Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Planners

December 11, 2012

Planning Board
Town of Barrington
333 Calef Highway
Barrington NH 03825

Re: Excavation Site Plan
Map 210 Lot 57
Green Hill Road, Barrington, NH

Dear Members of the Town of Barrington Planning Board:

I am writing to you on behalf of Trinity Conservation LLC in response to concerns raised by the board during the hearing on December 4. The purpose of this letter is to address those concerns as well as provide details on the proposed operations.

Limits of excavation

The proposed excavation operation will be phased in ten (10) acre increments. The overall excavation area is 60 acres. The average depth of excavation is 20 +/-feet.

The limits of phase 1 are:
1,500 feet from Green Hill Road;
250 feet from the Isinglass River,
3,500 feet from Jessica Drive
1,000 feet from the rear of the Stillwater Circle properties.

The limits of phase 2 are:
1,800 feet from Green Hill Road;
250 feet from the Isinglass River,
2,800 feet from Jessica Drive
490 feet from the rear of the Stillwater Circle properties.

The limits of the ultimate site are:
1,500 feet from Green Hill Road;
250 feet from the Isinglass River,
1,300 feet from Jessica Drive
200 feet from the rear of the Stillwater Circle properties.

48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com

Type of operation

The operation will consist of common excavation, blasting and crushing activities. Normal hours of operation are expected to be from 7 AM to 6 PM Monday through Friday, plus possible Saturdays if demand warrants. Blasting will be limited to one day every two weeks. Based on boring information the applicant expects blasting to be limited to the western portions of the property. The expected blasting limits are approximately 1,700 feet from Green Hill Road, 1,200 feet from the Isinglass River 2,300 feet from Jessica Drive and 650 feet from the rear of the Stillwater Circle properties. Blasting will not be performed when there are overcast conditions. The operations will not require water use.

As a provision of the state permit requirements, the excavator will be required to follow Best Management Practices (BMPs) to ensure standards for reclamation and blasting are adhered to. Specifications for blasting and reclamation BMPs are included within the design plans.

Both phases one and two will last at least two (2) years. The total duration of the project is expected to last a minimum of twelve years.

The operator will be required to attend regular compliance hearings with the Barrington Planning Board to ensure conformance to the approved plan and permit conditions.

State and Federal Permits

Because the disturbed area exceeds 100,000 square feet, an Alteration of Terrain Permit from NHDES is required for the project. This process ensures proper BMPs are specified and that storm water is treated to state standards. The operator is required to renew the permit every five years.

As required by Federal law, the operator will be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and submit a Notice of Intent to the US EPA. This practice ensures wetlands and surface waters are not adversely affected by the construction.

Buffers

RSA 155E requires the applicant provide a 50 foot buffer zone from abutting properties and the Isinglass River. A generous 75 foot vegetative buffer will be provided along the northerly property line of parcel 210-57. Additionally, the applicant owns a strip of land, ranging up to 70 +/-feet to wide, between the site and the Stillwater Circle development which will be utilized to provide an additional buffer zone to the excavation site.

A 250 foot buffer of dense woodlands will be preserved adjacent to the Isinglass River. TFM has provided the Isinglass River Local Advisory Committee with a copy of our NHDES permit application package and will be meeting with the committee to review the project.

Parcel 210-44, a 104 +/- acre wooded parcel, abuts the proposed site along the entire western and southern edges. The applicant is proposing a 50 foot vegetated buffer to parcel 210-44. These measures will result in an extensive woodland buffer from abutting properties along Green Hill Road, Hansonville Road, and Jessica Drive.

Wildlife Habitat

TFM has consulted with NH Fish & Game Bureau (NHFG) to ensure the project will not adversely affect state or federal threatened or endangered specifies. Additionally, TFM has consulted with NH Natural Heritage Bureau to ensure the project will not adversely affect rare or exemplary natural communities. As such, we are aware that gravel pits provide excellent nesting habitat for certain species of turtles. For these reasons, we have designed an area to promote this habitat.

Aquifer Recharge

TFM understands that the site is located within the Aquifer Protection Overlay District. As such, borings have been taken to ensure the floor of the excavation is a minimum of four feet above the water table. This design will provide excellent treatment of stormwater runoff in compliance with local and state regulations. Furthermore, we have designed the site to completely recharge the total rainfall from a 100 year storm, consistent with the spirit of the ordinance.

Flooding

All of the excavation will occur outside of the limits of the floodplain of the Isinglass River. A natural berm exists between the site and the river; maintaining the gravel operation outside / above the flood plain.

Green Hill Road bridge over Isinglass River

NHDOT has issued a memorandum indicating Green Hill Road Bridge over the Isinglass River has the capacity to support truck traffic from the development. The applicant is proposing to install yield signage at the bridge to enhance the traffic safety. The applicant agrees to provide flagmen on a temporary basis if necessary during peak hours.

Traffic

The applicant expects ten (10) trucks hauling material from the site on an average day. It is further expected that a maximum of 30 trucks can haul materials on the busiest day. The truck loading will take approximately 30 minutes. The applicant expects a combination of standard triaxle dump and tractor trailer dump trucks to utilize the site. As such, we have specified a maximum capacity of 25 cubic yards per haul leaving the site.

We have assumed that the trips will be split between those from the east (to Route 125) and those to the west (to Route 202). We have further assumed that none of the trips will be routed to Hansonville Road. For this analysis we have distributed the trips as 75% to NH Route 125 and 25% to US Route 202.

In Summary:

Peak AM hour= 6 trips:	4 trips via NH Route 125
	2 trips via US Route 202
Maximum Daily= 60 trips:	45 trips via NH Route 125
	15 trips via US Route 202

Based on NHDOT data, Green Hill Road experiences approximately 2000 trips per day. As such, the maximum daily trip generation from the site represents a three (3) percent increase in the current traffic.

Sight Distance

Intersection Sight Distance was measured in field from the proposed driveway location at Green Hill Road. The posted speed limit on Green Hill Road is 30MPH. Sight distance was measured in compliance with NHDOT policy. The entire sight line was over the existing roadway surface of Green Hill Road. Sight distance was measured at 335 feet looking left (east) and 285 feet looking right (west) from the driveway.

TFM will prepare a sight line plan and profile prior to final approval for submission to the Town of Barrington.

Performance Standards

The project adheres to the Performance Standards in section 7.1 of the Barrington Zoning Ordinance in the following ways.

The operator will be required to identify drinking water wells located within 2000 feet of the proposed blasting activities as well as to develop a groundwater quality sampling program to monitor for nitrate and nitrite either in the drinking water supply wells or in other wells that are representative of the drinking water supply wells in the area. The plan will include pre and post blast water quality monitoring and be approved by NHDES prior to initiating blasting. The groundwater sampling program must be implemented once approved by NHDES.

The following best management procedures for blasting shall be complied with:

(1) Loading practices. The following blasthole loading practices to minimize environmental effects shall be followed:
(a) Drilling logs shall be maintained by the driller and communicated directly to the blaster. The logs shall indicate depths and lengths of voids, cavities, and fault zones or other weak zones encountered as well as groundwater conditions.
(b) Explosive products shall be managed on-site so that they are either used in the borehole, returned to the delivery vehicle, or placed in secure containers for off-site disposal.
(c) Spillage around the borehole shall either be placed in the borehole or cleaned up and returned to an appropriate vehicle for handling or placement in secured containers for off-site disposal.
(d) Loaded explosives shall be detonated as soon as possible and shall not be left in the blastholes overnight, unless weather or other safety concerns reasonably dictate that detonation should be postponed.
(e) Loading equipment shall be cleaned in an area where wastewater can be properly contained and handled in a manner that prevents release of contaminants to the environment.
(f) Explosives shall be loaded to maintain good continuity in the column load to promote complete detonation. Industry accepted loading practices for priming, stemming, decking and column rise need to be attended to.
(2) Explosive selection. The following bmps shall be followed to reduce the potential for groundwater contamination when explosives are used:
(a) Explosive products shall be selected that are appropriate for site conditions and safe blast execution.
(b) Explosive products shall be selected that have the appropriate water resistance for the site conditions present to minimize the potential for hazardous effect of the product upon groundwater.
(3) Prevention of misfires. Appropriate practices shall be developed and implemented to prevent misfires.
(4) Muck pile management. Muck piles (the blasted pieces of rock) and rock piles shall be managed in a manner to reduce the potential for contamination by implementing the following measures:
(a) Remove the muck pile from the blast area as soon as reasonably possible.
(b) Manage the interaction of blasted rock piles and stormwater to prevent contamination of water supply wells or surface water.
(5) Spill prevention measures and spill mitigation. Spill prevention and spill mitigation measures shall be implemented to prevent the release of fuel and other related substances to the environment. The measures shall include at a minimum:
(a) The fuel storage requirements shall include:

1. Storage of regulated substances on an impervious surface;
2. Secure storage areas against unauthorized entry;
3. Label regulated containers clearly and visibly;
4. Inspect storage areas weekly;
5. Cover regulated containers in outside storage areas;
6. Wherever possible, keep regulated containers that are stored outside more than 50 feet from surface water and storm drains, 75 feet from private wells, and 400 feet from public wells; and
7. Secondary containment is required for containers containing regulated substances stored outside, except for on premise use heating fuel tanks or aboveground or underground storage tanks otherwise regulated.

(b) The fuel handling requirements shall include:
1. Except when in use, keep containers containing regulated substances closed and sealed;
2. Place drip pans under spigots, valves, and pumps;
3. Have spill control and containment equipment readily available in all work areas;
4. Use funnels and drip pans when transferring regulated substances; and
5. Perform transfers of regulated substances over an impervious surface.

(c) The training of on-site employees and the on-site posting of release response information describing what to do in the event of a spill of regulated substances.

(d) Fueling and maintenance of excavation, earthmoving and other construction related equipment will comply with the regulations of the New Hampshire Department of Environmental Services [note these requirements are summarized in wd-dwgb-22-6 best management practices for fueling and maintenance of excavation and earthmoving equipment" or its successor document.]

7.1.1 Vibration

Normal excavation operations are not expected to generate significant vibration. As noted above, the applicant expects blasting areas to be limited to the western portions of the property in areas where there is currently ledge face. This area is approximately 1,700 feet from Green Hill Road, 1,200 feet from the Isinglass River 2,300 feet from Jessica Drive and 650 feet from the rear of the Stillwater Circle properties. Based on the relative distance to these properties the operations are not expected to generate significant vibration to these areas. For these reasons, no vibration will be produced that is transmitted through the ground and is discernible without the aid of instruments at or at any point beyond the lot line of the site to these abutting properties.

7.1.2 Noise

The project will not generate noise levels exceeding 75 DBA at the abutting property lines. Normal excavation operations are not expected to generate significant noise. As noted above, the applicant expects blasting areas to be limited to the western portions of the property in areas where there is currently exposed ledge face. Based on the relative distance from the ledge to these properties the operations are not expected to generate significant noise impacts to these areas.

7.1.3 Odors

The operation is not expected to produce or create detrimental odors.

7.1.4 Air Quality

The operations are not expected to create significant smoke.

The plans include specifications which require the operator to control fugitive dust in compliance with state regulations. Only the smallest practical area shall be exposed at any time In order to minimize dust generation.

The project will not generate sulfur dioxide emissions.

The project will not cause or have the potential to cause particulate matter to become airborne.

7.1.5 Glare
The project will not generate glare.

7.1.6 Heat
The project will not emit or transmit heat or heated air.

7.1.7 Waste Disposal
All chemicals and other equipment used in the normal operations will be stored inside trailer(s) to prevent exposure to rain and wind. Additionally, the SWPPP specifies management procedures regarding hazardous or regulated substances as well as spill prevention, control and countermeasure procedures.

7.1.8 Vision Clearance
An existing paved driveway will be utilized as the access point to the site.

We trust these responses address your concerns. Please do not hesitate to contact me with any questions or comments.

Sincerely,
TFMoran Inc.

Jason S. Hill
Project Manager