

# References

- Topographic base mapping derived from 2010 airphoto as prepared by First Base Solutions Inc. Contour interval is 1 metre. Mapping supplemented with additional information from local planning documents.
- Survey of Monitoring Well locations 1 to 14 by Van Harten Surveying and Engineering.
- West boundary of northerly excavation area from *Erosion Hazards Study* by C.C. Tatham & Associates Ltd., June 16, 2015, January 19, 2018 and April 20, 2018.
   *Traffic Review*, C.C. Tatham & Associates Ltd.,
- June 2015 and July 05, 2017.
- 5. Sound Impact Analysis Violet Hill Pit, Valcoustics Canada Ltd., June 14, 2016 and July 06, 2017.
- 6. Aggregate Investigation, Geological Investigations, September 30, 2015.
- 7. Agricultural Impact Assessment, DBH Soil Services Inc., March 20, 2015.
- 8. Air Quality Assessment, Trinity Consultants Inc., March, 2016 and June 30, 2017.
- 9. Stage 1 and 2 Archaeological Resource Assessment, Archaeological Consultants and Contractors, January 14, 2015 and November 30, 2015
- Natural Environment Technical Report, Robin Craig Environmental Consultant, June 20, 2016 and April 20, 2018
- 11. Town of Mono Zoning Bylaw 78-1, as Amended.
  12. Proposed Violet Hill Pit Combined Level 1 and 2 Hydrogeological Assessment, Whitewater
- Hydrogeological Assessment, Whitewater
  Hydrogeology Ltd., June, 2016.
  13. Visual Assessment, Rollings Hyland Consulting,
- August 25, 2016.

  14. *Planning Report*, Ron Davidson Land Use
- Planning Consultant Inc., June 29, 2016.

  15. Witness Statement on Planning, Ron Davidson Land Use Planning Consultant Inc., June 24,
- 2020
  16. Letter re: Updated Groundwater Elevation Data, Whitewater Hydrogeology Ltd., June, 2020.
  17. Letter re: Soil Sampling for Rehabilitation to an Agricultural After Use, DBH Soil Services Inc.,

April 30, 2020.



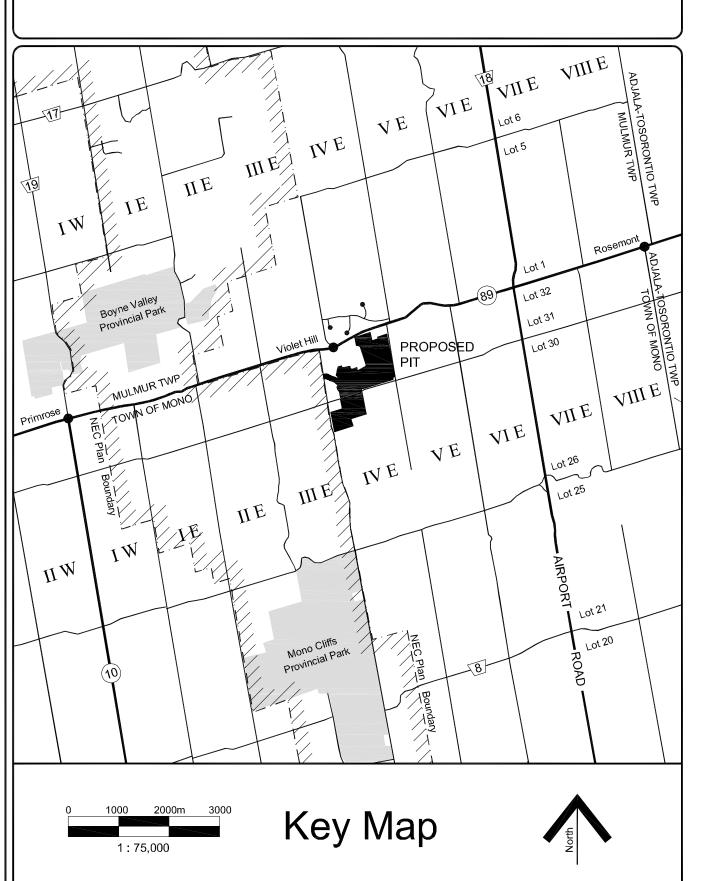
# **VIOLET HILL PIT**

Part Lots 30, 31 & 32, Conc. 4 E.H.S.

Town of Mono

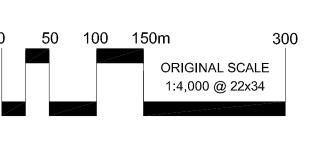
Dufferin County

Page 1 of 7 **EXISTING FEATURES** 

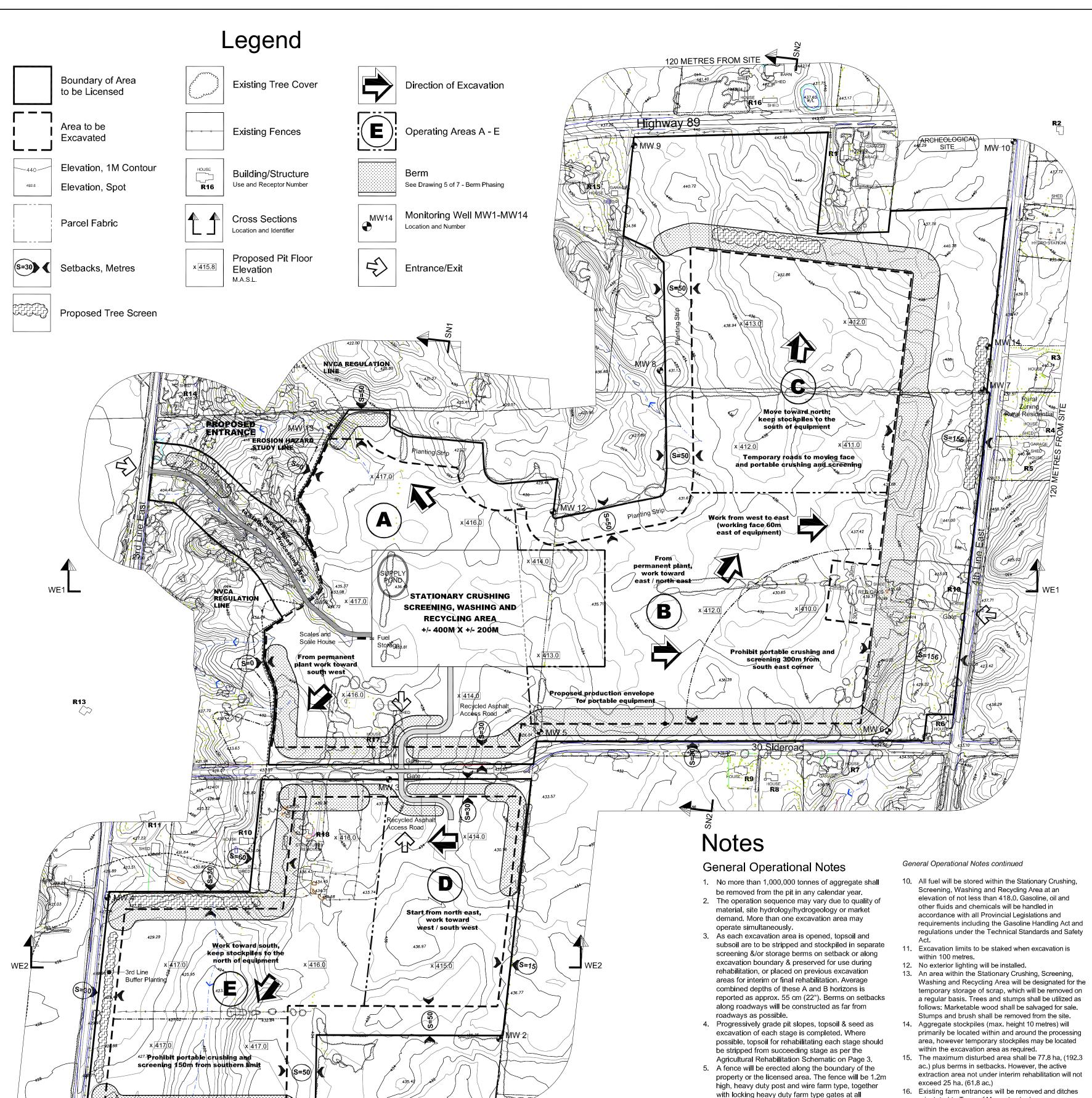


I ACKNOWLEDGE AND SHALL CARRY ON MY OPERATION IN ACCORDANCE WITH THE SITE THIS SITE PLAN IS PREPARED UNDER PLAN UPON WHICH MY LICENCE IS BASED. THE AGGREGATE RESOURCES ACT APPROVED: S.G. GREENWOOD AGGREGATES LIMITED FOR A CLASS A LICENCE, CATEGORY 3 FILE: August 2020 Site Plans.dwg PLOTTED: 18 Aug. 2020 SITE PLANS APPROVED BY: JEFFREY A. ROLLINGS MINISTRY OF NATURAL RESOURCES AND FORESTRY DESCRIPTION APP'D No. DATE Amendments









120 METRES FROM SITE

General Operational Notes continued

19. Onsite material will be used to construct berms. However, approved top soil will be imported to aid in berm construction and ensure the total disturbed area not under interim rehabilitation does not exceed 25 hectares. The licensee must ensure that the top soil is tested at the source, before it is deposited on-site, to ensure that the material meets the Ministry of the Environment, Conservation and Parks (MOECP) criteria under Table 1 of MOECP's Soils, Ground Water and Sediment Standards for use under Part XV.1 of the

Environmental Protection Act. Reference shall also be had to the On-Site and Excess Soil Management Regulation under the EPA. Sampling results will be provided to MNRF upon request. Documentation will also be provided to the Town of Mono and all imported top soil will comply with standards found in the Town of

20 Material movement from Operating Areas D and E shall only be through Area A, and the main entrance. Site-to-site access shall be by a controlled crossing of 30

21. Truck traffic will be restricted to "local deliveries only" on all roads bordering the license except for the designated haul route from the exit of the license to Hwy. 89 on 3rd

22. Prior to licence surrender wells will be decommissioned in accordance with Ontario Regulation 903. 23. Prior to site preparation, the Greenwood Aggregates Spill

details of the Violet Hill Pit operations. The Spill Prevention and Mitigation Plan shall outline the material handling and storage protocols, mitigation and monitoring measures and spill response plan. (i.e. emergency contact procedures, including the Spills Action Centre, and response measures including containment and clean-up.) All fuel handling will comply with the provincial Liquid Fuels Handling Code. This Plan shall be displayed in scalehouse at all times.

## Natural Heritage Mitigation

The following actions are recommended and are included or the site plans to mitigate and protect natural features on and within 120m of the Greenwood Violet Hill Pit site.

All rehabilitated areas and setbacks within the licence will be surveyed annually by an experienced professional to determine if individual or colonies of invasive species including the following listed species have become established

 Glossy Buckthorn (Frangula alnus) • Dog-strangling Vine (Cynanchum rossicum) • Black Dog-strangling Vine (Cynanchum louiseae) • Garlic Mustard (Alliaria petiolata) • Japanese Knotweed (Polygonum cuspidatum)

• Phragmites or Common Reed (Phragmites australis subsp. australis) • Giant Hogweed (Heracleum mantegazzianum)

If an individual or colony of any of the above listed species is found within the licence area the individual or colony will be eradicated if feasible. The eradication method and/or methods will be determined and implemented by an experienced professional and may include manual, mechanical and/or chemical means.

### Provincially Significant Wetlands • The extraction limit will be set back a minimum of 150 m from the wetland boundary.

made to the site plan as necessary.

A report of the above described surveys will be kept on

 Each of the 30 known Butternut will be clearly marked and numbered to assist with future identification and the

 A minimum 50 m setback between the extraction limit and the drip line of the north woodland where 26

marked around the 4 known Butternut found within the proposed extraction limit

must demonstrate to the satisfaction of OMNRF, that Endangered Species Act requirements related to protecting Butternut and their habitat have been met.

an area where an operation is planned. o Conducting the searches during the growing season

each within a 50 m setback. Completing health assessments by a certified

assessments to OMNRF within 30 days of completing the assessments

Barn Swallow

16. Existing farm entrances will be removed and ditches

reinstated to Town of Mono standards. 17. Removal of overburden typically occurs twice per year: once during late Fall or early Spring, and a second time during late summer. The duration of the activity is 1-2 weeks. The actual timing and duration may vary

entrances. Installation to occur prior to any site

Excavation will proceed in lifts of 10m (33 ft.) or less,

7. Equipment operating in the pit may include, but is

etc. A scale and scale house will be erected

8. Final site drainage will be by infiltration. Refer to

There will be no water diversion or points of

9. See Noise Control Measures for hours of operation.

adjacent to the stationary processing area.

not limited to, bulldozers, loaders, trucks, scrapers,

crushers, screeners, conveyors and power plants,

Page 3, Progressive and Final Rehabilitation Plan.

disturbance.

with benching if required.

discharge from the site.

somewhat. 18. Prior to the installation of any stationary equipment, all crushing and screening equipment will be portable and operate below grade. Any future stationary equipment will be installed within the Stationary Crushing, Screening, Washing and Recycling Area pursuant to Provincial Regulations and permits.

Mono Fill By-law. All imported top soil will be included in the maximum annual tonnage.

Sideroad with gates and stop signs.

Contingency Plan shall be updated to include the specific

• Common Buckthorn (Rhamnus cathartica)

# **Endangered and Threatened Species**

 The Species at Risk List for Ontario will be reviewed annually to determine if newly listed species are present or have the potential to be found within the extraction

 Prior to stripping the area to be cleared will be surveyed during appropriate survey time periods by a qualified professional for the presence of endangered and threatened species.

file at the pit site and will be provided to OMNRF if an endangered or threatened species is found. If required, approvals/authorizations will be obtained under the Endangered Species Act and/or amendments

establishment of appropriate setbacks.

Butternut were found will be established and clearly A minimum 50 m setback will be established and clearly

 Prior to any operational activities occurring within the licensed area, including building haul roads, the operator

This will accomplished by: o Searching for Butternut in an area and within 50 m of

prior to commencing the operation by a qualified professional following OMNRF search protocols. Marking clearly all Butternut found and protecting

Butternut health assessor on all Butternut found during the above described searches. o Submitting the results of the Butternut health

o Seeking appropriate authorization under the Endangered Species Act prior to removing or commencing any operation within 50 m of any Butternut.

 Greenwood Aggregates Limited has registered with the OMNRF a Notice of Activity, to "Alter a Structure" that is Barn Swallow habitat, under Endangered Species Act exemption guidelines O. Reg. 242/08 23.3, certificate # X-102-0000000340

 Prior to any operational activities occurring within the licensed area, the operator must demonstrate to the satisfaction on OMNRF that Endangered Species Act requirements related to protecting Barn Swallow and

their habitat have been met. Bobolink and Eastern Meadowlark Exclude the natural vegetation communities including the cultural meadows along the north-west and west boundaries of the licenced area from the extraction limit.

Natural Heritage Mitigation continued

- Exclude the on site north and south woodlands and potential bat maternity habitats from the license area.
- Ensure a minimum 30 m setback between the extraction limit and the drip lines of any woodland community on or adjacent to the site.
- Prior to removing any buildings and mature trees on the site the building/trees will be surveryed by a qualified professional for the presence of bats using current survey protocols.
- A multi-chambered bat house will be constructed to create bat maternity habitat on or within 120m adjacent to the site.

### Significant Woodlands Exclude the north and south woodlands from the

- license area. • Ensure a minimum 50 m setback from the drip lines of all woodlands on the site and their adjacent components.
- Implement dust control measures as required to protect vegetation and wildlife within woodlands.
- The setback areas adjacent to the north and south woodlands will be planted with native conifers such as White Spruce and Eastern White Pine to add to the
- diversity of the woodlands To ensure no negative impacts from dust, adhere to Dust Control Measures as outlined on Page 7 of the Site Plans

### White Heath Aster

 Prior to extraction in Phase E, White Heath Aster (Symphotrichum pilosum) will be searched for and if found, will be moved to a suitable area outside the extraction limit

### Significant Wildlife Habitat Shrub/Early Successional Bird Breeding Habitat

• Exclude the natural vegetation communities including the cultural thickets along the west boundary of the licensed area from the extraction limit.

**Eastern Wood Pewee** 

- · Exclude the north and south woodlands from the
- Ensure a minimum 50 m setback from the drip lines of all woodlands on the site and their adjacent
- Implement dust control measures as required to protect vegetation and wildlife within woodlands.
- Store fuel and maintain equipment in a fuel and maintenance area in accordance with Provincial
- Prepare a Spills Response Plan that will be implemented and enforced to protect water quality.
- Monitor groundwater as described in the "Proposed Violet Hill Pit Combined Level 1 Level 2 Hydrogeological Assessment" by Whitewater

For Natural Heritage Mitigation notes pertaining to construction of the access road, see page 5 of 7 Berm Phasing and Details.

Hydrogeology Ltd., 2015.

## Hydrogeology

Gravel pit extraction will remain 5 metres above the established water table. As a result, there is no risk of an interference with any existing private water wells.

# Pit Floor Elevation

Groundwater contours are shown on Page 1. Due to the geological conditions, the pit floor will range at elevations between 410 masl and 417 masl.

# Aggregate Washing

Site operations will include an on-site washing facility consisting of a lined closed loop system, which will recycle water in ponds perched above the water table. Appropriate approvals under the Ontario Water Resources Act will be obtained to allow for the use of water in day-to-day

### Compliance Monitoring Program 1. Continuous water levels and temperatures shall be

collected at all groundwater monitoring wells between March and November of each operating year.

 A selection of representative domestic water wells located within 500 m of the extraction area should be included in the groundwater monitoring program if they meet the selection criteria, which includes: wells are in compliance with Ontario Regulation 903 (as amended), are accessible, and constructed in the overburden aquifer. Prior to operations, water samples shall be collected from the participating domestic water wells and analyzed for general chemistry, major anions, oil and grease, and bacteria. Subsequent samples should be collected and analyzed on an annual basis at the end of the operational season (late fall). Continuous water levels should be collected from each domestic well and the data retrieved on a semi-annual basis.

2. An annual report summarizing the findings of the groundwater monitoring program for the operational season shall be prepared and submitted to the MNRF, the Nottawasaga Valley Conservation Authority and the Town of Mono by June 1st of the following year.

# Recycling

1. Only unused surplus concrete produced at the licensee's ready mix concrete operation in Alliston will be permitted for recycling on this site.

2. The licensee will only import asphalt pavement for recycling to satisfy the requirements of the internal pit roads and blending with aggregate to meet specifications.

3. All concrete and asphalt will be stored in the stationary processing area and the total combined volume stored onsite will not exceed 100 loads.

4. All imported material coming into or leaving the site will be included in the maximum annual tonnage. 5. Recyclable asphalt materials will not be stockpiled within: 30m of any water body or man-made pond; or

 2m of the surface of the established water table. 6. Removal of recycled aggregate is to be ongoing. 7. Once the aggregate on site has been depleted there will be no further importation of recyclable materials permitted. Following final rehabilitation, all recycling operations must cease.



# **VIOLET HILL PIT**

Part Lots 30, 31 & 32, Conc. 4 E.H.S. Town of Mono **Dufferin County** 

# Page 2 of 7 **OPERATIONS**

## Noise Control Measures

weekends or on Statutory holidays.

extraction commencing in Area B.

Operations Plan.

- 1. Hours of operation are 7:00 to 19:00 Monday to Friday. No operations shall take place on Sundays or
- 2. Loading and shipping only is allowed beginning at 6:00 am Monday to Friday and 6:00 to 12:00 on Saturdays.
- 3. Receptor 17 must be vacated prior to commencing any extraction activities on the site.

Berms must be constructed as shown on the Operations

according to the timings shown on the berm sequencing

constructed prior to extraction commencing within that

area. For example, if extraction is to commence in Area

constructed prior to this extraction. If extraction were to

berms for both Areas A and B are required prior to

8. Portable crushing and screening activities cannot occur

9. Any permanent processing plant is to only operate within

the area shown on the Operations Plan. The permanent

processing plant is to be installed at a ground elevation

screening provided by having the plant below existing

maximum sound emission levels are not to exceed the

Front End Loaders at the Permanent Processing Plant

within 300 m of the southeast corner of Area B and

within 150 m of the southern limit of Area E. See

of 422 masl to take advantage of the acoustical

10. The direction of extraction is to be as shown on the

11. The amount of equipment and the corresponding

values indicated in the table below.

move to Area B prior to extracting all of Area A, then the

Plan. The berms can be constructed and removed

details. The berms required for any area must be

A, then the berms required for Area A must be

- quideline limits are met. The audit measurements must 4. Receptor 18 must be vacated prior to commencing be done by a qualified acoustical engineer. extraction activities in the south portion of the site. 14. All Greenwood owned equipment will be equipped with 5. The sound emission level for all pieces of equipment only broad band backup safety beepers to be used on used for construction activities including site preparation
- and rehabilitation must comply with the limits outlined in 15. A "use of engine brakes prohibited onsite" policy will be MOECP Publication NPC-115, "Construction posted and enforced.
- 16. Residence R19 will remain occupied, but will not be 6. Construction and rehabilitation activities can only occur adversely impacted by noise from pit operations. during the daytime period (i.e. 0700 to 1900 hours), 17. All appropriate approvals under provincial requirements Monday to Friday. There is to be no construction on
  - will be obtained. 18. In the event of a noise complaint, the complaint will be directed to the Site Supervisor, who will follow the protocols outlined on Page 7.

12. If additional or other equipment is to be used on the site

for non-construction or non-rehabilitation activities, the

mitigation recommendations implemented prior to this

13. One off-site noise audit measurement is to be completed

is being done on the site to confirm the MOECP noise

reaching a depth of elevation 422 masl, when processing

at the commencement of the operation and after

equipment operating on the site

noise impact assessment needs to be updated and any

### Archaeology

1. Should deeply buried archaeological/heritage remains be found on the property during site preparation and/or extraction activities, the Ministry of Tourism and Culture should be notified immediately. In the event that human remains are encountered during site preparation and/or extraction, activities associated with the proposed development of the license area, the project proponent, Greenwood Aggregates Limited, should immediately contact the police, the Ministry of Tourism and Culture, and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and

# Variations from the

Commercial Relations at 416-326-9382.

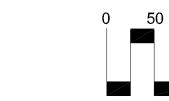
excavation limit.

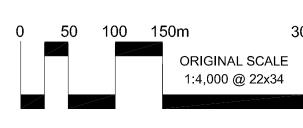
Operational Standards The following conditions illustrated on this plan vary from the requirements of the provincial standards that apply to licensed pits in Ontario

5.1 Fences Fence will be located on license boundary except at the entrance where it will follow the

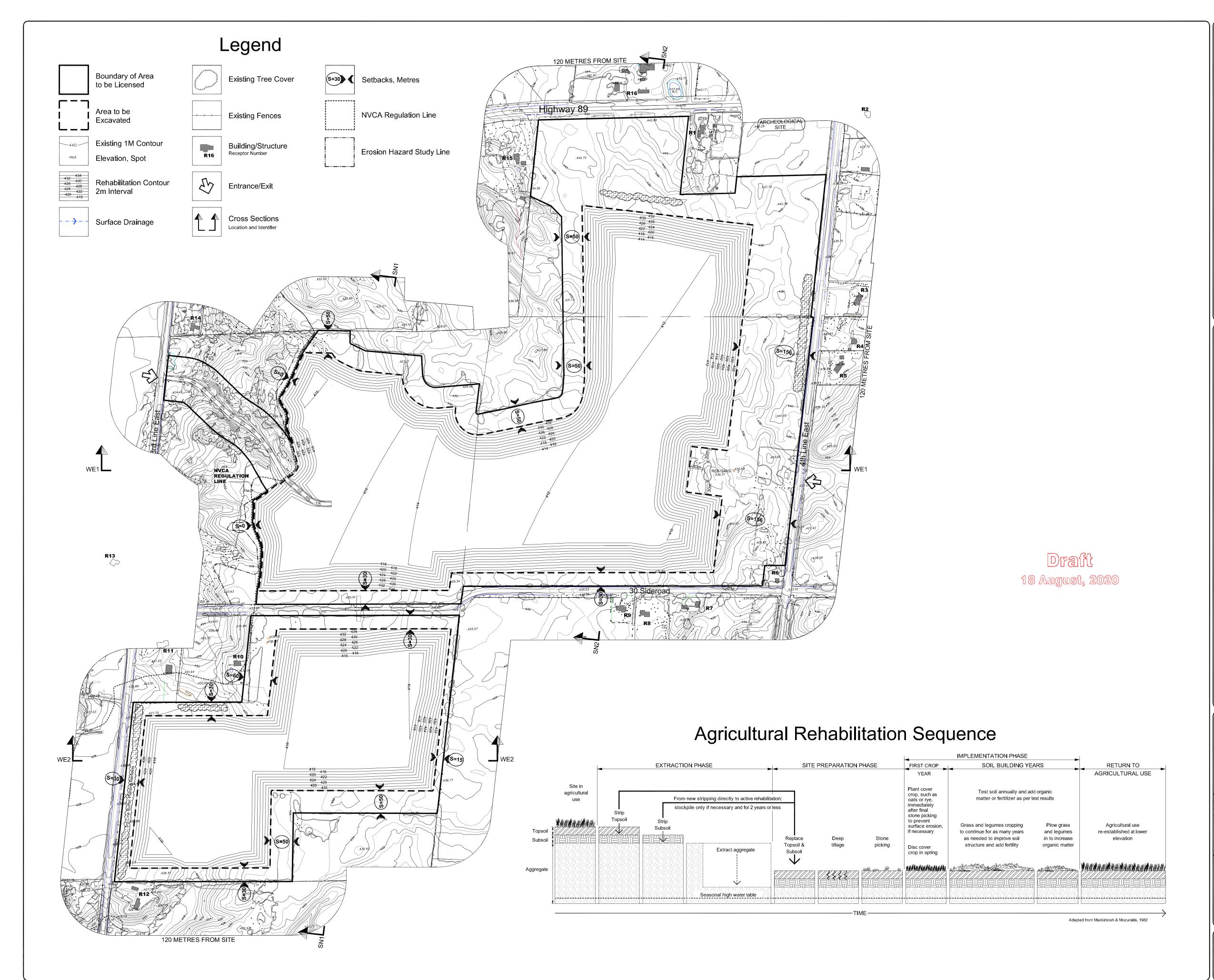
**Maximum Sound Emission** Level at 15m Reference Distance (dBA) Front End Loader at Extraction Face Portable Crushing Plant at Extraction Face Portable Screening Plant at Extraction Face Dedicated On-Site Haul Trucks Permanent Processing Plant which includes crushers, screens and a wash plant

		I ACKNOWLEDGE AND SHALL CARRY ON MY						
VN: J.A.R.		OPERATION IN ACCORDANCE WITH THE SITE PLAN UPON WHICH MY LICENCE IS BASED.	THIS SITE PLAN IS PREPARED	UNDER				
ROVED: S.G.		GREENWOOD AGGREGATES LIMITED	THE AGGREGATE RESOURCE					
August 2020 Site Plans.dwg			FOR A CLASS A LICENCE, CAT	EGORY 3				
TED: <b>18 Aug. 2020</b>		PER: DATE:						
MEN ).	IDMENT	SITE PLANS APPROVED BY:  MINISTRY OF NATURAL RESOURCES AND FORESTRY  DATE:	JEFFREY A. ROLLINGS  DATE:					
).	. DATE DESCRIPTION		N	APP'D				
Amendments								











# **VIOLET HILL PIT**

Part Lots 30, 31 & 32, Conc. 4 E.H.S.

Town of Mono

Dufferin County

Page 3 of 7
PROGRESSIVE
AND FINAL
REHABILITATION

# Notes

- 1. Progressive rehabilitation to occur within one full growing season after excavation of edges.
- 2. Rehabilitation shall be undertaken in two phases. Following removal of the gravel layer (a minimum depth of 6 metres below existing grade), the surface will be lightly topsoiled and seeded. Edge rehabilitation down to the sand layer will be completed. Later, the sand layer will be removed, and final rehabilitation will be completed at final pit floor elevations..
- Pit floor to be excavated and graded to proposed rehabilitation elevations, or a minimum of five metres above the watertable. Topsoil and subsoil are to be progressively reclaimed from new stages and/or berms, in sequence, and placed on prepared (graded) areas. Average depth of topsoil and subsoil available for rehabilitation is approx 55cm (22").

Final rehabilitation soils will have compaction and fertility tested, prior to seeding, to confirm soil restoration and revegetation requirements.

All field areas to be rehabilitated in accordance with Ministry of Natural Resources and Forestry Guidelines for Rehabilitation to an Agricultural After Use.

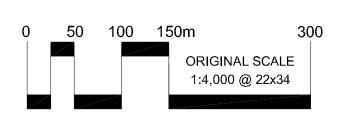
- 4. Complete edge rehabilitation by filling slopes with overburden reclaimed from storage berms, or where possible, with material stripped from current stages.
- 5. After use of the proposed license area is agricultural and open space conservation.
- 6. Ultimate rehabilitation contours will vary as a result of actual site conditions, unsuitable granular material, and groundwater levels.
- 7. Side Slopes will be seeded with a seed mix which contains native grass and forb species and avoids invasive species such as crown vetch.
- 8. Site drainage will be by infiltration into the ground.
- 9. Pre-extraction data will be collected to provide baseline information to assist in determining if restoration has been successful. Soil sampling for analysis of nutrients will be completed by following the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) Factsheet "Soil Sampling and Analysis for Managing Crop Nutrients", Addex # 533 (March 2016) in conjunction with the recommendations in the OMAFRA document "Draft Agricultural Impact Assessment (AIA) Guidance Document (March 2018).

Soil sampling will be completed by a qualified person prior to any stripping of topsoil on a phase by phase basis. Soil sampling will only be completed once at the initial stage of a new phase and will not be completed prior to reopening an area for secondary extraction. Sampling results will be made available to the Town upon request.

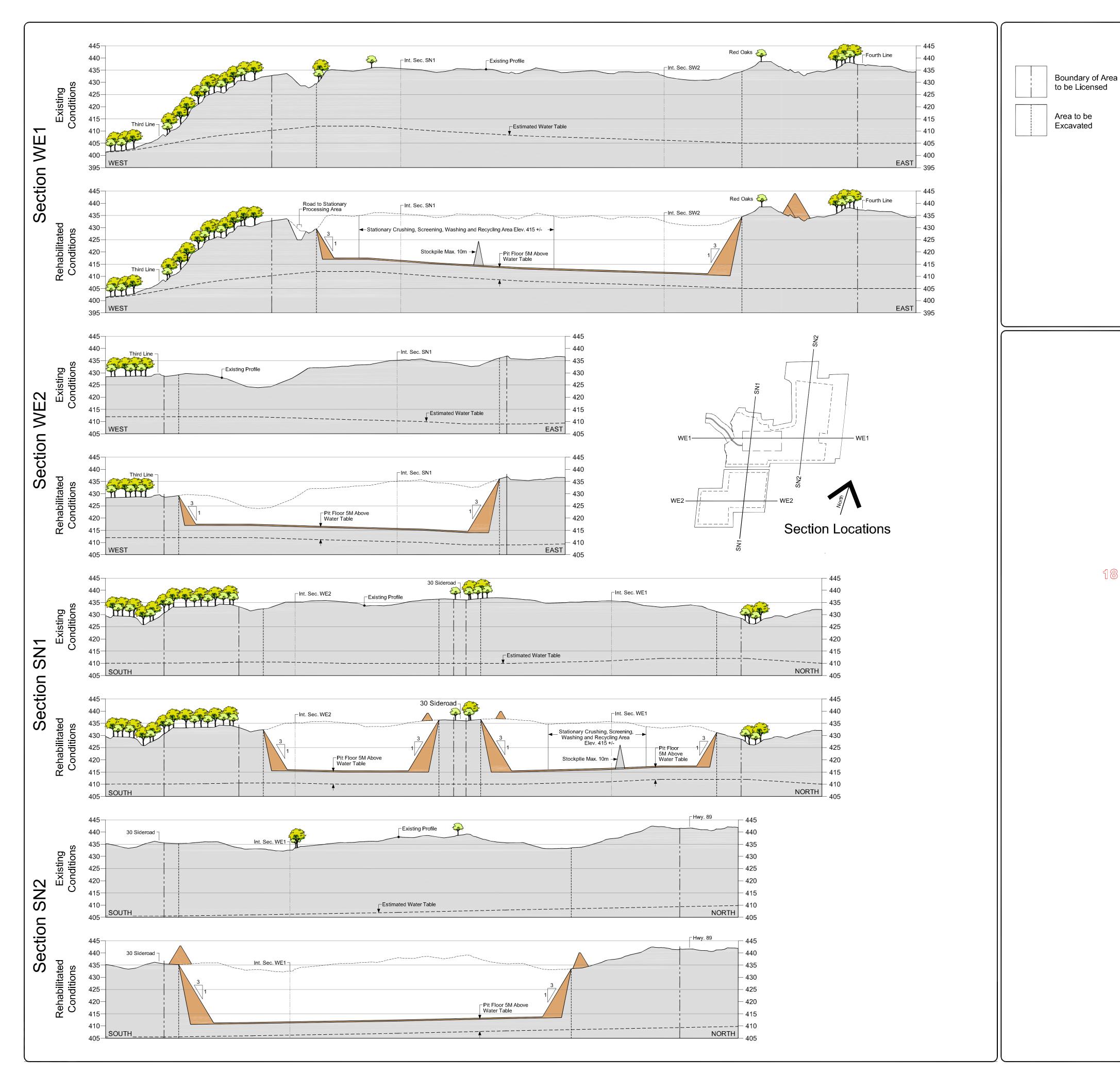
10. Imported concrete will not be used for backfill

DRAWN: J.A.R.  APPROVED: S.G.  FILE:August 2020 Site Plans.dwg  PLOTTED: 18 Aug. 2020		I ACKNOWLEDGE AND SHALL CARRY ON MY OPERATION IN ACCORDANCE WITH THE SITE PLAN UPON WHICH MY LICENCE IS BASED. GREENWOOD AGGREGATES LIMITED  PER: DATE:	THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENCE, CATEGORY 3					
AMENDMENT NO.		SITE PLANS APPROVED BY:  MINISTRY OF NATURAL RESOURCES AND FORESTRY  DATE:	JEFFREY A. ROLLINGS DATE:					
No.	DATE	DESCRIPTION		APP'D				
Amendments								











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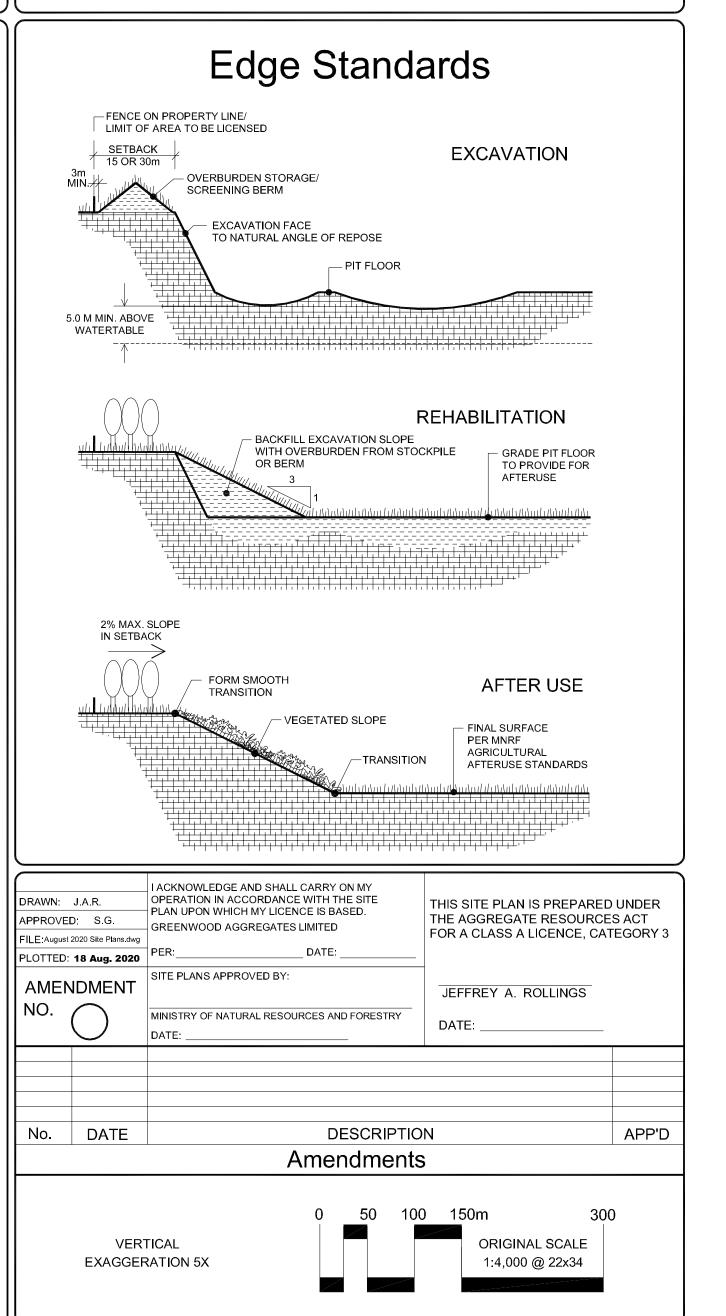
Town of Mono

Dufferin County

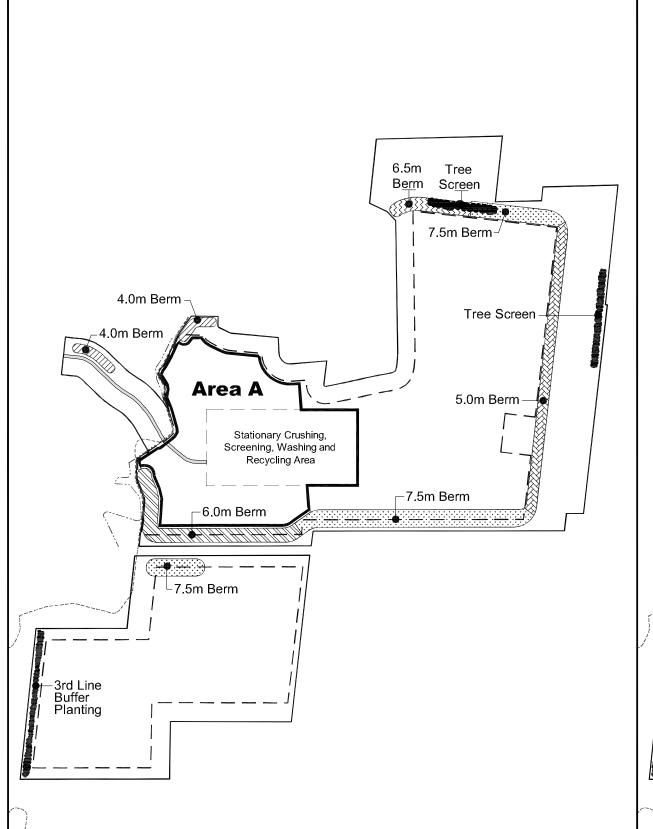
Page 4 of 7
SECTIONS

# Notes

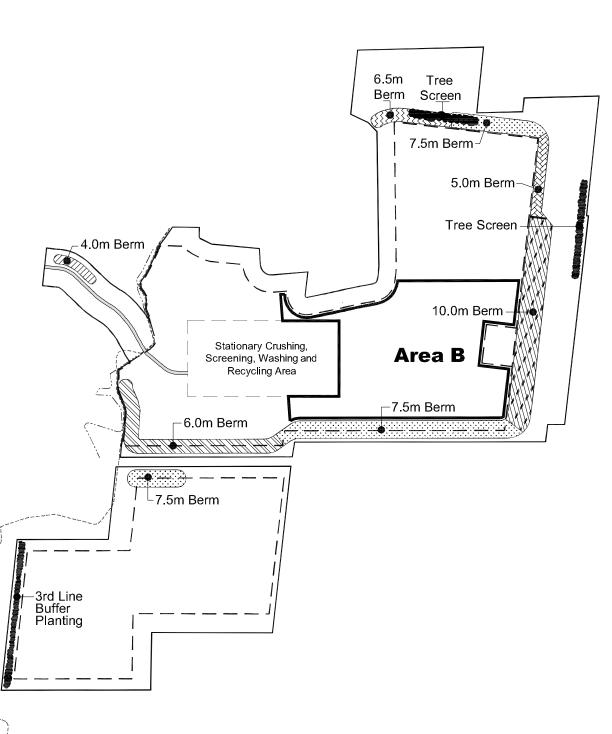
Drait 18 August, 2020



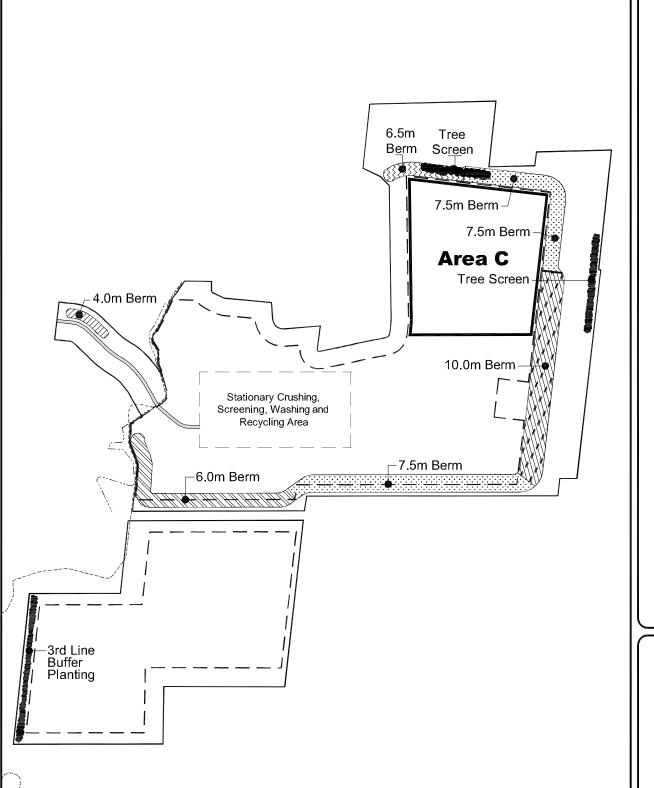
ROLLINGS HYLAND CONSULTING
Caledon, Ontario 519.942.1961



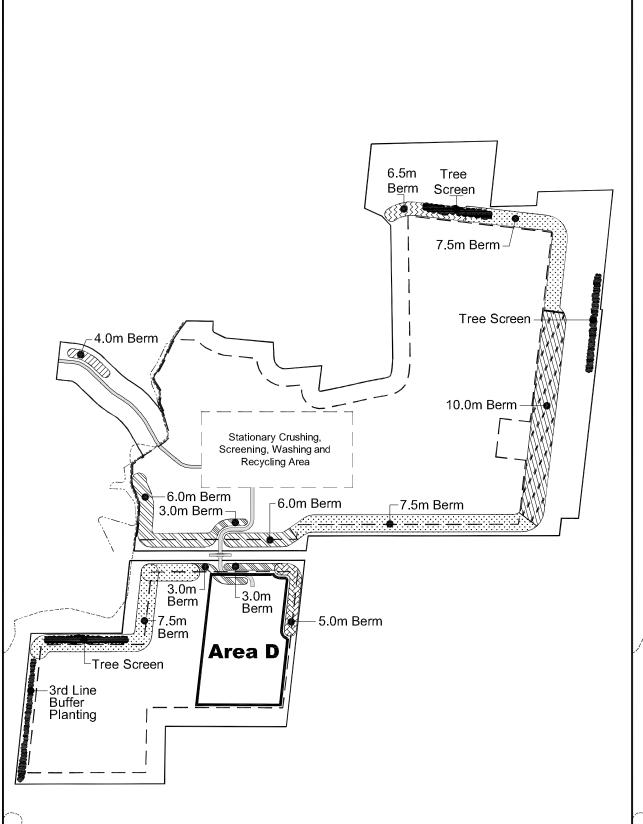
Berm Requirements - Area A



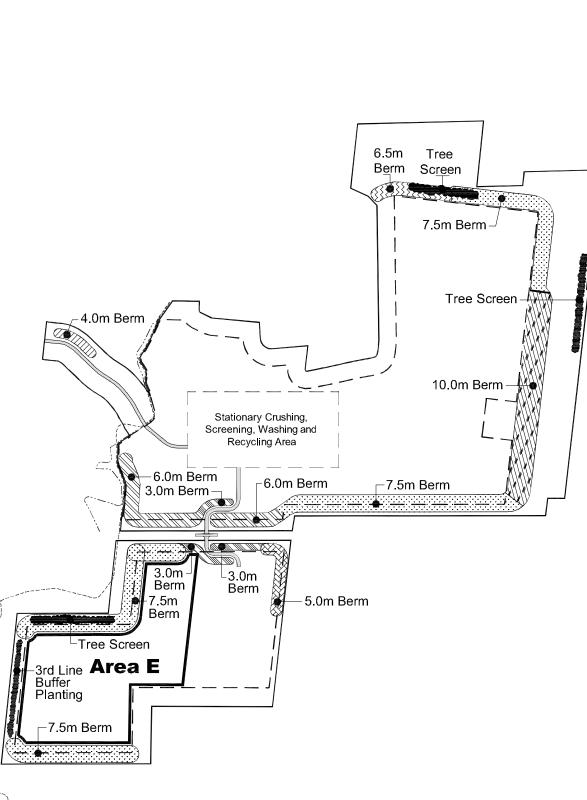
Berm Requirements - Area B



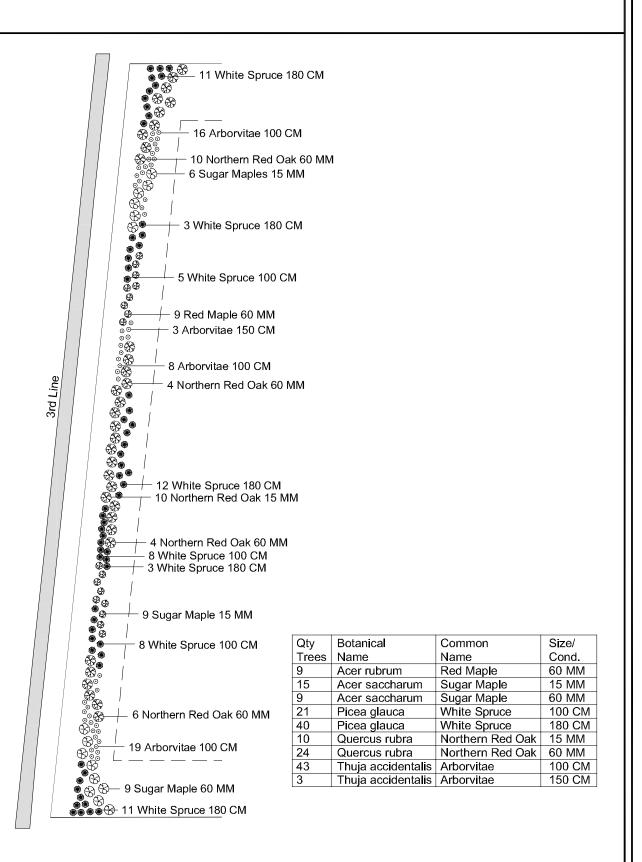
Berm Requirements - Area C



Berm Requirements - Area D

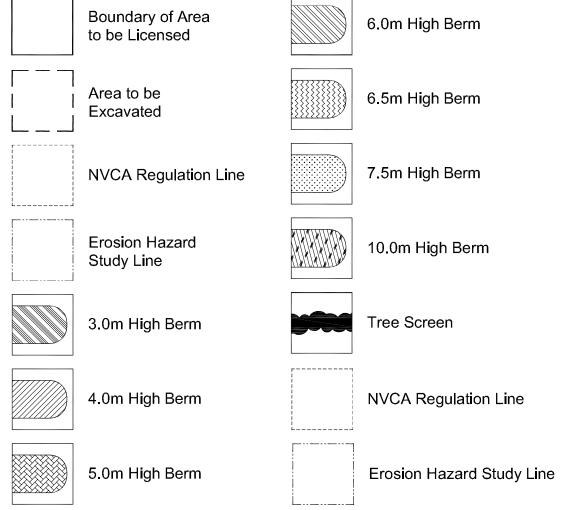


Berm Requirements - Area E



3rd Line Buffer Planting

# Legend



# Natural Heritage Mitigation For Access Road

**Provinically Significant Wetlands on Adjacent Lands** 

- No land clearing or construction to occur from April 1 to July 31. Minimize area distrurbance during land clearing and road construction. - The haul road ditches will be armoured as required to prevent erosion.

- Surface water from the haul road will be retained on site to infitrate into the ground water

- Erosion protection and surface water retention facilities will be designed to the satisfaction of the Town of Mono.

Provincial legislation

- Ensure all construction personnel are familiar with the Greenwood Agrregates corporate Spills Contingency Plan and the ten point "Spill Contingency Plan" described on page 2 of the Site Plans.

**Endangered and Threatened Species** 

- Prior to stripping, the haul road area and within 120 metres will be surveyed for the presence of endangered and threatened spcies during appropriate survey time periods

by a qualified professional. - A report of the above described surveys will be kept on file at the pit site and will be provided to OMNRF if an endangered or threatened species is found. - If required, approvals/authorizations will be obtained under the Endangered Species Act

component of the restoration strategy.

suitable habitat on the Violet Hill property.

Shrub/Early Successional Bird Breeding Habitat

and/or amendments made to the site plan as necessary.

- Plant the 5.4 ha. setback land along the north boundary of the property with a native and non-native non-invasive meadow seed mixture.

- The restoration strategy will be prepared by a knowledgeable professional - Native seed meadow mixes such as Ontario Seed Company mixes #8135 and/or #8145

will be planted initially to stablize the site and create early successional meadow habitat. If these mixes are unavilable suitable alternatives will be used,

- Upland, medium height native shrubs will be planted in small clusters sparsely scattered over the site to develop shrub/early successional habitat. At least 3 species that are site suitable will be included in the plantings. These may include Chokecherry (Prunus virginiana), Serviceberry (Amelanchier arborea) and Staghorn Sumac (Rhus typhina).

Depending on availability, other suitable species will be used. - Planting specifications will include seed rate per ha., shrub planting pattern and stocking

- Other aspects of the strategy will include shrub tending requirements, survival monitoring,

acceptable survival rates and replacement policy. - The restoration area will be monitored for invasive species and appropriate control measures implemented. Described in more detail on Page 2 Natural Heritage Mitigation. - Naturalization of native shrubs and other native vegetation will also be an important

- Prior to clearing for the haul road, the ditches and the surface water retention facility, the area will be surveyed for White Heath Aster (Symphotrichum pilosum) and Prarie Cinquefoil (Drymocallus arguta) by a qualified professional. - If one or both species are found they will be relocated by a qualified professional to

Dust Impacts on Breeding Birds and Vegetation

- Ensure all construction personnel are familiar with and implement the 10 point dust control plan on the site plans.

- Ensure all construction personnel are familiar with dust control measure contained in the Trinity Sonsultants Ontario Inc. Air Quality Assessment Report Violet Hill Pit, Town of Mono, ON, Greenwood Aggregates Company Limited, 2016

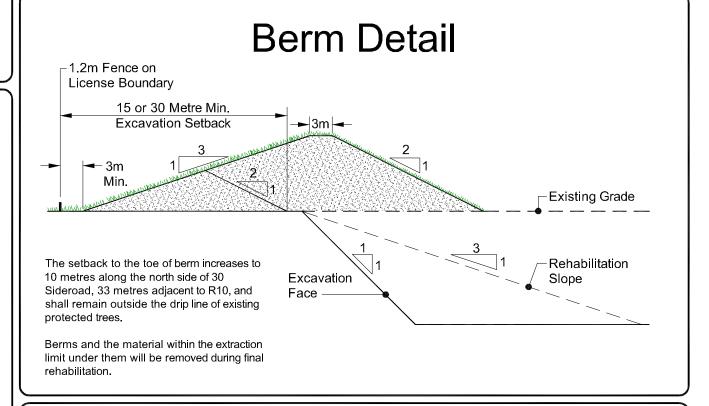
- Ensure all construction personnel are familiar with the dust control measures contained in Trinity Consultants Ontario Inc. Best Management Practices for Fugitive Dust, Greenwood Aggregates Company Limited, Violet Hill Pit, Town of Mono, ON, 2018.



# **VIOLET HILL PIT**

Part Lots 30, 31 & 32, Conc. 4 E.H.S. Town of Mono **Dufferin County** 

Page 5 of 7 BERM PHASING AND DETAILS



# Notes

- Berms to be constructed with onsite material or approved topsoil. Topsoil to 0.10m depth and seed. Refer to General Operational Note 19 on Page 2 of 2, Operations Plan. Material from the 4th Line setback to be used in
- 2. Berm vegetation to be maintained for the duration of the 7.
- 3. Berms to be constructed to heights shown on this
- drawing, and may extend into the excavation area.

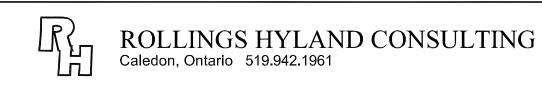
construction of berm along 4th Line.

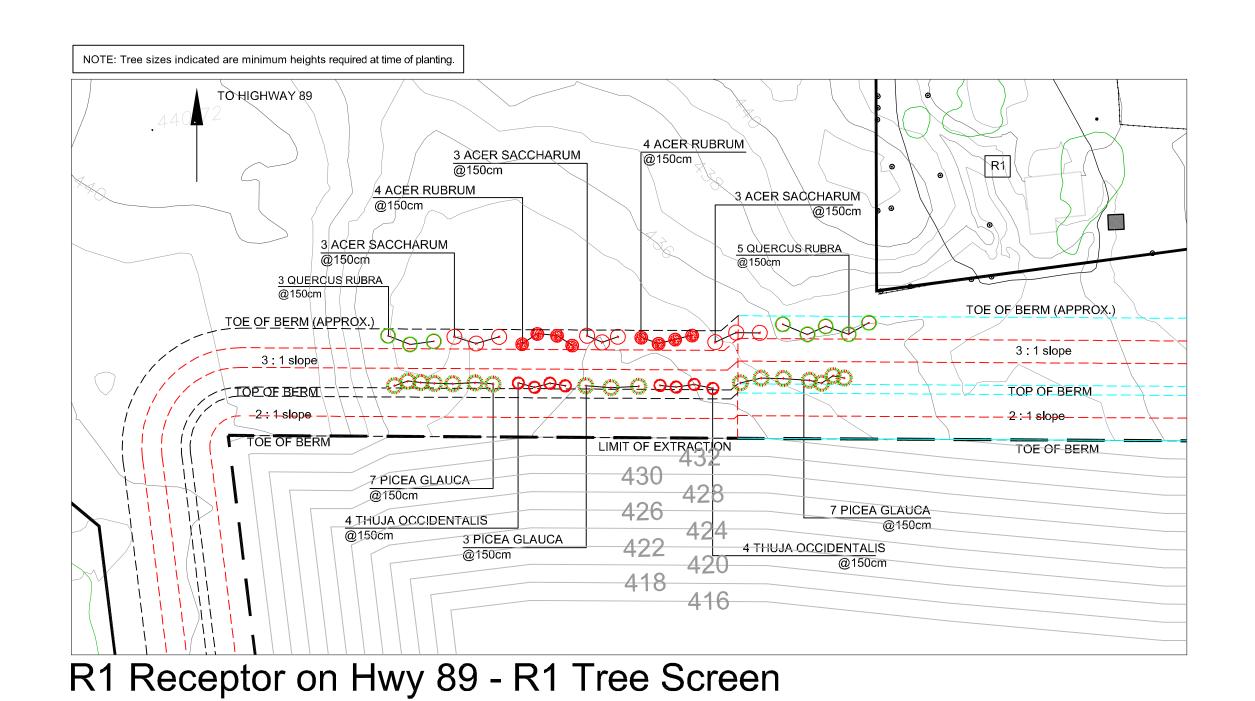
- 4. All berms on the north side of 30 Sideroad shall be no closer than 10 metres from the license limit to provide snow storage.
- 5. 3rd Line buffer planting will be planted prior to commencing work in Area A and will remain after final rehabilitation. If the Third Line Buffer Planting must be disturbed to accommodate berms, it is to be reinstated to its full length as part of rehabilitation.
- Refer to Page 7 Tree Screen Details for planting plans relating to tree screens other than Third Line. Some flexibility in the planting plan may result from consultation with adjacent landowners at the time of

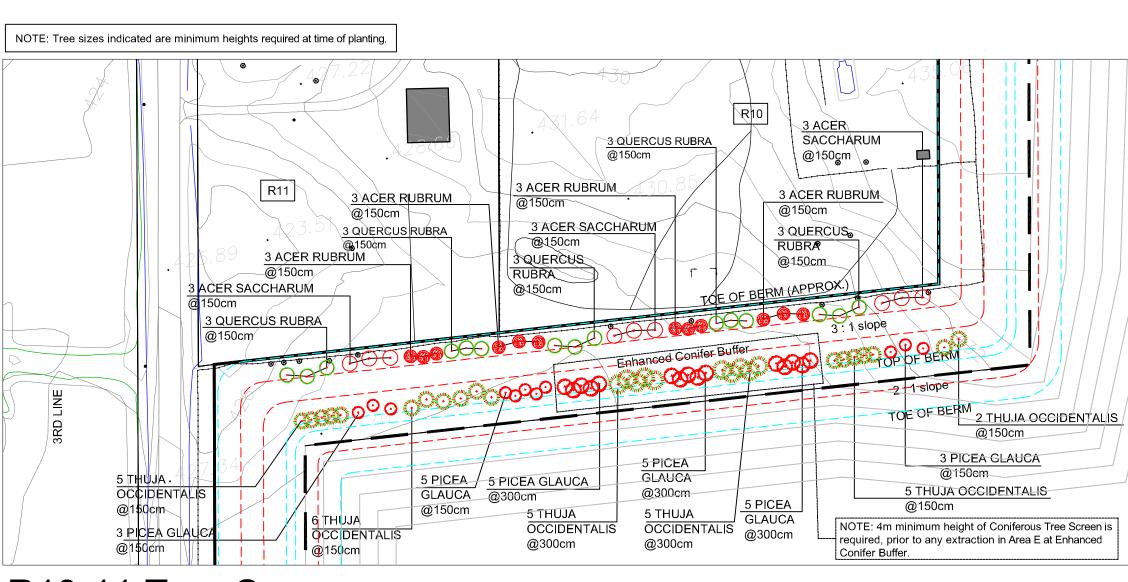
 Where tree screens are located on berms, hardwoods shall be planted at the edge of the berm, and will remain after berms have been removed. During removal of berms, driplines and tree roots to be protected for all

1:10,000 @ 22x34

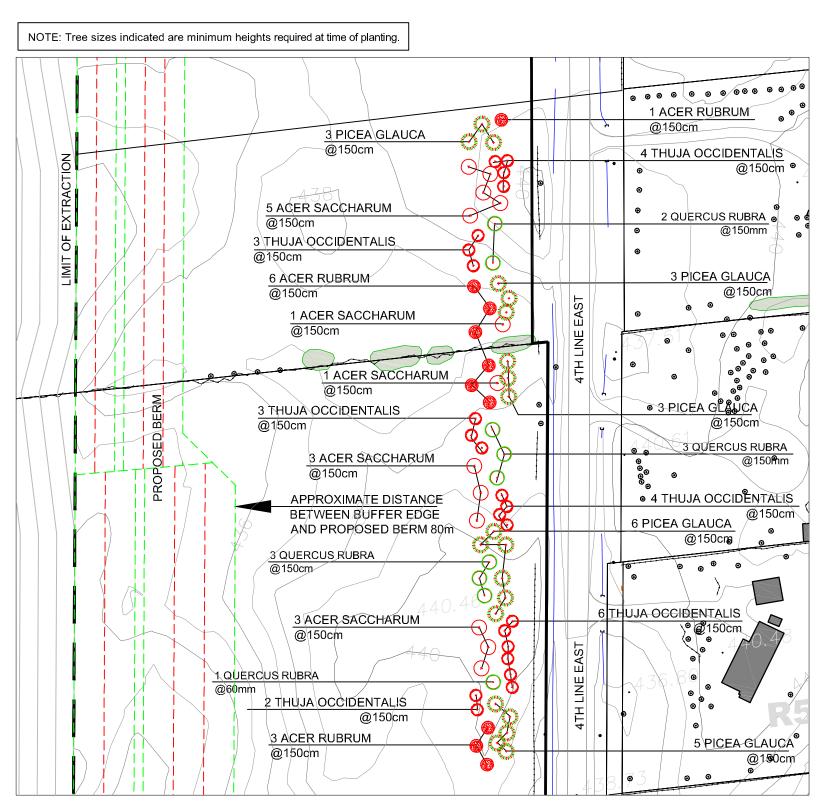
I ACKNOWLEDGE AND SHALL CARRY ON MY RAWN: J.A.R. OPERATION IN ACCORDANCE WITH THE SITE THIS SITE PLAN IS PREPARED UNDER PLAN UPON WHICH MY LICENCE IS BASED. THE AGGREGATE RESOURCES ACT PPROVED: S.G. GREENWOOD AGGREGATES LIMITED FOR A CLASS A LICENCE, CATEGORY 3 FILE August 2020 Site Plans.dwg OTTED: 18 Aug. 2020 AMENDMENT JEFFREY A. ROLLINGS MINISTRY OF NATURAL RESOURCES AND FORESTRY No. DATE **DESCRIPTION** APP'D Amendments **ORIGINAL SCALE** 







R10-11 Tree Screen



4th Line East - R3-5 Tree Screen

Draft 18 August 2020



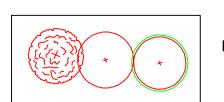
# **VIOLET HILL PIT**

Part Lots 30, 31 & 32, Conc. 4 E.H.S. Town of Mono **Dufferin County** 

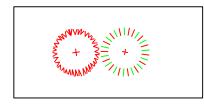
Page 6 of 7

# TREE SCREEN **DETAILS**

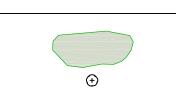
# Legend



**Proposed Deciduous Trees** 



**Proposed Coniferous Trees** 



Existing Vegetation to Remain

# Tree Screen Maintenance Notes:

A tree screen maintenance program will include regular monitoring and watering as required for the first year until the trees are established and thereafter annually in the spring to identify any requirements for fertilization, pest control or watering. Any dead plant material will be replaced yearly in later spring or fall followed by a year of regular monitoring and watering as required.



DRAWN: J.A.R.  APPROVED: S.G.  FILE:Aug 2020 Site Plans.dwg  PLOTTED: 18 Aug. 2020		I ACKNOWLEDGE AND SHALL CARRY ON MY OPERATION IN ACCORDANCE WITH THE SITE PLAN UPON WHICH MY LICENCE IS BASED. GREENWOOD AGGREGATES LIMITED  PER: DATE:	THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENCE, CATEGORY 3  JEFFREY A. ROLLINGS  DATE:					
AMENDMENT NO.		SITE PLANS APPROVED BY:  MINISTRY OF NATURAL RESOURCES AND FORESTRY  DATE:						
No. DATE DESCRIPTION		N	APP'D					
Amendments								



ROLLINGS HYLAND CONSULTING
Orangeville, Ontario 519.942.1961

## Complaints Procedures

Greenwood Construction Company Limited, Greenwood Ready Mix Limited and Greenwood Aggregates Company Limited will hereinafter be referred to as "Greenwood".

- The following procedure applies to complaints directly related
- to services and processes of Greenwood. Complaints are reviewed on receipt and complainants are advised if alternate complaint procedures apply.

### 2. Guiding Principles

- It is in the interest of all parties that complaints are dealt with promptly and resolved as quickly as possible.
- Staff shall treat complaints as confidential and protect complainant's privacy
- Review of complaints is fair, impartial and respectful of parties
- involved.
- Complainants are advised of their options to escalate their complaint if they are dissatisfied with treatment or outcome.
- Complainants are provided clear and understandable reasons
- for how decisions on the complaint were made. Updates are provided to complainants during review
- Complainants are used to assist in improving services, policies

## and procedures. 3. Types of Complaints

Definition: A complaint is an expression of dissatisfaction about the service, actions, or lack of action by a Greenwood business unit or staff. Complaints may relate to the actions of an individual or to a

- Greenwood policy, process or procedure. Examples include but are not limited to:
- A percieved failure to do something agreed to do;
- A failure to observe policy or procedures;
- An error made by staff, or Unfair or discourteous actions/statements by staff:
- Anyone personally affected can submit a complaint and it will be reviewed in accordance with this procedure.

### 4. How a Complaint is Made

- A complaint may be received verbally (in person or telephone) or in writing (received be hand delivery, mail, fax
- A complaint may be received by an individual acting on another person's behalf.

## 5. Complaint Review and Escalation Process

# The Greenwood complaint procedure uses a 3 stage escalation

- If Greenwood's staff person is uncertain about how to interpret or handle an issue raised by a complainant, they chould request the assistance of available management staff.
- Complaints may be accelerated through the escalation process depending on the nature of the issue and judgement
- Upon any escalation, staff informs the complainant of the manager's name and contact information.

### First Stage - Informal Review

- Effort will be made to solve verbal complaints immediately to the satisfaction of the complainant without need for a formal written complaint.
- When receiving a verbal complaint directly, staff will listen. and understand the complaint, and may attempt to resolve it.
- Frontline staff automatically and immediately refer the verbal complaint to the manager on duty when:
- The complainant requests the complaint be referred to a manager;
- The verbal complaint is about conduct of a staff person. and/or significant disciplinary action is a possible outcome,
- The complainant is unusually upset, extremely angry or
- The verbal complaint cannot be resolved by the frontline staff because it is outside their specific delegation or area of
- expertise, or
- It is of a serious nature such as alleged controversial conduct, illegal conduct, or there is a threat of legal action.
- All written complaints are referred to the appropriate manager.

### Second Stage - Management Review All written compaints begin at the second stage.

- All complaints about conduct of frontline staff begin at the
- second stage. The manager acknowledges receipt with the complainant in a
- timely manner. • The manager reviews the complaint, and may attempt to
- resolve the complaint immediately. If required, the manager conducts a formal review of the
- complaint to determine its validity and explore a resolution (See Formal Review Process below). Management staff may request a verbal complainant to put
- the complaint in writing, especially if it involved a serious or complex matter. If the complainant declines to complete the form, the manager should record details as described by the complainant.
- For all verbal and written complaints requiring formal review, the manager indicates to the complainant when they will contact them with a resolution or update.

# Third Stage - Owner Review

# Where the complainant is dissatisfied with the decision of the

manager, the manager refers the complaint to the owner. The owner may attempt to resolve the complaint immediately or may conduct a formal review (See Formal Review Process

# 6. Formal Review Process

- A formal review process may be conducted during the
- second and third stages. The formal review may include: Discussions sith the complainant to clarify the complaint, confirm common understanding, clarify outcome sought,
- Discussion with staff involved. Review of background information such as policies and

or explain complaint procedures

- procedures, previous written communications and other documentation Obtain and review other expert opinions or perspectives
- At each stage of escalation, it should be determined whether the formal review to-date has been adequate.

# Notice of decision and Resolution

- Written complaints receive a written notice of decision unless
- otherwise requested by a complainant. Verbal complaints receive written or verbal notice at
- manager's discretion or as requested by the complainant If formal review determines that the complaint is justified, the complainant is notified of corrective action to be taken and any remedy proposed.

## 8. Unresolved Complaints

If complainant remains unsatisfied at the end of this procedure, the complainant is advised as to further steps they may pursue outside of Greenwood.

Signage at the pit entrance will warn truck drivers of school buses, to drive safely, prohibit use of engine brakes, and to not turn southbound on 3rd Line or east/west on 30th Sideroad except for local deliveries. Signage will also include the Company name and

contact information, and require no queuing on 3rd Line.

## Measures to Control or Minimize Fugitive Dust

### Paved Roads and Entrance Ways

The internal haul route extending from the public road to the scales on the site will be paved and recycled asphalt will be laid on the remainder of the internal route. The following measures shall be used to control and minimize fugitive dust from the internal paved

- The Pit will have one (1) point of entry/exit, which will be paved and well maintained during operations. The entry/exit
- point is extending 500 m east of 3rd Line E. The Pit shall have the capability to spray water or other approved dust suppressants as deemed necessary by the
- Site Foreman on paved surfaces on-site, as well as roads near the site entrance as needed. • The actual application rate shall vary, depending on surface
- moisture conditions and traffic levels, and shall be triggered whenever the scale operator or Site Foreman observes trailers producing a trailing cloud of dust greater than 1/3 of a trailer length.
- Haul routes shall be maintained during Pit operations, to ensure that loose fine material on the haul route surface is
- To prevent spillage and air entrainment during transport of
- aggregates, the aggregate loads shall be covered during transport on the internal unpaved roads.
- Any spillage or material deposited on the paved roads shall be removed promptly. Regular sweeping of the paved roads will be conducted as required, at the discretion of the Site Foreman, to ensure that
- Trucks and other mobile equipment shall reduce speed as necessarily to reduce trailing dust clouds. The maximum speed will be 35 km/hr.

visible loose fine material of the haul road surface is

The internal haul routes at the Site beyond the paved route are unpaved. The following measures shall be used to control and minimize fugitive dust from the internal unpaved roads:

- A truck or trailer-mounted tank will be located on site at all times and shall be equipped with a spray bar to deliver water evenly over the haul route surface.
- At the discretion of the Site Foreman, an alternative MOECP/US-EPA approved dust suppressant may be used should water prove insufficient to control dust emissions. Environmentally hazardous compounds such as waste oil shall not be used as a dust suppressant.
- Dust suppressant supply (water or alternative) shall be available to allow the tanker truck to fill and apply the full payload each hour, if necessary, during dry conditions.
- The actual application rate shall vary, depending on surface moisture conditions and traffic conditions, and shall be triggered whenever the Site Foreman or scale operator observes trucks producing a trailing cloud of dust greater
- than 1/3 of a trailer length. Haul routes shall be maintained (i.e. re-graded)
- approximately monthly during May to October, to ensure that loose fine material on the haul route surface is minimized. Trucks and other mobile equipment shall reduce speed as
- necessary to reduce trailing dust clouds. The maximum speed will be 35 km/hr.
- the established haul roads that have been maintained. Limiting the trucks away from unmaintained areas of the site is intended to minimize disturbance of unmaintained areas.
- To prevent spillage and air entrainment during transport of aggregates, the trucks carrying aggregate loads shall be
- Disturbed areas of unpaved roads shall be stabilized to the extent possible with rollers or other similar equipment.

# Wind Erosion of Exposed Stockpiles

- the active extraction face is dry and dusty and the wind is directed toward a residence at a speed sufficient to cause
- Water shall be applied to stockpile material that are dry and dusty when the wind is directed toward a residence at a
- speed sufficient to cause widespread visible emissions. Stockpiles shall be maintained to avoid steep sides or faces.
- Disturbance of storage piles shall be minimized where feasible. For active stockpiles, the disturbed area shall be minimized to the extent possible.

# Aggregate Crushing, Screening & Washing Plants

- plants shall be equipped with a water spray system. The actual water application rate shall vary, being adjusted as
- or scale operator observes visible dust emissions.
- Where possible, the height of lifts and discharge distances to
- Conveyor drop heights shall be minimized to the extent
- possible to reduce spillage and provide windbreak. Conveyor belts shall be cleaned periodically to remove

# Truck Loading and Transportation

operator observes the material to be dry and dusty and the wind is sufficient to cause wide-spread visible emissions with plumes directed towards the residences.

The highest point of the material loaded into a truck shall not exceed the vehicles tray walls unless it is covered.

# Wind Erosion of Exposed Faces

visible erosion of the open face with plumes directed off-site.

Aggregate stockpiles will be located on the Pit floor in close

Wind forecasts shall be monitored regularly for heavy winds during this phase of the operation to anticipate the need for these measures and allow for next day planning.

### Measures to Control or Minimize Fugitive Dust, continued

### IMPLEMENTATION

commencing in the Pit. Control measures shall remain in place so long as the Pit remains in operation.

### Implementation Plan

(BMPP) shall be implemented, including training of facility

- The BMPP shall be kept on file at the scale house;
- Training on new and existing operating procedures shall be provided to relevant staff
- Refresher training shall be provided at a minimum of once
- The Pit management shall communicate the BMPP to responsible supervisors, who shall ensure staff are following
- operating procedures defined in the BMPP;
- Management shall ensure BMPP is reviewed annually; and

### **INSPECTION AND MAINTENANCE**

### Maintenance

The following outlines the details regarding the inspection and maintenance procedures that shall be employed at the site:

- inspected when in use:
- the truck traffic. Prior to the operation of the processing plants, the water spray systems should be inspected, and pond water levels shall inspected to ensure adequate water supply;

## Identification of Problems

The Site Operator shall be informed of any issues that arise from inspections performed. Operations may be curtailed if dust control equipment is not adequately performing.

## MONITORING AND RECORD KEEPING

Visual inspection for dusty conditions in areas of emission sources identified in the BMPP shall occur at a minimum of twice daily during dry weather and once per day otherwise. Records shall be

- Unpaved haul routes are maintained;
- Water sprays are used at the processing plant;
- Heavy dust plumes are observed; and. The internal roads shall be clearly delineated to limit traffic to A complaint is received.
- covered during transport on the paved and unpaved roads.

- Extraction shall be reduced or suspended if the condition of
- widespread visible erosion of the open face.

- Where the Site Foreman deems necessary, the processing
- needed to reduce visible dust emission.
- Water for the spray system will be provided from the sump or settling pond. The spray-bars will be triggered whenever the Site Foreman
- the top of the stockpile will be kept to a minimum.

# entrained material.

Truck loading will be suspended if the Site Foreman or scale

Extraction shall be suspended if the condition of the extraction face is dry and dusty and the wind is sufficient to cause wide-spread

proximity to the extraction face or in the stockpile area.

All control measures are to be in place prior to extraction

The following outlines how the Best Management Practices Plan

- every 2 years;
- The Site Foreman shall be responsible for ensuring the
- The staff shall follow the BMPP procedures.

- The water spray system for the processing plant will be
- Haul routes shall be inspected daily, or more regularly as dictated by wind conditions and truck traffic. The haul routes shall be maintained on a regular basis, as previously indicated, based on the inspection, the wind conditions and

made each time the following events occur:

- Dust suppressant is applied to paved and unpaved haul
- Wet or vacuum-sweeper arrives and cleans paved surfaces;

All records will be kept onsite in a logbook. In the event of a dust complaint, the complaint will be directed to

### The Pit will enact an action plan concerning its operations in response to a complaint, as detailed in the following section.

**RESPONSE TO COMPLAINTS** Complainants are requested to identify the location of the incident as well as the time of day that it was detected and any other relevant information. All dust complaints shall be forwarded to the

the Site Supervisor, who will follow the protocols outlined in the

Greenwood Complaints Procedures document, which is kept on-

### Site Foreman and recorded in the logbook as identified in the previous section.

that the complaint was made), and

- The Site Foreman shall ensure the following actions:
- Conduct a site survey to identify sources of visible dust contributing to the complaint: · Create a record of this survey Determine weather conditions (both current and at the time)

• Report on all on-site activities at the time the complaint was If the information collected from the survey procedures indicates that Pit is not the source of the dust complaint, the complainant shall be notified of this finding. Documentation supporting this response mechanism (site survey record and wind station readings at the time of the complaint) shall be provided to the complainant

complainant. If it is determined that the complaint is related to Pit activities, the following response procedures shall be followed, in the order

The Site Foreman shall ensure that all elements of the BMPP are

upon request. The Site Foreman or other Pit staff shall respond to

all complaints within 24 hours with a phone call to the

provided below:

Level 2 - Review of the BMPP

### being followed. Control measures such as spraying or watering shall be increased or operations may be curtailed, as required.

Level 1 - Inspection and Correction of Operations

the dust complaint, the BMPP shall be reviewed for additional control measures. Level 3 - Operational Modifications If the Level 2 response does not adequately resolve the source of

the dust complaint, the Pit shall commit to making physical changes

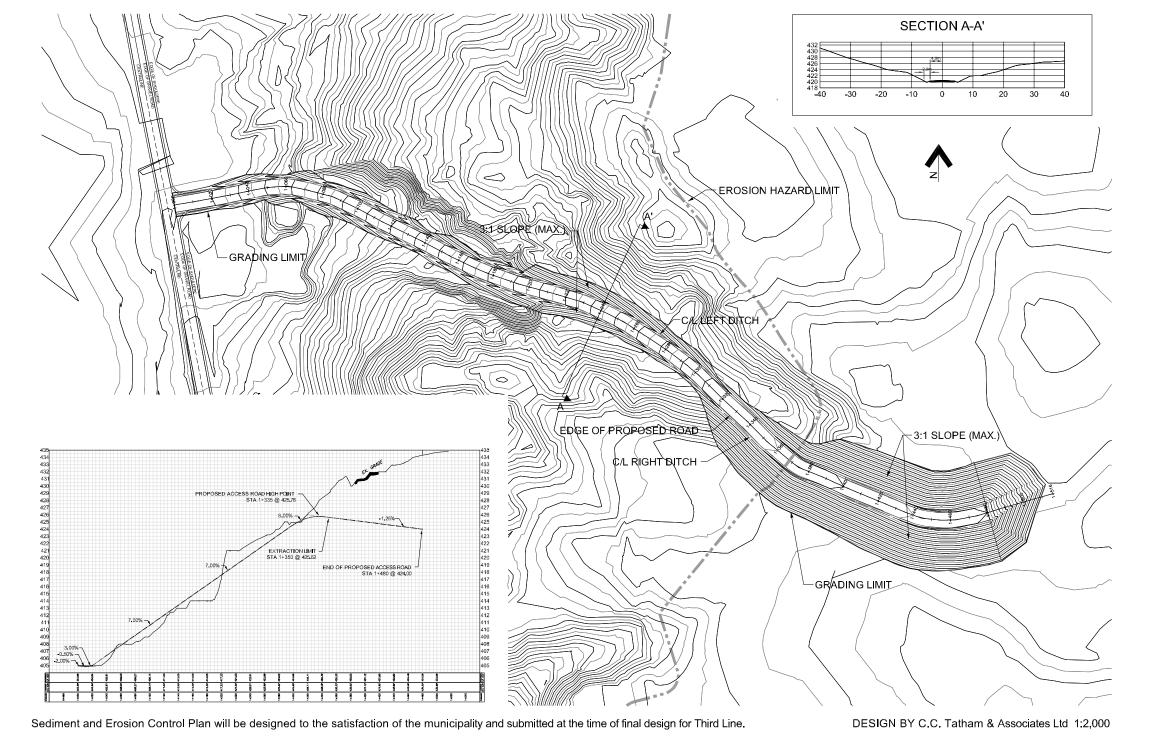
to the facility to address the source of the dust emissions. Such

changes may include, but are not limited to additional enclosures,

If the Level 1 response does not adequately resolve the source of

relocation of equipment, or additional paving. All appropriate approvals under provincial requirements shall be

# Access Road Plan





# **VIOLET HILL PIT**

Part Lots 30, 31 & 32, Conc. 4 E.H.S. Town of Mono **Dufferin County** 

Page 7 of 7 **NOTES** 

18 August, 2020

I ACKNOWLEDGE AND SHALL CARRY ON MY DRAWN: JAR OPERATION IN ACCORDANCE WITH THE SITE THIS SITE PLAN IS PREPARED UNDER PLAN UPON WHICH MY LICENCE IS BASED. THE AGGREGATE RESOURCES ACT PPROVED: S.G. GREENWOOD AGGREGATES LIMITED FOR A CLASS A LICENCE, CATEGORY 3 FILE August 2020 Site Plans dwg LOTTED: 18 Aug. 2020 SITE PLANS APPROVED BY: AMENDMENT JEFFREY A. ROLLINGS MINISTRY OF NATURAL RESOURCES AND FORESTRY **DESCRIPTION** No. DATE APP'D Amendments

NO.

ROLLINGS HYLAND CONSULTING Caledon, Ontario 519.942.1961