

Winchendon Landfill Site Observation – August 24, 2023

To: Brian Croteau, DPW Director
FROM: Aaron Sabbs, PE, Tighe & Bond
COPY: Alex Fagnand, PE, Tighe & Bond
DATE: September 19, 2023

On August 24, 2023, Aaron Sabbs from Tighe & Bond visited the Winchendon Landfill (hereby referred to as the "Site") to monitor the grading and shaping activities of the Landfill Closure Project. The Site, which is located at 580 River Street, is the former Mabardy Landfill. It is owned and operated by W.L. French Corporation (Operator) as the Winchendon Landfill. As part of the Landfill Closure Project, the Massachusetts Department of Environmental Protection (MassDEP) has permitted the acceptance of up to 415,000 cubic yards of COMM 97-001 material as defined by MassDEP Policy. A Minor Modification of Existing Landfill was approved by MassDEP May 5, 2023 which increased the permitted maximum volume to 480,000 cubic yards. In accordance with Condition 13 of the Landfill Closure Agreement between the Town and the Operator, the Site was reviewed for compliance with the following documents:

- Corrective Action Design permit approval issued on September 23, 2020 and Corrective Action Design Plans prepared by Langdon Environmental, LLC, dated June 2019 and revised October 2019.
- Initial Operations Plan, by Langdon Environmental, LLC, dated January 2021, revised to include temporary rip rap settling area.

Landfill Operations

General landfill operations appeared to comply with best practices and the Corrective Action Design. While on site, material was placed and spread by bulldozer in the general area of Section B-B of Sheet C-5 of the Corrective Action Design, within the limits designated for initial placement. Material has also been placed and graded in the area of Section C-C since the previous site visit. These areas have been graded and gravel has been placed to allow truck access as the elevation in these areas increases. The access road on the east side of the site has been raised to allow access to the northern part of the site.

Stormwater and Erosion

Stormwater conveyances have been constructed per the Initial Operations Plan as revised to include a temporary rip rap settling area. This plan was submitted to MassDEP under a Major Permit Modification (BWP SQ 11). A swale, including check dams, has been constructed from the temporary stormwater basin to the temporary settling area. Overflow from the temporary stormwater basin runs to the settling area with a PVC drainage pipe running beneath the access road. The swale from the northern section of the site to the temporary stormwater basin has not yet been constructed. Sediment built up in the temporary rip rap settling area should be cleared out before it affects its functionality.

As the landfill's footprint has grown, portions of the swale at the toe of the slope have been filled, reducing the length of the swale. The PVC drainage pipe was also previously broken when additional rip rap was placed and has not been repaired.

Sediment that had previously built up against the erosion control at the base of the southwestern slope has recently been removed and a berm has been created to slow the flow of water before it reaches the erosion control. This area has seen repeated issues due to erosion on the slope and will require continued monitoring and maintenance.

Vegetation on the hydroseeded slopes has grown in inconsistently and there are several areas where erosion has caused rills and gullies to form.

Material Accepted

Tighe & Bond reviewed the attached Net Daily Summary Report received for the month of August, which details the total tonnage and number of loads of material received by the facility. As indicated in the attached Table 1, a total of 32,023.68 tons of material was received in August, which results in 51,422.45 tons remaining of the total 912,000 tons permitted. Based on a utilization factor of 1.9 tons per cubic yard of soil, the total volume received in August was 16,854.57 cubic yards, which results in 27,064.45 cubic yards remaining. This represents about 6% of the total permitted volume remaining based on the updated BWP SW 22 permit.

The DEP permit limits the number of loads received to 64 per day without special Town permission. There were no days in August in which the number of loads received was greater than 64.

Enclosed are photographs summarizing the items observed during the site visit, and Table 1, which notes the monthly summary of material accepted.



Photo 1 – Eastern slope and access road, looking north.



Photo 2 – Raised access road at the base of the eastern slope.



Photo 3 –Material placed and graded at the center of the Site with grading for truck access



Photo 4 – Southwestern slope with sediment cleared from against the erosion control.



Photo 5 – Monitoring well and southwestern slope.



Photo 6 – Southwestern side slope.



Photo 7 – Temporary stormwater overflow catch basin.



Photo 8 – Swale between temporary stormwater basin and temporary rip rap settling area.



Photo 9 - Temporary rip rap settling area.



Photo 10 – Material placed and graded at the northern limits of the site.



Photo 11 –Western limits of the Site.



Photo 12 –Material placed and graded at the center of the Site with grading for truck access



Photo 13 –Material placed and graded at the center of the Site with grading for truck access

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JOB NO	W-1157-81	SHEET	1	OF	1
CLIENT	Winchendon DPW			DATE	9/18/2023
SUBJECT	Mabardy Landfill Monthly Material Summary				

Table 1 - Cumulative Material Received

Month-Year	Material Received (tons)	Material Received (cubic yards)
Before Feb-21	12,764.15	6,717.97
Feb-21	32,224.28	16,960.15
Mar-21	26,702.78	14,054.09
Apr-21	22,376.79	11,777.26
May-21	26,096.58	13,735.04
Jun-21	24,834.48	13,070.78
Jul-21	16,002.93	8,422.59
Aug-21	13,708.12	7,214.80
Sep-21	32,160.64	16,926.65
Oct-21	29,375.34	15,460.71
Nov-21	30,332.79	15,964.63
Dec-21	37,372.65	19,669.82
Jan-22	28,064.80	14,770.95
Feb-22	21,010.31	11,058.06
Mar-22	39,235.17	20,650.09
Apr-22	20,711.52	10,900.80
May-22	25,688.75	13,520.39
Jun-22	43,679.43	22,989.17
Jul-22	40,396.22	21,261.17
Aug-22	38,661.13	20,347.96
Sep-22	24,344.83	12,813.07
Oct-22	32,291.88	16,995.73
Nov-22	34,051.56	17,921.87
Dec-22	35,519.07	18,694.25
Jan-23	28,746.67	15,129.83
Feb-23	20,013.49	10,533.42
Mar-23	23,247.59	12,235.57
Apr-23	16,433.86	8,649.40
May-23	16,073.79	8,459.89
Jun-23	17,109.00	9,004.74
Jul-23	19,323.27	10,170.14
Aug-23	32,023.68	16,854.57
Total	860,577.55	452,935.55
Permit Limit	912,000.00	480,000.00
Remaining	51,422.45	27,064.45

580 River Street, LLC
Gross/Tare/Net Daily Summary

Order: by Job Type: Incoming
From 08/01/2023 to 08/31/2023

08/01/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
Arlington Catch Basin Cleanings (T21-0353-1-M)	2	139,880	69.94
08/01/2023 Totals	2	139,880	69.94

08/02/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
Brookline Catch Basin Cleanings (T20-0169-1-M)	7	460,380	230.19
Arlington Catch Basin Cleanings (T21-0353-1-M)	2	129,320	64.66
Alta Marlborough (T23-0200-1-M)	15	1,116,240	558.12
Drill Spoils Lynn Belden Bly Bridge (T23-0222-1-B)	4	288,540	144.27
08/02/2023 Totals	28	1,994,480	997.24

08/03/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
Huntington Tower (C21-015-1-b)	7	509,280	254.64
MassDOT District 3 Catch Basin Cleanings (T17-01	15	1,109,560	554.78
Arlington Catch Basin Cleanings (T21-0353-1-M)	2	134,180	67.09
Eversource Hudson URAM soil (T22-1481-1-B)	9	648,960	324.48
Alta Marlborough (T23-0200-1-M)	11	758,700	379.35
Drill Spoils Lynn Belden Bly Bridge (T23-0222-1-B)	3	230,440	115.22
Retaining Wall Saugus BeldenBly Bridge (T23-0222	1	81,120	40.56
08/03/2023 Totals	48	3,472,240	1,736.12

08/04/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
MIT SOMA Building 2 (C22-009-1-B)	2	156,140	78.07
C22-017 William Carter School (C22-017-1-b ADD	2	149,700	74.85
Arlington Catch Basin Cleanings (T21-0353-1-M)	2	126,860	63.43
Eversource Hudson URAM soil (T22-1481-1-B)	4	281,780	140.89
The Cove Worcester 85 Green St (T22-1483-1-M)	6	440,740	220.37
Alta Marlborough (T23-0200-1-M)	15	1,060,820	530.41
08/04/2023 Totals	31	2,216,040	1,108.02

08/07/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
MassDOT District 3 Catch Basin Cleanings (T17-01	6	411,540	205.77
Wellesley Catch Basin Cleanings (T21-0152-1-M)	9	582,660	291.33
Tufts University Tennis Complex (T22-1423-1-B)	2	145,860	72.93
Alta Marlborough (T23-0200-1-M)	22	1,526,860	763.43
08/07/2023 Totals	39	2,666,920	1,333.46

08/08/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
Brookline Catch Basin Cleanings (T20-0169-1-M)	8	529,420	264.71

580 River Street, LLC

Gross/Tare/Net Daily Summary

Order: by Job Type: Incoming

From 08/01/2023 to 08/31/2023

Tufts University Tennis Complex (T22-1423-1-B)	2	154,460	77.23
55 Fruit St (T23-0079-1-mss)	2	158,860	79.43
Alta Marlborough (T23-0200-1-M)	4	285,740	142.87
UMass CSL Building (T23-0227-1-B)	1	52,800	26.40
08/08/2023 Totals	17	1,181,280	590.64

08/09/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
C22-017 William Carter School (C22-017-1-b ADD)	2	135,440	67.72
Wellesley Catch Basin Cleanings (T21-0152-1-M)	2	132,980	66.49
Binney Park (T22-1409-1-B)	4	310,780	155.39
Tufts University Tennis Complex (T22-1423-1-B)	2	149,520	74.76
08/09/2023 Totals	10	728,720	364.36

08/10/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
85 Boston Street (T21-0139-1-B)	9	680,660	340.33
Tufts University Tennis Complex (T22-1423-1-B)	2	147,180	73.59
Eversource - Station 20 (T23-0119-1-B)	4	274,140	137.07
Retaining Wall Saugus BeldenBly Bridge (T23-0222	4	300,440	150.22
08/10/2023 Totals	19	1,402,420	701.21

08/11/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
MIT SOMA Building 2 (C22-009-1-B)	20	1,464,040	732.02
85 Boston Street (T21-0139-1-B)	8	591,420	295.71
Ragon Inst Group II-1 (T21-0147-1-B)	3	173,360	86.68
Eversource - Station 20 (T23-0119-1-B)	4	278,740	139.37
Alta Marlborough (T23-0200-1-M)	6	389,860	194.93
Retaining Wall Saugus BeldenBly Bridge (T23-0222	3	236,840	118.42
08/11/2023 Totals	44	3,134,260	1,567.13

08/14/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
MIT SOMA Building 2 (C22-009-1-B)	34	2,474,400	1,237.20
66 Galen St Watertown BOL Soil (T21-0114-1-B)	10	695,720	347.86
Eversource Hudson URAM soil (T22-1481-1-B)	6	477,400	238.70
MXD Development (T23-0214-1-B)	1	71,200	35.60
Retaining Wall Saugus BeldenBly Bridge (T23-0222	4	291,580	145.79
08/14/2023 Totals	55	4,010,300	2,005.15

08/15/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
MIT SOMA Building 2 (C22-009-1-B)	10	759,620	379.81
Sussmna 50 Pleasant St Brookline (C23-001-1-m)	2	62,280	31.14
Eversource Hudson URAM soil (T22-1481-1-B)	6	392,620	196.31

580 River Street, LLC

Gross/Tare/Net Daily Summary

Order: by Job Type: Incoming

From 08/01/2023 to 08/31/2023

350 Boylston St, Boston, MA (T22-6392-1-B)	19	1,345,880	672.94
55 Fruit St (T23-0079-1-mss)	2	161,480	80.74
Charlton Catch Basin Cleanings (T23-0117-1-M)	9	423,320	211.66
Alta Marlborough (T23-0200-1-M)	6	409,740	204.87
08/15/2023 Totals	54	3,554,940	1,777.47

08/16/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
MIT SOMA Building 2 (C22-009-1-B)	33	2,405,860	1,202.93
Sussmna 50 Pleasant St Brookline (C23-001-1-m)	2	62,820	31.41
Tufts University Tennis Complex (T22-1423-1-B)	2	146,060	73.03
08/16/2023 Totals	37	2,614,740	1,307.37

08/17/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
Huntington Tower (C21-015-1-b)	5	371,440	185.72
MIT SOMA Building 2 (C22-009-1-B)	40	2,966,400	1,483.20
Sussmna 50 Pleasant St Brookline (C23-001-1-m)	2	85,740	42.87
Rindge Commons (T22-1237-1-B)	6	278,080	139.04
382 Harvard Street, Cambridge, MA (T22-1447-1-B)	1	44,360	22.18
Alta Marlborough (T23-0200-1-M)	3	195,380	97.69
08/17/2023 Totals	57	3,941,400	1,970.70

08/18/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
MIT SOMA Building 2 (C22-009-1-B)	15	1,072,740	536.37
Sussmna 50 Pleasant St Brookline (C23-001-1-m)	1	41,760	20.88
66 Galen St Watertown BOL Soil (T21-0114-1-B)	10	734,300	367.15
Rindge Commons (T22-1237-1-B)	5	176,040	88.02
Binney Park (T22-1409-1-B)	4	293,500	146.75
382 Harvard Street, Cambridge, MA (T22-1447-1-B)	1	44,300	22.15
Alta Marlborough (T23-0200-1-M)	3	141,720	70.86
08/18/2023 Totals	39	2,504,360	1,252.18

08/21/2023

Job Name	<u>Loads</u>	<u>Net</u>	<u>Net Tons</u>
Huntington Tower (C21-015-1-b)	8	614,620	307.31
MIT SOMA Building 2 (C22-009-1-B)	20	1,422,900	711.45
Sussmna 50 Pleasant St Brookline (C23-001-1-m)	1	46,080	23.04
Tropical Products (C23-010-1-B)	8	543,940	271.97
325 Binney St, Cambridge, MA (T20-0350-1-M)	4	277,740	138.87
Arlington Catch Basin Cleanings (T21-0353-1-M)	4	254,280	127.14
Binney Park (T22-1409-1-B)	4	297,720	148.86
Alta Marlborough (T23-0200-1-M)	2	140,860	70.43
1 Rogers St Cambridge (T23-0224-1-B)	3	144,860	72.43

580 River Street, LLC
Gross/Tare/Net Daily Summary

Order: by Job Type: Incoming
From 08/01/2023 to 08/31/2023

08/21/2023 Totals	54	3,743,000	1,871.50
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08/22/2023

Job Name	Loads	Net	Net Tons
MIT SOMA Building 2 (C22-009-1-B)	13	941,900	470.95
Sussmna 50 Pleasant St Brookline (C23-001-1-m)	1	25,760	12.88
Tropical Products (C23-010-1-B)	2	144,620	72.31
Middlesex Eversource Mystic to Woburn (T19-0371	3	214,160	107.08
325 Binney St Cambridge (T20-0350-1-m add 2)	4	258,500	129.25
Arlington Catch Basin Cleanings (T21-0353-1-M)	2	131,340	65.67
Eversource - Station 20 (T23-0119-1-B)	5	394,840	197.42
Alta Marlborough (T23-0200-1-M)	6	429,000	214.50
1 Rogers St Cambridge (T23-0224-1-B)	4	173,180	86.59
08/22/2023 Totals	40	2,713,300	1,356.65

08/23/2023

Job Name	Loads	Net	Net Tons
Sussmna 50 Pleasant St Brookline (C23-001-1-m)	1	35,000	17.50
325 Binney St Cambridge (T20-0350-1-m add 2)	4	300,700	150.35
Arlington Catch Basin Cleanings (T21-0353-1-M)	2	149,440	74.72
85 Boston St Everett (T22-1360-1-b)	11	805,320	402.66
Binney Park (T22-1409-1-B)	4	297,780	148.89
420 Rutherford Ave Charlestown (T22-1496-1-B)	14	1,063,200	531.60
55 Fruit St (T23-0079-1-mss)	2	148,260	74.13
Alta Marlborough (T23-0200-1-M)	10	726,220	363.11
1 Rogers St Cambridge (T23-0224-1-B)	2	80,560	40.28
08/23/2023 Totals	50	3,606,480	1,803.24

08/24/2023

Job Name	Loads	Net	Net Tons
MIT SOMA Building 2 (C22-009-1-B)	9	648,860	324.43
325 Binney St Cambridge (T20-0350-1-m add 2)	4	295,360	147.68
Revere DPW (T21-0279-2-M)	5	340,820	170.41
420 Rutherford Ave Charlestown (T22-1496-1-B)	13	1,014,860	507.43
Alta Marlborough (T23-0200-1-M)	2	152,840	76.42
08/24/2023 Totals	33	2,452,740	1,226.37

08/25/2023

Job Name	Loads	Net	Net Tons
MIT SOMA Building 2 (C22-009-1-B)	24	1,800,580	900.29
GLX (T18-0354-2-m ADD 3)	1	54,520	27.26
Residences at 1800 Boylston (T21-0087-1-B)	8	641,060	320.53
420 Rutherford Ave Charlestown (T22-1496-1-B)	11	839,860	419.93
12 Hemenway Street (T23-0103-1-M)	3	49,260	24.63
Eversource Station 250 Everett Charlesto (T23-0257	6	440,460	220.23

580 River Street, LLC
Gross/Tare/Net Daily Summary

Order: by Job Type: Incoming
From 08/01/2023 to 08/31/2023

08/25/2023 Totals	53	3,825,740	1,912.87
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08/28/2023

Job Name	Loads	Net	Net Tons
MIT SOMA Building 2 (C22-009-1-B)	37	2,678,480	1,339.24
Residences at 1800 Boylston (T21-0087-1-B)	6	454,340	227.17
85 Boston St Everett (T22-1360-1-b)	12	923,340	461.67
420 Rutherford Ave Charlestown (T22-1496-1-B)	4	281,260	140.63
08/28/2023 Totals	59	4,337,420	2,168.71

08/29/2023

Job Name	Loads	Net	Net Tons
MIT SOMA Building 2 (C22-009-1-B)	43	3,113,200	1,556.60
Residences at 1800 Boylston (T21-0087-1-B)	9	661,320	330.66
420 Rutherford Ave Charlestown (T22-1496-1-B)	4	290,340	145.17
55 Fruit St (T23-0079-1-mss)	2	140,640	70.32
UConn S. Campus Infrastructure (T23-0157-1-M)	2	109,620	54.81
08/29/2023 Totals	60	4,315,120	2,157.56

08/30/2023

Job Name	Loads	Net	Net Tons
MIT SOMA Building 2 (C22-009-1-B)	46	3,278,740	1,639.37
C22-017 William Carter School (C22-017-1-b ADD	4	285,860	142.93
Middlesex Eversource Mystic to Woburn (T19-0371	2	144,060	72.03
Residences at 1800 Boylston (T21-0087-1-B)	6	443,060	221.53
08/30/2023 Totals	58	4,151,720	2,075.86

08/31/2023

Job Name	Loads	Net	Net Tons
MIT SOMA Building 2 (C22-009-1-B)	2	123,040	61.52
C22-017 William Carter School (C22-017-1-b ADD	10	654,320	327.16
Middlesex Eversource Mystic to Woburn (T19-0371	2	135,660	67.83
Residences at 1800 Boylston (T21-0087-1-B)	6	426,840	213.42
08/31/2023 Totals	20	1,339,860	669.93

Grand Total	907	64,047,360	32,023.68
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