



April 25, 2019

East Whiteland Township Board of Supervisors
East Whiteland Township Planning Commission.
Municipal Building
209 Conestoga Road
Frazer, PA 19355

*Re: Additional Comment and Expert Review Regarding Development Proposal for Bishop Tube site by
Constitution Drive Partners*

Dear East Whiteland Township Supervisors and Planning Commission members,

The Delaware Riverkeeper Network believes that you have no choice but to reject the proposal from Constitution Drive Partners (CDP) to develop the over 13 acre Bishop Tube site with 93 residential units, including roadways, driveways and stormwater management systems.

We want to remind you of our request that the public be given the opportunity to comment on the firms you are considering hiring with the Technical Evaluation Grant (TEG) you received from the state to help support your consideration of any proposed remediation evaluation and proposal for the Bishop Tube site. Once you have proposals from firms interested in undertaking this work, we ask that those proposals be made available to the public for review and comment.

Groundwater, soil and surface water at the Bishop Tube site are highly contaminated with Trichloroethylene (also referred to as Trichloroethene or TCE), which is classified as a probable human carcinogen by the EPA. Other contaminants also permeate the site. This highly contaminated condition -- coupled with the intensity of the proposed development that will have unacceptably high impacts on the environment, the Exceptional Value Little Valley Creek, and the surrounding community -- demands the denial of Township approval. Your duties pursuant to local law and the Pennsylvania Constitution prohibit any other alternative at this time.

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We offer this second letter of comment, in addition to our letter dated February 6, 2019, in support for this position. In the attached expert report Engineer Michelle Adams, President of Meliora Design, identifies multiple areas where the proposed development project cannot be said to comply with township ordinances, where missing information or misinformation prevent informed decisionmaking, and where the current proposal directly threatens impacted communities and the environment. As laid out in greater detail in the attached report, Engineer Adams and her team at Meliora identify the following concerns:

Regarding §200-14: it appears the pervious paving has been assigned an inappropriate curve number for stormwater management calculations and proposed infiltration trenches are actually impervious, contrary to the infiltration label CDP has placed on them.

Regarding §200-54.A.(3): the extent of contamination at the site has not been fully or properly considered; greater detail is needed regarding compliance with erosion and sedimentation protections to ensure prevention of contamination spread; CDP needs to confirm that they will not be using contaminated soil from onsite or offsite sources as needed fill for their proposed project.

Regarding §200-56.A: proposed grading raises concerns regarding protection of Little Valley Creek and the buffer around rain garden 2 fails to meet the 100 foot width.

Regarding §200-57: the proposed grading and vegetation removal on steep and very steep slopes will “lead to degraded stream quality of the adjacent and down gradient Little Valley Creek”; and important information regarding tree removal has not been provided in the CDP plans.

Regarding §170-103.E: CDP has failed to provide the detail necessary to demonstrate compliance regarding minimization of land disturbance.

Regarding §170-103.G and §170-103.L: CDP fails to accurately portray or consider the stormwater impacts of the proposed development for Little Valley Creek, neither the potential pollution or volume ramifications of the project are assessed and/or portrayed for community consideration and decisionmaking.

Regarding §170-305.I: “The applicant has incorrectly used weighted curve numbers”; there are multiple inconsistencies throughout the plans, worksheets and calculations; and there are concerns “over the validity of the calculations provided by the applicant” and therefore the township’s ability to do an accurate review.

Regarding §170-402.E: Stormwater management practice “loading ratios all grossly exceed the guidance provided in the PA BMP Manual”.

In addition, there are inconsistencies, deficiencies and information problems throughout the proposal materials such as a notation stating that underdrains will be installed below pervious pavers and yet no underdrain is shown on project plans.

In sum, as Engineer Adam states: There are “significant areas where this proposed development plan fails to meet the municipal zoning code and municipal stormwater management code, and the “information provided by the applicant fails to show protection of human health and safety and protection of vital water resources.”

The Delaware Riverkeeper Network will continue to submit comments and technical analyses as they are developed.

With regards,



Maya K. van Rossum
the Delaware Riverkeeper

Attachment:

Review by Michele C. Adams, PE, LEED AP, President, Meliora Design dated April 9, 2019

Cc:

Cosmo Servidio Regional Administrator, EPA Region III
Patrick Patterson, Regional Director, PADEP Southeast Regional Office
Brian O’Leary, Executive Director, Chester County Planning Commission
Senator Andy Dinniman
Senator Daylin Leach
Representative Kristine Howard
Congresswoman Chrissy Houlahan

April 9, 2019

Ms. Maya K. van Rossum
The Delaware Riverkeeper
Delaware Riverkeeper Network
925 Canal Street, 7th Floor, Suite 3701
Bristol, PA 19007

RE: Preliminary Review of Bishop Tube Land Development and Stormwater Management

Dear Ms. van Rossum,

Meliora Design has reviewed the plans and documentation related to the Malin Road Development (formerly Bishop Tube), located in East Whiteland Township, Chester County, Pennsylvania, including the following documents prepared on behalf of the applicant:

1. Malin Road Development, Revised Preliminary Land Development Plan, dated September 22, 2018
2. Post Construction Stormwater Management Report, Malin Road Development, Dated October 8, 2018
3. Letter from Mark Thompson to East Whiteland Township, dated October 10, 2018

We have also reviewed various supporting documents including the following:

1. Chapter 170 Stormwater Management of the Code of the Township of East Whiteland, PA
2. Chapter 175 Subdivision and Land Development of the Code of the Township of East Whiteland, PA
3. Chapter 200 Zoning of the Code of the Township of East Whiteland, PA
4. Technical Memorandum by Tom Myers, Revised Review of Bishop Tube Superfund Site and an Assessment of the Site's Proposed Residential Development – Dated January 7, 2019

We have reviewed these materials specifically for issues related to site development and stormwater management. Following our document review, we believe there to be a great deal of information to substantiate the concern of the Delaware Riverkeeper Network that the proposed development of 1 Malin Road, formerly known as Bishop Tube, by Constitution Drive Partners (CDP) does not adequately protect the public health of potential residents of the proposed development, nearby community members, and all citizens downstream of Little Valley Creek, a Pennsylvania Exceptional Value (EV) stream. We believe that this design does not protect EV water resources from pollution likely to be exacerbated by the proposed use of this property, nor does it demonstrate that a thorough cleanup of the site is a serious consideration of the developer and the Pennsylvania Department of Environmental Protection (DEP).

Overview of Existing Site Conditions

This project is located at 1 South Mail Road in East Whiteland Township, Chester County Pennsylvania. The site area is approximately 13.60 acres. The area to be disturbed with the proposed land development plan is approximately 10.48 acres, as noted in the Post-Construction Stormwater Management Report, dated October 8, 2018. The site generally slopes from the southwest to the northeast, with areas of steep slopes (slopes between 15% and 25%) and very steep slopes (slopes greater than 25%).

The site is bordered immediately to the north by rail service, zoned as industrial land use. To the west is industrial area. To the south is also rail service, zoned as industrial land use. The site is bordered to the east by Little Valley Creek and further east beyond the creek is residential land use. Little Valley Creek is classified as Exceptional Value (EV) and MF (Migratory Fishes) per Chapter 93 of the Pennsylvania Code, and is listed as an impaired stream per Section 303(d) list.

The existing land use is dominated by previous industrial use, and the site contains a large four-story building and associated bituminous and concrete paved areas. The site is underlain by well-drained “B” and “C” soils. It should be noted, however, that the site has documented contamination related to past industrial use, including both contamination of the soil and groundwater.

While not detailed on the Sheet 2 or 24 Conservation Plan, dated September 22, 2018, there are many areas of vegetation containing trees of unknown caliper and species that will be removed for the proposed development.

Overview of Proposed Development

The primary components of the proposed conditions, as shown in the Revised Preliminary Land Development Plan, dated September 22, 2018 include:

- The construction of 93 new townhome residence, with associated driveways, walkways, and parking
- Associated circulation roadways
- Three (3) “infiltration trenches”, with impervious PVC liner and underdrain
- Three (3) rain gardens, with impervious PVC liner and underdrain
- Porous paving, with impervious PVC liner and underdrain

The total post-development impervious area (as estimated on Worksheet 4 Calculations provided in the Post-Construction Stormwater Management Report) is 5.09 acres, or approximately 37% of the total tract area.

Chapter 200 Zoning

The proposed development site is zoned Residential Revitalization District (RRD). There are a number of concerns of the proposed development pertaining to zoning, many of which are related to Article X Environmental Protection. Concerns include the following:

- **Impervious Surface Definition**

We do not believe that all calculations have been done in accordance with the definition of impervious surfaces as defined in **§200-14**. Impervious Surface is defined as: *“Any surface on a lot that blocks or impedes the natural percolation of water... Unless specifically stipulated within this chapter, semi-pervious paving surfaces shall be considered as being impervious for the purpose of measuring allowable impervious coverage. Walking trails and/or frontage sidewalks shall not be considered as being impervious for the purpose of measuring allowable impervious coverage but shall be considered as such for the purpose of stormwater management calculations.”* While not explained in the narrative, it appears that the pervious paving has been assigned a curve number inconsistent with impervious coverage for the purpose of stormwater management calculations. Additionally, structures labeled as “infiltration trenches” that are lined with an impervious liner do not meet the Pennsylvania Stormwater BMP Manual definition of “infiltration trenches” and should be considered impervious.

- **Protection of Human Health and Safety**

We do not believe that the applicant has provided sufficient information to meet the requirement of **§200-54.A.(3)** to *“Protect the health and safety of all residents and visitors and minimize threats to property through the promotion of sound land development practices.”* Health and safety should be a paramount concern, especially considering the documented contamination of site soils and groundwater.

Specifically, there is concern over excavation of contaminated soils. The extent of contamination in the soil and groundwater of the site has not been fully determined. CDP’s disinterest in the possibility that soils outside of the areas of concern (AOCs) could be contaminated warrants doubt in their commitment to establishing a residential site that meets minimum public health standards. Furthermore, the excavation of the contaminated soils is a significant step in the construction phase that must strictly adhere to specific Erosion and Sediment Control standards, and East Whiteland Township should require that CDP attaches a more comprehensive construction sequence with respect to this step (e.g. how long will the removal of contaminated soil take? How will the exposed soil pits be protected on site during a precipitation event? How will excavation equipment be cleaned?) CDP needs to show that they have fully thought through the dangers posed during handling and unearthing this toxic material.

CDP must provide more information especially about the soils that will be replacing the excavated soils from the AOCs. CDP originally planned to use soils from the “borrowed” area of the site, but the Township ZHB disallowed this when they rejected in part the variance request for steep slopes. Will the soil be borrowed from a new portion of the site? Has that soil been monitored or tested? Or is the soil going to be imported? What will the composition of this soil

be and how will it be tested?

Mr. Dobson, an engineer who represented CDP at the ZHB Appeal, estimated that “approximately 400,000 CF of clean fill would be needed [for the site], including approximately 181,000 CF of replacement of the contaminated unsaturated soils” (East Whiteland Township Zoning Hearing Board Appeal No. 2016-24). This is a significant volume of soil to be moved around/brought on site and must be ensured to be free of contaminants.

- **Protection of Water Resources**

We do not believe that sufficient information has been provided to meet the intent of **§200-56.A** “to sustain riparian buffers along stream courses, thereby preserving natural environmental resources and maintaining ecological stability” and the following sections **§200-56.A(1)** regarding “Affirmation of Valley Creek’s designation by the Commonwealth of Pennsylvania as an ‘Exceptional Value Stream’ by protecting it and its tributaries from environmental contamination,” **§200-56.A(2)** regarding “Enhancement of stream course water quality and provision for food and cover for aquatic and terrestrial wildlife by preserving and encouraging woodlands alongside streams that shade stream waters, trap nutrients and sediment runoff, and stabilize streambanks.” While a 100’ buffer has been established, there is a significant amount of grading upgrade and in very close proximity to the buffer setback. This includes extensive grading on areas that are defined as steep slopes and very steep slopes. Extreme caution should be exercised to ensure that the immediately adjacent Little Valley Creek, an Exceptional Value Stream, remains free of contamination and degradation. Furthermore, the riparian buffer distance around Rain Garden 2, measures to be less than 100 ft.

- **Protection of Steep Slopes**

While a variance was approved for construction within and upon steep and very steep slopes, as required by **§200-57**, it is our opinion that development upon steep and very steep slopes will lead to degraded stream quality of the adjacent and down gradient Little Valley Creek, especially given its classification as an Exceptional Value Stream. Limitations of development on steep and very steep slopes are specifically intended to “protect hillsides and their related soil and vegetative resources, thereby minimizing adverse environmental effects.” This proposed development proposes grading and vegetation removal on steep and very steep slopes. Notably, the caliper and species of vegetation to be removed has not been identified on the plans.

Chapter 170 Stormwater Management

Stormwater management is a critical part of any proposed land development. This issue is particularly significant given the soil and groundwater contamination on site, the proximity to an Exceptional Value Stream, and the proposed residential use. Review of the documentation revealed inconsistencies and a lack of detail related to stormwater management proposed for the Malin Road Development. These concerns include the following:

- **Minimize Land Disturbance**

Sufficient information has not been provided by the applicant to comply with **§170-103.E** to *“Minimize land disturbance and protect and incorporate natural hydrologic features, drainage patterns, infiltration, and flow conditions within land development site designs.”* There is a significant amount of grading on this site to achieve the desired layout, with steep grading (3:1) on the southern-most portion of the site, and even steeper proposed grading on the southeast portion of the site abutting the 100’ Riparian Buffer.

- **Infiltration**

Under normal development circumstances, and as reflected in Chapter 170, infiltration would be encouraged. Specifically, infiltration is encouraged under **§170-103.G** *“Provide infiltration and maintain natural groundwater recharge to protect groundwater supplies and stream baseflows, prevent degradation of surface water and groundwater quality, and to otherwise protect water resources”* and **§170-103.L** *“Minimize impervious surfaces and connected impervious surfaces to promote infiltration and reduce the volume and impacts of stormwater runoff.”* Further infiltration requirements are outlined in **§170-306**. Given the site contamination, concentrated infiltration may not be a viable solution for stormwater management. The proposed design takes precautions to provide impervious PVC liners and underdrains in stormwater management systems. While this may be a preferred approach to limit mobilization of contaminants, it is unclear what impact this will have on water resources. The increase in runoff volume to Valley Creek must be calculated and addressed by the applicant. There is guidance on hotspot runoff control provided in **§170-301.N** and **§170-301.O** which describes pretreating runoff from hotspots (such as industrial sites) prior to infiltration or minimizing the infiltration requirement. It is unclear what options were explored by the engineer and incorporated into the proposed development plan to achieve a safe level of stormwater infiltration. We draw attention to the PADEP’s request for a numerical fate transport model to be completed for the site to delineate the existing contaminant plume, and to predict the effect of Malin Road Development on the plume’s extent.

- **Calculation Inconsistencies**

- **§170-305.I** describes that the use of weighted averages of runoff coefficients shall not be used for water quality and runoff volume calculations. The applicant has incorrectly used weighted curve numbers, which artificially lowers the runoff volume produced within the TR-20 methodology. This raises concern over the validity of the calculations provided by the applicant and, subsequently, the extent of the review by the township reviewing entity.

- There are several inconsistencies in the identified areas throughout the plans, worksheets, and calculations. For example, Worksheet 4 for POI-E contains 9.02 acres in the existing condition and 9.55 in the proposed condition. Similarly, Worksheet 4 for POI-W contains 1.02 acres in the existing condition and 1.07 acres in the proposed condition. The HydroCAD model provided in the PCSM report has an area of 13.13 acres for POI-E existing condition and 13.3 acres in the proposed condition. Further, the Limit of Disturbance (LOD) does not appear to be numerically labeled on the plans, and it is unclear if all areas are accounted for.
- **Loading Ratios**
§170-402.E describes “Stormwater runoff design computations and documentation, such as [...] loading ratios, etc., consistent with the guidelines and criteria presented in the PA BMP Manual (as amended) or other guidance acceptable to the Municipal Engineer, and used in the design of the BMPs, conveyances and other features proposed to be utilized for stormwater management...” Areas provided within the modeling reports provided in the PCSM report were reviewed for consistency between the recommended BMP loading ratios in the PA BMP Manual. The results are summarized in the table below:

BMP	Footprint (SF)*	Drainage Area (ac)*	Loading Ratio**
INF-1	384	0.389	44.13
INF-2	390	0.718	80.20
INF-3	264	0.309	50.99
RG-1	583	1.295	96.76
RG-2	1794	5.565	135.12
RG-3	405	0.708	76.15
*From HydroCAD modeling reports provided in PCSM report			
** Calculated LR = [Drainage area in ac * 43560 sf/ac] / [BMP Footprint in sf]			

These loading ratios all grossly exceed the guidance provided in the PA BMP Manual, which recommends a loading ratio of 10 for surface features such as rain gardens and infiltration trenches.

- **General Plan Inconsistencies**
 - A PVC liner detail exists for the rain garden and “infiltration trenches”, but the plans do not show or explain how the liner will be sealed around the outlet pipe or any other penetration so that the BMP is non-infiltrating as designed.
 - The pervious paver detail contains a note that underdrains are to be installed per plan. However, no underdrain is shown on the plans or details.
 - The critical stages notes on PCSM plan do not include description of the installation of PVC lining or underdrain for pervious pavers.

- The construction sequence of the pervious pavers on PCSM plan does not include description of PVC lining or underdrain installation.
- The construction sequence of the rain gardens on PCSM plan does not include description of outlet structure or underdrain installation.
- The construction sequence of the “infiltration trench” on the PCSM plan does not include description of the outlet structure installation.
- In the PCSM Narrative, Section I.h.1, the sequence of the rain garden installation does not include discussion of the outlet structure or underdrain.
- In the PCSM Narrative, Section I.h.2, the sequence of the “infiltration trench” installation does not include discussion of the outlet structure.
- In the PCSM Narrative, Section I.h.3, the sequence of the pervious paver installation does not include discussion of the PVC liner or underdrain.

Summary

The information provided by the applicant fails to show protection of human health and safety and protection of vital water resources. Given that this site is contaminated and significant earth disturbance is proposed, there are clearly risks to Little Valley Creek, which is classified as an Exceptional Value Stream by Chapter 93 of the Pennsylvania Code. Further, there are significant areas where this proposed development plan fails to meet the municipal zoning code and municipal stormwater management code, which specifically outlines protections for human and environmental health. We believe this preliminary analysis substantiates the concerns of the Delaware Riverkeeper Network over the proposed Malin Road Development, formerly known as Bishop Tube, by Constitution Drive Partners (CDP). Review of these materials also shows a failure to demonstrate that a thorough cleanup of the site and subsequent responsible development is a serious consideration of the developer and the Pennsylvania Department of Environmental Protection (DEP).

Sincerely,



Michele C. Adams, PE, LEED AP

President, Meliora Design