



ZONING BOARD OF APPEALS
TOWN HALL WELLESLEY, MA 02181

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ZBA 96-49

Petition of Town of Wellesley/DPW/Water & Sewer Division
Morses Pond Pump Station off Turner Road

Pursuant to due notice, the Special Permit Granting Authority held a Public Hearing on Thursday, July 25, 1996 at 8 p.m. in the Great Hall at the Town Hall, 525 Washington Street, Wellesley, on the petition of TOWN OF WELLESLEY/DPW/WATER & SEWER DIVISION requesting Site Plan Approval pursuant to the provisions of Section XVIA and Section XXV of the Zoning Bylaw to allow construction of a one-story building to be used as a Water Treatment Facility with a footprint of 4,400 square feet and a floor area of 8,800 square feet; and an additional 6,650 square feet of drives and parking area with associated landscaping at the MORSES POND PUMP STATION OFF TURNER ROAD, in a Single Residence District, a Water Supply Protection District and a Flood Plain District.

On June 27, 1996, the petitioner filed a request for a hearing before this Authority, and thereafter, due notice of the hearing was given by mailing and publication.

Presenting the case at the hearing was Tim Bailey, Director of the Department of Public Works, who was accompanied by Sidney Farnsworth, Commissioner of the Board of Public Works; Joseph Duggan, Superintendent of the Water & Sewer Division; and Leonard MacKoul, Project Engineer from Earth Tech.

General Background

Mr. Duggan explained that the Water & Sewer Division has arrived at a good solution to the problem defined by the Safe Drinking Water Act. The plan is to build three water treatment facilities to treat all Wellesley water supplies, which consist of seven wells: three wells at Morses Pond and four wells in the Rosemary Valley. There will be one treatment facility at Morses Pond to service the three wells; one facility to combine the T.F. Coughlin Well and the Wellesley Avenue Well, which are 750 feet apart, off of Wellesley Avenue near the Needham Town line; and one facility located diagonally behind the Longfellow Well on the eastbound side of Route 9, which will service the two smaller Rosemary Well and Longfellow Well.

Mr. Duggan stated that the treatment process at all three facilities will be corrosion control and iron and manganese removal. The process will consist of tray aeration with hydroxide addition for pH control, and green sand filtration for iron and manganese removal. The iron and manganese are absorbed on the green sand filter material, and then backwashed out. The backwash water will then be concentrated so that 90% of it can be recycled into the system.

ZBA 96-49
Petition of Town of Wellesley/DPW/Water & Sewer Division
Morses Pond Pump Station off Turner Road

AUG 13 8 21 AM '96

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The remaining 10% will be sent into the MWRA sewer system. The process is identical at the three treatment facilities.

The architecture of the treatment facilities is very similar to the existing well stations. The Morses Pond and Wellesley Avenue facilities will be identical and will be sized for a design flow rate of 2 million gallons per day. These facilities will have 5 of the pressure tank vessels, which are the green sand filters. The Rosemary/Longfellow facility will be sized for a design flow rate of 1 million gallons per day, and will have 4 of the pressure tank vessels.

The first floor of the treatment facility will contain the pressure green sand vessels and the chemical feeds. One side will be dedicated to treatment additions. Beneath the first floor will be a pipe gallery, which will be surrounded by the clear well, which will hold the treated water, and the residual separation tanks, which will contain the concentration of the backwash water where the residuals will be settled out and pumped into the sewer system. The supernatant will be syphoned off and recycled into the headworks of the plant.

The Board asked general questions regarding the capability of the process, equipment and size of the facilities to provide for future changes in the process, or the need for additional equipment.

Mr. Duggan responded that the present flow capacities are the maximum allowable. Mr. Farnsworth stated that the need for future additional equipment is difficult to determine. When the three facilities are completed, Wellesley will be in compliance with the Safe Water Drinking Act. There has been provision for compliance with the radon and groundwater disinfection regulation. The proposed process is as far-thinking as possible.

Jack Brady, Fairbanks Avenue, asked why the buildings could not be increased by another 1,000 square feet to be prepared for any eventuality. Mr. Duggan said that if the extra square footage were available, there would be nothing to fill it. To try to treat in advance for an unknown is not sensible. He added that the facilities have been sited with the goals of treatment process efficiency and expansion.

The Board asked about potential noise. Mr. MacKoul responded that all of the major pumps are located inside the building. The aerator has a small 3/4 horsepower blower located on its top. The diesel generator has intake and exhaust mufflers. The generator will be turned over once every two weeks during the day, but would only be used continually in the event of a town power failure.

The Board asked how much personnel would be involved in running each of the sites. Mr. Duggan said that DEP is exploring this issue with them. DEP would like to see one operator

ZBA 96-49

Petition of Town of Wellesley/DPW/Water & Sewer Division
Morses Pond Pump Station off Turner Road

AUG 13 8 21 AM '96

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at one of the facilities for 4 hours per day, which is more time than is presently required. DEP is suggesting that one facility be designated as a main facility, and the other two as satellites. More maintenance people will be required as there is additional equipment to be serviced. A DPW employee will always be on site when chemical deliveries are made. As the bulk storage tanks have been sized for a minimum 30 day capacity, there would be deliveries once a month or every two months.

The Board noted the lack of bathroom facilities in all of the floor plans. Mr. Duggan said that DEP wanted one of the facilities to have a restroom. It would probably be located in the abandoned Wellesley Avenue pump station. The Board strongly recommended that bathroom facilities be provided in each of the treatment facilities.

Mr. MacKoul gave a general description of the treatment facility, and a detailed explanation of the treatment process.

Site Information

Using the Existing Conditions Plan, Mr. MacKoul pointed out the location of the treatment facility between the beach parking lot and the existing facility yard, and the access road to both the beach area and the pump station. A chain link fence encloses the entire pump station. The area is very wooded.

The paved area into the existing pump station will be expanded so that chemical trucks can access the facility. The treed area from the access road will remain so that the facility is screened at the rear. The existing planting will be supplemented with evergreens to provide a screen year round. The tree screen will also help to block light and sound.

The treatment facility will be a one-story building with a brick veneer and an asphalt shingle roof, and will contain the same equipment and processes as the other two treatment facilities.

The site is located in a flood plain, so that compensatory storage had to be provided. Initially, the site plan showed 100% compensatory storage. Neighborhood residents wanted to minimize the number of trees which would have had to be cut down in order to achieve this percentage, so other compensatory storage plans of 80% and 40% were depicted. The Wetlands Protection Committee decided it could accept the 40% compensatory storage site layout, thus saving many trees.

The Board asked if any fill would be used. Mr. MacKoul responded that this is a "fill" site, and that a preponderance of the material taken from the Wellesley Avenue site would be used at Morses Pond, but beyond the 100 year Flood Plain. In order to achieve the compensatory

ZBA 96-49

Petition of Town of Wellesley/DPW/Water & Sewer Division
Morses Pond Pump Station off Turner Road

AUG 13 8 21 AM '96

TOWN RECEIVED
WELLESLEY, MA 02181

storage, the area around the building will be filled in. This would be a swaled area, as the flood plain encroaches on the site.

The Board noted the lack of bathroom facilities on the plans, and strongly recommended that bathroom facilities be provided on the site.

Tom Korsmeyer, 81 Russell Road, asked for a clarification as to the noise level resulting from the facility. Mr. MacKoul responded that the only component located outside the facility, besides the emergency diesel generator, would be the air stripper, which has a small 3/4 horsepower motor and is surrounded by noise attenuation barriers. The noise level would be equivalent to an air conditioner. Mr. Duggan added that the proposed interior pumping will be the same horsepower as the existing pumping.

Statement of Facts

The subject property is located off of Turner Road at the Morses Pond Pump Station, on a 16.4 acre parcel in a Single Residence District, a Water Supply Protection District and a Flood Plain District. The site is bounded by a Single Residence District to the north and east, Morses Pond to the west and the railroad track to the south. There is one existing building on the site: the Morses Pond Pump Station, which is a one-story 25 foot by 30 foot brick structure housing the well pump and chemical feed equipment.

The petitioner is requesting Site Plan Approval to allow construction of a one-story building to be used as a Water Treatment Facility, with a footprint of 4,400 square feet and a floor area of 8,800 square feet. An additional 6,650 square feet of drives and parking area, which will include 3-5 unmarked spaces, and associated landscaping will be added.

The following plans were submitted: Existing Conditions Plan (3LA-1) dated 4/8/96, signed by Leonard MacKoul, Registered Professional Engineer, and Scott T. Ridder, Registered Landscape Architect; Site Plan (3LA-2) dated 5/23/96, revised 7/18/96, signed by Leonard MacKoul, Registered Professional Engineer, and Scott T. Ridder, Registered Landscape Architect; Floor Plans & Elevations (3A-1) dated 4/8/96, signed by Leonard MacKoul, Registered Professional Engineer, and John W. Look, Registered Architect; Wall Sections (GA-1) dated 4/8/96, signed by Leonard MacKoul, Registered Professional Engineer, and John W. Look, Registered Architect; Outside Piping Plan (3M-1) dated 4/8/96, signed by Leonard MacKoul, Registered Professional Engineer; and Electrical Site Plan (3E-7) dated 4/8/96, signed by Leonard MacKoul, Registered Professional Engineer, and Rama K. Chandra, Registered Professional Engineer. A plan titled Property Line Delineations with site plans for Wellesley Avenue/T.F. Coughlin, Rosemary/ Longfellow and Morses Pond, dated July 25, 1996, signed by Douglas R.

ZBA 96-49
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Morses Pond Pump Station off Turner Road

AUG 13 8 21 AM '96

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TOWN CLERK'S OFFICE
WELLESLEY, MA 02181

Stewart, Professional Land Surveyor was also submitted.

The following written information was submitted: An Official Development Prospectus, Test Boring Results prepared by New England Boring Contractors of CT, Inc., dated 4/24/95; Drainage Calculations and Compensatory Storage dated 4/23/96, revised 5/23/96, prepared by Dale MacKinnon, Registered Professional Engineer; and Hydrant Flow Data Summary, dated 5/23/91, prepared by ISO Commercial Risk Services, Inc.

An Order of Conditions (DEP 324-225) was issued by the Wellesley Wetlands Protection Committee on June 20, 1996.

The Design Review Board held a Preliminary Review of the project on May 23, 1996, and a Final Review on June 13, 1996.

All submitted plans and written information were also sent to the Planning Board, Wetlands Protection Committee, Town Engineer, Board of Health and the Fire Chief, as required by Section XVIA of the Zoning Bylaw. Written responses from each of the above were received and are on file in the office of the Board of Appeals. On July 23, 1996, the Planning Board reviewed the petition and voted to recommend no objection.

The Wetlands Protection Committee held hearings on May 9, May 30, and June 20, 1996. In the Committee's opinion, the proposed plans for on-site recharge meet requirements stipulated in Section XIV-E of the Zoning Bylaw. The run-off generated on site will be routed to a detention basin surrounding the site. The Committee recommended the use of a layer of low permeability clay in the detention basin. In the Committee's opinion the proposed plans for regrading will not detrimentally impact the quality or quantity of groundwater.

Decision

This Authority has made a careful study of the materials submitted and the information presented at the hearing. The petitioner's proposed construction of a one-story water treatment facility with a footprint of 4,400 square feet and a floor area of 8,800 square feet, constitutes a Major Construction Project pursuant to Section XVIA of the Zoning Bylaw because it includes the construction of 2,500 or more square feet of gross floor area, and is pursuant to Section XIVB and Section XIVE of the Zoning Bylaw, as it is located in both a Flood Plain District and a Water Supply Protection District.

It is the opinion of this Authority that the submitted plans for the proposed construction of the water treatment facility comply with the Zoning Bylaws of the Town, protect the safety, convenience and welfare of the public, minimize additional congestion in public and private ways

ZBA 96-49

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Morses Pond Pump Station off Turner Road

AUG 13 8 21 AM '96

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TOWN CLERK'S OFFICE
WELLESLEY, MA 02181

and insure adequate protection for water, sewerage and drainage. Furthermore, they insure compliance with Section XVI and Section XXII of the Zoning Bylaw.

Site Plan Approval is hereby given by this Authority, as voted unanimously at the Public Hearing, pursuant to Section XVIA, Section XIVB, Section II and Section XIVE of the Zoning Bylaw, subject to the conditions attached hereto as Addendum A.

APPEALS FROM THIS DECISION,
IF ANY, SHALL BE MADE PURSUANT
TO GENERAL LAWS, CHAPTER 40A,
SECTION 17, AND SHALL BE FILED
WITHIN 20 DAYS AFTER THE DATE
OF FILING OF THIS DECISION IN
THE OFFICE OF THE TOWN CLERK.

Kendall P. Bates, Acting Chairman

Robert A. Bastille

William E. Polletta

cc: Planning Board
Wetlands Protection Committee
Tim Bailey, Director/DPW
Inspector of Buildings

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ZBA 96-49

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Morses Pond Pump Station off Turner Road

ADDENDUM A.

1. All work shall be performed in accordance with plans submitted and on file with this Authority.
2. All design and construction must comply with all applicable state and local codes.
3. All requirements of the Town of Wellesley Fire Department shall be complied with.
4. All requirements of the Department of Public Works shall be met including, but not limited to the requirement that water, sewer and electric connections, together with drainage connections be made in accordance with DPW standards.
5. Upon completion of the project, a complete set of site utility plans shall be submitted to the Department of Public Works.
6. A copy of the occupancy permit issued by the Inspector of Buildings shall be submitted to this Authority at the time of issuance.
7. All requirements of the Wellesley Wetlands Protection Committee shall be complied with, and the Order of Conditions (DEP 324-225) is hereby incorporated into this decision.
8. All requirements of the Department of Environmental Protection shall be met.
9. Although not a condition, the Board of Appeals strongly recommends that bathroom facilities be located at the Morses Pond Pump Station Water Treatment Facility.

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