Township of ESQUIMALT

Official Community Plan

DPA No. 7 Energy Conservation & Greenhouse Gas Reduction

Area

Land within the municipal boundaries of the Corporation of the Township of Esquimalt

Designation

Development Permit Area No. 7 is designated for:

- Section 488 (1)(h)- Energy Conservation; and
- Section 488 (1)(j)- GHG emissions reduction. *Note: For DPA justification and exemptions please refer to the Official Community Plan, pages 95-96.*

If you are proposing a development within this DPA, please provide your application details in Section A. In Section B, please comment on how you propose to meet the DPA guidelines.

Section A

Application No.	Project Address	Applicant Name
DP	884 Lampson St Development	Lida Construction

Section B

No.	Guideline-	Comments
24.5.1	**Siting of buildings and structures**	
1	Orient buildings to take advantage of site specific climate conditions, in terms of solar access and wind flow; design massing and solar orientation for optimum passive performance.	Site analysis was performed and the site conditions were taken into consideration when designing the building.
2	Build new developments compactly, considering the solar penetration and passive performance provided for neighbouring sites, and avoid shading adjacent to usable outdoor open spaces.	This property was designed as a single building to be compact. The upper storeys are stepped back and the building is sited to provide larger setbacks from the homes to the east to minimize shadowing.
3	In commercial, residential or commercial mixed-use designated areas with taller developments, vary building heights to strategically reduce the shading on to adjacent buildings.	The lower (south) side of the building has a reduced height from 6 storeys allowable to 5 storeys.

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4	Provide space for pleasant pedestrian pathways between buildings.	The landscape plan provides pathways and outdoor amenity areas for the building residents.
5	Strategically site buildings to sustain and increase the community's urban forest tree canopy cover.	There are thirteen trees to be removed and the landscape plan has proposed the planting of 55 trees on-site and an additional 4 trees off-site which could be located in the park across Lampson.
6	Provide space for significant landscaping including varying heights of trees, shrubs and ground covers.	The u/g parking has been setback from Tillicum to provide deeper soils for larger trees. The landscape plan provides the proposed replanting including a variety of tree and shrub species.
7	Provide intuitive pedestrian access to storefronts and businesses with site connectivity to nearby amenities and services to help promote walking and the use of other active transportation modes.	NA
8	Provide usable outdoor amenities such as seating, food gardens, mini-libraries, and play spaces in semi-public areas to enhance the experience of walking and recreating in the neighbourhood.	The landscape plans provide the resident amenity areas on the ground floor outdoor areas as well as on an outdoor rooftop amenity area on the south side.
9	In residential neighbourhoods, provide space for larger trees and a second row of street trees as this will enhance the pedestrian experience by lowering wind velocity at street level, reducing excessive heating at ground level and absorbing vehicle and other urban noises.	The u/g parking has been setback from Tillicum to provide deeper soils for larger trees nad layered planting. The landscape plan provides the proposed replanting including a variety of street level tree and shrub species.

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24.5.2	Form and exterior design of buildings and structures	
1	Orient larger roof surfaces to the south for potential use of solar panels or photo-voltaic roofing.	The main roof will be solar ready (electrical conduits run). Large roof area can allow for multiple PV layout options.
2	Use roof designs that reduce heat transfer into neighbouring buildings, helping reduce the local heat island effect and the need for cooling of buildings in warmer months.	A high-albedo roof material is intended to be used to help reduce heat gain.
3	Place more windows on the south side of buildings to increase solar gain, and fewer/ smaller windows on the north side to minimize heat loss.	The site orientation determines that windows are predominantly east and west facing. Solar heat gain for fenestration will be dealt with using low-e coatings.
4	Use roof over-hangs, fixed-fins or other solar shading devices on south and west facing windows to reduce peak summer heat gain while enabling sunlight penetration in winter months.	Overhangs provided on all large door assemblies. Low SHGC windows can be specified with high visual light transmitance.
5	Install adjustable overhangs above windows that can help control the amount of sun exposure in warmer months thereby reducing need for cooling.	Fixed overhangs provided on all large door assemblies.
6	Provide building occupants with control of ventilation; i.e. windows that open.	Large doors and operable windows provided throughout. Where possible, cross venting provided at corners.
7	Skylights are discouraged as they decrease insulating values and can interfere with solar panel installation.	No skylights are included in the proposal
8	Add rooftop patios and gardens, particularly food producing gardens, as they can contribute to local resilience, livability, and reduction in greenhouse gas production by reducing food transportation costs.	Resident herb garden and berry producing shrubs proposed for upper amentiy space.
9	Install greenhouses for growing food on rooftops where neighbourhood privacy and light intrusion concerns are mitigated.	N/A
10	Avoid heavily tinted windows or reflective glass which will diminish the natural daylighting of interior spaces, thereby requiring increased energy requirements for interior lighting.	Tinted windows not being considered. Low SHGC windows with high visual light transmitance to be used.

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11	In exposed marine locations select durable materials that will withstand weather and sea spray, to ensure low maintenance costs and infrequent replacement needs.	NA

24.5.3	Landscaping	
1	Develop a front yard landscape design that is natural and delightful so residents do not need to leave the neighbourhood to experience nature.	There are multiple outdoor spaces around the project including a naturalized Amenity Area in the Northeast corner. The frontyard isn't large enough to naturalize.
2	Choose open space and landscaping over dedicating space to the parking and maneuvering of private motor vehicles.	The amount of parking and drive aisles on the surface has been limited to visitor parking and a MODO car stall with the vast majority of the parking being underground.
3	Conserve native trees, shrubs and soils, thereby saving the cost of importing materials and preserving already sequestered carbon dioxide.	While trees are being removed on the building site, the landscape plan includes replanting of trees and shrubs for future sequestered CO2.
4	Use deciduous trees for landscaping along southern exposures, as they provide shade in the summer and allow more sunlight through in the winter.	Deciduous trees have been used to allow for seasonally appropriate shading.
5	Strategically place taller trees and vegetation on the south and west sides of buildings where there is more direct sun exposure.	This has been done within the limitations of the existing Hydro line.
6	Strategically place coniferous trees such that they can buffer winter winds.	LARGE CONIFERS NOT APPROPRIATE AS PARKADE SLAB RESTRICTS TREES WE CAN PLANT. SOME SMALLER GROWING (NOT NATIVE CONIFERS) PROPOSED ON NORTH SIDE.
7	As context and space allow, plant trees that will attain a greater mature size, for greater carbon storage; removal of healthy trees is discouraged as the loss of the ecosystem services provided by larger trees will take many years to recover.	The arborist report considered the potential to retain trees and recommendations for removal related to the building design and required frontage improvements.
8	Plant trees with a larger canopy cover along roadways and sidewalks, thereby providing shading of paved areas, lowering the heating of paved surfaces and reducing the wind velocities in these pedestrian areas.	The Tillicum frontage has numerous large adjacent trees and the sidewalk will be moved away from the curb so that pedestrians will be walking closer to the proposed trees. The Lampson frontage will also have a landscaped area.

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9	Plant shorter and sturdier vegetation closer to buildings and other structures, and taller vegetation further away to avoid potential damage from strong winds blowing vegetation against buildings.	This strategy has been used
10	For commercial areas, strategically increase green space between buildings, allowing room for landscaped pathways to improve the pedestrian experience, promote walking, and provide for improved light penetration on to sidewalks.	NA
11	For parking areas and along boulevard/ sidewalk edges; plant trees to provide shade, store carbon and reduce the heat island effect.	The Tillicum frontage has numerous large adjacent trees and the sidewalk will be moved away from the curb so that pedestrians will be walking closer to the proposed trees. The Lampson frontage will also have a landscaped area.

24.5.4	Machinery, equipment and systems external to buildings and other structures	
1	For external lighting: • Choose efficient low-energy and long life technologies; • Design lighting to reinforce and compliment existing street lighting; • Use motion-sensitive or solar-powered lights whenever possible; • Layer lighting for varying outdoor needs; and • Provide lighting systems that are easily controlled by building occupants.	Schematic pathway lighting has been shown on the landscape plan which takes into account safety, reduced glare, and spillover.
2	Use heat pumps, solar panels, green (living) roofing or an innovative system to improve a building's energy performance.	Ductless split Heat Pumps and ERV will be used for efficient heating & cooling of living spaces.
3	Use durable, vandalism and graffiti resistant materials where neighbourhood surveillance may be limited.	Durable materials such as masonry and fiber cement cladidng used on the ground floor.
4	Design for on-site heat recovery and re-use of water.	No heat recovery or re-use of water has been proposed for this project.

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5	In commercial and industrial areas: design bicycle parking facilities to be inviting for cyclists. Locate bike racks near the main building entrance, with adequate lighting and weather protection.	NA
6	In commercial areas, provide fast charge electric vehicle charging stations near locations that have quick customer turnover, and ensure the station is easily accessible, well lit, and visible from the public street.	NA
7	Provide car sharing facilities that are well lit, available for residents, and easily accessed from the public street.	A Modo car and parking stall are proposed for the outdoor parking area adjacent to the Lampson St access.

24.5.5	**Special Features**	
1	Select building materials that have been shown to have a high level of durability for the use intended.	Primary building envelope systems being designed for a service life of 25 years+. Masonry and fiber cement cladidng are used predominantly for the exterior cladding.
2	Use wood for construction as a means to sequester carbon dioxide - North American grown and sustainably harvested wood is preferable for building construction.	The building is woodframe above the first floor.
3	Select local and regionally manufactured building products whenever possible to reduce transportation energy costs.	Their are minimal materials manufactured on the Island which limits options. Local & Regionally manufactured materials will be considered where available.
4	Reuse of existing buildings and building materials is encouraged.	Noted
5	Choose materials that have a high likelihood of reuse or recycling at end of life.	End-of-life & lifespan of materials are important factors for material selection. The main clading materials (masonry & fibre-cement) have been selected in part for their high quality and long life.