DEVELOPMENT IMPACT STATEMENT

In accordance with Section 5.2(4) of the Town of Millbury's Subdivision Rules and Regulations, the Applicant shall submit a Development Impact Statement (DIS).

It is an Applicant's responsibility to prepare and document the DIS insufficient detail to permit an adequate evaluation by the Planning Board; however the Board may request in writing additional data. It is necessary that the Applicant respond to all sections of the DIS form except in the event that the Planning Board grants a written exemption:

The Board may waive any section(s) of the requirements when, in their opinion and submission of evidence from the Applicant, the requirements are not applicable to the proposed project.

The entire cost of the Development Impact Statement shall be the responsibility of the Applicant

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Name of Project:

1.28 MW DC Solar PV Storage Development And 500kW Battery Energy Storage System

Type of Project:

Large-Scale Ground-Mounted Solar Photovoltaic Installation

Applicant(s):

Millbury Landfill Solar LLC

Project Location:

207 Riverlin Street

Parcel Number(s): *24-19*

Total Acreage: *19.99 acre*

Name of individual(s) preparing this DIS:
Weston & Sampson Engineers, Inc.

I. PROJECT DESCRIPTION

A. Number of Units: *Not Applicable*

___Total

____ Single Family

____Duplex

____Multi-family

B. Number of Bedrooms: *Not Applicable*

___Total

____ Single Family

____Duplex

____Multi-family

C. Approximate Price/Unit: *Not Applicable*

_____ Single Family

___Condominium

___Rental

II. SITE DESCRIPTION

A. Present land uses by percentage of the site. *See Stormwater Narrative*

Land Use	Approximate Acreage Present	Approximate Acreage Future
Meadow or Brushland (non-agriculture)		
Forest		
Agriculture (orchards, farmland, pasture)		
Wetland		
Water Surface Area		
Flood Plain		
Unvegetated (rock, earth, fill)		
Roads, Buildings & Other Impervious Surface		
Other (indicate type)		

B. List the zoning districts (including overlay zoning districts) in which the site is located and indicate the percentage of the site in each district.

District	Percentage
Industrial I-1	*100%*
Aquifer Protection Overlay Area A	*~5%*

III. NATURAL ENVIRONMENT

A. Land

1. Describe the potential and probable impacts of the proposed development on the existing geology, topography, and land use of the project site and surrounding area. What is the approximate percentage of the proposed site with slopes between 0-10%, 10-15% and greater than 15%?

The proposed development will be installed following existing topography which ranges in slope between 0-30% on the landfill cap.

Slope Range	***Percentage w/in Limit of Work***
0%-10%	*32*
10%-15%	*16*
>15%	*52*

Temporary erosion and sedimentation controls will be installed during construction around the perimeter limit of work. Disturbances to existing vegetation will be limited to the area of the ballast blocks, and the

gravel access road. Stormwater will be managed through the existing stormwater management system in place at the landfill including a riprap swale and stormwater basin.

2. Describe any unusual or unique features such as bogs, kettle ponds, eskers, drumlins, quarries, distinctive rock formations, or bedrock outcroppings on the site.

   The site has several wetlands surrounding the development. These wetlands will be protected by best management practices. No wetland crossings are required for site development. No impacts on wetland areas are proposed.

3. Describe any limitations on the proposed project caused by subsurface soil and water conditions, and methods to be used to overcome them.

   The proposed project is located on a previously capped solid waste landfill that shall remain protected from excavation; therefore, the proposed development is using a ballasted foundation versus ground mounted posts. Post closure use of a capped landfill falls under the jurisdiction of MassDEP through a SW36 Major Post Closure Use Permit Application.

4. Describe procedures and findings of percolation tests conducted on the site.

   Percolation tests are not applicable for this project since it is at an existing closed landfill.

5. Describe the methods to be used during construction to control erosion and sedimentation and siltation including use of sediment basins and type of mulching, matting, or temporary vegetation; approximate size and location of land to be cleared at any given time and length of time-to exposure; covering of soil stockpiles; and other control methods used. Evaluate effectiveness of proposed methods on the site and the surrounding areas.

   Temporary erosion and sedimentation controls will be installed during construction including a construction exit and sediment barriers following existing topography at the limit of disturbance. Ground disturbances will be limited to the placement of crushed gravel for foundation pads (ballast blocks and equipment pads), installation of a gravel access drive, conduit support blocks and utility poles. Erosion and sedimentation controls and procedures are outlined on the project Drawings included in Appendix C..

6. Describe the permanent methods to control erosion and sedimentation. Include descriptions. of:

   a. Areas subject to flooding or ponding;

   No part of the site being developed is expected to be impacted by flooding or ponding due to site elevation and the topography of the site.

   b. Proposed surface drainage system;

   See Appendix J for the stormwater narrative.

   c. Proposed land grading and permanent vegetation cover;

   Regrading of the areas under the proposed PV arrays is not proposed. Other than the dense graded aggregate that will be used to form the access road and pads under the ballast blocks and equipment pad(s), the site will remain vegetated.

   The access drive is to consist of a minimum 10 inch layer, installed down slope of an existing rip-rap lined swale minimizing hydraulic impacts while the pads are not expected to change the overall flow path of stormwater runoff.

d. Methods to be used to protect existing vegetation;

As discussed previously, existing vegetation at the site is to remain throughout the site except for the area of the access drive, ballast block and equipment pad locations.

e. The relationship of the development to topography;

The proposed development will follow existing topography.

f. Any proposed alterations of shorelines, marshes or seasonal wet areas

No alterations to wetlands around the site are proposed

g. Estimated increase of peak runoff caused by altered surface conditions; and methods to be used to return water to the soils.

There is no increase to peak runoff of stormwater from the site under the proposed development conditions.

B. Air

1. Describe possible sources and duration of significant amounts of odors, smoke and dust during construction.

Dust is not anticipated at the site due minimal disturbance to existing vegetation. Dust may be present during deliveries of gravel and crushed stone at the site but will be limited to small durations. Smoke and odor are not anticipated to occur.

2. Describe the relationship of the location of the subdivision and prevailing wind patterns to nearby residences, business, recreation areas, and other public areas.

The nearest homes are across the railroad and beyond thick vegetation. Access to the site will only be periodic and there will be no long-term impacts on the operation of the adjacent transfer station.

3. Describe precautions to eliminate or minimize the adverse environmental effects of the smoke, dust or odors generated.

During construction, dust will be managed through the use of sprinkling of water as needed.

C. Water and Wetlands

1. Evaluate how and to what extent the project will affect the quality and quantity of any existing or potential public or private water supplies including watersheds, reservoirs, and groundwater.

The proposed project is located on the existing capped landfill and is not expected to affect the quality and quantity of water supplies.

2. Indicate whether the site is located on an aquifer and note its approximate yield.

The site is located adjacent to the Aquifer Protection Overlay Area A.

3. Discuss the project's effects on groundwater supply and efforts to recharge groundwater supplies.

The project will have no effect on groundwater supply as it is located on the existing capped landfill disconnected from groundwater supply.

4. Discuss the effect of the proposed sewage disposal methods on surface and groundwater supplies and quality.

There is no sewage proposed as part of this project.

5. Discuss the probability that the project will increase pollution or turbidity levels within receiving waterways and the precautions to be taken to minimize the effects.

The probability of increased turbidity levels within receiving waterways from the project is low given the minimal impact to existing vegetation and no change to topography at the site. The proposed project will minimize these effects through the use of temporary erosion and sedimentation controls during construction until final stabilization is established.

6. Discuss the project's effect on the waterway's aquatic biota and use as habitats.

The project is located on an existing landfill cap upland of protected habitat areas. Waterway's aquatic biota and use as habitats will be unaffected.

7. Discuss what effect the project will have on increasing the incidence of flooding, including areas outside the subdivision.

The project is not expected to impact the local incidence of flooding.

D. Flora and Fauna

1. Discuss the projects effects on land-based ecosystems, such as the indigenous wildlife, stream bank cover, and vegetated or wooded growth.

There are no expected effects to land-based ecosystems as the site is located on a closed landfill cap.

2. Describe proposed types and amounts of vegetal cover.

No change to vegetal cover is proposed.

3. Discuss the existence of rare or endangered plant, wildlife or fish species in the project area.

No rare or endangered flora or fauna have been identified in the project area.

E. Open Space & Recreation

1. Discuss whether there is any farmland or forest land on the site that is protected under Chapter 61A or 61B of the Massachusetts General Laws.

Not applicable. The project is located on the existing closed landfill cap. There is no protected farm or forest land protected under Chapter 61A or 61B of the Massachusetts General Laws.

2. Discuss whether the site is adjacent to conservation land or recreation area.

Dorothy Pond is west of the existing transfer station on the west side of the project site.

3. Describe existing or proposed recreational facilities including active and passive types, age groups participating, and state whether recreational facilities and open space are available to all residents.

There are no recreational facilities, existing or proposed on the closed landfill.

4. Discuss how the location and construction of the project will affect existing and potential park and recreation areas, open spaces, and natural areas.

The project will not affect existing parks, recreation areas, or natural areas.

5. Discuss whether the site includes scenic views and if the proposed development will cause any scenic vistas to be obstructed from view.

There are no scenic vistas which the project will obstruct.

IV. MAN-MADE ENVIRONMENT

A. Aesthetics and Visual Impact

1. Discuss whether the project contains buildings of historic or archeological significance (consult with the Millbury Historical Commission).

There are no existing buildings of historical significance at the site.

2. Describe the agricultural and landscaping techniques which will be used to blend the structures with the surrounding area.

There are no structures proposed.

3. Discuss the heights of the structures in relation to the surrounding area.

There are no structures proposed.

4. Discuss the projects visual impact and possible interference with scenic views.

There are no scenic vistas which the project will obstruct.

5. Describe type of construction building materials used, location of common areas, location and type of common service facilities (laundry, trash, and garbage disposal).

There are no structures proposed.

6. Describe the type, design, location, function and intensify of all exterior lighting facilities. Attention given to safety, privacy, security, and daytime and nighttime appearance shall be detailed.

There is no proposed lighting associated with the project.

B. Noise

1. Describe the time, duration, and types of noises generated by the project (including traffic generated from the development), both during and after construction.

During the 3-4 month construction period, there may be several trucks per day for delivery of materials. In addition, there will be vehicles from site workers which may be between 10 and 20 on certain days. Following construction, the site will be visited a few times per year for routine maintenance. Once operating, negligible noise will be generated from the electrical equipment and battery enclosure.

2. Describe the controls which will be used to eliminate or minimize the adverse impacts of these noises.

The site is well screened by vegetation and set back far enough that the construction noise and noise generated from the electrical equipment will be negligible.

C. Water Supply

1. Discuss the demands of the project for consumption and fire protection. Estimate the daily average and the summer peak daily average demand for the proposed subdivision when completed.

There is no public water supply proposed for this project.

2. Describe the groundwater and/or surface water supply to be used to supply the subdivision.

There is no public water supply proposed for this project.

D. Solid Waste

1. Estimate the amount and type of solid waste generated by the subdivision per year.

   Solid waste generated during construction will be collected onsite and managed by the Applicant. There will be no solid waste generated by the project after construction is complete.

2. Indicate the most likely means of disposal and probable disposal site(s).

   The contractors performing the work will be responsible for removal and disposal of the waste that they generate.

3. Describe the average and peak daily disposal and the impact of such disposal on the ground water.

   Solid waste generation during construction is not expected to impact ground water conditions.

   Stormwater System

1. Indicate the location of all proposed outfalls.

   No new outfalls are proposed.

2. Describe the effect- of the outfalls and their discharge on the receiving waters, i.e., increased flows, pollution, etc.

   No new outfalls are proposed, the peak runoff rate will be unchanged from existing to proposed, therefore there no effect on the receiving waters is expected.

3. Discuss the quantity of stormwater to be discharged.

   There is no change in ground cover or topography at the site; therefore, no increase in stormwater quantity is expected from the proposed project.

F. Circulation System

1. Discuss existing traffic conditions, including average daily and peak hour volumes, avenge and peak speeds, sight distances, accident data for the _ previous three years, and levels of service (LOS) of intersections and *streets* affected by the proposed development. Generally, such data shall be presented for all streets and intersections adjacent to or within 1000 feet of the project boundaries, and shall be no more than 12 months old at the date of application, unless the Board specifically approves other data.

   There will be no traffic impacts upon project completion. The Applicant will work with the Town transfer station employees to develop delivery schedules and parking locations to minimize impacts on the operation of the facility.

2. Discuss the expected impact of traffic generated by the proposed development on area roadways, including projected peak hour and daily traffic generated by the development on roads and ways in the vicinity of the development, sight lines at the intersections of the proposed street(s), sightlines of existing intersections, condition of existing streets, and projected post development traffic volumes and levels of service of intersections and streets likely to be affected by the proposed development.

   There will be no traffic impacts upon project completion.

   In determining the impact of vehicular traffic generation from a development, the following standards and definitions shall be used (unless the Applicant demonstrates to the Planning Board that given the nature of the proposed project or applicable road systems, other standards are appropriate):

- A registered professional engineer experienced and qualified in traffic engineering shall prepare the traffic analysis:

- Trip generation rates for land uses shall be as contained in the most recent update of Trip Generations, Institute of Transportation Engineers, Washington DC.

3. Describe efforts to minimize traffic and safety impacts through such means as physical design and layout concepts, roadway and intersection improvements, drainage improvements, and pedestrian and bicycle facility improvements.

   There will be no traffic impacts upon project completion.

4. Describe the proposed pedestrian circulation pattern. Identify existing sidewalks within 1,000 feet of the proposed site.

   There will be no pedestrian traffic impacts upon project completion.

V. *COMMUNITY SERVICES*

Schools

Estimate the probable number of students generated by the subdivision. *Not Applicable*

Describe the location of the nearest schools. *Not Applicable*

3. Describe projected schoo1bus routing changes and projections of future school building needs resulting from the proposed project *Not Applicable*

Police

1. Describe the expected impact on police services, time and manpower needed to protect the proposed development and service improvements necessitated by the proposed development.

   There are no anticipated police services required as part of the proposed project.

C. Fire

1. Describe expected fire protection needs.

   There are no anticipated fire services required as part of the proposed project. If there is a fire need, there is an access road with proposed to the transformer pad.

2. Describe on-site firefighting capabilities, fire flow water needs, and source and delivery system needs. In the event of fire, estimate the response time of the fire department (consult with fire department).

   To the best of our knowledge, there are no on-site firefighting capabilities..

3. Describe fire department service improvements necessitated as a result of the proposed project.

   There are no fire service improvements proposed as part of this project.

D. Public Works

1. Calculate the total linear feet of roadway to be publicly maintained and plowed.

   Not applicable, no new proposed public roadways are proposed for the project.

2. Calculate the linear feet of street drains, culverts, sanitary sewers, and waterlines to be publicly maintained.

   Not applicable, there are no new street drains, culverts sewers or waterlines proposed for the project.

3. Analyze projected need, responsibility and costs to the Town of roadway maintenance.

   Not applicable, there will be no change to existing roadways associated with the project.