

25 October 2017

Attn: Mayor Barb Desjardins and Council
Township of Esquimalt
1229 Esquimalt Road
Esquimalt, BC V9A 3P1



ARCHITECT'S NARRATIVE - CORVETTE LANDING RE-ZONING APPLICATION

Dear Mayor Desjardins, Dear Councillors of Esquimalt,

as follows, please accept our Rezoning application for the Corvette Landing project, located at 658-662 Admirals Road and 669 Constance Avenue.

1. Executive Summary

The proposed Corvette Landing project is located in the Township of Esquimalt, in the Esquimalt Harbour neighbourhood in close proximity to the Naval Base and the Dockyards. Situated at the corner of Admirals Road and Naden Way, it is a significant urban development site. The site spans the length of the block of Naden way along a green space towards Constance Avenue. The proposed building is for a residential building. It will offer 83 market affordable homes with a broad range of home types, from 350sf 1BR/studios to 960sf 3BR family homes. Designed as a high quality building, it will serve as an urban development catalyst for the community of Esquimalt. The new building will advance the creation of a vibrant, diverse and prosperous community, as a new paradigm, through its unique combination of affordability, livability and sustainability

The building will be certified Passive House standard, one of the globally leading standards for sustainability and energy efficiency. The project is proposed to be built using engineered BC produced mass-timber technology, providing a low carbon footprint and highly durable construction. Built through off-site prefabrication, the project will minimize its impact on construction related noise, and traffic, while substantially reducing the length of the construction time itself.

2. Urban Design Approach and Response to Esquimalt Official Community Plan

- 1. Healthy Community:** The project will meet OCP objectives to further a healthy community as per OCP 1.8.2-1.8.5. It will create 'a healthy, active and livable community' with quality housing and adequate green space, creating a strong sense of community for the tenants and the township. The project is committed through Passive House certification, the use of renewable materials and extensive landscaping of the ground plane and roof-tops, to "protect and enhance the natural environment while accommodating change and development".
- 2. Street enhancements on Constance Avenue:** The proposal provides for improvements of the interface of the adjacent part of Constance Avenue to the parking lot of the Navy yard. It is proposed to replace the existing unkept green strip and fencing.
- 3. Parking:** The building is proposed to have 83 underground (OCP 9.3.5.f) parking stalls in a 1:1 ratio to the number of homes. This will include the allocation for required guest parking. The building will provide bicycle parking at a ratio of 1:1.5 for a total of 125 in addition to a bicycle service station and 6 lockable bicycle parking stalls for guests.
- 4. Building Height and Density:** The proposed building complies with Building Bylaw No. 2446 Schedule A Land Use Designation for Multi-Unit High Rise Residential (5+ Storeys) and OCP 2.2.4.4 building height of up to 12 storeys and an acceptable FSR of 3.0. The proposed height is 10 storeys above adjacent ground at Admirals Road, 5/6 storeys above adjacent ground on Constance Avenue with a total height of 12 storeys. The proposed density is 2.5 FSR.
- 5. Housing:** The proposed building aspires to meet and exceed the expectations of the OCP 3.3 for Housing to create "attractive and affordable communities, for ... owners .." "Homeownership has benefits to the homeowner and to the community as a whole. Some of the benefits include a sense of pride and community, security of tenure, increased control over residential environment, ability to build equity ..." The building will create a range of housing types, as per 3.3.1.a. The building recognizes the needs of families as per OCP 3.3.2.d. The building offers homes with the opportunity to work from home, aiding the Township's goal towards a more prosperous community (OCP Section 8) in advancing "technology and knowledge-based business".
- 6. Smart Construction and Greenhouse Gas Emission Reduction:** In compliance with OCP 3.6 Smart Design and Construction the building provides a long lists of features to bring much needed innovation in sustainability to Esquimalt. These include an explicit commitment to low energy Passive House certification, use of mass-timber structural system, and the use of renewable materials where feasible to reduce carbon footprint that is embodied or construction related and operational through the use of energy. As such, the building will satisfy ambitious

objectives as per OCP 7.1.2.6 Greenhouse Gas Emission Reduction Targets, It is conceivable for the building to become carbon neutral in the future if the Township were to provide renewable energy based hydronic district energy (OCP 9.8.5.c). Please see below under Systems and Prefabrication for additional detail on Smart Construction. CPTED measures have been considered.

- 7. Design Response:** The buildings have been designed to "minimize visual intrusion onto the privacy of surrounding homes and minimize the casting of shadows ..." (OCP 9.3.5 b-d) The predominant building mass has been placed along the Northern edge of the property along the adjacent green space to maximize the visual separation to the neighbours on the South. South facing facades will have no living room windows or balconies. Homes along Constance Avenue face West with beautiful views to the water and mountains across the adjacent Navy Yard parking lot with no impact on neighbours. The building form minimized overshadowing of adjacent residential properties. The landscape architecture emphasizes the creation of an attractive residential area street scape, with the parking entrance well screened and tucked away off Constance Avenue. In response to OCP 9.8.5 Design Guidelines: The building captures passive solar energy in the winter through south facing homes orientation, while mitigating heat gain through the external walkways and vertical courtyard screens/vertical gardens that act as shading devices (OCP 9.8.5.a and b, and 9.9.12)). There will be a priority to use high quality and locally sourced materials, provide friendly and transparent lobby and amenity spaces that are visible from the street and weather protected entries (OCP 9.8.5 f through j). The building will provide use of indigenous landscape species, will be bird friendly and careful lighting design to avoid impact on neighbours and dark skies. (OCP 9.8.5.u through x). The building form maximizes the creation of community and livability.

3. Specific Design Considerations

1. Livability

1. Instead of the typical one-fits-all approach we offer a systematic and scalable approach to provide an unprecedented combination of affordability, livability, and sustainability in the creation of living and connected communities.
2. The proposed buildings is a contemporary courtyard buildings, following an evolution of urban housing typologies that have proven to provide highly livable solutions around the world for centuries. IC+LWPAC have pioneered their synthetic evolution in Vancouver for over a decade through award winning projects.
3. The people-focused home design (not unit thinking) offers homes that are highly efficient, yet superbly livable, virtually without any interior hallways, with excellent proportions, adaptability and practicality.
4. Due to the courtyard configuration, each home has 2 sided exposures with abundant daylight, a strong sense of the outdoors, vertical gardens and urban context, and access to natural cross ventilation. Natural Cross ventilation, for natural cooling leads to increased comfort and eliminates the need for mechanical air conditioning systems.
5. Flexible layouts lead to choice, with a broad range of homes to reflect broad needs of varying demographics ranging from singles, to live/work to families and multigenerational living.
6. Living spaces are visually open with uncluttered layouts, to empower people to create their homes.
7. Quiet bedrooms are provided at the courtyard side for each home, away from arterial traffic noise. Research in environmental psychology tells us that air pollution, noise and crowding can corrode mental health and social wellbeing. People need quiet and calm spaces at home in order to recharge, especially in dense urban settings.
8. Systems built, the homes and common areas provide a high perceived quality, leading to pride of tenancy and sense of belonging.
9. The homes are designed to maximize an individuals need of privacy, comfort and wellness.
10. Each home will have a below ground secure storage locker.

2. Community

1. Optimizing the number and arrangement of housing units in a development is a critical aspect of both affordability and sociability. Courtyard buildings with open circulation system of walkways, social landings and mesh enclosed experiential staircases lead to a high degree of social interaction and sense of community. What might seem like insignificant encounters with neighbours are actually the basis for a rich community life.
2. Vertical gardens extend the natural sense of each home to be connected to nature. Vertical screens that rise from across the northern edges of the east-west walkways provide articulation, solar gain control and mediate privacy.
3. The open presence of the building design and home entries create a heightened degree of identification with a feeling of belonging and a truer sense of home.
4. Common roof top gardens with opportunities for urban agriculture and common amenity for collective activities create strong communities, instead of high turnover rates and vandalism. Vertical gardens and open circulation system convert the typically dark and drab double corridors of today's housing projects into delightful common amenities. When people enjoy direct contact with nature, they are more likely to appreciate their environment and engage in sustainable living. Providing a warm, welcoming environment where people cook and eat together can be one of the strongest measures for improving community health.
5. Gated courtyards allows children to play and move more freely in accordance with City guidelines.

3. Quality and Beautiful Simplicity

1. Considered Design, simple, elegant with lasting quality is something not typically associated with affordable housing, but considered essential for successful market affordable housing as long term homes.
2. Unique presence of a carefully designed building to its context and its material and urban presence leads to a heightened degree of personal identification with a sense of place. Natural materials in wood, anodized aluminum and galvanized metals with careful detailing, precision assembly, and clarity of expression will convey a true sense quality of simple yet playful elegance.

4. Sustainability

1. LWPAC+IC's Platforms-for-Life 'EcoSystem' proposed for the Corvette Landing project is based on the predominant use of renewable materials. Cross-Laminated-Timber (CLT) panels are the primary material for the platforms cluster and structural system. It has been engineered to allow for structures up to 16 storeys, built from panelized open spatial modules. The material and panelization is ideal to combine renewable resources with state of the art CNC / Robotic precision fabrication. Equally the focus is on minimizing heat loss and cooling requirements through Passive House design with certification that includes a highly airtight pre-fabricated building-envelope.
2. Through the use of mass-timber the buildings will have a low carbon footprint, both embodied and operational,
3. Off site prefabrication creates less waste and trips to construction site,
4. Passive House is part of the systems DNA, lowering energy consumption from 100kwh/m2 up to 10kwh/m2 by factor of 10X. PHPP modelling has shown that the design of the Corvette Landing project has eliminated need for cooling systems through solar gain control and natural cross ventilation,
5. The buildings can be Net Zero ready through the future inclusion of renewable energy source, such as renewable hydronic District Energy.
6. Quality, robustness and airtight building envelopes with high comfort, provide building outstanding longevity,
7. Tenant electricity consumption and cost are reduced due to abundant daylight. Operators electrical consumption and cost are reduced because of the exterior circulation system with no need of artificial lighting during the day, and no need for pressurization and associated mechanical systems' maintenance cost of fans, filters and pumps due to the open stairs and walkways.
8. The team has a proven sustainability and Passive House team track record for over a decade.

5. Operations Considerations

1. Longevity to enhance affordability through reduced building depreciation, lowered maintenance cost and increased sustainability. The high quality systems build assemblies ensure are designed for 60-100 year life-cycle span vs typical 25-40 years.
2. The design and the systems adaptability allow to future-proof adaptation to different demographics, ensuring long term vibrant social communities.

3. The Passive House and open courtyard designs lead to a substantial reduction of mechanical and electrical systems with lowered maintenance and replacement cost.

6. Proven Solutions for a New Paradigm - Platforms-for-Life housing systems technology

1. The underlying platform design for the proposed buildings is shared and follows a systems technology specifically developed for urban housing over the last 15 years. We have created a proven generative technology that is both replicable and adaptable to follow IC+LWPAC's mantra: **Do more with less and create many from one common holistic platform housing systems technology.**
2. The system is based on the use of highly complete off-site prefabricated 'beyond-the-box' spatial components. The structural system is using mass-timber technology, buildable up to 16 storeys, that meets building code requirement through alternative solutions. Our approach is supported by the Chief Building Officials Office of the City of Vancouver (see attached letter). The technology is used broadly in Europe and Vancouver is now home to the tallest wood building in the world: UBC Brock Commons has just been complete with 18 storeys. Our team brings world class expertise to this technology and we have and are delivering currently \$69,000,000 worth of projects to BC.
3. As part of the system, the building envelope is also fully prefabricated allowing for highly effective integration of Passive House performance.
4. Off-site prefabrication allows for an accelerated project delivery schedule by up to 50%, through parallel on-site and off-site construction, reducing construction financing, carrying costs and exposure to escalation.
5. Contrary to conventional modular prefabrication, the Platforms-for-Life system provides a high quality product, designed to take full advantage of state of the art CNC and robotics assisted high precision machining/milling and assembly of components, leading to a 21st century industrial design quality integrated product. This requires a level of pre-construction integration and coordination that virtually eliminates typical change order processes, reduces risks and contingencies, while enhancing quality control.
6. Off-site prefabrication substantially reduces waste. Construction related noise and traffic on the neighbourhood is substantially reduced
7. The system is adaptable and replicable, and it can be readily transferred to various other sites in Esquimalt. Continuity through multiple successive projects further deepens affordability by reducing design and fabrication related factory overhead.

Sincerely,


Oliver Lang, Architect AIBC, Principal LWPAC, President Intelligent City

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