



ATTACHMENT 'B': APPLICATION REFERRALS

AGENCY	COMMENTS
<i>Province of Alberta</i>	
Alberta Environment and Parks	<p>Hillstone Aggregate Phase 2 expansion:</p> <ul style="list-style-type: none"> • While the Millennium report (Hillstone Aggregates) provides a hydrogeological assessment for the site, the analysis is not as robust as the Summit Pit – SLR Hydrogeological report. The Millennium report concludes no impact to groundwater considering the pit is a dry operation and does not further the analysis. The SLR report considers the impact of removing the overburden (denser material than gravel) during the operation that facilitates higher groundwater flows and higher flows in Big Hill Springs. The SLR report concludes a .4 L/s to .7 • L/s increase in the spring – I'm assuming (although not stated) this is during pit operations and that reclamation includes replacement of the overburden leading to a return of natural flows. It would have been great for the SLR report took this one step further to see if the increase in flow impacts the tufa (negative or positive) – that's the question we need answered. • Criteria for hydrogeological assessments for all gravel pit operations should include: • Documented impacts to groundwater considering the change in cover over the water table at each project phase (pre construction, operations and decommissioning). Impacts include surface and ground water quantity and quality. • Mitigation measure to reduce impacts (phasing, effectively storing the overburden, reducing the operation where possible). • Net effects assessment – what is the change? • Ideally it would benefit Alberta Parks review to have a calculation of cumulative effects of all the planned pits above Big Hill Springs and the potential increase in spring water at any given time during pit operations ... and assessing those impacts on tufa formation and the vegetation unique to the Big Hill Spring PP.
Alberta Transportation	<p>In reviewing the application, the proposed development falls within the control distance of a provincial highway as outlined in the Highways Development and Protection Act / Regulation, and will require a roadside development permit from Alberta Transportation. Relocating the access & construction of the Type II intersection treatment will be included as a condition of development permit approval.</p>
<i>Internal Departments</i>	



AGENCY	COMMENTS
Planning and Development Services - Engineering	<p data-bbox="467 268 578 298"><u>General</u></p> <ul style="list-style-type: none"> <li data-bbox="506 304 1463 430">• As the application is for aggregate mining, prior to issuance of future DP, the applicant is to provide payment of the Community Aggregate Payment Levy in accordance with Bylaw C-7748-2018, as amended, in the amount of \$0.40 per ton of aggregate extracted and removed. <li data-bbox="506 436 1463 569">• Prior to issuance of future DP, the applicant is required to provide a Construction Management Plan for the construction of the Type II intersection at Highway 567 and a paving of a new road within the road allowance in accordance with County's servicing standards. <li data-bbox="506 590 1463 1438">• Prior to issuance of future DP, the applicant will be required to provide a detailed reclamation plan for the Phase II area in accordance with the MSDP and the requirements under the Code of Practice for Gravel Pits published by AEP. The plan shall address: <ul style="list-style-type: none"> <li data-bbox="548 741 1463 835">○ the progressive reclamation of the pit in terms of operating and un-reclaimed areas compared to reclaimed areas to ensure a maximum open pit area of 40 acres at any given time; <li data-bbox="548 842 1463 905">○ the reclamation monitoring and maintenance plan to ensure the success of the reclamation activities; and <li data-bbox="548 911 1463 974">○ implementation of the recommendations of the slope stability assessment prepared in support of reclamation activities. <li data-bbox="506 995 1463 1438">• Policies should be added under Section 5.0 of MSDP as follows: <ul style="list-style-type: none"> <li data-bbox="613 1045 1463 1171">○ Reclamation will be completed in accordance with Part 5 of the code of practice for pits, which sets requirements regarding the conservation of soil and subsoil and characteristics of reclamation. <li data-bbox="613 1192 1463 1287">○ Progressive reclamation will be implemented to ensure that area of disturbance is minimized at any given time and post-extraction lands are returned to their former agricultural state. <li data-bbox="613 1308 1463 1438">○ A reclamation plan shall be submitted with each development permit application to demonstrate how the mined areas will be returned to their original condition as new mining areas are opened. <li data-bbox="506 1459 1463 1619">• Prior to issuance of future DP, the applicant is required to provide a comprehensive landscaping plan, prepared by a qualified Landscape Architect, for the Phase II area showing the landscaping elements that are to be incorporated into the berm, setback and entrance areas. <li data-bbox="506 1640 1463 1808">• As per amended Hillstone Aggregates Gravel Pit MSDP, PM2.5 levels will be no greater than 27 µg/m³. Hillstone will ensure that their operation will be compliant with Canadian Ambient Air Quality Standards (CAAQS) and Alberta Ambient Air Quality Objectives (AAAQO). <li data-bbox="506 1814 1463 1944">• Applicant provided an Air Quality Assessment, prepared by Millennium EMS Solution Ltd., dated January 2021. The results of the Air Quality Assessment showed there were no predicted exceedances of AAAQOs or CAAQs for any modelled compounds



AGENCY	COMMENTS
	<p>and any averaging period at or beyond the Development Fence line. As such, the operation of the Project is not expected to adversely affect air quality beyond the Development Fence line.</p> <ul style="list-style-type: none"> • As per amended Hillstone Aggregates Gravel Pit MSDP, Hillstone Aggregates has adopted a threshold noise limit of 65 dBA L_{eq} (One hour) and will use the guideline and recommendations contained in "AER Directive 038" to manage and mitigate noise from the pit. • Applicant provided a Noise Impact Assessment, prepared by Patching Associates Acoustical Engineering Ltd., dated September 18, 2020. As per the Noise Impact Assessment, the cumulative sound pressure level is expected to meet the AER Guidelines for permissible sound level as well as the threshold noise limit adopted for this project of 65 dBA L_{eq} (One Hour) at all of the receivers in the study area for daytime operations. <p><u>Geotechnical</u> - Section 300.0 requirements:</p> <ul style="list-style-type: none"> • As per amended Hillstone Aggregate Gravel Pit MSDP, several water level measurements were conducted at the site between 2012 and 2018, which indicates water table is expected to be at an elevation of between 1272.1 and 1286.6 above sea level. • Measuring wells have been preserved from drilling operation in 2012 and 2015. Additional wells will be established once the mining is complete for phase 1. • As per the MSDP, Aggregate Operation will be at least 1 m above the groundwater table which is compliant with "A Guide to the Code of Practice for Pits" by Alberta Environment. • Prior to issuance of future DP, the applicant will be required to implement a groundwater measurement program for phase 2 and provide the County with new groundwater readings at the boundaries of the Phase II area to record all fluctuations in groundwater levels to ensure gravel extraction activities remain a minimum of 1.0 m above the highest recorded groundwater reading at all times. • As a permanent condition of the DP, the applicant is required to implement a groundwater measurement program for which the applicant is to install piezometers within the open pit area to take monthly readings of the groundwater levels to ensure mining activities remain a minimum of 1.0 m above the recorded groundwater levels at all times. The applicant will be required to keep a log to record the readings and be able to provide the County with the log upon request and include the log in the Annual Operations Report. • A policy 4.15 should be revised to measure the groundwater elevation in all operating measuring wells at least at a frequency of every month. • A second of policy 4.16 should be revised to "Groundwater de-watering is not permitted." <p><u>Transportation</u> - Section 400.0 requirements:</p> <ul style="list-style-type: none"> • Access (Type I) to the site is provided from Highway 567 which is located approximately 570 m from the eastern quarter section boundary. The current access is expected to close and proposed to



AGENCY	COMMENTS
	<p>move west through road right-of-way.</p> <ul style="list-style-type: none"> • Hillstone Aggregate Traffic Update prepared by Bunt & Associates, dated April 5, 2017 propose to upgrade current access to Type II intersection. • Applicant provided a Transportation Impact Assessment, prepared by Bunt & Associates, dated August 31, 2020. The TIA addresses the impacts of the proposed development on traffic operations including Type II intersection at Highway 566 and construction of a new road. The post development analysis confirmed that type II intersection is necessary to support the development and it is expected to operate within acceptable capacity parameters once built. No illumination is required. A highway access review determined that Type II intersection can be accommodated along Highway 567 without any conflict of intersection geometry and the proposed new access location will provide further separation from the proposed Type IV intersection east of the site. • As per AT, the proposed development falls within the control distance of provincial highway. Relocating the access & construction of the type II intersection warrant will be included as a condition of development permit approach. • Prior to issuance of future DP, the applicant will be required to enter into a Development Agreement with the County for: <ul style="list-style-type: none"> ○ Construction of a Type II intersection at Highway 567 for a new road west of NW-36-26-04-W05M including all signage and any other roadside indicators to the satisfaction of AT and County; ○ Obtaining Roadside Development Permit and other necessary approvals from AT for the Highway Intersection improvements ○ Construction of a new road within road allowance west side of NW-36-26-04-W05M to an industrial paved standard (400.6) from Highway 567 to a site access including paved cul-de-sac, necessary signage, stormwater infrastructure and a paved approach for a site access to the satisfaction of County. ○ Removal and reclamation of the existing access to the satisfaction of AT ○ Implementation of the recommendations of the geotechnical report and pavement structure design; ○ Implementation of the recommendations of the Construction Management Plan; and ○ Implementation of the recommendations of the climbing lane warrants. • Prior to issuance of future DP, the applicant is require to provide a climbing lane warrant, prepared by a qualified professional, to determine if there is a need for a climbing lane to allow for the safe entrance of truck traffic onto the highway from the Type II intersection at Highway 567. Should a climbing lane is warranted, the



AGENCY	COMMENTS
	<p>construction of climbing lane shall be done through a development agreement prior to issuance of future DP.</p> <ul style="list-style-type: none"> • Prior to issuance of future DP for Phase 2, the applicant is required to obtain a Construction Completion Certificate from the County for all the work to be completed through a Development Agreement. • Prior to issuance of future DP, the applicant will be required to provide a Traffic Management Plan in accordance with Joint Operating Standards which shall address: <ul style="list-style-type: none"> ○ measures to control driving behavior of aggregate haulers; ○ use and monitoring of in-vehicle monitoring systems; ○ turning movements onto the Highway to provide recommendations to optimize safety of Highway users; and ○ measures to be implemented to prevent the transfer of aggregate and other detritus materials onto the Highway and local road network. • Policies should be added to Section 4.4 of MSDP as follows: <ul style="list-style-type: none"> ○ All commercially licensed trucks directly controlled by the operator will participate in the ASGA truck registry program (or equivalent) ○ Hillstone Aggregates shall provide a 24-hour number for neighbours within the immediate vicinity to report issues with truck traffic relative to aggregate operations within the MSDP area. ○ An updated Traffic Impact Assessment shall be submitted at the development permit application stage in support of each operational phase. • Prior to issuance of future DP for Phase 2, the applicant is required to provide payment of the Transportation Offsite Levy in accordance with current levy by-law at the time of DP approval, for the total gross acreage of the gravel pit and areas associated with gravel extraction activities. <p><u>Sanitary/Waste Water</u> - Section 500.0 requirements:</p> <ul style="list-style-type: none"> • The applicant will use portable sanitary facilities on site. The applicant's proposal is in accordance to policy 449 (use of sewage holding tanks for industrial, commercial and institutional lands). • Engineering have no concerns with this proposition. <p><u>Water Supply And Waterworks</u> - Section 600.0 & 800.0 requirements:</p> <ul style="list-style-type: none"> • Potable water will be trucked in. • Engineering have no requirements at this time. <p><u>Storm Water Management</u> – Section 700.0 requirements:</p> <ul style="list-style-type: none"> • Stormwater Management Plan was completed by Westhoff Engineering Resources Inc. for the quarter section dated September, 2013. • Westhoff's Stormwater Management Plan proposed a combine



AGENCY	COMMENTS
	<p>approach of storage-infiltration-evaporation for Phase 1 pit operation to achieve zero discharge and suggested same strategy be adopted as pit operation progresses to Phase 2 and Phase 3. At this time, the applicant shall provide an update to stormwater management plan incorporating stormwater treatment to minimize the contamination of groundwater through infiltration of un-treated stormwater.</p> <ul style="list-style-type: none"> • As a condition of future DP, applicant will submit a site specific stormwater management plan, prepared by a qualified professional, providing the onsite stormwater management strategy for the phase 2 development • A Policy should be added to Section 4.9 of MSDP as follows: <ul style="list-style-type: none"> ○ A Site-specific stormwater management plan shall be submitted at the development permit application stage to address the specific stormwater management requirements of each operational phase. <p><u>Environmental</u> – Section 900.0 requirements:</p> <ul style="list-style-type: none"> • Erosion and Sediment Control (ESC) Plan was completed as per policy 6.13 of the Big Hill Spring Gravel Pit Master Development Plan, prepared by Aggers Technical Services Ltd, Dated August 25, 2018. Erosion and Sediment control includes <ul style="list-style-type: none"> ○ Minimizing surface disturbances ○ Preventing off-site mud tracks ○ Fugitive Dust Controls ○ Temporary and Permanent Erosion and Sediment Controls ○ Emergency ESC measures ○ Post-pit operations and Final reclamation • A policy should be added to Section 4.11 as follows: <p>“Erosion and Sediment control and stormwater management will be addressed onsite to meet the requirements of the County Servicing Standards”</p> • Prior to issuance of future DP, the applicant will be required to provide a Site-Specific ESC plan for phase 2 prepared by a qualified professional, providing the ESC measures to be implemented onsite during the operation of the pit in accordance with the MSDP and the requirements of the County Servicing Standards. • Prior to issuance of future DP, the applicant will be required to provide an ESC Plan prepared by a qualified professional, providing the ESC measures to be implemented for the construction of the Type II intersection at Highway 567 and construction of a new paved road within a road allowance. • A Wetland Assessment and Impact Report was provided, prepared by Ghostpine Environmental Services, dated September 17, 2018. As a part of the wetland assessment, a field assessment was completed incorporating wildlife survey, soil assessment, and wetland identification and delineation. • Following are the findings of the Wetland Assessment and Impact Report: <ul style="list-style-type: none"> ○ Wetland: 7 wetlands are present on site for Phase 2 and Phase 3. None of the wetlands are crown claimable.



AGENCY	COMMENTS
Transportation Services	<ul style="list-style-type: none"> ○ Wildlife: Several wildlife species are present on site. Mitigation measures are recommended to minimize impact to Wildlife ○ Soil: Soils in the area are predominantly chernozemic with rare areas of solonchic soils. The risks of soil erosion by wind and water in this area ranges from severe to moderate. Reclamation procedure is proposed. ● As a permanent condition of future DP, the aggregate development must align with all relevant municipal, provincial and federal legislation, regulations and policies. ● The wetland assessment and impact report was used to get approval from AEP under the Water Act to infill wetland and ephemeral zone during Phase 2 construction of gravel pit. Prior to issuance of future DP, the applicant will be required to demonstrate all necessary approvals are obtained for wetland disturbance from AEP under the Water Act. ● Prior to issuance of future DP, the applicant will be required to demonstrate the authorization and clearance has been obtained under the Historical Resources Act for mining activities as identified Section 3.2.3 of MSDP. ● Policies should be added to Section 4.13 of MSDP as follows: <ul style="list-style-type: none"> ○ The requirements of relevant provincial legislation (Code of Practice for Pits, Water Act) and the requirements of the County Servicing Standards will be met to ensure that environmental impacts are minimized. ○ Any proposed disturbances of identified wetlands within the MSDP area shall require approval from Alberta Environment and Sustainable Resource Development in accordance with the requirements of the Provincial and Municipal Wetland Policy and the Water Act. ○ The aggregate development will align with all relevant municipal, provincial and federal legislation, regulations and policies. ● Site Grading, fill placement, temporary stockpile placement and berm construction are not to negatively impact ● existing surface drainage or direct additional surface drainage into adjacent County road allowance. ● Applicant to confirm duration of stockpile placement. Applicant to be responsible for dust, weed and erosion ● control for duration of stockpile placement. ● For gravel pit operations applicant to be reminded to adhere to the conditions within the County's Community ● Aggregate Payment (CAP) Levy Bylaw. ● Application involves Development along Alberta Transportation Road Allowance. Therefore applications to be ● circulated to Alberta Transportation for review and comments.



AGENCY	COMMENTS
Agricultural & Environmental Services	<ul style="list-style-type: none"> • Applicant to be reminded to adhere to the conditions identified within the County Noise Bylaw. <p>It may be of benefit to the applicant to create a Weed Management Plan and have a contractor available (or be personally prepared) to control any regulated weeds. The applicant will need to ensure compliance with the Alberta Weed Control Act.</p>

Circulation Period: (March 26, 2019 to April 16, 2019)

Agencies that did not respond, expressed no concerns, or were not required for distribution, are not listed.