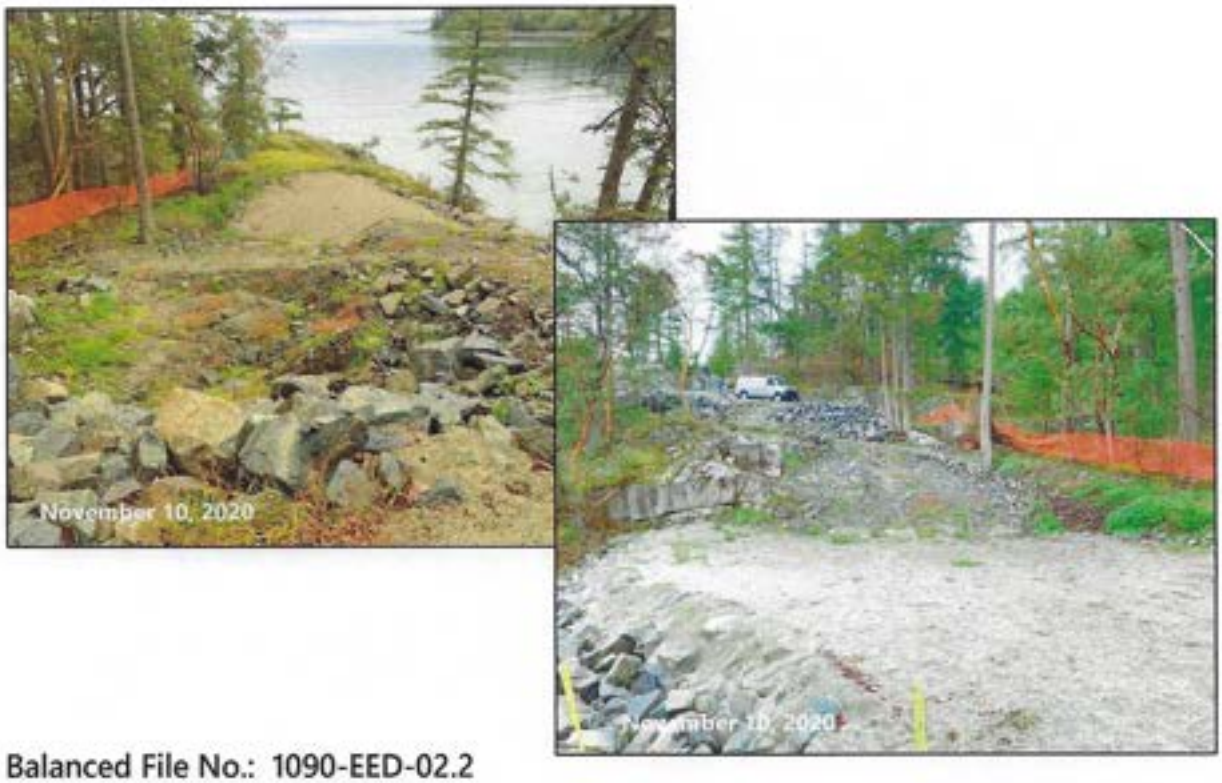
BALANCED
Advisors

Construction of Swimming Pool within Ocean Setback Area Terrestrial Environmental Impact

Unit 1 7531 Cove Beach Road Halfmoon Bay, SCRD



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Prepared by:

Balanced Advisors Limited
1047 Belvedere Drive
North Vancouver, B.C.
V7R 2C6

Prepared for:

West Coast Turn Key
#4 – 6695 Nelson Avenue
West Vancouver, B.C.
V7W 2B2

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1 SUMMARY

1.1 Background

The Owners of the lot at Unit 1 7531 Cove Beach Road (the Lot) are developing the Lot as a detached single-family residence. The Owners are represented by the Builder, West Coast Turn Key. Residence ancillary features include a Waterfront Plaza area. Much of the Waterfront Plaza footprint is within the Sunshine Coast Regional District (SCRD) designated 15 metre (m) setback from the ocean. The Waterfront Plaza, including that area within the 15m ocean setback, is approved for construction under the current SCRD building permit.

1.2 Current situation

Construction of the residence and ancillary features is well advanced.

The Owners are proposing to add a Swimming Pool to the Waterfront Plaza area. The entire footprint of the proposed Pool would be within the Waterfront Plaza area. Most if not all of the proposed Pool footprint would be within the SCRD 15m ocean setback area. The Waterfront Plaza, including that area of the Plaza within the 15m ocean setback, including the footprint of the proposed Swimming Pool, is approved for construction under the current SCRD building permit.

The Owners have applied to SCRD for a variance to allow for the Swimming Pool to be added to the Waterfront Plaza, within the Plaza area approved for construction under the current SCRD building permit. The Pool would be constructed along the waterfront margin of the Plaza, within the 15m ocean setback area.

To inform consideration of the variance request SCRD have asked the Owners to provide SCRD with a report outlining the terrestrial environmental impacts related to construction of the Swimming Pool within the ocean setback area, and potential restoration opportunities.

On behalf of the Owners, the Builder has engaged our firm, Balanced Advisors Limited (Balanced), to prepare the environmental impact report for SCRD consideration. This document is our Balanced report.

1.3 Qualified Environmental Professional (QEP) Opinion

In our informed opinion as experienced QEPs:

- The proposed construction of the Swimming Pool within the 15m ocean setback area of the Waterfront Plaza will have no substantive adverse environmental effect on the local terrestrial or marine environments.
- Restoration of the terrestrial environment of the proposed Swimming Pool site is neither necessary from an environmental perspective nor feasible. If there is a perceived need to mitigate the effect of removal of vegetation from the Waterfront Plaza area by the previous owner/developer, there might be mitigation opportunities available through planting of suitable native shrubs and herbs within the ocean setback area.

QEP opinions and conclusions are laid out below in Sections 6, 7, 8, and 9 (pages 7-14) and summarized in Section 9 and Table 1 below (pages 14 and 15).

2 WATERFRONT PLAZA SITE DISTURBANCE / DEVELOPMENT

Through personal communication (West Coast Turn Key; October 2024) the current Builder advises that:

- Initial disturbance of the Lot was carried out by a previous owner/developer with no connection to the current Owners or Builder.
- The Waterfront Plaza site, including the Swimming Pool area, was cleared of vegetation and the ground reworked and levelled by the previous owner/developer prior to November 30, 2020, the date when the current Owners acquired ownership of the Lot.

The Builder and Balanced have provided photos of the Plaza site showing the site cleared of vegetation with the ground reworked and levelled prior to the November 30, 2020 acquisition of the site by the Owners:

- The photos provided by the Builder are from an October 10, 2020 site visit by the current Owners before they acquired the Lot (personal communication; West Coast Turn Key; October 2024).
- The photos held by Balanced are from the November 10, 2020 site visit and inspection of the foreshore and seabed adjacent to the Waterfront Plaza site. The photos show the Plaza site cleared with the ground reworked and levelled. Two of the November 10, 2020 photos held by Balanced are shown on the cover page of this report.

3 MARINE RIPARIAN AREA (MRA) – LOCAL ECOSYSTEM FUNCTION

3.1 MRA – The Area within 15 Horizontal Metres of the Ocean at High Water

The terrestrial area adjacent to the sea is known as the MRA. Within British Columbia, the MRA is generally described as extending 15m inland from the natural boundary of the upland with the sea at high water. The SCRD 15m ocean setback area matches the MRA.

MRA ground conditions and vegetation often show a transition between typical upland terrestrial conditions and typical aquatic marine conditions and, under natural conditions, provide connectivity between the terrestrial and marine ecosystems. That connectivity provides for the contribution of local terrestrial ecosystem features and functions to the local marine ecosystem. The MRA, and in particular native MRA vegetation, typically provide the greatest terrestrial contribution to local marine ecosystem function.

3.2 MRA – Contribution to Marine Foreshore

Marine foreshore is the site-specific intertidal area between the lowest tide mark (lower low water large tide) and the highest tide mark (higher high water large tide).

Marine foreshore characteristics range from near vertical bedrock exposed to wave energy to areas largely protected from wave energy featuring gently sloping foreshores with finer surface materials such as pebbles, sand, and/or mud and upper foreshore areas that are only inundated during periods of higher tides.

The local foreshore ecosystems characterized by little exposure to wave energy, gentle slopes, finer surface materials, and upper foreshore areas that are only inundated during periods of higher tides benefit from allochthonous energy: energy produced outside the marine ecosystem. For those foreshore ecosystems, adjacent MRAs are substantive sources of allochthonous energy, including MRA vegetation leaf litter and detritus, and terrestrial insects delivered to the foreshore; delivery avenues include direct drop, wind drift, and precipitation runoff. With limited wave exposure and a gently sloped foreshore, leaf litter and detritus and insect products can remail in place within the local foreshore area providing food and nutrients to the local fish and wildlife food web and habitats.

The ecosystems of the ocean at large and marine foreshore areas that area exposed to wave energy and comprise near vertical and/or steep bedrock and/or larger rock are largely autochthonous with respect to energy requirements and production: Most energy is produced within the ecosystem by phytoplankton and other marine plants and energy sources. For such foreshore types the relative MRA allochthonous energy contribution is not substantive. MRA energy sources delivered to the foreshore are widely dispersed with limited contribution to local fish and wildlife habitats.

In addition to contributing fish and wildlife food and nutrients to adjacent foreshore, MRA vegetation can provide shade and associated temperature and desiccation regulation to foreshore areas.

Foreshore characterized by sandy surface materials, particularly on upper foreshore near higher tide levels, and northerly or easterly exposure to direct sunlight will benefit from MRA shade.

Sessile benthic organisms and the spawn, eggs and larvae, of fish such as surf smelt (*Hypomesus pretiosus*) that spawn in finer surface materials on mid and upper foreshore will benefit from MRA shade temperature and desiccation regulation. Surf smelt are forage fish for Pacific salmon species. Accordingly, the MRA shade benefits derived by surf smelt will have broader ecosystem and societal benefits.

Foreshore characterized by near vertical and/or steep slopes or southern or westerly exposure to direct sunlight will derive limited benefit from MRA shade.

3.3 MRA – Terrestrial environment

MRAs provide terrestrial ecosystem features and functions typical of similarly vegetated terrestrial environments, including terrestrial wildlife habitat, including food and nutrients, cover, and habitation. However, beyond providing connectivity between terrestrial and marine ecosystems, MRAs provide no unique terrestrial environment features and functions that are not provided by terrestrial areas outside of the 15m MRA in areas more than 15m from the natural boundary between upland and ocean.

4 MRA – PRIOR TO INITIAL SITE DISTURBANCE/DEVELOPMENT

4.1 Terrestrial Environment

The British Columbia Ministry of Environment (MOE) online data base BC iMap (B.C. Conservation Data Centre 2024a) indicates that the designated Waterfront Plaza area is situated on the western margin of a terrestrial ecological community that MOE as designated as the *Abies grandis / Tiarella trifoliata* (grand fir / three-leaved foamflower) ecological community.

The *Abies grandis / Tiarella trifoliata* ecological community is described in a number of MOE documents (B.C. Conservation Data Centre 2009, 2013. 2014) that are available through the MOE online B.C. Conservation Data Centre (CDC) database BC Species and Ecosystems Explorer (B.C. Conservation Data Centre 2024b).

The B.C. Conservation Data Centre (CDC) indicates that the *Abies grandis / Tiarella trifoliata* ecological community was first observed during the year 2000, with the most recent observation during 2012.

Aerial images available through Google Earth (Google 2024) indicate that prior to the initial site disturbance by the previous owner/developer of the site, some areas of the *Abies grandis / Tiarella trifoliata* ecological community in the vicinity of the designated Waterfront Plaza site did not support forest vegetation. Instead of forest vegetation some areas in the vicinity of the Plaza site comprised bare and/or moss-covered bedrock outcrops.

Prior to the initial site development by the previous site owner/developer the terrestrial ecosystem features and functions associated with the *Abies grandis / Tiarella trifoliata* ecological community present at the designated Waterfront Plaza site would have provided features and functions typical of similarly forested terrestrial environments, including terrestrial wildlife habitat, including food and nutrients, cover, and habitation. However, beyond providing connectivity between the local terrestrial and marine ecosystems, the *Abies grandis / Tiarella trifoliata* ecological community present at the Plaza site would not have provided any unique, or scarce terrestrial ecosystem features and/or functions.

The terrestrial ecosystem features and functions provided by the *Abies grandis / Tiarella trifoliata* ecological community present at the Plaza site are well represented in the vicinity of the site, including immediately to the east of the site on the abutting property, which supports a relatively large contiguous forested area, including the main body of the local *Abies grandis / Tiarella trifoliata* ecological community.

Beyond the immediate footprint of the cleared area, the adverse environmental effect of the removal of the vegetation from the Waterfront Plaza site, including the site of the proposed Swimming Pool within the 15m ocean setback area, would have been limited; the removal of vegetation from the cleared area would not have had a substantive adverse impact on the terrestrial ecosystem functions of adjacent areas.

4.2 Marine environment

As indicated above in Subsections 3.2 and 3.3, considering the nature of the shore and foreshore adjacent to the Waterfront Plaza site, prior to initial site development by the previous site owner/developer, beyond providing connectivity between the local terrestrial and marine ecosystems, the contribution of the *Abies grandis / Tiarella trifoliata* ecological community present at the Plaza site to the local marine environment and ecosystem would have been limited.

The shore and foreshore adjacent to the Waterfront Plaza site is characterized by near vertical and/or steep slopes with southern and/or westerly exposure to direct sunlight. Such foreshore will derive limited benefit from terrestrial environment energy sources or MRA shade.

The removal of terrestrial vegetation from the cleared area would not have had a substantive adverse impact on local marine ecosystem function.

5 OCEAN SETBACK – WATERFRONT PLAZA: CURRENT SCRD BUILDING PERMIT

As noted above in Section 2, the Builder (personal communication; West Coast Turn Key; October 2024) advises that the Waterfront Plaza site, including the 15m ocean setback and the planned footprint of the proposed Swimming Pool, was cleared of vegetation and the ground reworked and levelled by the previous owner/developer of the site prior to November 30, 2020, the date when the current Owners acquired ownership of the Lot.

MOE estimates that it would take more than 100 years for the reestablishment of the biological and structural diversity of the terrestrial *Abies grandis / Tiarella trifoliata* ecological community that occupied the Plaza site prior to the clearing of the site (B.C. Conservation Data Centre 2013). Considering local site conditions and the extensive reworking of the ground in conjunction with the site clearing, it is unlikely that any other ecological community would reestablish at the site within a shorter time frame. Considering the foregoing, there is no reasonable prospect that the site terrestrial environment could be restored to conditions or equivalent that existed prior to the initial site disturbance by the previous owner/developer.

Considering the foregoing, in Balanced's view it is reasonable to consider the Waterfront Plaza site, including that part of the site within the 15m ocean setback and the planned footprint of the proposed Swimming Pool, to have been devoid of substantive terrestrial ecosystem features and functions at the time site was acquired by the Owners. Accordingly, it is reasonable to conclude that construction of the Plaza, including that part of the Plaza within the 15m ocean setback and the planned footprint of the proposed Swimming Pool, will have no substantive adverse environmental effect with respect to terrestrial, marine, or MRA environments.

The foregoing is reflected in the SCRD issuance of the current building permit, which includes that part of the Plaza within the 15m ocean setback and the planned footprint of the proposed Swimming Pool within the setback area.

6 OCEAN SETBACK – WATERFRONT PLAZA: PROPOSED SWIMMING POOL ADDITION

In Balanced's opinion, construction of the Swimming Pool within the 15m ocean setback area of the Waterfront Plaza will have no substantive adverse environmental effect, neither on the local terrestrial or marine environments nor on local terrestrial or marine ecosystem function.

As indicated above in Section 4, construction of the Plaza, including the part of the Plaza within the 15m ocean setback, including the footprint of the proposed Swimming Pool, will have no substantive adverse environmental effect with respect to terrestrial, marine, or MRA environments.

As indicated in Section 2 above, the Waterfront Plaza area included in the SCRD building permit is devoid of substantive vegetation and associated terrestrial ecosystem features and functions. The Plaza site was cleared of vegetation by the previous owner/developer prior to the current Owners acquiring the site. As the Waterfront Plaza area is devoid of terrestrial environmental features and functions, replacing a part of the Plaza area with the footprint of the proposed Swimming Pool will not result in any adverse impact on the terrestrial environment of the Plaza area, including the 15m ocean setback.

The Builder has advised that Waterfront Plaza surface treatments included in the SCRD building permit would be considered to be non-permeable (personal communication; West Coast Turn Key; October 2024). The planned footprint of the proposed Swimming Pool would of course be non-permeable. As the Plaza surface treatments will be non-permeable, replacing a part of the non-permeable Plaza footprint with the non-permeable footprint of the Swimming Pool would not result in any loss of permeable area within the 15m ocean setback.

7 SWIMMING POOL ADDITION – POTENTIAL ADVERSE ENVIRONMENTAL EFFECTS

As noted above in Sections 1 and 6, in Balanced's opinion, construction of the Swimming Pool within the 15m ocean setback area of the Waterfront Plaza will have no substantive adverse environmental effect on local terrestrial or marine environments.

Some aspects of the Swimming Pool construction and operation that might be of interest with respect to potential adverse environmental impacts are addressed below in Subsections 7.1 – 7.7.

7.1 Swimming Pool – Site preparation / Plaza completion

Potential adverse environmental impacts related to the remaining site preparation for and completion of the construction of the Waterfront Plaza, including the construction of the proposed Swimming Pool within the 15m ocean setback area, can be avoided and/or sufficiently mitigated using standard construction best practice measures applied to avoid and mitigate adverse environmental effects.

Site preparation concerns include preventing the release of deleterious substances to terrestrial and/or marine environments. Deleterious substances of concern include soils, sediments, sediment-laden water, turbid water, and uncured cementitious products such as uncured cement and uncured concrete.

The Builder (personal communication; West Coast Turn Key; October 2024) advises that:

- The Waterfront Plaza footprint, including the planned footprint of the proposed Swimming Pool addition to the Plaza, has been excavated to the underlying bedrock with all soils removed.

- Remaining site preparation comprises placement of clean finer aggregate material such as gravel and sand to design elevations.
- Plaza completion in keeping with the SCRD building permit will include installation of pre-cast concrete pavers.

With all soils removed from the Plaza site, including the footprint of the proposed Swimming Pool, it is unlikely that the remaining site preparation or the completion of the Plaza or the construction of the proposed Swimming Pool would result in any substantive release of soil, sediment, sediment-laden water, or turbid water to the terrestrial or marine environments.

With respect to the addition of the Swimming Pool to the Waterfront Plaza area, the Builder (personal communication; West Coast Turn Key; October 2024) advises that:

- Site preparation would be the same as for the Plaza: Placement of clean finer aggregate material such as gravel and sand to design elevations.
- The proposed Swimming Pool addition to the Plaza area would involve construction of the concrete pool shell within the planned footprint of the Pool within the Plaza area. The concrete pool shell would be cast-in-place within constructed framework.
- Appropriate management measures would be employed to contain all uncured concrete during and after the casting-in-place of the Swimming Pool shell.
- Management measures employed for the construction of the Pool will include measures similar to those measures employed during the casting-in-place of the concrete foundations of the residence in keeping with the SCRD building permit.

7.2 Swimming Pool – Materials / methods

As indicated above in Subsection 7.1:

- The construction of the Swimming Pool within the 15m ocean setback area as an addition to the Waterfront Plaza would not involve any materials or methods beyond those used for construction of the residence and Plaza in keeping with the SCRD building permit.
- Potential adverse environmental impacts, including impacts on the terrestrial and marine environments, related to the construction of the Swimming Pool within the 15m ocean setback area will be avoided and/or sufficiently mitigated using standard construction best practice measures applied to avoid and mitigate adverse environmental effects.
- Management measures employed for the construction of the Pool will include measures similar to those measures employed during the casting-in-place of the concrete foundations of the residence in keeping with the SCRD building permit.

7.3 Swimming Pool – Infill water

The Builder has advised that freshwater would be used to fill and operate the Swimming Pool that the Owners propose to add to the Waterfront Plaza (personal communication; West Coast Turn Key; October 2024).

Depending on the treatment used to sanitize the Pool water, freshwater use for the Pool presents little to no potential for adverse environmental impact on terrestrial or marine environments.

In the event that it is necessary to use treated Pool water for fire suppression, it is unlikely that the use of the Pool water would cause any substantive adverse environmental impact on the terrestrial or marine environments.

7.4 Swimming Pool – Water source

The Builder (personal communication; West Coast Turn Key; October 2024) has advised that:

- The water that will be used to fill and operate the Swimming Pool that the Owners propose to add to the Waterfront Plaza will be groundwater supplied by a private groundwater well that the Owners have drilled on the Lot.
- The Owners' well is registered with the Province of British Columbia Ministry of Environment (MOE) for private domestic use.

Considering the limited draw on the well associated with filling and operating the Pool, the use of groundwater from the Owners' private well is unlikely to have any substantive adverse environmental impact on the terrestrial or marine environments.

The use of surface water for the Pool, particularly water from the nearby Kenyon Creek, would likely have a greater potential environmental impact on the terrestrial and marine environments than the use of groundwater from the Owners' well.

7.5 Swimming Pool – Water treatment

The Builder (personal communication; West Coast Turn Key; October 2024) has advised that:

- The current intention is to use an Ozone system plus Ultra Violet (UV) filter as the primary treatment for sanitizing the water that will be used to fill and operate the Swimming Pool that the Owners propose to add to the Waterfront Plaza.
- With the Ozone/UV system in place, some addition of chlorine would be necessary to meet the regulatory criteria for potable drinking water.

- With the Ozone/UV/chlorination system in place, the amount of chlorine in the Pool water would be equivalent to the level of chlorine in drinking water supplied through municipal systems.

Properly managed, the proposed Ozone/UV/chlorination system presents no substantive potential for any substantive adverse environmental impact on the terrestrial or marine environments.

7.6 Swimming Pool – Water release

7.6.1 Water release – Controlled/Intended

Properly managed, controlled/intended release of Swimming Pool water, to drain the Pool or for other reasons, would present no substantive potential for any substantive adverse environmental impact on the terrestrial or marine environments.

Leaving chlorine treated pool water untreated and uncovered for 10 days will allow chlorine to dissipate naturally. Dechlorination filters and/or other treatments can provide for faster chlorine removal.

With chlorine naturally dissipated and/or actively removed, pool water would be essentially fresh water. With controlled discharge of dechlorinated pool water to pervious ground in a terrestrial environment, the pool water will infiltrate the ground as would rainwater with no adverse environmental impact. With controlled discharge of dechlorinated pool water to the marine environment, the pool water would be quickly and effectively dispersed by the marine waters, as would any watercourse discharge, with no adverse environmental impact.

7.6.2 Water release – Uncontrolled/Unintended

Uncontrolled/unintended release of treated pool water would not allow for the dichlorination described above in Subsection 7.6.1. Possible causes for such uncontrolled/unintended release include failure of pool drainage system and failure or breaching of the pool shell.

Uncontrolled release would likely:

- Involve rapid movement and perhaps some aeration of the release flow, either of which would likely result in some dissipation of chlorine.
- Not allow time or circumstance for any substantive ground infiltration, with most of the discharge flowing over the steep rocky largely unvegetated shore before discharging to the ocean.

Much of the released pool water chlorine would be dissipated prior to the release flow entering the ocean. Upon entering the ocean, the release flow would be quickly and effectively dispersed

by the marine waters, as would any watercourse discharge, with no adverse environmental impact.

7.7 Swimming Pool – Water heating

The Builder (personal communication; West Coast Turn Key; October 2024) has advised that:

- The Owners preference for heating the Swimming Pool is a seawater heat pump.
- To that end, the Owners have applied to Province of British Columbia authorities for permission to install a heat exchange ocean loop on the seabed adjacent to the Lot.
- In case the Province does not approve the ocean loop application, the Owners are considering heating the Pool with air-source heat pumps, perhaps combined with a gas-fired boiler.

None of the seawater heat pump, air-source heat pumps, or the boiler would have a direct adverse environmental impact on the local terrestrial or marine environments.

However, properly designed, installed, and operated, the seawater heat pump would provide the greatest pool heating efficiency with no substantive adverse environmental impact on terrestrial or marine environments. Air-source heat pumps would be less efficient.

Use of a gas-fired boiler has implications in relation to global warming and the climate crisis. That said, as indicated above, use of a gas-fired boiler would not have a direct adverse environmental impact on local terrestrial or marine environments.

8 SWIMMING POOL ADDITION – POTENTIAL RESTORATION OPPORTUNITIES

8.1 Restoration opportunities

SCRD has asked for potential restoration opportunities be included in this report outlining potential terrestrial environmental impacts related to the construction of the proposed Swimming Pool within the 15m ocean setback area of the Waterfront Plaza. The Waterfront Plaza is included in the SCRD building permit.

As indicated above in Section 2, the terrestrial environment of the Waterfront Plaza site, including the footprint of the proposed Swimming Pool within the 15m ocean setback area, was cleared of vegetation by the previous owner/developer of the site prior to the current Owners acquiring the Lot and prior to the current Owners developing the plans for the Plaza, which are included in the SCRD building permit. The current Owners bear no responsibility for the clearing of the site or any associated loss of terrestrial environmental features and functions from the cleared area.

In Balanced's view, considering the foregoing, including restoration opportunities in the consideration of the terrestrial environmental impact related to the construction of the proposed Swimming Pool within the 15m ocean setback area cleared of vegetation by the previous owner/developer of the site might not be warranted.

In Balanced's view, restoration of the terrestrial environment features removed from the cleared area of the Waterfront Plaza site is not necessary to maintain terrestrial and marine ecosystem features and functions within the near vicinity of the Plaza site. As indicated above in Section 4, prior to being cleared of vegetation, the terrestrial environment of the Waterfront Plaza site would not have provided any unique, or scarce terrestrial ecosystem features and/or functions; the terrestrial ecosystem features and functions provided by the vegetation removed from the cleared area are well represented in the close vicinity of the site.

Beyond the immediate footprint of the cleared area, the adverse environmental effect of the removal of the vegetation from the Waterfront Plaza site, including the site of the proposed Swimming Pool within the 15m ocean setback area, would have been limited; the removal of vegetation from the cleared area would not have had a substantive adverse impact on the terrestrial ecosystem functions of adjacent areas.

The removal of terrestrial vegetation from the cleared area would not have had a substantive adverse impact on local marine ecosystem function.

In any case, restoration of the terrestrial environmental features removed from the cleared area is not feasible.

Considering that the Waterfront Plaza area and the construction of the Plaza are consistent with the SCRD building permit, and the information provided above in Section 5, there is no reasonable prospect that the terrestrial environment of the Plaza site, including the footprint of the proposed Swimming Pool within the 15m ocean setback area, could be restored to conditions or equivalent that existed prior to the initial site disturbance by the previous owner/developer.

As indicated in Section 5 above, MOE estimates that it would take more than 100 years for the reestablishment of the biological and structural diversity of the terrestrial ecological community that occupied the Waterfront Plaza site prior to the clearing of the site (B.C. Conservation Data Centre 2013). Considering local site conditions and the extensive reworking of the ground in conjunction with the clearing of the Plaza site, it is unlikely that any other ecological community would reestablish at the site within a shorter period of time.

8.2 Mitigation opportunities

As indicated above in Subsection 8.1, restoration of the terrestrial environment features of the Waterfront Plaza site, including the footprint of the proposed Swimming Pool within the 15m ocean setback area, that were removed by the previous owner/developer, is neither necessary from an environmental perspective, nor feasible.

Should there be a perceived need to mitigate the removal of vegetation from the Waterfront Plaza site by the previous owner/developer, there might be practicable mitigation opportunities. Mitigation strategies might include planting suitable native vegetation at suitable locations within the ocean setback area. Plantings could focus on suitable native shrubs and herbs; trees that might grow tall enough to present a potential hazard could be avoided.

9 CONCLUSIONS

SCRD has asked for a report outlining the terrestrial environmental impacts related to construction of a swimming pool within the setback area of the Waterfront Plaza area and potential restoration opportunities.

As laid out above, in our informed opinion as experienced Qualified Environmental Professionals (QEPs):

- The proposed construction of the Swimming Pool within the 15m ocean setback area of the Waterfront Plaza will have no substantive adverse environmental effect, neither on local terrestrial or marine environments nor on local terrestrial or marine ecosystem function.
- Restoration of the terrestrial environment of the proposed Swimming Pool site is neither necessary from and environmental perspective nor feasible. Should there be a perceived need to mitigate the environmental effects of the removal of vegetation from the Plaza site by the previous owner/developer, there might be mitigation opportunities available through planting of suitable native vegetation within the ocean setback area adjacent to the site proposed for the Swimming Pool.

The QEP opinions and conclusions laid out above in Sections 7 and 8 are summarized in Table 1 below.

Table 1: QEP Opinions /Conclusions – Construction of Swimming Pool within the 15m Ocean setback area of the Waterfront Plaza and Restoration Opportunities:

Adverse Environmental Effects

Construction of Swimming Pool Within 15m Ocean Setback Area of Waterfront Plaza Adverse Environmental Effect	
Consideration	**Potential for Substantive Adverse Environmental Effect**
Construction of Swimming Pool within Ocean Setback (Section 6)	**Low: no concern** Subject to application of best management practices
Site preparation / Waterfront Plaza construction (Subsection 7.1)	**Low: no concern** Subject to application of best management practices
Materials / Methods (Subsection 7.2)	**Low: no concern** Subject to application of best management practices
Infill water (Subsection 7.3)	**Low: no concern**
Water Source (Subsection 7.4)	**Low: no concern**
Water Treatment (Subsection 7.5)	**Low: no concern** Subject to application of best management practices
Water Release (Subsection 7.6)	**Low: no concern** Subject to application of best management practices
Water Heating (Subsection 7.7)	**Low: no concern** Subject to application of best management practices
Restoration / Mitigation (Section 8)	**Low: no concern**

10 BALANCED QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP)

The Balanced QEP who prepared this EED report is a Registered Professional Biologist (R.P.Bio.) in good standing with the College of Applied Biologists (CAB). CAB is constituted under the British Columbia *Professional Governance Act*. Preparation of this report is within the QEP's R.P.Bio. scope of practice.

In addition to the QEP's R.P.Bio. status, the QEP is certified by the Province of British Columbia to carry out watercourse assessments under the Province of British Columbia *Riparian Areas Protection Act* (RAPA) and associated *Riparian Areas Protection Regulation* (RAPR). The QEP is certified to act as the sole and/or lead QEP for RAPR assessments.

RAPA and RAPR do not apply to marine or estuarine environments or MRAs as the Province of British Columbia defers to Fisheries and Oceans Canada (DFO) in relation to marine and estuarine fish habitat and associated MRA considerations. The separation of RAPA and RAPR from marine and estuarine fish habitat and MRA consideration is an administrative arrangement between federal and provincial government authorities. RAPR intent and overarching ecological concepts and principles are applicable to marine, estuarine, and MRA ecosystems.

The Balanced QEP has more than 50 years experience surveying and assessing freshwater and marine ecosystems within British Columbia and in addressing project-related interests and requirements of local government, provincial, and federal regulatory authorities.

The QEP worked for more than 30 years as a DFO biologist with the DFO Habitat Management Program (HMP), the predecessor to the now-named Fish and Fish Habitat Protection Program (FFHPP). With HMP the QEP was responsible for applying the federal *Fisheries Act* through survey and assessment of freshwater and marine ecosystems, review of project proposals involving watercourses and marine and estuarine environments, and enforcement support provided to the DFO enforcement program, the DFO Conservation and Protection (C&P) Program.

The Balanced QEP who prepared this report is familiar with the Project site and environs. The QEP visited and inspected the site during September 2021.

11 LIMITATIONS, QUALIFICATIONS, SIGNATURES

This report has been prepared by Balanced for the exclusive use and benefit of the Owners of the lot at Unit 1 7531 Cove Beach Road, Halfmoon Bay, SCRD (the Lot), and/or West Coast Turn Key in relation the development of the Lot. The contents, implied or written, of this document and related media may not be utilized in part or in whole without the authorization of the Owners of the Lot, West Coast Turn Key, or Balanced.

This document reflects Balanced's best judgment considering the information available at the time of its preparation, consistent with the Project scope of work; it is accurate and complete to the best of Balanced's knowledge.

Balanced's services associated with the preparation of this document have been carried out in a manner consistent with that level of skill and care ordinarily exercised by QEPs currently practicing under similar conditions. No warranty, express or implied, is made.

This report does not constitute approval under any municipal, provincial, or federal legislation; this report does not relieve anyone from any obligation to comply with relevant municipal, provincial, or federal legislation or requirements.

BALANCED ADVISORS LIMITED

Report preparation

Bruce Clark, R.P.Bio.
Project Biologist

Report review

Scott Christie, R.P.Bio.
Senior Biologist

APPENDIX 1 – REFERENCES

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APPENDIX 2 – PROJECT CONTACTS

Project Builder

West Coast Turn Key
#4 – 6695 Nelson Avenue
West Vancouver, B.C.
V7W 2B2

Contact
James Young
e-mail: james@westcoastturnkey.com
mob.: 604-351-8142

Project Environmental Consultant

Balanced Advisors Limited
1047 Belvedere Drive
North Vancouver, B.C.
V7R 2C6

Contact
Bruce Clark, R.P.Bio.
Project Biologist
e-mail: bruce@balancedadvisors.ca
mob.: 604-518-5856