Town of Wellesley
Department of Public Works
Engineering Division

George J. Saraceno, Senior Civil Engineer

TO: Lenore Mahoney, Executive Secretary of the Zoning Board of Appeals

RE: Wellesley Country Club - 300 Wellesley Avenue
Proposed Short Course Project
Site Plan Review

DATE: December 24, 2015

The Town of Wellesley Department of Public Works (DPW) – Engineering Division has reviewed the following documents submitted by Allen and Major Associates, Inc. (A&M) of Lakeville, MA for the Wellesley Country Club (Club) request for a special permit for the six hole Short Course Project under Site Plan Review with the Zoning Board of Appeals (ZBA). These materials include:

- Plan sheets: C-0, 1, MP, GD, ER-1, 8/19/15
- Plan sheets: G-1, EW-1, PW-1, 11/11/15
- Wellesley Country Club – Short Course Grow-in-Proposed Management Plan, 9/12/15
- Turfgrass Management Plan for the Wellesley Country Club Using an Integrated Pest Management Approach, revised 6/12
- Letter to Town of Needham, 11/11/15
- Renewal Registration Statement for Verfied Water Withdrawal, effective date 1/1/08
- Site Plan Approval Review Plans and Submittal Checklist, 8/19/15

DPW staff met with Phil Cordeiro of A&M on October 7, 2015 to discuss the Short Course project and review preliminary comments that were submitted from this office in an email dated September 15, 2015, see attachment. The DPW requested additional information from A&M, related to storm water and groundwater protection.

The project consists of the disturbance of over 8 acres of land and involves removal of 1.69 acres of trees, land reshaping, installation of golf course appropriate top soil, bituminous golf cart pathways, new plantings and an irrigation system. The earth work includes cuts of 7,900 cubic yards and fill of 8,550 cubic yards for a total net fill of 650 cubic yards. The designers have explained that the plan is to balance the site and to import only the top soil needed for the fairways and greens. Construction is expected to be accessed from an existing curb opening on Brookside Road, which is an Ancient and Scenic way in the Town of Wellesley. The portion of Brookside Road in Needham is a public way. We note that the private portion of Brookside Road is in poor condition and has no sewer or drain infrastructure. We recommend that the applicant repave, curb to curb from the projects construction entrance to the Town of Wellesley/Needham Town line. We recommend that the applicant's design engineer take core samples of the roadway to determine which method of pavement restoration is feasible. The project is wholly within the Towns Watershed Protection District. Additionally the project area is a contributory watershed to the Charles River, on which there is a Total Maximum Daily Load (TMDL) for Phosphorus.

Four test pits, TP-1, 2, 3 and 4 were excavated at various locations throughout the site to determine soil

characteristics and depth to groundwater. The soils consist of loamy sand with no redox or mottling. The test pit depth ranges from 63″ to 132″, which indicates that the water table is moderately deep, beyond the excavation ability. The soil characteristics from the USDA Soil Survey show a Hinckley Sandy Loam with a hydraulic rating of A, which is consistent with what was found in each test pit and indicates that the permeability of the soil is good. Percolation tests were performed for each test pit, with a percolation rate less than 2 MPI, a well draining soil.

The well draining soils, the increased amount of active turf managed area and the proximity of the project to the Town's Rosemary Brook Well field has caused the DPW to carefully consider this project. We requested and have been provided the Club's turf management plan, which in a general way outlines the steps to promote healthy grass growth and includes the use of pesticides and herbicides. We have also requested and were provided information related to the current water withdrawal of the Club for irrigation. The DEP permit allows the Club to withdraw 25.2 MGY or 0.12 MGD with an effective date of January 1, 2008. There are 3 registered withdrawal points; Rosemary Brook, Well #13 and Well#17. The proposed Short Course project is expected to withdraw 1.4 MGY. We note that the Club is close to exceeding their water withdrawal limit and no provision has been discussed for supplemental water supply from the Town of Wellesley.

Based on the information reviewed, and our responsibly to protect the Town's water supply, we feel conditions requiring the Club to monitor groundwater for possible impacts from turf care chemical applications and to reduce and possibly eliminate phosphorous applications should be put in place.

The EPA will require under the NPDES MS4 permit a Phosphorus Control Plan (PCP) which is designed to reduce the amount of phosphorus in stormwater discharges from the Charles River and its tributaries. We would ask that the Club provide the amount of phosphorus based chemicals used for turf management on an annual basis and how it is managed as part of the PCP.

The DPW has also compiled a listed of comments regarding the plans and design documentation provided by the applicant's design engineer.

General Comments

1. The applicant should provide the DPW with a copy of the chemicals and amounts used on an annual basis at the Club.

2. Before the completion of the project the applicant should install a monitoring well near the wetland area along Brookside Road.

3. The applicant should provide a groundwater sampling program, which should be reviewed and approved by the DPW with the requirement to conduct quarterly screening including one sample in the spring and one in the fall, of all active groundwater wells and the above mentioned monitoring well, for possible impacts from nutrients and pesticides. The sampling protocol should include Synthetic Organic Chemicals (SOC's) and other chemicals of concern.

4. The applicant should prepare and submit for a review a Phosphorous Control Plan.
5. The Club averages approximately 20 MGY of water withdrawal. The applicant shall provide the DPW with copies of the DEP annual water withdrawal reports for the Club and new Short Course.

6. Provide a site locus map that shows the entirety of the property, new Short Course and location of the Town's water supply, including Zone II and all existing surface and ground water withdrawal locations.

7. The tables for the pre-development and post-development peak runoff rates by watershed should be combined to compare the two conditions side by side for the Short Course. The combined peak runoff rates for sub-watershed 1 and 2 are reduced for all storm events, which are designed to recharge groundwater through a series of perforated underdrains below the bunkers, tees and greens for each course and through a dry detention area, which also provides infiltration. The post-development peak-runoff rates for sub-watershed 3 which flows and is conveyed to an existing isolated wetland, are equal to or reduced for all storm events. Surface water runoff from the Short Course area is not expected to create ponding issues on Brookside Road as Brookside Road is higher in elevation than the isolated wetlands that receive most of the stormwater runoff.

8. We understand that the Club will not expand membership as part of the project, however we believe that there is potential for a modest increase in activity and corresponding vehicle trips. The applicant should quantify this.

9. As a result of this project the Club will remove an area where grass clippings, stump and debris storage currently occurs. We have been informed that these functions will be moved off site. The applicant should provide some outline of this operation including, type, frequency, size and anticipated route for new trucks.

10. The applicant should outline hours of operation, days, seasons and if possible any special events that can be anticipated for the Short Course.

11. The applicant should provide a construction management plan, showing the locations of temporary parking, stockpiling, milestone scheduling particularly the schedule for the tree removal work, truck routes, hours and duration of work.

12. We recommend the applicant repave Brookside Road between Wellesley Ave and the southernmost construction access point.

Concluding Remarks

While the project, as described to us, seems unlikely to have significant traffic, noise, or light impacts, it does represent a considerable land disturbance and, most importantly is within the Town's Zone II wellhead protection area. The removal of trees and creation of turf and cart paths modestly increases runoff. The permeable soils in conjunction with application of chemicals has the potential, if not

carefully monitored, to impact surface and ground water resources. We believe both the Club and the Town will benefit from added monitoring locations and active management.

If I may be of any further assistance, feel free to contact me in the office at 781-235-7600, x3318 or via email, gsaraceno@wellesleyma.gov.

Sincerely,

George J. Saraceno
Senior Civil Engineer

Enclosure: Email, date 9/15/15

cc: Michael Pakstis
William Shaughnessy
David Hickey
Douglas Stewart
Michael Grant
Meghan Jop
Michael Zehner
Lenard Izzo
Philip Cordeiro (A&M)
Anthony Del Gaizo (Town of Needham)

Saraceno, George

From: Saraceno, George
Sent: Tuesday, September 15, 2015 9:43 AM
To: 'Phil Cordeiro'
Cc: Hickey, David
Subject: RE: WCC ZBA application

Hi Phil,
I have reviewed the plans for the Wellesley Country Club Short Course project. My comments are provided below.

- Provide net cut and fill calculations and trucking routes to the site.
- Revise the locus map to show abutting streets and more of the Wellesley Country Club property, possibly using a 500' scale.
- Is a survey plan/plot plan necessary for the Wellesley portion of the project?
- Show the minimum slope required for the proposed solid wall and perforated ADS pipe.
- Show the location of the staging, stockpile area and construction entrance pad on the Proposed Erosion Control Plan.
- On the Proposed Erosion Control Plan at hole 4, add a note to clarify that the proposed pipe is either solid wall or perforated.
- Show the location of the turbidity curtain on the Proposed Erosion Control Plan.
- If proposed stone check dams will be used on the project, please show on the Proposed Erosion Control Plan.
- Please note if the proposed concrete headwalls will be poured-in-place or pre-cast.
- Provide a detail for the proposed golf cart path. How many tons of asphalt will be required for the project?
- A temporary construction fence and tree protection detail have been provided but not indicated on any plans.
- Has the Town of Needham provided feedback on this project?
- Just curious, is the wetlands shown on the plan an isolated wetland?
- Should the open storage area be moved away from the 100' conservation buffer?

Is there an opportunity to use some other material for the golf cart path other than asphalt? Have you suggested other materials to the Wellesley Country Club?

When is your hearing scheduled with the WCC?

Thank you,

George

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