



## Official Community Plan

### DPA No. 1: Natural Environment

#### Area

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

#### Designation

Development Permit Area No. 1 is designated for the purpose of establishing objectives for:

*Section 488 (1) (a)- protection of the natural environment, its ecosystems and biological diversity Note: For DPA justification and exemptions, please refer to the Official Community Plan, pages 75-77.).*

**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 00017	1379 Esquimalt Road	Deane Strongitharm, CitySpaces Consulting

#### Section B

No.	Guideline	Comments (Please complete with NA where not applicable)
<b>18.5.1</b>	<b>Lands Free of Development</b>	
1	Land within 7.5m of the high watermark of the Gorge Waterway shall be retained in as natural a state as possible. Where the land has been previously altered, the area shall be restored with native trees and plants	NA
2	New buildings/ structures shall not be located within 20 m of the high watermark of the Gorge Waterway.	NA
3	New buildings/ structures shall not be located within 10 m of the high watermark of the Strait of Juan de Fuca.	NA
4	Replacement of, expansion of, densification and intensification of the use of existing buildings within 20 m of the high watermark of the Gorge Waterway is discouraged; detached accessory dwelling units are strongly discouraged in this location.	NA



5	Replacement of, expansion of, densification and intensification of the use of existing buildings within 10 m of the high watermark of the Strait of Juan de Fuca is discouraged and detached accessory dwelling units are strongly discouraged in this location.	NA
6	Variances to 'Building Height' and 'Siting Requirements' will be considered where natural areas and trees are being protected.	NA
7	Consider the use of conservation covenants for areas having high ecosystem conservation values. Property owners are encouraged to work with local land trusts to protect natural features and valuable habitat areas through land covenants.	NA

#### 18.5.2 Natural Features

1	Retain existing healthy native trees, vegetation, rock outcrops and soil wherever possible.	Major veteran fir trees and Garry oaks, and rock outcroppings preserved.
2	Preserve and enhance native tree and shrub clusters that overhang the waters edge as these provide shade, protection and feeding habitat for fish and wildlife.	NA
3	Preservation of natural topography is favoured over blasting or building of retaining walls.	New building and parking located in existing parking lot and previously disturbed areas.
4	Narrower manoeuvring aisles, fewer and smaller parking spaces can be considered where natural areas are being conserved.	On-site parking approved by Council was less than bylaw, but recognized complementary nature of the uses.
5	Design new development and landscaping to frame rather than block public views.	The main focus of the design, including the Heritage Alteration Permit, is to ensure views of the church while providing necessary connections.
6	Avoid disturbing, compacting and removing areas of natural soil as this can lead to invasion by unwanted plant species, poor water absorption and poor establishment of new plantings. Use of local natural soil in disturbed and restored areas will support re-establishment of ecosystem functions.	The majority of the new development and its parking is located on already disturbed areas with imported fill; major natural features on the site are preserved.





18.5.3	Biodiversity	
1	New landscaping shall consist predominantly of native plant and tree species. Plants that are native to the Coastal Douglas-fir biogeoclimatic zone are preferred in landscape treatments as they provide habitat for threatened indigenous flora and fauna. Drought tolerant plants native to western North America, that are known to be non-invasive, are a good alternative choice for landscaped areas.	Landscape plantings consist primarily of native, drought resistant species.
2	In residential locations plan for 'nature out front'; for new landscaping in front and exterior side yards use a variety of site-appropriate, native species; thereby contributing positively to pedestrian friendly urban streets, future greenways and habitat enhanced corridors.	With removal of the existing Church Hall, new landscaped areas will be provided in front of the Hermitage building; the perimeter of the parking lot will be landscaped.
3	Choose trees and plants for site conditions; consider shade, sunlight, heat, wind-exposure, sea spray tolerance, and year round moisture requirements in their placement.	Plant materials have been selected to suite site conditions.
4	Consider the habitat and food needs of birds, pollinators, and humans in tree and plant species selection and placement; native plantings and food gardens compliment each other.	The major natural ecosystem on the site is located on the east side of the property; the area is being preserved and some additional plantings have been chosen specifically for pollinization.
5	Encourage native plant and food gardens to spill from private land into boulevards.	Boulevard vegetation consistent with Township plantings.
6	Avoid monoculture plantings, especially expanses of turf grass outside of playing field sites.	No monoculture plantings are planned.
7	Snags, logs, driftwood and rock cairns may be used as interesting landscaping features that also provide habitat for native flora and fauna.	NA
8	Avoid using fast-growing non-native plants to cover and retain soils as they may become invasive and a constraint to the establishment of other plants.	No fast-growing non-native plants are planned.
9	Locate civil servicing pipes/lines under driveways or other paved areas to minimize tree root damage. (Note that the majority of trees have their roots in the top 0.6 m of the soil).	Civil servicing will not impact tree roots.
10	Design retaining wall spacing and landscape planting areas of sufficient width and depth to support plantings (eg. provide larger spaces for trees).	Plantings will be placed in accordance with appropriate and professional standards.



11	Support the daylighting of portions of the stormwater system for enhanced habitat.	Rain gardens are incorporated for storm water capture and filtration.
12	Aim to meet the Canadian Landscape Standards in all landscaping installations.	Canadian Landscape Standards will be met.

#### 18.5.4 Natural Environment

1	Strategically locate leafy trees/ hedges and water features to mask urban noises such as traffic, garbage collection and delivery locations. Consider that leafy rough barked trees, vine covered walls and natural ground cover materials (mulch, soil) will help dampen urban noise.	Planting material selected to best address surrounding built/urban environment.
2	Use International Dark-Sky Association approved lighting fixtures in outdoor locations. Outdoor lighting shall be no brighter than necessary, be fully shielded (directed downward and designed to serve pedestrian needs), have minimal blue light emissions and only be on when needed. Avoid vanity lighting, and lighting directed into the night sky and trees tops.	Principles of the International Dark-Sky Association will apply; lighting will be kept a level suitable for its use, recognizing that the residents of the new and existing housing, as the majority of Parish members are elderly.
3	Light spillage on to waterways is strongly discouraged.	NA
4	Place trees and vegetation near sources of air pollution including busy roadways, to assist in reduction of air pollution through the collection of particulate matter on leaves and needles, and absorption of toxic gases, including but not limited to: ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, carbon dioxide, cadmium, chromium, nickel and lead.	Tree planting according to Township standards will be applied along Esquimalt Road; the original driveway from Grafton Road will be altered to preserve an arbutus tree on the boulevard; tree foliage on the eastern side of the property is preserved.

#### 18.5.5 Drainage and Erosion

1	Preserve, restore and enhance treed areas. Trees are the most effective form of absorbent landscaping due to their extensive root zones and their ability to both absorb water from the soil and intercept precipitation on leaves, needles and branches. Consider that native conifers are well adapted to local wet winters.	The main treed portion of the site will remain intact.
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2	Reduce the impact of surges in stormwater on shorelines by designing on-site stormwater retention systems to contain the first 3 centimetres [1.25 inches] of precipitation on site, per precipitation event; and incorporating rainwater collection systems into roof design and landscaping.	Stormwater retention techniques, including rain gardens and bioswales are incorporated into the design.
3	Consider using shared private/ public rain gardens. Direct a portion of stormwater to adjacent public open spaces, when deemed appropriate by the Director of Engineering and Public Works.	As the site is an entire block, there is no opportunity to integrate rain gardens with other neighbours.
4	Maximize the ratio of planted and pervious surfaces to unplanted surfaces, and design paved areas to direct water towards vegetated areas, to help reduce surface run off. Where paved surfaces are needed, intersperse with drought resistant vegetation and trees, to help absorb stormwater, provide shade and reduce the local heat island effect.	The landscape plan, civil works and storm water plan maximize the ratio of planted and pervious surfaces to impervious surfaces. The impervious parking area surface drains into a raingarden.
5	Use porous surfaces to enhance stormwater infiltration, permeable paving is preferable for all open air parking areas. Ensure installation methods contribute to sustained permeability and retention of stormwater on the site.	Rain gardens and permeable pavers are integrated into the design.
6	Choose absorbent landscaping materials; leaf mulches, wood chips and good quality top soil, over gravel, pavers and concrete. Provide mulch of organic, locally derived materials; leaf mulch from local tree leaves is most desirable.	All new landscaping, soil, materials, and plantings will be to BC Landscape Architects standards.
7	Incorporation of rain gardens, bio-swales, rain barrels, and even small depressions (puddles) into landscaping will help reduce surges of stormwater entering local waterways.	Rain gardens and bioswales have been incorporated.
8	Planting densities should ensure that vegetated areas will have near 100% plant coverage after two full growing seasons.	Plant spacing and density will be determined by a landscape architect.

<b>18.5.6</b>	<b>Protect, Restore and Enhance Shorelines</b>	
1	Waterfront property owners are encouraged to become familiar with and adopt a 'soft shore' restoration approach to the care of their foreshore property (i.e. Green Shores for Homes).	NA



2	Avoid the expansion of dock area, bulkheads, groins or other shoreline hardening structures. Removal or reductions in the surface area of existing private docks is encouraged.	NA
3	Where shoring methods are required to prevent erosion or the sloughing of the shoreline, choose bio-engineering methods over the use of sea-walls or retaining walls. Where sea-walls or retaining walls are the only means of effectively preventing erosion, design in consultation with qualified environmental professionals, as well as engineering professionals.	NA

#### 18.5.7 Native Bird Biodiversity

1	Protect and enhance habitat features like mature trees, shrub clusters, native fruit bearing shrubs, fresh water ponds and ephemeral damp areas (puddles).	Major habitat features (large veteran trees) will be preserved.
2	Encourage increased front yard habitat along quieter streets to reduce bird vehicle conflicts and enhance the pedestrian experience through native plantings.	Foster Street will remain largely undisturbed.
3	Sustain a mix of habitat types; including forest, shrub-land, meadow, riparian wetland and coastal shoreline ecosystems in landscaping.	There are no wetland or riparian areas. The existing forest and tree cover, combined with the new landscaping, provides for a mix of habitat types.
4	Incorporate a vertical vegetation structure [vertical habitat] including layers of ground cover, shrub, understorey and canopy in landscape design.	Ground cover, small and large shrubs, and small and large trees are incorporated into the landscape plan.
5	Choose a range of native plant species and sizes; a mix of coniferous and deciduous trees will enhance bird species diversity.	A range of plant species and sizes are provided: perennials, grasses, ground cover plants, small and large trees and shrubs.
6	Incorporate architectural features that limit collisions between birds and windows including patterned, frosted or tinted glass, exterior louvers, blinds, sun shades and canopies.	Main windows in residential units will have juliet balconies and windows with blinds.
7	Cap and screen all ventilation pipes and grates, avoid openings greater than 2.0 x 2.0 cm.	Yes.





## 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 000117	1379 Esquimalt Road	

#### Section B

No.	Guideline-	Comments
<b>24.5.1</b>	<b>Siting of buildings and structures</b>	
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.	The new building is set away from the Hermitage and every housing floor has a south side communal balcony for the senior housing residents and their guests.
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.	The housing mass is located on the northwest corner to provide visual separation to the heritage church. This location near the corner of the site also does not impact other neighbouring sites and the housing mass shade is cast onto Esquimalt and Grafton streets.
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 design intent of the 5-storey building is to create separation from the heritage church and allow sun to reach the church's west facade and courtyard.



4	Provide space for pleasant pedestrian pathways between buildings.	The new project provides an added street courtyard off Esquimalt Road. It also retains much of the green space between the church and the hermitage as possible. The Esquimalt frontage has new street trees and gardens.
5	Strategically site buildings to sustain and increase the community's urban forest tree canopy cover.	Retaining as many trees as possible and adding replacement trees for those cut down. The new surface parking lot entrance has been modified to retain an existing arbutus tree on Grafton Street and the existing mature trees to the northwest of the Hermitage.
6	Provide space for significant landscaping including varying heights of trees, shrubs and ground covers.	There are three rain gardens placed along the Grafton Street and Esquimalt Road frontages. A Prayer Garden has been developed on the south side of the Heritage Church. New large deciduous street trees along the Esquimalt Road frontage.
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.	New Ministry Centre is recessed from the building mass and a light steel structure accents the entrance. The Heritage Church has a new south facing entrance (similar to the existing north entrance) for parishioners coming from the parking lot or Hermitage. The seniors housing has a trellis archway at the Grafton Street property line.
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.	A new courtyard off Esquimalt Road provides an area for the Multi Purpose Room to spill out to and large glazed overhead doors allow for the extension of the indoor space to the exterior and invite people to participate. The Prayer Garden is a quiet space with seating. There is allow area for a future play area and meditation maze
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.	N/A





<b>24.5.2 Form and exterior design of buildings and structures</b>		
1	Orient larger roof surfaces to the south for potential use of solar panels or photo-voltaic roofing.	Flat roof allows for future solar panels (hot water heating).
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.	Lighter colored roofing is intended on the flat roofs of the new Ministry Centre and Senior Housing.
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.	Unit break up of the building required windows on the north side for daylighting and reduce overlook to the Hermitage. Most units have cross ventilation.
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.	Balconies and a top parapet extension will provide shading at some of the windows.
5	Install adjustable overhangs above windows that can help control the amount of sun exposure in warmer months thereby reducing need for cooling.	No adjustable overhangs.
6	Provide building occupants with control of ventilation; i.e. windows that open.	All units have doors to balconies and operable windows for ventilation. Please note 16 of the units have cross ventilation (windows on two sides).
7	Skylights are discouraged as they decrease insulating values and can interfere with solar panel installation.	No Skylights.
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.	No roof patios. However on every senior living floor there is a communal south facing balcony that will have planters to allow residents to grow herbs, plants, etc.
9	Install greenhouses for growing food on rooftops where neighbourhood privacy and light intrusion concerns are mitigated.	No greenhouses.
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.	No heavily tinted windows.
11	In exposed marine locations select durable materials that will withstand weather and sea spray, to ensure low maintenance costs and infrequent replacement needs.	N/A



<b>24.5.3 Landscaping</b>		
1	Develop a front yard landscape design that is natural and delightful so residents do not need to leave the neighbourhood to experience nature.	The Ministry Centre has a rain garden along Grafton Street, new courtyard plaza between the Ministry Centre and Church and new rain gardens along the Church.
2	Choose open space and landscaping over dedicating space to the parking and maneuvering of private motor vehicles.	Retained as much green space and trees as possible including jogging the parking entrance off Grafton Street to preserve an arbutus tree and existing trees at the northwest end of the Hermitage.
3	Conserve native trees, shrubs and soils, thereby saving the cost of importing materials and preserving already sequestered carbon dioxide.	Retained arbutus and fir trees (described above). Also retain the rock outcropping and Garry Oaks off of Foster Street.
4	Use deciduous trees for landscaping along southern exposures, as they provide shade in the summer and allow more sunlight through in the winter.	Two new large deciduous trees at either end of the surface parking lot provide shading along the sidewalk and near by windows.
5	Strategically place taller trees and vegetation on the south and west sides of buildings where there is more direct sun exposure.	Retained tall fir trees at the northwest corner of the Hermitage that provide shading to the new Seniors Housing and visual privacy during the summer.
6	Strategically place coniferous trees such that they can buffer winter winds.	The wind is most often from the east from October to March. The site has a series of mature existing oak, cedar and fir trees that are retained. There are new street trees on Esquimalt Road that will offer some buffering.
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 project retains the majority of the sites existing trees (all of the mature trees) and introduces 5 large deciduous trees, and 9 smaller ornamental deciduous trees.
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.	Six new deciduous trees along Esquimalt Road, three smaller ornamental trees along Grafton Street and two new deciduous trees in the new parking area.
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.	The west side of the new building along Grafton Street has a rain garden with native plant species for stormwater treatment. Also the north planting bed along the Church is a similar rain garden.
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.	N/A





11	For parking areas and along boulevard/ sidewalk edges; plant trees to provide shade, store carbon and reduce the heat island effect.	Two new large deciduous trees at either end of the new surface parking lot.
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<b>24.5.4</b>	<b>Machinery, equipment and systems external to buildings and other structures</b>	
1	<p>For external lighting:</p> <ul style="list-style-type: none"> <li>• Choose efficient low-energy and long life technologies;</li> <li>• Design lighting to reinforce and compliment existing street lighting;</li> <li>• Use motion-sensitive or solar-powered lights whenever possible;</li> <li>• Layer lighting for varying outdoor needs; and</li> <li>• Provide lighting systems that are easily controlled by building occupants.</li> </ul>	Entrances will have LED lighting either mounted in a canopy or orientated that no up lighting will occur. Downcast LED lighting placed on the exterior wall of the building to illuminate the courtyard off Esquimalt Road and the sidewalk along the south end of the seniors housing.
2	Use heat pumps, solar panels, green (living) roofing or an innovative system to improve a building's energy performance.	Air source heat pump may be used where single application cooling is required (common lounge). There is currently no intent to air condition the entire facility.
3	Use durable, vandalism and graffiti resistant materials where neighbourhood surveillance may be limited.	The seniors housing introduces many "eyes on the street". The Ministry Centre ground level is brick to the second floor.
4	Design for on-site heat recovery and re-use of water.	Three rain gardens provided (two along Esquimalt Road and one along Grafton Street). Heat recovery of the ventilation systems rather than primary heating plant is intended. Step Code 3 required.
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.	6 public bike racks near entrance to the Ministry Centre off Esquimalt Road. 8 public bike racks near entrance to Church off Esquimalt Road. 4 public bike racks near south entrance to seniors housing.
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.	N/A
7	Provide car sharing facilities that are well lit, available for residents, and easily accessed from the public street.	No car share



<b>24.5.5 Special Features</b>		
1	Select building materials that have been shown to have a high level of durability for the use intended.	Brick base along the main floor and stucco cladding above
2	Use wood for construction as a means to sequester carbon dioxide - North American grown and sustainably harvested wood is preferable for building construction.	Wood frame construction this will be lumber products from BC.
3	Select local and regionally manufactured building products whenever possible to reduce transportation energy costs.	Part of the Construction Strategy.
4	Reuse of existing buildings and building materials is encouraged.	Retaining and connecting to the church as a site amenity
5	Choose materials that have a high likelihood of reuse or recycling at end of life.	Aluminum railings, brick and wood construction





## Official Community Plan

### DPA No. 8 Water Conservation

#### Area

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

#### Designation

Development Permit Area No. 8 is designated for:

- Section 488 (1)(i)- Water conservation. *Note: For DPA justification and exemptions please refer to the Official Community Plan, pages 100-101.*

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 000117	1379 Esquimalt Road	Deane Strongitharm, CitySpaces Consulting

#### Section B

No.	Guideline-	Comments
<b>25.5.1 Building and Landscape Design</b>		
1	Reduce the burden on built stormwater infrastructure by designing on-site retention systems to retain the first three centimetres (1.25") of stormwater on site, per precipitation event.	Rainwater is filtered through raingardens, combined with native plants for stormwater treatment.
2	Provide space for absorbent landscaping, including significantly sized trees on the site and by not allowing underground parking structures to extend beyond building walls.	No underground parking provided.
3	Incorporate rainwater collection systems into roof design; consider using living roofs and walls as part of a rainwater collection system.	Rainwater roof collection is filtered through raingarden prior discharge to the municipal stormwater system on Esquimalt Road.
4	Incorporate rain gardens into landscaping and direct rainwater towards vegetated areas.	Raingardens are integrated into the landscape and civil engineering design.



5	Intersperse paved surfaces with drought resistant vegetation that will provide shade on those surfaces and design the paved surfaces to drain into the vegetation.	Paved surface is broken up with a combination of pavers and landscaping that provides shade and drainage.
6	Design landscaping with more planted and pervious surfaces than solid surfaces.	Outdoor solid surface public areas incorporate a pervious brick system.
7	Direct stormwater towards adjacent public spaces, with rain gardens/ bioswales located on public property where it would benefit both the new development and the municipality and where it is deemed appropriate by municipal staff.	There are no public spaces adjacent to the site. However, along the edge of the road rights of way, a combination of vegetation and raingardens predominate

25.5.2 Landscaping- Select Plantings for Site and Local Conditions		
1	Retain existing native trees vegetation, and soil on site.	Site planning has considered building location to preserve mature vegetation and prominent natural features.
2	Plant species native to the Coastal Douglas-fir biogeoclimatic zone, as they are most suited to our climate and require little additional irrigation once established.	Existing Douglas fir, cedar and oak trees are being preserved. Appropriately, new street trees on Esquimalt Road and Grafton Street boulevards are deciduous.
3	Consider shade, sunlight, heat, wind-exposure and sea spray, as well as water needs in the selection and placement of plant species.	New trees will be located to provide shade.
4	Group plants with similar water needs into hydro-zones.	Hydro zones (raingardens) provide native plant species for stormwater treatment.





25.5.3	<b>Landscaping- Retaining Stormwater on Site (absorbent landscaping)</b>	
1	Preserve and restore treed areas. Trees are the most effective form of absorbent landscaping due to their extensive root zones and their ability to both absorb water from the soil and intercept precipitation on leaves, needles and branches. Consider that native conifers are well adapted to local wet winters.	Existing treed area are being preserved with large distances between the major tree groupings on the east side of the property.
2	Use pervious landscaping materials to enhance stormwater infiltration; permeable paving is preferable for surface parking areas.	Pervious landscape features are incorporate. Parking area includes application of pervious pavers for the actual parking stalls.
3	Avoid disturbing, compacting and removing areas of natural soil, as these are naturally absorbent areas.	New building and parking located on previously disturbed areas.
4	Locate civil servicing lines along driveways and other paved areas, to lessen the disturbance of natural soils and loss of their natural absorption qualities.	No civil servicing lines cross natural soils or vegetation. All services are from the Township.
5	Use good quality top soil and compost for the finish grading of disturbed areas to contribute to the water holding capacity of newly landscaped areas.	All landscape work, including soil medium, will conform with BCSLA & BCNTA specifications.
6	Choose bark mulches or woodchips for walking paths for enhanced absorption.	An asphalt fire running from the existing parking lot to the northeast corner of the property will be replaced with a new, narrower walking pathway. All building entrances and access points will have walkways from the street.
7	Plant at densities that will ensure vegetated areas have 100% plant canopy coverage after two full growing seasons. Consider that understory native plants are adapted to local climates, absorb seasonal soil moisture and reduce compaction due to foot traffic.	Plant materials and spacing will conform to BCLAS standards.



25.5.4	Landscaping- Water Features and Irrigation Systems	
1	Use automated high efficiency irrigation systems where irrigation is required.	A drip system and low water volume irrigation systems will be used.
2	Incorporate stormwater retention features into irrigation system design.	Stormwater features are located nearest Grafton Street and Esquimalt Road to best integrate storm water retention features into the irrigation design.
3	Use recirculated water systems for water features such as pools and fountains.	There are no specific water features planned.
4	Install plantings and irrigation systems to the Canadian Landscape Standard.	Planting and irrigation will be to the Canadian Landscape Standard.





## GREEN BUILDING CHECKLIST



The purpose of this Checklist is to make property owners and developers aware of specific green features that can be included in new developments to reduce their carbon footprints to help create a more sustainable community.

Creating walkable neighbourhoods, fostering green building technologies, making better use of our limited land base and ensuring that new development is located close to services, shops and transit are some of the means of achieving sustainability.

The Checklist which follows focuses on the use of Green Technologies in new buildings and major renovations. The Checklist is not a report card, it is a tool to help identify how your project can become 'greener' and to demonstrate to Council how your project will help the Township of Esquimalt meet its sustainability goals. It is not expected that each development will include all of the ideas set out in this list but Council is looking for a strong commitment to green development.

There are numerous green design standards, for example, Built Green BC; LEED ND; Living Building Challenge; Green Shores; Sustainable Sites Initiative. Esquimalt is not directing you to follow any particular standard, however, you are strongly encouraged to incorporate as many green features as possible into the design of your project.

As you review this checklist, if you have any questions please contact Development Services at 250.414.7108 for clarification.

**New development is essential to Esquimalt.  
We look forward to working with you  
to ensure that development is  
as green and sustainable as possible.**

Other documents containing references to building and site design and sustainability, which you are advised to review, include:

- Esquimalt's Official Community Plan
- Development Protocol Policy
- Esquimalt's Pedestrian Charter
- Tree Protection Bylaw No. 2664
- A Sustainable Development Strategic Plan for the Township of Esquimalt

*Adopted on January 10th, 2011*



"One-third of Canada's energy use goes to running our homes, offices and other buildings. The federal government's Office of Energy Efficiency (Natural Resources Canada) reports that a corresponding one-third of our current greenhouse gas (GHG) emissions come from the built environment."

[Green Building and Development as a Public Good, Michael Buzzelli, CPRN Research Report June 2009]

Please answer the following questions and describe the green and innovative features of your proposed development. Depending on the size and scope of your project, some of the following points may not be applicable.

## Green Building Standards

*Both energy use and emissions can be reduced by changing or modifying the way we build and equip our buildings.*

1	Are you building to a recognized green building standard? If yes, to what program and level? <u>BC Energy Step Code – Step 2</u>	Yes ✓	No
2	If not, have you consulted a Green Building or LEED consultant to discuss the inclusion of green features?	Yes ✓	No
3	Will you be using high-performance building envelope materials, rainscreen siding, durable interior finish materials or safe to re-use materials in this project? If so, please describe them. Building envelope will be designed with a rainscreen & interior materials will be durable, including vinyl flooring in the rental suites & marmoleum flooring in the Church Hall.	Yes ✓	No
4	What percentage of the existing building[s], if any, will be incorporated into the new building? <u>100</u> %		
5	Are you using any locally manufactured wood or stone products to reduce energy used in the transportation of construction materials? Please list any that are being used in this project. <u>The second to fifth floors will be wood frame construction using lumber products from BC.</u>		
6	Have you considered advanced framing techniques to help reduce construction costs and increase energy savings?	Yes ✓	No
7	Will any wood used in this project be eco-certified or produced from sustainably managed forests? If so, by which organization? <u>No</u>  For which parts of the building (e.g. framing, roof, sheathing etc.)? <u>NA</u>		
8	Can alternatives to Chlorofluorocarbon's and Hydro-chlorofluorocarbons which are often used in air conditioning, packaging, insulation, or solvents] be used in this project? If so, please describe these. <u>See attached.</u>	Yes ✓	No
9	List any products you are proposing that are produced using lower energy levels in manufacturing. <u>Concrete foundations, main floor structure, second floor concrete slab &amp; upper floor concrete toppings. Cellulose insulation in exterior walls. Wood frame construction from second to fifth floors.</u>		
10	Are you using materials which have a recycled content [e.g. roofing materials, interior doors, ceramic tiles or carpets]?	Yes ✓	No
11	Will any interior products [e.g. cabinets, insulation or floor sheathing] contain formaldehyde?	Yes	No ✓



## Water Management

*The intent of the following features is to promote water conservation, re-use water on site, and reduce storm water run-off.*

### Indoor Water Fixtures

12	Does your project exceed the BC Building Code requirements for public lavatory faucets and have automatic shut offs?	Yes ✓	No
13	For commercial buildings, do flushes for urinals exceed BC Building Code requirements?	Yes	No ✓
14	Does your project use dual flush toilets and do these exceed the BC Building Code requirements?	Yes	No ✓
15	Does your project exceed the BC Building Code requirements for maximum flow rates for private showers?	Yes	No ✓
16	Does your project exceed the BC Building Code requirements for flow rates for kitchen and bathroom faucets?	Yes	No ✓

### Storm Water

17	If your property has water frontage, are you planning to protect trees and vegetation within 60 metres of the high water mark? [Note: For properties located on the Gorge Waterway, please consult Sections 7.1.2.1 and 9.6 of the Esquimalt Official Community Plan.]	Yes	No	N/A ✓
18	Will this project eliminate or reduce inflow and infiltration between storm water and sewer pipes from this property?	Yes ✓	No	N/A
19	Will storm water run-off be collected and managed on site (rain gardens, wetlands, or ponds) or used for irrigation or re-circulating outdoor water features? If so, please describe. <u>The intent is to create a rain garden along the front of Esquimalt Road &amp; a second rain garden along the western property line along Grafton Street.</u>	Yes ✓	No	N/A
20	Have you considered storing rain water on site (rain barrels or cisterns) for future irrigation uses?	Yes	No ✓	N/A
21	Will surface pollution into storm drains will be mitigated (oil interceptors, bio-swales)? If so, please describe. <u>New surface parking lot will drain toward new building &amp; a strip of permeable pavers to allow infiltration of runoff prior to conveyance to rain garden along Grafton St.</u>	Yes ✓	No	N/A
22	Will this project have an engineered green roof system or has the structure been designed for a future green roof installation?	Yes	No ✓	N/A
23	What percentage of the site will be maintained as naturally permeable surfaces?	39.8 %		

### Waste water

24	For larger projects, has Integrated Resource Management (IRM) been considered (e.g. heat recovery from waste water or onsite waste water treatment)? If so, please describe these.	Yes	No	N/A ✓
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## Natural Features/Landscaping

*The way we manage the landscape can reduce water use, protect our urban forest, restore natural vegetation and help to protect the watershed and receiving bodies of water.*

25	Are any healthy trees being removed? If so, how many and what species? <u>Three Scotch Pine are being removed from the existing Church parking lot. (See Tree Management Plan)</u>	Yes ✓	No	N/A
	Could your site design be altered to save these trees?		✓	
	Have you consulted with our Parks Department regarding their removal?		✓	



26	Will this project add new trees to the site and increase our urban forest? If so, how many and what species? <u>Five Crimson King Maples, six Sweet Gum &amp; three Austrian Pines</u>	Yes ✓	No	N/A
27	Are trees [existing or new] being used to provide shade in summer or to buffer winds?	Yes ✓	No	N/A
28	Will any existing native vegetation on this site be protected? If so, please describe where and how. <u>See attached.</u>	Yes ✓	No	N/A
29	Will new landscaped areas incorporate any plant species native to southern Vancouver Island? <u>Native plant species will be used in the rain gardens for stormwater treatment.</u>	Yes ✓	No	N/A
30	Will xeriscaping (i.e. the use of drought tolerant plants) be utilized in dry areas? <u>Lily of the Valley, California Lilac, Pink Azalea, Shirobana Spirea &amp; Japanese False Holly</u>	Yes ✓	No	N/A
31	Will high efficiency irrigation systems be installed (e.g. drip irrigation; 'smart' controls)?	Yes ✓	No	N/A
32	Have you planned to control invasive species such as Scotch broom, English ivy, Himalayan and evergreen blackberry growing on the property?	Yes ✓	No	N/A
33	Will topsoil will be protected and reused on the site?	Yes ✓	No	N/A
<b>Energy Efficiency</b>				
<i>Improvements in building technology will reduce energy consumption and in turn lower greenhouse gas [GHG] emissions. These improvements will also reduce future operating costs for building occupants.</i>				
34	Will the building design be certified by an independent energy auditor/analyst? If so, what will the rating be? <u>BC Energy Step Code – Step 2</u>	Yes ✓	No	N/A
35	Have you considered passive solar design principles for space heating and cooling or planned for natural day lighting?	Yes ✓	No	N/A
36	Does the design and siting of buildings maximize exposure to natural light? What percentage of interior spaces will be illuminated by sunlight? <u>60 %</u>	Yes ✓	No	N/A
37	Will heating and cooling systems be of enhanced energy efficiency (ie. geothermal, air source heat pump, solar hot water, solar air exchange, etc.). If so, please describe. <u>See attached.</u> If you are considering a heat pump, what measures will you take to mitigate any noise associated with the pump? <u>See attached.</u>	Yes ✓	No	N/A
38	Has the building been designed to be solar ready?	Yes ✓	No	N/A
39	Have you considered using roof mounted photovoltaic panels to convert solar energy to electricity?	Yes ✓	No	N/A
40	Do windows exceed the BC Building Code heat transfer coefficient standards?	Yes	No ✓	N/A
41	Are energy efficient appliances being installed in this project? If so, please describe. <u>EnergyStar appliances (fridges, stoves, washer, dryers) will be installed.</u>	✓		
42	Will high efficiency light fixtures be used in this project? If so, please describe. <u>All light fixtures will be LED or Compact Fluorescent (CFL).</u>	Yes ✓	No	N/A
43	Will building occupants have control over thermal, ventilation and light levels?	Yes ✓	No	N/A
44	Will outdoor areas have automatic lighting [i.e. motion sensors or time set]?	Yes ✓	No	N/A
45	Will underground parking areas have automatic lighting?	Yes	No	N/A ✓



**Air Quality**

*The following items are intended to ensure optimal air quality for building occupants by reducing the use of products which give off gases and odours and allowing occupants control over ventilation.*

46	Will ventilation systems be protected from contamination during construction and certified clean post construction?	Yes ✓	No	N/A
47	Are you using any natural, non-toxic, water soluble or low-VOC [volatile organic compound] paints, finishes or other products? If so, please describe. <u>Low VOC paints, primers, varnishes and flooring will be used throughout.</u>	Yes ✓	No	N/A
48	Will the building have windows that occupants can open?	Yes ✓	No	N/A
49	Will hard floor surface materials cover more than 75% of the liveable floor area?	Yes ✓	No	N/A
50	Will fresh air intakes be located away from air pollution sources?	Yes ✓	No	N/A

**Solid Waste**

*Reuse and recycling of material reduces the impact on our landfills, lowers transportation costs, extends the life-cycle of products, and reduces the amount of natural resources used to manufacture new products.*

51	Will materials be recycled during demolition of existing buildings and structures? If so, please describe. <u>Reuse of dimensional lumber.</u>	Yes ✓	No	N/A
52	Will materials be recycled during the construction phase? If so, please describe. <u>Reuse of forming material.</u>	Yes ✓	No	N/A
53	Does your project provide enhanced waste diversion facilities i.e. on-site recycling for cardboard, bottles, cans and or recyclables or on-site composting?	Yes ✓	No	N/A
54	For new commercial development, are you providing waste and recycling receptacles for customers?	Yes	No	N/A ✓

**Green Mobility**

*The intent is to encourage the use of sustainable transportation modes and walking to reduce our reliance on personal vehicles that burn fossil fuels which contributes to poor air quality.*

55	Is pedestrian lighting provided in the pathways through parking and landscaped areas and at the entrances to your building[s]?	Yes ✓	No	N/A
56	For commercial developments, are pedestrians provided with a safe path[s] through the parking areas and across vehicles accesses?	Yes	No	N/A ✓
57	Is access provided for those with assisted mobility devices?	Yes ✓	No	N/A
58	Are accessible bike racks provided for visitors?	Yes ✓	No	N/A
59	Are secure covered bicycle parking and dedicated lockers provided for residents or employees?	Yes	No ✓	N/A
60	Does your development provide residents or employees with any of the following features to reduce personal automobile use [check all that apply]: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> transit passes  <input type="checkbox"/> car share memberships  <input type="checkbox"/> shared bicycles for short term use  <input type="checkbox"/> weather protected bus shelters  <input type="checkbox"/> plug-ins for electric vehicles </div> <div> <input checked="" type="checkbox"/> Secured and enclosed scooter parking </div> </div>			

**Is there something unique or innovative about your project that has not been addressed by this Checklist? If so, please add extra pages to describe it.**

## **GREEN BUILDING CHECKLIST**

### Green Building Standards

8. Any refrigerant required for this project will be hydro-fluorocarbon (HFC). Mechanical and building materials will be fibreglass rather than foamed insulation. There is no intent to use CFCs or HCFCs on this project.

### Natural Features/Landscaping

28. The Project Team includes an arborist who will provide guidance and supervise work within or near critical root zones of trees to be retained on and off-site. The work will include, but is not limited to:
- Pruning, root pruning, excavation, etc.
  - Arranging for specified growing medium to be placed in excavations.
  - Ensuring barriers are installed or re-installed according to Township specifications after work in critical work zones is completed prior to Township inspection/re-inspection.
  - Coordinating service installers for excavation of utility serving, particularly when using a common trench.

### Energy Efficiency

37. An air source heat pump may be used where single application cooling is required (common lounge area). There is currently no intent to air condition the entire building. Condensing units, if required, will be small (less noise), located in parking areas away from residential units, and screened with plantings. Efficiencies in heating will be gained through heat recovery of the ventilation systems rather than a primary heating plant.