast It Global
Drilling crew	1	Adelaide Rock Drilling

Site preparation and rehabilitation (earthmoving)		
Other (provide details)		<Include name and contact details here.>

Shifts worked per day	Hours worked per day	Days worked per week
1	11	3

Equipment	Owner/operator	Description/capacity	Activity/purpose
Atlas Copco ECM 660IV	John Bland	*Blasthole Rig (28m depth)*	*Drilling approximately 30 holes, dependant on geology timeframes etc*
4x4 Vehicles	Management Personnel: Peter Ebbs (Quarry Manager) James Rowe (Groundwork Plus) Drew Martin (BlastITGlobal) Colin Stormoth (APlus Blast Management)	 Quarry Manager Shotfirer Blast Engineer Explosives	*Undertake works, supervision and management of drilling and blasting activities.*

Provide any additional information, if required.

Drill Rig details: Length 9.98m, Height 2.87m, Width 2.47m, weight 13 tonnes.

Low impact exploration activities

Will low impact exploration activities be conducted that are not covered by the Generic program for environment protection and rehabilitation – low impact mineral exploration in South Australia, Ministerial Determination 001 (generic PEPR)? If yes, describe each low impact activity.	Yes ☐	No ☒

Drilling activities

Will exploration drilling activities be conducted? If yes, fill out the below table	Yes ☒	No ☐

Tenement	Drilling type	Maximum number of drillholes	Maximum drillhole depth (m)	Maximum number of sumps required at each site	Maximum size of sumps (length x depth x width) (m^3)	Average size of each drill pad* (m^2) (no excavation required)	Number of sites requiring pad excavation	Average volume (m^3) of material to be excavated (excluding sumps)
RL 132	Blasthole	37	28	NA	NA	1	NA	0
TOTAL		37	1132	NA	NA	37	NA	0
		Total number of drillholes (add each row to calculate the total).	Total metres proposed (maximum number of holes x average depth for each row, then add each row to calculate the total).	Total number of sumps (maximum number of sumps x drillsites for each row, then add each row to calculate the total).	Total volume of sumps (maximum size of sumps x number of sumps for each row, then add each row to calculate the total).	Total area of disturbance (number of holes x average size for each row, then add each row to calculate the total).	Total number of pads requiring excavation (add each row to calculate the total).	Total volume of material to be excavated (number of sites requiring excavation x average volume for each row, then add each row to calculate the total).

* The footprint includes all areas of disturbance associated with the drillsite.

Drillsite preparation

If exploration drilling activities are proposed, describe the methods used to prepare sites, including vegetation clearance requirements, site levelling and digging of sumps.

The drill will be trammed to the site of drillhole location depicted on **Drillhole Location Plan (Refer to 1916.DRG.009R3)**.
Holes will be drilled (89 or 114mm hole) to the required depth.
Agricultural/grazing land previously cleared, no vegetation clearance required.

As the drilling will be dry and small bore there will be little spoil generated and no requirement for digging of sumps for wet mud storage.

Drillhole construction and decommissioning

Have the personnel responsible for implementing the proposed program read and understood the Earth Resources Information Sheet M21, Mineral exploration drillholes – general specifications for construction and backfilling?	Yes ☒	No ☐
Describe how drillholes will be constructed, including the casing material to be used, depth of casing, if the casing will be cemented, cementing intervals and the class of driller that will install the casing.		
Hammer drilling of hole, no casing, holes backfilled with stemming (14mm aggregate and drill chip material).		
Drilling chip samples will be taken every 1m of drilling and assays taken, at the completion of the drilling of the hole the hole will be stemmed (backfilled) utilising the drill chips that were extracted from the hole, Drillholes that are not initiated will be stemmed (backfilled) with the use of drill chip cuttings and/or competent aggregate material (10-20mm) where required if groundwater is intercepted (unlikely) throughout the drilling process the hole will be stemmed (backfilled) as per the requirements in M21 Mineral Exploration Drillholes – General specifications for construction and backfilling. However for the purpose of clarity, as the exploration drill holes are equivalent to Class 1 water wells (interception of a single aquifer), backfilling with cuttings and / or clean fill will be conducted, with cement capping at surface. Drill holes that are to be utilised for seed hole blasting will not require stemming of the entire hole as the hole will have a mixture of ANFO and 10mm stemming, the energy from the blasting event will collapse the hole.		

Costeans and bulk sample disposal pits

Will costeans/bulk sample disposal pits be required for the proposed program? If yes, fill out the table below.	Yes ☐	No ☒

Tenement	Number of costeans/pits	Size of costean (length x width) (m^2)	Average depth (m)	Volume excavated (m^3)	Total volume excavated (m^3) (number of costeans/pits x volume)	Total area of disturbance* (length x width) (m^2)
						<Tab to add rows.>
TOTAL						
	Total number of costeans/pits (add each row to calculate the total).				Total volume of material to be excavated (add each row to calculate the total)	Total area of disturbance (number of costeans/pits x area of disturbance for each row, then add each row to calculate the total).

*Includes storage of excavated material at the site (e.g. topsoil and subsoil segregation).

Costeans and bulk sample disposal pit preparation

If costeans/bulk sample disposal pits are required, describe site preparation methods, vegetation clearance, and safety and maintenance requirements.

NA

Sample management

Describe the size of samples collected (including drilling samples and bulk sampling), collection methods, materials used when collecting the sample, sample disposal methods (including removal of sample bags), safety management and any other sample management requirements at the exploration site (e.g. tarps or matting used to contain cuttings). Include requirements for on-site geological sample management (splitting of archive samples, bag farms, core processing and storage).

One chip tray per hole, approx. 100 grams of material per metre.

Access routes to work areas

Will access off existing tracks be required? If yes, detail the method(s) for gaining access and if vegetation clearance is required. Include the total area of disturbance (includes drill traverses and seismic lines) required off existing tracks (i.e. length (km) and width (m) of new tracks).	Yes ☒	No ☐
Access to the site will be gained overland from existing quarry development, Refer **1916.DRG.009R3 – Proposed Drilling** for access route details. A drill rig access route has been developed to ensure minimal impact of the land and vegetation during the program. Native vegetation has been avoided, no clearance required. No new creek crossings to be constructed. Use of existing crossing. Traversing approximately 3km length, 2.47m width (drill track width).		
Will existing tracks require upgrading and/or maintenance? If yes, detail the work required to upgrade/maintain existing tracks.	Yes ☐	No ☒

Indicate planned access routes on a locality plan and distinguish between existing and proposed new access tracks (including fence lines).

Campsites, storage and equipment laydown areas

Using the tables below, provide a description of campsites and/or laydown areas required. Indicate the campsite and laydown area on a locality plan.

Campsite details		
Is a campsite required? If no, no further information is required.	Yes ☐	No ☒
What is the maximum number of personnel the campsite will accommodate?	NA	
What will be the total area (ha) of vegetation clearance for the campsite?	NA	
If vegetation clearance is required, describe the methods used to prepare the site?		
NA		
What will be the total area (ha) of disturbance for the campsite(s)?	NA	
Will any excavations be required? If yes, describe the purpose of the excavation and the maximum volume (m^3) of material to be excavated.	Yes ☐	No ☒
<Include text here.>		
Will the proposed ablution facilities be endorsed/approved for use by the Department of Health or local council, where applicable? If no, provide a reason?	Yes ☐	No ☐
NA		

Proposed infrastructure (includes hydrocarbon and water storage requirements)	**Quantity**	**Description/capacity**
		<Tab to add rows.>

Provide a description and justification of the camp location (e.g. previously cleared areas etc.), and any other relevant information if required.
<Include text here.>

Laydown area details		
Will laydown areas be required? If no, no further information is required.	Yes ☐	No ☒
Will the laydown area(s) be located at the same location as the campsite?	Yes ☐	No ☐
What will be the total area (ha) of vegetation clearance for the site?	ha	
If vegetation clearance is required, describe the methods used to prepare the site?		
<Include text here.>		
What will be the maximum area of disturbance (ha) for the laydown area(s)?	ha	
Will any excavations be required? If yes, describe the purpose of the excavation and volume (m^3) of material to be excavated.	Yes ☐	No ☐
<Include text here.>		

Proposed infrastructure (includes hydrocarbon and water storage requirements)	Quantity	Description/capacity
Nil required		
		<Tab to add rows.>
Provide a description and justification of the location (e.g. previously cleared areas), and any other relevant information if required.		
<Include text here.>		

Water supply and management

Will camp and/or drilling water be required? If yes, describe how and where water will be sourced for drilling, track maintenance and camping purposes (e.g. groundwater, surface water, mains). Provide details on the volume of water required and how wastewater or runoff water will be managed.	Yes ☒	No ☐
Water will be supplied via water cart sourced from water main (SA Water main with permission by portable meter) for dust suppression and collaring on the rig.		
If surface water will be used as a water source and/or if mineral drillholes will be used as a water supply well, indicate if a licence for water extraction/usage is required (refer to relevant Natural Resources Management water allocation plan available on the DEWNR website)? If yes, attach a copy of the licence. Where a licence has not been obtained, include a statement confirming a licence will be obtained before the extraction and/or usage of water.	Yes ☐	No ☒
<Include text here.>		

Groundwater and drilling investigation activities

Will any water bores be required and/or water investigation activities (e.g. pump testing, water monitoring sites, water storage, turkey nests/dams) be conducted? If yes, describe the water drilling and investigation activities, including site preparation, vegetation clearance, and safety and maintenance requirements.	Yes ☐	No ☒
<If yes, include text here.>		
If water bores are to be drilled and/or groundwater investigation activities are to be conducted, indicate if well permits have been obtained and whether or not a water extraction licence is required in accordance with the NRM Act. If yes, attach a copy of the permit(s)/licences. If no, include a statement confirming that permits/licences will be obtained prior to commencement of water investigation activities.	Yes ☐	No ☒
<If yes, include text here.>		

Water affecting activities

Will any water affecting activities (refer to s. 127 of the NRM Act) be undertaken? If yes, attach a copy of the permit. If a permit has not been obtained, include a statement confirming that a water affecting activity permit(s) will be obtained and provide a description of the site preparation, vegetation clearance, and safety and maintenance requirements.	Yes ☐	No ☒
<If yes, include text here.>		

Other exploration methods and/or ancillary activities

Are any other proposed exploration methods (e.g. seismic) and/or ancillary exploration activities required? If yes, describe the activity(s), site preparation, vegetation clearance, and safety and maintenance requirements.	Yes ☒	No ☐
Seed Hole Blasting and monitoring will be undertaken on the drilled holes to obtain monitoring of vibration and air overpressure data. Monitoring by blast monitor geophone instrumentation used for measuring blast vibration, mounted on concrete block (self-tapping screw and/or epoxy resin) and buried into the ground surface and fixed into position by placing excavated soil and tamping soil into place to secure mount. Data relevant to MLP proposal risk assessment. There will be no requirement for vegetation clearance or other site preparation. Site previously cleared (grazing land). Full safety requirements consistent with the use of explosives will be employed during blasting.		

Management of hazardous materials

Will activities be conducted in areas of known uranium and thorium mineralisation? If yes, attach a Radiation Management Plan and confirmation of endorsement of the plan by the Environment Protection Authority South Australia (EPA).	Yes ☐	No ☒
Will any other hazardous material be encountered when exploring in the area? If yes, list the types of hazardous materials and provide a management plan on how these materials will be managed.	Yes ☐	No ☒
<If yes, include text here.>		

SECTION E – LEASE CONDITIONS (s. 70B(2)(d))

Retention leases

Where the retention lease includes specific conditions that are not environmental outcomes, a section must be included that demonstrates where these have been addressed in the PEPR (if relevant) or demonstrates how otherwise they have or will be complied with.

<Include text here.>

SECTION F – MANAGEMENT OF ENVIRONMENTAL IMPACTS (s. 70B(2) and r. 65(1))

Use the table below (instructions provided) to identify all of the environmental, social and economic potential impact events that are likely to occur as a result of the proposed exploration activities, and how each of the identified impacts will be managed. Identified potential impacts events should be developed based on the proposed operational details and description of the environment and must have corresponding outcomes, measurement criteria and a monitoring plan.

Environmental management – potential impacts/events, outcomes, measurable criteria and monitoring plan

			Likelihood of consequence (LH)				
			1	2	3	4	5
			Rare	Unlikely	Possible	Likely	Almost certain
Severity of consequence (CQ)	A	Insignificant	Low	Low	Low	Low	Low
	B	Minor	Low	Low	Moderate	Moderate	Moderate
	C	Moderate	Moderate	Moderate	High	High	High
	D	Major	High	High	Extreme	Extreme	Extreme
	E	Catastrophic	High	Extreme	Extreme	Extreme	Extreme

How to fill out the table

1. Based on the description of the environment and exploration operations, indicate which potential impacts are applicable to the proposed program. Note that some potential impacts are applicable to all programs.
2. For each applicable potential impact (and corresponding receptor), describe control and rehabilitation strategies that will reduce the risk of the potential impact to an acceptable level, and achieve the corresponding environmental outcomes.
3. Conduct an impact assessment to determine if the control and rehabilitation strategies address the potential impact (i.e. reduce the risk to an acceptable level). Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level.
4. For each applicable potential impact, the corresponding outcome and outcome measurement criteria are required.
5 Based on the description of the environment and proposed exploration activities, determine if any other potential impacts are applicable. For each new potential impact, describe proposed control and rehabilitation strategies, conduct an impact assessment, and develop corresponding outcomes and outcome measurement criteria.

Use the above matrix to conduct an impact assessment for each potential impact.

Impact assessment							**Outcomes**	**Outcome measurement criteria (includes monitoring plan)**
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control and rehabilitation strategies** Where the risk is not considered low after implementing control and rehabilitation strategies, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence				
				LH	**CQ**	**Risk**		
Stakeholders: • freehold land owners (including adjacent landowners) • state government departments. • local government (councils) • ElectraNET	Interference to: • existing or permissible land use (noise, dust, vibration). • existing tracks. • aesthetic values of an area. Non-compliance with legislative requirements.	Yes	• Community Consultation with adjacent landowners (Hanson employees etc) by way of direct discussions, notifications, phone calls, letters/email etc. Ongoing communication by letters. • Community members - notification in advance as to when blasting will take place (by methods stated above) and during community consultation meeting K4C forum (Thursday 2nd March 2017). • All blast holes will be sufficiently stemmed to minimise risk of noise impact on community. • Operator will obtain consent from ElectraNET prior to undertaking exploration activities. • Exploration activities will occur as per ElectraNET agreement.	3	B	M	Stakeholders are informed and satisfied with the proposed methods used to conduct exploration activities on their land, and all prescribed forms are served and agreements obtained in accordance with the Mining Act.	Provide the information requested within the 'Complaints' section of the annual exploration compliance report demonstrating that all reasonable complaints from stakeholders are resolved to the satisfaction of both parties prior to and ongoing during the course of exploration program. Provide the information requested within the 'Landowner details and liaison' section of the annual exploration compliance report demonstrating that prescribed forms were served and agreements obtained in accordance with the Mining Act prior to the commencement of exploration activities.
Stakeholder: DEWNR	Interference to: • existing or permissible land use. • buildings, structures, existing tracks or other infrastructure. • aesthetic values of an area. Non-compliance with legislative requirements.	No	As the drilling and test blasting will comprise a short term, low to moderate impact activity taking place on cleared farmland with a low density of rural residential dwellings in the immediate vicinity, the impact on existing land uses is expected to be very low.	N/A	N/A	N/A	For activities located within or adjacent to regional reserves, national, conservation and marine parks only: • no unauthorised interference with park management activities.	Provide confirmation that: • Park access notification forms were submitted to DEWNR and DSD at least 10 days prior to entry into regional reserves, national, conservation and marine parks, or • Program notifications for PEPRs approved for an ongoing period of time, were submitted to DEWNR and the DSD at least 21 days prior to entry into regional reserves, national, conservation and marine parks.

Impact assessment							**Outcomes**	**Outcome measurement criteria (includes monitoring plan)**
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control and rehabilitation strategies** Where the risk is not considered low after implementing control and rehabilitation strategies, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence				
				LH	**CQ**	**Risk**		
Flora and fauna and their habitats; includes Commonwealth and state scheduled species.	Loss/modification of native vegetation and associated habitats through the clearance of vegetation.	No		N/A	N/A	N/A	No permanent loss/modification of native flora and fauna populations and their habitats through: • clearance • fire • other unless prior approval under the relevant legislation is obtained.	Maintain before, during and after photographic evidence of all exploration sites (e.g. drillsites, new track exit/entry points off existing tracks, costeans, campsites) demonstrating that: • The area and method of disturbance is consistent with that described in the PEPR. • No uncontrolled fires* occurred as a result of exploration activities. • All drillholes that are not initiated throughout the seed hole blasting program are sufficiently stemmed (backfilled) to avoid disruption to local flora and fauna. Representative photos to be included within the annual exploration compliance report.
All flora and fauna, especially listed species.	Loss/modification of the environment (biological, social and economic) through the introduction of weeds and pathogens.	Yes	Drill rig and attendant vehicles will be inspected and cleaned to ensure vehicles and equipment are free of weed seed upon entry to site.	1	B	L	No introduction of new species of weeds and plant pathogens, nor increase in abundance of existing weeds species.	Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report, confirming that: • Vehicle logs were kept during the exploration program, demonstrating that all vehicles are clean and free of plant and mud material prior to entering properties† within the tenement areas, unless otherwise agreed to with the relevant landowners. • Photographic evidence before and during exploration operations and after rehabilitation of disturbed sites was captured, demonstrating that no new weeds and plant pathogens were introduced, nor an increase in abundance of existing weeds recorded.
All fauna	Entrapment of fauna through open drillholes and excavations.	Yes	Hole diameters are small and will limit the range of fauna potentially affected. Holes will be temporarily plugged immediately after drilling and backfilled upon completion of work.	1	B	L	No fauna traps created as a result of exploration activities.	Maintain before, during and after photographic evidence of all drillholes and/or excavations demonstrating that: • All drillholes were permanently or temporarily capped/plugged immediately upon completion. • No fauna and livestock became trapped in drillholes and/or excavations throughout the duration of the program. • All rehabilitation was completed within 3 months of expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Representative photos are to be included within the annual exploration compliance report. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.
Aboriginal heritage sites	Disturbance to Aboriginal heritage.	No		N/A	N/A	N/A	No disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained.	Maintain a database and provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report demonstrating that: • Heritage sites were not impacted during the conduct of the exploration program, unless prior approval was obtained under the appropriate legislation. • Work ceased on discovery of a significant site and recommenced only after authorisation. • Aboriginal heritage sites identified during the exploration program were appropriately recorded and reported to authorities, if not previously known.
European heritage sites and sites of scientific and environmental significance	Disturbance to European heritage sites and sites of scientific and environmental significance (e.g. geological monuments, fossil reserves).	No		N/A	N/A	N/A	No disturbance to European heritage sites and to sites of scientific and environmental significance unless prior approval under the relevant legislation is obtained.	Demonstrate no impact to heritage sites and sites of scientific and environmental significance by: • Maintaining evidence, including detailed maps showing sites compared to the location of exploration activities, and

Impact assessment							Outcomes	Outcome measurement criteria (includes monitoring plan)
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control and rehabilitation strategies** Where the risk is not considered low after implementing control and rehabilitation strategies, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence **LH**	**CQ**	**Risk**		
								photographic evidence of sites before and after the conduct of the exploration program. • Providing a statement within the annual exploration compliance report confirming sites were not impacted during the conduct of the exploration program.
Soil/vegetation/fauna	Soil/vegetation contamination (e.g. hydrocarbons, rubbish, drill samples/cuttings, ablutions, other sources).	Yes	Trackable wastes disposed by licenced operator at an approved facility. Retain waste tracking slips (min.5 years), Any spill pf potential contaminants shall be cleaned up immediately. The operator shall ensure appropriate spill kits are available at all times. Regular (daily) inspections of hoses/lines. Drillhole cuttings to be temporarily stored on ground (adjacent to drillhole) and used to backfill drillhole.	1	B	L	No contamination of soil and no loss of native vegetation as a result of exploration activities.	Demonstrate that all domestic or industrial waste (includes general rubbish and hydrocarbons) is disposed of in accordance with the *Environment Protection Act 1993* within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), and that all fuel and chemicals are stored in accordance with EPA requirements, by providing: • The name, location and contact details of the authorised waste disposal facility. • A statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming domestic and industrial waste was removed from all exploration sites and disposed of at an authorised waste disposal facility. • Photographic evidence within the annual exploration compliance report demonstrating that all fuel and chemical storage facilities were managed in accordance with EPA requirements. Maintain photographs of all exploration sites and provide representative photos within the annual exploration compliance report demonstrating that drill cuttings are: • removed from site and disposed of at a licensed facility • buried under a minimum of 30 cm of soil, or in accordance with EPA guideline, *Radiation protection guidelines on mining in South Australia: mineral exploration*, available on the EPA website, or • backfilled down the drillhole, within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.
Soil	Disturbance to the soil profile and topography, and accelerated soil erosion caused by exploration activities (e.g. construction of sumps, new tracks and drill pads; ground compaction at laydown areas and camps).	Yes	As the drilling and test blasting will comprise a short term, small scale disturbance - low to moderate impact activity, impact on existing soil is considered low. Holes will be temporarily plugged (concrete/plastic plug) immediately after drilling and backfilled with drillhole chips upon completion. Blasted ground (landform) rehabilitated to pre blast condition suitable for grazing.	1	B	L	Where soil disturbance occurs as a result of exploration activities, ensure that: • topsoil quality and quantity is maintained • the soil profile and topography is reinstated to original conditions • there is no accelerated soil erosion.	Maintain before, during and after photographic evidence of all excavations, drillsites, camps, laydown areas and new tracks demonstrating that: • The soil profile and topography is reinstated to original conditions and is consistent with natural surroundings within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. • Where required, sufficient topsoil is removed (depending on soil profile), stored separately from subsoil and reinstated (in the correct order) within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. • There are no signs of accelerated soil erosion during and post rehabilitation of disturbed sites. Representative photos to be included within the annual exploration compliance report. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.

Impact assessment							Outcomes	Outcome measurement criteria (includes monitoring plan)
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control and rehabilitation strategies** Where the risk is not considered low after implementing control and rehabilitation strategies, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence **LH**	**CQ**	**Risk**		
Surface hydrology	Alteration to surface hydrology – interference to surface drainage.	No	No drilling activity proposed within creek lines and/or creek banks. Use of existing crossing for access.	N/A	N/A	N/A	No permanent modification to hydrological features caused by exploration activities without obtaining a water affecting permit from the relevant Natural Resource Management Board.	Provide before, during and after photographic evidence within the annual exploration compliance report demonstrating that original drainage contours (watercourses and lakes) are consistent with the natural relief post rehabilitation within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period). Alternatively, provide copies of water affecting permits within the annual exploration compliance report.
Groundwater/aquifer	Groundwater contamination: • contamination of aquifers through entry of pollutants from the surface • degradation of natural hydrostatic conditions (maintain pre-drilling pressures).	Yes	Adherence to drilling plan and depths outlined in 1916.DRG.009R3 Proposed Drilling Location Plan and commitment to maintain 3m buffer from groundwater. Log drill holes Any holes with identified cavities will not be loaded with explosives. Detonation of explosives takes path of least resistance with a maximum over break of 500mm below base of drill hole. All explosives will be consumed during detonation. Should groundwater be intercepted (highly unlikely) contamination from the surface will be prevented by backfilling with cuttings and/or competent aggregate (10-20mm) and placing a cement cap over the upper 5 m. There is a low risk of impacts to groundwater should the aquifer be intercepted. The potentiometric surface (confined groundwater pressure) is expected to reside > 25 m deep and there is a low risk of artesian groundwater conditions (flowing wells). This is based on a review of the standing water levels at wells located within 5 km of the quarry site (AGT, 2016; DEWNR WaterConnect, 2016). Cross contamination of aquifers cannot occur as there is only 1 aquifer – the Kanmantoo Group fractured rock aquifer. This aquifer is brackish to saline, low yielding and is suitable for stock use only.	1	B	L	Drillholes restored to controlling geological conditions that existed before the hole was drilled or, where it is intended to re-enter the hole, the hole must be completed with casing of adequate strength and the casing cemented so that all aquifers are isolated to prevent the movement of any fluids behind the casing.	Maintain evidence demonstrating that drillholes are decommissioned in accordance with Earth Resources Information Sheet M21, *Mineral exploration drillholes – general specifications for construction and backfilling*, and/or specific conditions from DEWNR (Groundwater) within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Drillholes that are not initiated will be stemmed (backfilled) with the use of drill chip, if groundwater is intercepted throughout the drilling process the hole will be stemmed (backfilled) as per the requirements in M21 Mineral Exploration Drillholes – General specifications for construction and backfilling. However for the purpose of clarity, as the exploration drillholes are equivalent to Class 1 water wells (interception of a single aquifer), backfilling with cuttings and / or clean fill will be conducted, with cement capping at surface. Provide the information requested within the 'Groundwater' section of the annual exploration compliance report.
Soil/vegetation/fauna	Discharge of groundwater into the surrounding environment.	No	This outcome is not possible as flowing wells are not known in the area.	N/A	N/A	N/A	No discharge of groundwater outside of the exploration site (e.g. drillsite) into the surrounding environment and no discharge of water into a watercourse, unless prior approval under the relevant legislation is obtained.	Maintain photographic evidence of all drillsites demonstrating that groundwater was not discharged into the surrounding environment, unless water affecting activity permits were obtained allowing the discharge of groundwater into watercourses and/or lakes. Representative photos and water affecting activity permits (where applicable) to be included within the annual exploration compliance report.
Groundwater users	Interference to existing water users when extracting water from existing dams, water bores or mineral drillholes.	No		N/A	N/A	N/A	No public nuisance impacts resulting from the extraction of water for exploration purposes, unless prior approval under the relevant legislation is obtained.	Provide the information requested within the 'Complaints' section of the annual exploration compliance report demonstrating that all reasonable complaints from stakeholders were resolved to the

Impact assessment							Outcomes	Outcome measurement criteria (includes monitoring plan)
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control and rehabilitation strategies** Where the risk is not considered low after implementing control and rehabilitation strategies, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence **LH**	**CQ**	**Risk**		
								satisfaction of both parties, prior to and ongoing during the course of the exploration program without the involvement of DSD. Where permits are required for the extraction and/or usage of groundwater, provide copies of the licence or permit within the annual exploration compliance report.
Soil/vegetation/fauna	Degradation of rehabilitated access tracks caused by third party access (includes previously closed and rehabilitated access tracks).	Yes	Single pass overland tracking without clearing. As the drilling and test blasting will comprise a short term, low to moderate impact activity taking place on cleared farmland and not impacting on rehabilitated areas, the impact is considered to be low.	1	B	L	Rehabilitated access tracks remain permanently closed to HV access post use for exploration drilling program.	Maintain before and after photographic evidence demonstrating that all tracks are closed and rehabilitated within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Representative photos are to be included within the annual exploration compliance report. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.
Community/landowners	Damage to infrastructure and loss of income through fire.	Yes	Water supply available for fire fighting (via water cart). Fire extinguishers available in light vehicles for fire fighting. Monitoring of CFS website for Total Fire Ban notifications.	1	B	L	No loss of infrastructure or income through fire as a result of exploration activities.	Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming that no uncontrolled fires* occurred. Alternatively, provide a report on the independent investigation of all uncontrolled fires* demonstrating that the licensee could not have reasonably prevented the fire through the implementation of precautionary measures.
General public	Injury or death to members of the public as a result of exploration activities.	Yes	Private property. No access to general public. Access to site by weighbridge sign in procedures. Signage at access points. Australian standard blasting protocols will be activated during the live fire process. OHS procedures communicated to drill and blast project team. PPE worn by contractors and project team.	1	B	L	No accidents involving the public that could have been reasonably prevented by the licensee.	Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming no accidents occurred involving the public during and after the exploration program. If an accident involving the public did occur, provide a copy of the independent investigation report within the annual exploration compliance report demonstrating that the licensee could not have reasonably prevented the accident through the implementation of precautionary measures.
General public, employees, contractors and the environment	Contamination of the environment when exploring for known uranium and thorium deposits. Public and employee/contractor exposure to low level radiation.	No	The project does not involve exploring for radioactive materials.	N/A	N/A	N/A	No increase in background radiation levels, and employee/contractor exposure levels during the exploration program are within safe limits.	Maintain a database and provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report demonstrating that: • Radiation levels post exploration and rehabilitation are consistent with pre-existing background levels. • Employee and contractors exposure levels were within safe limits during the exploration program.
Residents	Nuisance dust	Yes	Dust generated from drilling activities will be minimised via the use of small diameter drills and water suppression. Ongoing communication to adjacent land owners and nearby residents by letter drop and verbal communication. Ongoing dust monitoring occurring as per of MLP project associated with adjacent EML	1	B	L	No public health and/or nuisance impacts from dust generated by operational (drill & blast) activity.	Mine records demonstrate all dust related complaints are acknowledged within 48 hours and closed out within seven days to the satisfaction of the complainant or as agreed with the Regulator. If complaints are not resolved air quality monitoring may be conducted by a suitably qualified person to demonstrate dust emissions comply with the following: • Dust deposition of 4g/m2/month, (or no more than 2g/m2/month above background) when monitored in accordance with Australian Standard AS3580.10.1 Methods for sampling and analysis of ambient air – Determination of particulates – Deposited matter – Gravimetric method

Impact assessment							Outcomes	Outcome measurement criteria (includes monitoring plan)
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control and rehabilitation strategies** Where the risk is not considered low after implementing control and rehabilitation strategies, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence				
				LH	**CQ**	**Risk**		
								In the event that dust deposition monitoring determines an exceedance: • Undertake a further assessment of dust where necessary and review the air quality measures to mitigate. Provide details of complains, dust results and outcomes in annual exploration compliance report.

† Properties = freehold (cropping and grazing land); perpetual/pastoral lease land; council land; regional reserves; national, conservation and marine parks; Aboriginal land; Commonwealth land etc.

SECTION G – PHOTOS

Include photographs in this section:

- that have been obtained during site visits
- that help describe relevant environmental and operational aspects in the PEPR.

Copy and paste photo into the template below and then resize to fit page width. Ensure that all information about each photo is completed and refer to the photo number in the relevant section of the PEPR. (To insert additional photos, copy and paste the template below.)

Site identification/details	Date taken	Photo number and PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Comments
<Copy and paste photo here, then resize to fit page width.>						

Site identification/details	Date taken	Photo number and PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Comments

<Copy and paste photo here, then resize to fit page width.>

Site identification/details	Date taken	Photo number and PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Comments

<Copy and paste photo here, then resize to fit page width.>

SECTION H – MAPS

Provide a map(s) showing the following information, where applicable:

- tenement boundaries
- location of existing ephemeral and permanent rivers, creeks, swamps, streams or watercourses, and water management structures
- location of towns, existing roads, rails, fences, transmission lines, buildings, dams and pipelines
- location and extent of any environmentally sensitive areas located within the tenement boundaries
- any relevant land use types (e.g. parks and reserves, Aboriginal land, Woomera Prohibited Area).

Ensure maps provided in this section are **NOT** commercially sensitive or confidential. All maps and sections must conform to the standards outlined in the determination for exploration PEPRs (Ministerial Determination 013).

Please see attached drawings

Attachment 1 – Drawing 1916.DRG.002R1 Exempt land
Attachment 2 – ElectraNET supporting documentation
Attachment 3 – Drawing 1916.DRG.001A Orthophoto
Attachment 4 – Drawing 1916.DRG.009R3 Proposed Drilling

SECTION I – PUBLIC RELEASE OF INFORMATION

In accordance with DSD procedures on the public release of exploration PEPRs (refer to Minerals Regulatory Guidelines MG22, *Guidelines for conducting mineral exploration in South Australia*), please advise if you object to the release of any information included within this application (with the exception of sections marked 'not for public release'). If yes, specify the section(s) that you object to being publicly released and provide clear reasons why.	Yes ☐	No ☒
<If yes, include text here.>		

SECTION J – SUBMISSION OF12-MONTH EXPLORATION PEPR APPLICATION

An electronic version (PDF preferred) is to be submitted to DSD. A hard copy of the 12-month exploration PEPR application together with an electronic version can be submitted if the file size is too large to email. The information in both the hard copy and electronic version must be identical.

Submissions should be marked 'Attention: Exploration Regulation' and forwarded by email, post or courier:

Email
DSD.Exploration@sa.gov.au

Post
Mineral Tenements and Exploration Branch
Resources and Energy
Department of State Development
GPO Box 320
Adelaide SA 5001

Courier
Mineral Tenements and Exploration Branch
Resources and Energy
Department of State Development
c/- Level 7, 101 Grenfell Street
Adelaide SA 5000

ADDITIONAL INFORMATION – not for public release

Landowner details and consultation (r. 65(1)(c))

Using the table below, provide relevant landowner and stakeholder details, including occupier and land manager details, and summarise the results of consultation that has been undertaken on the proposed operation. Landowners include freehold landowners, Aboriginal land, Defence managed land (except the WPA), council, perpetual and pastoral lease holders, lessees or sub-lessees and government departments.

Tenement	Stakeholder, landowner and station name	Land tenure	Land use	Date notice of entry (Form 21) served	Date use of declared equipment (Form 22) served	Type of exempt land	Date waiver of exemption (Forms 23A, 23B) obtained	Date consultation/access agreement and/or permits signed/authorised	Landowner concerns raised and how addressed
RL 132	Beverley Dawn Faulkner	Fee simple (CT 4338/644 FP160548 A9)	PrPro(MLR) Grazing	28/2/2017	02/03/2017	Structure	To be provided.	28/2/2017 Document to be provided to DSD on signing prior to commencing exploration work.	No Concerns (NoE attached) Any waivers required will be obtained prior to commencing exploration work.
EL 5628	Hillgrove Resources Ltd	CT 5735/307, Filed Plan 160548A9 Allotment 9	PrPro(MLR) Grazing	N/A	N/A	N/A	N/A	15/3/2016	No Concerns. Copy of agreement submitted to DSD (tenements) 2016.
RL 132	ElectraNET	Fee simple (CT 4338/644 FP160548 A9) easement	PrPro(MLR) Grazing	To be provided.	To be provided	Structure	To be provided.	Document to be provided to DSD on signing prior to commencing exploration work.	Any waivers required will be obtained prior to commencing exploration work.

If any individual or group of affected persons were not able to be consulted, what steps were taken to consult with them?

Letter drop to adjacent land owners, face to face and/or phone discussions communicating proposed operations and to address concerns and queries. Scheduled to occur Friday 24 March 2017.

Where consultation has not been conducted, provide a detailed plan describing how the above consultation requirements will be achieved.

N/A – Community meeting (K4C) held 2/3/17

Additional information

List any other supporting information and/or documents submitted with the application, including land access approvals/permits required to conduct the proposed exploration program.

<Include text here.>

ADDITIONAL MAPS – not for public release

Maps

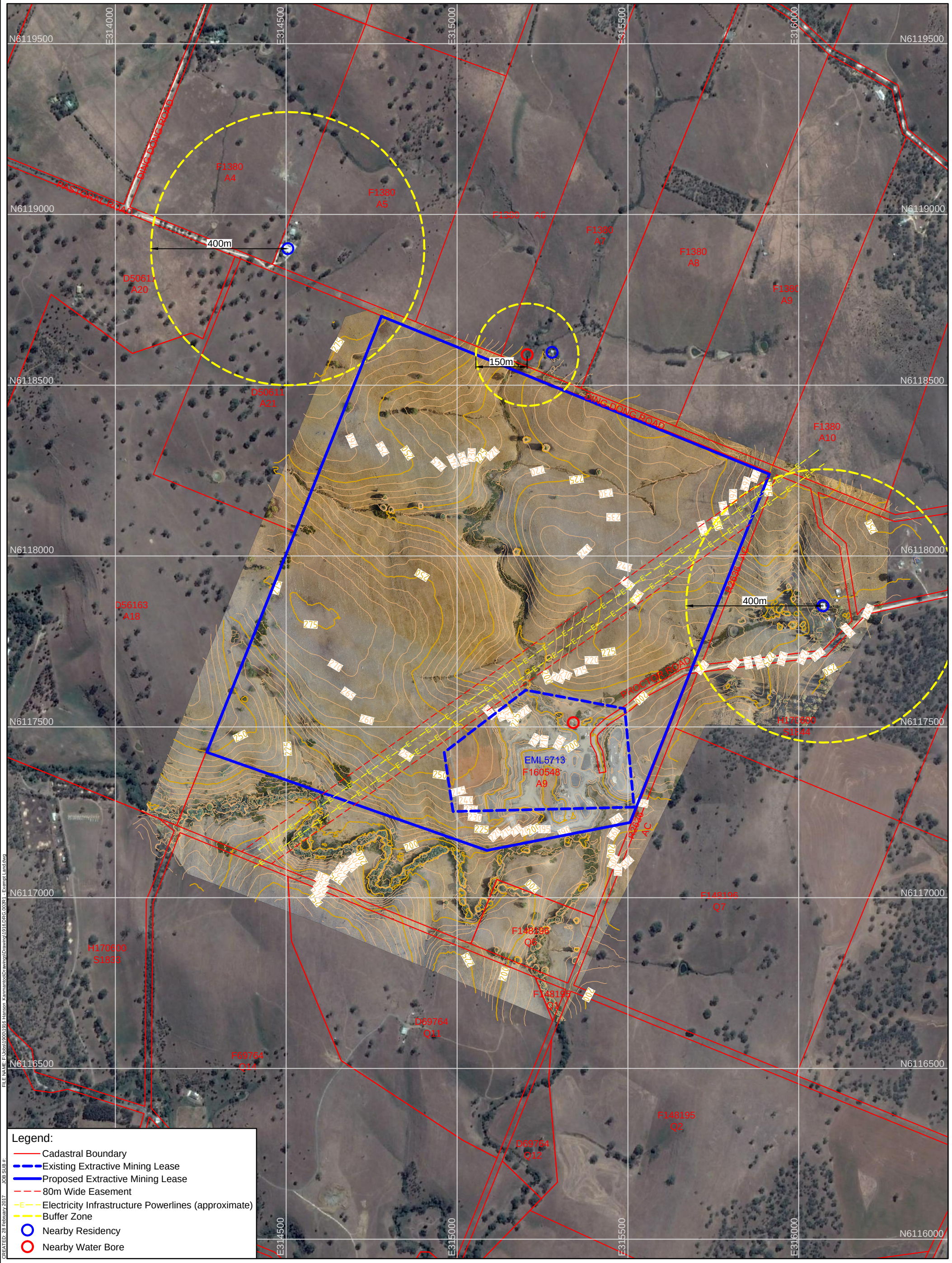
Provide a map(s) showing the following information that is located adjacent to or within the proposed area of operations, where applicable:

- tenement boundaries
- cadastral information
- existing surface contours
- existing vegetation
- location of the proposed exploration operations (includes drillholes, existing and new access tracks, drill traverses, campsites, laydown areas and other applicable information) and/or the target exploration area(s)
- location of existing ephemeral and permanent rivers, creeks, swamps, streams or watercourses and water management structures
- location of houses and homesteads, existing roads, rails, fences, transmission lines, buildings, dams and pipelines
- known sightings of listed species
- location and extent of all environmentally sensitive areas
- any relevant land use types (e.g. parks and reserves, Aboriginal land, Woomera Prohibited Area).

All maps and sections must conform to the standards outlined in the determination for exploration PEPRs (Ministerial Determination 013).

Attachments

Attachment 1 – Drawing 1916.DRG.002R1 Exempt land
Attachment 2 – ElectraNET supporting documentation
Attachment 3 – Drawing 1916.DRG.001A Orthophoto
Attachment 4 – Drawing 1916.DRG.009R3 Proposed Drilling



FILE NAME: F:\Jobs\1900\1916 Hanson Kanmantoo\Drawings\Drawing\1916.DRG.002R1 - Exempt Land.dwg
JOB SUB #:
CREATED: 28 February 2017

REV	DESCRIPTION	DATE	BY
1	Buffers Revised	28-02-17	JS

Data Sources:
Photography: Aerial Survey 2016-01-29
Topography: Aerial Survey 2016-01-29
Cadastre: SA PLB
Ecosystem:
Other:

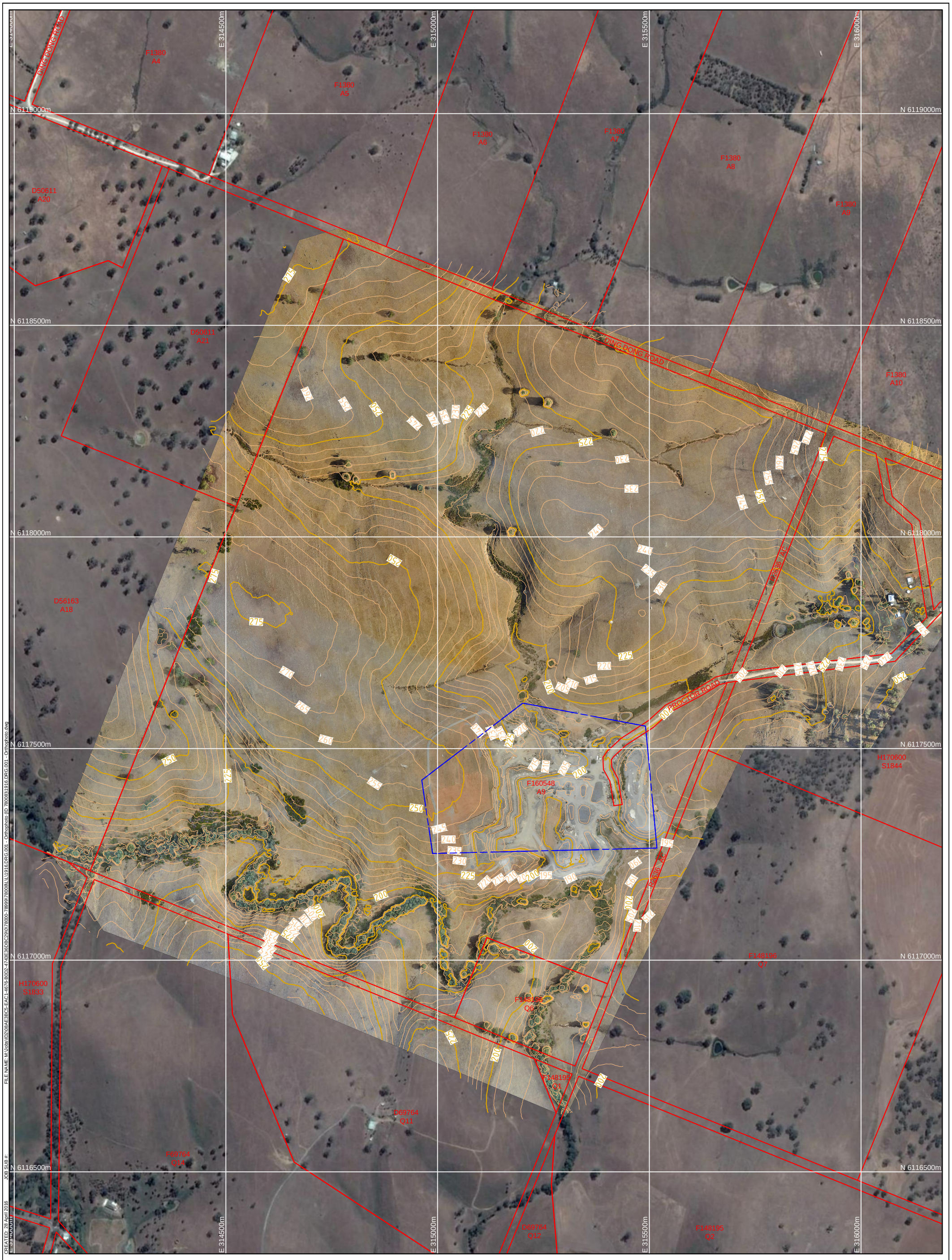
PROJECT: Kanmantoo

CLIENT: Hanson Construction Materials Pty Ltd

TITLE: Exempt Land

GROUNDWORK plus
PH: +61 7 3871 0411
WWW.GROUNDWORK.COM.AU

SCALE: 1:10,000 When Printed On A3 (0 – 200)
DATE: 26 October 2016
PRINTED: 28 February 2017
DRAWN: JS
CHECKED:
DRAWING NUMBER: 1916.DRG.002
REVISION: 1
DATUM: HORIZONTAL / VERTICAL / ZONE MGA / AHD / 54



FILE NAME: M:\Jobs\ID2\08AE3BC5-EAC1-4676-B0D2-4743E36DBC29\078000-78899\78008\LL\1916.DRG.001 - Orthophoto (ID 78008)\1916.DRG.001 - Orthophoto.dwg

JOB SUB #:

CREATED: 28 April 2016

REV	DESCRIPTION	DATE	BY

Data Sources:
Photography: Aerial Survey 2016-01-29
Topography: Aerial Survey 2016-01-29
Cadastre: SA PLB
Ecosystem:
Other:

Legend:
- Cadastral Boundary
- Extractive Minerals Lease

PROJECT: Kanmantoo

CLIENT: Hanson Construction Materials Pty Ltd

TITLE: Orthophoto 29/01/2016

GROUNDWORK plus
PH: +61 7 3871 0411
WWW.GROUNDWORK.COM.AU

SCALE: 1:8,000 When Printed On A3 (0 – 160)
DRAWING NUMBER: 1916.DRG.001A
REVISION:
DATE: 28 April 2016
DRAWN: LT
PRINTED: 28 April 2016
CHECKED:
DATUM: HORIZONTAL / VERTICAL / ZONE
MGA / AHD / 54

Proposed Drillhole Locations MGA94 Zone 54

Drillhole ID	Easting	Northing	Elevation	Depth
DH01	314640	6118058	252	28
DH02	314768	6118055	236	28
DH03	314782	6117910	255	28
DH04	314942	6117906	249	28
DH05	314652	6117831	275	28
DH06	314771	6117780	269	28
DH07	314931	6117772	253	28
DH08	314656	6117705	272	28
DH09	314784	6117653	265	28
DH10	314934	6117663	240	28
DH11	315116	6117702	205	16
DH12	314792	6117558	262	28
DH13	314951	6117578	245	28
DH14	315173	6117306	206	17
DH15	315075	6117279	226	28
DH16	314942	6117226	226	28

Proposed Drillhole Locations MGA94 Zone 54

Drillhole ID	Easting	Northing	Elevation	Depth
DH17	315196	6117486	219	28
DH18	315080	6117393	247	28
DH19	315064	6117470	249	28
DH20	314901	6117377	251	28
DH21	314829	6117323	242	28
DH22	315170	6118138	225	28
DH23	315224	6118032	235	28
DH24	315414	6118148	232	28
DH25	315284	6117864	220	28
DH26	315452	6117967	238	28
DH27	315569	6118055	239	28
DH28	314717	6118345	258	28
DH29	314708	6118283	259	28
DH30	314830	6118366	247	28
DH31	314833	6118286	253	28
DH32	314936	6118359	238	28

Proposed Drillhole Locations MGA94 Zone 54

Drillhole ID	Easting	Northing	Elevation	Depth
DH33	314941	6118266	246	28
DH34	315032	6118325	231	28
DH35	315468	6117775	229	28
DH36	315403	6117640	207	18
DH37	315483	6117703	216	27

Transmission Tower Locations MGA94 Zone 54

Tower ID	Easting	Northing
T1	314419	6117141
T2	314849	6117444
T3	315064	6117596
T4	315473	6117886
T5	315833	6118142
T6	314408	6117091
T7	314926	6117456
T8	315410	6117798
T9	315818	6118091

Blast Monitoring Locations - Setout Points MGA94 Zone 54

ID	Easting	Northing
M1	314923	6118029
M2	314915	6117772
M3	314885	6117377
M4	314923	6117118
M5	314926	6117456
M6	314923	6118175

Legend:
- Cadastral Boundary
- Extractive Minerals Lease
- Mineral Claim
- 80m Wide Easement
- Electricity Infrastructure Powerlines (approximate)
- Transmission Tower Location (approximate)
- Proposed Drillhole Location
- Calyptorhynchus funereus (Yellow-tailed Black Cockatoos)
- Trichosurus vulpercula (Brush-tailed possum (scats))
- Blast Monitoring Location
- Drilling Rig Access
- Stipa Oligostachya (Fine-Head Spear Grass)

REV	DESCRIPTION	DATE	BY
1	Additional Details	23/02/17	JS
2	Blast Monitoring Locations Added	02/03/17	JS
3	Depths Added to Drillhole Locations Table	08/03/17	JS

Data Sources:
Photography: UAV Survey, Captured 2016-11-02.
Topography: UAV Survey, Captured 2016-11-02.
Cadastre: SA PLB
Ecosystem:
Other:

PROJECT: Kanmantoo

CLIENT: Hanson Construction Materials Pty Ltd

TITLE: Proposed Drillhole Location Plan

GROUNDWORK plus
PH: +61 7 3871 0411
WWW.GROUNDWORK.COM.AU

SCALE: 1:8,000 When Printed On A3 (0 – 160)
DRAWING NUMBER: 1916.DRG.009
REVISION: 3
DATE: 8 March 2017
DRAWN: LT
PRINTED: 17 March 2017
CHECKED:
DATUM: HORIZONTAL / VERTICAL / ZONE: MGA / AHD / 54

FILE NAME: F:\Jobs\1900\1916 Hanson_Kanmantoo\Drawings\Drawings\1916.DRG.009r3 Proposed_Drilling.dwg
JOB SUB #:
CREATED: 8 March 2017