APPENDIX H

Least Bittern Survey Results for the Beaver and Kizell Cells (DST 2013b)

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DST File No.: OE-OT-015982

Attn: Beverley McCreight, OMNR Kemptville District Manager
Heather Zurbrigg, OMMR Species at Risk Biologist
Erin Thompson, OMNR Natural Heritage Biologist Intern

CC: Nicholas Stow, Senior Planner, City of Ottawa

Re: Least Bittern Survey Results for Kizell and Beaver Cells

INTRODUCTION AND PURPOSE

As discussed during the March 12, 2013 meeting between the Ontario Ministry of Natural Resources (OMNR), the City of Ottawa (the City), KNL Developments Inc. (KNL) and DST Consulting Engineers (DST), DST undertook a Least Bittern (*Ixobrychus exilis)* survey for the Kizell Wetland Complex on behalf of KNL. The purpose of this survey was to verify the presence/absence of Least Bittern in the Beaver Cell and the Kizell Cell of the Kizell Wetland Complex in order to support OMNR's evaluation of the Storm Water Management Plan for KNL Phase 7, 8 and 9. OMNR has identified the need for a Least Bittern survey within the Kizell and Beaver Cells, based on the presence of potentially suitable habitat for this species. Previous bird surveys have been conducted in the area of the KNL Developments, but did not include call playback methods which are effective for detecting Least Bittern (Brunton 1992; Muncaster 2003, Stow 2011). None of the existing natural science investigations which have been completed for the study area have previously confirmed the presence of Least Bittern, though it was noted that the habitat is potentially suitable for this species (Stow 2011).

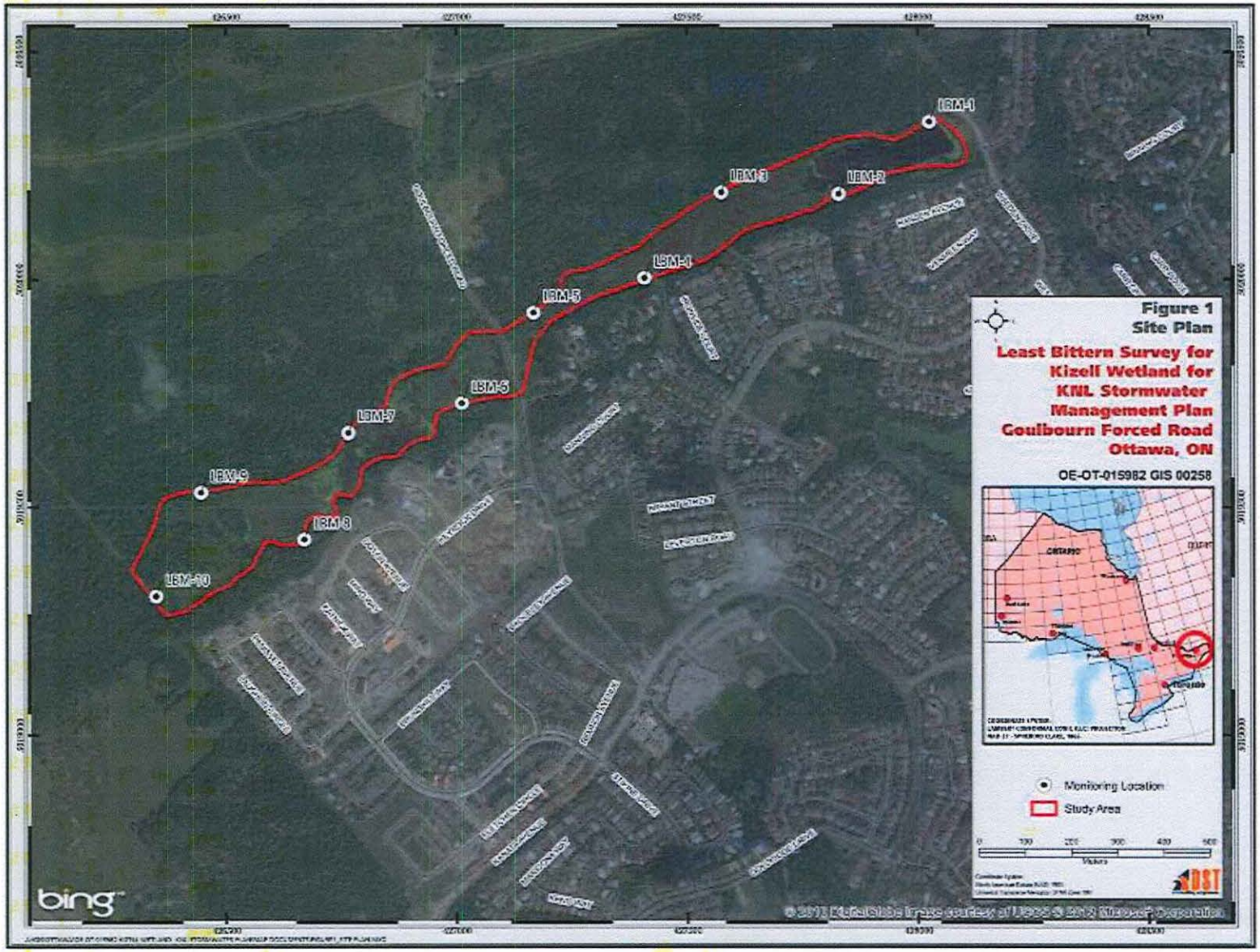
Least Bittern was declared a nationally threatened species by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in 2001 and this status remained unchanged following the 2009 reassessment (COSEWIC 2009). Least Bittern is also listed as a threatened

species under the Ontario *Endangered Species Act*. Least Bittern is known to breed in Manitoba, Ontario, Quebec, New Brunswick and possibly Nova Scotia. This species prefers freshwater marshes and sometimes brackish marshes, with tall dense emergent vegetation (primarily cattails), though it is also found in shrubby swamps. The species is known to be secretive and inconspicuous and so it has not been intensely studied (COSEWIC 2009).

This letter outlines DST's results for the Least Bittern survey.

METHODS

DST provided a letter on March 22, 2013 to OMNR, the City, and KNL outlining the surveying methods in full detail. In brief, Least Bittern surveys were conducted following the *Canadian Wildlife Services (CWS) National Least Bittern Survey Protocol* (CWS 2012). This protocol necessitates that surveys be completed by two trained surveyors. Each survey location was visited prior to the actual survey to validate site accessibility and travel routes. Survey stations were staked or marked for easy recognition. Surveys were carried out three (3) times on May 16th, May 27th and June 13th, 2013. Surveys were conducted in areas of potentially suitable habitat as shown in Figure 1. This included areas of freshwater marsh with tall dense emergent vegetation (primarily cattails) and portions of the wetland where shrubby swamp conditions were found. Survey stations were spaced along the marsh edge at a minimum distance of 250 meters from the next survey station, following a route that encircled the entirety of the Kizell Wetland including both the Kizell and Beaver Cells (Refer to Figure 1). Least Bitterns were recorded whenever seen or heard. A thirteen minute call response broadcast was conducted at each station, with five minutes dedicated towards passive listening, followed by five minutes of call broadcasting, and the final three minutes towards additional passive listening (CWS 2012). All bird species encountered in the course of these surveys were recorded. This included both species at risk (SAR) and non-SAR birds.


LBM-1
LBM-2
LBM-3
LBM-4
LBM-5
LBM-6
LBM-7
LBM-8
LBM-9
LBM-10
Figure 1
Site Plan
Least Bittern Survey for Kizell Wetland for KNL Stormwater Management Plan
Goulbourn Forced Road
Ottawa, ON
OE-OT-015982 GIS 00258
Monitoring Location
Study Area
bing

SURVEY RESULTS

Least Bitterns were encountered on two (2) separate occasions at the Kizell Wetland, with both sightings within the eastern half of the Kizell Cell. No Least Bittern were encountered within the Beaver Cell. During the May 27th, 2013 survey event, one (1) Least Bittern was seen and heard at LBM-7. The individual observed was highly responsive to the taped call and approached the surveyor to close range. This individual emerged from the vegetation in response to call playing, approaching to a much closer distance than is usual for this species (see Photos 1-3). This individual was clearing a male, based on plumage and calling behavior. During the June 13th, 2013 survey event, three (3) individuals were seen and heard. The first individual was heard and seen briefly at LBM-8. This was believed to be a lone male. The second encounter was at LBM-9 where a pair of Least Bittern were seen and heard. During this sighting, a male bird was heard responding to the taped call and briefly emerged from the vegetation. Later this bird flew away deeper into the wetland and a female was seen to be following the male as he flew away from the surveyor. Both the male and female Least Bittern landed together north of LBM-6 within an area of dense vegetation.

The following chart summarizes all Least Bittern activity observed by DST during this survey.

Table 1. Summary of Least Bittern Observations at the Kizell Wetland.

Common Name	Scientific Name	Location	Date	Gender
Least Bittern	*Ixobrychus exilis*	LBM-7	27-May	Male
Least Bittern	*Ixobrychus exilis*	LBM-8	13-Jun	Male
Least Bittern	*Ixobrychus exilis*	LBM-9	13-Jun	Male and Female

The Least Bittern is the smallest of the North American Herons (ROM 2008). They create their nests on platforms within dense stands of emergent vegetation (MBBA 2012), with nests about 30 centimeters above the water's surface (NAS 2013). Open water patches are utilized by Least Bittern for foraging, and their nests are usually within ten (10) meters of open water. The Least Bittern ambushes its prey often from a platform they have constructed out of bent vegetation (MBBA 2012).

Photo 1: Least Bittern (male) observed at LBM-7.

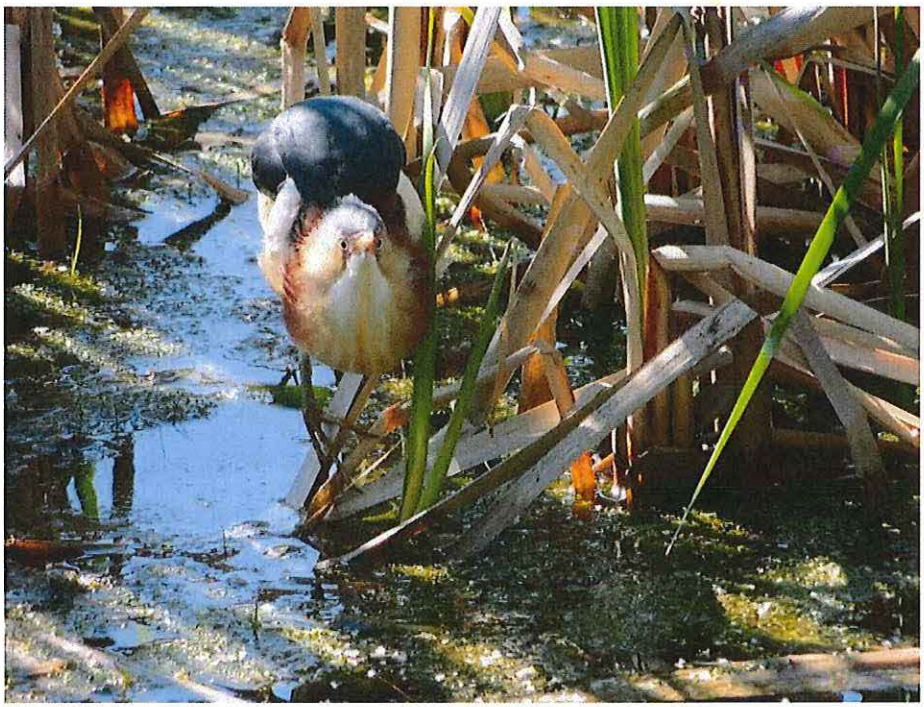


Photo 2: Least Bittern (male) calling from LBM-7.

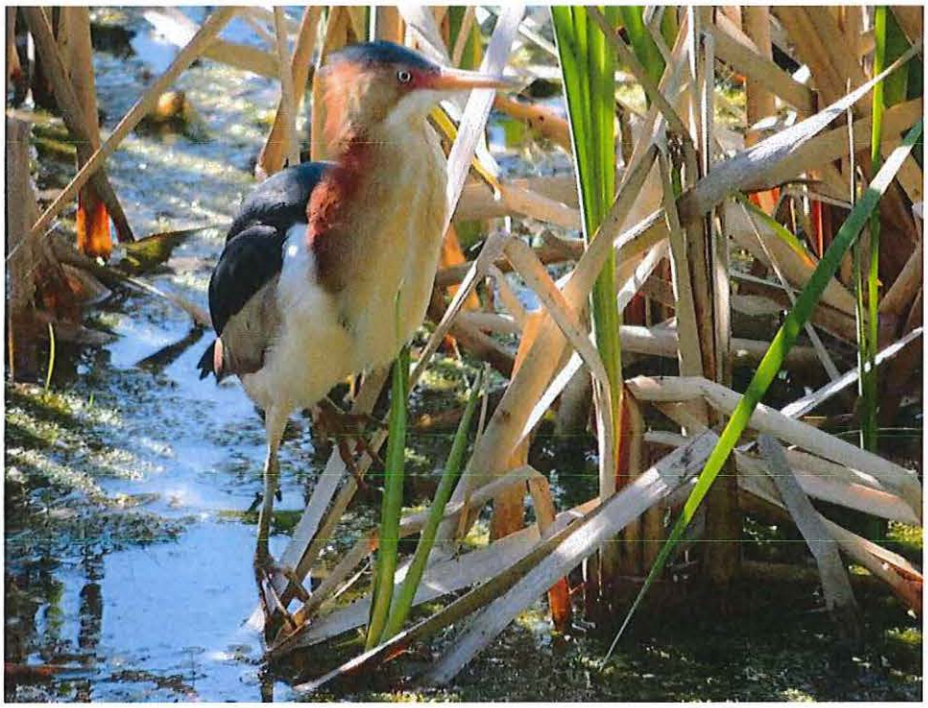


Photo 3: Least Bittern (male) observed at LBM-7.

No other species at risk were observed during the survey. In addition to Least Bittern, the following non-SAR birds were also observed:

- American Woodcock (*Scolopax minor*)
- American Robin (*Turdus migratorius*)
- Black Capped Chickadee (*Poecile atricapillus*)
- Cackling Goose (*Branta hutchinsii*)
- Canada Goose (*Branta canadensis*)
- Common Grackle (*Quiscalus quiscula*)
- Double Crested Cormorant (*Phalacrocorax auritus*)
- Great Blue Heron (*Ardea Herodias*)
- Green Heron (*Butorides virescens*)
- Hairy Woodpecker (*Picoides villosus*)
- Mallard (*Anas platyrhynchos*)
- Red Winged Blackbird (*Agelaius phoeniceus*)
- Swamp Sparrow (*Melospiza Georgiana*)

CLOSURE

We trust that the above information is sufficient, should you have any questions or require further information, please do not hesitate to contact the undersigned at your convenience.

Sincerely,

For **DST Consulting Engineers Inc.,**

Ashleigh Cleary

Andrew McKinley

Ashleigh Cleary, B.Sc.
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Senior Biologist

REFERENCES

Brunton, D. (1992) Kanata Lakes Study Area Natural Environment Assessment.

Canadian Wildlife Service (2012) National Least Bittern Survey Protocol. Website: http://www.ec.gc.ca/nature/default.asp?lang=En&n=B3C3D120-1#_Toc190580274 (Accessed March 20, 2013)

COSEWIC (2009). COSEWIC Assessment and Updated Status Report on the Least Bittern (*Ixobrychus exilis*) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. Species at Risk Public Registry (Accessed March 20, 2013).

Manitoba Breeding Bird Atlas (MBBA) (2012) Manitoba Species at Risk: Least Bittern Website: http://www.birdatlas.mb.ca/speciesatrisk/species/LeastBittern/species.htm (Accessed June 13, 2013)

Muncaster, B. (2003) Environmental Impact Statement – Kanata Lakes North, Kanata Ward, City of Ottawa

National Audubon Society (NAS) (2013) Least Bittern - *Ixobrychus exilis*. Website: http://birds.audubon.org/birds/least-bittern (Accessed June 13, 2013)

Ontario Ministry of Natural Resources (2012a) Natural Heritage Information Center Website: http://nhic.mnr.gov.on.ca/ (Accessed June 11, 2012)

Ontario Ministry of Natural Resources (2012b) Species at Risk Ontario. Website: http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/276722.html (Accessed June 11, 2012)

Royal Ontario Museums (ROM) (2008) Least Bittern. Website: http://www.rom.on.ca/ontario/risk.php?doc_type=fact&id=104&lang=en (Accessed June 13, 2013)

Stow, N. (2011) Re-evaluation of the Kizell Drain Wetland Complex. *Application for Designation as a Provincially Significant Wetland (PSW)*