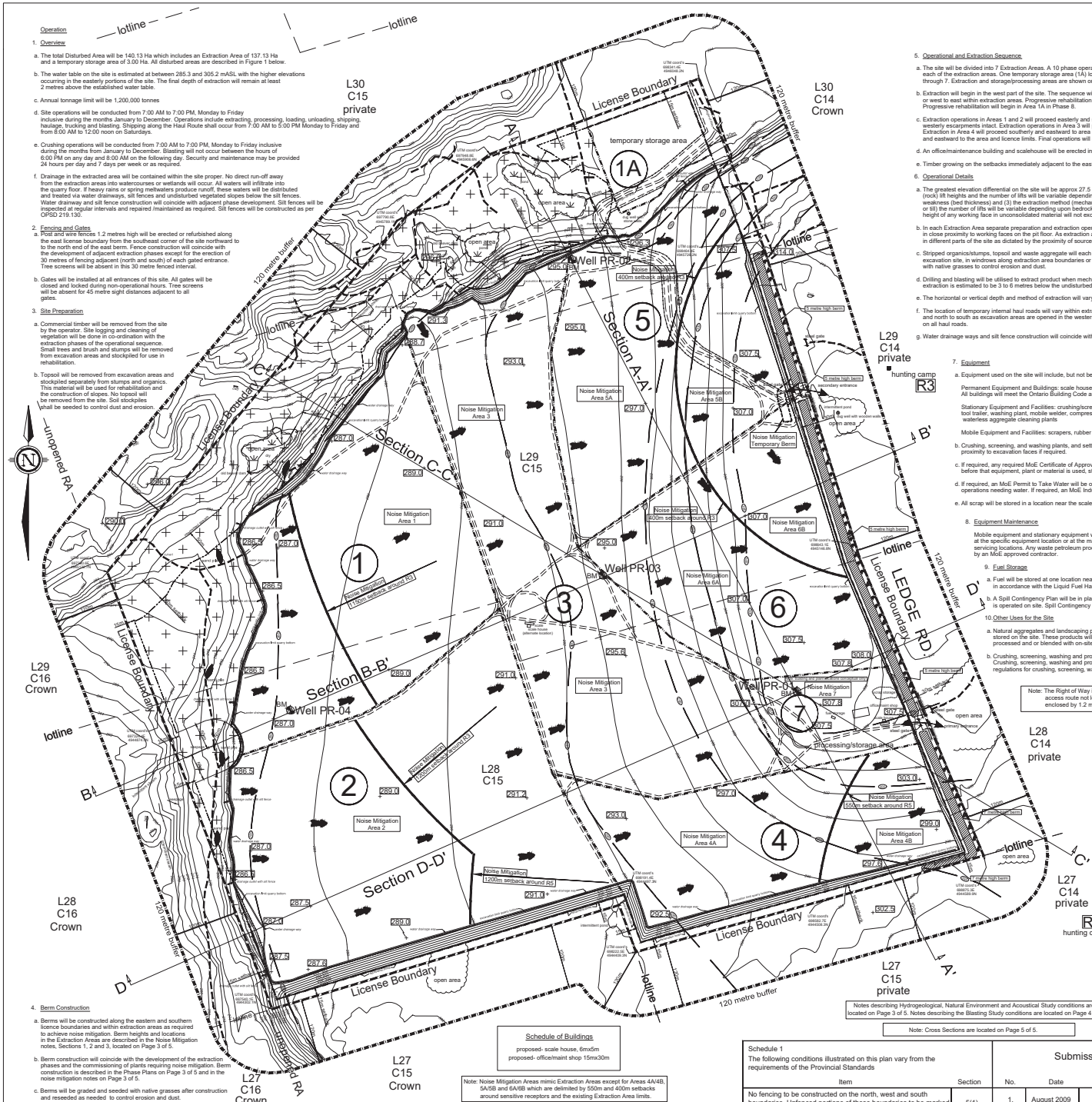

Operation

1. Overview

a. The total Disturbed Area will be 140.13 Ha which includes an Extraction Area of 137.13 Ha and a temporary storage area of 3.00 Ha. All disturbed areas are described in Figure 1 below.

b. The water table on the site is estimated at between 285.3 and 305.2 mASL with the higher elevations occurring in the easterly portions of the site. The final depth of extraction will remain at least 2 metres above the established water table.

c. Annual tonnage limit will be 1,200,000 tonnes

d. Site operations will be conducted from 7:00 AM to 7:00 PM, Monday to Friday inclusive during the months January to December. Operations include extracting, processing, loading, unloading, shipping, haulage, trucking and blasting. Shipping along the Haul Route shall occur from 7:00 AM to 5:00 PM Monday to Friday and from 8:00 AM to 12:00 noon on Saturdays.

e. Crushing operations will be conducted from 7:00 AM to 7:00 PM, Monday to Friday inclusive during the months from January to December. Blasting will not occur between the hours of 6:00 PM on any day and 8:00 AM on the following day. Security and maintenance may be provided 24 hours per day and 7 days per week or as required.

f. Drainage in the extracted area will be contained within the site proper. No direct run-off away from the extraction areas into watercourses or wetlands will occur. All waters will infiltrate into the quarry floor. If heavy rains or spring meltwaters produce runoff, these waters will be distributed and treated via water drainways, silt fences and undisturbed vegetated slopes below the silt fences. Water drainway and silt fence construction will coincide with adjacent phase development. Silt fences will be inspected at regular intervals and repaired /maintained as required. Silt fences will be constructed as per OPSD 219.130.

2. Fencing and Gates

a. Post and wire fences 1.2 metres high will be erected or refurbished along the east license boundary from the southeast corner of the site northward to to the north end of the east berm. Fence construction will coincide with the development of adjacent extraction phases except for the erection of 30 metres of fencing adjacent (north and south) of each gated entrance. Tree screens will be absent in this 30 metre fenced interval.

b. Gates will be installed at all entrances of this site. All gates will be closed and locked during non-operational hours. Tree screens will be absent for 45 metre sight distances adjacent to all gates.

3. Site Preparation

a. Commercial timber will be removed from the site by the operator. Site logging and cleaning of vegetation will be done in co-ordination with the extraction phases of the operational sequence. Small trees and brush and stumps will be removed from excavation areas and stockpiled for use in rehabilitation.

b. Topsoil will be removed from excavation areas and stockpiled separately from stumps and organics. This material will be used for rehabilitation and the construction of slopes. No topsoil will be removed from the site. Soil stockpiles shall be seeded to control dust and erosion.

4. Berm Construction

a. Berms will be constructed along the eastern and southern licence boundaries and within extraction areas as required to achieve noise mitigation. Berm heights and locations in the Extraction Areas are described in the Noise Mitigation notes, Sections 1, 2 and 3, located on Page 3 of 5.

b. Berm construction will coincide with the development of the extraction phases and the commissioning of plants requiring noise mitigation. Berm construction is described in the Phase Plans on Page 3 of 5 and in the noise mitigation notes on Page 3 of 5.

c. Berms will be graded and seeded with native grasses after construction and reseeded as needed to control erosion and dust.

5. Operational and Extraction Sequence

a. The site will be divided into 7 Extraction Areas. A 10 phase operational sequence will extract the resource and progressively rehabilitate each of the extraction areas. One temporary storage area (1A) located north of the extraction areas will remain open during Phases 1 through 7. Extraction and storage/processing areas are shown on Page 2 and the operational phases are shown on Page 3.

b. Extraction will begin in the west part of the site. The sequence will progress generally eastward with extraction occurring from north to south or west to east within extraction areas. Progressive rehabilitation will begin in Area 1 and follow the extractive sequence through to Phase 10. Progressive rehabilitation will begin in Area 1A in Phase 8.

c. Extraction operations in Areas 1 and 2 will proceed easterly and southerly to the area boundaries leaving portions of the northern and westerly escarpments intact. Extraction operations in Area 3 will proceed southward and eastward to extraction area boundaries. Extraction in Area 4 will proceed southward and eastward to area and license boundaries. Operations in Areas 5 and 6 will proceed southward and eastward to the area and licence limits. Final operations will occur in Area 7.

d. An office/maintenance building and scalehouse will be erected in Area 7. Scrap storage and mobile fuelling equipment will be located nearby.

e. Timber growing on the setbacks immediately adjacent to the eastern and southern licence boundaries will be left as permanent tree screens.

6. Operational Details

a. The greatest elevation differential on the site will be approx 27.5 metres, to a quarry floor elevation of 286.5 mASL. In consolidated material (rock) lift heights and the number of lifts will be variable depending upon: (1) rock characteristics, (2) the thickness of pre-existing planes of weakness (bed thickness) and (3) the extraction method (mechanical pulling or blasting). In unconsolidated material (earth, clay, sand, gravel or till) the number of lifts will be variable depending upon bedrock topography and the character of the material. The vertical height of any working face in unconsolidated material will not exceed 1.5 metres above the reach of the extraction equipment.

b. In each Extraction Area separate preparation and extraction operations will occur. Initially stockpiles of product will be located in close proximity to working faces on the pit floor. As extraction areas are developed, product stockpiles will be generated in different parts of the site as dictated by the proximity of source material.

c. Stripped organics/stumps, topsoil and waste aggregate will each be stockpiled separately from the product either in close proximity to the excavation site, in windrows along extraction area boundaries or in other site storage areas. Topsoil and organic stockpiles shall be seeded with native grasses to control erosion and dust.

d. Drilling and blasting will be utilised to extract product when mechanical pulling becomes ineffective. The maximum depth for mechanical extraction is estimated to be 3 to 6 metres below the undisturbed bedrock surface but may vary depending upon local rock characteristics.

e. The horizontal or vertical depth and method of extraction will vary where the character or quality of product does not meet market requirements.

f. The location of temporary internal haul roads will vary within extraction areas. Internal haulage of product will occur from west to east and north to south as excavation areas are opened in the western portion of the site. Dust control measures will be employed as needed on all haul roads.

g. Water drainage ways and silt fence construction will coincide with the development of extraction areas.

7. Equipment

a. Equipment used on the site will include, but not be limited to:

Permanent Equipment and Buildings: scale house (6mx5m), office/maintenance shop (15mx30m). All buildings will meet the Ontario Building Code and be approved by the Township.

Stationary Equipment and Facilities: crushing/screening plant, stacker, conveyors, electrical plant, feed bins, tool trailer, washing plant, mobile welder, compressor, temporary settling ponds, water spray equipment, waterless aggregate cleaning plants

Mobile Equipment and Facilities: scrapers, rubber and steel tracked excavators and dozers, loaders, trucks, rock drills, scales

b. Crushing, screening, and washing plants, and settling ponds may be portable and may move throughout the site in close proximity to excavation faces if required.

c. If required, any required MoE Certificate of Approval will be obtained for processing equipment, plants or material before that equipment, plant or material is used, stored or processed on the site.

d. If required, an MoE Permit to Take Water will be obtained for utilising surface or underground waters for any processing operations needing water. If required, an MoE Industrial Sewage Works Permit will be obtained for water management.

e. All scrap will be stored in a location near the scale house and removed on a regular basis.

8. Equipment Maintenance

Mobile equipment and stationary equipment will be serviced on site. Equipment will be serviced at the specific equipment location or at the maintenance shop. Spill kits will be employed at all servicing locations. Any waste petroleum products will be collected and removed from the site by an MoE approved contractor.

9. Fuel Storage

a. Fuel will be stored at one location near the scale house in Area 7. A mobile refuelling tank used in accordance with the Liquid Fuel Handling Code will be used for refuelling equipment.

b. A Spill Contingency Plan will be in place and posted at the site before any equipment is operated on site. Spill Contingency Plan notes are located on Page 4.

10. Other Uses for the Site

a. Natural aggregates and landscaping products from off site may be imported and temporarily stored on the site. These products will be stockpiled in current extraction or storage areas and may be processed and or blended with on-site materials and resold from this site.

b. Crushing, screening, washing and processing within the license area will occur on an ongoing basis, as required. Crushing, screening, washing and processing will be carried out following all safety and environmental regulations for crushing, screening, washing or processing.

Note: The Right of Way indicated on this plan may be removed and replaced by an alternate access route not located within the quarry limits. While in place, the ROW will be enclosed by 1.2 metre high post and wire fencing as shown on the plan.

Undeveloped Area (approx 27 Ha)
lands within this area will remain undeveloped except for silt fences and rip-rap lined drainage ditches

Figure 1- Summary of Extraction Areas

Area 1: 22.48 Ha (extraction)
Area 2: 30.88 Ha (extraction)
Area 3: 27.24 Ha (extraction)
Area 4: 15.88 Ha (extraction)
Area 5: 19.70 Ha (extraction)
Area 6: 16.56 Ha (extraction)
Area 7: 4.39 Ha (extraction/processing)
Total Extraction Area = 137.13 Ha
Area 1A: 3.00 Ha (temporary storage)
Total Disturbed Area = 140.13 Ha
Total License Area = 175.32 Ha

Notes describing Hydrogeological, Natural Environment and Acoustical Study conditions are located on Page 3 of 5. Notes describing the Blasting Study conditions are located on Page 4 of 5.

Note: Cross Sections are located on Page 5 of 5.

Schedule of Buildings
proposed- scale house, 6mx5m
proposed- office/maint shop 15mx30m

Note: Noise Mitigation Areas mimic Extraction Areas except for Areas 4A/4B, 5A/5B and 6A/6B which are delimited by 550m and 400m setbacks around sensitive receptors and the existing Extraction Area limits.

I acknowledge and shall carry on the operation of this site in accordance with the site plan upon which my license is based.

Paul Ritchie — Date

Site Plans Approved By:

Ministry of Natural Resources — Date

Schedule 1
The following conditions illustrated on this plan vary from the requirements of the Provincial Standards

Item	Section
No fencing to be constructed on the north, west and south boundaries. Unfenced portions of these boundaries to be marked with flagging and signs except within wetlands.	5(1)

Submissions/Site Plan Amendments

No.	Date	Submission/Amendment	Approved by
1.	August 2009	First Site Plan Submission	
2.	November 2011	Second Site Plan Submission	
3.	Feb 25 2013	Peer Review Amendments	
4.	Aug 19 2014	Revisions as shown at OMB hearing	

Dewdney Mountain Farms Quarry

Legend

- License Boundary
- Lot Lines
- Setbacks
- 120 m perimeter line
- Fences- Newly Erected
- Berms
- Tree Screens
- All Weather Roads
- Main Haul Roads
- Logging roads, trails
- Entrance/Exit
- Gate
- Contour Lines (mASL)
- Contour Lines (mASL) Quarry Floor and Walls
- 291.2 Final Extraction Elevation (mASL)
- BM Bench Marks
- Natural Bushlines
- Wetlands, partly treed
- Streams
- PR-01 Monitoring Wells
- Other Wells
- R5 Buildings/ Sensitive Receptor ID
- 1 Extraction Area
- Extraction Area Limit
- Direction of Extraction
- Inferred Water Table Contour (masl) (Sept 2010)

Part Lot 28, 29 & 30, Con 15
Geographic Township of Harvey
in the
Municipality of Trent Lakes
(Formerly the Township of Galway-Cavendish and Harvey)
County of Peterborough

0 50 100 150 200
Metres

0 100 200 300 400 500
Feet

Scale 1:2500

NAD 83 T17

contour interval 2 metres

Operations Plan
Page 2 of 5

Quarry Licensed To:
Dewdney Mountain Farms Ltd.
543 Ledge Road
Trent Lakes, Ontario, K0M 1A0

List of Buildings/Hunting Camps:
R3- Doug Lynn (owner)
R5- Wayne Banwell (owner)

revised May 1, 2020

Lakeview Engineering Inc.
459 Fire Route 42
North Kawartha, ON, K0L 2H0
705-772-7910
lakeviewpeng@gmail.com