



August 20, 2012

Ms. Rebecca J. Murrell, EIT  
Engineering Associate  
Alliance Consulting Engineers Inc.  
PO Box 8147  
Columbia, South Carolina 29202

Reference: Report of Preliminary Federally Protected Threatened and Endangered Species  
Determination  
Westgate Industrial Park  
Ballycastle Drive  
Clover, York County, South Carolina  
ECS Project No. 08-8479A

Dear Ms. Murrell:

As part of the Site Certification Process, ECS Carolinas, LLP (ECS) is pleased to submit this report documenting the preliminary federally protected threatened and endangered species determination of the approximate 130 acre tract located on Ballycastle Drive in Clover, York County, South Carolina. This report summarizes our findings for the site.

### **Background Information**

The site is an approximate 130 acre tract located on Ballycastle Drive in Clover, South Carolina (Figure 1). ECS was contracted to conduct a preliminary determination of federally protected threatened and endangered species.

The majority of the site contains wooded land. Several cleared areas are present also present on the site. A utility easement runs through the center portion of the site. Power lines and a sanitary sewer system run along the utility easement. Several unpaved roads and streams cross the site.

### **Field Reconnaissance**

Mr. David Valentine and Ms. Elizabeth Ross of ECS conducted the field reconnaissance on August 17, 2012. The reconnaissance was performed to observe the site for federally threatened or endangered species/suitable habitat. The study was conducted by walking throughout the site, observing the site for evidence of the presence of the federally protected threatened and endangered species and their habitats.

The site can be divided into four zones of potential habitat (Figure 2). The zones are listed below:

1. Roadway
2. Utility Easement
3. Wooded Land
4. Cleared Land

The zone designated as "Roadway" is located along the three roads that run throughout the property. The areas immediately adjoining the roads are covered with grasses and other herbaceous vegetation. This zone appears to be mowed regularly.

The zone designated as "Utility Easement" is located in the central portion of the site. This area consists primarily of tall grasses. This zone appears to be cleared occasionally for access purposes.

The zone designated as "Wooded Land" is located on a majority of the site. This area consists of a mixture of tree species. Portions of this zone contain heavily wooded areas, which were unable to be accessed. Streams are located in the wooded portion of the site.

The zone designated as "Cleared Land" is located on the northern portion of the site along an unpaved road. Several piles of debris are located in this area. This zone is covered with herbaceous vegetation, grasses, vines and shrubs.

### **Preliminary Threatened and Endangered Species Determination**

We have reviewed the South Carolina Department of Natural Resources, Rare, Threatened & Endangered Species Inventory prepared by the Heritage Trust Program. The inventory identifies the species have been reported to the Heritage Trust Program as occurring in the state and each county. The inventory is not a complete listing of what actually exists, as no complete survey of the state has ever been done. The inventory does not include common or game species. The following federal listed species were identified in York County.

<b>Common Name</b>	<b>Scientific name</b>	<b>Federal Status</b>
Pool Sprite	<i>Amphianthus pusillus</i>	Threatened
Schweinitz's Sunflower	<i>Helianthus schweinitzii</i>	Endangered

Endangered - A taxon "in danger of extinction throughout all or a significant portion of its range."  
Threatened - A taxon "likely to become endangered within the foreseeable future throughout all or a significant portion of its range."

### **Species/Habitat Description**

#### **Pool Sprite**

**Description:** Pool Sprite is a small, aquatic annual plant with short stems. The stems are rooted, leafy and submerged and produce flowers and threadlike scapes. The tip of the scapes contain two, small, oppositely arranged bracts. The scapes elongate to allow the bracts to float on the surface of the water. One small, purplish flower is located between the two bracts. The fruit of the Pool Sprite consists of small, bilobed capsules and the seeds are long and dark brown to black.

**Habitat:** Pool Sprite is a rooted aquatic plant that is restricted to temporary pools that are formed in depressions on outcrops of granitic rock. A large threat is the destruction of habitat from quarrying and increased land use.

**Conclusion:** We did not observe granitic rock outcrops in accessible areas of the site. Therefore, based on our observations and knowledge of Pool Sprite, it does not appear that suitable habitat for this species is present on the site.

### **Schweinitz's Sunflower**

**Description:** Schweinitz's sunflower is a perennial plant that can grow to heights ranging between 6 and 16 feet. The stem is purple, and the upper third is branched at a 45 degree angle. The leaves are arranged in pairs on the lower portion of the stem and typically occur singly on the upper portion. The leaves grow out from the stem at a right angle, and the tips of the leaves tend to droop. The leaves are thick and stiff, with a rough upper surface. The leaves have broad spiny hairs that are directed toward the tip, and soft white hairs cover the underside. The plant produces small yellow flowers. Schweinitz's sunflower blooms from late August until frost.

**Habitat:** Schweinitz's Sunflower is typically found along roadsides, power line clearings, old pastures, woodland openings as well as other sunny to semi-sunny areas. The sunflower is generally associated with poor clayey and/or rocky soils. The sunflower is believed to have formerly occurred in prairie-like habitats or post-oak savannas maintained by fires.

**Conclusion:** Roadways, utility line easements and several clearings are present on the site. It appears that suitable habitat for this species may be present on the site. However, we did not observe this species in accessible areas of the site.

No other federally listed threatened and endangered species were identified in York County by the South Carolina Department of Natural Resources Heritage Trust Program.

### **Conclusions**

Based on our observations, it appears that suitable habitat for Schweinitz's Sunflower may be present on the site. However, we did not observe this species during our reconnaissance of accessible areas of the site. Additionally, we did not observe granitic outcrops at the site that would provide suitable habitat for Pool Sprite. Therefore, it is our opinion that federally protected threatened and endangered species will not be impacted by the proposed development.

### **Limitations**

Observations, conclusions, and recommendations pertaining to the federally threatened and endangered species and their habitats within the subject site are necessarily limited to the conditions observed and materials reviewed at the time this study was undertaken.

### **Closing**

We appreciate the opportunity to provide our services to you. Please contact us at (704) 525-5152 if you have questions or require additional information.

Sincerely,

**ECS CAROLINAS, LLP**



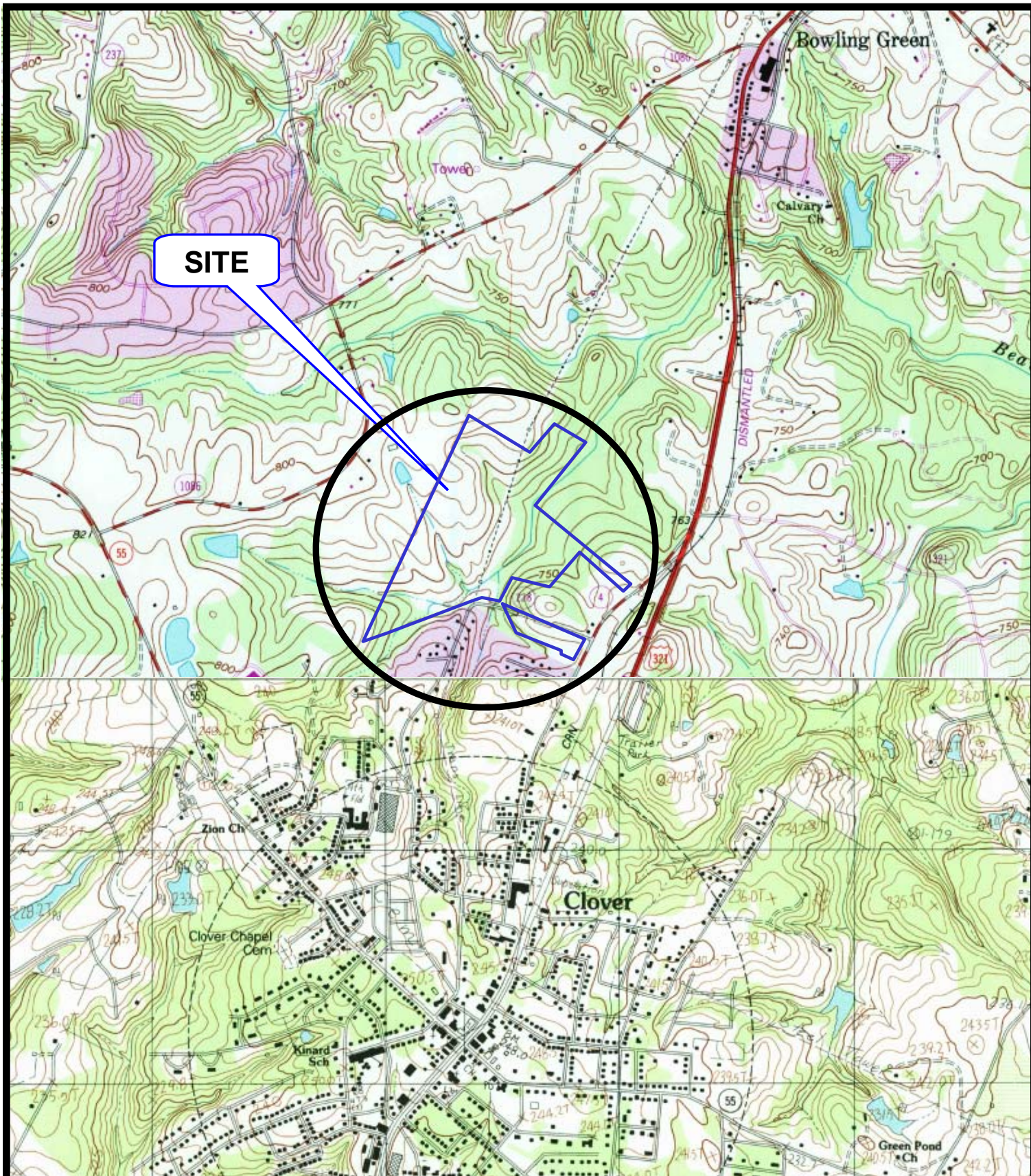
David E. Valentine  
Environmental Technician



Denise M. Neas, PWS, LSS  
Senior Environmental Principal

Attachments: Figure 1 - Site Location Map  
Figure 2 - Site Map





#### SOURCE:

USGS TOPOGRAPHIC MAP:  
Gastonia – South, North Carolina Quadrangle,  
Dated 1993 and Clover, South Carolina  
Quadrangle, Dated 1985

Scale: 1" ~ 2,000'

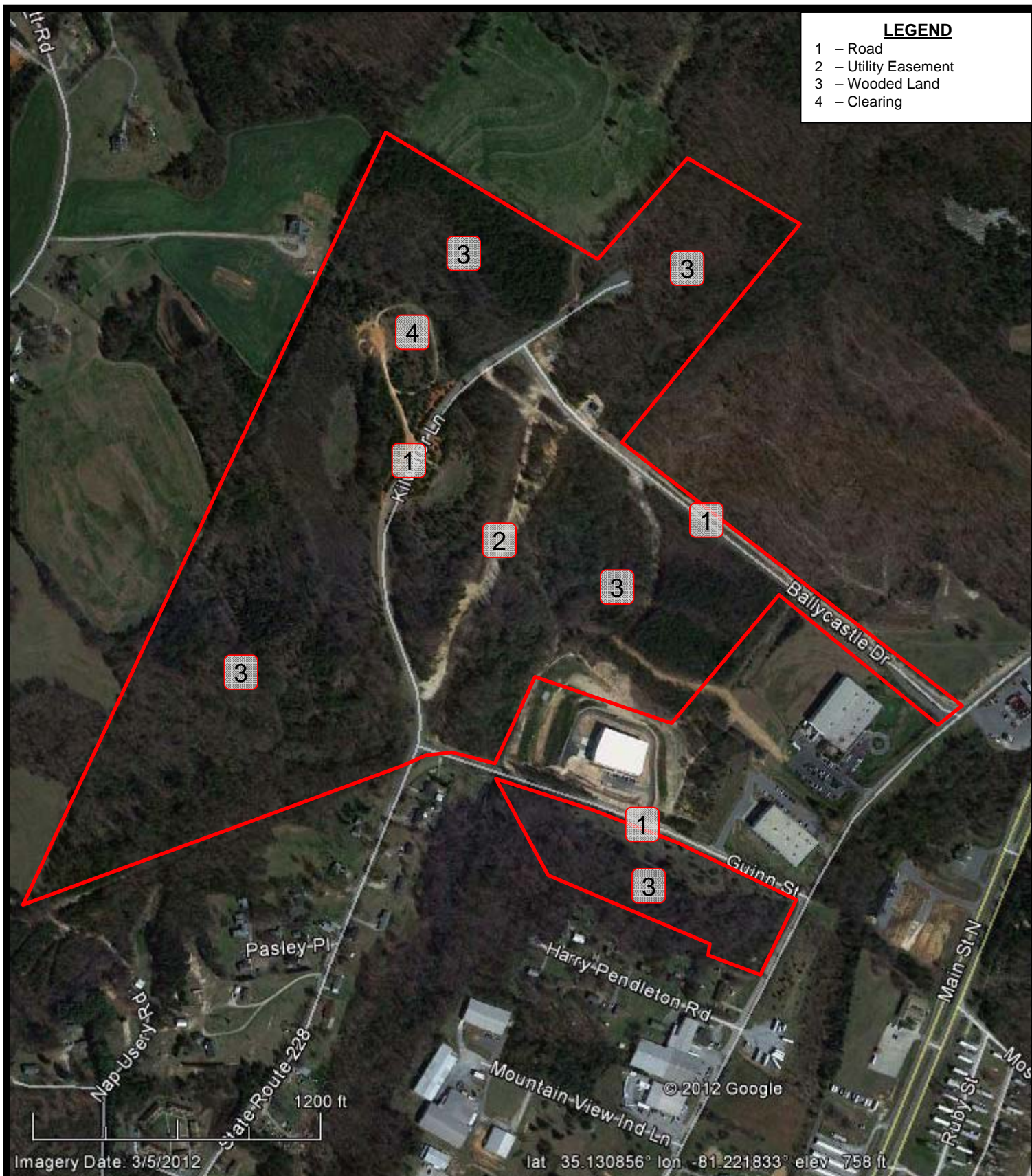


#### FIGURE 1 SITE LOCATION MAP

Westgate Industrial Park  
Ballycastle Drive  
Clover, York County, South Carolina

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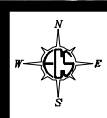




- LEGEND**
- 1 - Road
  - 2 - Utility Easement
  - 3 - Wooded Land
  - 4 - Clearing

**SOURCE**

Google Earth  
(via the Internet)  
  
Scale: As Shown



**FIGURE 2**  
**2012 AERIAL PHOTOGRAPH**

Westgate Industrial Park  
Ballycastle Drive  
Clover, York County, South Carolina  
  
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