

DEVELOPMENT PERMIT

NO. DP- 2020-17

TO: **Urban West Architecture**

ADDRESS: **102-1688 West 1st Avenue
Vancouver, B.C. V6J 1G1
(Permittee)**

- 1) This Development Permit is issued subject to compliance with all of the Bylaws of the Town of Gibsons applicable thereto, except those specifically varied or supplemented by this Permit.
- 2) The Development Permit applies to those "Lands" within the Town of Gibsons described below:

Parcel Identifier: 010-342-214

**Legal Description: LOT 6 OF LOT A BLOCK C DISTRICT LOT 686 PLAN
7731**

**Civic Address: 263 Gower Point Road
(the "Lands")**

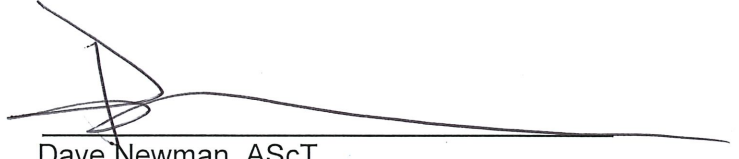
- 3) These Lands are within Development Permit Areas identified in the Town of Gibsons Official Community Plan, Bylaw 985, 2005. This permit applies to:
 - Development Permit Area No. 9 (Gibsons Aquifer) for the purpose of the protection of the Gibsons Aquifer.
- 4) The Land shall be developed only in strict accordance with the terms and conditions and provisions of this Permit, including without limitation to the specifications in the following reports, which are attached to and form part of this Permit:
- 5) The Land shall be developed only in strict accordance with the terms and conditions and provisions of this Permit, including without limitation to the specifications in the following reports, which are attached to and form part of this Permit:
 1. Gibsons Aquifer Development Permit Area No. 9 Application Support, John Taylor, PEng, CSAP and Tom Hudson, PAg, EP, PMP, dated June 26, 2020.
- 6) All recommendations of the report(s) are to be followed.
- 7) Minor changes to the aforesaid drawings that do not affect the intent of this Development Permit are permitted only with the approval of the Town of Gibsons.
- 8) If the Permittee does not commence the development permitted by this Permit within twenty-four months of the date of this Permit, this Permit shall lapse.

- 9) Upon completion of the works, a letter from a qualified professional is required to confirm all conditions of this permit were met.
- 10) This Permit is NOT a Building Permit.

ISSUED THIS 19TH DAY OF OCTOBER, 2020.



Lesley-Anne Staats, MCIP, RPP
Director of Planning



Dave Newman, AScT
Director of Infrastructure Services

Copy of permit to the Geotechnical Engineer

MEMORANDUM

June 26, 2020

To: Grant Gilles – *Target Real Estate Development Corporation*From: John Taylor, PEng, CSAP - *Core6 Environmental Ltd.*
Tom Hudson, PAg, EP, PMP - *Core6 Environmental Ltd*Re: **Gibsons Aquifer Development Permit Area No. 9 Application Support**
263 Gower Point Road, Gibsons, BC

Core6 Environmental Ltd (Core6) has prepared the following memorandum to support the application for a Gibsons Aquifer Development Permit Area No. 9, from the Town of Gibsons. The permit is required to facilitate future redevelopment of 263 Gower Point Road, Gibsons, BC (the "Site").

Contamination Potential

The Site historically operated as a service station and bulk fuel storage facility, that was decommissioned in 1994 and all associated infrastructure, including underground piping, storage tanks and pumps were removed. Core6 have undertaken multiple investigations at the Site and obtained a Certificate of Compliance (COC) from the British Columbia Ministry of Environment and Climate Change Strategy (BC ENV) in May 2016. The COC was obtained to support a future commercial slab-on-grade development. The proposed development comprises a commercial land use at grade, with residential units above. Consequently, the proposed development does not present a concern with respect to the potential to generate contamination. Rather, contamination concerns are limited to the historical use of the Site, which have been addressed through issue of the COC.

Based on the previous investigations and the Core6 Detailed Site Investigation report, the local surficial geology at, and within immediate vicinity of, the Site has been investigated to a maximum depth of almost 17 metres below ground surface (mbgs). The geology observed was relatively consistent across the area and can be divided into three main units:

- Fill - Varies in composition from fine to coarse grained, variable gravel content, trace to some silt, and loose to dense, extending to depths of up to 3 mbgs
- Silt - Sandy silt, with fine grained sand, trace to some clay, trace to some gravel, stiff, shells, extending to depths of up to 6 mbgs; and
- Till - Silty sand to sand with some silt, trace to some gravel to gravely, very dense. Discontinuous lenses of fine grained sand, and sand and gravel ranging from <0.5 to 2 m in thickness.

The silt unit is considered to represent the Capilano Sediments, which contain a perched aquifer. The underlying Till represents the Vashon Drift deposits. Although the Vashon Drift Till Unit has been regionally mapped as an aquitard by Waterline Resources Inc. (Waterline) in 2013, it has been defined as a Till Aquifer based on the Contaminated Sites Regulation, since the hydraulic conductivity is higher than 1×10^{-6} m/s. According to Waterline Resources Inc (Waterline) (2013) and Doyle (2013) the Vashon Drift geologic unit acts as an upper confining unit (aquitard) to the underlying Pre-Vashon Gibsons Aquifer. Within Lower Gibsons, the aquifer has been reported to experience flowing artesian conditions. Consequently, there are strong upward vertical hydraulic gradients from the aquifer underlying the Till Aquifer. Based on this Site-specific information, the underlying aquifer does not exist within 17 m of the Site surface in this area.

Based on the proposed development plans for the Site drafted by Urban West Architecture Inc. (Urban West), the aquifer will not be impacted during construction. The proposed development is limited to slab on (existing) grade, and therefore excavation at the Site will be minimal for footings and grading.

Contamination remaining at the Site predominantly comprises petroleum hydrocarbon, and some minor metal, impacts to the soils and groundwater. These concentrations have been laterally and vertically delineated. Since minimal excavation is proposed, existing contamination will not be disrupted during construction. This limits the potential for contaminant mobilization and will not jeopardize the integrity of the underlying aquifer, or the overlying aquitard that protects it. This is further emphasised by the aquifer being located at depths greater than 17 mbgs. Detailed hydrogeological studies conducted by Core6 for the Site to support the COC application, concluded that the shrinking contaminated groundwater plume on-Site is restricted to the overlying aquitard where there is no driving force for the plume to migrate downwards into the aquifer.

According to the BC Water Resource Atlas, five water wells are located within 300 metres cross to upgradient of the Site. Four of these wells are for monitoring or unknown water intent use, and one has been identified as a water supply well owned by the Town of Gibsons. The Town of Gibsons water supply well is located approximately 300 m southwest (up to cross gradient) of the Site. Hydrogeological studies conducted by Core6, as well as communications between Core6 and the Town of Gibsons' hydrogeology consultant, Waterline, have confirmed that further or future transport of existing contaminants via vapour and groundwater pathways towards the well is unlikely. Copies of these communications, along with the DSI and COC were provided to the Town of Gibsons by Core6 in 2016.

The proposed development will connect to existing municipal storm and sewage systems which lead to outfalls that ultimately drain to Howe Sound. Accordingly, no direct or indirect discharge or impact is anticipated to any creeks or riparian areas designated as being environmentally sensitive.

Well Head Protection Area

The Site falls within the Well Head Protection Area as defined by the Town of Gibsons. As stated above, the Site is located within 300 m of five water wells, including the Town of Gibsons water supply well located to the west. The potential for contaminant migration to these water wells has been investigated thoroughly by Core6 as part of the DSI, and in conjunction with Waterline, have confirmed that transport

of existing contaminants towards the well is unlikely. Given the distance to these wells, and the nature of the proposed development, the risk to existing monitoring wells is considered low.

Topography of the Site indicates rainwater and surface water runoff will flow southeast towards Howe Sound, cross gradient from the municipal water well located 300 m southeast of the Site. Stormwater and rainwater will be captured via municipal catch basins and carried through to the municipal outflow.

Excavation in the Lower Gibsons Subarea

The Site is located within the Lower Gibsons Sub-area. As stated above, minimal excavation works is proposed to support redevelopment at the Site and will largely be limited to surficial soils. Any excavated surficial soil will be managed and disposed of accordingly. Based on the previous environmental investigations at Site, Core6 understands that the aquifer is greater than 17 mbgs and therefore, these preparation works have a low potential to cause changes in aquifer pressure. Geological cross-sections of the site are included within the Core6 DSI report that depict the depth of aquifer, and subsurface geology.

Professional Qualifications

Extensive environmental investigation including a Preliminary Site Investigation (PSI), Detailed Site Investigation (DSI), and Human Health and Ecological Risk Assessment (HHERA) was completed for the Site in 2015 by Core6 and resulted in a Risk Based Certificate of Compliance (COC) provided for the Site in 2016. These investigations were overseen by Core6's staff of seasoned experts in the field of professional environmental engineering, hydrogeology, and biology. Accordingly, Core6 are suitably qualified to prepare this memorandum regarding potential hydrogeological impacts from contamination and the proposed development.