



REGIONAL DISTRICT OF CENTRAL KOOTENAY
DEVELOPMENT PERMIT
DP1905A

Date: May 5, 2022

Issued pursuant to Section 490 and 491 of the *Local Government Act*

1. This Development Permit is issued to Reina & Christian Pharness of Lot 1 District Lot 2636B Kootenay District Plan EPP85287, PID (031-169-287) as the registered owner (hereinafter called the “Permittees”) and shall only apply to those lands within the Regional District of Central Kootenay, in the Province of British Columbia legally described as Lot 1 District Lot 2636B Kootenay District Plan EPP85287, PID (031-169-287) as shown on the attached Schedules 1 and 2, forming part of this Permit, referred to hereafter as the “said lands”.
2. This Development Permit is issued subject to compliance with all of the bylaws of the Regional District of Central Kootenay applicable thereto, except as specifically varied or supplemented by this Permit.
3. This Development Permit shall not have the effect of varying the use or density of land as specified in the applicable Zoning Bylaw of the Regional District of Central Kootenay, nor a Floodplain Specification under Section 524 of the Local Government Act.
4. The said lands have been designated ‘Environmentally Sensitive Development Permit (ESDP) Area’ and are located within a Development Permit Area pursuant to the Electoral Area A Comprehensive Land Use Bylaw No. 2315, 2013.
5. The Permittee has applied to the Regional District of Central Kootenay to construct improvements to foreshore access and replacement and expansion of an existing deck and associated structures on the said lands. Pursuant to this Development Permit and subject to the terms and conditions herein contained, as well as all other applicable Regional District Bylaws, the Regional District of Central Kootenay hereby authorizes the use of the said lands for this purpose.
6. The Permittee is required to obtain approval in writing from the Regional District of Central Kootenay prior to the construction any new buildings, external additions to existing buildings or for any deviation from the development authorized under Section 5 of this Development Permit. Furthermore, the Permittee is hereby advised of the following requirements:
 - 6.1 Proposed construction of improvements to foreshore access and replacement and expansion of an existing deck and associated structures is authorized in accordance with the terms described in the report titled “10015 and 10025 Highway 3A Subdivision Twin Bays, Kootenay Lake Riparian Assessment” prepared by Masse Environmental Consultants Ltd., dated August 2017 and the addendum to said report dated January 26, 2021, attached to this permit including:
 - 6.1.1 The Riparian buffer along Kootenay Lake shall be maintained as a no-construction zone with the exception of foreshore access. Any activities proposed within the riparian setback should be assessed by a Qualified Environmental Professional prior to construction;

- 6.1.2 The riparian buffer be maintained around the wetland. Any activities proposed within the riparian setback should be assessed by a Qualified Environmental Professional;
 - 6.1.3 The removal of riparian vegetation be avoided, and where not avoidable (for example when accessing the foreshore) that it be minimized as much as possible;
 - 6.1.4 The riparian buffer be maintained around the wetland and any activities proposed within the riparian setback should be assessed by a Qualified Environmental Professional;
 - 6.1.5 That exposed soils be re-vegetated with native vegetation as soon as possible;
 - 6.1.6 Erosion and sediment control plans are implemented during construction;
 - 6.1.7 Shoreline alterations are concentrated in one area and that shoreline accesses, structures and pathways are narrow;
 - 6.1.8 Stairs and decks within the riparian area be elevated from the ground to enable light penetration and promote vegetation growth;
 - 6.1.9 Access to foreshore be designed using stairs with landings and avoiding paths in order to reduce erosion and habitat impact;
 - 6.1.10 Invasive weed species are removed from the property;
 - 6.1.11 Live and dead trees, especially deciduous trees over 30 cm DBH be retained unless considered a hazard;
 - 6.1.12 Clearing of trees and vegetation should be conducted outside of the songbird breeding season (April 1 – August 15). If clearing is to occur during the songbird breeding season a Qualified Environmental Professional should assess presence of active nests within areas to be cleared;
 - 6.1.13 Access to foreshore be designed to allow for wildlife movement across the riparian area.
 - 6.1.14 That all Measure to Protect the Integrity of the SPEA as identified in the Addendum (dated January 26, 2021) to the Report titled “10015 and 10025 Highway 3A Subdivision Twin Bays, Kootenay Lake Riparian Assessment” prepared by Masse Environmental Consultants Ltd., dated August 2017 be implemented during construction.
 - 6.1.15 That steps identified in the Habitat Restoration section of the Addendum (dated January 26, 2021) to the Report titled “10015 and 10025 Highway 3A Subdivision Twin Bays, Kootenay Lake Riparian Assessment” prepared by Masse Environmental Consultants Ltd., dated August 2017 be implemented following construction.
 - 6.1.16 That steps identified in the Monitoring section of the Addendum (dated January 26, 2021) to the Report titled “10015 and 10025 Highway 3A Subdivision Twin Bays, Kootenay Lake Riparian Assessment” prepared by Masse Environmental Consultants Ltd., dated August 2017 be implemented following construction.
7. As a condition of the issuance of this Permit, the Regional District shall hold an irrevocable Letter of Credit submitted by the Permittee in the amount of **\$984.00** to ensure the habitat restoration

requirements as set forth in Section 6 and a post construction inspection and report prepared by a Qualified Professional are completed and in accordance with the following provisions:

- 7.1 A condition of the issuance of this Permit is that should the Permittee fail to carry out the works and services as herein above stated, according to terms and conditions of this permit within the time provided, the Regional District may use the Security Deposit to complete these works or services by servants, agents or contractors, and any surplus shall be paid over to the Permittee. If the amount of funds is insufficient to cover the actual cost of completing the works, then the Permittee shall pay such deficiency to the Regional District immediately upon receipt of the Regional District's bill for same.
 - 7.2 The Permittee shall complete the Habitat Restoration works required by this Permit prior to **June 30, 2023**. Within this time period the required landscaping must be inspected and approved by a Qualified Environmental Professional and the Regional District.
 - 7.3 If the Habitat Restoration works are not approved within this time period, the Regional District has the option of continuing to extend the term of the Permit until the required restoration is completed or has the option of drawing from the Security Deposit to complete the required landscaping. In this event, the Regional District or its agents have the irrevocable right to enter into the property to undertake the required Habitat Restoration works for which the Security Deposit was submitted.
8. In accordance with the Local Government Act, 'Notice' shall be filed in the Land Title Office that the said lands are subject to this Development Permit.
 9. The terms of this Development Permit including subsequent amendments, are binding on all persons who acquire an interest in the said lands associated with this Permit.
 10. It is understood and agreed that the Regional District has made no representations, covenants, warranties, guarantees, promises, or agreement (verbal or otherwise) with the Permittee other than those in this Development Permit. It is solely the responsibility of the Permittee to ensure that the requirements of all other applicable government agencies are satisfied.
 11. This Development Permit does not constitute a building permit.
 12. This Development Permit shall come into force and effect 14 days after the date of issuance unless a Waiver of Appeal is received from the Permittee at which time the Development Permit shall be deemed to be issued upon receipt of the Waiver of Appeal. OR If a Notice of Appeal is received the Development Permit shall be suspended until such time as the Board of the Regional District of Central Kootenay has decided the Appeal.

S Sudan

Sangita Sudan, General Manager of Development Services

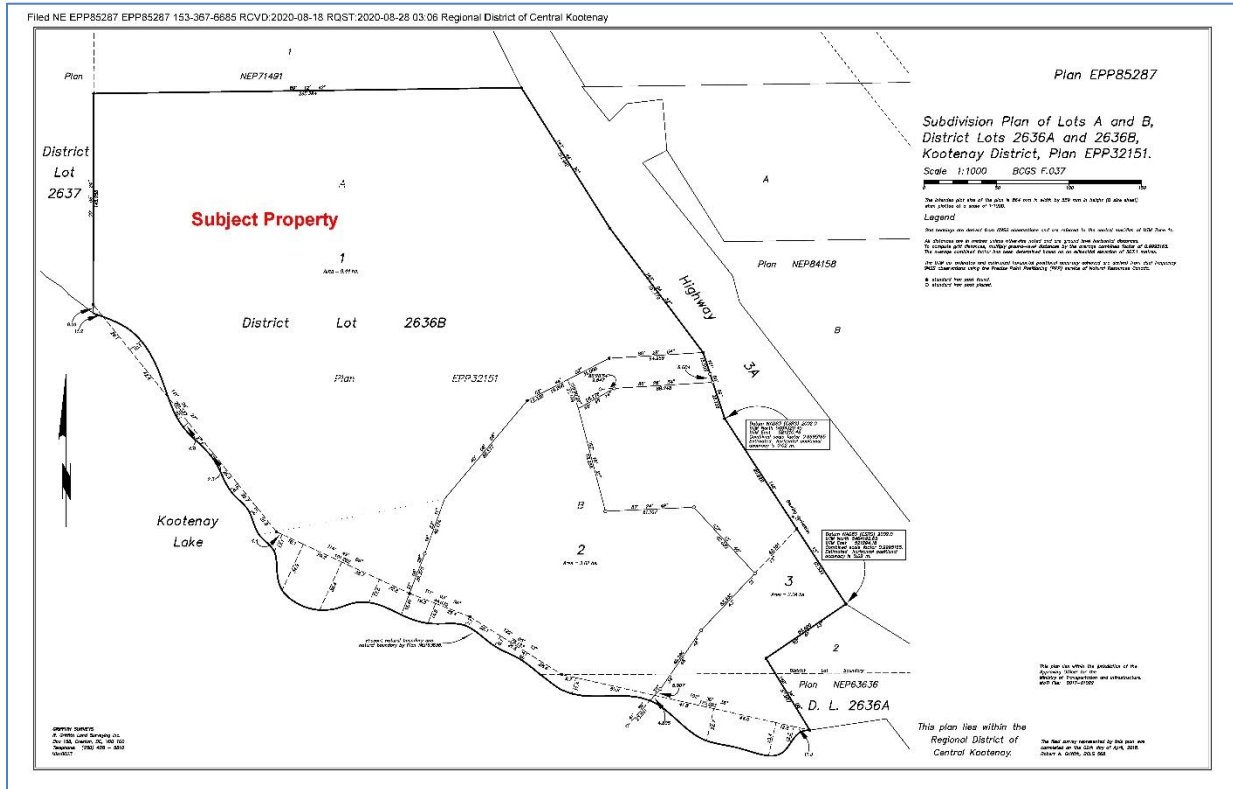
March 15, 2022

Date of Approval (date of review and approval)

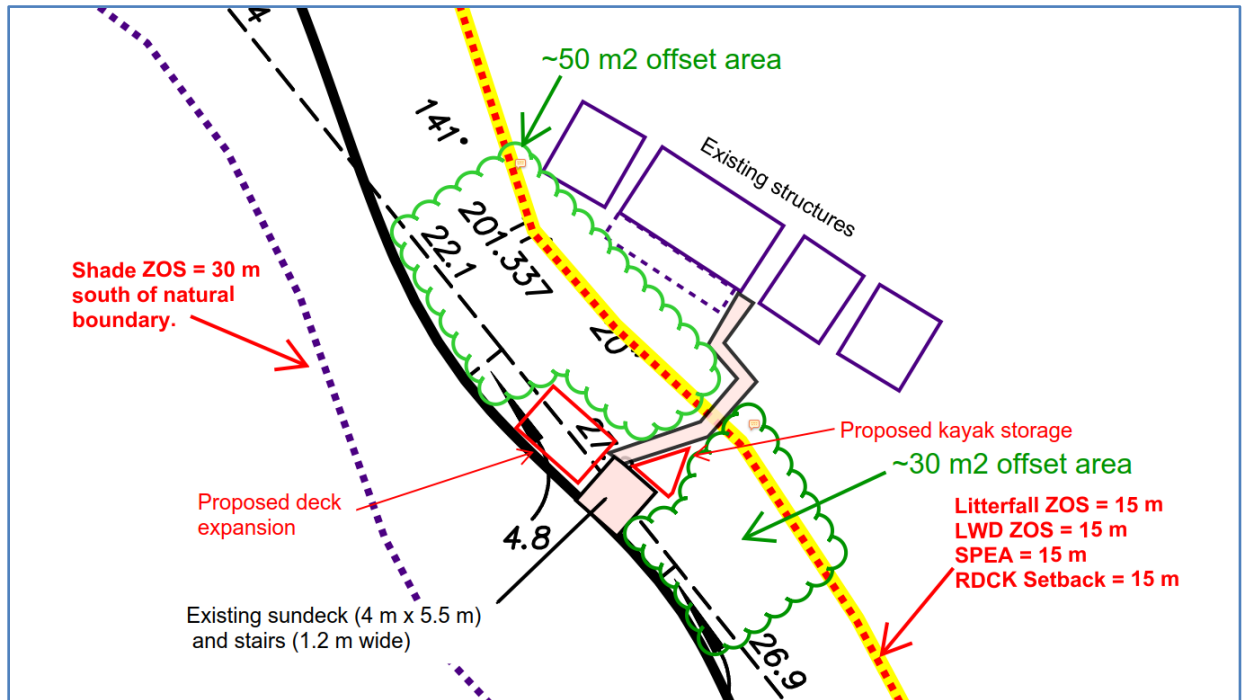
May 5, 2022

Date of Issuance (pending receipt of securities)

Schedule 1: Subject Property



Schedule 2: Site Plan



- SPEA Setback (15m)
- - - RDCK ESDP Setback (15 m)

Schedule 3: Environmental Assessment

ADDENDUM

TO: Nelson Wight, Planning Manager - Regional District of Central Kootenay
FROM: Iraleigh Anderson, P.Ag., B.Sc. - Masse Environmental Consultants Ltd.
DATE: January 26, 2021
RE: Riparian Assessment for Amendment to Development Permit (DP1904A) at 10025 Highway 3A
REF DOC: 10015 and 10025 Highway 3a Twin Bays, Kootenay Lake Environmental Assessment.

Introduction

Masse Environmental Consultants (MEC) was retained by Corey Wells on behalf of Chris Pharness to conduct a riparian assessment to accompany an application for an amendment to a Development Permit (DP) at 10025 Highway 3A, Twin Bays, BC. The proposed development includes improvements to foreshore access and replacement and expansion of an existing deck and associated structures. A site survey was conducted on December 11, 2020 by Iraleigh Anderson P.Ag.

This addendum accompanies an environmental assessment (EA) prepared for subdivision of properties; 10015 and 10025 Highway 3A (Masse 2017). The EA provides information required for an Environmentally Sensitive Development Permit (ESDP), as per the Regional District of Central Kootenay *Electoral Area 'A' Comprehensive Land Use Bylaw No. 2315*. It defines the Streamside Protection and Enhancement area (SPEA) for the property to be 15 m along the foreshore of Kootenay Lake. The EA recommends that the SPEA along Kootenay Lake should be "maintained as a no-construction zone with the exception of foreshore access" and "any activities proposed within the riparian setback should be assessed by a Qualified Environmental Professional (QEP) prior to construction" (Masse 2017).

Based on direction from RDCK planning staff (Eileen Senyk Pers. Comm.), the objective of this riparian assessment is to:

- Determine whether proposed foreshore construction works align with conditions set out in the Development Permit (#DP1904A) issued for the recent subdivision of the property;
- Gather information regarding potential environmental impacts from proposed development; and,
- Provide mitigation options

This addendum to the EA (Masse 2017) provides a description of proposed works; description of Kootenay Lake riparian habitat at the proposed project site; and discussion of impacts and mitigation options and measures to protect the riparian area.

Proposed Works

Proposed works within the 15 m SPEA of Kootenay Lake include:

1. Replacement of deteriorating wood staircase within existing footprint (~22m²).
2. Replacement of deck within existing footprint (~22m²), elevated ~35 cm above existing elevation.
3. Construction of new deck expansion and access walkway to the north (~28 m²).
4. Construction of kayak storage shed to the southeast of the existing deck (~12 m²).

The primary construction material for all structures will be wood, which will be anchored onto the rock. With the exception of the upper portion of the staircase, all proposed construction is entirely within the SPEA. The proposed deck expansion and kayak storage area would increase the built footprint within the SPEA by 40 m². Refer to Figure 1 for conceptual diagram and Figure 2 (Pg. 8) for Site Plan.

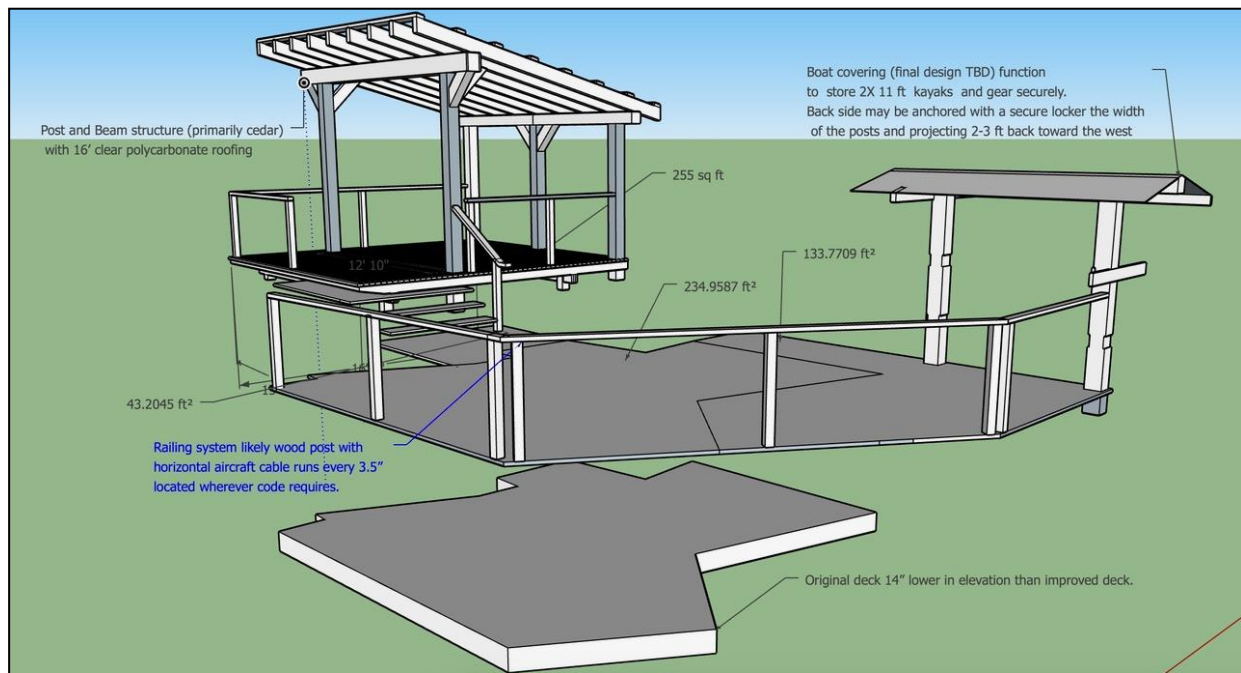


Figure 1. Conceptual diagram provided by Corey Wells January 6, 2021.

Riparian Habitat Description

Riparian habitat at the project location consists of exposed bedrock outcrops with slopes typically between 35-50% on a south to west facing aspect. Exposed bedrock is the dominant substrate, and tree cover is sparse. There is high diversity of flowering shrubs and herbs; and mosses and lichens are prominent on all substrates (e.g., bedrock, woody debris, trees etc.). Trees within the SPEA are stunted and typically less than 10 m tall. Coarse woody debris is limited within the project area. A young ponderosa pine (~25 cm diameter at breast height; Photo 5) in poor health is leaning over the SPEA. When this tree falls it will add valuable cover to this open rock habitat where there is currently only a minimal amount of aged coarse woody debris. Shrubs are present in patches where small depressions have allowed soil development. Boulder and talus cover is minimal. Exotic plant cover is present, with Canada bluegrass (*Poa compressa*) dominating several cracks in the rock and pockets of soil; and hare's foot clover (*Trifolium arvense*) growing in a large patch of soil. An exotic rose (*Rosa* sp.; Photo 7 and Photo 8) is present south of the deck. The habitat type is Rock Outcrop (Ro05 - Juniper -

Kinnikinick - Penstemon; Photos 1-4) site association (MacKillop and Ehman 2016). Plant species observed are listed in Table 1 (and see Masse 2017).

This site is favourable for western skink (*Plestiodon skiltonianus*; a blue listed species in BC), garter snake (*Thamnophis sirtalis*; see Masse 2017), and northern alligator lizard (*Elgaria coerulea*). Rubber boa (*Charina bottae*; a species of Special Concern under the Canada *Species at Risk Act*) may also be present.

Rock outcrops also provide potential nesting habitat for the Common Nighthawk (*Chordeiles minor*), an at risk (Listed as Threatened under the Canada *Species at Risk Act*) aerial insectivore which has been observed along Kootenay Lake.

Flowering plants on the rock outcrop provide forage and nesting habitat to birds, small mammals, and invertebrates including pollinating insects. Plant species observed are listed in Table 1 (and see Masse 2017). The deep waters below the rocky outcrop provide no complex substrate or aquatic vegetation for fish habitat.

One small area of soil within a depressed rock outcrop has been damaged by bonfire activity (Photo 6) and the habitat has also been impacted by the removal of coarse woody debris. An exotic rose (*Rosa* sp.; Photo 7 and Photo 8) is sprawling south of the deck. Past pruning on the rose crown was evident.



Photo 1. View of habitat around existing staircase, view east.



Photo 2. View of habitat within proposed deck expansion area, view south.



Photo 3. Rock outcrop habitat, south of deck.



Photo 4. Outcrop with patch of hare's foot clover, northeast of deck.



Photo 5. Leaning ponderosa pine view southeast leaning over SPEA.



Photo 6. Soil damage from bonfire northeast of deck.



Photo 7. Exotic rose crown, south of deck.



Photo 8. Exotic rose spreading across rock outcrop habitat, south of deck.

Table 1. Plants observed within the SPEA December 11, 2020.

| English Name | Scientific Name | English Name | Scientific Name |
|------------------------|--------------------------------|---------------------------|------------------------------|
| Herbaceous | | Trees and Shrubs | |
| bluebunch wheatgrass | <i>Pseudoroegneria spicata</i> | Douglas-fir | <i>Pseudotsuga menziesii</i> |
| bull thistle | <i>Cirsium vulgare</i> | ponderosa pine | <i>Pinus ponderosa</i> |
| Canada bluegrass | <i>Poa compressa</i> | Rocky Mountain juniper | <i>Juniperus scopulorum</i> |
| cheatgrass | <i>Bromus tectorum</i> | baldhip rose | <i>Rosa gymnocarpa</i> |
| Columbia River mugwort | <i>Artemisia lindleyana</i> | common juniper | <i>Juniperus communis</i> |
| common harebell | <i>Campanula rotundifolia</i> | common snowberry | <i>Symphoricarpos albus</i> |
| hare's-foot clover | <i>Trifolium arvense</i> | falsebox | <i>Paxistima myrsinites</i> |
| hawkweed | <i>Hieracium sp.</i> | mallow ninebark | Physocarpus malvaceus |
| horseweed | <i>Conyza canadensis</i> | mock-orange | Philadelphus lewisii |
| kinnikinnick | <i>Arctostaphylos uva-ursi</i> | rose | Rosa sp. |
| maidenhair spleenwort | <i>Asplenium trichomanes</i> | saskatoon | Amelanchier alnifolia |
| blue-eyed-grass | <i>Sisyrinchium montanum</i> | tall Oregon-grape | Mahonia aquifolium |
| nodding onion | <i>Allium cernuum</i> | stonecrop | Sedum sp. |
| poverty oatgrass | <i>Danthonia spicata</i> | Lichens and Mosses | |
| rough-leaved ricegrass | <i>Oryzopsis asperifolia</i> | star moss | <i>Syntrichia ruralis</i> |
| round-leaved alumroot | <i>Heuchera cylindrica</i> | haircap moss | <i>Polytrichum sp.</i> |
| Sandberg's bluegrass | <i>Poa secunda</i> | lung lichens | <i>Lobaria sp.</i> |
| self-heal | <i>Prunella vulgaris</i> | | |
| shrubby penstemon | <i>Penstemon fruticosus</i> | | |
| spotted knapweed | <i>Centaurea stoebe</i> | | |
| violet | <i>Viola sp.</i> | | |
| willowherb | <i>Epilobium sp.</i> | | |
| yarrow | <i>Achillea millefolium</i> | | |

Kootenay Lake Shoreline Resources

Site specific riparian habitat risks, Ktunaxa Nation cultural values, and archaeological resources were retrieved from the Kootenay Lake Foreshore Inventory Mapping (FIM) and the Kootenay Lake Shoreline Management Guidelines documents (EEC 2016, KLP 2018). The property is within FIM segment 182. Table 2 provides the environmental and archaeological risk results identified in the FIM along the shoreline of the property.

Table 2. Environmental and archaeological risk results.

| Aquatic Habitat Index Rating (AHI) | Aquatic Sensitivity | Archaeological Risk | Enhanced Engagement Required |
|---|----------------------------|----------------------------|-------------------------------------|
| Low | No | Red | Yes |

Ecological Impacts

Ecological impacts within SPEA associated with proposed deck expansion and stair replacement include:

- Loss of ~ 40m² rock outcrop habitat within proposed deck footprint and alteration of habitat in the areas immediately adjacent (~1 m) to the new structures. Shading under the deck will reduce vegetation survival within the footprint and the habitat will no longer be suitable forage for insect pollinators or reptiles. Though the area under the deck may provide hiding cover for some small animals, this is not considered a habitat enhancement.
- Soil disturbance may provide sites where exotic plant species can become established.
- Expansion of human infrastructure could lead to future terrestrial habitat impacts if landowners continue to gradually remove SPEA vegetation.

Measures to Protect the Integrity of SPEA

Mitigation measures to be implemented to protect the integrity of SPEA include:

- Clearly delineating worksite boundaries and minimizing vegetation alteration and removal.
- Working within the existing footprint. Do not store, operate, or move equipment in sensitive rock outcrop habitat adjacent to existing access structures.
- Pre-cut materials outside of the SPEA to the extent possible to prevent release of wood and metal dust.
- Surface runoff should be controlled and directed away from shallow rock outcrop soils.
- Avoid use of generators and other gasoline powered equipment within the SPEA. If such equipment must be used it should be placed and stored in secondary containment, to prevent drips and leaks.
- Minimize access to rock outcrop areas within the SPEA to reserve as wildlife habitat. The proposed use of guardrails around the deck is a positive design feature that will discourage access to adjacent rock outcrop ecosystems within the SPEA.
- Avoid bonfires in sensitive rock outcrop soils. Fire degraded soils provide microsites for establishment of exotic plant species which compete with native species and degrade sensitive ecosystems.
- Retain coarse woody debris within the SPEA and allow the leaning ponderosa pine to fall in the rock outcrop. The resulting coarse woody debris as it provides valuable cover for reptiles and other wildlife.
- Revegetate disturbed areas of soil with ecotypic (i.e., regionally adapted) native rock outcrop plant species immediately following construction. After construction, areas of disturbed soil should be seeded with the West Kootenay Pollinator Seed Mix for Dry Sites seed available from [Kinseed](#) in Nelson, BC. Seed

application rates provided on the website indicate minimum values. Seeding will be most effective in the late fall. Removal of exotic invasive species (e.g., weeding) will be required in the first season, and a second application of seed will be required the following season to promote target vegetation establishment and competition with aggressive exotic species such as hare's foot clover and spotted knapweed which flood the local landscape with abundant seed.

Mitigation Options

The Shoreline Management Guidelines for Kootenay Lake (KLP 2018) outlines principles for shoreline development in order to achieve a "No Net Loss" of habitats present. This objective is achieved by applying the following priority sequence of mitigation options: 1. *Avoidance* of environmental impacts; 2. *Minimization* unavoidable impacts; 3. On-site *restoration* of unavoidable impacts; and 4. *Offset* residual impacts that cannot be minimized or restored through restoration of similar ecosystems nearby (KLP 2018).

Consistent with KLP (2018), mitigation options for the proposed works include: 1. Avoidance or 2. Minimization, restoration, and offsetting. Steps which have been taken to minimize the impacts to the SPEA to date include proposed replacement of the staircase within the existing footprint and reduction of proposed north deck expansion by ~13 m² (pers. comm. Corey Wells). The following provides an ecosystem restoration plan to offset habitat loss from the proposed development as this is the proposed approach by the landowner.

Habitat Restoration

In order to offset SPEA habitat loss from the proposed development, habitat restoration of similar rock outcrop habitat on the subject property is proposed at a 2:1 ratio (i.e., 80 m² restored to offset 40 m² impacted). Previously impacted rock outcrop habitat immediately north and south of the deck/staircase present a sufficient target area for restoration (Figure 2).

The soil damaged by the bonfire northeast of the deck provides an opportunity for restoration. The following steps should be used to restore the bonfire area:

1. Soils from below the new deck should be carefully salvaged by hand and layered upon the fire damaged areas to provide a suitable medium for plant reestablishment. The soil should be spread carefully to match the surrounding microtopography.
2. After placement of soils this area should be seeded annually for at least two years with the West Kootenay Pollinator Seed Mix for Dry Sites. This seed is available from [Kinseed](#) in Nelson, BC. Seed application rates provided on the website indicate minimum values. Seeding will be most effective in the fall.
3. Exotic plants should be removed from this area to promote establishment of target species.

Exotic plants elsewhere in the outcrops should also be removed. The following steps will enhance the rock outcrop habitat by replacing exotic species with native ones:

1. Exotic plants throughout the rock outcrop should be pulled carefully so that all roots are removed, but soil disturbance is minimized. The large patch of [hare's foot clover](#) and numerous small patches of [Canada bluegrass](#) and [spotted knapweed](#) north and east of the deck should be removed.

2. The exotic rose south of the deck should also be eradicated. Any aboveground growth of the rose should be pruned immediately each time it is visible. If the rose is completely pruned regularly throughout the season the roots will gradually starve and die.
3. Bare soils previously occupied by exotic plants should be carefully seeded with the West Kootenay Pollinator Seed Mix for Dry Sites.

A minimum of two seasons of treatment are recommended to provide an advantage to target native species over aggressive exotic species. Habitat restoration of sensitive herbaceous communities, such as rock outcrops, is a technical process which should be led by a QEP. It is recommended that a QEP visit the site immediately before construction to conduct restoration, and again one year thereafter to monitor effectiveness.

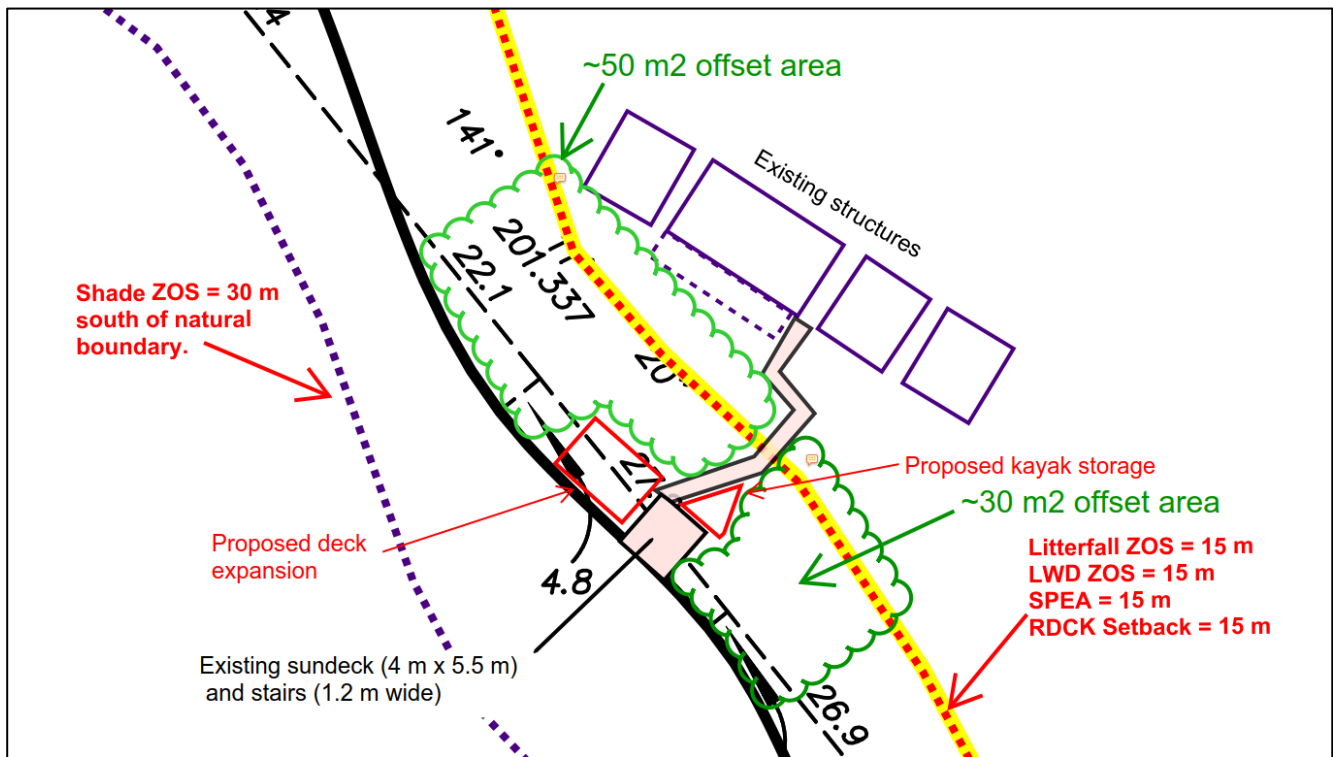


Figure 2. Site plan with approximate development footprints and potential offsetting areas.

Monitoring

QEP direction and monitoring is required to ensure effectiveness of proposed mitigation options, particularly the specialized approach to rock outcrop habitat restoration which has been recommended.

Indicators of success after two years include:

- Establishment of native species from the prescribed seed mix should be observed in:
 - All previously disturbed construction restoration areas around the work area;
 - The bonfire pit; and
 - The area formerly dominated by hare's foot clover.
- Neither bare ground nor exotic plants should dominate cover in the above listed areas.

- Efforts to eradicate the exotic rose should be evident. Evidence of regular pruning of all aboveground biomass should be observable, or ideally the rose should be dead.

Conclusion

Foreshore access repairs and upgrades are proposed within the 15 m Kootenay Lake SPEA at 10025 Highway 3A, Twin Bays, BC. The rock outcrop within the SPEA is a sensitive ecosystem which provides habitat for reptiles and other terrestrial wildlife. New development within the SPEA contributes to cumulative impacts to the Kootenay Lake riparian area; however, options for mitigation of site-specific impacts are presented (KLP 2018).

Closure

This report has been prepared by a Qualified Environmental Professional (QEP) who has not acted for, or as an agent(s) of the RDCK and was at the expense of the property owner.

If you have any comments or questions, please do not hesitate to contact me.

Sincerely,



Iraleigh Anderson, B.Sc., P.Ag.

ira@masseenvironmental.com

References

- [EEC] Ecoscape Environmental Consultants. 2016. Kootenay Lake Foreshore Inventory and Mapping and Aquatic Habitat Index. Prepared for: Kootenay Lake Partnership & Fisheries and Oceans Canada.
- [KLP] Ktunaxa Nation Council, Regional District of Central Kootenay, Ministry of Forests, Lands, and Natural Resource Operations, Ecoscape Environmental Consultants Ltd., Tipi Mountain Eco-Cultural Services Ltd. The Firelight Group Ltd., Wayne Choquette. 2018. Shoreline Management Guidelines – Kootenay Lake. Prepared for Kootenay Lake Partnership.
- Mackillop, D. and Ehman, A. 2016. A Field Guide to Ecosystem Classification and Identification for Southeast British Columbia: The Southeast Columbia Mountains. Province of B.C., Victoria, B.C. Land Management Handbook 70.
- [Masse] Masse Environmental Consultants. 2017. 10015 And 10025 Highway 3a Subdivision Twin Bays, Kootenay Lake Environmental Assessment. Prepared for the Regional District of Central Kootenay.