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March 24, 2023

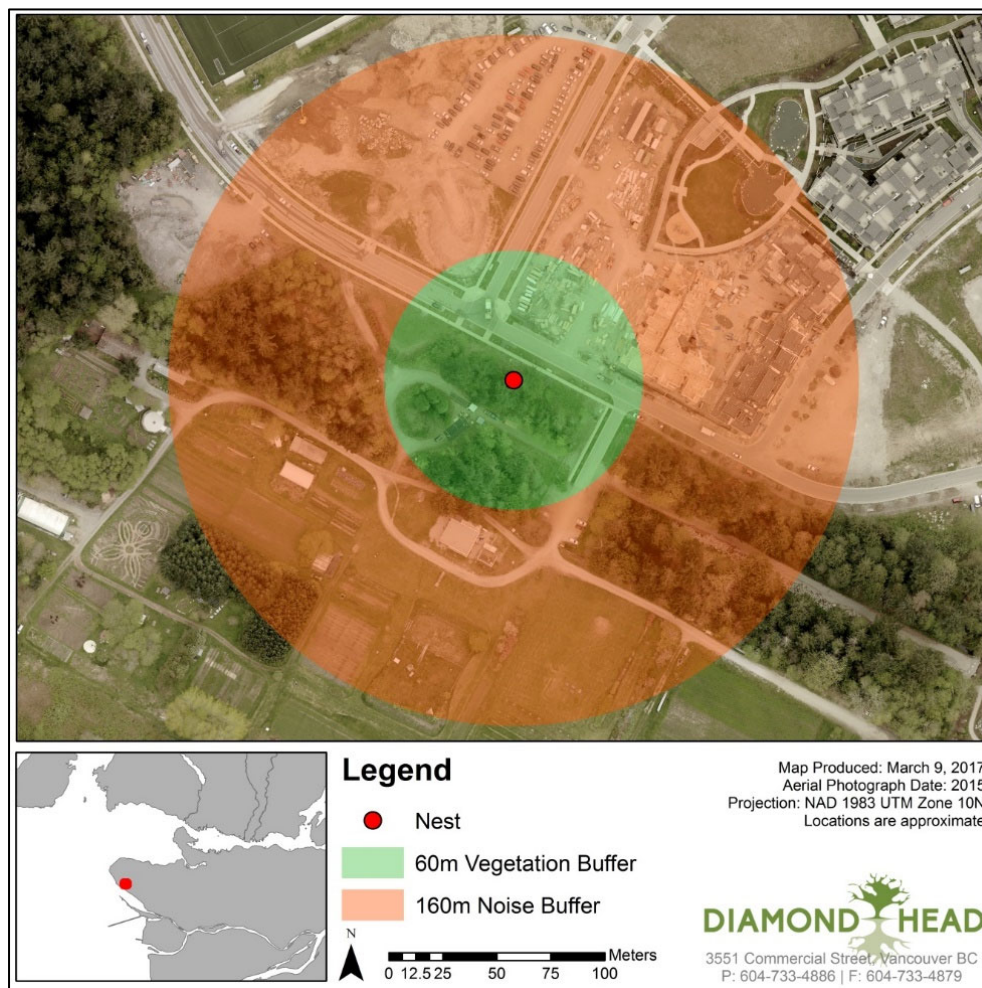
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### **Memo Re: Monitoring of Eagle Activity**

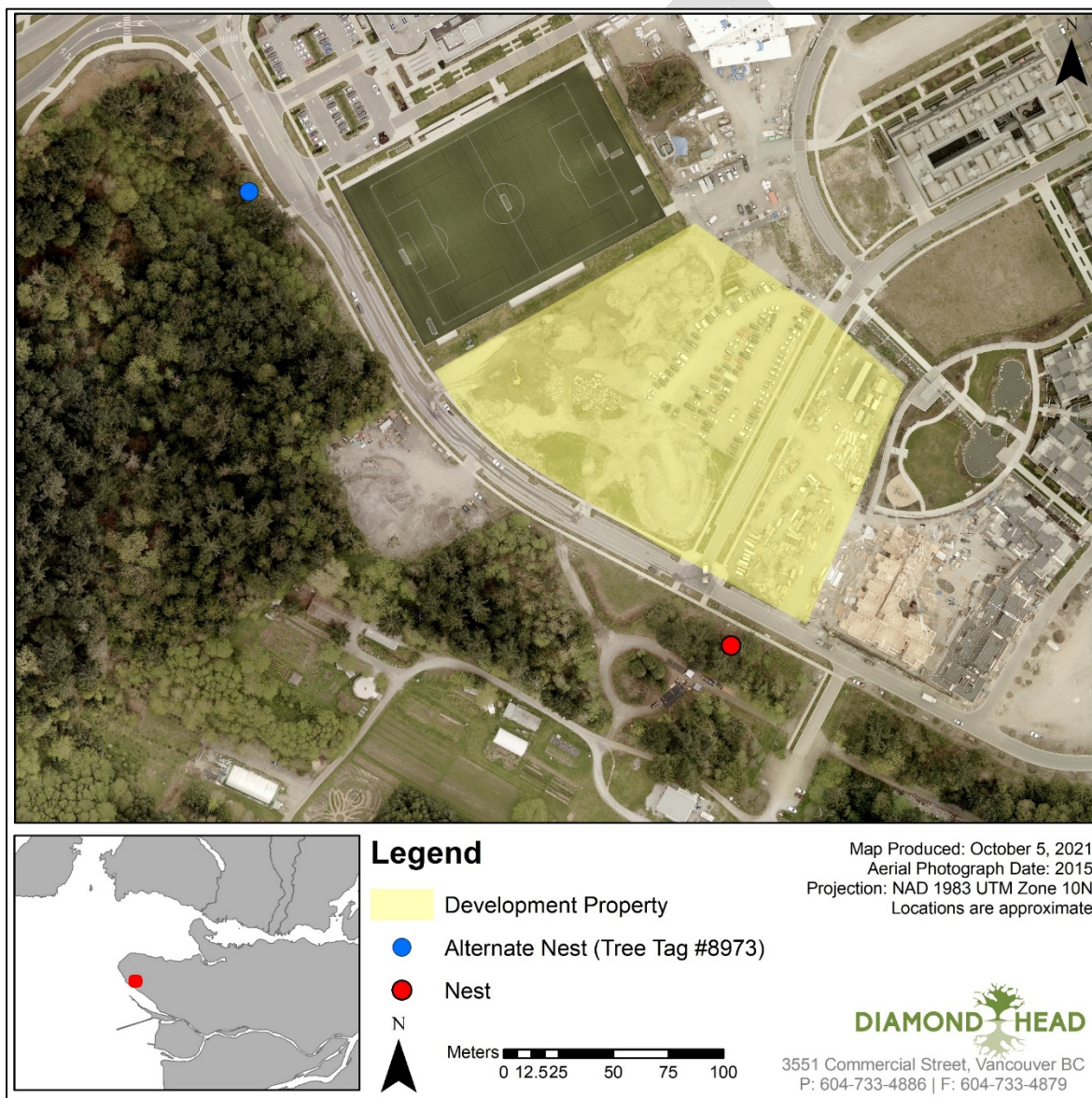
A Protected Species Management Plan was developed to manage the impacts to a bald eagle nest from proposed construction of a multi-unit residential development on Ross Drive at Birney Ave on the University of British Columbia South Campus. The plan was developed by Diamond Head Consulting (DHC) for this nest on March 23<sup>rd</sup>, 2017. The plan recognizes the legal obligation to protect this nest and outlines best management practices to mitigate impacts to it during planned development (Figure 1).



**Figure 1. Original nest location, with vegetation (green) and noise (orange) buffers**

Diamond Head has been monitoring this nest since 2017, and in September 2020 an alternative nest was constructed by Hancock Wildlife Foundation to provide the eagles an opportunity to nest away from construction disturbance (Figure 2). This original nest was intended to be coned off in 2020, at the recommendation of the raptor expert at the Ministry of Forests and the Hancock Wildlife Foundation; however, with the construction postponed, the coning was delayed with the intent of coning the nest closer to the start of construction.

With construction scheduled to begin in summer 2023, plans to cone the original nest proceeded. A wildlife permit for the nest coning was submitted by DHC on June 30<sup>th</sup>, 2022 and approved by the province on September 2<sup>nd</sup>, 2022. The original nest was coned on September 14<sup>th</sup>, 2022. With the eagles return to the area, monitoring of the original nest and alternate nest has begun for the 2023 breeding season.



**Figure 2. Location of the original nest (red) and alternate nest (blue) at Ross Drive and Birney Avenue.**



Four monitoring sessions were conducted to determine if the eagles had adopted the alternate nest; 2 in December, 1 in January and 1 in early February. Throughout both monitoring sessions, no activity was observed at the original nest, nor had the alternate nest been adopted. Eagles have been observed around the UBC Wesbrook area and circling around the original nest by both DHC staff and the public.

With the eagles not adopting the constructed alternate nest, DHC biologists conducted a search late February on nearby natural areas and tall trees to identify any new eagles nests. This search was focused on the tallest trees in the immediate area and larger natural areas. The search identified three raptors nests of interest, located in Pacific Spirit Park, along Old Marine Drive. UBC Properties Trust requested that DHC continue monitoring these nests to determine if they were active and, if active, attempt to identify if they could be the eagles that were previously nesting at Ross Drive and Birney Avenue.

This memo details a monitoring session conducted by DHC on March 22<sup>nd</sup>, 2023, to search the surrounding area to determine if the three identified nests were actively being used by bald eagles.

### Site Visit – Observed Eagle Nest and Activity

March 22, 2023

Three nests were identified during the nest survey in February 2023 (Figure 3). Nest 1 is a raptors nest that was suspected to be under construction. Nest 2 is an established nest located in a 38 m tall grand fir. Nest 3 is an established nest, previously identified by the Stanley Park Ecological Society (SPES) Eagles Nest report in 2014 and labelled as the UBC Botanical nest. During the February nest survey, two eagles were observed mating at the Nest 3 (UBC Botanical).

All three nests were observed during the monitoring session at various times of day. Monitoring of the nests began at 7:56 AM and concluded at 1:15 PM. Weather conditions were clear and cool in the morning (5°C) and warm in the afternoon (12°C). A summary of eagle activity during the February nest survey and this March 22 monitoring session are provided in Table 1 and Table 2, respectively.

**Table 1: Summary of eagles and nest observations on February 23, 2023.**

Nest #	Eagle Activity
Nest 1	No eagle activity, identified nest suspected to be under construction
Nest 2	No eagle activity
Nest 3 (UBC Botanical)	Observed two eagles mating on nest tree
Original Nest	Cone still in place, no eagle activity
Alternate Nest	No eagle activity.

**Table 2: Summary of eagles and nest observations on March 22, 2023.**

Nest #	Eagle Activity
Nest 1	No activity for duration of monitoring session. Discussion with a volunteer monitor suggested that this was likely an eagles' nest that had collapsed several years ago.
Nest 2	Observed eagles exhibiting nesting behaviours. Volunteer monitor stated that this nest had not been active for at least the past 2-3 years.
Nest 3 (UBC Botanical)	No eagle activity
Original Nest	Cone still in place, no eagle activity. New signs posted on information board.
Alternate Nest	No eagle activity

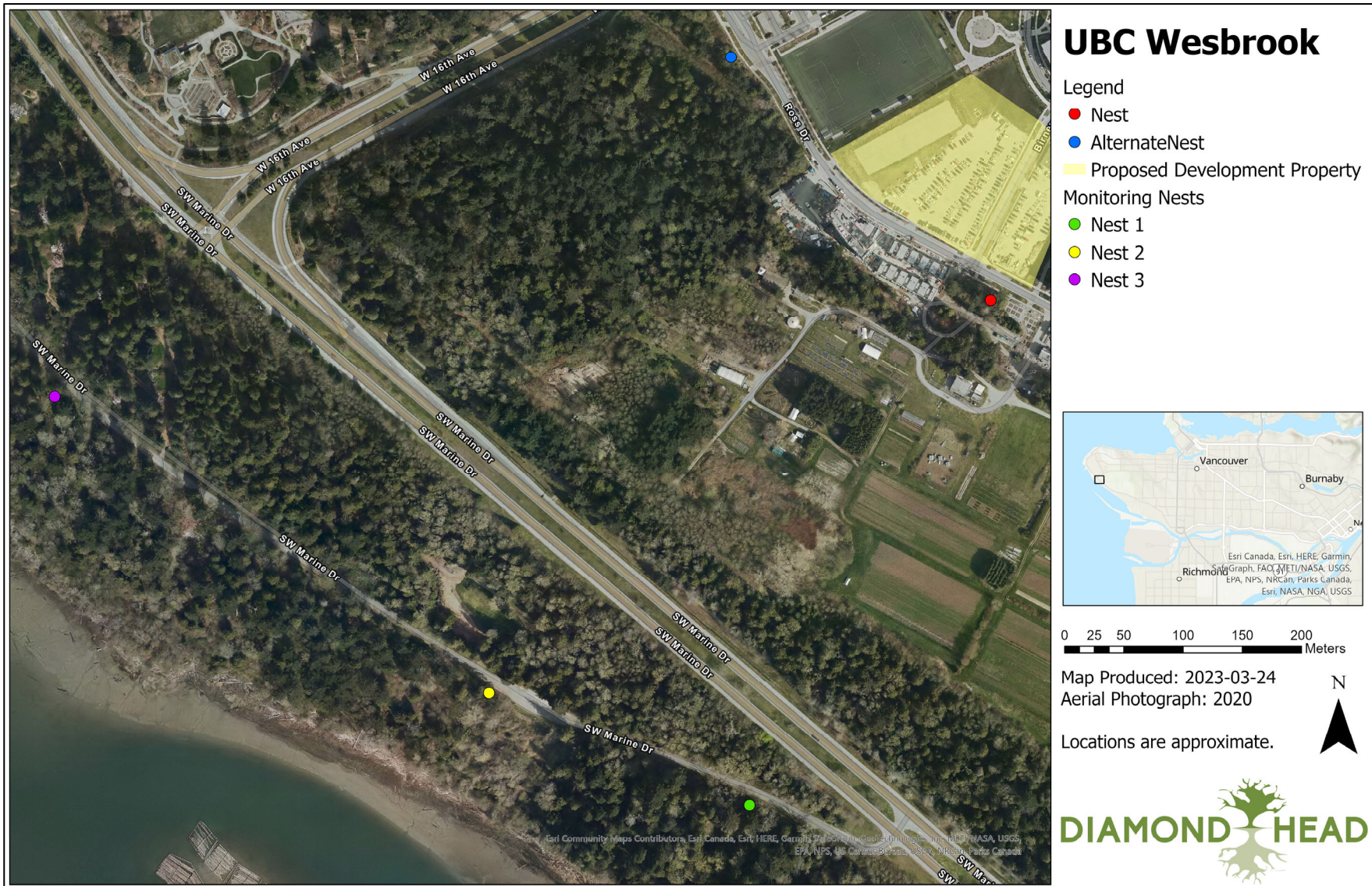


Figure 3. Location of identified nests and the original and alternate nest along Ross Drive.



For the duration of the monitoring period, there was no activity at Nest 1. Discussions with a volunteer monitor suggested that there was a nest around this area that had collapsed and fallen apart. One of the main branches Nest 1 is located on was observed to be broken, suggesting that this nest may be the collapsed nest. It is very likely this will continue to be inactive for the nesting season.

Nest 2 showed no activity at the start of the monitoring session. At approximately 8:18 AM an adult bald eagle was observed perching on the nest and the nest tree before departing shortly. It is possible this eagle was previously sitting in the nest, but unable to be seen. Two eagles were observed perching on the nest tree and seen gathering nesting materials and tending to the nest at 12:15 PM. This nesting behaviour confirms that this nest is active for the 2023 breeding season. Discussions with the volunteer monitor confirmed that this nest had not been active for approximately 2-3 years prior to the 2023 breeding season. It is possible that the eagles inhabiting this nest now were the pair of eagles that were using the original nest at Ross Drive and Birney Avenue.

Nest 3 (UBC Botanical) showed no activity for the duration of the monitoring period. It is possible that the eagles observed mating at this tree during the February nest survey have since chosen to occupy Nest 2, were unsuccessful at mating, or were not visible for the duration of the monitoring period.



Nest 1, red arrow indicating a broken branch.



Pair of eagles observed at Nest 2



Eagle at Nest 2 tending to the nest.



View of Nest 3 (UBC Botanical) that remained inactive

## Conclusions and Recommendations

The monitoring session was split between 3 different nests. As such, no one nest was monitored for a full monitoring period. The following conclusions and recommendations are summarized per nest:

**Nest 1** – It is likely that nest 1 is partially collapsed, rather than partially built, as previously suggested. Given its incomplete nature, the lack of eagles observed near or in the nest, and the timing in the season DHC is confident this nest is likely to be **inactive** for the 2023 breeding season.

**Nest 2** – Nest 2 was confirmed to be **active** for the 2023 breeding season. Photos were taken of this nesting pair and compared to photos of the breeding pair at Ross Drive & Birney Avenue; however, the biologist could not confirm if it was the same pair or not. Since the nest was unused in recent years, according to a volunteer monitor, it suggests that this nest may now be occupied by the pair that used to occupy the nest at Ross Drive & Birney Avenue.

**Nest 3 (UBC Botanical)** – No eagle activity was observed at Nest 3 (UBC Botanical) for the duration of the monitoring period; however, the monitoring was inconclusive. Given mating adults were observed using the nest in February, it is recommended this nest be monitored continuously for at least one additional 4-hour period to determine if it is active or not.

Construction near the original nest is planned to resume in 2023. Following the completion of construction, the cone will be removed and access to the original nest restored. Currently, the permit expires September 2024. **The cone must be removed between August 1<sup>st</sup> and September 15<sup>th</sup>, 2024** after it is confirmed that any nearby eagles have left the area. At that time, it is likely that either the original pair of eagles will re-adopt the nest or a new pair of eagles will use it. If noisy construction is still ongoing by September 2024, an application will need to be made to the province to extend the length of time the cone is in place.

Please do not hesitate to contact us if you have any questions or require clarification on anything contained in this memorandum.

**DIAMOND HEAD CONSULTING LTD.**



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## Insurance Information

WCB: # 657906 AQ (003)  
General Liability: Northbridge General Insurance Corporation - Policy #CBC1935506, \$5,000,000  
Errors & Omissions: Lloyds Underwriters – Policy #PFSP00018463, \$1,000,000

## Appendix A - Statement of Limitations

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