Government of South Australia
Department for Energy and Mining

Ref: T2016/000314
ID NO: 2020D028162

24 August 2020

Mr Damon Case
Operations Manager Aggregates
PO Box 1204
MARLESTON SA 5033
damon.case@hanson.com.au

Dear Mr Case,

REQUEST FOR RESPONSE DOCUMENT TO CONSULTATION - EXTRACTIVE MINERALS LEASE APPLICATION OVER RETENTION LEASE (RL) 132 – KANMANTOO BLUESTONE QUARRY

I am pleased to advise that your application is progressing and the statutory public consultation stage has been completed.

Your Extractive Minerals Lease application was publicly advertised on 4 June 2020 with a closing date for comments of 16 July 2020. Requests from the public for extensions to this date were received and for the purposes of Section 35A of the *Mining Act* 1971 it was determined reasonable to extend the period until 16 August 2020. Your application was also circulated to relevant government departments, the landholder and the local council with an invitation for comment.

In total 14 responses were received, and full copies of these responses are enclosed. In addition a number of matters were raised by government departments, these matters are detailed in Attachment 2.

As a result of the public consultation phase, some matters were raised which the Department for Energy and Mining (DEM) seeks further information from you.

In accordance with Section 35(2) of the *Mining Act 1971*, I require that you provide a response to the matters raised by the public and government within **3 months** of the date of this letter prior to DEM making a final recommendation on whether to grant the Lease and what conditions are appropriate if the Lease is to be granted.

If you require a longer time to review the responses, please contact the Assessment Officer below. Please be aware that the response document you provide will be available to the public.

If you have any enquiries please contact Charlotte Baker, Mining Assessment Officer, Ph: 8429 2502, Mobile: 0455 096 746, or email: charlotte.baker@sa.gov.au.

Yours sincerely

Andrew Querzoli
DEPUTY DIRECTOR MINING ASSESSMENT
DELEGATE OF THE DIRECTOR OF MINES

Cc: Sarah Bellman (Sarah.Bellman@hanson.com.au)
James Rowe, Groundwork Plus (jrowe@groundwork.com.au)

Attachment: 1. Table detailing matters raised by government
2. Guidance on response to public submissions
3. Copies of Public Submissions

Attachment 1: Table of matters raised by Government

Table 1: Matters raised by Government to be addressed in a response document:

	Summary of Matter	Requirement for Response Document
1	**Air Quality** Please note these comments only apply to stage 1 of the proposed quarry. Due to the proposed life of the operation and potential for new technologies to develop in this time the assessment has focused on stage 1 of the proposal. The predicted modelling results show anomalies with the 24-hour and annual averages for TSP and PM_{10}. Given that PM_{10} is a subset of TSP, it is expected that PM_{10} would be lower than TSP in all modelled results at the same locations. This is not the case as some PM_{10} results are higher than their corresponding TSP results.	Clarify the modelling results that indicate PM_{10} is higher than TSP despite being a subset of this data. Alternatively reassess the modelled data to clarify this anomaly.
2	**Crystalline Silica** Whilst the logic for assessment of the potential crystalline silica is sound, the conclusion doesn't take into account whether there's any crystalline silica in the background $PM_{2.5}$ size fraction which could raise the annual average concentration range above the recommended 3µg/m^3. We understand that the likelihood of there being a fraction of background $PM_{2.5}$ as crystalline silica is extremely low, but the question remains and needs to be addressed.	Respond to the comment that the background level of crystalline silica is not considered in the overall level of crystalline silica to exceed the recommended Victorian limit.
3	**Geohazards** Section 2.5 of the proposal includes the following assessment of sulphide minerals: • The drilling logs do not highlight any sulphide minerals. • The section 80 agreement will Hillgrove Resources states Hillgrove Resources retains all rights to metallic minerals. DEM consider that:	Provide a plan to address the risk of Acid and Metalliferous Drainage (AMD) during proposed operations. At a minimum this should include a program for confirming the presence of potentially acid forming (PAF) material or otherwise.

	• The drilling samples reported in the MP have only indicated the hardness of rock (not the chemical composition) and thus the MP does not provide sufficient evidence to determine if sulphide minerals are present or otherwise. • The drilling samples taken did not extend to the full depth proposed to be mined. • The section 80 agreement with Hillgrove resources does not address this matter as pyrite is not a 'metallic mineral' and it is unlikely to have a commercial value. The potential for geohazards, including potentially acid forming (PAF) materials requires additional information. DEM notes that leading practice management of PAF and AMD is well documented in the Global Acid Rock Drainage Guide (GARD) and other publications (by the Mine Environment Neutral Drainage Program (MEND) and the Commonwealth Leading Practice handbook: Preventing Acid and Metalliferous Drainage 2016).	
4	**Groundwater model** Two objectives of the numerical model were to estimate pit inflows for the life of the mine, and the magnitude and extent of drawdown at receptors (existing users and off-lease GDEs). It is unclear whether the model adequately estimates worst-case impact to receptors, given a number of assumptions made during model construction, for example: • Inconsistency between the conceptual model and the numerical model, particularly surface-groundwater interaction and the resulting predictions at off-lease GDEs. • Uniform hydraulic conductivity (K) of 0.0004 m/day. Site hydraulic tests indicate localised heterogeneity with K ranging 0.00015 – 0.0018 m/day. • Fixed recharge of 19 mm/yr based on the value presented in the WAP. This value was based on an estimated average recharge rate over the entire Bremer Kanmantoo underground management zone (466 km2) and	The analytical model would be an acceptable alternative to the numerical model (which contains a number of uncertainties described earlier) for this assessment. Using the analytical model, present a range of possible pit inflows over the life of the quarry, and quantify the worst-case impact at receptors. The analysis needs to consider a range of plausible recharge rates and measured hydraulic conductivity values. The numerical model may need to be revised should the analytical model assessment indicate

	may not be representative of recharge at the model domain (23 km2 of active cells).	impact at receptors that do not demonstrate achievement of the proposed outcome (no adverse impact to groundwater quantity and / or quality caused by quarrying operations to existing groundwater users).
5	**Groundwater – impact of drawdown on native vegetation** The groundwater model (Attachment 6) assessed impact to GDEs off-lease at three locations along Dawesley Creek (Figure 4.2), with the conclusion that impacts to these GDEs as a result of drawdown would be minimal. 'End of mining' groundwater drawdown around the pits is predicted to be around 170 mAHD (Figure 6.4 Attachment 6), which is a 15-40 m reduction in groundwater levels. The impact assessment only considers the potential impacts of direct native vegetation clearance through mining operations. However, the potential for impacts on the health and longevity of native vegetation from water drawdown is not discussed, particularly any potential impact to River Red Gums and Fine-Head Spear Grass from groundwater drawdown. Please be aware that should a lease be granted the measurement criteria for native vegetation should consider monitoring of vegetation health both inside and outside the area of potential groundwater drawdown.	Update the native vegetation impact assessment (and if required the native vegetation management plan) to include potential impacts as a result of ground water drawdown and increased fracturing of the rock beneath the water course reducing water availability for native vegetation. This assessment should specifically focus on the River Red Gums on EML 5713 and Fine-Head Spear Grass near MPL 155.
6	**Light Spill** The light spill assessment only considered the impacts from the existing quarry operations and did not consider any changes that may be required for increasing the production rate and hours of operation. Light spill should be managed in accordance with Australian Standard AS4282. A revised impact assessment is required, and if applicable, a separate outcome and draft measurement criteria should be provided for light spill (i.e. this should be separate from the visual amenity criteria).	Review the impact assessment for light spill from night operations and if applicable, provide an outcome and draft measurement criteria for consideration that specifically addresses light spill.

7	**Native Vegetation** Under the Native Vegetation Regulations 2017 all clearance activities must demonstrate that all reasonable measures have been taken to avoid and minimise negative impacts (either direct or indirect) of proposed activities on biodiversity. The vegetation clearance report indicates that Tree 36 which is a large River Red Gum is to be cleared as it is located within the haul road between pit 3 and pit 5.	Explain why the tree cannot be retained by redirecting the haul road.
8	**Native Vegetation** The vegetation clearance report indicates that there 22 trees within the existing EML and that 2 have been previously approved for clearance, while a further 4 are being applied for clearance.	Confirm that the remaining 16 will not be impacted by mining operations.
9	**Rehabilitation** The proposal states that quarry faces will be backfilled once a terminal face has been reached with WDF and overburden / crusher dust. However, there is no contingency plan provided in the situation where an insufficient volume of backfill material has been provided. As the receipt of WDF will be based on demand from a third party there is some uncertainty in regards to this rehabilitation strategy. DEM acknowledges that for long life quarries, the progressive rehabilitation / closure plan and the post quarry land use will evolve over time. However, it is important that operational decisions made during the quarry life ensure that the opportunities for productive post quarry land uses remain available. This being the case, DEM requires: a) A base case for progressive rehabilitation and closure, including consideration of contingencies. b) Hanson to set out a process for progressive rehabilitation/closure that is integrated with a post quarry land use plan.	Review and detail the progressive rehabilitation strategies including consideration of potential contingencies. Describe a process for achieving optimal resource extraction, beneficial post quarry land use and optimal opportunities for progressive rehabilitation. This should include (at a minimum): • a description of the timing and process for engagement with landowner(s), interested parties and any other relevant stakeholders who should inform the planning of land use options; and • timing of key milestones within the process, for example, the rehabilitation design for stage 1 should be finalised before the pit crest has passed the point where key rehabilitation strategies become unavailable (i.e. the point at which the pit crest (as determined based on the WA guidelines for abandonment bunds[1]) would breach the 50 m offset to overhead transmission structure).

[1] WA Safety Bund Walls Around Abandoned Open Pit Mines Guideline

	Potential contingency options could include calculating the appropriate position for an abandonment bund surrounding all pits or considering a safe and stable pit batter.	
10	**Surface water** Brochures of Suppress X and Mobile Foam Dust Suppression System have been attached to the MP and while those brochures state the product is environmentally friendly there is no mention of the possible toxic effects to aquatic organisms should they enter the nearby watercourses. Application of these chemicals should not occur near the watercourses or onto land where it is reasonably likely they will enter waters (including within 24 hours of rain), unless it can be demonstrated that these substances are non-toxic to freshwater organisms.	Update the impact assessment for surface water to assessment the potential impact of chemicals (fuels and dust suppressant chemicals) from entering waterways. If there is a confirmed source, pathway and receptor please include details of how this will be managed and assessed. Monitoring could include testing of all surface water leaving the site against the Environment Protection (Water Quality) Policy 2015 or toxicity testing of the dust suppressant chemicals to determine whether they are non-toxic to freshwater organisms.
11	**Surface Water** **11.1 Combined (ultimate) footprint of the proposed development:** While the combined footprint of the ultimate proposed development is stated to be less than 10% of the total catchment area of Surface Water Management Zone (SWMZ) 426BR033, it is to be noted that this is located in the downstream (near the outlet) of the SWMZ. This is critical as all surface runoff generated from the upstream area flows through this proposed development area. Attachment 7 states "*It is assumed that the existing surface water flows within the watercourses will be maintained and the overland flows outside of the quarry development footprints will be diverted around the pits and enabled to enter the existing watercourses*"	**11.1a** Provide a plan to ensure the current or pre-proposed development flow regime of the watercourse at the outlet of SWMZ 426BR033 is maintained. Flow regime includes the magnitude, duration, and frequency of flow events, and not just the mean annual volume of surface flow. (Refer to relevant sections of the Eastern Mount Lofty Ranges (EMLR) Water Allocation Plan (WAP) **11.1b** Any additional surface water generated from the proposed quarry expansion is to be captured, diverted and used as per relevant policies in the EMLR WAP. This includes consideration of releasing 'low flows', as the sediment basins might be deemed to be runoff-capturing dams (refer to principles 49 to 53 of the WAP for further details). It is recommended that

		the proponent further consult Hills and Fleurieu Landscape Region on the matter.
	11.2 Hydraulic Modelling: Attachment 7 of the MP estimates runoff using average annual rainfall (Kanmantoo Station no. 023724) and runoff coefficients of 0.42 and 0.65 (ARR 2016) and provides estimated runoff data in Table 2 as the 'Summary of Hydraulic Modelling. This document does not provide further details on modelling, such as, whether a time-series rainfall-runoff generation process was included in the modelling process.	**11.2** To undertake appropriate assessment of the hydraulic modelling results, provide details of the hydraulic model used, input data to the model, modelling assumptions, model outputs and limitations of the modelling and results.
	11.3. Flooding risks: The documents use an average annual rainfall year for estimating the runoff expected to be generated. It is unclear how this assessment is related to flood events from high-intensity rainfall events and whether this analysis was undertaken. High rainfall events can have implications for flooding on site and discharge of any silt-laden waters to the surrounding catchment. Detailed modelling data should be provided to undertake a full assessment.	**11.3** To undertake an appropriate assessment of flooding risks, the surface water modelling study should include the required stormwater and flood management aspects, including, but not limited to, ensuring that all development is kept out of the 100-yr ARI flood extents.
	11.4 Additional surface water generated: The document estimates an additional 73 ML of surface water will be generated by the proposed development during an average rainfall year. This estimated 73 ML of additional flows is (i) considered a significant volume for a dry SWMZ, (ii) has the potential to considerably modify and impact the immediately downstream flow regime, with higher impacts expected during high rainfall years and (iii) this, as stated in 11.2, is based on preliminary estimates using an average year . Further documentation on the actual modelling undertaken is required. It is also not apparent whether this assessment is based on observed streamflow data. It is therefore recommended that appropriate streamflow monitoring be undertaken to confirm the uncertainties.	**11.4** Provide an appropriate streamflow monitoring plan. The response document should include an outline of monitoring locations and parameters to be monitored. At a minimum, monitoring sites should be located just upstream and downstream of the proposed development to assess the impacts of the proposed development on flows. Continuous water level (with rating curve developed to calculate flow) or flow should be recorded at the monitoring sites.

		Should you require further guidance on any surface water matters, please contact your assessment officer who can facilitate a meeting with DEM and DEW.
12	**Surface water / sediment management** Image 1916.DRG.061 shows a sedimentation basin in very close proximity to Dawesley Creek. A dashed blue line is depicted between the basin and the creek, however, the dashed line is not shown in the legend of the images, so it is not clear what the dashed line represents. For example, it may depict a bund, or the pit crest which would act as a barrier between the basin and the creek.	Provide details of how the most southern sedimentation basin will be constructed to prevent contaminated runoff flowing directly to Dawesley Creek.
13	**Traffic – Proctor Road intersection with Old Princes Highway** The proposed operations will enable significant expansion of the existing quarry operations. The MP did not contain any detailed information of the potential traffic projections or potential impacts to the Old Princes Highway/Proctor Road intersection. DPTI Transport requests that a Traffic Impact Assessment (including intersection upgrade assessment) is undertaken for the construction and operational phases, with specific focus on Old Princes Highway/Proctor Road intersection. Some of the matters below may be in consideration with the works between the proponent and Council, and if not, our request is as follows: This should include: • Proposed vehicle types and numbers (including heavy vehicles and over-size/over-mass vehicles), vehicle turning paths, and traffic impacts on the arterial and local road networks - specifically Old Princes Highway/Proctor Road intersection • Identify any potential Old Princes Highway/Proctor Road intersection upgrades are warranted to mitigate the intersection traffic impacts	Engage with DPTI Transport regarding this matter and provide a response. DEM can facilitate a meeting with DPTI, please contact your assessment officer in order to arrange a time.

	○ based on traffic warrant assessment of current and proposed traffic volumes ○ Using Austroads guidelines and DPTI standards and guidelines ○ Consider any potential pavement requirements arising from increased vehicle loadings at the intersection Any road intersection upgrades will need to be undertaken to the satisfaction of the relevant asset owner (ie either DPTI or Council), with all costs borne by the proponent. Note that permits for any over-dimensional/over-mass vehicles will be through the National Heavy Vehicle Regulator.	
14	**Traffic – Proctor Road** **14.1 Traffic Movements** The MP states up to 288 truck movements per week are expected if the operation reaches 600 ktpa. The submission from Mount Barker District Council indicates the current approvals for heavy machinery to use Proctor Road may not allow this and a further assessment and approval would need to be sought. The council is the relevant authority under the National Heavy Vehicle Regulator for Proctor Road. **14.2 Infrastructure** The proposed number of truck movements are likely to have a significant impact on Proctor Road, owned by Mount Barker District Council. **14.3 Dust** The Air Quality Assessment (attachment 4 of the MP) states that Proctor Road will be fully sealed in 2019, however, to date approximately 350 m of the road has been sealed.	**14.1** Please provide a justification there is a reasonable prospect Hanson Construction Materials would be able to obtain the required road permits to meet the truck movements that are set out in the MP. Alternatively please provide a worst case scenario for truck movements should approval to use larger trucks not be obtained. **14.2** Please consult with the council regarding their submission and the potential impact of proposed operations on Proctor Road. Provide the results of consultation in the response document. **14.3** Please confirm if the statement in the MP regarding the seal of Proctor Road is still accurate, or otherwise (acknowledging that Hanson is not the owner of Proctor Road). If no further sealing of Proctor Road is proposed justify whether the air quality assessment assumptions accurately reflect

		what is proposed and if not provide an updated assessment.
	14.4 Noise & Light Spill Sales and loading activities are proposed 24 hours a day, 7 days per week. The noise and light spill assessments do not assess the impacts of haul truck movements through Kanmantoo township on a 24/7 basis.	**14.4** Provide an impact assessment for the impact of traffic along Proctor Road on noise amenity and light spill from headlights in consideration of the proposed 24/7 operations.
15	**Water Affecting Activities Permits** As stated in the MP, the site is located in the Eastern Mount Lofty Ranges Prescribed Water Resources Area (EMLR PWRA) – SWMZ 426BR033. The Water Allocation Plan (WAP) for the PWRA lays out the policies and principles related to capture, extraction and diversion of surface water resources, for both, existing and new Water Affecting Activities (WAA). Attachment 7 of the MP has assessed the impact of the existing and the proposed quarrying extension activities on catchment inflows to the site at a broad scale. Further detail is also required to be included in the report regarding the impact to the flow regime (see matter 11). Surface water infrastructure can be licenced/permitted either through an EPA Licence or through DEW/Regional Landscape Board. It is recommended that further discussion is had to be clear on the proposed pathway for licencing/permitting.	Determine the preferred licencing/permitting pathway for surface water infrastructure. Discuss with DEM/EPA/DEW if required. Undertake an assessment of whether a water affecting permit is required and if required contact the relevant authority regarding permitting.

16	**Water Allocations** Water supply for the mining operation has not yet been confirmed. There is a shortfall in the water supply required for the mining operation and no additional water supply has as yet been identified. A combination of sources is still being investigated (recycled water, mains, surface water). Use of groundwater and/or surface water would require a water allocation/licence. Water allocations must be sourced from the same water management zone and applied to be transferred within the rules of the Water Allocation Plan (WAP).	Clearly state the proposed source of water for the 30-40ML of water to be required onsite. Clarify what permits / allocations are required for operations (including both groundwater evaporation from pit formation and water use requirements onsite). For any permits or allocations required please provide evidence Hanson Construction Materials Pty Ltd have a reasonable prospect of obtaining these permits/allocations for stage 1 of the proposed operations. Enquiries regarding DEW permitting and allocations should be directed to the Water Licensing Branch, Berri, on 8595 2053.

Table 2: Should a lease be granted, the following are matters to be addressed in a PEPR

	Summary of Matter	**Requirement for Response Document**
1	**Air Quality Monitoring** There are several questions raised regarding the proposed PM_{10} monitor: • Will there be a co-located meteorological station? • How will the apportionment of high readings be made, whereby it may not be clear if the quarry is the main contributor under some circumstances? • What trigger levels will be set and for what averaging periods? • Will the quarry review and identify key emission sources just based on high readings, including acceptance of high background (beyond quarry control) by still triggering action? Typically, an active monitoring system involves at the very least a triangulation set of monitors with a co-located meteorological station which work in unison to clearly indicate the direction of emissions to	Given the expected expansion size of the quarry, the proponent should consider installation of a triangulation PM_{10} monitoring system (a minimum of 3 PM_{10} monitors) with co-located meteorological station(s) from the start of the project. The period of the monitoring should be undefined (not one year), particularly since the Stage 1 expansion will take up to 2033 before the maximum of 600ktpa will be reached. Should a lease be granted a Trigger, Action and Response Plan (TARP) will need to be developed and provided that clearly defines what information constitutes requiring responses and what those responses will be. A copy of the TARP would need to be included in the PEPR.

	better identify source. A single monitor is likely to result in poor information and perhaps over-reaction to high monitored levels. Furthermore, as it currently stands, the proposal appears to be for a 1-year monitoring campaign with a single PM_{10} monitor (located near the house owned by the proponent) starting when extraction capacity (600ktpa) has been reached in 2033.	
2	**Air quality monitoring** The criteria for air quality refers to monitoring in accordance with Australian Standard AS3580.9.6 Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM10 high volume sampler with size selective inlet – Gravimetric method. This Australian Standard refers to the wrong type of monitoring for this impact not all monitoring will require Hi Vol depending on the impacts to the receptor.	Please note that should a lease be granted this criteria should be amended to refer to methods as agreed with the regulator.
3	**Blasting criteria** The MP proposes a complaints based measurement criteria for blasting, however, there is no consideration of potential impacts from blasting on infrastructure in the proposal.	Detail how the measurement criteria has considered potential impacts on infrastructure (specifically the powerlines running through the site) or alternatively propose a measurement criteria for monitoring vibration impacts at the transmission poles to confirm modelled vibration limits.
4	**Fauna** Common Brushtail Possum (*Trichosurus vulpecula*) and Yellow-tailed Black-Cockatoo (*Calyptorhynchus (Zanda) funereus whiteae*) were observed at the site and are listed as 'Rare' and 'Vulnerable' respectively at a State level. It is possible that these species are using the River Red Gums (*Eucalyptus camaldulensis*) at the site for breeding and/or roosting.	It would be ideal if appropriately sized nest boxes for Common Brushtail Possum and Yellow-tailed Black-Cockatoo are installed in adjacent habitat to compensate for the loss of tree hollows through this development.
5	**Groundwater** Managing potential impacts to groundwater quality requires an understanding of the chemical characteristics and storage of waste material, and the appropriate management of any contaminated mine waters such as acid and metalliferous drainage (AMD).	Please note the site will be required to adhere to the general environment duty to prevent or minimise harm to groundwater, under the Environment Protection (Water Quality) Policy 2015, and section 25 of the *Environment Protection Act 1993*.

	The quarry expansion is considered a low risk activity in relation to groundwater due to activity type, ie no chemical processing, and there is only minor pyritic material reported in the Tapanappa Formation. However, given the operation is likely to intercept groundwater, the quarry expansion is considered an activity that has the potential to pollute groundwater. As such, the operation has a general environment duty to prevent or minimise harm to groundwater, under the Environment Protection (Water Quality) Policy 2015, and section 25 of the *Environment Protection Act 1993*. Control measures would include, but are not restricted to, • Chemicals stored on site to be handled correctly (stored and handled in a bunded area). • Spill kit to be available onsite to deal with leakage from vehicles. Monitoring program should be continued to ensure no impacts to groundwater water quality over the life of the quarry and compared to the baseline sampling as well as all relevant guidelines.	
6	**Groundwater Measurement Criteria** The proposed groundwater measurement criteria control and management strategies are not adequate.	Groundwater control and management strategies are to include: • Groundwater monitoring at multiple points to validate predicted drawdown, with actions if major deviations are observed. • Groundwater monitoring at locations sufficient to measure the GDE receptors. • Sampling for water quality parameters to demonstrate achievement of the proposed outcome. • Outcome measurement criteria should include reference to the maximum predicted drawdown.
7	**Legislation references**	Should a lease be approved, please ensure the PEPR references the new legislation.

	Throughout the MP, any reference to Natural Resources Management Act 2004 (SA) should be changed to Landscape Act SA 2019 (commencing 1st July 2020). There is no reference to this legislation or water affecting activities in Attachment 25 (Legislation and Standards) in the MP in relation to surface water.	
8	**Noise** Attenuation on the new processing plant is currently not confirmed because the plant design itself is currently not complete. The acoustic report have noted that the designed enclosures will require at least a 10dB(A) reduction in external noise levels however does not provide details of how it will be achieved.	Difficult to discuss options when equipment itself is not confirmed for the new processing plant projected for periods after Stage 1B. It is recommended that an acoustic specialist is consulted to design the attenuation required when plant equipment have been confirmed.
9	**Noise** If no attenuation is applied, exceedances are predicted at receivers R10 which is approximately 500m from the site boundary. The other receiver that will see exceedances would be a house that is noted to be the “QM” house owned by the operators. Even after attenuation, R10 is likely to be exposed to high noise levels throughout the life time of the mine.	Although the model predicts that the noise levels at R10 would meet the noise criteria for most of the time in worst case weather scenarios, further consideration is recommended to reduce potential impacts from noise at this receiver.
10	**Noise** The acoustic report recommends acoustic berms at pit 1 and 3 to reduce noise at receivers R10 and the QM house.	These must be implemented, please ensure they are included in any proposed PEPR, should a lease be granted.
11	**Stockpiling near water courses** The applicant proposes a minimum of five metres distance between soil and overburden stockpiles and water courses. This might be too close to the waterway in some places where natural flood out occurs due to flatter topography. Additionally, the report states “The brown loam topsoil is deeper on this site and there is no exposed rock on the surface or evident in the profile during sampling. These areas near the creek could be a valuable source of topsoil for use in rehabilitation programs and should be carefully salvaged and stockpiled to maintain its quality”.	A suitable buffer should be identified and maintained between excavation works and the creek to mitigate risks associated with flooding and peak flows washing over and eroding excavated soils.

12	**Surface water** It is mentioned and shown on the images that some of the sedimentation basins proposed for the site will discharge to the watercourses. Section 7.1 proposes visual monitoring of these discharges but no physical monitoring of turbidity is proposed.	Any discharge of water from the sedimentation basins must comply with the Environment Protection (Water Quality) Policy 2015. Turbidity should be measured in the water discharging from the basins to demonstrate compliance with the Policy. If turbidity is measured at values higher than 50NTU, corrective actions should be taken on site to either reduce the turbidity or prevent the water from being released to the environment.
13	**Waste Derived Fill** The MP states Waste Derived Fill (WDF) will be placed in the current EML area for temporary stockpiling before being used for bunding or infilling of pit voids. Section 3.2 of the EPA *Standard for the production and use of WDF* requires the WDF to be for an immediate use. There must be appropriate materials flow and stockpile management to avoid inappropriate and speculative stockpiling of material. DEM also note there is inconsistency within the document regarding how WDF is referred to. Some sections refer to construction and demolition waste, other sections refer to clean soil. Sections that refer to clean soil (eg. section 7.9.2) describe it as containing concrete which is not a component of waste soil as defined by the EPA standard. The use of this fill is varied as backfilling of voids or improving growing medium for vegetation within rehabilitated areas.	Should a lease be granted, the PEPR must include details of stockpile management, including: • Maximum size of temporary stockpiles • Maximum residency time of temporary stockpiles. • Clarity about the type of fill to be received onsite and how this fill will be used. This should consider whether the proposed waste is fit for the reuse purpose. For noting, all descriptions of WDF must align with the EPA standard for use of WDF.

Attachment 2: Guidance on response to Public Submissions

During the statutory circulation period the Mining Proposal (MP) was made available for statutory public consultation. A number of public submissions were received. Hanson is to review the public submissions, identify the relevant matters raised and provide a response addressing all of the relevant matters raised. The table format below is provided as guidance only and Hanson can adopt alternative formats should you wish to do so.

Should there be matters raised that are not within the scope of the MP, the applicant can state this and provide a reason as to why you believe the matter is not within scope. The response to public submissions is required in accordance with Section 35(2) of the *Mining Act 1971*.

In relation to common matters within a single submission, the applicant is free to group the issues in your response document to prevent duplication. Please ensure each response to a matter is clear and easy to follow should you choose to group matters. In relation to common matters between different public submissions (or a government matter) where the matter is identical in nature, the applicant is free to reference a previous response to prevent duplication. Please ensure that each response is clear and easy to follow should you choose to use references.

Guidance Response Document Table:

Reference Number	Public Submitter	Matter raised in public submission	Applicant Response
1	Name or Unique Identifier	Summarise the matter and include links or references as appropriate.	*Insert applicant response:*
2	Name or Unique Identifier	Summarise the matter and include links or references as appropriate.	*Insert applicant response:*
3	Etc…	Summarise the matter and include links or references as appropriate.	*Insert applicant response:*