



State of New Jersey

Highlands Water Protection and Planning Council
100 North Road (Route 513)
Chester, New Jersey 07930-2322
(908) 879-6737
(908) 879-4205 (fax)
www.highlands.state.nj.us



CHRIS CHRISTIE
Governor

JIM RILEE
Chairman

KIM GUADAGNO
Lt. Governor

EILEEN SWAN
Executive Director

Highlands Council Staff Recommendation Report Proposed Highlands Redevelopment Area Designation Former Fenimore Sanitary Landfill - Roxbury Block 7404, Lot 1

Date: October 14, 2011

Re:	Application Type:	<i>Proposed Highlands Redevelopment Area Designation</i>
	Name:	<i>Strategic Environmental Partners, L.L.C.</i>
	Municipality:	<i>Roxbury</i>
	County:	<i>Morris</i>
	Highlands Act Area:	<i>Preservation Area</i>
	LUCM Location:	<i>Protection Zone</i>
	Property:	<i>Block 7404 Lot 1</i>
	Proposed Use:	<i>Placement of photovoltaic panels on top of constructed landfill cap</i>

1.0 PROJECT DESCRIPTION

Strategic Environmental Partners, L.L.C. has petitioned for Highlands Council designation of a Highlands Redevelopment Area for a brownfield site, to allow the construction of a solar energy array. The proposed project is the redevelopment of the Former Fenimore Sanitary Landfill, located in Roxbury Township. The property that contains the landfill (Block 7404 Lot 1) encompasses approximately 102 acres, of which approximately 60 acres had been utilized for landfilling activities from the early 1950s to the late 1970s. The property is bounded by the Morris Canal Park to the north and northeast, housing developments to the northwest and west, Mountain Road to the south, and Ledgewood Park to the east. The NJDEP has determined that the property contains a sanitary landfill facility as defined in the Solid Waste Management Act and therefore qualifies for a Highlands Brownfield Designation under Track One at N.J.A.C. 7:38-6.6(b)1. In accordance with N.J.A.C. 7:38-6.6(c), a Track One Highlands Brownfield consists of the limit of waste and those areas that were legally disturbed as of August 10, 2004. The NJDEP approved the Highlands Brownfield Designation on August 18, 2011, as depicted on the plan titled "Former Fenimore Sanitary Landfill, Block 7404 Lot 1, Roxbury Township, Morris County, New Jersey" Sheet No. BD-1, dated July 27, 2011, last revised August 17, 2011, and prepared by Matrix New World Engineering. The issuance of the Highlands Brownfield Designation by the NJDEP allowed the applicant to petition the Highlands Council for a Highlands Redevelopment Area Designation for the designated brownfield site.

The proposed solar energy project will be preceded by closure of the landfill, which did not occur in 1979 when operations ceased. The closure of the landfill qualifies for Exemption #15 under the Highlands Act and is not addressed by this Consistency Determination. Following the proper closure of the landfill in various phases, the applicant proposes to redevelop the landfill (i.e., the area designated as the Highlands Brownfield,

which in this case is coterminous with the proposed Highlands Redevelopment Area) by placing photovoltaic panels on top of the constructed landfill cap using non-penetrating structures to maintain cap integrity. According to the applicant, the photovoltaic system would be capable of generating 10 megawatts of electrical power and would encompass approximately 50 acres (almost the entire area of the Highlands Brownfield). This review is only for the proposed redevelopment on top of the constructed landfill cap. Thus, the “initial condition” for this review is the closed and capped landfill (i.e., the area designated as the Highlands Brownfield). Note that the NJDEP’s Administrative Consent Order and Landfill Closure Plan Approval (both issued on October 6, 2011) address the various phases of the landfill closure. The Highlands Council’s approval of a Highlands Redevelopment Area provides the ability for NJDEP to issue a Highlands Preservation Area Approval (HPAA) which will have to address how construction will be phased where specific areas are capped and solar panels installed as they concurrently move to the capping of other portions of the landfill. Please note that the Highlands Act provides that the Highlands Council may designate all or a portion of a NJDEP-designated Brownfield as a Highlands Redevelopment Area. The specific delineation is case-specific, reflecting the need to protect on-site Highlands resources, neighboring properties and Highlands resources, and the objectives of the Regional Master Plan, relative to the land area and development concepts of the proposed redevelopment action.

The verification that the landfill has been properly closed and capped would occur through NJDEP Landfill Closure approval and the HPAA process. Redevelopment activities may only commence upon issuance of an HPAA. Highlands resources that are to be removed by the final closure process are not considered in this review. However, Highlands Resources to be created through NJDEP requirements as part of the final closure process (which for this project includes a portion of a stream corridor relocation that traverses the Highlands Brownfield) are considered.

2.0 ADMINISTRATIVE PROCESS

The Fenimore Landfill Site operated as a landfill from the early 1950s to the late 1970s. The NJDEP ordered the landfill closed in April 1977 after the owner failed to meet the engineering control requirements for leachate collection and containment. Since the operation of the landfill ceased prior to the enactment of current solid waste regulations and NJDEP found the original closure plan unacceptable, the landfill was never properly closed. The site was listed on the NJDEP’s statewide landfill clean-up initiative list in 2000. Ownership of the landfill has changed several times since 1981 and the property is currently owned by Strategic Environmental Partners, L.L.C.

The applicant met with Highlands Council staff on November 2, 2009 to discuss the procedures for the ultimate redevelopment of the landfill site for a solar array (i.e., a sequence of actions requiring NJDEP brownfield designation, Highlands Redevelopment Area Designation by the Highlands Council, and NJDEP Highlands Preservation Area Approval [HPAA] with Redevelopment Waiver). The applicant then pursued designation of the Highlands Brownfield with NJDEP. In a letter dated August 18, 2011, the NJDEP determined that the Former Fenimore Sanitary Landfill property contains a sanitary landfill facility as defined in the Solid Waste Management Act and therefore qualifies for a Highlands Brownfield Designation under Track One at N.J.A.C. 7:38-6.6(b)1. As previously noted, the NJDEP approved the Highlands Brownfield Designation as depicted on the plan titled “Former Fenimore Sanitary Landfill, Block 7404 Lot 1, Roxbury Township, Morris County, New Jersey” Sheet No. BD-1, dated July 27, 2011, last revised August 17, 2011. Via letter dated August 31, 2011, the applicant submitted a formal Petition for Highlands Redevelopment Area Designation for the NJDEP-approved Highlands brownfield site. The Highlands Council staff determined that the application materials submitted were sufficient for the staff to commence a technical review. This technical review has been completed and is contained in the Consistency Determination, included by reference in this review and recommendations report. The NJDEP approved a landfill closure plan and Administrative Consent Order on October 6, 2011. The Consistency Determination and this Report are posted on the Highlands Council web site along with relevant site maps. However, there are also paper files submitted to the Highlands Council that are part of the public record. As is the case for all

Highlands Council staff project reviews, members of the public are invited to make an appointment with Council staff to review project files and all application materials.

3.0 SMART GROWTH AND SUSTAINABLE ECONOMIC DEVELOPMENT CONSIDERATIONS

Redevelopment opportunities will be a major vehicle for economic development within the Highlands Region, particularly within the Preservation Area. Redevelopment policies and objectives within the Highlands Regional Master Plan (RMP) envision the conversion of underutilized, previously disturbed lands into new economic contributors to the Region's fiscal health. As stated in the RMP, "Redevelopment will help to meet the Region's growth needs by optimizing the efficient use of previously settled areas with existing communities and available infrastructure, thus conserving natural resources." These formerly developed sites provide the base where economic activity may continue to flourish and regional growth needs may be accommodated.

Given that redevelopment is one of the major opportunities for sustainable economic development and smart growth in the Highlands Region, the proposed redevelopment project was reviewed for policies and objectives relevant to smart growth and sustainable economic development. The RMP calls for economic development that is "sustainable over time," and not dependent on "development of undeveloped lands." The Highlands Act calls for the RMP to "promote compatible...uses and opportunities within the framework of protecting the Highlands environment."

The subject proposal entails the installation of a solar array on a capped landfill. It represents the conversion of previously disturbed lands (formerly uncapped, unclosed landfill) into a green energy initiative. The RMP specifically encourages green energy redevelopment of brownfield sites as follows: "Objective 6M1b. Evaluate mechanisms for remedial activities that apply resource protection, enhancement, and restoration approaches that allow for a minimal redevelopment footprint, encourage "brownfields to greenfields" approaches, and include green energy and building concepts." In addition, the RMP recognizes the importance of the State Energy Master Plan in which solar energy generated via solar panels is strongly encouraged as one of the most sustainable means of generating energy. The Highlands Council through its RMP Air Quality Program encourages the use of renewable energies. However, the siting of such facilities must ensure that Highlands resources, including scenic viewsheds, are not impaired. The latter is addressed by the Highlands Council through mitigation requirements so as to protect economic values of surrounding residential development.

4.0 FINDINGS AND RECOMMENDATIONS

Council staff reviewed the application materials. Findings include:

- **Brownfield Requirement:** The NJDEP approved the Highlands Brownfield Designation as depicted on the plan titled "Former Fenimore Sanitary Landfill, Block 7404 Lot 1, Roxbury Township, Morris County, New Jersey" Sheet No. BD-1, dated July 27, 2011, last revised August 17, 2011. The applicant provided to the Highlands Council a copy of this plan and a copy of the August 18, 2011 NJDEP determination letter, thus satisfying this requirement.
- **Resource Assessment:** The installation of the photovoltaic panels on top of the constructed landfill cap would result in the encroachment of the 300-foot Highlands Open Waters buffers for off-site streams. However, it is recognized that the buffers in the project area are entirely disturbed (capped landfill) and that the photovoltaic project will have a *de minimis* impact on quality or integrity of the buffer area subsequent to landfill final closure. However, to the extent feasible, as a condition of this approval, establishment and maintenance of a vegetated buffer between the stream reach and

the project area should be required. The Highlands Council GIS data indicate that some areas on the parcel outside of the designated Highlands Brownfield site are mapped as Critical Wildlife Habitat. No change is proposed to these areas other than access to the transmission grid which will require mitigation.

Scenic viewsheds from adjacent public roads and private development may be damaged, and therefore a dense vegetated buffer should be preserved or created to protect against such scenic impairment. It is recognized that trees and other woody species cannot be planted within the landfill cap (roots would compromise the integrity of the cap), and that in the area along Mountain Road, in the vicinity of Lookout Drive, the designated Highlands Brownfield directly abuts Mountain Road (with solar panels proposed right to the edge of the brownfield). As a condition of this approval, the solar array shall be screened from the viewshed of adjacent public roads and private development through a minimum 75 feet of either dense vegetated cover or the construction of an earthen berm which shall be seeded and planted with native herbaceous species. Note that the Landfill Closure Plan Approval allows for the use of soil/vegetative cover which should be used to mitigate damage to viewsheds. The applicant shall provide a screening plan for review and approval by the Highlands Council prior to any solar project work in the vicinity of Mountain Road and the intersection of Lookout Drive and Vanover Drive. The Screening Plan shall provide screening of the solar panels from all public roads and private residences in the area to the fullest extent possible.

- Smart Growth and Sustainable Economic Development:** The proposal is consistent with the RMP regarding redevelopment of contaminated sites, smart growth and sustainable economic development as the installation of a solar array on a capped landfill represents the conversion of previously disturbed lands (formerly uncapped, unclosed landfill) into a green energy initiative. Solar energy generated via solar panels is one of the most sustainable means of generating energy. The Highlands Council through its RMP Air Quality Program encourages the use of renewable energies.

The Highlands Act allows a waiver of any provision of a Highlands permitting review on a case-by-case basis for a redevelopment proposal, conditioned upon the finding by NJDEP that it meets the requirements of the narrative criteria described in Section 36 of the Act (N.J.S.A. 13:20-34). To assist NJDEP, the Council staff concludes that the proposed project meets the waiver criteria, which are addressed as follows:

Requirement	Staff Analysis
1) would have a de minimis impact on water resources and would not cause or contribute to a significant degradation of surface or ground waters;	There would be no new water/wastewater requirements. No expansion of a public water supply system is proposed, and no expansion of the existing sewer service area is proposed. As the capped landfill would already constitute impervious surface, the proposed project would not be adding new impervious surface and thus, no additional stormwater would be generated.
2) would cause minimal feasible interference with the natural functioning of animal, plant and other natural resources;	The capped landfill will feature no vegetation other than required screening or natural resources. Installation of the proposed solar array would result in minimal interference with the natural functioning of animal, plant and other natural resources.
3) will result in minimum feasible alteration or impairment of the aquatic ecosystem;	The proposed project entails encroachment into a Highlands Open Waters buffer that will be in a completely disturbed condition (capped

Requirement	Staff Analysis
	landfill). Stormwater regulations must be followed in the project design upon permitting (see response to #7).
4) will not jeopardize the continued existence of endangered animal or plant species;	See response to #2
5) is located or constructed as to neither endanger human life or property nor otherwise impair public health, safety and welfare;	The proposed Highlands Redevelopment Area is compatible with existing municipal zoning. A screening buffer is necessary to protect the local neighborhoods.
6) would result in minimal practicable degradation of unique or irreplaceable land types, historical or archaeological areas, and existing public scenic attributes; and	No resources of this type are known to be affected by the project.
7) meets all other applicable NJDEP standards, rules, and regulations and State laws.	Compliance with all remaining NJDEP standards will be addressed through the HPAA with redevelopment waiver permit process.

It is the Highlands Council staff's recommendation that the Highlands Council approve the proposed Highlands Redevelopment Area designation for the full area of the NJDEP Brownfield Designation, with the conditions that through the HPAA process except to the extent that these conditions are demonstrated to impede the proper closure of the landfill under NJDEP's Administrative Consent Order and Landfill Closure Plan Approval:

1. The application for a HPAA must address how solar panel and related construction will be phased, consistent with the Landfill Closure Plan, where certain areas are capped and solar panels installed as the applicant concurrently moves to the capping of other portions of the landfill;
2. The encroachment into a Highlands Open Waters buffer shall be entirely within a previously disturbed area, which would not result in a net impact to the functional value of the buffer (in conformance with Policy 1D4) and therefore qualifies for a waiver. However, to the extent feasible, as a condition of this approval, establishment and maintenance of a vegetated buffer between the stream reach and the project area will be required;
3. To minimize potential impacts from the solar array on stream water quality and habitat, a condition of this approval is the establishment and maintenance of a vegetated buffer along the edge of the rip-rap, outside of the designated Highlands Brownfield. This condition shall be addressed through a minimum 50-foot vegetated buffer consisting of layered woody and herbaceous species, except the buffer may be smaller where it would conflict with NJDEP's Administrative Consent Order and Landfill Closure Plan Approval;
4. It must be demonstrated that solar panels can be effectively constructed and maintained (consistent with the Landfill Closure Plan) along the northeastern border of the constructed landfill cap; this area will be sloping and is adjacent to a steep ridge;
5. The remainder of the property outside of the proposed Highlands Redevelopment Area shall be protected through a conservation restriction, specifically authorizing ecological restoration and maintenance, with recognition of any existing utility structures such as storm sewers and drainage basins may periodically need maintenance or replacement. If any disturbance of the area outside of the Brownfield is required for access to the transmission grid, mitigation will be required by the Highlands Council before any such disturbance occurs;
6. The solar array shall be screened from the viewshed along Mountain Road and along all existing private development through a minimum of 75 feet of dense vegetated cover. Berms may be used to supplement the vegetated buffer, but structures such as fences shall not substitute for the vegetated buffer. It is recognized that trees and other woody species cannot be planted within the landfill cap (roots would compromise the integrity of the cap), and that in the area along Mountain Road, in the

vicinity of Lookout Drive, the designated Highlands Brownfield directly abuts Mountain Road. As a condition of this approval, the applicant shall establish an earthen berm to screen the viewshed along Mountain Road (in a manner consistent with the Landfill Closure Plan) which shall be seeded and planted with native herbaceous species. The applicant shall provide a screening plan for review and approval by the Highlands Council prior to any solar work in the vicinity of Mountain Road and the intersection of Lookout Drive and Vanover Drive;

7. The stormwater regulations must be followed in the project design through the HPAA with redevelopment waiver, as part of the NJDEP permitting process. The Highlands Council expects that under the NJDEP waiver, the applicant shall supply a stormwater management plan and a construction implementation plan that minimizes disturbance during and after construction. As a condition of this approval, the applicant shall demonstrate that the solar panels can be constructed effectively while maintaining the integrity of the proposed stormwater management features (e.g., the proposed forebay swales) and be consistent with the Landfill Closure Plan; and
8. During the HPAA with redevelopment waiver permit process, the applicant must demonstrate that the solar panels can be installed without compromising the integrity of the landfill cap and to meet the conditions of the Landfill Closure Plan.

Attachments

- Consistency Determination