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Master Site Development Plan

The Summit Pit
DRAFT for Public Hearing Purposes



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Summit Aggregate Pit

Master Site Development Plan

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CONTENTS

Section A | OVERVIEW

1.0	Motivation & Rationale	i
2.0	The Proposal	02
3.0	Purpose of the Master Site Development Plan	03
4.0	Municipal Policy Framework	04

Section B | SITE DESCRIPTION

5.0	Local Area Context	08
6.0	Site Conditions	09

Section C | AGGREGATE OPERATIONS

7.0	Site Development Plan	16
8.0	Typical Operations	18
9.0	Stormwater Management	20
10.0	Groundwater Management	22
11.0	Site Access	26
12.0	Truck Haul Routes	28
13.0	Development Phasing & Mining Sequencing	30
14.0	Visual Appraisal	32
15.0	Stripping & Grading	33
16.0	Air Quality Considerations	34
17.0	Noise Mitigation	36
18.0	Habitat Preservation	38
19.0	Sediment & Erosion Control	39
20.0	Weed Management	39
21.0	Post-Mining Reclamation	40

Section D | COMMUNITY CONSULTATION

22.0	Community and Stakeholder Engagement	44
23.0	Mountain Ash Commitments to Address Local Concerns	45

Section E | IMPLEMENTATION

24.0	Land Use Amendment	48
25.0	Development Permit Process	49
26.0	Potential Closure of Range Road 40 Right-Of-Way (ROW)	50
27.0	Provincial Approval Process	51

Section F | ASSESSMENT OF CUMULATIVE ASPECTS OF EXTRACTION ACTIVITIES IN THE AREA

LIST OF FIGURES

1	Regional Context	01
2	Local Context	02
3	Existing Land use	05
4	Site Conditions	08
5	Topography	11
6	Existing Wetlands	13
7	Development Concept	17
8	Stormwater Management	21
9	Groundwater Monitoring	23
10	Site Access Plan	27
11	Proposed Truck Haul Route	29
12	Development Phasing & Mining Sequencing Plan	31
13	Visual Impacts	32
14	Acoustic Assessment Receptor Locations	36
15	Proposed Reclamation Plan	41





Overview

SECTION A

1.0 Motivation & Rationale

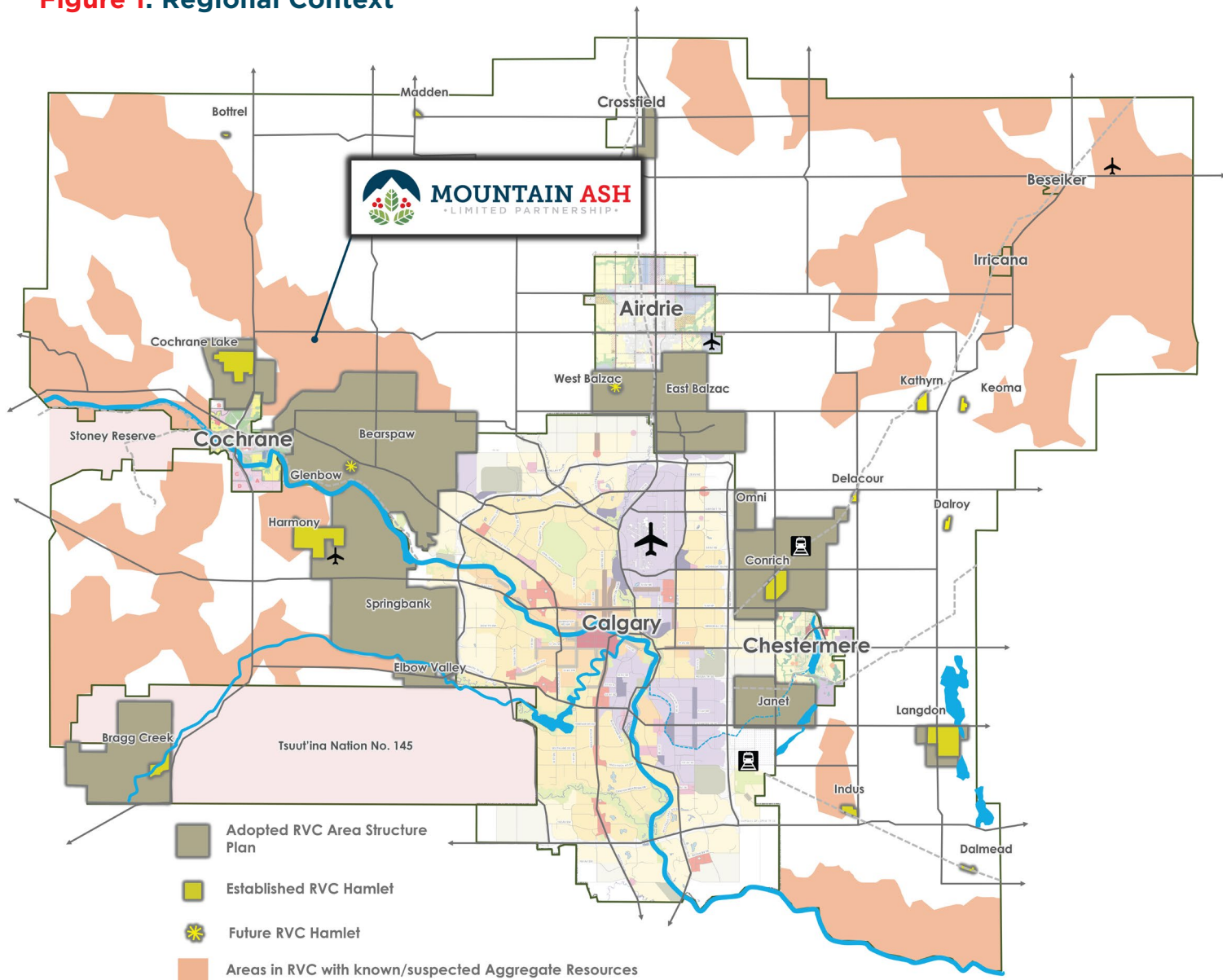
Aggregates are non-renewable resources found only in locations where natural processes have placed them. They are essential to support the development of roads, buildings, and municipal infrastructure. The Calgary Metropolitan Region has traditionally enjoyed benefits from close supply of large aggregate reserves. However, these reserves are depleting due to impacts of rapid urbanization and subsequent sterilization of gravel deposits due to development encroachment.

The Calgary Metropolitan Region lacks a comprehensive areas of approved land use specifically intended to secure a stable, long-term supply of aggregate. As illustrated by **Figure 1: Regional Context**, the Summit Pit's location is close to municipalities with high aggregate demand including Airdrie, north Calgary, and the Highway 2 corridor. The site has direct access to Highway 567 for aggregate hauling that would minimize truck traffic on municipal roads within the surrounding community. As such, proposed smaller aggregate operations such as the Summit Pit can serve an important role to ensure a steady, cost-effective supply of aggregate products for infrastructure projects throughout the north-central portion of the Metropolitan Region.

Mountain Ash Limited Partnership, hereby referred to as 'Mountain Ash', is committed to ensuring the proposed aggregate operation contemplated by this MSDP responds to and appropriately mitigates potential for negative cumulative impacts relative to adjacent lands. Mountain Ash acknowledges that proposals for aggregate operations often create concerns from adjacent neighbours relative to noise, dust, traffic, groundwater, and visual impacts. Prior to preparing this MSDP, Mountain Ash representatives contacted all neighbouring landowners within a +/- 800 m radius of the Plan area with an offer for an in-person meeting to share the motivation & rationale for this MSDP and gather initial feedback accordingly. Mountain Ash will host a community-wide Information Session later in the RVC application process prior to the proposal being presented to Council. Mountain Ash will continue to work collaboratively with local stakeholders and the County to ensure the design of this proposed aggregate operation is consistent with municipal & provincial policies and implementation of the proposed operations project appropriately addresses potential cumulative effects.

Section F of this MSDP includes a comprehensive list of implementation strategies that Mountain Ash is willing to advocate for as part of a local aggregate producer's group which could assist the County to establish a framework to assess and mitigate potential cumulative impacts resulting from multiple aggregate pits operating within the same general location.

The Overview


Figure 1: Regional Context

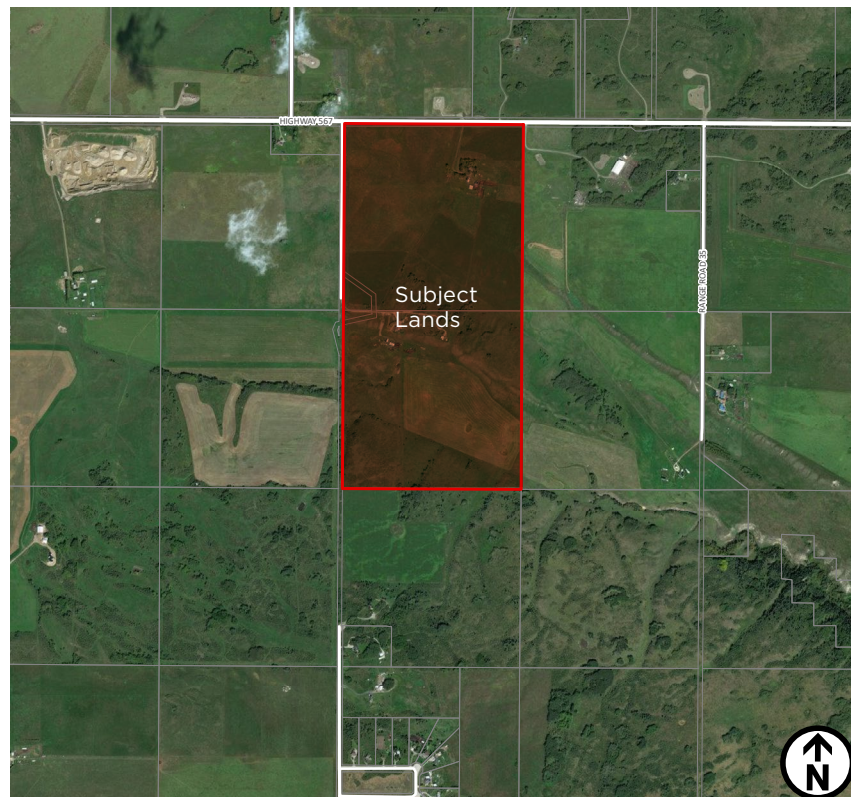
2.0 The Proposal

As illustrated by **Figure 2: Local Context**, the proposed Summit Pit is located along Highway 567 northeast of the Town of Cochrane. The Plan area is legally defined as at W 1/2 31-26-3 W5M and contains +/- 131 ha (+/- 323 ac). Mountain Ash is locally owned company which intends to develop an aggregate extraction operation within a portion of the subject land. The area surrounding the MSDP area includes an evolving mix of agricultural, farmsteads and business land uses such as natural resource industrial, oil & gas wells, and highway business development.

On-site operations are proposed to include stripping of topsoil & overburden materials, mining of the underlying sand and gravel, and eventual reclamation of all disturbed areas. The sand & gravel excavated within the site will be crushed & screened and shipped to markets around Balzac, Calgary International Airport and north Calgary growth areas. Reclamation of the pit will be phased and will follow closely behind discontinued mining operations, with a maximum of +/- 40 acres open for excavation at any one time. The site will be returned to agricultural uses upon completion. Mountain Ash anticipates a 30 to 40-year operating period to be implemented by the County via a series of staged development permits to be submitted throughout the life of the project.

Figure 2:
Local Context

 Subject Land



3.0 Purpose of the Master Site Development Plan

This Master Site Development Plan (MSDP) establishes a policy framework to describe how the proposed aggregate operation will be implemented in accordance with the sustainability principles of the County Plan which supports the extraction of natural resources in a manner that balances the interests of affected landowners, industry, and society at large. The MSDP includes a policy framework intended to provide guidance for a subsequent land use redesignation and a series of development permit processes within the Plan area.

This MSDP includes an overall description of the proposed aggregate operation including a site development aggregate extraction plan, a reclamation & environmental mitigation strategy, identification of potential impacts & mitigations to surrounding lands, an assessment of cumulative aspects of other aggregate activities to the surrounding area, and a summary of interim & post reclamation land uses that may coincide with aggregate operations.

To support the MSDP policy framework, Mountain Ash has prepared a variety of technical reports including the following:

- a. Biophysical Impact Assessment Report
- b. Wetland Assessment Impact Report;
- c. Hydrogeological Impact Assessment;
- d. Conceptual Stormwater Management Report;
- e. Transportation Impact Assessment;
- f. Acoustic Assessment;
- g. Air Quality Assessment; and
- h. Visual Appraisal.

4.0 Municipal Policy Framework

This Master Site Development Plan (MSDP) complies with the relevant policies of the County Plan (Bylaw C-7280-2013) and provides guidance for the land use redesignation and development permit process. This MSDP establishes specific expectations about how the project will be implemented including phasing, proposed operations, reclamation, transportation, and community considerations. It includes a policy framework that describes how the aggregate operation will be implemented in accordance with various principles of the County Plan which “supports the extraction of natural resources in a manner that balances the needs of residents, industry, and society” (Section 15.0, page 67).

4.1 The County Plan, Municipal Development Plan (2013)

Section 15: Natural Resources of the County Plan contains applicable policies related to aggregate resource extraction when offsite impacts related to operations can be mitigated. Section 15.6 of the County Plan indicates that “until such a time as a County aggregate extraction policy is prepared, applications for aggregate extraction shall prepare a master site development plan that address the development review criteria identified in Section 29.” Further guidance on the preparation of an aggregate master site development plan can be found in Appendix C, Section 4 of the County Plan.

As the County has not yet prepared an aggregate extraction policy, this MSDP has been prepared in accordance with the County Plan’s Section 15.6 and is intended to address the comprehensive policy and technical requirements governing same in order to provide Council, administration, relevant stakeholders and area residents with a sound understanding of the merits of the proposal.

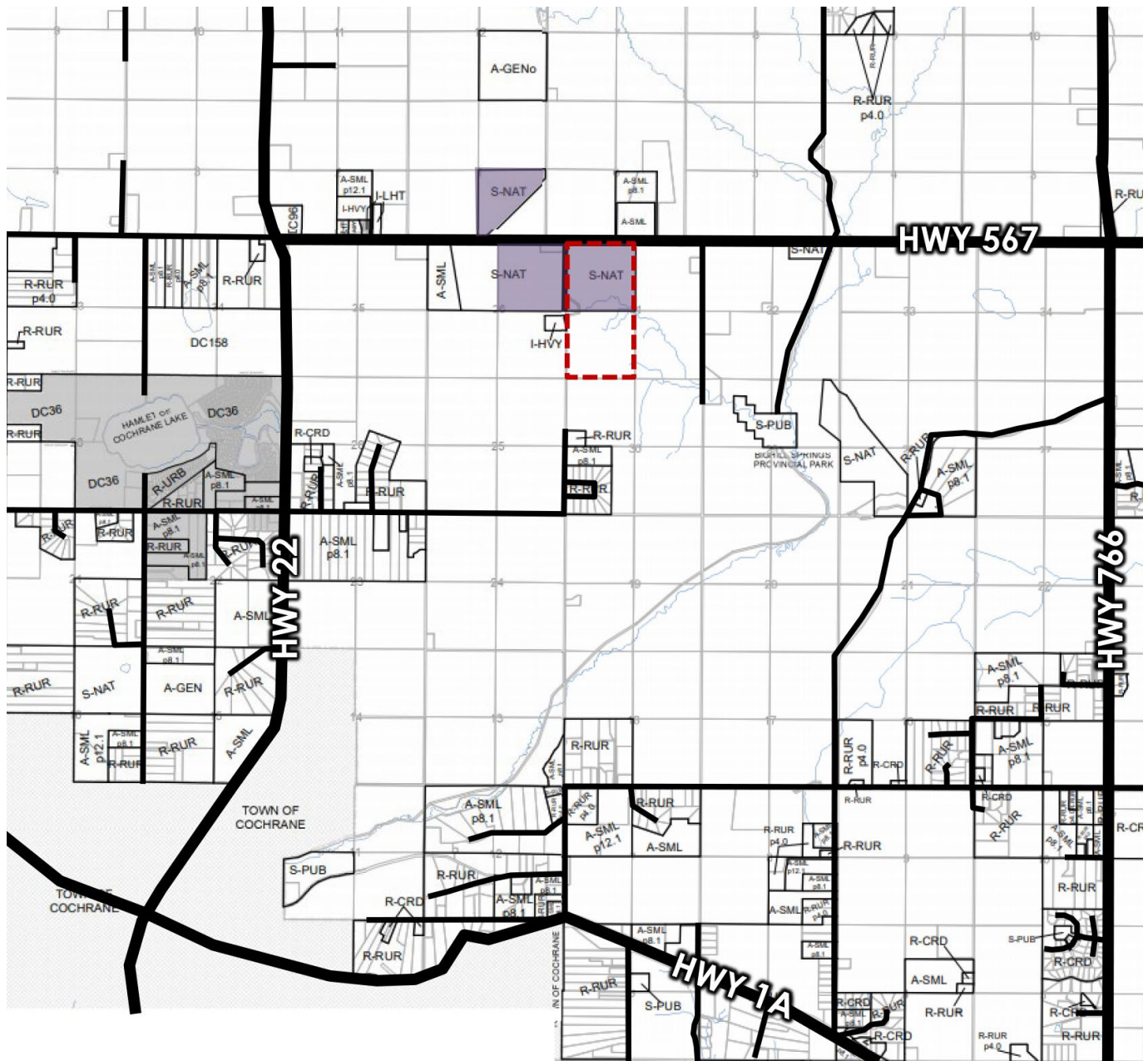
4.2 Existing Land Use Bylaw (C-8000-2020)

As illustrated by **Figure 3: Existing Land Use**, the subject lands are currently designated with a mix of Agriculture, General District (A-GEN) and Special, Natural Resources (S-NAT) under the Rocky View Land Use Bylaw C-8000-2020. The NW 31 is presently designated Special, Natural Resource (S-NAT) and the SW 31 is designated Agriculture, General District (A-GEN).

Pursuant to the September 16, 2019 decision from the Court of Queen’s Bench (Docket 1701 12053), Justice J.T. Eamon set aside RVC Council’s decision to approve the NRI District within NW 31. Notwithstanding that the County is presently challenging this court ruling, for purposes of this MSDP, it is assumed that the existing land use for NW 31 is Agriculture, General District (A-GEN).

The Overview

Figure 3: Existing Land Use



■ Recently approved NRI Designation subject to Court of Queen's Bench
(Docket 1701 12053)



Site Description

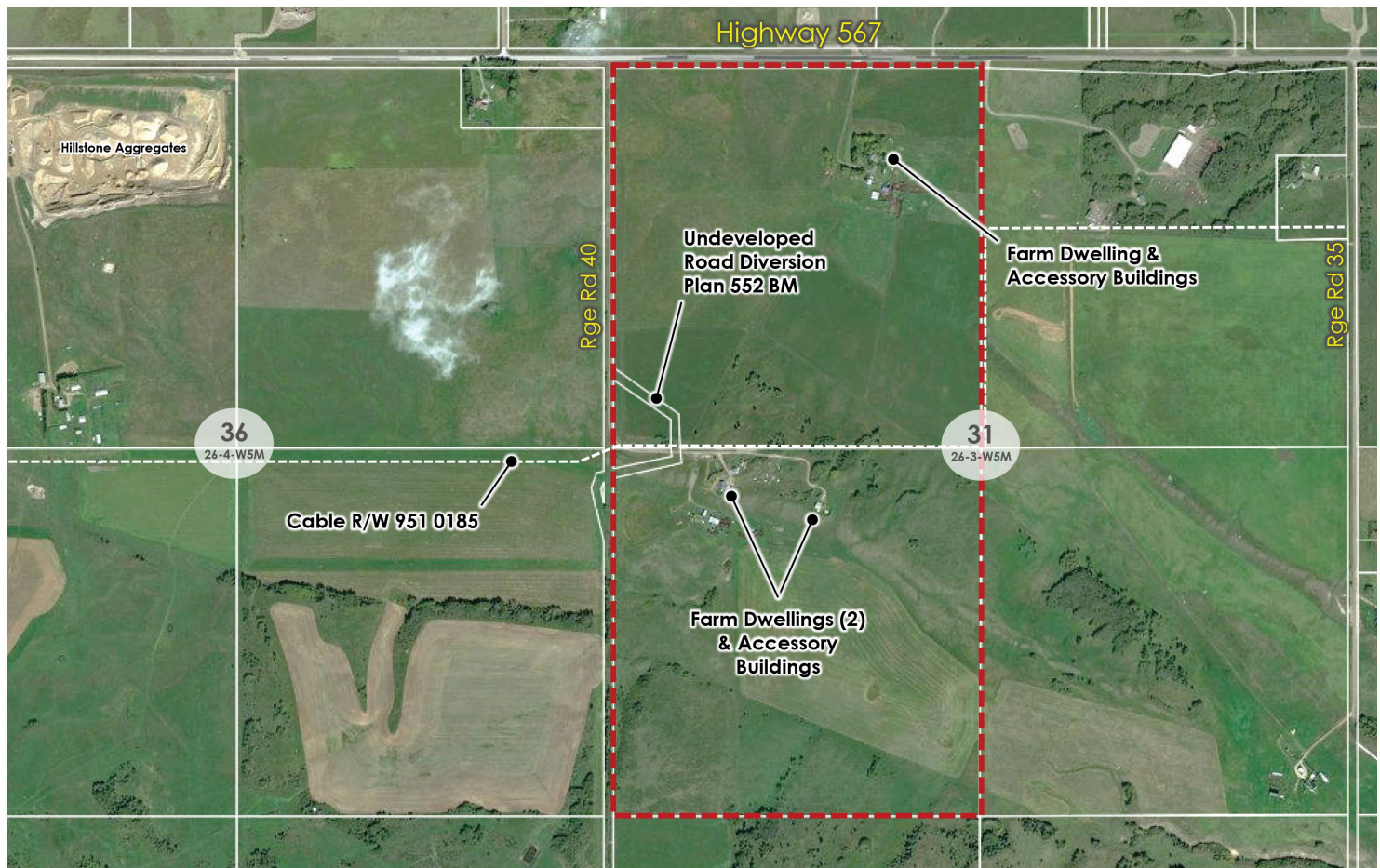
SECTION B

5.0 Local Area Context

The subject lands are situated within an area featuring a range of land uses including agricultural, farmsteads and a mix of non-residential land uses, existing aggregate operations, oil & gas wells, and highway commercial development.

The MSDP area fronts onto a provincial highway (Highway 567) which is ideally suited to accommodate the conveyance of aggregate resources from the Plan area to local and regional markets.

Figure 4: Site Conditions



6.0 Site Conditions

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A summary of the existing site conditions is provided in the following sections based on field observations and the findings of various technical studies prepared by Mountain Ash in support of this MSDP.

6.1 Legal Descriptions & Existing Developments

As illustrated by **Figure 4: Site Conditions**, the subject lands include the W 1/2 31-26-3-W5M and described generally as follows:

- NW 31 contains +/- 66.27 ha (+/- 163.76 ac) bounded by Highway 567 to the north and Range Road 40 to the west. The parcel includes an existing farm building site containing an existing dwelling and shelter belt, various accessory buildings, various livestock corrals, a PSTS & groundwater well, and approach & driveway from Highway 567. The Plan area contains an undeveloped road ROW which is proposed to be closed and consolidated with the subject lands. A right-of-way containing a telecommunications line traverses the quarter section along the southern boundary.
- SW 31 contains +/- 64.4 ha (+/- 159.19 ac) bounded to the west by Range Road 40. The parcel includes an existing farm building site containing two (2) existing dwellings and shelter belts, various accessory buildings, various livestock corrals, a dugout, two (2) PSTS & groundwater wells, and a driveway from Range Road 40.

6.2 Topography

As illustrated on **Figure 5: Topography**, slopes within the MSDP Area is undulating, with elevations ranging from a high point of 1,298m in NW 31 to a low point of 1,270m in SW 31. The subject lands slopes towards generally towards the south and east. The majority of NW 31 is relatively flat with a slight southwest facing aspect. The SW 31 contains a relatively flat area in the northern portion of the quarter with slopes falling into a natural valley system that extends to the southeast towards the Big Hill Creek.

6.3 Biophysical Considerations

Mountain Ash prepared a Biophysical Impact Assessment Report in support this MSDP. According to the conclusions of this report, the MSDP area does not contain any rare plants, plant communities or sensitive soils that will be negatively impacted by the proposed aggregate operations.

The site does not contain any watercourses or obvious drainages that may have hydraulic connections with adjacent lands.

Although the site contains evidence of migratory birds, the relatively small area of habitat to be disturbed is not likely to negatively impact wildlife species in the area. Care must be taken to restrict development disturbances during the nesting bird season (i.e. mid Apr – late August).

POLICIES:

6.3.1 Aggregate development within the MSDP area shall comply with all relevant municipal, provincial and federal legislation, regulations and policies.

Site Description

Figure 5: Topography



6.4 Wetlands

Mountain Ash prepared a Wetland Assessment Impact Report (WAIR) in support of this MSDP. As illustrated by **Figure 6: Existing Wetlands**, the MSDP area contains twenty (20) identified wetlands, the majority of which contain Class I seasonal wetlands which are regularly farmed through. The MSDP area does not contain any wetlands that are expected to be claimed by Alberta Public Lands.

With the exception on Wetlands #19 and #20, all identified wetlands are proposed to be disturbed by proposed aggregate operations. As such, Mountain Ash has prepared the WAIR to categorize each wetland and establish compensation amounts in accordance with the Alberta Wetland Policy to be provided to the Province at the development permit stage.

6.5 Historic Resource Act Considerations

Clearance for development disturbance was previously provided for the NW 31 by Alberta Culture in September 2014 in accordance with the Historic Resource Act.



Site Description

Figure 6: Existing Wetlands





Aggregate Operations

SECTION C

7.0 Site Development Plan

As illustrated by **Figure 7: Development Concept**, on-site operations will include stripping of topsoil & overburden materials, stockpiling of same within the site, mining of the underlying sand and gravel, and eventual reclamation of all disturbed areas.

Topsoil and overburden will be used to construct a landscaped screening buffer along the highway frontage and the eastern boundary of the MSDP area.

A portable scale will be installed at the entrance to the site along Rge Rd 40 south of the intersection with Highway 567. All sand and gravel will be excavated by a front-end loader and fed into a portable crushing & screening spread that will operate within the site as demand for gravel occurs. Aggregate product will be loaded onto trucks from the stockpiles to be conveyed through the scale house prior to being hauled to regional markets.

Aggregate products excavated within the site will be crushed, screened and shipped to markets around Balzac, Calgary International Airport and north Calgary growth areas.

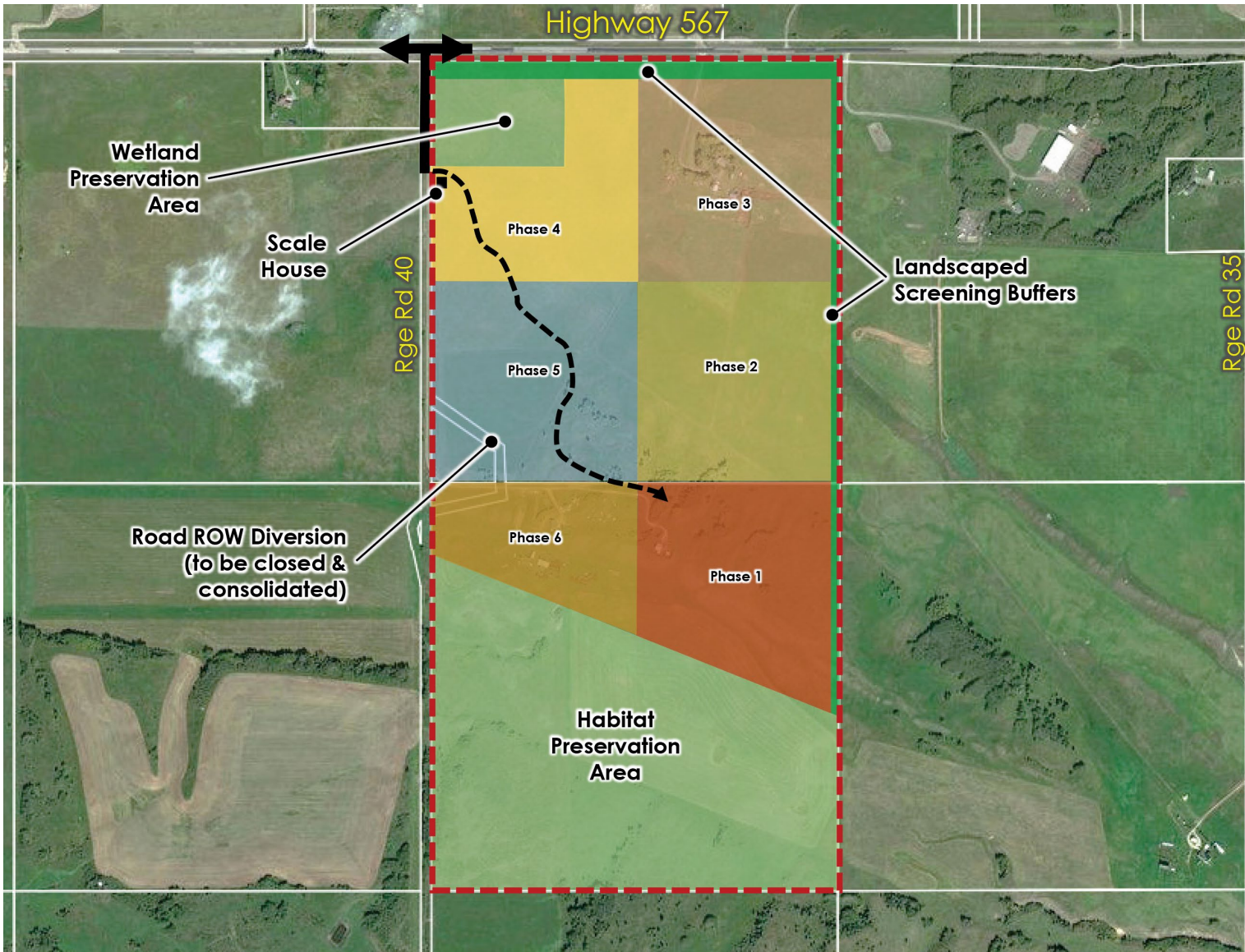
Mountain Ash anticipates a 30 to 40-year operating period to be implemented by the County via a series of staged development permits to be submitted throughout the life of the project.

Reclamation of the pit will be phased and will follow closely behind discontinued mining operations, with a typical maximum of +/- 40 acres open for excavation at any one time. The site will be returned to agricultural uses upon completion.

POLICIES:

7.1 Aggregate operations within the MSDP are expected to proceed as generally illustrated on Figure 7: Development Concept.

Aggregate Operations

Figure 7: Development Concept

8.0 Typical Operations

Typical extraction and aggregate production within each operational phase are expected to include simultaneous support from one (1) portable crusher, one (1) loader, one (1) bulldozer, and three (3) scrapers.

Potable water and sanitary servicing will be supplied by portable facilities managed by Mountain Ash via a local contractor. Similarly, waste refuse facilities will be provided onsite and removed on a weekly basis and transported to an approved waste management facility.

A scale house and administrative office will be constructed on site in a suitable location to ensure safe effective on-site logistics related to the export of aggregates from this location.

Hours of operation within the proposed Summit Pit are expected to occur Mondays – Fridays from 7 AM to 7 PM and Saturdays from 7 AM to 5 PM. No aggregate operations (including crushing activities) will occur on Sundays or Statutory Holidays.

POLICIES:

- 8.1** *An Operations & Management Plan shall be submitted at the development permit application stage to clarify the specific requirements in support of each operational phase.*
- 8.2** *Hours of operation within the MSDP area are expected to occur Mondays – Fridays from 7 AM to 7 PM and Saturdays from 7 AM to 5 PM.*
- 8.3** *No aggregate operations will occur within the site on Sundays or Statutory Holidays. No crushing activities will occur within the site on Sundays or Statutory Holidays¹.*
- 8.4** *The size of the operating area shall be limited to a maximum of 40 acres at each development phase as determined through applicable County development permit approvals and AEP approvals pursuant to the Code of Practice for Pits in Alberta.*

¹ Mountain Ash has made a commitment to the current landowner situated immediately east of the MSDP area to NOT undertake crushing activities on Saturdays for as long as he continues to reside on the property. Once this landowner no longer resides on his property, Mountain Ash expects to commence crushing activities on Saturdays.

Aggregate Operations

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9.0 Stormwater Management

Mountain Ash prepared a Conceptual Stormwater Management Plan in support of this MSDP to demonstrate how rainfall & surface runoff within the proposed aggregate operation will be managed throughout the course of development. As illustrated by **Figure 8: Stormwater Management**, Mountain Ash will manage stormwater within the site to prevent flooding downstream, to prevent pollution of the underlying aquifer or surface water bodies, to provide a gravity system to contain surface drainage that does not require active pumping, to separately manage runoff from undisturbed areas (clean runoff) whenever possible, and to ensure operations are not negatively affected by stormwater runoff.

As described by the Conceptual Stormwater Management Report, a strategy to manage surface drainage within each phase of aggregate operations is described as follows:

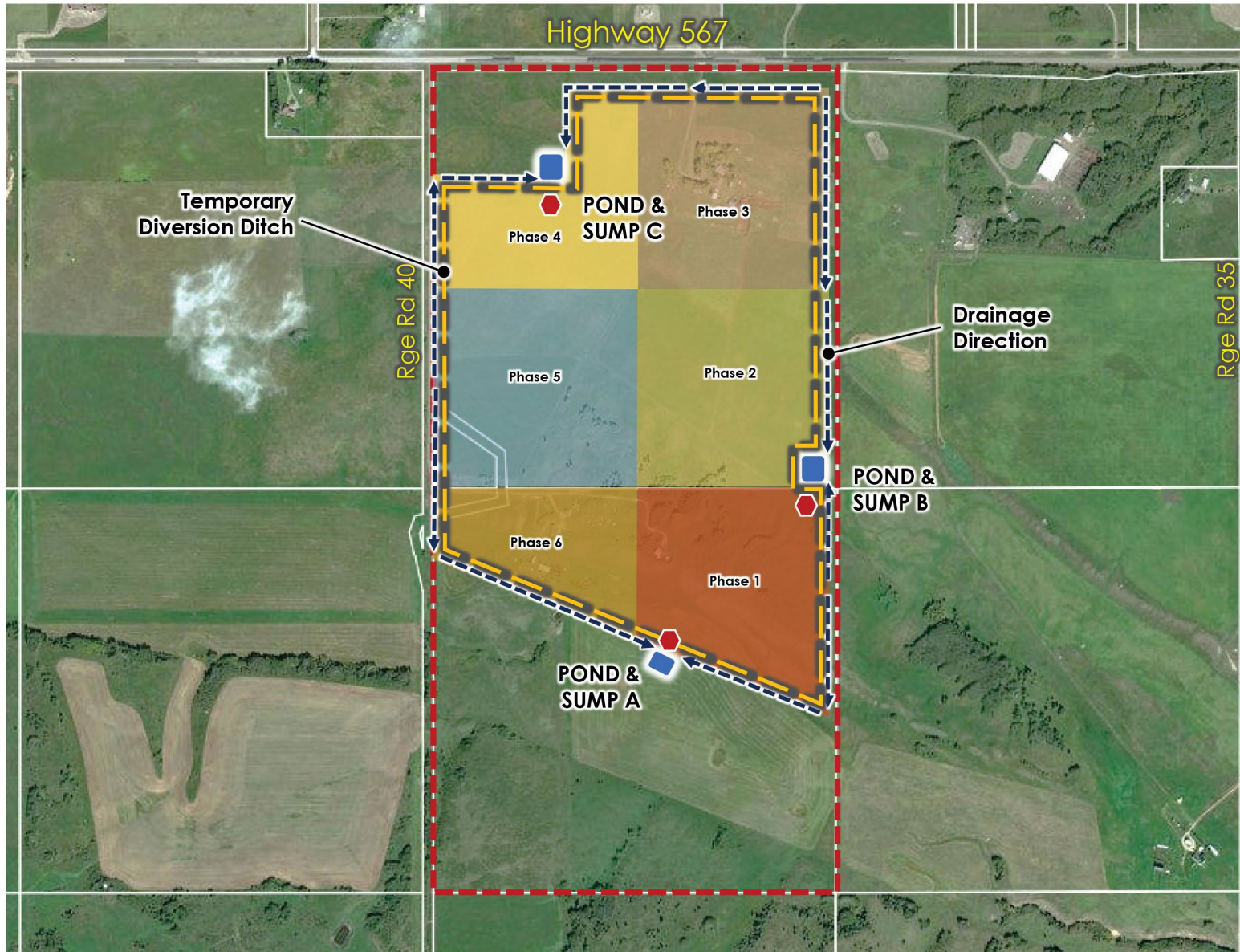
- Install **perimeter vegetated ditches at the outer foot of screening berms as initial treatment with appropriately sized settlement ponds as secondary treatment;**
- **Excavate a sump into underlying sand & gravels to form an area for groundwater recharge (i.e. tertiary treatment); and**
- Provide interception ditches to route clean runoff away from extraction areas and allow for overland dispersal.

POLICIES:

9.1 Stormwater management within the MSDP is expected to occur as generally illustrated on Figure 8: Stormwater Management.

9.2 A Site-Specific Stormwater Management Plan shall be submitted at the development permit application stage to clarify the specific stormwater management requirements in support of each operational phase.

Aggregate Operations

Figure 8: Stormwater Management

10.0 Groundwater Management

Mountain Ash prepared a Hydrogeological Impact Assessment in support this MSDP to address concerns about the effect of an aggregate operation on local groundwater resources. The purpose of the assessment was to determine if the project would affect:

- The confined/unconfined aquifers at or near the proposed Summit Pit development,
- Neighbours within a +/- 500 m radius of the proposed site, and/or
- The Big Hill Creek.

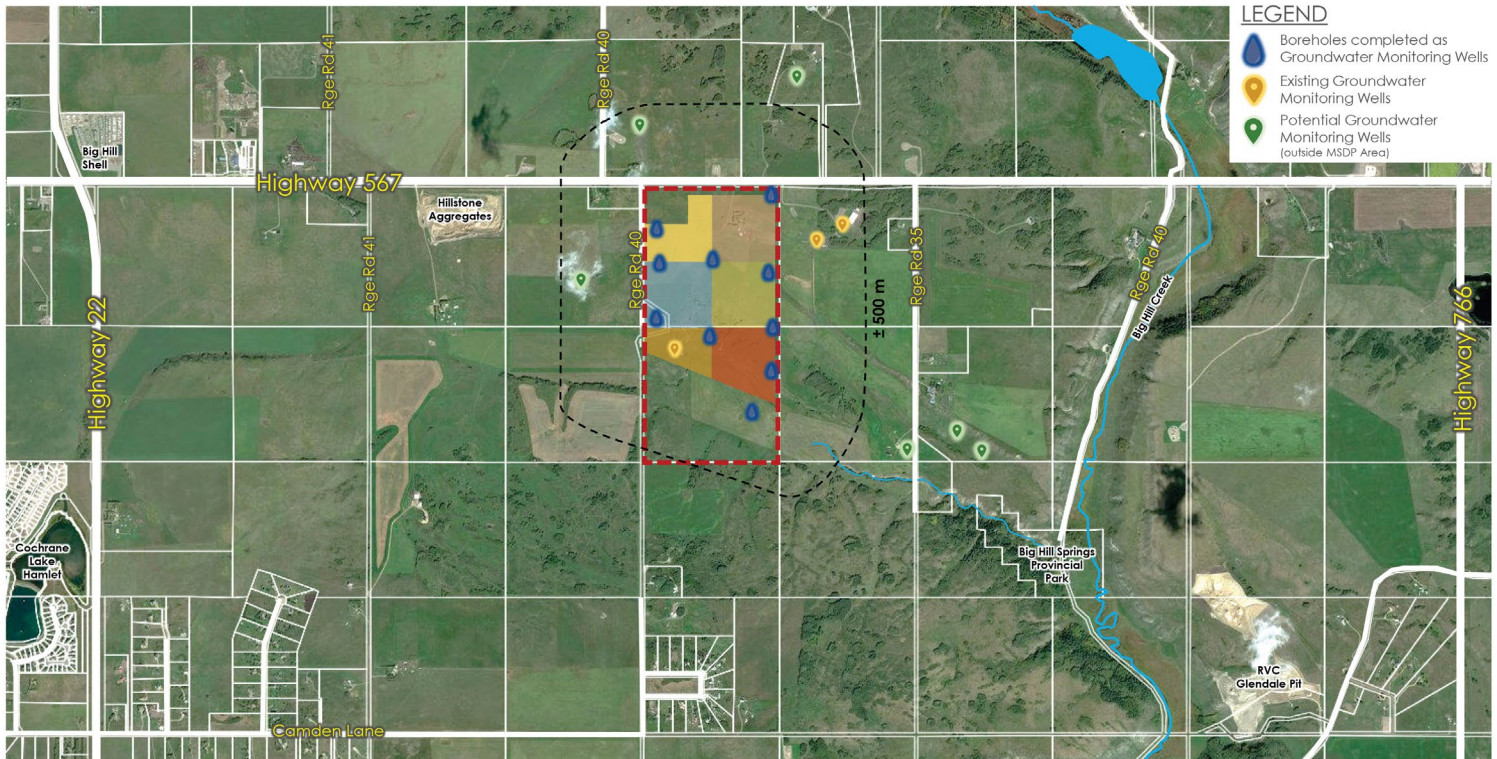
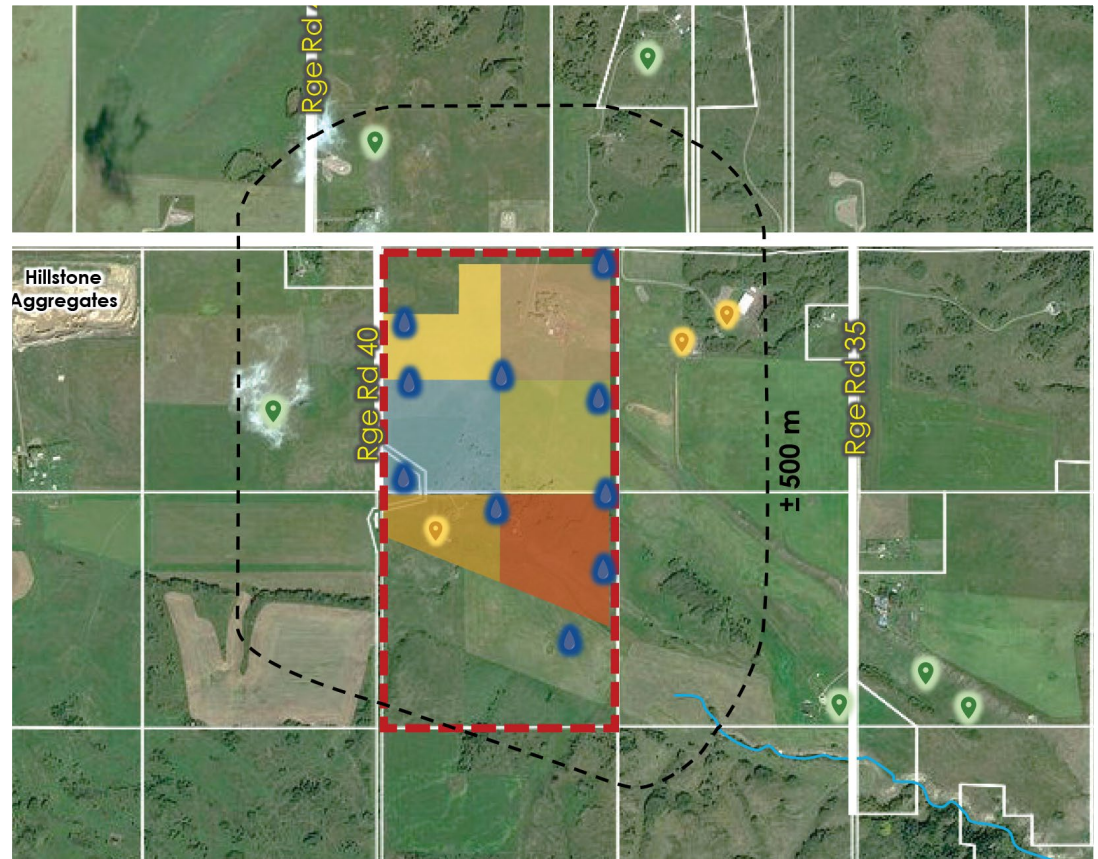
The conclusions of the Hydrogeological Impact Assessment indicate the proposed aggregate extraction will not pose any significant or adverse impacts to the existing confined or unconfined groundwater aquifers underlying the MSDP area, or the adjacent Big Hills Springs, as it pertains to water volume or water quality. To ensure there are no negative effects to local groundwater conditions, Mountain Ash will restrict excavate to a minimum of 1.0 m above the depth of the groundwater table. As such, ongoing excavation activities will not create negative impact to the underlying groundwater aquifer quantity and quality.

As illustrated by **Figure 9: Groundwater Monitoring**, Mountain Ash is committed to monitoring the existing groundwater flow system, to give early warning of any unanticipated changes, and to address community concerns related to groundwater, Mountain Ash has already completed an initial two (2)-year groundwater monitoring program to determine pre-development and early development groundwater levels. To support this MSDP, Mountain Ash has installed ten (10) groundwater monitoring wells (with piezometers) within the subject lands and will monitor four (4) additional existing domestic groundwater wells located within adjacent properties situated within +/- 500 m of the MSDP area. The monitoring program will track fluctuations in groundwater levels, on a monthly basis, in order to continuously measure the quantity and quality of groundwater within the underlying aquifer during the lifespan of the aggregate operation.

During the operational phase, any potential source of water pollution would be from human-caused sources such as fuels, solvents and suspended solids from reworking of the material on site. The potential for these human caused effects will be mitigated within the site by implementation of best handling practices under the Code of Practice for Pits, applicable Environmental Protection and Enhancement Act rules, and other relevant codes of best practice.

Aggregate Operations

Figure 9:
Groundwater
Monitoring



POLICIES:

- 10.1 A Groundwater Management Plan and Monitoring Program shall be submitted at the development permit application stage in support of each operational phase.***
- 10.2 Mountain Ash will implement a Groundwater Monitoring Plan throughout the lifespan of the operation with the location of monitoring wells as generally illustrated on Figure 9: Groundwater Monitoring.***
- 10.3 Groundwater management techniques shall be implemented in accordance with the conclusions and recommendations of the Hydrogeological Assessment prepared in support of this MSDP.***
- 10.4 As per the Code of Practice for Pits in Alberta all mining operations will be a minimum of 1.0 m above the groundwater table.***
- 10.5 All potential sources of groundwater contamination from human-caused sources shall be mitigated using best handling practices under the Code of Practice for Pits, Environmental Protection & Enhancement Act rules, and other codes of best practice.***
- 10.6 The Groundwater Monitoring Program shall be completed monthly and Mountain Ash shall provide results to interested stakeholders upon request.***
- 10.7 Mountain Ash shall provide a 24-hour number for neighbours within the immediate vicinity to report issues with groundwater relative to aggregate operations within the MSDP area.***
- 10.8 Mountain Ash shall promptly investigate any community concerns it receives about groundwater wells in the vicinity of its operations.***

Aggregate Operations

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11.0 Site Access

Access to the site will be provided from Hwy 567 at the intersection of Rge Rd 40 as illustrated on **Figure 10: Site Access Plan**. Mountain Ash will upgrade this existing intersection with a Type IVa intersection treatment and improve the existing portion of Rge Rd 40 extending south to the MSDP area's main site access will be upgraded to a paved industrial standard road in accordance with the County Servicing Standards.

Mountain Ash prepared a Traffic Impact Assessment (TIA) in support of this MSDP. The TIA report concluded that, with the intersection improvement proposed at Highway 567, the roadway and intersection capacities relative to initial AM and PM peak traffic movements anticipated at opening day as well as the 10 and 20-year development horizons will continue to operate at acceptable levels.



POLICIES:

- 11.1** *Access within the MSDP is expected to occur as generally illustrated on Figure 10: Site Access Plan.*
- 11.2** *An updated Traffic Impact Assessment shall be submitted at the development permit application stage in support of each operational phase.*
- 11.3** *Mountain Ash shall upgrade the intersection of Highway 567 and Range Road 40 with a Type IVa intersection as a condition of the Stage 1 development permit, to the satisfaction of the County and Alberta Transportation. AT shall be required to approve a Roadside Development Permit for this transportation improvement.*
- 11.4** *Mountain Ash shall upgrade the portion of Road 40 extending south from Highway 567 to the main site access to an industrial paved standard as a condition of Stage 1 development permit in accordance with the County Servicing Standards.*
- 11.5** *Where commercially feasible, all trucks servicing the Summit Pit shall be registered with the Alberta Sand & Gravel Association Truck Registry.*
- 11.6** *Mountain Ash 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.*

Aggregate Operations

Figure 10: Site Access Plan



-  Existing all-turns stop controlled intersection
-  Existing three-way stop controlled intersection

12.0 Truck Haul Routes

Highway 567 is a provincial high load corridor and ideally suited to accommodate aggregate resource hauling activities. Notwithstanding, Mountain Ash is committed to reducing the overall impact of its aggregate operations on the surrounding municipal and Provincial transportation network.

As illustrated by **Figure 11: Proposed Truck Haul Routes**, truck traffic from the Summit Pit is expected to be conveyed from the site along to key markets east of the site, such as Balzac, the Calgary Airport and the north Calgary growth areas via Highway 567.

Aggregate produced and transported to market from the Summit Pit will generally service markets east of the proposed aggregate development. Mountain Ash anticipates only 10% of all truck trips west into the Cochrane market due to the existing available supply of aggregates to that market. Mountain Ash proposes three (3) primary transportation routes/networks described as follows:

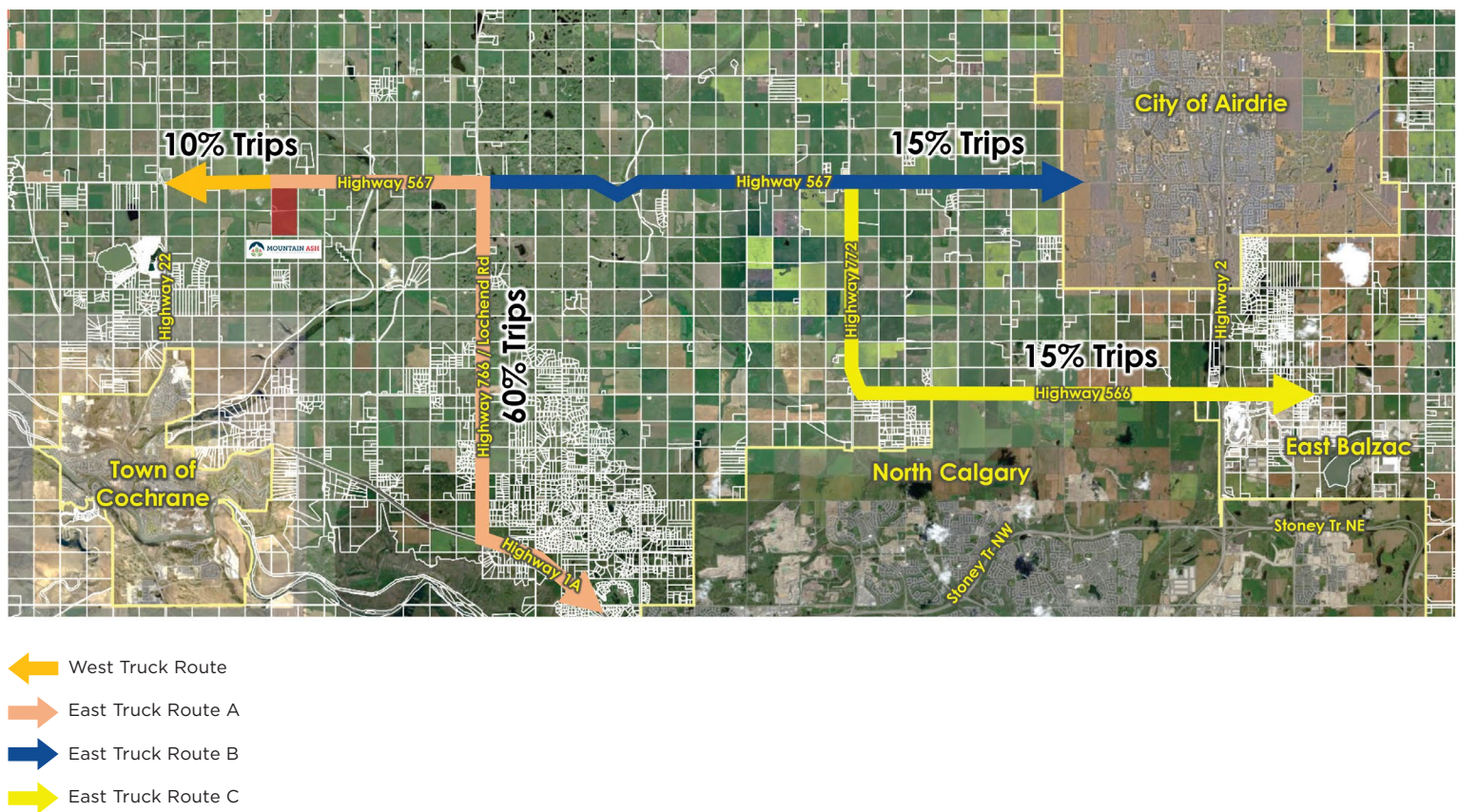
- **West Route:** Heading west on Highway 567 anticipated to include about 10% of truck trips.
- **East Route:** Heading east on Highway 567 anticipated to include about 90% of truck trips, with the following sub-routes described as follows:
 - » **East Route A** – Heading east on Highway 567, south on Highway 766, then east on Highway 1A into Calgary to include about 60% of East Route truck trips to and from Summit Pit operation.
 - » **East Route B** – Heading east on Highway 567 into west Airdrie to include about 15% of the East Route truck trips to and from Summit Pit operation.
 - » **East Route C** – Heading east on Highway 567, south on Hwy 772 (Symons Valley Road), then east on Hwy 566 into Balzac to include about 15% of the East Route truck trips to and from Summit Pit operations.

POLICIES:

12.1 *Truck haul routes servicing the MSDP are expected as generally illustrated on Figure 11: Proposed Truck Haul Routes*

12.2 *A Truck Haul Route Plan shall be submitted at the development permit application stage to clarify the specific transportation routes in support of each operational phase, to the satisfaction of the County and Alberta Transportation.*

Aggregate Operations

Figure 11: Proposed Truck Haul Routes

13.0 Development Phasing & Mining Sequencing

As illustrated by **Figure 12: Development Phasing & Mining Sequencing Plan**, aggregate operations will commence within the Phase 1 area situated within the SE corner of the site. Extraction operations will progress in a northern direction towards the northern boundary of the MSDP area before shifting westerly and eventually southerly parallel to Rge Rd 40 before eventually concluding within the SW corner of the site.

As part of development permit approval conditions for Phase 5, Mountain Ash must apply to close the existing undeveloped Roadway Diversion Plan 552 BM contained within the MSDP area for the purposes of consolidation.

Aggregate operations within the Summit Pit are expected to occur over a 30 to 40-year time frame depending on market conditions. Development permit approvals will be required to support each phase of the proposed aggregate operations.

POLICIES:

- 13.1** *Staging of aggregate operations within the MSDP area is expected to occur as generally illustrated on Figure 12: Development Phasing & Mining Sequencing Plan.*
- 13.2** *A Mining & Excavation Plan shall be provided at the development permit stage to detail how operations are expected to proceed within each development phase.*
- 13.3** *The existing undeveloped road diversion ROW Plan 552 BM contained within the MSDP area may be closed and consolidated with the subject lands as condition of the Phase 5 development permit associated with this proposed aggregate operations.*

Aggregate Operations

Figure 12: Development Phasing and Mining Sequencing Plan

14.0 Visual Appraisal

Mountain Ash prepared a Visual Appraisal in support this MSDP to assess the visual impacts the proposed aggregate operation will have on existing building sites within the vicinity of the subject lands as well as the travelling public passing by the site on Highway 567.

The conclusions of this report indicate that, although the proposed development will necessitate disturbance and alteration of the site's existing landform and vegetation, the overall visual impression provided from the perspective of the public driving through or passing by the site will remain mostly unchanged, given the phased development approach, installation of landscaped screening berms, and progressive reclamation activities proposed by this MSDP.

Landscaped screening berms will be constructed within the MSDP area to limit the exposure of operations when viewed from the highway and existing farm building sites directly to the east. A landscaped berm along the Highway 567 frontage will be constructed as part of the Phase 1 approvals and a berm along the eastern boundary of the Plan area will be constructed as part of the Phase 2 and 3 approvals. The developer will prepare a Landscaping Plan at each development permit stage to establish the specific design and location of the berms.

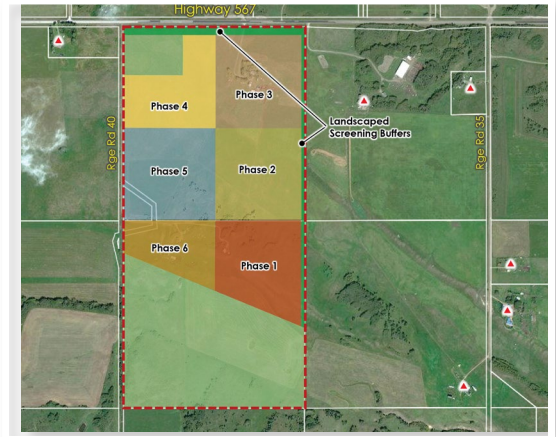
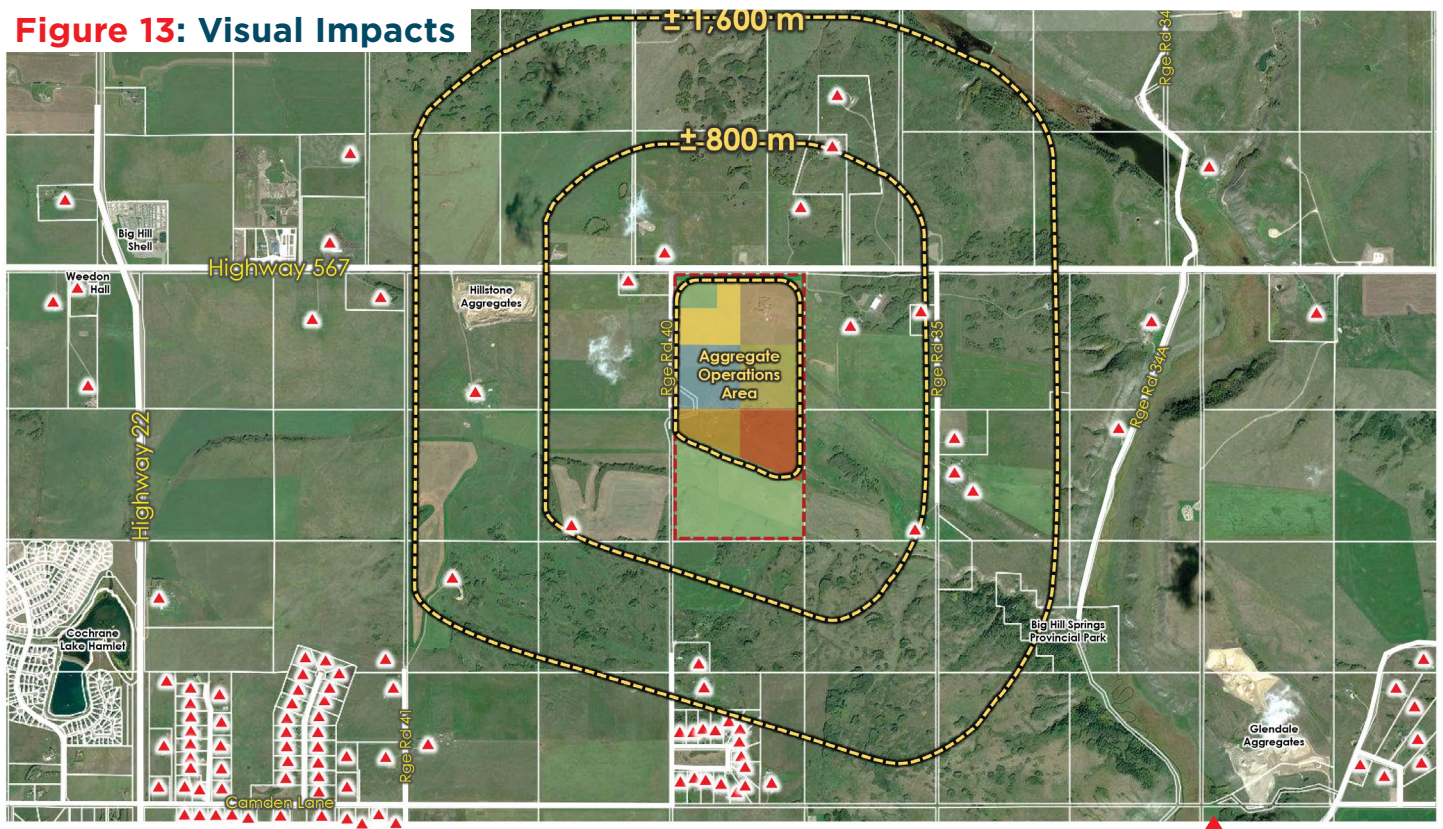


Figure 13: Visual Impacts



Aggregate Operations

15.0 Stripping & Grading

Stripping & grading of topsoil and overburden will be completed prior to mining activities proceeding within each operational phase. Stripped topsoil and overburden will be stockpiled to support construction of visual and sound attenuation berms. The material contained within each berm will be used for future reclamation processes once aggregate operations have concluded within each phase. Stockpiled topsoil & overburden will be placed into the depleted areas in the same order they were removed as per regulations found within the Code of Practice for Pits in Alberta. The topsoil layer will be seeded for pasture or annual crops after final reclamation.

Dust control, sediment/erosion control, and weed management control practices will be implemented during stripping and stockpiling activities.

POLICIES:

- 15.1 A Stripping & Grading Plan shall be provided at the development permit stage to detail how topsoil and overburden will be excavated within each development phase.***
- 15.2 All topsoil & overburden excavated within the site shall be stockpiled to be used to construct landscaped screening berms and to reclaim the excavated areas.***
- 15.3 As illustrated by the Figure 13: Visual Impact Assessment, sight and sound attenuation berms will be constructed in support of each operational phase prior to commencement of other aggregate activities.***
- 15.4 Stockpiled topsoil & overburden will be placed in the depleted areas in the same order they were removed in accordance with the Code of Practice for Pits in Alberta.***

16.0 Air Quality Considerations

Mountain Ash is committed to maintaining air quality within and in vicinity of the MSDP area throughout the lifespan of aggregate operations.

Mountain Ash prepared an Air Quality Assessment in support of this Master Site Development Plan to assess the anticipated emissions associated with the activities and operations of the proposed aggregate operation including diesel combustion products such as sulphur dioxide (SO₂), fine particulate matter with aerodynamic diameter less than 2.5 Qm (PM_{2.5}), carbon monoxide (CO), oxides of nitrogen (NO_x), and fugitive dust emissions from wheel entrainment and pit operations including total suspended particulates (TSP).

Dispersion modelling was executed following the Alberta Environment and Parks (AEP) – and its predecessor organizations dispersion modelling guidance (AESRD 20013b), using the CALMET and CALPUFF models with 5 years (2002-2006) of meteorological data. The results at the project boundary showed there were no predicted exceedances of the Alberta Ambient Air Quality Objectives (AAAQOs) for any modelled compounds and any averaging period. The predicted maximum concentrations at the sensitive receptors are all less than the AAAQOs for all modelling scenarios and all contaminants. Expected TSP concentrations will likely be lower, as the residences are surrounded by partially wooded areas and bushes which trap dust.

Some operating best-practice options were applied to reduce dust (TSP) emissions: the application of Calcium Chloride (CaCl₂) to unpaved roads for dust suppression, adding shrouds to conveyor drops and the application of watering on mine surfaces. Further, in order to avoid TSP exceedances along the property boundary, crushers should be located at least 190 m from the east site boundary and 140 m from the other site boundaries.

In conclusion, operation of the Project is not expected to exceed ambient air quality objectives beyond the property boundary and will have limited impact on air quality at the nearest residences, alone or in conjunction with emissions from other nearby operating industrial operations.

Aggregate Operations***POLICIES:***

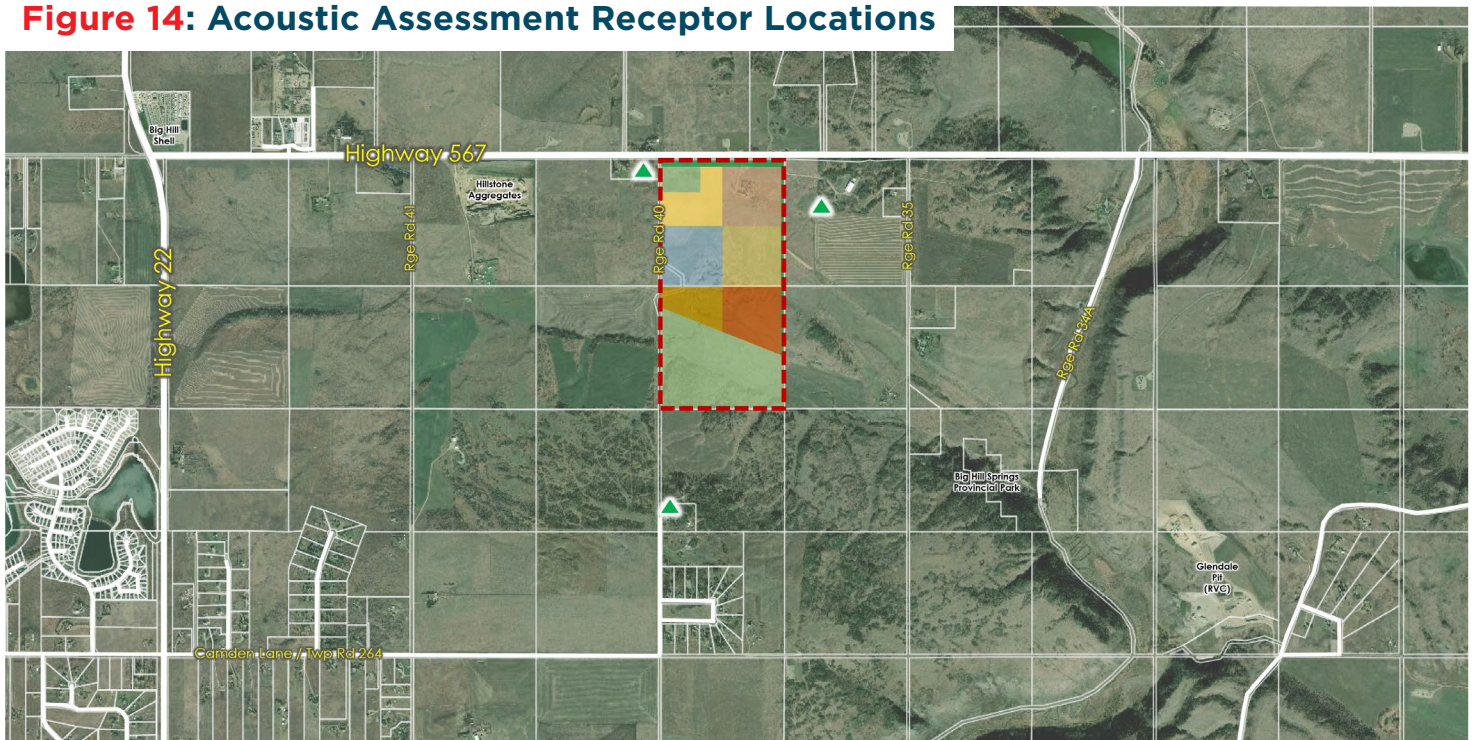
- 16.1** *Mountain Ash shall provide an Air Quality Management Plan and Monitoring Program at the development permit stage in support of each operational phase.*
- 16.2** *Mountain Ash shall undertake specific measures to control dust generated by aggregate operations within the MSDP area as follows:*
- *Shroud the crusher and conveyor drops;*
 - *Locate the crusher at least 190 m from the east site boundary and 140 m from the west site boundary in accordance with the recommendations of the Air Quality Assessment, 2020;*
 - *Paving the portion of Rge Rd 40 from Hwy 567 to the main entrance to the site;*
 - *Implement dust suppression via application of purchased water and/or calcium chloride on all driving surfaces and operating areas within the MSDP on as as needed basis;*
 - *Lowering maximum speed limits to 30 km/hr within the site;*
 - *Surface roughening within the site to create windrows within open areas;*
 - *Maintaining landscaped areas adjacent to Hwy 567 and Rge Rd 40;*
 - *Ensuring all topsoil berms/stockpiles are vegetated with an AESRD approved grass seed mixture; and*
 - *Suspending aggregate operations during high-wind events.*
- 16.3** *Mountain Ash shall monitor air quality at the perimeter of the MSDP area to ensure compliance with the Canadian Ambient Air Quality Standards (CAAQS) and Alberta Ambient Air Quality Objectives (AAAQO).*
- 16.4** *Mountain Ash shall provide a 24-hour number for neighbours within the immediate vicinity to report issues with dust relative to aggregate operations within the MSDP area.*

17.0 Noise Mitigation

Rocky View County does not have a standardized method for conducting aggregate operation noise measurements. However, the County regulates noise nuisance through the Noise Control Bylaw (C-5772-2003) which states that no person shall “make, continue, cause, or allow to be made or continued any excessive, unnecessary, or unusual noise of any type” and that noise must be “minimized as much as practicable.” The Noise Control Bylaw does not prescribe quantitative limits for noise emissions.

Mountain Ash prepared an Acoustic Assessment in support of this Master Site Development Plan to assess the potential sound egress from the proposed aggregate operation in relation to surrounding noise sensitive receptors. As illustrated on **Figure 14: Acoustic Assessment Receptor Locations**, sound monitoring was undertaken at three (3) adjacent locations to provide a good representation of the existing acoustic environment for the variety of surrounding receptors and to determine the operational sound level assessment criterion for each noise sensitive receptor. The monitoring was undertaken over multiple days, inclusive of a weekend period. The predominant sound source at each monitoring locations was road traffic sound from Highway 567 and local residential sound, with occasional sound from the active Hillstone Aggregates operations, but such sounds were not dominant.

Figure 14: Acoustic Assessment Receptor Locations



▲ Noise Receptor Locations

Aggregate Operations

Sound propagation modelling employed to prepare the Acoustic Assessment predicts that the operational sound at the nearest noise sensitive receptors would be below the criteria for all phases with inclusion of appropriate acoustic mitigation and best practice. As required by the County's Noise Control Bylaw, through the noise impact control measures identified, noise emissions would be minimized as much as practicable. The results of this analysis indicate that noise generated within the MSDP area will be at or below 65 decibels, measured at the property line and at the nearest adjacent dwellings.

POLICIES:

- 17.1** *An updated Noise Impact Assessment and Noise Mitigation Plan shall be submitted at the development permit application stage in support of each operational phase to demonstrate that aggregate operations will comply with the Alberta Energy Regulator's "Directive 038".*
- 17.2** *Mountain Ash shall maintain noise levels generated by the operation at or below 65 decibels, to be measured at the perimeter of the MSDP area. This standard, recommended for Rocky View County by the Alberta Sand & Gravel Association (ASGA), reflects the City of Calgary's daytime noise limit for residential areas.*
- 17.3** *To mitigate egress of sound from the aggregate operation, Mountain Ash will install a 3m earth berm along the northern boundary of the site, install acoustic shrouds on the crusher unit, and ensure all equipment operating within the site are equipped with white noise/broadband reverse alarms.*
- 17.4** *Mountain Ash shall provide a 24-hour number for neighbours within the immediate vicinity to report issues with noise relative to aggregate operations within the MSDP area.*
- 17.5** *Mountain Ash shall ensure the placement of the crusher shall respect a minimum 100m buffer from the site boundary in order to control the egress of sound from the pit relative the nearest noise sensitive receptors.*
- 17.6** *Mountain Ash shall provide a 24-hour number for neighbours within the immediate vicinity to report issues with noise relative to aggregate operations within the MSDP area.*

18.0 Habitat Preservation

As illustrated on **Figure 7: Development Concept**, a significant portion of the SW 31 will not be disturbed and will be left in a natural state to respect the environmental integrity of the valley feature that traverses the site from northwest to southeast. Additionally, the existing wetlands situated within the northwest corner of NW 31 will be retained and are not expected to be disturbed pursuant to the mining and development sequencing plan contemplated by this MSDP.

POLICIES:

- 18.1** *An updated Biophysical Impact Assessment shall be submitted at the development permit application stage in support of each operational phase.*
- 18.2** *The existing valley feature within the SW 31 and the existing wetlands situated within the northwest corner of the NW 31 will not be disturbed, as illustrated on Figure 7: Development Concept.*

Aggregate Operations

19.0 Sediment & Erosion Control

Mountain Ash will implement appropriate erosion & sediment control techniques during aggregate operations and site reclamation activities. Detailed erosion & sediment control plans for each operational phase will be prepared in support of each development permit application.

POLICIES:

- 19.1** *An Erosion & Sediment Control Plan shall be submitted at the development permit application stage in support of each operational phase.*

20.0 Weed Management

Mountain Ash will inspect the MSDP area for noxious and restricted weeds as defined by the Weed Control Act and regulations and applicable Rocky View County Land Use Bylaw regulations. Herbicide may be applied to weeds as controlled under the Provincial Code of Practice for Pesticides and the Environmental Code of Practice for Pesticides. Summit Pit will engage with the RVC Agricultural Fieldman on soil handling and weed control management techniques employed during operations.

POLICIES:

- 20.1** *A Weed Control Plan shall be submitted at the development permit application stage in support of each operational phase.*
- 20.2** *Mountain Ash shall undertake weed control during operation and reclamation as directed by the Weed Control Act and the Rocky View County Land Use Bylaw*

21.0 Post-Mining Reclamation

Reclamation will be ongoing and continuous throughout the life of the project to maximize the amount of land under agricultural production during pit operations. The size of open areas being used for operations will be limited to +/- 40 acres at any one time.

As illustrated by **Figure 15: Proposed Reclamation Plan**, the objective of the final reclamation plan is to return the land to an equivalent agricultural land capability after mining operations are complete. Interim and post reclamation land uses will be agriculturally based in keeping with the historical grazing & pasture activities. No ponding or standing water will be left on the landscape as part of the operations.

During reclamation activities, topsoil and overburden materials will be removed from stockpiles and placed over the reclamation zone. The overburden materials will be placed first with topsoil being spread on top to form the surface layer. To optimize efficiencies, efforts will be made to directly apply the overburden and topsoil materials from expansion areas to reclamation zones as opposed to stockpiling the materials in a storage area. Replaced topsoil will be seeded with a vegetation seed mixture as soon as practical to help control erosion and weed growth. Determination of seed mixtures will be based on proper land management practices, such as planned crop rotations and/or grazing schedules. Following seeding, the operator will conduct annual inspections to measure the success of the re-vegetation process.

A monitoring and maintenance plan will be developed and implemented to assess the success of reclamation. This would include field identification and documentation as well as the preparation of a report.

POLICIES:

- 21.1 Reclamation within the MSDP area is expected to occur as generally illustrated on Figure 11: Proposed Reclamation Plan.***
- 21.2 A Reclamation Plan shall be submitted with each development permit application to demonstrate how depleted areas will be returned to their original condition as new mining areas are opened.***
- 21.3 Reclamation of mined areas shall consist of the replacement of salvaged overburden and topsoil with 3:1 side-slopes around the mined areas.***
- 21.4 Seeding of disturbed areas shall include an appropriate seed mix.***



Community Consultation

SECTION D

22.0 Community and Stakeholder Engagement

Due to public health situation related to COVID-19 and restrictions to non-essential public gatherings, Mountain Ash provided alternative methods to learn about the project and get involved rather than hosting an in-person public engagement event. Instead, members of the public were invited to visit the project website to learn about the project and complete an online survey, or they could request to receive hard copy materials where access to the internet was not possible. The objective of the engagement program was to provide information related to the Master Site Development Plan submission, proposed mitigation measures to address potential impacts arising from the proposed development, and to collect public input and respond to questions.

Mountain Ash held an online engagement program for their Summit Pit project from August 10 – August 24, 2020.

In total, 24 surveys were completed by the public. The survey included five questions, three of which were multiple choice while two were open ended. Of the comments received, most focused on the following topics:

- Traffic impacts
- Potential environmental impacts related to air quality, water, and cumulative impacts
- General opposition to aggregate extraction in the area

As part of the Master Site Development Plan application process, Mountain Ash completed various comprehensive technical studies to assess site conditions and develop mitigation measures to address community concerns, included those mentioned in the survey. As such, Mountain Ash believes that the mitigations proposed within the Master Site Development Plan will effectively reduce and/or eliminate concerns related to site operations and would allow them to operate as a good neighbour in the community.

An Engagement Summary Report was prepared to summarize the community and stakeholder engagement process in support of this Master Site Development Plan.

Community Consultations

23.0 Mountain Ash Commitments to Address Local Concerns

Mountain Ash is committed to implementing aggregate operations in a consistent manner that respects the concerns of surrounding neighbors and local stakeholders. As such, Mountain Ash is prepared to enter into a Good Neighbour Agreement with interested neighbours to establish appropriate protocols and procedures to respond to expressed concerns generally as follows:

Table 1: Mountain Ash's Development Commitments

	Expressed Landowner Concern	Mountain Ash's Commitments to Address Concerns
1	Habitat & wildlife	Restrict development disturbances within the valley feature situated within SW 31, limit disturbances within the MSDP area during migratory bird nesting season.
2	Groundwater mitigation	Limit excavation to minimum of 1 m above water table, implement ongoing groundwater monitoring.
3	Dust mitigation	Pave portion of Range Rd 40 from Hwy 567 to main site access, apply water and/or calcium chloride on access routes within the site, implement ongoing air quality monitoring & reporting.
4	Noise mitigation	Reduce operating hours, restrict crushing on Sundays & Holidays, implement ongoing noise monitoring & reporting.
5	Landscaping & screening	Install landscaped berms on perimeter of MSDP area as required, implement dark sky lighting.
6	Respectful aggregate operations	Limit open excavation areas to +/- 40 ac per development phase, reduce operating hours, implement aggregate operations via phased development permit processes, implement progressive reclamation throughout the lifespan of the operation.
7	Ongoing communications & community relations	Provide all landowners & residents situated within +/- 1.6 km of the MSDP area with a direct contact for a Mountain Ash representative and establish a project website to provide general & specific updates for interested stakeholders relative to ongoing aggregate operations within the Summit Pit.

POLICIES:

- 23.1** *Mountain Ash shall work with neighboring residents, business and interest groups to address impacts that may arise from future surrounding aggregate operations should they be approved including trucking, noise, groundwater and dust as summarized in Table 1: Mountain Ash's Development Commitments.*
- 23.2** *Mountain Ash shall enter into a Good Neighbour Agreement with interested neighbours, at the development permit stage, to establish appropriate protocols and procedures to respond to expressed concerns on a timely basis.*





Implementation

SECTION E

24.0 Land Use Amendment

For Mountain Ash to implement the proposed aggregate operation contemplated by this MSDP, an application to redesignate the subject lands from Agriculture, General District (A-GEN) and Special, Natural Resources (S-NAT) to Direct Control District (DC) must be approved by Council. A site-specific regulation will be established to prescribe general and site-specific development requirements to be implemented via development permit approval conditions. Prescriptions and regulations within the proposed DC district will address matters such as:

- Hours of operation;
- Mining sequencing & staging;
- Development permit renewal intervals;
- Commitments for Mountain Ash to adhere to development considerations such as:
 - » Mining & building setbacks;
 - » Landscaping, lighting, and signage requirements;
 - » Noise, air quality and groundwater monitoring & reporting requirements;
- Commitments for certain updated technical reporting to be provided at the development permit stage; and
- Specific prescriptions to address potential accommodation of other 'complementary' uses that may coincide with aggregate extraction & processing within the MSDP area such as:
 - Accessory buildings;
 - General Agriculture;
 - Communications Facilities (Types A, B & C);
 - Dwelling Unit, accessory to principal use;
 - Home based business (Types I & II);
 - Office;
 - Outdoor Storage;
 - Kennel; and
 - Signage

POLICIES:

24.1 The subject lands will be designated Direct Control District in accordance with the Land Use Bylaw (C-8000-2020).

24.2 The regulations of the Direct Control District shall ensure Mountain Ash's commitments to address concerns from neighbouring properties are appropriately implemented as described in Section 23.0 of this MSDP.

25.0 Development Permit Process

Prior to aggregate operations proceeding within each anticipated mining & sequencing phase, Mountain Ash shall submit a development permit application to the County to address specific matters such as:

- Aggregate operations plan;
- Active mining boundary;
- Transportation infrastructure improvements;
- Stormwater management infrastructure improvements;
- Construction management;
- Erosion & sediment control;
- Landscaping & screening;
- Dust control (air quality);
- Noise control;
- Reclamation;
- Annual reporting requirements to summarize matters such as:
 - » Status of operations;
 - » Dust (air quality) monitoring;
 - » Noise monitoring;
 - » Reclamation activities; and
 - » Good Neighbour Agreement (i.e. a description of complaints expressed from neighbouring landowners & follow up mitigations by the pit operator).

POLICIES:

25.1 Implementation of the Summit Pit is expected to occur in multiple phases in accordance with the County's development permit process.

25.2 The developer acknowledges that new information and/or updates to various plans and technical reporting prepared in support of this MSDP will be provided at the development permit stage to clarify how Mountain Ash will honor its commitments described in Section 23.0 of this MSDP.

26.0 Potential Closure of Range Road 40 Right-Of-Way (ROW)

As illustrated by **Figure 12: Development Phasing & Mining Sequencing Plan**, aggregate excavation is expected to commence in the southeast corner of the MSDP area and progress to the north and then west in a counter-clockwise fashion. As the lifespan of the operation approaches Phase 4, there is merit to consider closing the portion of Rge Rd 40 which extends south of the paved access from Highway 567. Mountain Ash believes it would be prudent to remove the aggregate underlying the Range Road 40 ROW as opposed to mining up to the adjacent setback. Likewise, given the alterations to existing site grades subsequent to excavation, it also would be beneficial to align the post-reclamation elevations between the excavated area and the statutory road allowance to avoid the 'egg carton' effect that would otherwise result.

As such, concurrent with the development permit application for Phase 4, Mountain Ash may submit a road closure application to close the affected portion of Range Road 40. Subsequently, Mountain Ash may pursue appropriate approvals from the County and Alberta Transportation to permit excavation of aggregate within the Rge Rd 40 ROW subject to an Agreement (with terms) to be negotiated as a condition of the associated development permit application.

POLICIES:

- 26.1** *Concurrent with the development permit application for Phase 4, Mountain Ash may apply to close the portion of Range Road 40 ROW extending south of the paved access to the MSDP area for aggregate extraction purposes.*
- 26.2** *Subject to appropriate approvals, Mountain Ash may excavate the aggregate within the ROW subject to an Agreement, with terms, to be negotiated with the County and Alberta Transportation as a condition of the associated development permit.*

27.0 Provincial Approval Process

27.1 Alberta Code of Practice for Pits

Mountain Ash has completed a Master Site Development Plan for Alberta Environment and Sustainable Resource Development (AESRD) in accordance with a Code of Practice registered with Alberta Environment and Sustainable Resource Development.

The COP application has been submitted to AESRD in support of the Summit project. The Code of Practice is a document that requires a gravel pit registration holder to perform certain duties during the life of the pit. Examples of information required which is to accompany a Code of Practice for Pits in Alberta is as follows:

Pit Water Monitoring	Wildlife Considerations
Landowner Contact information	Noise
Reporting Requirements:	End land uses
Contravention Reports	Sequence of Operations
Five Year Reports	Soil Conservation
Final Reclamation Reports	Drainage
Operating Records	Soil Replacement
Reclamation Certification	Re-vegetation
Activities Plan	Weed Control
Full Cost Security	Extraction Setbacks
Depth of Excavation	

POLICIES:

27.1.1 No aggregate operations shall occur within the MSDP area without an approval from Alberta Environment and Sustainable Resource Development (AESRD) in accordance with the requirements of the Code of Practice for Pits.

27.2 Provincial Water Act Approvals

AESRD is also responsible for provincial approvals under the Water Act. Under the Water Act, a Wetland Assessment Impact Report (WAIR) is required in areas where wetlands may be impacted by development. The contents of a WAIR are similar to the requirements of the Biophysical Impact Assessment prepared to support the MSDP and include the need for seasonal surveys of wetlands. These studies will be prepared and submitted to Alberta Environment at the future development permit stages.

POLICIES:

27.2.1 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 Wetland Policy and the Water Act.

27.3 Alberta Transportation Roadside Development Permit

Mountain Ash will require a Roadside Development Permit to be approved by Alberta Transportation prior to operations because the proposed development is within 1,600 m of Provincial Highway 567. Mountain Ash will prepare and submit a roadside development permit application subsequent to the approval of the MSDP and land use amendment, and prior to aggregate activities proceeding within the site.

POLICIES:

27.3.1 No aggregate operations shall occur within the MSDP area without approval of a Roadside Development Permit from Alberta Transportation.

Implementation

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Assessment of Cumulative Aspects of Extraction Activities in the Area

SECTION F

This MSDP includes a strategic policy implementation framework intended to assess & mitigate cumulative impacts relative to considerations such as traffic, noise, air quality, groundwater, visual impacts and public communications. Evaluated within this framework, Mountain Ash is confident that the proposed Summit Pit will not create negative impacts to the lands surrounding the MSDP area.

As illustrated on **Figure 1: Regional Context**, the Summit Pit MSDP is located within an area of the County that is known to contain significant aggregate resources. Provincial and municipal land use policies encourage the responsible removal of these resources. As such, it is reasonable to assume additional proposals for natural resource extraction will be advanced by other aggregate operators to pursue similar approvals affecting other parcels within the surrounding area.

On July 11th, 2017, Rocky View County Council directed Mountain Ash Limited Partnership, Lafarge Canada and McNair Sand & Gravel to prepare coordinated development policies in each of their respective MSDP's to:

- I. Identify consistent minimum standards that all operations will adhere to;
- II. Establish joint measures to minimize and monitor cumulative impacts on the local area, including identifying acceptable mitigation strategies for affected properties within a mile and a half from the property lines of the gravel pits; and
- III. Review and adapt transportation access and egress to Highway 567 to maximize safety and result in a design that would allow loaded gravel trucks to maximize their speed to safely merge into Highway 567's lanes as determined by RVC engineering and Alberta Transportation.

Each respective land use application was approved with MSDP's that indeed included development policies to align various operating standards, monitoring programs and infrastructure upgrades.

On September 16th, 2019, an Alberta Court of Queen's Bench decision (Docket 1701-12053) set aside RVC Council's land use approval for the previously mentioned aggregate producers. Although RVC is appealing this decision of the Courts, Mountain Ash is not certain that the County will be successful in this regard.

Although Mountain Ash has decided to pursue a new application for MSDP and Land Use Amendment, they continue to honor and respect the fundamental motivation of Council's July 11th, 2017 direction. That is, to establish a policy framework that facilitates collaboration between Mountain Ash and other existing/future aggregate operations in the Big Hill Springs area to cumulatively manage the effects of multiple aggregate operations within the same general location.

Accordingly, Mountain Ash anticipates the County will implement the following policy framework at the land use and/or development permit stage to facilitate a coordinated approach amongst all existing and proposed aggregate operations within the Big Hill Springs area with respect to operating best practices, transportation improvements, landscaping and visual screening infrastructure, noise, air quality, and groundwater mitigations, and project communications.

28.1 Coordination of Operating Best Practices

Mountain Ash is committed to operating The Summit Pit in a manner that limits cumulative negative impacts to surrounding residents.

As such, Mountain Ash is committed to the following:

- Restricting operating hours within the MSDP area as follows:
 - Monday to Friday: 7am to 7pm
 - Saturday: 7am to 5pm
 - Sundays and/or Statutory Holidays: No operations.
- Working collaboratively with other approved aggregate operators to align operating best practices (where possible and practical) with the overall objective of limiting potential nuisances to surrounding residents.

POLICIES:

28.1.1 Mountain Ash will implement operating best practices within the subject lands as described within this MSDP.

28.1.2 Mountain Ash will work collaboratively with other approved aggregate operators within the Big Hill Springs area to collectively align operating best practices (where possible and practical) with the overall objective of limiting nuisances to surrounding residents.

28.2 Coordination of Transportation & Traffic Safety Considerations

Mountain Ash is committed to implementing appropriate transportation improvements within and adjacent to the MSDP area with the overall intent of limiting cumulative impacts to surrounding residents.

As such, Mountain Ash is committed to the following:

- Working collaboratively with the County and Alberta Transportation to design and implement appropriate access from Highway 567 to ensure aggregate operations do not negatively affect the function and safety of the municipal and regional transportation network.
- Implementing operating measures to ensure that all vehicles leaving the MSDP area do so in a state that will prevent aggregate materials and other detritus from being deposited onto the roadway and/or highway network.
- Working collaboratively with other approved aggregate producers to jointly assess transportation impacts throughout the lifespan of their project, and where possible and practical, consider the following:

- Sharing appropriate traffic data to assist other operators to prepare their Traffic Impact Assessments in support of their projects.
- Aligning common highway access points for multiple aggregate operations;
- Implementing joint funding arrangements to construct highway intersection upgrades where such improvements provide a proportional benefit;
- Coordinating the design of project lighting to ensure all lighting within project areas are fully compliant with Dark Sky Guidelines.
- Coordinating implementation of signage and other roadside indicators to clearly identify specific project areas and promote appropriate way finding between multiple pit areas; and
- Reducing speed limits (subject to Alberta Transportation).
 - Working with other approved aggregate operators in the Big Hill Springs area to:
 - Educate trucking contractors to ensure that queuing will not be tolerated on the highway.
 - Collaborate with local enforcement authorities to ensure queuing activities are monitored and appropriately enforced.
 - Align regional truck haul routes and liaise with Alberta Transportation and the County accordingly.
 - Participate in the ASGA Truck Registry Program and promote the use of in-vehicle monitoring systems within all commercially licensed trucks servicing local aggregate operations.

POLICIES:

- 28.2.1 Mountain Ash will implement transportation upgrades and related operating procedures as described within this MSDP.**
- 28.2.2 Mountain Ash shall prepare an update to the Traffic Impact Assessment prepared in support of this MSDP, at each development permit stage, to appropriately consider and assess future ambient traffic conditions.**
- 28.2.3 Mountain Ash will work collaboratively with other approved aggregate operators within the Big Hill Springs area (where possible and practical) to share appropriate technical information, proportionally fund and construct transportation improvements, and establish and implement ongoing operating practices with the overall objective of mitigating cumulative effects relative to the operation and safety of the municipal and regional transportation networks.**

28.3 Coordination of Landscaping & Visual Screening Improvements

Mountain Ash is committed to working with other aggregate operators within the Big Hill Springs area to coordinate the design and function of landscaped screening berms with the overall objective of screening the aggregate operations from view of the public road/highway frontages.

As such, Mountain Ash is committed to the following:

- Coordinating the design of landscaped screening berms where two (or more) aggregate operations abut one another.
- Coordinating the maintenance program for landscaped screening berms where two (or more) aggregate operations abut one another.

POLICIES:

28.3.1 Mountain Ash will construct and maintain landscaped screening berms within the subject lands as described within this MSDP.

28.3.2 Mountain Ash will work collaboratively with other approved aggregate operators within the Big Hill Springs area to design and maintain landscaped berms (where possible and practical) with the overall objective of screening aggregate operations from the public road/highway frontages.

28.4 Coordination of Noise, Air Quality and Groundwater Mitigations

Mountain Ash is committed to working with other aggregate operators within the Big Hill Springs area to coordinate practices and procedures to mitigate concerns relative to noise, air quality and groundwater with the overall intent of limiting cumulative impacts to surrounding residents.

As such, Mountain Ash is committed to the following:

Noise:

- Restricting noise generated within the site based on industry best practices and the Rocky View County Noise Control Bylaw.
- Restricting noise levels to no more than 65 decibels within the MSDP area, to be measured at noise receptors installed at the project property line.
- Providing advanced notifications to adjacent residents when unique operating conditions might be expected to generate noise in excess of 65 decibels.
- Installing muffler silencers or back-up strobe lights on all equipment operating on-site.
- Enclosing aggregate crushing equipment.

- Installing noise monitoring stations upwind, centrally located and downwind of pit operations.
- Engaging a third party to record data from noise monitoring stations on a 'real time' basis.
- Establishing protocols & procedures to share data with other aggregate operators and local stakeholders.

Air Quality:

- Implementing dust control measures based on industry best practices including, but not limited to, paving access roads from the Highway to the main site access, apply calcium chloride and/or water on all driving aisles within each pit, and lower speed limits within project boundaries to 30 km/hr.
- Limiting the amount of open excavations to 3 40 ac at a time.
- Implement progressive reclamation activities as soon reasonably possible following depletion of the aggregate resources within each development phase.
- Enclosing aggregate crushing equipment.
- Implementing dust control measures on all unpaved haul routes and at all aggregate transfer points.
- Implementing daily inspections to ensure dust control measures are in place.
- Suspending pit operations in high wind conditions.
- Developing procedures and protocols to ensure trucks leaving an operation is appropriately securing and covering its load.
- Installing dust monitoring stations upwind, centrally located and downwind of the pit operation.
- Engaging a third party to record data from dust monitoring stations on a 'real time' basis.
- Establishing protocols and procedures to share data with other aggregate operators and local stakeholders.

Groundwater:

- Ensuring all excavation activities are prohibited closer than 1 m to the depth of groundwater.
- Installing groundwater monitoring wells upstream centrally located and downstream of pit operations.
- Engaging a third party to record data from groundwater monitoring wells on a 'real time' basis.
- Establishing protocols & procedures to share data with other aggregate operators and local stakeholders.

POLICIES:

28.4.1 Mountain Ash will establish ongoing monitoring programs relative to noise, air quality and groundwater as described within this MSDP.

28.4.2 Mountain Ash shall update the Acoustic Assessment, Air Quality Assessment and Hydrogeological Impact Assessment prepared in support of this MSDP, at each development permit stage, to appropriately consider and assess future ambient noise, air quality and groundwater conditions.

28.4.3 Mountain Ash will work collaboratively with other approved aggregate operators within the Big Hill Springs area (where possible and practical) to share associated monitoring data and align appropriate operating practices with the overall objective of mitigating cumulative affects relative to noise, air quality and groundwater.

28.5 Coordination of Ongoing Communications

Mountain Ash is committed to working with other aggregate operators within the Big Hill Springs area to coordinate operating best practices within the MSDP area with other natural resource extraction projects approved by the County with the overall intent of limiting cumulative impacts to surrounding residents.

As such, Mountain Ash is committed to the following:

- Establishing a project website to be updated regularly.
- Publish results of the ongoing noise monitoring, air quality monitoring and groundwater monitoring.
- Establishing clear expectations regarding how and when expressed complaints are to be addressed.
- Working collaboratively with other approved aggregate producers to align protocols and procedures regarding project related public communications.

POLICIES:

28.5.1 Mountain Ash will implement ongoing project communications relative to The Summit Pit to ensure adjacent residents and stakeholders are kept apprised of ongoing natural resource extraction operations as described within this MSDP.

28.5.2 Mountain Ash will work collaboratively with other approved aggregate operators within the Big Hill Springs area to collectively align communication protocols and procedures (where possible and practical) with the overall objective of ensuring local residents and stakeholders are kept apprised of ongoing aggregate operations in the area.

Supporting Technical Documents

(submitted under separate cover)

-
- Hydrogeological Impact Assessment, SLR Global Environmental Solutions, January 2020
 - Conceptual Stormwater Management Plan, SLR Global Environmental Solutions, January 2020
 - Biophysical Impact Assessment Report, SLR Global Environmental Solutions, January 2020
 - Wetland Assessment Impact Report, SLR Global Environmental Solutions, February 2020
 - Visual Appraisal, SLR Global Environmental Solutions, February 2020
 - TIA Letter Update, Watt Consulting Group, March 2020
 - Acoustic Assessment. SLR Global Environmental Solutions, May 2020
 - Air Quality Assessment in Support of the Summit Pit Application, May 2020
 - Transportation Impact Assessment, Watt Consulting Group, August 2014
 - Community and Stakeholder Engagement Summary, September 2020

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Master Site Development Plan

The Summit Pit
DRAFT for Public Hearing Purposes



MOUNTAIN ASH
• LIMITED PARTNERSHIP •

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