



Niblett Environmental Associates Inc.
Biological Consultants

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PN 15-049

Mr. James Beach
Development Manager
Broccolini
130 Slater Street, Suite 1300
Ottawa, Ontario
K1P 6E2

**Subject: BROCCOLINI DEVELOPMENT
383 SLATER ST.**

CITY OF OTTAWA

**ENVIRONMENTAL IMPACT STUDY
PEREGRINE FALCONS AND CHIMNEY SWIFT**

Dear Mr. Beach:

We are pleased to submit our EIS report in support of your application for a zoning bylaw amendment for a residential building at 383 Slater Street.

After a thorough review of the existing data on the Ottawa peregrine falcons and chimney swift habitat and existing literature we have assessed the impacts of the proposed development on those species. We have made several recommendations to mitigate any potential impacts.

Please contact us if you or the agencies require any additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "C. Ellingwood", is written over a light blue horizontal line.

Chris Ellingwood
President and Sr. Terrestrial and Wetland Biologist

**BROCCOLINI DEVELOPMENT
383 SLATER ST.

CITY OF OTTAWA

ENVIRONMENTAL IMPACT STUDY
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1.0 Introduction

Niblett Environmental Associates Inc. was retained by Broccolini to complete an Environmental Impact Study for a proposed condominium development in downtown Ottawa as part of the current Zoning by-law amendment application. The EIS was completed to assess the potential impact of the development on downtown nesting peregrine falcons, mitigation measures and the need for permits under the Endangered Species Act. The report was also to address the potential for nesting habitat for a second threatened species, chimney swift, in the existing commercial/residential buildings to be removed.

NEA has prepared a Comprehensive EIS on peregrine falcons for other developments in downtown Ottawa and submitted this to the City. That report provided a comprehensive review of the nesting habits of this pair of peregrine falcons. As a result, we have not included a detailed discussion of the falcon nest, the behavior of the adults or a map conveying locations of nest and favorite perches.

This EIS report is part of the documentation required for the zoning amendment. Further discussion will be required at the detailed design stage between MNR and the development team to examine building design features, construction mitigation and other items as it relates to prevent harm/impacts to the adult and young falcons during the construction phase and in the design of the building including mechanical equipment on the roof of the proposed building.

Those items are outlined in this report, in terms of options available and the reasoning behind the mitigation measures proposed. The detailed design of the building, timing of construction and the need for a permit under the Endangered Species Act will need to be

discussed at that stage with MNR.

2.0 Study Rationale

The City of Ottawa Official Plan, approved under the *Planning Act*, seeks to ensure that development applications will not result in negative impacts to the significant habitat of threatened and endangered species within the City. Policies for the protection of such habitat are presented in section 4.7.4 of the City's Official Plan, which was recently amended through Official Plan Amendment 76 to ensure consistency with the 2014 Provincial Policy Statement (PPS) and the *Endangered Species Act, 2007* (ESA, 2007). These policies prohibit development or site alteration within significant habitat for endangered and threatened species, and only permit such activities adjacent to significant habitat when an Environmental Impact Statement (EIS) is completed which demonstrates that the proposed project will not have a negative impact on the habitat.

The key trigger for the EIS is through regulations issued under the ESA, 2007. The Ontario Ministry of Natural Resources (MNR) has recently issued a habitat regulation under the ESA, 2007 for the peregrine falcon, a threatened species in Ontario. This regulated habitat is now in effect (as of February 18, 2010). Paragraph 29 of O. Reg. 242/08 is relevant to Ottawa, which has hosted nesting peregrine falcons in the downtown core for over a decade:

Peregrine Falcon Habitat

29. For the purpose of clause (a) of the definition of "habitat" in subsection 2 (1) of the Act, the following areas are prescribed as the habitat of the peregrine falcon:

1. A natural cliff face on which a peregrine falcon is nesting or has nested at any time during the previous 15 years, excluding any part of the cliff face where the top of the cliff face is less than 15 metres above the base of the cliff face.
2. The area within one kilometre of an area described in paragraph 1.
3. An artificially created cliff face, such as a vertical or very steep rock cut in an open pit mine, on which a peregrine falcon is nesting.
4. A nesting site on a building or other structure that is being used by a peregrine falcon or was used by a peregrine falcon at any time during the previous two years, and the area on the outside surface of the building or structure that is within 10 metres of the nesting site.
5. An area that,

i. is on or within 200 metres of a building or structure described in paragraph 4, and

ii. is habitually used by peregrine falcons. O. Reg. 436/09, s. 1.

The ESA, 2007 protects the falcons and their habitat directly, in addition to the protection of significant habitat under the *Planning Act*. Section 9 of the ESA, 2007 prohibits killing, harming or harassing the falcons, while Section 10 prohibits damaging or destroying the falcons' habitat (as identified through the above-referenced regulation). These prohibitions have implications for development projects, building maintenance programs (e.g. window washing) and other activities including use of outdoor spaces such as balconies in the vicinity of the falcons' habitat. The Endangered Species Act provides a provision for a permit under section 17 (2) that allows certain activities to occur that result in impacts on an endangered or threatened species as long as an overall benefit is proven.

To comply with provincial legislation and policy and municipal policy requirements, Broccolini has commissioned an EIS to assess impacts to any significant (i.e. regulated) habitat of the peregrine falcons in downtown Ottawa, in proximity to the condominium development located at 385 Slater Street and 400 Albert Street.

The Official Plan includes a provision for development proposed within 120 metres (adjacent lands to) of the regulated habitat. This does not apply to the 385 Slater Street building. The proposed development is within the regulated habitat (i.e. 200 m radius around the nest site). The EIS will assist the City and MNR in identifying the potential impacts of development projects on the falcons and their significant habitat, and outline appropriate measures to avoid or mitigate such impacts. While the majority of impacts and mitigation measures are expected to relate to new building construction or redevelopment of existing buildings within the area of interest, some recommendations may also apply to the ongoing maintenance and operation of these new or renovated buildings.

3.0 Study Area

The falcons' current preferred nesting site is the Delta Hotel (formerly Crowne Plaza Hotel) at 101 Lyon Street between Albert Street and Slater Street in the western portion of the downtown core of Ottawa.

The boundaries of the study included an area of 200 metres from the building where the existing nest is located, a distance corresponding to the ESA habitat protection requirements under Paragraph 29 of O. Reg. 242/08 (Figure 1).

The subject site for this proposed new development is located at the southwest corner of Slater and Bay Street. Future redevelopment is proposed on the balance of the lands to the east.

4.0 Study Methods

4.1 Overview of Approach

The study approach was conducted in three distinct phases. The first phase was to review the existing literature on peregrine falcons and latest information available on the Ottawa pair as per the Ottawa Field Naturalists Club Falconwatch logs.

In the second phase field visits were conducted. NEA is very familiar with this area and a recent visit to view the peregrines was conducted in May 2015. As such we are familiar with the buildings in the area that are utilized by the falcons for perching, feeding, roosting and hunting. The final phase was the compilation of the literature, review of aerial photographs, review of the concept designs and discussions with the study team.

5.0 Proposed Building Design

The building proposed to be constructed is a 23-storey building with a penthouse including residential occupation and ground floor retail. A detailed description of the building is provided to outline the key features the specific design parameters. The concept drawings, artists renderings and elevations submitted with the zoning amendment application should be reviewed for details (IBI).

The proposed condominium development is located at 383 Slater Street. The building envelope currently contains several low commercial buildings.

The majority of the building will be constructed of a mixture of materials including and concrete with unit windows and clear glazed glass. The southern side will include concrete box facades and a penthouse amenity area. Balconies will also have glass fronts. The panels of glass are all relatively small and spacers and different types of glass used to create a pattern.

6.0 Impact Assessment

As this study is not a detailed analysis of urban peregrines in general, this section has been prepared to address in particular the concerns and issues related to the actively nesting pair of falcons in downtown Ottawa and the potential impacts from the construction of this building. The proposed building is approximately 150 metres west southwest of the peregrine nest on the Delta hotel and 1 block away

The impacts of this development can be divided into two categories: 1) direct impact on the birds and potential impacts to nesting activities and 2) indirect impacts from the design of the building, in particular the presence and extent of glass windows and construction activity. The potential for benefits to the birds through the new perches and other façade features are also addressed.

6.1 Regulated Peregrine Falcon Habitat in Ottawa

The nest site used since 1998 is located on the Delta Hotel formerly the Crowne Plaza Hotel and prior to that the Citadel Inn. This building is owned and operated as part of the Delta Hotels chain and is located at 101 Lyon Street between Albert Street and Slater Street in the western portion of the downtown core of Ottawa. The regulated habitat as defined by the

area within 200 metres from the existing nest site on the building in downtown Ottawa.



**Photo 1: Female peregrine with one chick on
NW corner of Delta hotel (OFNC Falconwatch website,
photo taken May 30, 2015)**

An analysis of the Falconwatch data and discussions with the Falconwatch coordinators and MNR found that the birds use much of downtown Ottawa for their territory, in particular the buildings within two blocks of the nest and perches that provide a visual sight line to the nest. The birds will use the territory on the south and east side of downtown more when nesting on the southeast corner of the Delta Hotel. Conversely they use the north and western side of downtown more when nesting on the northwest corner. The adults and young do spend considerable time on buildings on all sides of the Delta Hotel. Those high perches serve as ideal locations for visually searching for prey, lookouts for predators and defensive positions to watch for predators or other peregrines or humans that may threaten the nest.

The birds also use a broader area of Ottawa for hunting including Tunney's Pasture, Britannia, Ottawa River and western downtown area. This is confirmed by visual observations and the prey items noted by the volunteers, specifically spotted sandpiper, a river shoreline species.

Plucking and feeding locations are scattered in downtown. Buildings in downtown are variable in design, height and complexity, providing a wide variety of perches. This includes tall antennas on several buildings, concrete ledges, architectural features,

balconies, metal ledges on top edge of buildings and gravel rooftops. Corners of buildings are the typical location for perching as it provides views in two directions and from above.

A review of the peregrine falcon watch activity reports from 1998 to 2015 (OFNC, 2015) was completed by NEA. Common perches were determined through examining observations made by the volunteers of the Ottawa Field Naturalists Club. The roof top was observed as the most frequently used by the peregrine falcon adult pair from 1998 through to 2010. The tall roof top antennae on the Carlisle building at the southeast corner of Lyon Street and Laurier Avenue west was observed to be the second most frequently used perch. That tall perch provides a commanding view of most of downtown. The balconies, window ledges and light standards were observed to be used less frequently by the peregrine falcon pair for all years. In 2015 the adult peregrines have changed with an unbanded male now present. One chick approximately 10 days old is currently residing in the nest (May 30, 2015). The falcons fledged three chicks successfully in 2014.

6.2 Sources of Stress in Downtown Ottawa and Peregrine Response

The peregrines using the area within 200 metres of the Delta Hotel as their main territory and hunting area are exposed to many sources of stress. The adults and young utilize the hotel and adjacent buildings for all their normal activities. The main stresses to the falcons are not from street level noises, pedestrians, vehicles etc. The birds are sensitive to human presence near the nest site or wherever the birds are perched. In particular activity above or at a similar elevation attract the birds' attention (Eve Ticknor; Recovery Strategy; Damon Greer: pers. comm.). The hotel nest site is strictly off limits to all personnel during the nesting season. This prevents sudden flushing of the birds while nesting and abandonment of the eggs during the key incubation period.

Peregrines do react to disturbances that threaten the safety of the adult or the young/nest or perceived threats by making loud alarm calls. These kek-kek-kek screeches are a sign the birds are agitated. The Ottawa birds have been known to react to people on roof tops, window washers and on balconies. The adults react by close swoops near the person and constant alarm calls. Dive bombing and striking can occur. Birds regularly have swooped at falcon watchers who use the Constitution Square building southeast of the Crowne Plaza to track the young birds and the nest site. Several incidents of window washers being dived at have occurred over the years. During banding operations of the young in the nest, the adults are distracted by volunteers several buildings away.

The pair in Ottawa has changed over the years and different birds have different tolerances

to humans and disturbance. It has been noted that as the birds mature and nest over successive years they have become more defensive of their territory (Shaun Thompson, MNR; Eve Ticknor, OFNC and Damon Greer, Ohio DNR, pers. comm.). This is a natural instinct to protect the nest and defend the well established territory against intruders. Although incidents of close calls and aggressive behavior are uncommon, the birds will vigorously defend the nest site, their young and their territory.

6.3 Impact and Mitigation During Construction

Discussions with the experts and a literature review have found little information or consensus on the direct and indirect impacts of office or condo tower construction near an urban peregrine falcon nest.

Direct impacts on the nest would be from changes to the Delta hotel itself, in particular the nest ledge or maintenance activities. Peregrines do show a strong fidelity to a nest site. This pair has used the exact same area on the ledge for all nesting attempts on the northwest corner of the hotel, even with different males and females.

Indirect impacts related to activity near the nest site due to construction are more likely and mitigation must be provided to limit the duration, frequency and types of disturbance. All birds will habituate to constant noises and activities; however each individual has their own tolerance in terms of perceived threats, proximity someone can approach, the distance at which they will flush or react and the type of territorial defense that ensues. Indirect impacts on nesting success is predominantly through stress to the birds that detracts from incubation of the eggs, distraction from defending the nest, use of energy on alarm calling or dive bombing and interfering with normal activities such as hunting and providing food to the young.

The one block separation between this development and the Delta Hotel has the potential to affect the birds, primarily during construction. The nest site itself will not be impacted directly by construction of the new residential building.

During the construction period, a suite of mitigation measures can be completed to limit indirect impacts to the birds, in particular during the critical nesting period.

1. Education and Contingency Plan

- Establishing liaison between MNR and Falconwatch and parties such as the property owners, building managers, construction supervisors to provide information on the peregrine falcons and make them aware of the birds in the area.
- Providing contact list (phone number, cell phone number, e-mail) of all key people (MNR, Falconwatch, building supervisors, building managers, construction supervisors, consulting biologist) to these parties in case an adult or young peregrine is found on site during construction, especially as the tower approaches the midway height
- Making all construction workers on site aware of the possible presence of falcons on the building and in the work zones and not to flush or disturb a bird that may appear injured or stressed.
- Making all construction workers aware that young falcon may be protected by an aggressive adult while on construction site, open floors or outside ledges.
- Develop protocol for dealing with peregrines on the buildings during construction and incidents regarding attacks on workers in consultation with and approval of MNR. Protocol should include contacting site supervisor, isolating area temporarily while falcon expert is contacted to attend site and determine if bird needs to be rescued and relocated or taken to vet, or if bird is simply resting on the ledge or building façade
- Regular contact with the Falconwatch coordinators and volunteers and MNR on issues or if incidents increase between workers and falcons

2. Construction Activity- Adaptive Management During Construction

An 'adaptive management approach' to deal with specific construction activities is required to ensure the construction is not delayed, while mitigating impacts on the falcons. How the adults and young will react to specific activities, personnel, equipment, cranes, loud noises, elevators and other activities is difficult to predict. Factors include a change in the adults breeding on site and the individual adult bird's tolerance to activity and human presence across from the nest site. Individual urban peregrines react differently with a range of personalities. Adults can be very tolerant and unaffected by new activities near the nest building through to aggressive individuals that vigorously defend the territory and are intolerant of people on rooftops or balconies.

Adaptive management requires that the construction crews are open to possible changes to activities on a day to day basis. The key time is the months of May, June and July when the falcons are nesting and young are hatched through to the fledging stage and the few weeks following the young leaving the nest ledge. At that time the behavior of the adults has the potential to disrupt construction activities and to affect the safety of the workers. Conversely, the falcons can be impacted by using energy on defending the nest and young that may affect the nesting success. Late March to May can also be a key time when the female is laying eggs and incubating eggs, at which time repeated disruptions can lead to abandonment or impact on hatching success.

- Open dialogue and cooperation to ensure falcons are not being stressed and affecting nesting attempt or nesting success
 - If issues arise on this subject or there is concern from MNR and falcon watchers the birds are reacting negatively to the activity directly related to the construction, a meeting be held between all parties to determine what additional mitigation measures are required.
 - Regular updates on the peregrine activity by the MNR and/or falconwatch volunteers to inform property managers, construction supervisors, project managers and building supervisors when young will hatch and when to be cautious of adult birds
 - Contact information posted on site and list of contacts with all key personnel
 - Update to property managers and building supervisors on nest failure if it occurs and the likely reason and also to let them know there will be no volunteers on patrol and less territorial behavior by adults
- Providing extra safety equipment/measures to crews if necessary to protect against peregrine strikes
- Ensure safety of workers accessing upper floor construction ledges and roof tops during construction, especially in May, June and July when young are flying in the area
- Contacting emergency numbers if peregrine found on site or if incident occurs
- Use of additional measures to protect workers and reduce stress on birds that may include protective sheeting on outside of building or other measures
- Engaging workers and managers to have an interest in the birds and provide input or innovative approaches on other possible measures to limit contact with birds, screen work from nest or reduce stress on birds

A qualified peregrine biologist (consultant) should also monitor the birds during the construction phase to provide input and advice on construction activities that may be impacting the birds' behavior or stress. This person can also act as a liaison between the Falconwatch volunteers and the building managers and construction crews. The frequency and duration of the monitoring should be discussed with the City, MNR and the development group so that sufficient effort is afforded to make informed decisions on possible impacts and discuss solutions/mitigation measures.

6.4 Building Design Features Relevant to Peregrine Health and Safety and Mitigation Measures

6.4.1 General Concerns and Mitigation Measures

From the discussions in this EIS and with falcon experts, the general consensus is that all-glass buildings pose a danger to migratory birds. Toronto has created specific guidelines to limit bird strikes on medium to high rise buildings.

Klem (2009) noted that Minimizing the use of large expanses of glass and nearby vegetation in the vicinity of clear and reflective panes will mitigate bird-glass collisions, and prevent injury and death to birds on passage during migratory periods.

The reflection of sky, buildings and vegetation in a building with large windows does not register as an obstacle for most birds, including peregrine falcons. The pattern of the glass, size of the panes, presence of dividers and bars between panels, colour of the panels, reflective properties of the glass, distorted patterns and angle of the glass all contribute to the reflectivity. Breaking up the pattern or choosing colours, coatings or less mirror like types of glass can significantly reduce the quality of the reflection. The use of closed blinds, louvers or other features to limit the overall transparency also gives visual clues to birds that the glass is an obstacle. Young falcons are susceptible to collisions with glass windows particularly in the first few flights.

For this project, the combination of concrete façade and glass on the balconies, unit windows and patio doors does not pose a significant danger to the Ottawa falcons. Klem (2009) notes that the breakup of the glass pattern with panes and multiple smaller surfaces limits the reflectivity and breaks up any reflections or lighting. Angling the glass can also change the reflective properties and make a building less of a hazard. The conceptual design shows that the window pieces are relatively small even on the larger penthouse units and glassed extensions facing Lyon Street with several floors of glass windows. The

windows should be designed with glass that has a non-mirror like surface (i.e. a distortion or special coating on the outside). The north facing windows will not reflect images as well due to the limited sunlight shining on the buildings and the angle of the light. As such they will not pose a hazard to the birds.

The height of the building also provides less opportunity for reflections of trees or other buildings. The open nature of the glazed panels also provides a view into the interior and does not give a transparency or view through to the other side. All of these features make the window less of a hazard for peregrines.

Incidents in downtown with all-glass buildings have resulted in the death of two young falcons. A young bird (known as Allison) hit the south side of the C.D. Howe building in 2007 on her first flight from the nest site, when flying low through the buildings in the area of Sparks Street and Kent Street and not realizing the reflection of trees and buildings in the mirrored glass. The bird was killed when it struck the glass windows. The next year, Jo-Jo a young female falcon succumbed to the same fate at the same building. Part of the issue with this building is that it is only 7 stories tall, faces south, has an open parking lot to the south, has a mirror like reflection, reflects all other buildings and prey flying by in the area. As a result, it is not perceived as an obstacle but as open space for the peregrines to fly through. The hunting speed of the birds also poses a danger when they approach that type of building.

The presence of cooling units or other mechanical equipment on the roof of a building can pose a danger, especially to young falcons. Open pits, stairwells, moving parts, electrical equipment or other sunken features can create a hazard for young peregrines who may fall into those areas and get trapped, be electrocuted or injured. The Minto Place has installed grills or grates over those areas to prevent falcons from becoming trapped. Confined spaces make it difficult for birds to hop out or spread their wings wide enough to fly out and they consequently can become trapped. The design of this building should keep this in mind.

The Ottawa peregrines are aerial predators that utilize speed, keen vision, agility and experience to hunt for prey. High vantage points and high flights over downtown allow them to search for potential prey. Stoops are high speed dives to attack a prey item. This technique is most effective when birds are flying or are surprised by a peregrine flying through the open spaces between buildings. The combination of open spaces (e.g. parking lots, low buildings, parkettes, water front, green space and spaces between buildings) plus the high vantage points and updrafts created by wind patterns and heat, create a combination of hunting territories and available prey items. The construction of a new

development in downtown will reduce the amount of open space. However there will still be a broad range of hunting habitats not only within the 200 metre distance but within their overall territory.

The opinion of the experts has been that wind patterns (wind tunnel effects) between office towers is typically not a major factor for a bird such as a peregrine falcon that is designed for high speed. The wind between the towers may be an issue on specific days/hours during weather events, which do not normally occur in the summer breeding season. The wind tunnel effect may impact on the young birds in their first few flights when they are not as adept at flying. After that the birds do become proficient at flying and dealing with changing wind conditions. Incidents of young birds affected by wind on early flights do occur but usually end in a poor landing attempts or minor impacts with building ledges.

The presence of guide wires or other support wires can also pose a danger to the birds (Sect. 3.0 ToR #6). No antennas or communications equipment is proposed for this building at this time.

There are records in Ottawa and several in Toronto where young birds have become temporarily trapped on balconies (glass panel and metal) (Sect. 3.0 ToR #6). In all cases the birds eventually flew out on their own accord but were watched by volunteers in case a rescue was needed. In Ottawa, incidents where young falcons have been temporarily trapped on glass balconies occurred at the Minto Place hotel on the 16th floor and on the 12th floor of the Marriot Hotel. Both managed to eventually hop up to the railing.

6.5 Residential Use/Operation/Maintenance Concerns and Mitigation Measures

6.5.1 General Concerns and Mitigation

Peregrines are particularly aware of potential dangers at their perch level, three floors below and above (Eve Ticknor; Damon Greer; David Bird, pers, comm.). This building is 4 stories shorter than the Crowne Plaza and much shorter than the surrounding buildings, including the antennae on the Carlisle Building to the northeast. As such the birds perched on that antennae should have little interest in activity 8-12 stories below.

Access to the rooftop and outside the building will be required for repairs, maintenance, window washing and security patrols. Currently building managers in the downtown core are visited by the Falconwatch coordinator annually and notified in writing of the timing of the young birds in the nest and fledging. This exercise has been very successful in

informing the managers when potential danger from falcon attacks is possible and to limit interactions between window washers and outside repair crews. The building managers have adapted to the peregrines schedule, primarily for safety reasons and limit these types of activities during those summer periods. Several building managers contact the Falconwatch coordinator to ask when these works can continue as the summer period and falcon activity winds down.

All of the potential mitigation measures and recommendations completed during construction period can limit the indirect impacts. However post construction, issues or unperceived hazards to the peregrines may arise that were not anticipated. Young birds in particular are very curious and get into situations and spaces where they can become entangled or trapped. It is important that the adaptive management approach continue post construction so that any incidents or hazards are assessed and preventative measures put in place. The continued cooperation with the Falconwatch, MNR and other experts is required to prevent situations that may cause injury or death to the falcons.

One example is the CD Howe building where flags and cloth banners are hung from the building in June to cover part of the glass surface of the building to limit the reflection. This was done in response to two young peregrines that were killed when they collided with this building in 1997 and 1998.

The presence of open balconies shown on the plan, particularly the penthouse decks and the green roof, should not pose a hazard to the residents. The height of the building, the size of the balconies and the distance from the Delta Hotel are key factors in limiting potential interactions or incidents between the falcons and the residents of the new building

6.5.2 Building Height Increase

Based on our consultation with experts and our knowledge of this falcon pair, the building height will not have a significant impact. The building is still only 23 floors, which is less than the height of the other buildings in the area.

The fledging period is the period when most incidents involving peregrines needing rescuing has occurred. The first flights are particularly difficult as the birds struggle to fly evenly and to land on suitable perches. Many incidents of young birds bumping into glass buildings and trying to catch a talon on a small window divider have been recorded in Ottawa. In most cases the birds manage to hold on or to regain their flight and land

elsewhere. Some have required rescues as they slide down to ground level. The height of the new building will not be an issue during first flights. There are balconies and ledges where the birds could rest. The issue may be the birds deciding to stay on a balcony railing for a few hours or longer until their next flight attempt.

6.6 Effect on Regulated Habitat Due to Construction

No impacts on the regulated habitat are anticipated from the construction and occupation of the Lamb Development building.

6.7 Overall Benefit Permit

Section 9 and 10 of the Endangered Species Act provide protection to endangered and threatened species and their habitat.

There are two key protection provisions in the Endangered Species Act, 2007:

Subsection 9(1) prohibits the killing, harming, harassment, capture, taking, possession, transport, collection, buying, selling, leasing, trading or offering to buy, sell, lease or trade species listed as extirpated, endangered or threatened on the SARO List

Section 10 prohibits the damage or destruction of the habitat of an endangered or threatened species on the SARO list, and may also apply to the habitat of extirpated species through a specific regulation. Habitat protection for some endangered or threatened species is presented in the recovery plans.

The act allows for some flexibility in balancing social, economic, and cultural considerations with the protection and recovery of Ontario's species at risk and their habitats. This enables the Ministry of Natural Resources, using various tools, to permit activities that would otherwise be prohibited by sections 9 or 10 of the act. Therefore, an authorization under the Endangered Species Act, 2007 (i.e. permit or agreement under Section 17(2) can be required as a part of the project approval when protected habitat may be damaged or destroyed as a result of the project.

An Overall Benefit Permit (Sect. 3.0 ToR #12) can be issued under clause 17(2)(c) , where the proponent can demonstrate, to the satisfaction of the Ministry, that:

- they can offset the negative effects of the project by taking additional actions that will result in an overall benefit to each individual species negatively affected by the project within a reasonable time
- reasonable alternatives have been considered, including alternatives that would not negatively affect the species, and the best alternative has been adopted, and
- they are taking reasonable steps to minimize negative effects on individual members of the species.

Overall Benefit to the falcons in downtown Ottawa would be from an increase in the habitat available while limiting any potential dangers and continued nesting success at the present nest site.

The proposed building is new construction where low 2 and 3 story commercial businesses exist. Currently those sites provide limited habitat for the falcons and are not used as nest sites, feeding perches, hunting perches or roosting sites. The new construction has the potential to increase the habitat by providing those functions. The overhanging roofs and open penthouse struts will provide perches for the birds. The birds typically choose high perches for hunting. The construction will not result in damage or destruction of the regulated habitat. Regulated habitat has been defined by MNR as the nest site but also the area within 200 metres of the nest site.

The second part of the Overall Benefit permit is to show that alternatives were considered and the best option chosen (Alternative Analysis). In completing the EIS and through discussions and design reviews by the City at the building permit stage, as well as discussions with MNR and falcon experts, the design of the buildings will ultimately be architectural and functional while providing a safe environment for the falcons.

The final part of the permit is to show that reasonable steps are taken to minimize negative effects on individual members of the species. In this EIS a number of mitigation measures and recommendations have been presented to prevent negative impacts on the falcons and their habitat.

The MNR is responsible for the issuance of the ESA permits, where needed. The EIS has been prepared to show an overall benefit to the falcons from the design of the buildings. Every effort will be made to work with the falcons present and limit contact or disturbance and comply with Section 9 and 10 of the Endangered Species Act. If MNR finds that a permit is still required, it should be negotiated with the building owner with specific conditions.

7.0 Chimney Swift

The chimney swift (*Chaetura pelagica*) is listed federally and provincially as a threatened species (COSEWIC, 2015, COSSARO, 2014). The chimney swift is usually found within 1 km of a waterbody and, as its name implies, predominantly nests within old chimneys in urban and suburban areas. Prior to European settlement, chimney swifts nested in old growth forests in hollow trees. As an aerial forager, the species feeds on clouds of aerial insects in urban areas and over fields and waterbodies. The insects are found in columns above those habitats. Declines in populations of these insects are in part to blame for a global reduction in swift numbers. A population of chimney swifts is present in downtown Ottawa where they occupy open chimneys. A discussion was held with the MNR Stewardship coordinator who is overseeing a project to map the nesting and roosting sites in the City of Ottawa. Advice and opinion was sought on potential habitat and restrictions on chimneys for these nests.

Chimneys used by the species are typically brick chimneys with open tops that allow easy access to the interior. The fireplaces for those chimneys are found more often in older homes, in particular historical buildings. Modern chimneys are lined with metal pipe and a cap installed to prevent precipitation and unwanted animals from entering the chimney. This practice has had a major impact on chimney swift nesting and roosting sites. Chimney swifts typically nest in singles, with one pair per chimney. After nesting and before and during migration from late July to early October, many swifts gather in bigger roosts, sometimes as many as hundreds in a single large chimney. These larger roosting chimneys are important for swifts on cool nights.

With the switch to gas and electric heating since the 1950s, however, chimneys have become too small and/or inaccessible for these birds. Old chimneys have been capped, wired over or lined with sheet metal, to which the birds cannot attach their nests. Most of the remaining suitable chimneys – largely on old churches, schools and commercial and industrial buildings – are also rapidly being closed, lined or demolished.

The two commercial buildings that are to be demolished as redevelopment occurs (385 Slater St. and 400 Albert St.) were examined to determine their current status. There was one main chimney per building, but both had be modified and capped. As such those chimneys are completely inaccessible and do not provide habitat for chimney swifts to nest or as a roosting site.



Photo 2. 385 Slater St. rooftop



Photo 3. 400 Albert St rooftop

8.0 Conclusions

The EIS report was prepared to address the potential direct and indirect impacts of a new condominium building and construction on an active peregrine falcon nest on the Delta Hotel in downtown Ottawa.

The proposed residential building by Broccolini will be lower in height than the existing falcon nest's building. Based on our consultation with falcon experts, literature review and observations, we conclude that there will be no negative impacts on the regulated habitat of this threatened bird provided that mitigation measures are in place and our recommendations are implemented. The need for an adaptive management approach and continual discussions/cooperation between the Falconwatch volunteers, MNR and the building managers and construction supervisors and crews however is paramount to ensuring issues are addressed as they occur and proper mitigation measures put in place as part of the detailed design and site plan approvals.

The need for a permit under the Endangered Species Act depends on the final design details and mitigation measures. This will be determined through discussions with MNR and their review of this EIS and the final building designs.

9.0 References

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- Ontario Ministry of Natural Resources. 2010. Technical Guidance for Forestry Activities in Peregrine Falcon Regulated Habitat under the Endangered Species Act, 2007. Draft for Public Review. 7pp. (*Note that this document applies solely to forestry activities in relation to natural cliff-nesting peregrines, not urban birds, and is therefore of little relevance to the City's needs. It does identify a critical breeding period of March 15 to September 1, which is intended as a broad guideline to be refined using local knowledge*).

Ontario Peregrine Falcon Recovery Team. 2010. Recovery strategy for the Peregrine Falcon (*Falco peregrinus*) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. vi + 36 pp.

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