



MEMORANDUM

To: Town of Deerfield Conservation Commission and Selectboard

From: Berkshire Design Group

Date: October 27, 2022

Project: NUPRO Industrial Project Development

Re: Notice of Intent – Peer Review Comments

BDG was hired by the Town of Deerfield to provide a third-party peer review of the documents and plans submitted with the Notice of Intent, Special Permit, Expedited Permit, and Site Plan Approval by SVE on behalf of NUPRO, LLC. The following comments summarize our findings and recommendations to the Town of Deerfield Conservation Commission.

Dear Members of the Conservation Commission,

At the request of the applicant, NUPRO, LLC, and the Town of Deerfield, Berkshire Design Group (BDG) was requested to provide a third-party peer review of documents and plans submitted as part of a Notice of Intent application for work proposed in resource areas under the jurisdiction of 310 CMR 10.00: Wetlands Protection Act, as well as for a Stormwater Permit, Special Permit, Expedited Permit, and Site Plan Approval, BDG reviewed the following documents and plans:

- 1) 000_NOI Title and Table of Contents
- 2) 001_NOI Letter to Conservation Commission
- 3) 002_WPA Form 3_8-22-22, Submitted by Mark Stadnicki SVE Associates, Dated August 22, 2022, eDEP Transaction ID: 1357391
- 4) 003_WPA Form 3 Fee Transmittal_8-22-22, EDEP Transaction #: 1357391
- 5) 004_Certified Abutters List_100 FT
- 6) 005_Project Narrative NOI_8-22-22
- 7) 006_Wetland Report_WWS Report
- 8) 007_USGS_Aerial Maps
- 9) 008_Signed_SWMP_8-22-22
- 10) 009_Signed Permit Set_8-26-22
- 11) 010_2022_Riverfront Impact Exhibit
- 12) 000_EPP Application Title and Table of Contents_9-1-22
- 13) 001_Signed EEP Application Letter
- 14) 002_Signed_EPP – Application 8-22-22 copy
- 15) 003_Certified Abutters List_300 FT
- 16) 004_Revised Project Narrative_9-6-22
- 17) 005_Project Statement_8-22-22

- 18) 006_Signed_SWMP_8-22-22
- 19) 007_Recorded Property Information
- 20) 008_Spec and Cut Sheets
- 21) 009_Signed Permit Set_8-26-22
- 22) 2022.09.28 – Published Notice EPD – Website-Bulletin Board rvsd
- 23) VHB Feasibility Study

After initial review and coordination, the applicant provided Berkshire Design with the following supplemental information (documents are attached for reference):

- 24) Wetland Delineation Report by Wendell Wetland Services, 7/24/2018
- 25) Soil Evaluation Report by SVE, 10/24/2022

After review and assessment of the submitted plans and documents, BDG provides the following comments and recommendations:

Notice of Intent Review

1. In the Wetlands Report prepared by Wendell Wetlands Services, an area noted as “Wetland D” is noted that it was previously delineated and may need to be revised. The applicant provided Berkshire Design with a wetland report from Wendell Wetland Services (attached) that this area was a detention basin that was “clearly a man-made stormwater structure” and therefore not delineated. We recommend that the applicant identify this area on the plans and that the Commission determine whether this area is subject to jurisdiction.
2. The applicant uses a 2005 aerial image that shows the use of the area from previous pickle factory activities, to calculate existing degraded area within the inner and outer Riverfront Area. Although a strict view of the regulations would request that degraded area of existing conditions be taken from more recent aerial or survey of the site, the Commission should note that this site was previously reviewed by the Commission in 2015. An Order of Conditions, MassDEP File #: 142-0201, recorded in the Franklin County Registry of Deeds on 5/19/2015, Book: 6686, Page: 184, was issued and included a special condition that the altered areas throughout the Riverfront Area, which by a strict interpretation of the regulations may not be considered degraded, will be classified as degraded in future projects. “SC#1. Finding of fact – The stone under the area shown as future expansion will continue to be classified as degraded area.”
3. The Applicant does not explicitly respond to each of the conformance criteria outlined in the Riverfront Area redevelopment subsection, 310 CMR 10.58 (5) (a)-(h), however, after reviewing the submitted documents and plans, BDG is providing the following comments to the Commission regarding the project’s effort to address these criteria.
 - (a) The proposed work is resulting in an overall improvement over existing conditions within the Riverfront area. The existing conditions contain approximately 154,399 square feet of degraded area; 67,034 square feet within the inner 100-foot, and 87,365, as noted on the submitted document titled, 2005 Wetlands Impacts. As noted

on sheet 7/12 Landscape & Riverfront Improvement Plan, proposed degraded areas total 65,535 square feet: 17,930 square feet in the inner riverfront area, and 47,605 square feet in the outer riverfront area. This is an overall total reduction in degraded area by 88,864 square feet.

- (b) The applicant has provided stormwater management plans that comply with the state stormwater standards. See “Stormwater Review” below.
- (c) The proposed work is no closer than the existing conditions.
- (d) The proposed work is located toward the outer Riverfront Area boundary, where feasible. The proposed degraded area in the inner riverfront area, creates a reduction of 49,104 square feet compared to existing conditions, and a reduction of 37,760 square feet in the outer riverfront area compared to existing conditions. The result is an overall reduction in degraded area within the riverfront area.
- (e) In comparing sheet 7/12 and the 2005 Wetlands Impacts, it appears that no proposed work within the Riverfront Area is outside of the existing degraded area to develop new degraded area.
- (f) This section is not applicable. However, the applicant is proposing to install a series of native wood vegetation to develop a vegetated buffer between the proposed work and the stream within the inner riverfront area. If restoration activities were considered to be required, we would suggest that these plantings would provide a functional vegetated buffer, once established.
- (g) We find this is not applicable.
- (h) We find this is not applicable.

Stormwater Review

1. The K value (Rawls rate) in the drawdown calculations is 1.02 in/hr. The exfiltration rate used in the HydroCAD calcs for ‘Discarded’ is 2.41 in/hr.
2. The required water quality volume is 505 cf less than required In Standard 4.
3. Oil/Water Separator maintenance. In the MassDEP Stormwater Handbook, Vol 2, Chap 2, pg 8, the maintenance requirements are “At a minimum, inspect oil grit separators monthly, and clean them out at least twice per year. Polluted water or sediments removed from an oil grit separator should be disposed of in accordance with all applicable local, state, and federal laws and regulations including M.G.L.c. 21C and 310 CMR 30.00.” This varies slightly on the time frames on page 2 of 4 in the Maintenance Activities section of the Stormwater Report. We recommend citing the language above in the O&M plan.

4. There are two structures labeled 'Proposed Oil/Water Separator 2' on sheet P/2.
5. The groundwater elevation in the southern portion of the eastern detention basin is at elevation 198.7± and at the northern portion is at elevation 197.6. The bottom contour of this basin is at elevation 200. So even if the stormwater runoff were to only sheet flow into this basin, the required 2' of separation from groundwater could not be achieved in the southern portion.
6. The inverts in and out of the proposed drainage structures (PCB#1, PCB#2, PCB#3, the Oil/Water Separator, Dry Well #1 and Dry Well #2) are designed to be below the reported groundwater elevation. Under seasonal high water conditions, this would cause standing water to be present in all of these structures even when there was no rain. Of particular concern would be the surcharging of the oil/water separator in which the petroleum products may be flushed out. Due to the fluctuation of the groundwater, there may be times when the flow will be reversed through the oil/water separator. Further, the drainage system is designed such that the oil/water separator will be under surcharge conditions under most storm events. We recommend that the designer provide documentation that demonstrates that the surcharging and reverse flow of the oil/water separator will have no adverse impacts.
7. The comments from Item #2 above also apply to the western infiltration basin.
8. The designer needs to demonstrate or provide documentation that the discharge from the drywells will meet the requirements of two feet of separation from groundwater to the bottom of an infiltration BMP, as required by the Massachusetts Stormwater Handbook.
9. The two roof drainage systems have design inverts below the respective infiltration basin spillway elevations of each. This will mean that when the infiltration basins are full, the water will back up into and pressurize the roof drain lateral pipes. The runoff from the roof drain downspouts would then have to work against this pressure in order to drain out. It may be possible that the water pressure could extend up into the downspouts. The designer needs to demonstrate that the downspouts and connections to the roof drain lateral pipes will be able to handle this potential pressure condition.
10. As noted under Comment #5, the proposed system of storm drain piping would be expected to function under pressure flow conditions during most storm events. Standard engineering practice is to design storm drain piping under an assumption of gravity flow conditions. We recommend that the applicant demonstrate that the proposed storm drains are sized to carry an appropriate design storm under pressurized flow conditions.
11. The foundation drain is connected directly to a dry well in the western infiltration basin with discharge being only to the surrounding soil at its infiltration rate. When the foundation drain is submerged, the pressure will cause flow to reverse in the foundation drain and force water back into the soil around the foundation. The designer should discharge the foundation drain to daylight.

Special Permit, Expedited Permit, Site Plan Approval Application Review

1. Demolition work is proposed within the R-1 Parcel, but it is not clear if the Town has provided permission for this work within this parcel. Please clarify.
2. Regarding §4740, Contents of Application for site plan approval, item #15., results of borings or soil exploration is not included in the application. Applicant to provide these test results when available.

Traffic:

1. A projected traffic distribution diagram prepared by VHB in 2009 was reviewed. It is not clear as to whether this was referenced in the traffic numbers reported in the Project Statement, item F.) section e. Transportation Plan Approval. There was no narrative describing how the projected traffic numbers in the VHB diagram were derived. VHB's traffic numbers are significantly higher than those in the table Project Statement.
2. Although the traffic numbers in the table appear to be consistent with the reported number of employees, and it appears that the numbers were derived from equations taken out of the ITE manual, we recommend that the narrative state this more clearly for the record.
3. In the third paragraph under section e of the Project Statement, it states "expected traffic which appears to be consistent for the proposed use of the property." We recommend that the applicant provide a more detailed explanation of the basis for this statement.