



**REDWING**  
ECOLOGICAL SERVICES, INC.

1139 South Fourth Street • Louisville, KY 40203 • Phone 502.625.3009 • Fax 502.625.3077

VIA EMAIL

November 20, 2014

Mr. Brian D. Stephens, P.E.  
Ball Homes, Inc.  
3609 Walden Drive  
Lexington, KY 40517  
bstephens@ballhomes.com

**Subject: Delineation Summary Report  
St. Joseph Property  
Louisville, Jefferson County, Kentucky  
Redwing Project No.: 14-152**

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Dear Mr. Stephens:

Redwing Ecological Services, Inc. (Redwing) is pleased to provide Ball Homes, Inc. with this summary of the water/wetland delineation conducted on the approximately 120-acre St. Joseph Property in Jefferson County, Kentucky. The goal of these services was to identify the location and extent of jurisdictional waters/wetlands on the site to assist Ball Homes with project development planning.

Based on the delineation, jurisdictional waters of the U.S. present on the site include:

- 4,465 feet of perennial stream
- 1,835 feet of intermittent stream
- 3,655 feet of ephemeral stream
- 0.10 acre of wooded wetland

In addition, approximately four acres of suitable summer roosting habitat for the federally-endangered Indiana bat (*Myotis sodalis*) is present on site. This memorandum summarizes study methodology, results, and a discussion of development-related issues.

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## METHODOLOGY

The delineation included in-house and field components. In-house research involved review of the USGS topographic quadrangle map, aerial photography, Louisville/Jefferson County Information Consortium (LOJIC) mapping, and the Jefferson County soil survey. Following review of these materials, Redwing conducted a delineation of the parcel on November 12 and 14, 2014 to identify the location and extent of jurisdictional waters/wetlands on the site. During the field visit, the presence of jurisdictional streams and open water bodies was evaluated on the basis of ordinary high water mark (OHWM), defined bed and bank features, and flow regimes. Potential wetland areas were investigated using the Routine On-Site Determination Method as defined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont – Version 2.0* (April 2012). This technique uses a multi-parameter approach that requires positive evidence of three criteria: wetland hydrology, hydric soils, and hydrophytic vegetation. This delineation has not been verified by the U.S. Army Corps of Engineers (USACE), who holds final authority over determinations of the location and extent of jurisdictional waters/wetlands.

## RESULTS

The site is located on the north side of Factory Lane approximately 0.4 mile west of Old Henry Road (Figure 1). It consists primarily of scrub woods habitat with scattered mature woods and two large agricultural fields (Figure 2). The water/wetland features delineated on site include ten streams and one wetland, as depicted on Figure 2 and summarized in the following table

Feature	Length (feet)	Area (acres)
Ephemeral 1	2,030	0.14
Ephemeral 2	385	0.02
Ephemeral 3	1,060	0.05
Ephemeral 4*	215	0.01
Ephemeral 5	180	0.01
<b>Total Ephemeral Stream</b>	<b>3,870</b>	<b>0.23</b>
Intermittent 1	990	0.05
Intermittent 2	445	0.06
Intermittent 3	400	0.04
<b>Total Intermittent Stream</b>	<b>1,835</b>	<b>0.15</b>
Perennial 1	4,095	0.66
Perennial 2	370	0.04
<b>Total Perennial Stream</b>	<b>4,465</b>	<b>0.70</b>
Wetland 1	--	0.10
<b>Total Wetland</b>	<b>--</b>	<b>0.10</b>
<b>TOTAL WATERS</b>	<b>10,170</b>	<b>1.18</b>

\*feature may be considered isolated by the USACE

In addition, the site contains potential summer habitat for the federally-endangered Indiana bat (*Myotis sodalis*), and the federally-proposed-endangered northern long-eared bat (*Myotis septentrionalis*). Potential habitat includes trees with dead branches, cracks, crevices, or exfoliating bark. This habitat includes 43 trees scattered throughout the scrub woodlands and totals approximately four acres.

## DISCUSSION

Jurisdictional waters of the U.S., including wetlands, are defined by 33 CFR Part 328.3 and are protected by Section 404 of the Clean Water Act (33 USC 1344), which is administered and enforced by the USACE. Many water/wetland impacts are also regulated by the Kentucky Division of Water (KDOW) - Water Quality Certification (WQC) Section. Permit requirements could vary widely depending on final development plans; however, based on preliminary site layouts prepared by Sabak, Wilson & Lingo, Inc., it appears that impacts to the majority of on-site stream features may be avoided. The range of potential water/wetland permitting on this site is as follows.

- Avoiding all water/wetland impacts (including bridging of any stream crossings) would require no permits from, or coordination with, the USACE or KDOW, unless an official Jurisdictional Determination (JD) is needed from the USACE (to approve the delineation).
- Impacts to greater than 0.5 acre of waters and 300 feet of stream will require an Individual Section 404 Permit from the USACE, unless a waiver is issued for more than 300 feet of stream impacts.
- Impacts to less than 0.5 acre of waters and 300 feet of stream can be authorized under a NWP 29. The USACE may issue a waiver for impacts to greater than 300 feet of stream to be handled under the NWP program.
- Impacts to greater than 300 feet of intermittent or perennial stream will require Individual WQC from the KDOW. The KDOW does not regulate impacts to ephemeral streams.
- Impacts to greater than 300 feet of intermittent or perennial stream or 0.1 acre of wetland generally require compensatory mitigation.


Under the 404 permitting process, the USACE determines if consultation with the U.S. Fish and Wildlife Service (USFWS) or the State Historic Preservation Office (SHPO) is required to address potential impacts to threatened/endangered species or significant archaeological/historic features, respectively. We are not aware of any archaeological features or studies that have been done on the site. The major threatened/endangered species issue of concern is likely related to the clearing of Indiana bat summer habitat. Based on maps released by the USFWS, the project is located in a "potential" habitat zone for the Indiana bat. Impacts to these areas will likely require informal




consultation with the USFWS, and either seasonal clearing restrictions or payments to the Indiana Bat Conservation Fund.

We appreciate the opportunity to assist you on this important project. Please call Bridget Carnahan or Ron Thomas at (502) 625-3009 with any questions on this report or the overall project.

Sincerely,

  
Bridget G. Carnahan  
Staff Biologist

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Ronald L. Thomas  
Principal  
Senior Ecologist

cc: Mr. Joe Marshall - Sabak, Wilson, & Lingo, Inc.

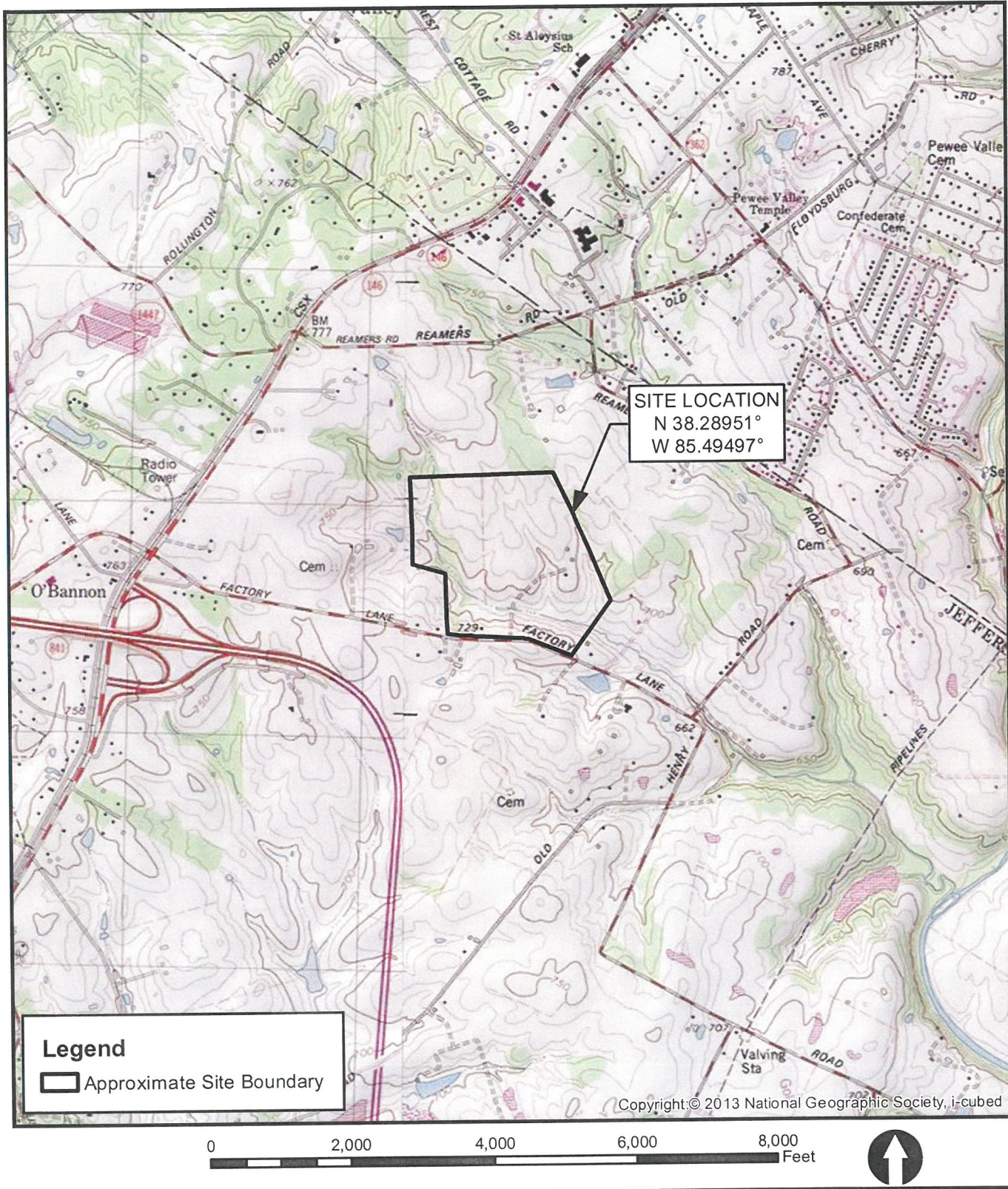
Attachments: Figure 1 – Site Location Map  
Figure 2 – Water/Wetland Location Map



## **FIGURES**



Source: USA Topo Maps, Copyright:© 2013 National Geographic Society, i-cubed



ST. JOSEPH PROPERTY  
JEFFERSON COUNTY, KENTUCKY



SITE LOCATION MAP

REVISED DATE: 11-10-14 DRAWN BY: BGC

FIGURE 1

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Source: World Imagery, ESRI and the GIS User Community (2014).



FEATURE	LENGTH (ft.)	ACREAGE (ac.)
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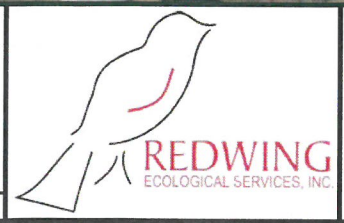
Source: Esri, DigitalGlobe, and the GIS User Commu

NOTE: JURISDICTIONAL WATER/WETLAND BOUNDARIES WERE DELINEATED AND SURVEYED BY REDWING WETLAND SCIENTISTS ON NOVEMBER 12 AND 14, 2014. THESE BOUNDARIES HAVE NOT BEEN VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS. USE OF THIS MAP IS FOR PRELIMINARY PLANNING PURPOSES ONLY.



ST. JOSEPH PROPERTY  
JEFFERSON COUNTY, KENTUCKY

REVISED DATE: 11-17-14      DRAWN BY: BJD



WATER/WETLAND  
LOCATION MAP

FIGURE 2

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