



CITY OF  
BAINBRIDGE ISLAND

ENVIRONMENTAL TECHNICAL  
ADVISORY COMMITTEE  
SPECIAL MEETING  
THURSDAY, JANUARY 9, 2020  
3:00 PM  
COUNCIL CONFERENCE ROOM  
280 MADISON AVENUE NORTH  
BAINBRIDGE ISLAND, WA 98110

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## AGENDA

CALL TO ORDER / ROLL CALL / ACCEPT OR MODIFY AGENDA / CONFLICT OF INTEREST DISCLOSURE

3:00 PM

CALL-IN NUMBER: 206-780-8633

**MEMBERS:**

JANE HANNUKSELA  
DYLAN FRAZER  
MELANIE KEENAN  
CHARLIE KRATZER  
MICHELLE MCCLURE

JUAN ROVALO  
STEVE SAEPOFF  
CASEY SCHMIDT  
KARL SHEARER

COUNCIL LIAISON: RASHAM NASSAR

APPROVAL OF MINUTES – OCTOBER 17, 2019 (5 MIN)

COUNCIL LIAISON REPORT – RASHAM NASSAR (10 MIN)

CHAIR REPORT ON ACTIVITIES SINCE OCTOBER 17<sup>TH</sup> MEETING – CHARLIE KRATZER (20 MIN)

DRAFTING AN ETAC LETTER TO BI REVIEW IN RESPONSE TO 12/27/19 ARTICLE ON BI WATER – CHARLIE KRATZER (30 MIN)

ANTIBES HMP DISCUSSION – CASEY SCHMIDT AND ETAC (15 MIN)

GWMP UPDATE – ALL (10 MIN)

GW FACT SHEET UPDATE – ALL (10 MIN)

ETAC WORKPLAN FOR 2020 – ALL (10 MIN)

PUBLIC COMMENT (10 MIN)

ADJOURNMENT

5:00 PM

For special accommodations, please contact Roz Lassoff,  
206-780-8624 or at [rlassoff@bainbridgewa.gov](mailto:rlassoff@bainbridgewa.gov)

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## MINUTES

Call to Order at 3:19 PM

**Member Attendees:** Karl Shearer, Charlie Kratzer, Jane Hannuksela, Juan Rovalo (on phone), Melanie Keenan (on phone)

**Members Absent:** Michelle McClure, Steve Saepoff, Casey Schmidt, Dylan Fraser

**Council Liaison:** Rasham Nassar (absent)

Minutes from August 8, 2019 meeting approved.

### **Council Liaison Report**

- Rasham was present just before the meeting started and stated that she nothing to report.

### **Chair Report on Activities Since 8/8 Meeting**

- Chair received a Public Records Request from Roz on 10/15 for 3 documents relating to the GWMP: (1) ETAC 32-page document sent to Council on 11/1/18; (2) ETAC talking points for 11/6/18 Council meeting presentation on GWMP; and (3) Memorandum sent to Council on 11/19/18 in support of GWMP and a proposed budget. The Chair sent these documents to Roz on 10/16;
- Chair made comments (as private citizen) at 8/27 Council meeting, expressing concerns about how stormwater will be dealt with in Suzuki development;
- Chair assisted Christian Berg of COBI Water Resources in sediment sampling on 8/29;
- Chair sat at table with Christian Berg at Harvest Festival on 9/22, discussing water issues with citizens;
- Chair attended AWRA-WA Annual Conference on 10/1 at Mountaineers in Seattle. Big topic of discussion was Hirst Decision and watershed assessment being done in WRIs, including WRIA15 (Kitsap County including BI);
- Chair interviewed for COBI Hydrogeologist position on 10/9.

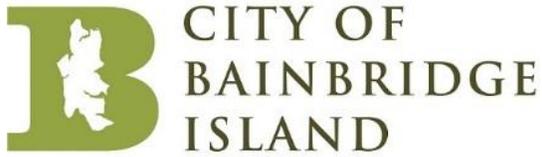
### **GWMP Update**

- Nothing has changed; interviews have happened for Hydrogeologist position.

### **GW Fact Sheet Update**

- No changes since last meeting.

Meeting adjourned at 3:52 PM



## Department of Planning and Community Development

### Memorandum

Date: December 30, 2019  
To: Environmental Technical Advisory Committee  
From: Annie Hillier, Planner  
Subject: Antibes Habitat Management Plan (HMP)

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#### Background

Two alternative methods may be used to meet the goals and policies of the Vegetation Management Section of the [Shoreline Master Program \(SMP\)](#): 1. The standard Shoreline Buffer, comprised of a Zone 1 and a Zone 2 protective buffer with predetermined dimensions (see SMP Table 4-3); or 2. A Site-Specific Vegetation Management Area, with unique dimensional standards intended to protect shoreline vegetation and ecological functions. In this case, the applicant has proposed a Site-Specific Vegetation Management Area.

As a part of the proposal for a Site-Specific Vegetation Management Area, the applicant is required to prepare an Habitat Management Plan (HMP), developed in accordance with the requirements listed in Appendix B, Section B-4. The HMP must:

- Demonstrate that there is no net loss of the property's specific shoreline ecological functions and associated ecosystem-wide processes pursuant to Section 4.1.2, Impact Analysis and No Net Loss.
- Use the scientific and technical information<sup>1</sup> compiled to support the Shoreline Buffer standards of Section 4.1.3.5(3)(b), and/or other appropriate technical information which, as determined by a qualified professional, demonstrates how the proposal protects ecological functions and processes and how it meets the goals and policies of Section 4.1.3, Vegetation Management.

#### Project Summary

The project site is located at 5370 NE Fletcher Landing, bordered by both Fletcher Bay (Priority Aquatic B designation) and Puget Sound (Aquatic designation). The northern portion of the site contains a spit, designated Natural, and the proposed development is located with the Shoreline Residential designation. If the standard Shoreline Buffer were applied to this site, it would extend 75' from the OHWM along Fletcher Bay, and 50' from the OHWM along Puget Sound. The existing SFR and ADU are

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<sup>1</sup> Scientific and technical information supporting the Shoreline Buffer standards is provided in the following documents available at the City of Bainbridge Island's Department of Planning and Community Development: Documentation of Marine Shoreline Buffer Recommendation Discussions, Memorandum, 2011, Herrera Environmental; Addendum to Summary of Science, 2011, Herrera Environmental; Bainbridge Island Current and Historic Coastal Geomorphic/Feeder Bluff Mapping, 2010, Coastal Geologic Services, Inc.; Best Available Science, 2003, Battelle; Bainbridge Island Nearshore Habitat Characterization and Assessment, 2004 Battelle.



located within the standard Shoreline Buffer, and are proposed to be demolished. A new SFR and accessory building are proposed within the existing footprints, with a Site-Specific Vegetation Management Area that essentially wraps around the proposed development, ranging in width from 5' to 83' (shown on Exhibit E in the attached HMP).

#### Next Steps

In accordance with SMP 4.1.3.5.3(a) (ii), the HMP must be reviewed by an independent third party. The Environmental Technical Advisory Committee (ETAC) should review the HMP for compliance with the standards in Appendix B, Section B-4, and should identify how the proposal meets two standards identified above. Staff intends to take into account all recommendations provided by ETAC prior to making a decision on the proposed Site-Specific Vegetation Management Area, and will add conditions to the proposal as necessary. The Administrator (e.g. Director) may approve, approve with conditions, or deny the request for a Site-Specific Vegetation Management Area.

# 5370 NE FLETCHER LANDING

## HABITAT MANAGEMENT PLAN

NOVEMBER 4, 2019  
BGE19\_0670



# 5370 NE FLETCHER LANDING

## HABITAT MANAGEMENT PLAN

NOVEMBER 4, 2019

PROJECT LOCATION  
5370 NE FLETCHER LANDING  
BAINBRIDGE ISLAND, WA 98310

TAX ACCOUNT  
4192-000-009-0001  
S 20, T 25 N, R 02E, NE QTR

PREPARED FOR  
HOEDEMAKER PFEIFFER  
6113 13<sup>TH</sup> AVENUE SOUTH  
SEATTLE WA 98108

PREPARED BY  
BGE ENVIRONMENTAL<sup>LLC</sup>  
2102 BRASHEM AVE  
BREMERTON, WA 98310  
360.710.6066  
[www.bgeenvironmental.com](http://www.bgeenvironmental.com)

BGE19\_0670

# CERTIFICATION

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, as a professional wetland scientist licensed to practice as such, is affixed below.



Robbyn Myers, PWS  
Wetland Biologist/Environmental Planner



Date

5370 NE FLETCHER LANDING  
HABITAT MANAGEMENT PLAN  
BGE19\_0670



**BGE ENVIRONMENTAL, LLC.**

WETLAND CONSULTING AND LAND USE PLANNING

# INTRODUCTION

Redevelopment is being proposed to a 0.75 acres residential property located at 5370 NE Fletcher Landing, Bainbridge Island, Kitsap County, Washington. The property is developed with a residential structure, carport, and accessory dwelling unit (ADU) all joined via a breezeway. The subject parcel is unique to Bainbridge Island and familiarized as the spit to Fletcher Bay. The parcels area is irregular to natural features. Shoreline views, use and access are present from multiple fronts along the shoreline. A ramp and floating dock support moorage to the inner passage of the bay.

Parcel character includes mature native conifers, landscaped beds to structural features and naturalized buffers along the nearshore. The shoreline includes natural conditions to the spit and armoring along the landward extent adjacent the residential use, to all sides.

The proposed project is redevelopment in kind for the residence and remodel of the accessory building. Structures will be demolished, followed by new construction and renovation. Although the living space is expanded upon by 195 sq ft, the total impervious surfaces within the parcel are reduced. The reduction includes hardscape to open areas associated with the primary structure. The reduction of impervious surface from existing to proposed is impressively 42%.

Vegetation impacts are unavoidable as the entire parcel lies within the 200 ft shoreline jurisdiction. Shoreline designation is shoreline Residential with a 75 ft standard buffer. Structures and use are existing non-conforming.

All shoreline development and activities shall be located, designed, constructed, and managed in a manner that will result in a no net loss of ecological function. To ensure achievement of no net loss standards, a site-specific analysis of potential impacts within the 200-ft shoreline jurisdiction and appropriate mitigation measures is provided through this Habitat Management Plan (HMP). This HMP is designed to meet the following criteria of the Site-Specific Vegetation Management section of the Bainbridge Island Municipal Code (BIMC) Chapter 16.12 Shoreline Master Program (SMP):

- Assessment of existing baseline environmental conditions;
- Assessment of priority habitat, species within the vicinity of the project;
- Project description;
- Analysis of mitigation sequencing;
- Impacts of site development; and
- Vegetation Management Plan.



# BASELINE ENVIRONMENTAL CONDITIONS

The subject parcel is in the Battle Point Park neighborhood at the shared terminus of NE Fletcher Landing in Bainbridge Island, Kitsap County, Washington. The parcel is irregular in shape. It shares a panhandle driveway from the south. The use area is defined to a rectangularly shaped landmass. The unique feature is the Fletcher Bay Spit to the north. The spit is natural.

All but the shared access lies within the 75 ft standard shoreline buffer, see Exhibit A.

The parcels character is living space and well-defined outdoor use areas adjacent to the structures as concrete patios. A breezeway connects all structures. The shoreline is heavily armored along the western nearshore and less to the interior of the bay in the east. The exception is associated with a ramp and dock. The existing use includes shoreline use and access areas both active and passive. Gravel landings direct use along the nearshore, prominent to the west and more present as landscape limits to the east. Islands of vegetation are persistent and intermittent through the use to all fronts of the shoreline.

The observed vegetation is mixed native and non-native landscaping. Mature Douglas firs stand impressively against the residential structures. Landscaping is shrub dominate with featured trees such as vine maple, flowering plum, spruce, and pine. Native shrubs and groundcovers are nested among a variety of common western garden plants. The vegetation inventory is depicted in Exhibit B and further documented at the end of this report as PHOTOGRAPHS.

The parcel habitat potential is typical residential, rural and urbanized species having a higher level of complexity to the nearshore tidal niches along the spit.



# BACKGROUND INFORMATION

## RESEARCH AND DATA SYNTHESIS

Background research and data review are essential for the assessment of known and documented habitat and species within the vicinity of the project site. Data researched included relevant mapping from U.S. Fish and Wildlife Service, Washington State Department of Fish and Wildlife (WDFW), and Washington Department of Natural Resources (WDNR) Natural Heritage Database. Reference sources are summarized in Appendix A and material content is provided in Appendix B of this report.

## CITY OF BAINBRIDGE ISLAND

The project property is located within the Point White-Battle Point management area. The shoreline is a mix of spit/backshore, high bluff, marsh/lagoon, and low bank shoreforms. Forage fish spawning beaches and goeduck beds are present. Eelgrass bed habitat is limited. Spawning is documented by cutthroat trout, steelhead, chum, and coho salmon. Existing land use is mostly residential and impacts to ecological function is deemed moderate<sup>1</sup>.

Fletcher Bay has a priority aquatic designation, pursuant to Chapter 16.12.020.C.2 Aquatic Designation. By definition these waters may exist in a relatively natural state, free of human influence, or contain resources, biological diversity, or other features that are particularly sensitive to human activity, or which contain unique, historical, archaeological, cultural, or educational features that merit special protection (Ord. 2014-04 § 3 (Exh. 1 § 3), 2014).

## U.S. FISH & WILDLIFE SERVICE NATIONAL WETLAND INVENTORY (NWI)

The US Fish and Wildlife Service National Wetland Inventory identifies wildlife of the estuarine waters of Fletcher Bay and inland waters of the Puget Sound. These waters are classified under the Cowardin system as E2AB/USN and E1UBL.

System Estuarine (E) : The Estuarine System consists of deepwater tidal habitats and adjacent tidal wetlands that are usually semi-enclosed by land but have open, partly obstructed, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines, there is appreciable dilution of sea water.

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<sup>1</sup> Cumulative Impacts Analysis for City of Bainbridge Island's Shoreline, pg 12.



Subsystem Intertidal (2) : The substrate in these habitats is flooded and exposed by tides; includes the associated splash zone.

Class Aquatic Bed (AB) : Includes wetlands and deepwater habitats dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years.

Split Class Unconsolidated Shore (US) : Includes all wetland habitats having two characteristics: (1) unconsolidated substrates with less than 75 percent areal cover of stones, boulders or bedrock and; (2) less than 30 percent areal cover of vegetation. Landforms such as beaches, bars, and flats are included in the Unconsolidated Shore class.

Water Regime Regularly Flooded (N) : Tides alternately flood and expose the substrate at least once daily.

Subsystem Subtidal (1) : The substrate in these habitats is continuously covered with tidal water (i.e., located below extreme low water).

Class Unconsolidated Bottom (UB) : Includes all wetlands and deepwater habitats with at least 25% cover of particles smaller than stones (less than 6-7 cm), and a vegetative cover less than 30%.

Water Regime Subtidal (L) : Tidal salt water continuously covers the substrate.



## FISH & WILDLIFE IPAC TRUST RESOURCES REPORT

The Fish & Wildlife IPaC Trust Resources Report identifies federally listed species and designated critical habitats, Essential Fish Habitat (EFH), and/or Distinct Population Segment (DPS). The report provides information for compliance with Endangered Species Act (ESA) listings identified through USFWS and National Marine Fisheries Service (NMFS). The identified EFH or DPS conform to the Magnuson Stevens Fishery Conservation and Management Act (Magnuson Stevens Act). The following table identifies the occurrence of these species in or near the project site.

Species	ESU/DPS	Federal Status	Designated Critical Habitat
Marbled Murrelet ( <i>Brachyramphus marmoratus</i> )	Washington	Threatened	Yes
Streaked Horned Lark ( <i>Eremophila alpestris strigata</i> )	Pierce County Mason County	Threatened	Yes
Yellow-billed Cuckoo ( <i>Coccyzus americanus</i> )	TBD	Threatened	None Currently
Bull Trout ( <i>Salvelinus confluentus</i> )	Coastal-Puget Sound	Threatened	Yes

Migratory birds identified in or near the project site include:

Common Name ( <i>Genus species</i> )	Occurrence/Use
Black Swift ( <i>Cypseloides niger</i> )	Breeding
Caspian Tern ( <i>Hydroprogne caspia</i> )	Breeding
Peregrine Falcon ( <i>Falco peregrines</i> )	Breeding
Rufous Hummingbird ( <i>Selasphorus rufus</i> )	Breeding
Purple Finch ( <i>Carpodacus purpureus</i> )	Year-round
Short-eared Owl ( <i>Asio flammeus</i> )	Year-round
Western Grebe ( <i>Aechmophorus occidentalis</i> )	Wintering
Willow Flycatcher ( <i>Empidonax traillii</i> )	Breeding



Critical habitat is a specific geographic area that contains features essential for the conservation of a threatened or endangered species. The project vicinity overlaps all or part of the critical habitat for the following species:

1. Chinook Salmon (*Oncorhynchus tshawytscha*)
2. Killer Whale (*Orcinus orca*)

There are no Wildlife Refuges or fish hatcheries in this location. Estuarine and Marine Wetlands overlaps the property vicinity.

## WDFW PRIORITY SPECIES AND HABITAT (PHS)

The Washington Department of Fish and Wildlife Priority Habitats and Species database identifies estuarine and marine aquatic habitat in the project vicinity.

## WDNR NATURAL HERITAGE DATABASE

According to Washington Department of Natural Resource (WDNR) records, no threatened or endangered species of plants are recorded as present within Section 20, Township 25 North, Range 02 East, W.M.



# PROJECT DESCRIPTION

The proposed parcel is entirely within the 200 ft shoreline jurisdiction. The project is redevelopment over existing, see Exhibit C. Project elements and actions include demolishing the existing residence, ADU, carport, and associated breezeway. Redevelopment of the residence includes new foundation for raising the final grade from the flood zone. The ADU is a rebuild over the existing foundation.

The new residence includes an addition of living space, 195 sq ft, landward (behind) the house, see Exhibit D. All other redevelopment features include the removal of existing commons (impervious) and delineating access, parking, and common space associations to the structure and the nearshore. Gravel paths will be converted to stands of native vegetation, outdoor patios are minimized for use and adequate shelter common to the seasonal variations in weather. Shoreline access is maintained as existing for small craft, pedestrian and water-oriented uses.

Vegetation disturbances are native and non-native varieties which include shrubs, groundcover, perennials, forbes, and grass. Significant trees (mature conifers) are avoided.

There is no change proposed or provided to the standard shoreline buffer of 75 ft. The parcels use and structures were lawfully constructed or existed prior to the current standard provision of the Shoreline Master Program (SMP) and therefore do not meet the specific standards of the program. Uses and access to the shoreline are existing and static with the bulkhead. Upon construction retreat, much of the surfaces adjacent to the residence and along the bulkhead will be restored with the recommendations provided in the VMP. The shoreline buffer is established at 15 ft off the proposed construction. Widths vary from 5 ft to 83 ft, see Exhibit E.



# MITIGATION SEQUENCING

Permitted uses shall be designed and conducted to minimize, in so far as practical, any resultant damage to the ecology and environments. Impacts shall be mitigated according to BIMC 16.12.B.2.d, in a sequential analysis to avoid, minimize and mitigate. The mitigation analysis sequence for the shoreline in question is provided below.

MITIGATION MEASURE	MITIGATED ACTION(S)
AVOID the impact altogether by not taking a certain action or parts of an action	<ul style="list-style-type: none"> <li>Existing nonconforming use and structures.</li> <li>Vegetation impacts cannot be avoided.</li> </ul>
MINIMIZE impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts	<ul style="list-style-type: none"> <li>The proposed redevelopment is over existing.</li> <li>New construction design considered all significant trees on-site and avoided excavation where potential harm is possible.</li> <li>The minimum necessary is proposed to avoid the loss of any significant tree identified to the property.</li> </ul>
RECTIFY the impact by repairing, rehabilitating, or restoring the affected environment	<ul style="list-style-type: none"> <li>Existing impervious surfaces are reduced by 41% with the proposed project by reducing outdoor common areas, structural overhangs, breezeways, and graveled surfaces.</li> <li></li> </ul>
REDUCE or eliminate the impact over time by preservation and maintenance operations	<ul style="list-style-type: none"> <li>Impacts are permanent.</li> <li>Buffer establishment is 15 ft off the new construction footprint.</li> <li>Existing non-conforming remains non-conforming.</li> </ul>
COMPENSATE for the impact by replacing, enhancing, or providing substitute resources or environments	<ul style="list-style-type: none"> <li>Enhance shoreline buffer with native trees, shrubs and groundcovers where feasible to the shoreline.</li> <li>Landscape new structure with a minimum of 60% native vegetation.</li> </ul>
MONITOR the impact and the compensation project and take appropriate corrective measures	<ul style="list-style-type: none"> <li>Enhancement area success, performance, maintenance and monitoring are defined in the <i>Vegetation Management Plan</i> section of this document.</li> <li>As-built, five-year monitoring and final compliance documentation required.</li> </ul>



# IMPACTS OF SITE DEVELOPMENT

Strict application of the shoreline buffer was applied to the site plan for quantification of vegetation impacts associated with the project. The entire parcel lies within the 200 ft shoreline jurisdiction. All but the access is within the standard 75 ft buffer. The parcels structures and use are non-conforming.

Impacts are identified as an area 10 ft outside of the existing structures or hardscape, see Exhibit D. Impacts identified include native and non-native shrubs, perennials, groundcovers, forbs, and grass<sup>2</sup>. There is an exchange of impervious to pervious surfaces, and vice versa, through sensitive design efforts to redevelop over existing and established use. No significant trees or preferred individuals are to be removed or disturbed within the projects action area. The existing use within the standard shoreline buffer is static and includes common access, lawfully established to the parcel through permitted uses; docks and trails.

The redevelopment of the parcel establishes a 15 ft setback off the proposed structure and expanded where available, see Exhibit E. The resultant established buffer retains the character and complexity of the shoreline buffer as it stands today with a net decrease in impervious surfaces; structure, hardscape, and landings. Impervious surfaces are reduced by nearly half the total area. The reduction is equally distributed among regions of the standard buffer and jurisdictional review, from zero to two-hundred feet.

The City of Bainbridge Island SMP is a vegetation specific policy. The removal of impervious surfaces is not considered an ecological measure of no net loss. However, it should be noted that the redevelopment of the Fletcher Landing parcel results in the following impervious surface reductions.

IMPERVIOUS	0 TO 30 FT	30 FT TO 75 FT	GREATER THAN 75 FT	TOTAL
Existing	5,460 sq ft	5,435 sq ft	2,010 sq ft	12,905 sq ft
Proposed	1,746 sq ft	3,903 sq ft	1,887 sq ft	7,536 sq ft
Net Change	-3,714 sq ft	-1,532 sq ft	-123 sq ft	-5,369 sq ft
PERCENT CHANGE	-68%	-28%	-6%	-42%

<sup>2</sup> It shall be noted that the grades of the surrounding landscape may be raised slightly to ease the transition to the proposed grade of new construction. Additional lawn and outlying landscape have the potential for disturbance. As the Vegetation Management Plan provides site specific and general structural landscape recommendations, any additional vegetation disturbances not identified in this report shall be addressed, in general, as restoration. Significant trees do not apply.



# VEGETATION MANAGEMENT PLAN

Vegetation replanting is required for all development, uses or activities within the 200-ft shoreline jurisdiction that either alters existing native vegetation or any vegetation in the required shoreline buffer, whether a permit is required or not. This includes invasive species removal (Chapter 16.12.030(B)(2)(c), COBI-SMP). To meet the goals and policies of the City of Bainbridge Island Shoreline Master Program (COBI-SMP), the new construction shall ensure that the parcels site specific ecological functions and processes are managed to meet the no net loss standard.

A *Vegetation Management Plan* (VMP) has been developed to rectify the identified functional deficiencies as mitigation for new construction within the shoreline parcel. Mitigation is depicted in Exhibit F and as proposed in the Preliminary Landscape Plan by Anne James, Landscape Architect, attached Exhibit G.

## VEGETATION MANAGEMENT AREA

The Vegetation Management Area (VMA) is defined as the shoreline buffer 15 ft from the new residence to OHWM, or up to 83 ft as depicted on Exhibit E. The VMA is identified for the restoration of shoreline buffers impacted historically or recovered with the redevelopment. The planting strategy is infill of native dune grasses, shrubs and trees preferred for supporting shoreline ecological function. Existing healthy stands of vegetation shall be evaluated for health and potential expansion of area under the VMP. Existing mature trees shall be evaluated for health, vigor, and sustainability. Planting schedules shall include understory and groundcovers.

Common use areas are existing, to remain, and include the ramp/dock, spit access, fire pit, and boat launch. Lawn within the interior of the planted buffer is recommended for easy access and movement through the parcel to the outlying use areas.



## PLANTING PLAN SPECIFICATIONS AND DETAIL

A conceptual planting summary, Exhibit F, is supplemental to the preliminary landscape plan, Exhibit G. Planting details which include species, density, and distribution will be developed prior to implementation in order to maximize vegetation recovery within the established shoreline buffer. An as-built will be submitted to the City within 60 days of installation.

Currently there is no minimum quantity or richness implied. Post construction, the parcels character shall be much as it is currently with shallow native buffers adjacent OHWM and a grassy interior for fluency through the property. All planted materials within the established shoreline buffer shall be native. Prior to design and implementation, BGE Environmental shall review and approve the landscape detail.

## PROJECT SEQUENCING

Planting shall occur during the dormant season, October 1 through March 31.

- 1) Clearly identify clearing limits with construction fencing. This may be alternatively identified as silt fencing per the approved Temporary Erosion and Sediment Control plan (TESC).
- 2) Once the site is stabilized for construction, the established shoreline buffer shall be independently evaluated for all potential restoration efforts consistent with the attached landscape plan (by other), see Exhibit G.
- 3) Review and approval of landscape design by BGE Environmental, LLC.
- 4) Install vegetation materials according to specifications for species and spacing per planting detail.
- 5) As-built production and submittal to the City within 60 days of planting.
- 6) Annual monitoring, late summer, and annual reporting to City for a minimum period of five-years.



# GOALS & STANDARDS

The goal of the Vegetation Management Plan is to restore the established shoreline buffer with native vegetation where reasonable, feasible, and beneficial. The goal includes developing vegetation niches which support a high level of ecological function and maintains the associated use and enjoyment. The established buffer shall provide performance screening of the structure to the bay, open waters and surrounding landscape.

Performance standards are necessary for the evaluation of success achieved with the implemented buffer enhancement. If the standards are met at the end of the five-year monitoring period, the City shall issue release of the performance bond.

## SURVIVAL

- 100% survival of all planted materials at the end of Year One. This standard may be met through establishment of installed plants or by replanting as necessary to achieve the required numbers. Herbaceous vegetation is difficult to track. See coverage criterion to establish standard.
- 100% survival of all tree plantings and 80% survival of all shrub plantings at the end of Year Five. This standard may be met through establishment of installed plants or by replanting as necessary to achieve the required numbers. Herbaceous vegetation is difficult to track. See coverage criterion to establish standard.

## COVERAGE

- Achieve at least 60% cover of native vegetation within the restored areas (VMA) by the end of Year 3.
- Achieve at least 90% cover of native vegetation within the restored areas (VMA) by the end of Year 5. The remaining 10% may include uses necessary for safe and fluent access through the property and established uses.

## INVASIVE SPECIES

- Removal and eradication of English ivy and Himalayan blackberry. No tolerance of the presence or establishment of invasive species, including all Class A, B, or C noxious weeds as listed by the Washington state Noxious Weed Control Board, within the Vegetation Management Area is applied.



# MONITORING

Upon installation of vegetation, the Restoration Specialist shall create an as-built document and submit it to the City of Bainbridge Island within 60 days of completing the work. The document may consist of a summary of actions as they pertain to the restoration efforts defined in this mitigation plan to include alterations and deviations to species, placement, or other actions necessary for proper implementation. A list of planted species, time of installation and supporting photographs, before and after installation, should accompany the document.

Each year, for the following four monitoring years, the VMA shall be reviewed by the Restoration Specialist to ensure that the planted materials are healthy, vigorous, and present a high probability of success pursuant the Performance Standards. Conditions shall be documented with photographs during the same time frame. Late summer monitoring and documentation is required. Contingency efforts shall be implemented as deemed necessary by the Restoration Specialist to ensure a successful five-year response to mitigation efforts.

Five years post planting, a review of mitigation and compliance documents should be provided to the City of Bainbridge Island. The compliance documents should be a determination of success regarding vegetation coverage, health and sustainability. The assessment may evaluate, but not be limited to, observations of species survival, replacement vegetation since restoration and a summary of actions completed to support the success of the restored shoreline buffer (irrigation, trimming, fertilizer use, etc.). It may include an estimate of buffer area restoration and quantification of, if any, additional use of native vegetation which promotes ecoregional function within the landscape. The monitoring report shall include yearly photographs of the vegetation conditions and progression with a technical evaluation of success in achieving the no net loss standard.



# MAINTENANCE

Maintenance of the vegetation management area shall consist of all actions necessary to ensure that planted materials establish and thrive with the planted area, and that invasive species do not encroach, spread, or establish within the vegetation management area or vicinity. The prescribed maintenance plan shall be implemented for a minimum of five years following completion of the plant installation. However, proper stewardship of the shoreline buffer is the responsibility of the property owner in which effective implementation of this plan will restore natural function to the shoreline ecology which protects the integrity of environment and the residing structures and use.

Anticipated actions and necessary guidelines to meet the performance standards are as follows:

- 1) Replace each plant found dead in the summer monitoring visit after the first year of planting and subsequent years if mortality continues to occur.
- 2) Invasive species maintenance plan:
  - a. Himalayan blackberry, Japanese knotweed, Scot's broom, English ivy, and other invasive vegetation shall be grubbed out by hand on an ongoing basis, being careful to grub out roots where both safe and accessible. Such work should not result in heavy disturbance of soil surface or jeopardize the roots of installed native or volunteer native plants.
  - b. Where hand removal is observed to have no effect in control and spread, herbicide applications may be applied, particularly for Japanese knotweed. Application of Imazapyr is acceptable. Herbicide applications must be conducted only by a state-licensed applicator during the effective time frame between mid-spring and mid-summer. Applications should be a targeted method such as spot spray or wick.
- 3) At least twice a year, hand remove all competing weeds and weed roots from beneath each installed plant and any desirable volunteer vegetation to eighteen (18) inches from the main plant stem. Weeding should occur as needed during the spring and summer. Frequent weeding will result in lower mortality and lower plant replacement costs.
- 4) Do not weed the area near the plant bases with string trimmer (weed whacker).
- 5) Mulch the weeded areas beneath plant with wood chips as necessary to maintain a minimum two to three-inch thick mat to the planting area

Care shall be taken to promote survival of the planted species. This does not include cutting of vegetation within the shoreline buffer. Height of the shrub cover is not expected to inhibit the



view corridor. Pruning is acceptable to maintain building setbacks for structure maintenance and to maintain plant health. Pruning should primarily involve removing all dead, broken, diseased, or problem limbs by trimming them at the point of origin or back to a strong lateral branch or shoot. Removing this material often opens the canopy sufficiently so that no further pruning is necessary.

When trimming and pruning vegetation, pile the debris in an area somewhere within the property to create a brush shelter. Tucking the trimmings beneath the shrubs is a perfect option. Downed wood, even a pile of twigs provides food and shelter to many species, while slowly returning nutrients to the soil. The pile can be in the sun or the shade, place it in an unused area of the property. Remove starts of invasive species immediately.

The use of herbicides, insecticides, or pesticides, particularly near the areas of berry, fruit or mast producing shrubs or trees, is not recommended. This will help ensure the availability of foraging for wildlife. Even fertilizing lawn can degrade nutrients and alter the decomposition process of the natural grasses. Limit the use of insecticides. Insect populations are important on many ecological levels particularly as a food source for insectivores.

## CONTINGENCY

If any part of the planting area fails to satisfy the goals and performance standards of this plan to such an extent that the failure cannot be adequately addressed through standard maintenance activities, a contingency plan shall be developed. A detailed contingency plan cannot be developed until the specific items that need to be addressed are known. Compliance with the installation procedures and maintenance plans are measures to properly promote a successful restoration. Where the performance is less than satisfactory, attention shall be given to, but not limited to, soil conditions, species installation, and temporal variations. Adaptive management actions taken to ensure success, when practical, are an acceptable means to ensure survival and growth of the planted species.



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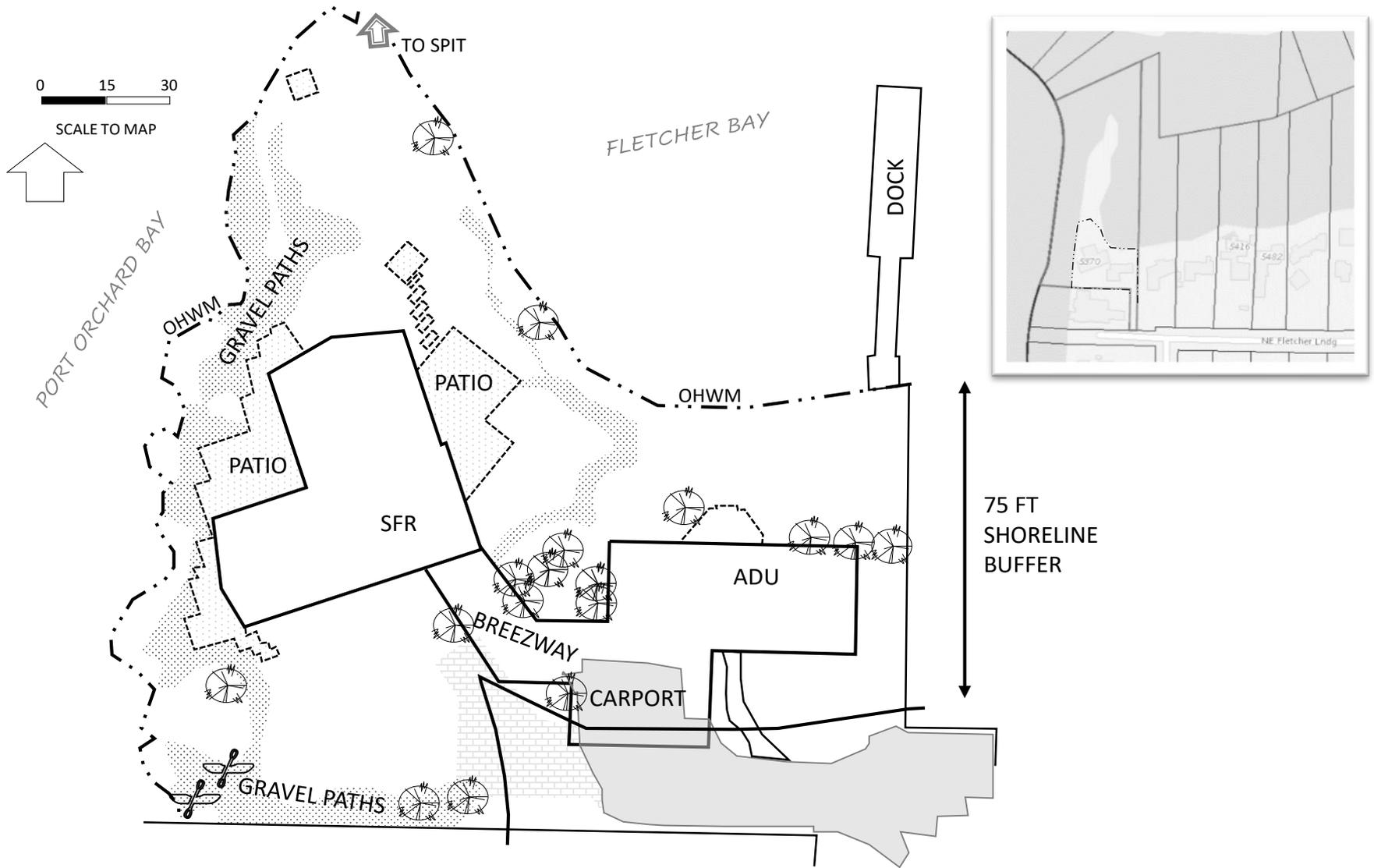


EXHIBIT A  
EXISTING CONDITIONS AND  
STANDARD BUFFERS

5370 NE FLETCHER LANDING  
4192-000-009-0001

BGE19\_0670  

**BGE Environmental, LLC**  
 Wetland Consulting & Land Use Planning

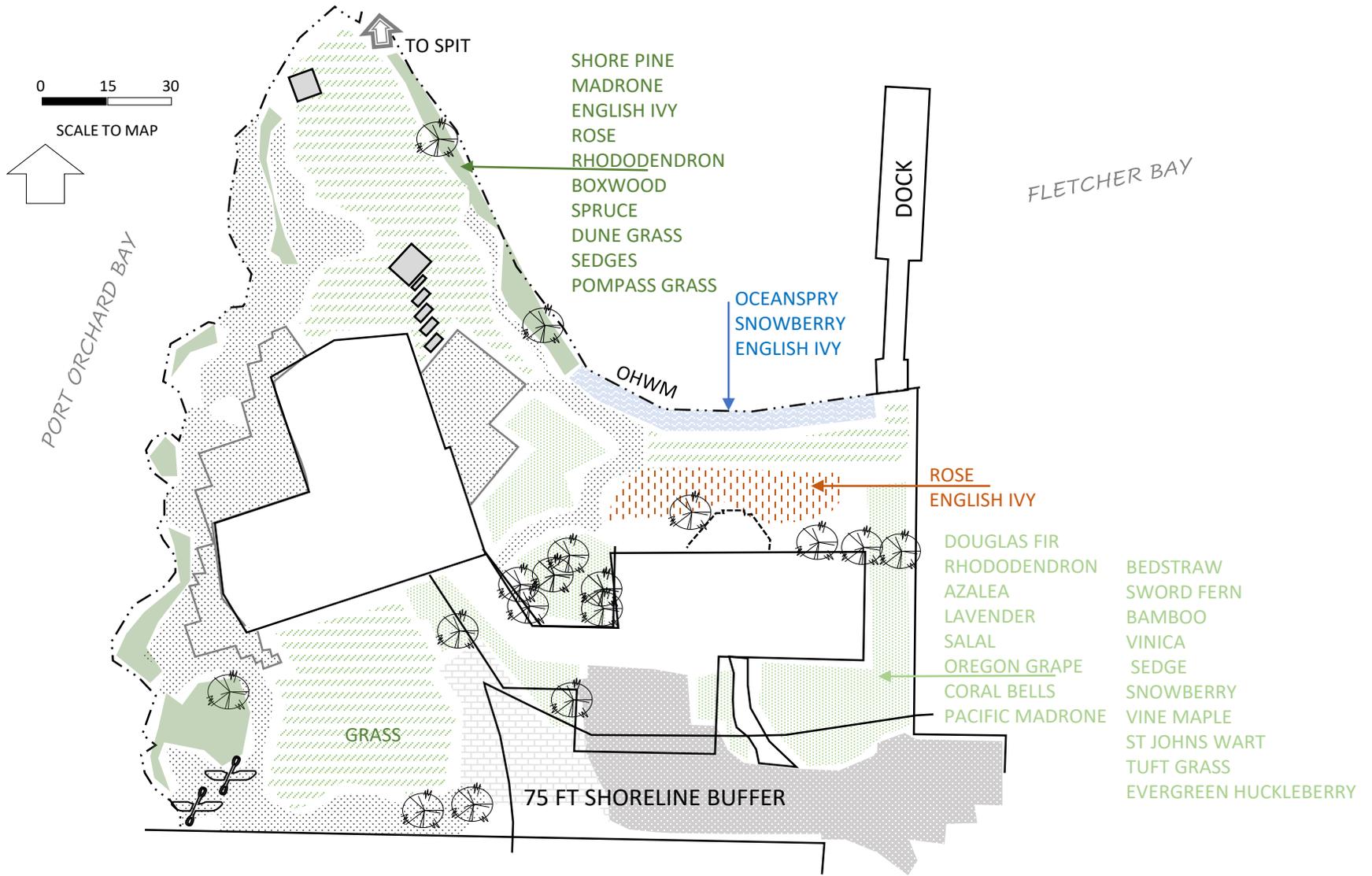


EXHIBIT B  
VEGETATION INVENTORY

5370 NE FLETCHER LANDING  
4192-000-009-0001



BGE Environmental, LLC

Wetland Consulting & Land Use Planning

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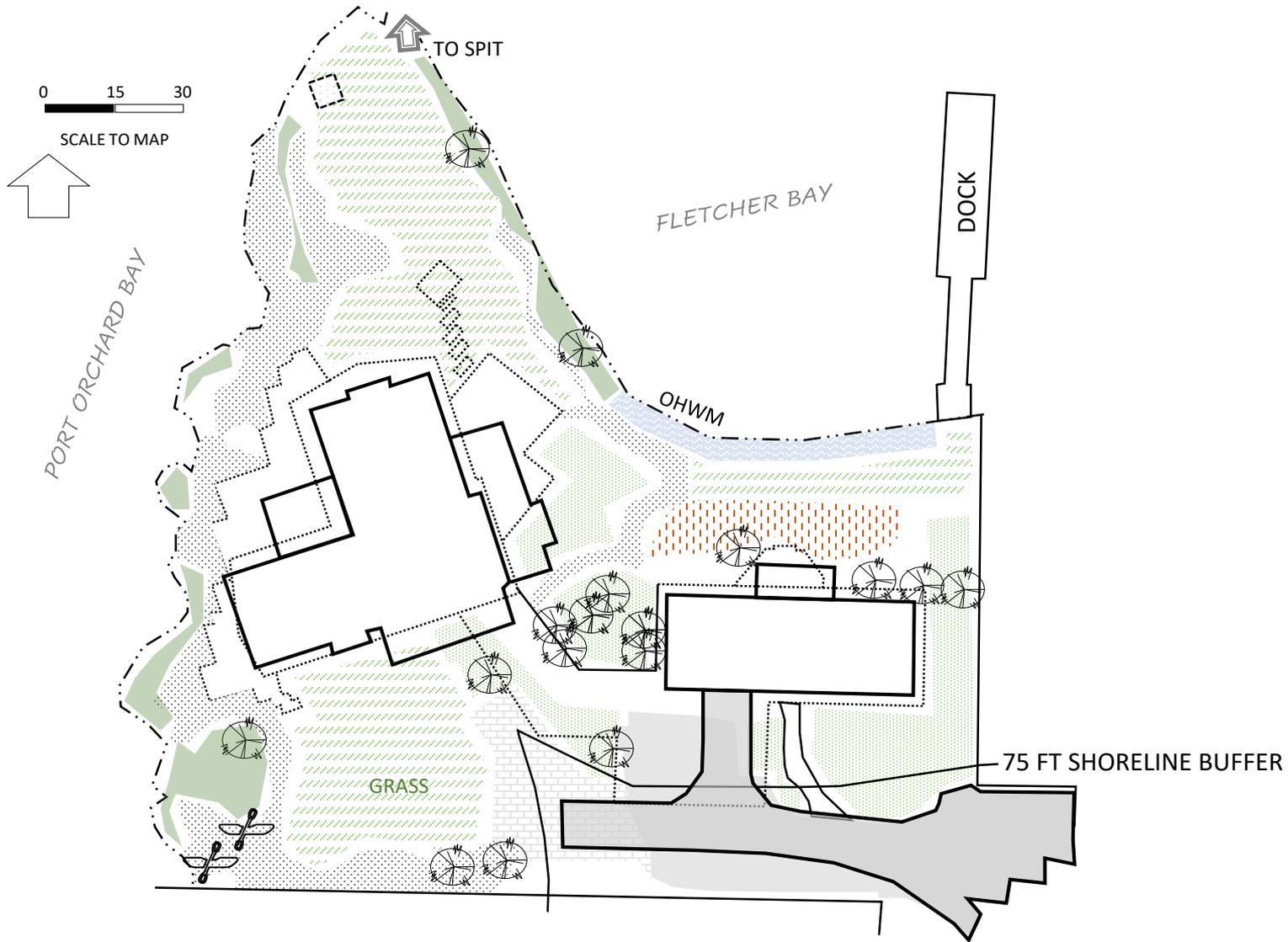


EXHIBIT C  
PROPOSED OVER EXISTING

5370 NE FLETCHER LANDING  
4192-000-009-0001



**BGE Environmental, LLC**

Wetland Consulting & Land Use Planning

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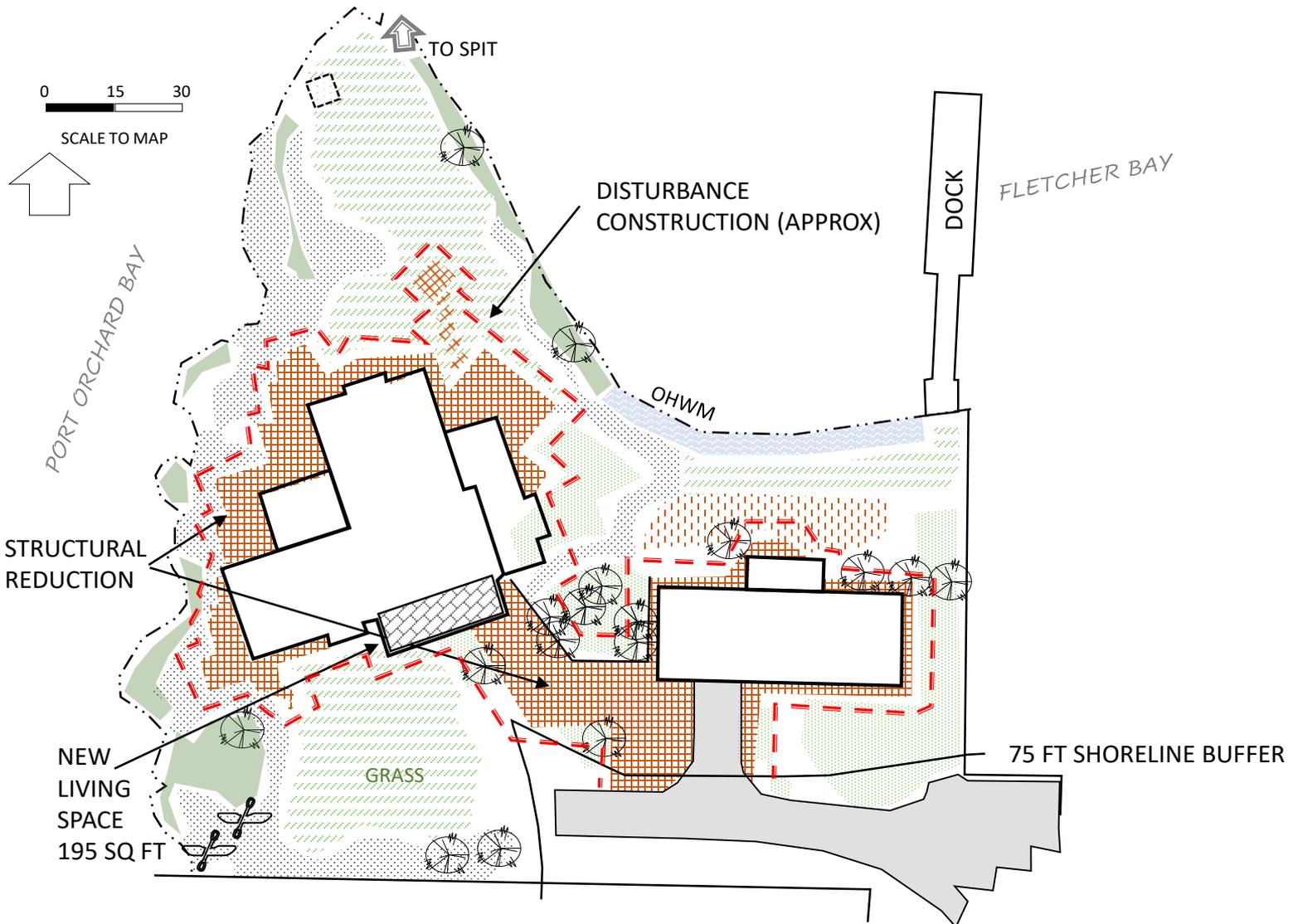


EXHIBIT D  
IMPACT SUMMARY

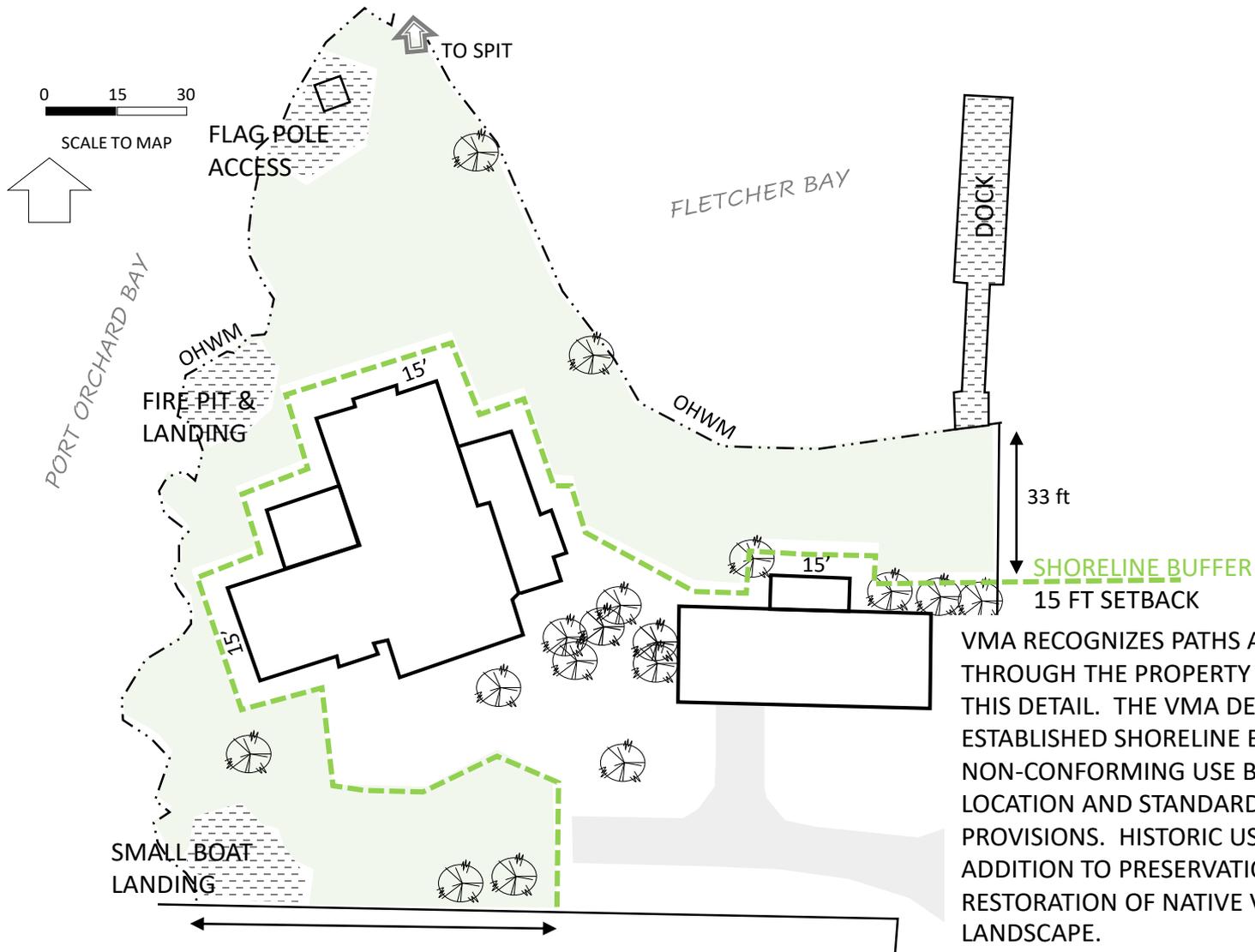
5370 NE FLETCHER LANDING  
4192-000-009-0001



BGE Environmental, LLC

Wetland Consulting & Land Use Planning

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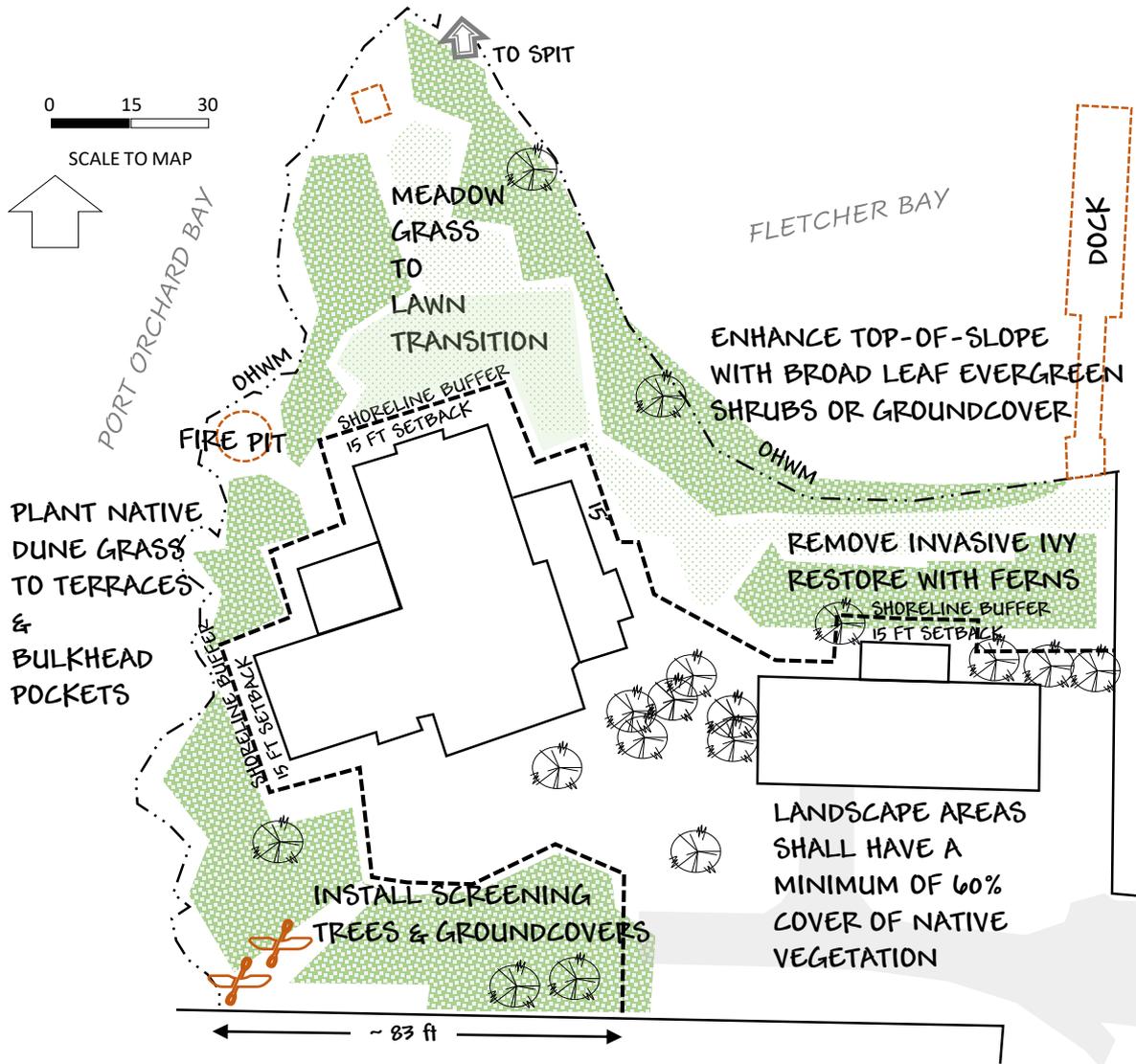


VMA RECOGNIZES PATHS AND TRAILS THROUGH THE PROPERTY NOT SHOWN TO THIS DETAIL. THE VMA DEPICTED HERE IS THE ESTABLISHED SHORELINE BUFFER, ONGOING NON-CONFORMING USE BASED ON SIZE, LOCATION AND STANDARDS TO CURRENT PROVISIONS. HISTORIC USE IS RECOGNIZED IN ADDITION TO PRESERVATION AND RESTORATION OF NATIVE VEGETATION TO THE LANDSCAPE.

EXHIBIT E  
ESTABLISHED BUFFER  
VEGETATION MANAGEMENT AREA

5370 NE FLETCHER LANDING  
4192-000-009-0001

BGE19\_0670  
**BGE Environmental, LLC**  
Wetland Consulting & Land Use Planning



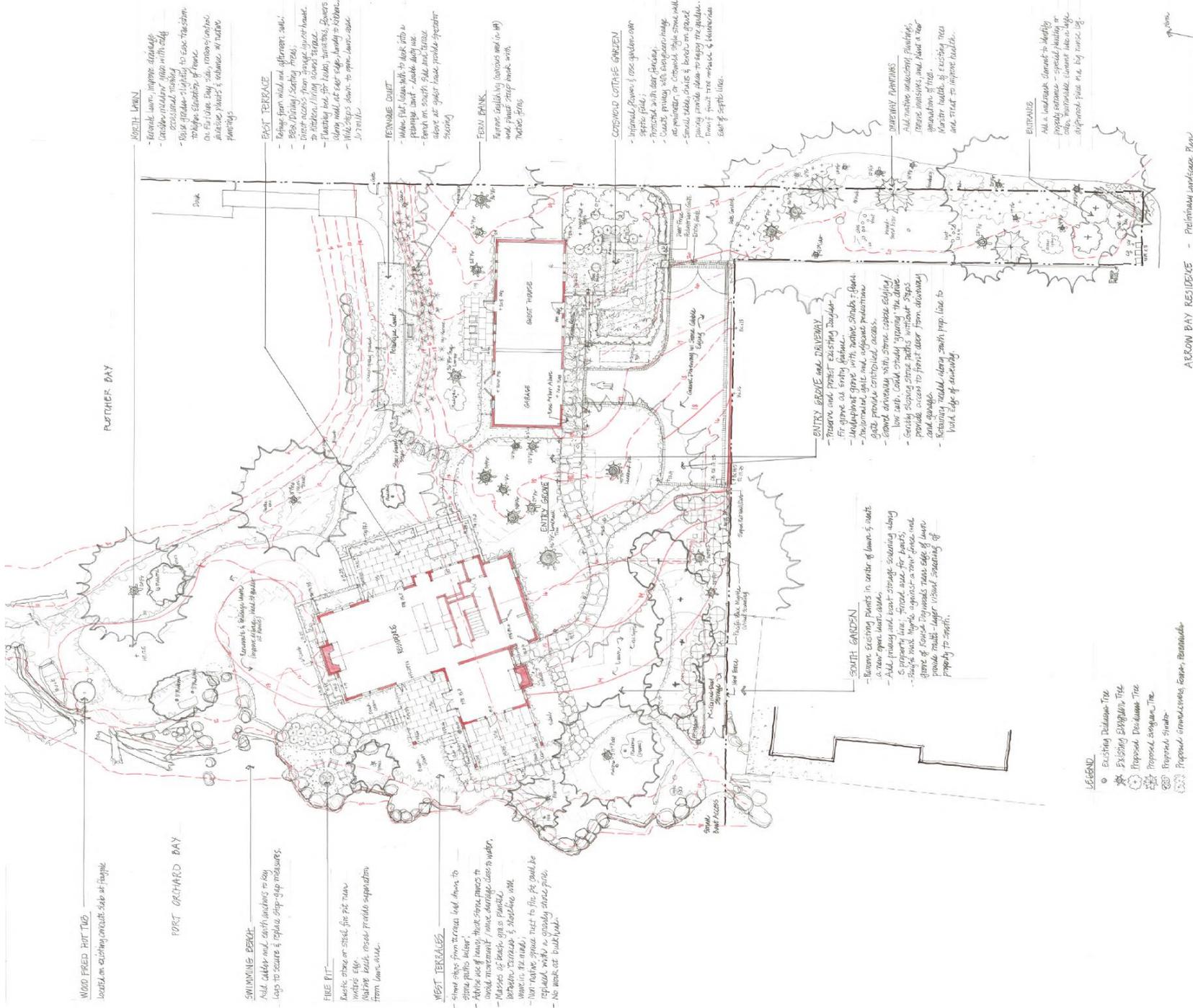
NOTE:  
 PLANTING SPECIES AND LOCATIONS ARE CONCEPTUAL FOR CONSISTENCY WITH PRELIMINARY DESIGNS FROM LANDSCAPE ARCHITECT. PRIOR TO IMPLEMENTATION OF THE VMP, THE SHORELINE BUFFER SHALL BE EVALUATED FOR SUITABILITY OF RESTORATION EFFORTS TO MAXIMIZE VEGETATION RECOVERY. FINAL PLANTING DETAILS SHALL BE PROVIDED IN AN AS-BUILT WITHIN 60 DAYS OF INSTALLATION. ALL PLANTS SHALL BE NATIVE TO THE REGION, TOLERANT TO THE SHORLINE ENVIRONMENT, AND PREFERRED FOR FUNCTIONAL SUPPORT TO THE NEARSHORE.

THE GOAL OF THE VEGETATION MANAGEMENT PLAN IS TO RESTORE THE ESTABLISHED SHORELINE BUFFER WITH NATIVE VEGETATION WHERE REASONABLE, FEASIBLE, AND BENEFICIAL. IT INCLUDES DEVELOPING VEGETATION NICHES WHICH SUPPORT A HIGH LEVEL OF ECOLOGICAL FUNCTION AND MAINTAINS THE ASSOCIATED USE AND ENJOYMENT OF THE PROPERTY. THE ESTABLISHED BUFFER SHALL PROVIDE PERFORMANCE SCREENING OF THE STRUCTURE TO THE BAY, OPEN WATERS AND SURROUNDING LANDSCAPE.

EXHIBIT F  
 VEGETATION MANAGEMENT PLAN

5370 NE FLETCHER LANDING  
 4192-000-009-0001

BGE19\_0670  
 **BGE Environmental, LLC**  
 Wetland Consulting & Land Use Planning



**WOOD FRED HOT TUB**  
 Located on existing concrete slab w/ flagpole

**FORT ORCHARD BAY**

**SWIMMING POOL**  
 All caddy and south anchors to stay  
 logs to secure & replace step-step measures.

**FIRE PIT**  
 Built stone on steel fire pit tank  
 weather eye  
 Mainline back, rock provide separation  
 from lawn area.

**NORTH TERRACES**  
 - Stone steps from terrace lead down to stone patio below.  
 - Add a row of heavy, thick stone pavers to create a new terrace.  
 - Mainline back, rock provide separation from lawn area.  
 - Non-slip surface next to fire pit, could be replaced with a gravelly stone path.  
 - No work on built-in.

**NORTH LAWN**

- Remove lawn, replace with deck  
 - Consider retaining wall with edge  
 - Consider existing retaining wall  
 - Add stone-clay to back the stone  
 - To high elevation of lawn  
 - On Fort One Day, add ramp on top  
 - Add stone-clay to back the stone  
 - Mainline back, rock provide separation from lawn area.

**EAST TERRACE**

- Remove lawn, add different soil.  
 - Add stone-clay to back the stone  
 - Consider existing retaining wall  
 - Add stone-clay to back the stone  
 - Mainline back, rock provide separation from lawn area.  
 - Add stone-clay to back the stone  
 - Mainline back, rock provide separation from lawn area.

**FERRY PANK**

- Remove lawn, add different soil.  
 - Add stone-clay to back the stone  
 - Consider existing retaining wall  
 - Add stone-clay to back the stone  
 - Mainline back, rock provide separation from lawn area.  
 - Add stone-clay to back the stone  
 - Mainline back, rock provide separation from lawn area.

**SOUTH GARDEN**

- Preserve and protect existing Douglas Fir grove as entry feature.  
 - Unimproved site, with native shrubs & plants.  
 - Good drainage, with stone steps leading to garage.  
 - Low sub. Good shading, opening the drive.  
 - Good screening, with stone steps leading to garage.  
 - Good screening, with stone steps leading to garage.  
 - Good screening, with stone steps leading to garage.  
 - Good screening, with stone steps leading to garage.

**LEGEND**

- Existing Redwood Tree
- ★ Existing Douglas Fir
- Proposed Deciduous Tree
- Proposed Evergreen Tree
- Proposed Shrub
- Proposed Groundcover
- Proposed Terrace

ARROW BAY RESIDENCE - Preliminary Landscape Plan  
 Anne Jones, Landscape Architect  
 Scale: 1/8"=1'-0"

**EXHIBIT G**  
**PRELIMINARY LANDSCAPE PLAN**

# PHOTOGRAPHS



PARKING TO FRONT.



ENTRY ACCESS. LANDSCAPE FRONTING ADU





CARPORT AND BREEZEWAY



COPSE OF SIGNIFICANT TREES





VIEW FROM DRIVEWAY PAVER TOWARDS THE WEST. PROPERTY LINE IS LEFT



LANDSCAPING TO BREEZEWAY AMONG MATURE CONIFERS





LANDSCAPING TO FRONT OF HOUSE. BREEZEWAY SHOWN



LOOKING BACK TOWARDS CARPORT





ESTABLISHED USE AT SW CORNER OF PARCEL. SMALL BOAT LAUNCH



LANDSCAPE, GRAVEL PATHS, & ASSOCIATED USE; TYPICAL





ADU SHORELINE FRONTAGE AND SURROUNDING ACCESS TYPICAL





VIEW TO SPIT FROM ADU PATIO. ENGLISH IVY AT TOP-OF-SLOPE



VIEW TOWARDS RESIDENCE FROM ADU. NOTE GRAVEL PATHS & IVY





BENCHED LANDING BETWEEN ADU AND DOCK.



ROSE AND IVY SLOPE TO BE RESTORED TO NATIVE FERNS





VIEW TO THE SOUTH FROM THE DOCK. SHORELINE TYPICAL



VIEW TO THE WEST FROM THE DOCK. SHORELINE TYPICAL





LANDSCAPE EXAMPLE BETWEEN ADU AND RESIDENCE



PATIO TO EAST SIDE OF RESIDENCE. LANDSCAPE TYPICAL





VIEW TOWARDS THE SPIT FROM PATIO



NORTHERN FACE OF RESIDENCE.



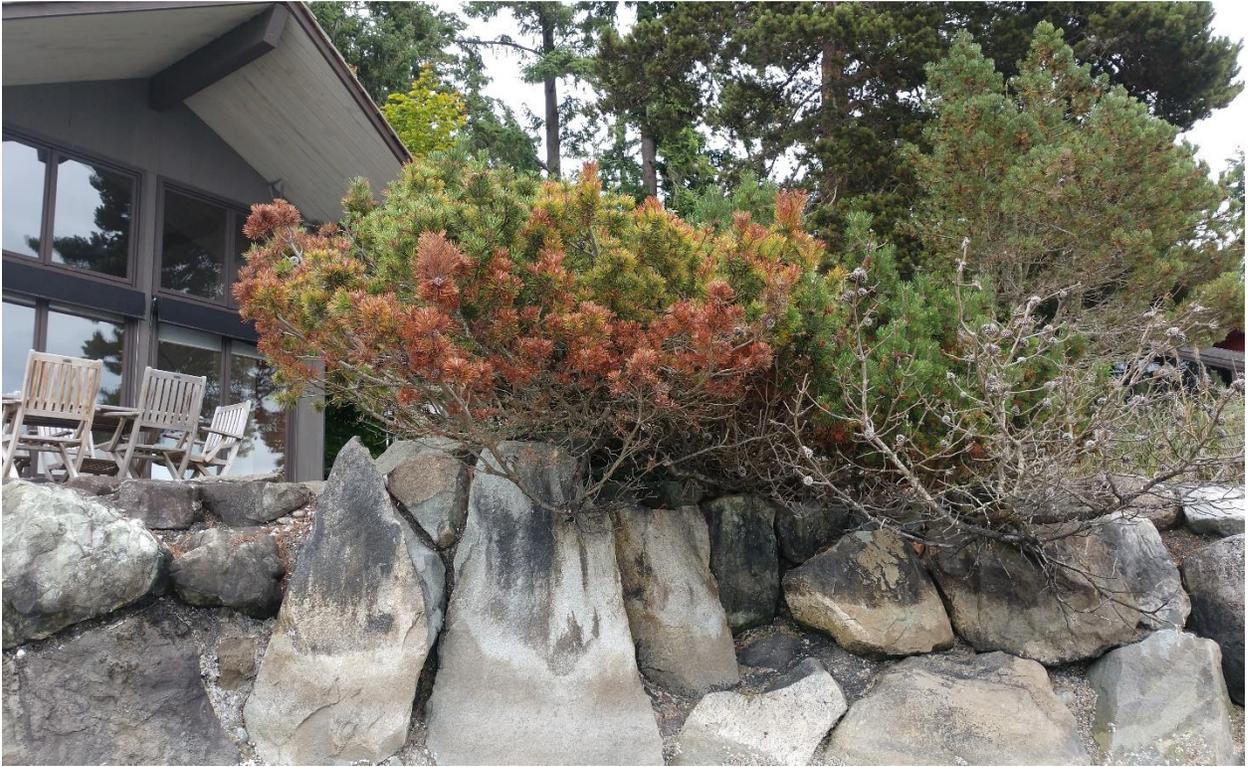


VIEW TO WESTERN SIDE OF RESIDENCE; SHORELINE TYPICAL



EXAMPLE OF ACCESS AND USE WHICH ARE STATIC TO THE BULKHEAD





LANDSCAPE WESTERN SHORELINE. TO BE EVALUATED & RESTORED IN VMP



EXISTING USE, FIRE PIT





TYPICAL OUTDOOR COMMON AREA AND ADJACENT LANDSCAPE. WEST





VIEW FROM WESTERN PATIO TOWARDS FRONT OF HOUSE



VIEW TO OPPOSITE DIRECTION, SHORELINE





EASTERN SIDE OF HOUSE. VIEW FROM THE SPIT



WESTERN SIDE OF HOUSE. VIEW FROM SPIT





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## MEMORANDUM

**TO:** COBI City Council

**FROM:** Environmental Technical Advisory Committee (ETAC)

**DATE:** February 25, 2019

**SUBJECT:** Report on ETAC's 2018 Activities and 2019 Work Plan

### 2018 Activities

1. Proposal for development of a Groundwater Management Plan (GWMP) for Bainbridge Island
  - Development of a GWMP was in the 2016 Comp Plan – High Priority Water Resources Action #2 states: “Adopt an island-wide Groundwater Management Plan. Take actions necessary – capital improvements, code changes, etc. – to capture, clean and re-infiltrate as much stormwater as reasonably possible.”
  - ETAC began working on a background document in support of a GWMP in late 2017
  - After many iterations, ETAC submitted a 32-page document to the Council on 11/1/18
  - ETAC members presented the proposal to the Council at 11/6/18 meeting and answered questions
  - ETAC submitted a letter to the Council on 11/19/18 in support of a GWMP and retention of the COBI Water Resources Specialist position, along with a proposed budget for the GWMP
  - The Council approved of an ETAC proposal to develop a Groundwater Fact Sheet for Bainbridge Island at their 12/11/18 meeting
  
2. Review of Habitat Management Plans (HMPs)
  - ETAC has been asked to review HMPs occasionally in the past by COBI planners. The role of the ETAC reviews was never very clear in the past and ETAC requested more clarification on the review role in an email to COBI on 11/9/18. In response, COBI agreed to provide more lead time for ETAC to make a review and promised more follow-up after the review process. To facilitate their review process, ETAC set up a sub-group of 4 members to work on these reviews and include the COBI planner in their discussions.
  - Robbins HMP – ETAC was initially asked to review in October 2017. The project was changed and a new HMP was referred to ETAC in September 2018; ETAC had some questions and requested follow-up but there has been no response since.
  - Satoris HMP – ETAC was initially asked to review in August 2018, but there was no follow-up and a coordinated review did not happen.
  - Marks and Maione HMP – ETAC subgroup worked with the COBI planner and a coordinated review was submitted by ETAC on 11/15/18.

## **2019 Work Plan**

1. Groundwater Fact Sheet
  - Draft a 1-page (front and back) fact sheet
  - Get the draft reviewed by KPUD and USGS
  - Revise and submit to the Council for approval
  - Post on COBI website and print copies
2. COBI staff liaison
  - ETAC needs a replacement for Christy Carr, preferably a staff person with expertise in environmental issues
3. GWMP process
  - Help COBI in some way with the two-year hydrogeologist position and contracting out for modeling expertise
  - Coordinate a community kickoff event with COBI communications staff
  - Provide quarterly updates to the Council on the progress of the GWMP
4. Review HMPs
  - Coordinate with the new COBI natural resources specialist to provide outside reviews through the ETAC subgroup on HMP reviews
5. Review Suzuki plans (if requested by the Council)
  - Provide reviews of Suzuki development plans as requested by the Council, especially as follow-up to past ETAC work on Suzuki environmental issues
6. Provide information on stormwater treatment (if requested by the Council)
  - Provide technical information pursuant to the \$100K approved in the budget for a study of methods to remove contaminants from stormwater before it discharges to Puget Sound
7. Provide information on tertiary wastewater treatment (if requested by the Council)
  - Provide technical information pursuant to the \$100K approved in the budget for a study of methods to remove contaminants of emerging concern before they are discharged to Puget Sound

**MEMORANDUM**  
**(1<sup>st</sup> cut draft)**

**TO:** COBI City Council

**FROM:** Environmental Technical Advisory Committee (ETAC)

**DATE:** January 9, 2020

**SUBJECT:** Report on ETAC's 2019 Activities and 2020 Work Plan

**2019 Activities**

1. Groundwater Fact Sheet
  - Drafted a 1-page (front and back) fact sheet
2. GWMP process
  - Reviewed COBI scope of work for the hiring process for the 2-year Hydrogeologist position and submitted comments to COBI
  - Subcommittee of Charlie Kratzer (chair), Melanie Keenan, Casey Schmidt, and Juan Rovalo
3. Provide information on tertiary wastewater treatment
  - Attended UAC meeting and provided comments for the tertiary treatment study
4. Review HMPs
  - No reviews requested by COBI
  - Subcommittee of Casey Schmidt (chair), Steve Saepoff, Karl Shearer, and Juan Rovalo

## **2020 Work Plan**

1. Groundwater Fact Sheet
  - Revise the draft fact sheet and submit to KPUD and USGS for review
  - Revise the fact sheet based on review comments and submit to the Council for approval
  - Post on COBI website and print copies
2. COBI staff liaison
  - ETAC still needs a staff liaison from COBI, preferably a staff person with expertise in environmental issues
3. GWMP process
  - Coordinate a community kickoff event with COBI communications staff
  - Provide quarterly updates to the Council on the progress of the GWMP
4. Review HMPs
  - Coordinate with COBI planning staff person to provide outside reviews through the ETAC subgroup on HMP reviews
5. Review Suzuki plans (if requested by the Council)
  - Provide reviews of Suzuki development plans as requested by the Council, especially as follow-up to past ETAC work on Suzuki environmental issues
6. Provide information on stormwater treatment (if requested by the Council)
  - Provide technical information pursuant to the \$100K approved in the budget for a study of methods to remove contaminants from stormwater before it discharges to Puget Sound
7. Provide information on tertiary wastewater treatment (if requested by the Council)
  - Provide technical information pursuant to the \$100K contract approved in 2019 for a study of methods to remove contaminants of emerging concern before they are discharged to Puget Sound