

April 25, 2018

Mr. John White  
14645 25<sup>th</sup> Avenue SW  
Burien, Washington 98166

Transmitted via email to: *forestledge@gmail.com*

**Re: Property Stability and Erosion Evaluation  
White Residence  
14645 25<sup>th</sup> Avenue SW  
Burien, Washington  
LAI Project No. 1328003.020.021**

Dear Mr. White:

Landau Associates, Inc. (LAI) is pleased to present this letter related to the results of our recent reconnaissance of your property located at 14645 25<sup>th</sup> Avenue SW in Burien, Washington (site). The purpose of our site reconnaissance was to assess if the removal of vegetation that has occurred at the site over the past few years has resulted in site erosion and/or site instability. Our services were provided in general accordance with the scope of services outlined in our proposal dated March 22, 2018, which you authorized on March 22, 2018.

## **Project Background**

The site is a privately owned forested bluff that overlooks Puget Sound. The property was purchased by you in 2012 and since that time some improvements were or are being conducted, including construction of an improved driveway, removal of invasive plant species, and installation of native plants.

The City of Burien (City) has issued a letter regarding alleged code violation related to past vegetation-clearing activities at the site. To resolve the code violation, the City has requested a letter from a geoprofessional confirming that the aforementioned clearing does not currently have an adverse impact on the stability of the site and that no erosion concerns are present at the site.

## **Restoration Action Plan**

Because you are interested in developing a long-term habitat management and restoration action plan for the site, the purpose of which is to protect, enhance, and maintain the forests and natural areas of the site, you retained Earth Corps in 2013 to develop a restoration action plan for the site. One of the highest priority actions of restoration recommended in the above-referenced restoration action plan is the removal and mitigation of invasive plant species (e.g., English ivy and cherry laurel/English holly) from the upland portion of the site.

Subsequent to preparation of the restoration action plan, we understand that you retained Earth Corps crews to remove some of the site's invasive plant species and reestablish some of the cleared areas with native plant installations.

## Site Reconnaissance

On March 29, 2018, the author of this letter conducted a site reconnaissance with you. The purpose of the reconnaissance was to look for signs of site erosion and/or site instability that could be attributed to the removal of onsite vegetation that has occurred over the past few years.

During our site reconnaissance, we made the following observations within the upland portion of the site (i.e., the portion of the site where some vegetation has been removed):

- No areas of bare ground were observed, except within the footprint of the driveway that is partially constructed.
- Areas of the site where vegetation has been removed, except within the footprint of the driveway that is partially constructed, have been re-planted with native species or grass.
- No areas of obvious soil erosion were observed.
- Temporary erosion control measures (such as silt fencing and filter socks in catch basins) related to construction of your driveway have been installed.
- The system that you have installed to collect stormwater runoff from your driveway and roof drain and route this water down the bluff in a controlled manner appears to be adequately preventing this water from causing soil erosion.
- In one area of the site near the base of your driveway where soil erosion may have been an issue in the past, we observed that a series of check dams/straw wattles have been installed across what appears to be a previously disturbed area of the site. Based on the lack of evidence of recent soil erosion within this portion of the site, these check dams/straw wattles appear to be working as intended.

## Conclusions and Recommendations

Based on our recent site observations, it is our professional opinion that the removal of vegetation from the upland portion of the site that has occurred over the past few years has not resulted in site erosion and/or site instability. Furthermore, it is our opinion that there are currently no areas of obvious soil erosion within the upland portion of the site that could be attributed to the removal of onsite vegetation.

Provided below are our recommendations related to the topic of soil erosion at the site:

- During and following periods of heavy rainfall, we recommend that you conduct site inspections and address any erosion concerns that you observe (we understand that you are currently doing this and have been doing this in the past). If needed, LAI is available to assist you in developing approaches for addressing erosion concerns that might develop in the future.
- We recommend that you obtain all necessary permits prior to performing any additional vegetation-clearing activities at the site. This same recommendation also applies to any future alternation, construction, development, or activity at the site that is located in a critical area or its buffer (i.e., anywhere on the site).

- After you restart construction of your driveway, we recommend that your contractor periodically inspect and maintain the temporary erosion control measures that have been installed so they perform as intended.

### Use of this Letter

Landau Associates prepared this letter for the exclusive use of John White and his consultants for specific application to the residential property located at 14645 25<sup>th</sup> Avenue SW in Burien, Washington. No other party is entitled to rely on the information included in this letter without the express written consent of Landau Associates. Furthermore, the reuse of information provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

We appreciate the opportunity to work with you on this project. If you have any questions or comments regarding the information contained in this letter, or if we may be of further service, please call me.

LANDAU ASSOCIATES, INC.



Steven R. Wright, PE  
Principal Geotechnical Engineer



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