



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

March 16, 2021

Newbury Planning Board
Town Hall, 12 Kent Way
Byfield, MA. 01922

Attn: Martha Taylor, Town Planner

Re: Response to Comments prepared by Joseph Serwatka January 23, 2021

Members of Board,

The following provides our response to review comments provided by the Joe Serwatka date 1/23/21. We have included the review comment and our response to facilitate the Board's review.

No.	Comment / Response	
Sheet 4 of 8, Grading Plan		
	Response:	No response required.
6.	Comment:	Five test pits are depicted on the plan, and the logs indicate fill overlying medium/coarse sand. The temporary solution statement indicates that there was substantial soil removal on the site, and that "deeper clay" was present in the monitoring wells. The concern is that the soils encountered in the test pits could be fill material, not naturally occurring soils. The engineer should provide data indicating where the soil removal occurred, and to what depth(s), in order to verify the correct parent material. It would also be helpful to review monitoring well data relative to groundwater observations.
	Response:	It is our opinion that since the soil logs show fill over a "Bw" layer, the sand material found in the "c" layer is naturally occurring. Figure 2 in the Temporary Solution Statement shows groundwater contours based on the Monitoring Well data. A copy of this plan is included with this letter.
	Comment:	The response states that since a "Bw" layer was encountered, the "C" layer below is naturally occurring. A "Bw" layer was not encountered in every test pit however. The Temporary Solution Statement indicates that much of the soil removal occurred in the central and southern portion of the site, essentially where the new "exfiltrating bioretention area" will be located. The 10-12" fill indicated in test pits 3 and 4 may not agree with the "substantial" soil removal indicated in the report. The report also indicates that wells were installed "into the clay", which apparently was not encountered in the test pits.



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		<i>As the remediation work was conducted a relatively short time ago (i.e. 2014) it may be a simple matter of someone from Arcadis commenting on the depth of soil removal and the parent materials encountered. The board may want the engineer to look into this.</i>
	Response:	All but one test pit shows a Bw layer. Attached is a plan showing the location of the soil excavations. Over 2/3 of the removal of soil was conducted within the wetland. Test pit 5 is close to an area that shows excavation occurred. While we do not know how much soil was removed in that location, it is reasonable to assume the C layer depicted in the soil log is in fact parent material. Test pit 4 is 22' away and shows the same parent material and roughly the same depth. As you mentioned in the original comment, the clays were noted as "deeper clays" which was not encountered in our testing.
	Comment	<i>The engineer is confident that the sand encountered in the test pits is a natural parent material. The board may want to make any approvals contingent upon conducting additional, deeper test pits in the area of the bioretention area after erosion controls are installed, prior to any site work.</i>
	Response	A condition requiring a test pit prior to construction is acceptable.
Stormwater Management Report		
	Response:	No response required.
2.	Comment:	<i>Test pits 03-05, located in the proposed infiltration basin, also appear to be located where the previous industrial building stood, or very close to it. As noted in the temporary Solution Statement, substantial soil removal occurred on the site, and deeper clay was noted in the monitoring wells. As all the test pits were not advanced much past four feet, and exhibited 1-2+ feet of fill, the concern is whether the soils encountered in the C layer were natural, or part of the site remediation. As noted above, the engineer should provide data as to where, and how much, soil removal/fill occurred. It would also be prudent to conduct additional test pits and advance them to 8-10 feet, as would be typical.</i>
	Response:	It is our opinion that since the soil logs show fill over a "Bw" layer, the sand material found in the "c" layer is naturally occurring. The Temporary Solution statement also states that approximately 1-2' of soil was removed which would be consistent with the fill shown on the soil logs.
	Comment:	<i>See comment above relative to soil tests. Also, the response states that the Temporary Solution Statement refers to 1-2' of soil removed from the site. The engineer should provide a page number for this reference.</i>
	Response:	All but one test pit shows a Bw layer. Attached is a plan showing the location of the soil excavations. Over 2/3 of the removal of soil was conducted within the wetland. Test pit 5 is close to an area that shows excavation occurred. While we do not know how much soil was removed in that location, it is reasonable to assume the C layer



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		depicted in the soil log is in fact parent material. Test pit 4 is 22' away and shows the same parent material and roughly the same depth. As you mentioned in the original comment, the clays were noted as "deeper clays" which was not encountered in our testing.
	Comment	<i>A page number has not been provided, but the response indicates that the engineer is confident that the sand encountered in the test pits is a natural parent material. As recommended above, any approvals should be contingent upon conducting additional, deeper test pits in the area of the bioretention area after the installation of erosion controls, and before any site work.</i>
	Response	A condition requiring a test pit prior to construction is acceptable.
New comments relative to new BMP design.		
5.	Comment:	<i>Based on the Policy guidelines, it appears that the 6" perforated pipe should be in gravel beneath the soil media, not within the soil media. The engineer should review this. Also, the plan/detail does not show the limits of the perforated pipe.</i>
	Response:	The details have been revised to show the perforated pipe in stone and shown on the plan view detail.
	Comment:	<i>The response states that the perforated pipe is shown in stone, but the stone is not labelled on the detail. The limits are shown on the plan view.</i>
	Response:	The detail has been revised to show the gravel labeled.

We trust this response letter provides the necessary information for the Board's consideration of the request for completeness. If you have any questions or comments, please feel free to contact our office at your convenience.

Sincerely,

Millennium Engineering, Inc.


James Melvin, P.E.
Project Manager

w/ Attachments
Cc: J. Bavaro
M. Griffin