***Charles L. Rowley, PE, PLS***

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November 6, 2021

Town of Wareham Planning Board

Memorial Town Hall

54 Marion Road

Wareham, MA 02571 Re: Site Plan Review

LSE Hydra, LLC Solar

North Carver Road

Attention: Richard Swenson, Chairman

Dear Chairman Swenson:

I have reviewed the submittal for the above referenced project including the Application for Site Plan Review, plans consisting of 13 sheets and stormwater calculations by GAF Engineering dated August 16, 2021 and have the following comments:

General Comments

1. Unlike many of the ground mounted solar projects that have come before the Planning Board for review, this one is unique in in terms of size and location. Although situated on a total of 47.7 acres, the solar portion of the project occupies only about 9.7 acres and is separated into three smaller arrays.
2. Two of the arrays are situated to the east of North Carver Road and have little exposure to view from the street. The most southerly array is located within a former blueberry patch and will be quite visible from the street.
3. No substantial clearing of woodland is necessary for the construction of any of the proposed sites. The most northerly site will require some regrading of the existing topography but is limited to the leveling of small isolated pockets of materials in the southerly part of the work area. The other two areas consist of an upland cranberry bog and a blueberry patch that has been in existence for many years.

Stormwater Calculations

1. The calculations have been done in accordance with the requirements of the Stormwater regulations and show that there will be no significant impact to the site or to the nearby Weweantic River in terms of an increase in volume of runoff.
2. The site is divided into three relatively small sub-catchment areas the already receive direct rainfall. Locating the proposed solar panels within these areas does not increase the total runoff that needs to be controlled.
3. The northerly array contains two infiltration areas that are small and are located in places that will collect runoff mostly from the proposed access driveways. Containment has been achieved for up to and including the 100-year storm event. Grading of the other two arrays will be such that runoff is contained within those areas.

Re: Site Plan Review

LSE Hydra, LLC Solar

North Carver Road

Page two

Decommissioning Requirements:

1. The decommissioning cost is listed as present value, $103,650.00 but with an associated salvage amount of $30,957.00.
2. The amount to be established for securing the decommissioning should be 125% of the base amount with no credit for salvage.
3. The decommissioning agreement should name the Town of Wareham as the beneficiary and will require approval from Town Counsel as to form.
4. The decommissioning costs should be reviewed every 5 years with a submittal to the Board that shows an updated cost analysis.

Recommendations and Points for Consideration:

1. The most southerly array located in the former blueberry patch is near North Carver Road and has the most exposure and visibility. A series of plantings along North Carver Road is recommended that would be in compliance with Section 591.4.3 of the Zoning By-Law.
2. As with other solar projects that have had high street visibility it is recommended that instead of four above ground utility poles, a series of pad mounted transformers be used. They are also located near North Carver Road and could be screened in compliance with Section 594.3 of the Zoning By-Law.
3. The southerly array has two points of access onto North Carver Road. It is recommended that the more southerly one be eliminated and a “T” type turn-around be constructed instead.
4. Much of the project is located within the riverfront area (a 200-foot wide strip) adjacent to the Weweantic River and the associated wetlands buffer zones. As such it is subject to the terms and conditions of the Commonwealth Wetlands Protection Act and the Wareham Wetlands By-Law.
5. The Riverfront area has two sections, a 100-foot wide inner riparian zone which is next to the Weweantic River and a 100-foot wide outer riparian zone. Most activities within the inner riparian zone are restricted. Activities within the outer riparian zone are allowed but under certain specified conditions.
6. An alternatives analysis is required as part of the submission under the Wetlands By-Law and Wetlands Act for projects falling within the Riverfront. The analysis generally describes the project impacts and what options might be available to limit impacts on areas subject to the regulations.

All of this information will need to provided to the Wareham Conservation Commission under a Notice of Intent. It is assumed that the project will ultimately come under the terms of an Order of Conditions which will spell out the final construction provisions in detail.

Re: Site Plan Review

LSE Hydra, LLC Solar

North Carver Road

Page three

This concludes an initial review of the project. Please feel free to contact me if you have any questions.

Very truly yours,

Charles L. Rowley

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Cc Board Members

Ken Buckland, Wareham Town Planner

Aaron Shaheen, Asst. Town Planner

Robert Rogers, GAF Engineering

David Pichette, Conservation Commission Agent

Jim Munise, BOS liaison to Planning Board