

## REPORT ON THE TOWN OF DUXBURY GRAVEL PIT

Information provided by Bob Magee, CESU Transportation Supervisor and 17-yr member Duxbury Select Board

**Purchase date:** 1997-98

**Purchase Price:** \$250,000

**Area:** 34 acres

**Purchase included:** Area for the gravel pit and an adjacent parcel for use as a future school. The purchase was of State land. It also included an agreement that the Town would use some of the gravel to construct an access road to the future school.

**Financing:** a bond at 2%

**NOTE: Bob said that currently, Duxbury is working on a bond through the Merchants at 1%. I am not sure if this is special emergency funding or not.**

**Length of negotiations and discovery: 10 years.**

**1<sup>st</sup> Step** the town took was to confer with three adjacent neighbors, take their recommendations, and obtain their approval.

**Noise Abatement:** trees left on the perimeter to a width of 200 feet.

**Use per year:** 5,000 cubic yards of sand; 10-12 K gravel. Bob said that it was virtually impossible to use more gravel than that, given the limits of the seasons and the size of the town crew.

**Location:** near the town garage.

**Hours:** limited to 8 AM-4 PM, with an exclusion for **crushing**, which is allowed 7 AM to 5 PM. **Reasoning:** there are only three crushing companies in the state, and they all operate on very tight schedules, so they want to get in and out as soon as possible. (Re **NOISE** of crushing, Bob stated that the machines are getting better and quieter all the time. Also, diesel emissions, both on road machinery and on school buses, are being greatly reduced year by year, which is encouraging.)

**Purchase Price VS Current Value:** I took the average rate of increase/decrease in land values from 1999 to 2005, and went from there. It is the understanding of the Real Estate industry that current value has now rolled back to the 2005 level.

Values I used, based on average rate of increase, were: 1999 – 1%; 2000 – 5%; 2001 – 8%; 2002 – 10%;  
2003 – 15%; 2004 – 15%; 2005 – 10%

This gave a current value of the Duxbury pit, if purchased now, of: \$458,200

But – 1) that's Duxbury, far away from the local land values 2) there was a feeling in Duxbury that they had 'stolen' the property 3) I didn't have time to find out how much material they thought the pit contained, although Bob did mention that they did extensive borings.

**Bob's Recommendation:** Do it! You'll never regret it.

A visit to the pit can be easily arranged.

Dan Close, 9/7/11

# Waitsfield Gravel Pit Armstrong Road Waitsfield

By David Rogers

## Works In Progress

- Gravel Pit

- [To WIP Page](#)

[Background](#) • [Permits](#) • [2007 Request for Proposals](#) • [Contacts](#)

(Links to documents and off-site pages will open in a separate window.)

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## Background

**Parcel Size:** 77.1 acres; gravel pit to involve a total of less than 10 acres.

**Parcel Number:** 99037.000

**Date Purchased by Town:** June 28, 2006

**Purchased From:** Robert Howard and Phyllis Tucker

**Book and Page:** Book 122, pages 342-346

**Purchase Price:** \$350,000

**Financing:** \$125,000 loan from Chittenden Bank, \$175,000 borrowed from Mr. Howard, \$25,000 from the Gravel Reserve Fund, and 25,000 from the General Fund gravel line item. The loans are to be paid back over a 5-year period.

## Material

### **Section 4.05 – Extraction of Earth Resources**

#### *Evaluation of Soil Conditions*

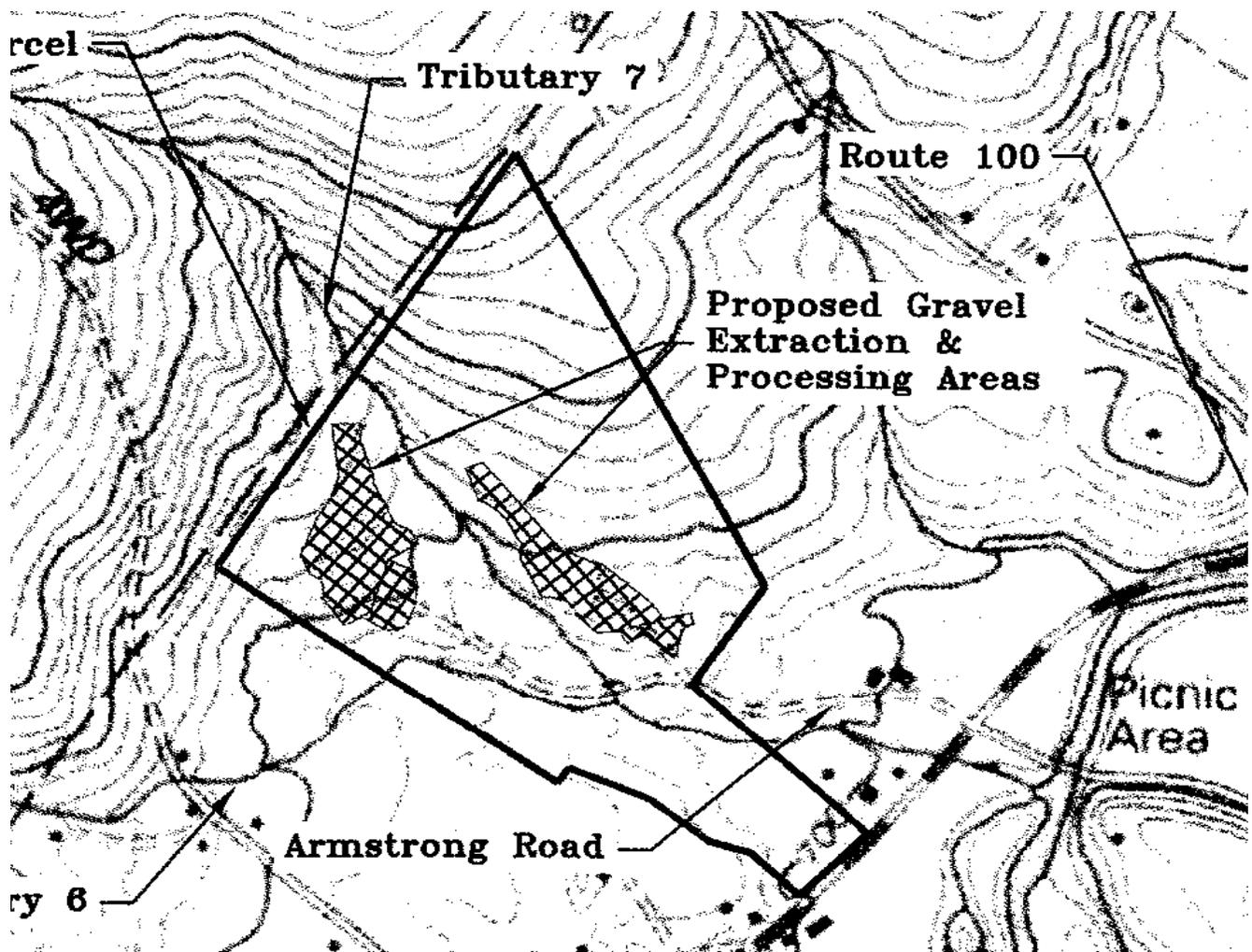
The proposed gravel extraction areas were evaluated using test pits. Logs from test pitting performed in 2002, 2003, and 2008 are shown in **Attachment 2**. Generally, the test pitting evaluation showed suitable gravel materials in the areas delineated on the site plans. The depth of suitable material ranged from approximately 5 to 12 feet below existing grades, with the majority of the tested areas showing 9 to 12 feet of suitable material. Topsoil thicknesses over the gravel material ranged from 0.7 to 2.5 feet. Based on a preliminary analysis of 50-foot site sections, it appears that approximately 70,000 cubic yards of suitable gravel material may be removed from the site according to the proposed grading plan.

## Public Need

#### *Public Needs Served by the Project*

The availability of a local gravel resource would be a valuable financial resource to the Town and would significantly reduce the Town's fuel usage and wear and tear on Town trucks. The Town currently purchases gravel from pits located in Bolton and Granville, which are each approximately 42 round-trip miles from the Waitsfield Town Garage.

Based on the Town's anticipated annual needs for road construction and maintenance, this material may be extracted at an average annual extraction rate of 5,000 to 7,500 cubic yards per year. With an available quantity of approximately 70,000 cubic yards of gravel, this equates to a projected timeframe for gravel extraction of approximately 9 to 14 years. In terms of current U.S. dollars, transportation of this quantity of gravel from the Town's current sources in Bolton and Granville would cost approximately \$18,700 to \$28,200 per year, or approximately \$262,000 over the projected life of the pit. This would also reduce the Town's environmental impact by reducing fuel consumption by approximately 4,420 gallons per year, or approximately 44,200 gallons over a 10 year span.



Route 100

DRB extraction limits

1. Extraction is limited to an average of not more than 7,500 yards a year. In the event the annual rate of extraction exceeds 8,500 yards in three consecutive years, the Town will notify the Administrative Officer to determine whether an amendment to this decision is required to review the merits of the increased rate of extraction relative to applicable zoning criteria. In the event of a natural disaster (e.g., major flood event) that necessitates the immediate removal of large volumes of materials to repair damage to municipal roads and facilities, the Town Administrator shall notify the Administrative Officer of the event and the materials removed directly in response to the disaster will be excluded from the annual calculation of extracted materials for that year.
5. On-site crushing of materials shall not exceed a maximum of twenty days in any calendar year.

DRB Best  
practice

7. The Town shall have the site inspected by a licensed Vermont engineer not less than once every three years. The engineer shall certify that the operation is proceeding in compliance with all aforementioned erosion and sedimentation control plans, and that the operation is not causing any adverse impact to water quality in streams. A copy of the certification shall be submitted to the Administrative Officer. In the event the engineer determines that the operation is not in compliance, or that impacts have occurred, a plan for remediation shall also be prepared and implemented by the town as soon as is practical. At any time the extraction is occurring within 50 feet of top of the embankment located northeast of Tributary 7, on the western side of the lower portion of the proposed phase II extraction site, the inspection shall take place annually until such time as the area within 50 feet of the embankment is reclaimed.

MICHAEL C. WEISEL, P.E.  
P. O. Box 71  
Underhill Center, VT. 05490  
(802) 899-3343

JOB UNDERHILL GRAVEL  
SHEET NO. 1 OF \_\_\_\_\_  
CALCULATED BY MWJ DATE 8/20/11  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE \_\_\_\_\_

### GRAVEL USE COMPUTATIONS

#### 1. ROUTINE MAINTENANCE

GRAVEL LOSS =  $1\frac{1}{2}$ " PER YEAR (USE  $1\frac{1}{4}$ " AVE.)

LENGTH OF GRAVEL ROADS = 38.2 MI = 201,696 L.F.

ASSUME AVERAGE WIDTH = 20'

ANNUAL VOL. LOST =

$$\left(201,696 \text{ FT} \times 20' \times \frac{1.25}{12}\right) / 27 = \underline{15,562 \text{ CY/YR}}$$

#### 2. ROAD RECONSTRUCTION



$$\text{GRAVEL VOL./L.F.} = \left[(2' \times 22') + (4' \times 2')\right] / 27 = 1.92 \text{ CY/LF} \\ \text{SAT } 2 \text{ CF/LF}$$

LENGTH REQUIRING RECONSTRUCTION = 37,175 L.F. = 7 MI. \*

ASSUME 1 MILE IS REBUILT EACH YEAR FOR 7 YRS.

ANNUAL GRAVEL REQ'D = 37,175 L.F.  $\times$  2.0 CY/LF. = 10,560 CY/YR

3. TOTAL ANNUAL GRAVEL DEMAND = 26,122 CY IN PLACE

4. VOL. AT PIT (UNCOMPACTED TRUCK MEASUREMENT) = IN-PLACE VOL.  $\times$  1.15  
=  $26,122 \times 1.15$   
= 30,000 CY/YR.

5. ANNUAL COST FOR GRAVEL FROM OUTSIDE SOURCE

$$\text{COST} = 30,000 \text{ CY/YR} \times \$20/\text{CY} = \underline{\$600,000}$$

\* FROM "T. OF V. - HIGHWAYS" FACT SHEET.



MICHAEL C. WEISEL, P.E.  
 P. O. Box 71  
 Underhill Center, VT. 05490  
 (802) 899-3343

JOB UNDERHILL GRAVEL  
 SHEET NO. 2 OF \_\_\_\_\_  
 CALCULATED BY MAN DATE 5/20/11  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 SCALE \_\_\_\_\_

MATERIAL PRICING - VARIOUS SOURCES (PER CY)

VENDOR / PRODUCT	G.W. TARE	H.S. & A.
1/2 CR. GRAV. 704.05 AT PIT	\$ 14	\$ 11.93
1/2 CR. GRAVEL 704.05 DELIVERED	\$ 18.50	\$ 20.93
3/4" CR. GRAV. 704.12 AT PIT	-	\$ 11.93
3/4" CR. GRAV. 704.12 DELIVERED	-	\$ 20.93
WINTER SAND AT PIT	-	\$ 12.00
WINTER SAND DELIVERED	\$ 16.50	\$ 21.60

1. DOES NOT ALWAYS MEET 704.05 SPEC.
2. \$ 80/HR TRUCKING, 0.75 HR. ROUND TRIP, 14 CY PER LOAD
3. \$ 73/HR TRUCKING, 2.0 HR ROUND TRIP, 14 CY PER LOAD

G.M.T. 644-8875  
 H.S.A. 482-3342



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P. O. Box 71  
Underhill Center, VT. 05490  
(802) 899-3343

JOB UNDERHILL GRAVEL  
SHEET NO. 2 OF  
CALCULATED BY MW DATE 9/30/11  
CHECKED BY DATE  
SCALE

6. MAYBE 1 MILE/YR. OF RECONSTRUCTION IS UNREALISTIC  
USE 0.5 MI. /YR FOR 14 YEARS

$$\text{GRAVEL REQ'D.} = 5200 \text{ FT/MI} \times 0.5 \text{ MI.} \times 2.0 \text{ CY/LF} = 5200 \text{ CY/YR}$$

7. TOTAL ANNUAL DEMAND = 15,562 + 5,200 = 20,842 C.Y./YR  
IN PLACE

8. PIT ANNUAL VOL. = 20,842 CY x 1.15 = 24,000 C.Y.

9. ANNUAL GRAVEL COST FOR LESS AGGRESSIVE PROGRAM  
COST = 24,000 C.Y./YR x 20/C.Y. = \$ 480,000

10. IF 2% INFLATION IS CONSIDERED, ANNUAL GRAVEL COST WILL  
BE AS FOLLOWS FOR THE 14 YEAR PERIOD

YEAR	GRAVEL COST
1	\$ 480,000
2	\$ 489,600
3	\$ 499,392
4	\$ 509,380
5	\$ 519,567
6	\$ 529,959
7	\$ 540,558
8	\$ 551,369
9	\$ 562,397
10	\$ 573,644
11	\$ 585,117
12	\$ 596,820
13	\$ 608,756
14	\$ 620,931

Rochingham Act 250 Muni Gravel Pit 2008

Brockway Mills



Municipal gravel pit operated by Town of Rockingham. Town will be leasing pit over several years and paying for lease on a per yd basis. Total size of lot is 11.5 +/- acres and area of operation will compose





Rockingham Selectboard Meeting

September 6, 2011 – Page 4

4. Highway Department

a) Approve Crushed Gravel Bid: Cullenen reported that a request for bids went out last week to 3 companies for crushing of approximately 4,000 cubic yards of asphalt/gravel from the Rockingham Town Pit. Bids were received from McCullough Crushing of \$3.70 per cubic yard and from Graves Trucking for \$6.49 per cubic yard. Cullenen stated that it is the recommendation of staff that the bid be awarded to McCullough Crushing. Clark Barber, resident, asked if this was material in the Town's pit. MacPhee stated that it was. *Ann DiBernardo made the motion to accept the bid from McCullough Crushing of \$3.70 per cubic yard for crushing of asphalt/gravel in the Town pit. Motion was seconded by Peter Golec. Motion passed unanimously.*

(1/?/11)

c) *Award Contract for Gravel Crushing (Wheeler Gravel Pit): Walsh noted that bids were requested for gravel crushing from the Wheeler Gravel Pit, costs to be taken from the Brockways Mill Road bond project. Bids were received from Bazin Brothers Trucking at \$3.29/CY, Graves Trucking at \$3.29/CY, and McCullough Crushing at \$2.95/CY. Bids were open on Thursday, January 27, 2011 by Walsh with Kerry Bennett, Everett Hammond and Bob Bazin present. It is recommended that the bid be awarded to low bidder McCullough Crushing Peter Golec made the motion that the contract for gravel crushing from the Wheeler Gravel Pit be awarded to McCullough Crushing at a cost of \$2.95/CY for 15,000 CY for a total of \$44,250 , costs to be taken from the Brockways Mill Road bond project. Motion was seconded by Fred Bullock. Motion passed unanimously.*

<http://www.rockbf.org/vertical/Sites/%7B6B964307-B78B-4D8D-8C7F-8D587328F0EB%7D/uploads/%7B27F73DCB-4F85-46B9-AB6C-30600717C642%7D.PDF>

*End Rockingham*

**Why the proposed Gravel Pit is/was bad idea for Underhill**

**By Peter Bennett**

1. Based on an option exercised without voter approval: perhaps legal but not transparent and not considerate of the voters

1. Entering into an option to pay a land owner \$1,000,000 for their land without a thorough review of all the town's possible options for lowering sand, gravel costs.

1. Spending over \$36,000 without specifying this amount in the budget and therefore without voter approval

1. Agreeing to assign all engineering data, surveys, and studies to the landowners if option is not exercised, again without voter approval.

1. Agreeing to pay the landowners' real estate taxes after three years for remainder of option if option is not exercised, again without voter approval

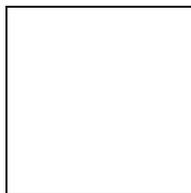
1. Accepting a spreadsheet analysis which has errors and is based on certain questionable assumptions: e.g. costs of berm, cost of reclamation, how to realize labor savings.

1. Lack of consideration of environmental effects including problems for adjacent (within at least one mile) landowners.

For some or all of these reasons, a nearly 2 to 1 majority of voters opposed this proposal in the fall of 2008. In 2010, a majority voted to keep the option open since there was no penalty for doing so and the town had invested substantial money already. It was not, I would submit, any sort of approval for exercising the option. I myself voted to hold the option open.

If the committee was to recommend exercising the option, I believe it would again be defeated by a substantial margin both for on its merits and the way it was mishandled from the beginning. The committee would thus have wasted its time in this regard.

We believe this option should be terminated now to avoid having to pay further costs related to it (the landowner's taxes).



The town gravel question is a complicated one and should not have a premature deadline forced upon it simply because of terms in this option

# **Vermont Bond Bank**

**See attached PDF Named  
Bond Bank.PDF**