



2015

# Regional District of Nanaimo Sustainable Development Checklist



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**Sustainability Coordinator**

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# BACKGROUND

- **Original Sustainable Community Builder Checklist was created in 2006**
- **Sustainable Development Checklist was implemented in 2011 with the launch of the Pilot Green Building Incentive Program**
- **Target new construction and renovation of single family homes**
- **The Checklist was revised in 2013**





# GOAL

- Recognize leaders
- Engage motivated residents and builders
- Establish a local green building inventory
- Be in touch with the industry
- Understand consumers' needs and aspirations





# KEY CONSIDERATIONS

- **Focus on performance and passive design strategies, not specific technologies**
- **Should not require significant additional investment**
- **Simple, compact, well-built houses could qualify too**
- **Not too technical**
- **Tied with incentive (\$500-\$1,000)**
- **The effort should be appropriate for the level of incentive**
- **Easy to administer**





# CHECKLIST & GUIDE (2011)

- **Score based**
- **10 pages**
- **Two sections:**
  - **Location and Site Design**
  - **Building Design and Construction**
- **Sustainable Development Guide**



The RDN Sustainable Development Checklist is a tool to help develop projects that respect the natural environment, contribute to the health and well-being of residents, and use less resources and money to operate. The Checklist also helps the Region measure progress toward its vision for a sustainable future.

If physical changes to the property or building are proposed, **complete this checklist and submit it with your Development Permit or Building Permit applications and you could be eligible for incentives.**

This Checklist encourages actions that go **beyond minimum** requirements. Methods and materials in this checklist may not be suitable in all circumstances. The homeowner(s), designer or builder is free to choose solutions most appropriate for a particular project. If the Checklist score indicates the homeowner qualifies for incentives, RDN staff will need additional information and materials to verify claims that are made in the checklist.

### General Questions

1. Please provide a brief description of your proposed project, including major activities planned on the land as well as any structure to be erected or added (attach additional sheets if necessary).
2. Subject property address \_\_\_\_\_
3. Subject property's legal description \_\_\_\_\_
4. Contact person's role:  Registered Property Owner(s)  Authorized Agent  
 Full Name: \_\_\_\_\_ Telephone Number: \_\_\_\_\_ Email or other preferred contact methods: \_\_\_\_\_

**Engage RDN staff early.** Book an appointment with the RDN Sustainability Coordinator for a **free consultation** on how to achieve a high level of sustainability and a high checklist score, which could qualify you for various incentives. Email [sustainability@rdn.bc.ca](mailto:sustainability@rdn.bc.ca) or call 250-390-6510 (250-954-3798 in District 69) to make an appointment.

### PILOT GREEN BUILDING INCENTIVE PROGRAM

The RDN has an Incentive Program to encourage the use of this Checklist. To be eligible, at least half of the questions on this Checklist must be applicable. The incentive amount will be based on total score. Funds are limited and will be provided on a **first come, first serve** basis.

Checklist Score	Incentive
60-74	\$500.00
75-89	\$750.00
90 +	\$1,000.00

For more information visit [www.rdnrebates.ca](http://www.rdnrebates.ca) or [www.rdn.bc.ca](http://www.rdn.bc.ca).

## Section A: Location and Site Design

Location		Points Available	Earned Points
<b>1</b>	<b>Future Growth</b>		
	Is the project located on lands within the Growth Containment Boundary?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>1</b>
<b>2</b>	<b>Infill</b>		
	Does the project involve the reuse of vacant and underused site(s) <sup>1</sup> within the Growth Containment Boundary?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>1</b>
	Does the project involve the reuse of building(s) within the Growth Containment Boundary?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>1</b>
<b>3</b>	<b>Neighbourhood Connectivity</b>		
	Is the project located within 400 metres (5- minute walk) of 5 of the listed destinations?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>1</b>
	Is the project located within 3 kilometres (10-minute bike ride) of 5 of the listed destinations?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>1</b>
	<input type="checkbox"/> Community/social centre <input type="checkbox"/> Recreational facility <input type="checkbox"/> Transit stop <input type="checkbox"/> Health care <input type="checkbox"/> Financial institution <input type="checkbox"/> Shop/market <input type="checkbox"/> Childcare facility <input type="checkbox"/> School <input type="checkbox"/> Park <input type="checkbox"/> Coffee shop <input type="checkbox"/> Restaurant		
	Is the project located within 400 metres of a transit stop?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>1</b>
<b>4</b>	<b>Additional Merits (Please describe )</b>		

## Site Design

<b>1</b>	<b>Environment (Habitat, Ecology, Air and Water)</b>		
<b>1.1</b>	<b>Fish Habitat and Watercourse Protection / Erosion and Sediment Control</b>		
	Does the project include land alteration, vegetation removal, construction and/or building less than 30.0 metres from any water feature, within or beyond the subject property boundary?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	If <b>Yes</b> , a Development Permit (DP) may be required.		
	If <b>No</b> , will any erosion and sediment control methods be implemented?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>1</b>

<sup>1</sup> Vacant and underused sites here refer to areas that have previously been developed but have been left abandoned or underutilized, not including land used for agriculture or park or left to naturally evolve.

<b>1.2 Environmentally Sensitive Areas</b>			
Are there any environmentally sensitive features on the subject property?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If <b>Yes</b> , a Development Permit (DP) may be required.			
If a <b>DP is not required</b> , will environmentally sensitive features on site be properly identified and protected?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>
<b>1.3 Aquifer and Groundwater Protection: quality</b>			
Select the applicable level of aquifer vulnerability for the project site (to be completed by RDN staff).	<input type="checkbox"/> high	<input type="checkbox"/> moderate	<input type="checkbox"/> low
Is the proposed site designed to minimize the impact on the quality of groundwater?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>
<b>1.4 Aquifer and Groundwater Protection: quantity</b>			
Is the proposed site designed to minimize the impact on the quantity of groundwater?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>
<b>1.5 Rainwater Management: rate, quantity and quality</b>			
Will best management practices be used to encourage natural infiltration of rainwater?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>
<b>1.6 Tree Retention</b>			
Are all existing mature trees (the trunk diameter is greater than 20 cm, measured 1.5 m above the ground) on site either retained or replaced with new trees?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>
<b>1.7 Air Quality</b>			
When clearing land, will downed wood or debris be left in buffer areas or grinded rather than being burned as 'waste'?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>
<b>1.8 Other, please describe.</b>			
<b>2 Protection of Development</b>			
<b>2.1 Hazard Lands</b>			
Is the subject property located within a mapped floodplain and/or on those lands with a natural grade greater than 30 percent?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If <b>Yes</b> , a Development Permit (DP) may be required.			
If a <b>DP is not required</b> , will any efforts be made to protect development from hazardous conditions?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>
<b>2.2 Fire Hazard</b>			
Is the proposed project in an area rated with extreme or high risk of Wildland Urban Interface (WUI) fire on the FireSmart Hazard Rating?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If <b>Yes</b> , will site design strategies that reduce the risk of WUI be incorporated	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>
<b>2.3 Contaminated Site</b>			
Is the proposed project located on a contaminated site? <sup>2</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If <b>Yes</b> , will any efforts made to address the actions required by the Ministry of Environment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>

<sup>2</sup> A contaminated site is defined as a site where any of the industrial or commercial activities in the Schedule 2 of the Provincial Contaminated Sites Regulations have taken place. Find the link to the Provincial Contaminated Sites Regulations in the RDN Sustainable Development Guide.



<b>3</b>	<b>Food Security</b>			
<b>3.1</b>	<b>Productive Land Protection</b>			
	Is any land taken out of agricultural production as a result of this development?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>-2/0</b>
	As a result of this development, the impervious paving area (excluding building footprint) is	<input type="checkbox"/> decreased		<b>1</b>
		<input type="checkbox"/> unchanged		<b>0</b>
		<input type="checkbox"/> increased		<b>-1</b>
<b>3.2</b>	<b>Planning for Agriculture</b>			
	Where agriculture is a permitted use, is the proposed development designed to facilitate current and future farming, based on an analysis by a professional agrologist?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>
	If <b>No</b> , can the site design demonstrate that the following considerations are taken into account?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>
	<input type="checkbox"/> Limit the size of the farm home plate or development footprint			
	<input type="checkbox"/> Limit the size of the house(s)			
	<input type="checkbox"/> Locate house(s) and the ancillary residential features in close proximity within a home plate			
	<input type="checkbox"/> Locate development close to a road frontage that provides access to the property			
	<input type="checkbox"/> Locate development on less fertile part of the property			
<b>3.3</b>	<b>Compatibility</b>			
	Is the proposed project within 15 meters of the Agricultural Land Reserve (ALR) or a farming operation?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	If <b>Yes</b> , a DP may be required.			
	If a <b>DP is not required</b> but the project is within 15 meters of a farming operation, will the project designed to lessen the impact of development upon the adjacent agricultural land such as constructing a landscaped buffer?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>
<b>3.4</b>	<b>Onsite Food Production</b>			
	Will the project incorporate or increase on-site food production?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>3</b>
<b>4</b>	<b>Pride of Place (culture, history, arts)</b>			
	Is the proposed project on a site that either is a known archaeological site or contains archaeological evidence?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	If <b>YES</b> , has the Ministry of Natural Resource Operations Archaeology Branch been contacted to obtain applicable permits?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>
	Will the actions recommended by a professional archaeologist be implemented?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>1</b>
<b>4.2</b>	<b>Other significant contribution the proposed development will make to preserve and promote local culture, history, heritage and arts. Please describe (1 point for each identified contribution).</b>			

## Section B: Building Design and Construction

Score

### Home Size (only applicable to new houses)

What is the total area of living space<sup>3</sup>? \_\_\_\_\_ square foot

What is the total number of bedrooms? \_\_\_\_\_

Total

Score

#### a. Shortcut

A shortcut option is available to those projects that pursue a comprehensive third-party certification. The applicants of these projects do not need to complete the questions in the step-by-step option.

#### Third-Party Certification

Is this project pursuing a third-party certification?  Leadership in Energy and Environmental Design (LEED) and EnerGuide 80 or higher  
 Built Green and EnerGuide 80 or higher

Indicate the level of certification  Platinum  
 Gold  
 Silver

#### b. Step-by-step

For renovation of or addition to an existing building, only changes within the scope of your project are applicable to this checklist. Improvements made outside the scope of your project previously should be noted as 'pre-existing' (P/E).<sup>4</sup>

### 1 Energy

Not applicable if the building is not intended for occupancy and heating or cooling is not needed (i.e., a garden shed or a garage)

Is the building designed and built to be net-zero in energy or carbon emissions?

If **YES**, score 26/26. Proceed to the next set of questions under 'Water'.

Yes  No

If **NO**, complete the rest of questions under 'Energy'

<sup>3</sup> The total area of living space here refers to the conditioned space (i.e., the space that requires heating or cooling).

<sup>4</sup> For example, if you already have a high efficiency toilet before the work is performed, you should note the condition as 'pre-existing'. In this case, no available point or earned point will be counted towards the overall score. If you do not have a high efficiency toilet and decide not to replace the existing toilet in your project, the point available for that item will be 1 and earned point 0.

				Points Available	Earned Points
1.1	<b>Reduce Energy Demand/Passive Design</b>				
	Refer to <i>Passive Design Toolkit for Homes</i> developed by City of Vancouver, if applicable.				
	<u>Solar Orientation</u>				
	Have the opportunities to take advantage of solar access been identified and responded to in design? (i.e., how much solar access exists on-site, how is the whole building oriented, and how each elevation is treated).	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Vegetation</u>				
	Is the landscaping designed to aid passive design strategies? (i.e., deciduous trees that provide shade in summer but access to solar heat in winter; trees to block or filter harsh winds.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Compact Form</u> (only applicable to new houses)				
	Is an efficient and compact form considered and achieved? (i.e., is the building designed to keep corners and joints to a minimum? Does the design maximize living space within a minimum envelope area?)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Building Envelope</u>				
	Is the building envelope designed and constructed to ensure that insulation is climate appropriate, desired airtightness can be achieved, and thermal bridges are avoided wherever possible?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Energy Modeling</u>				
	Is HOT2000 or similar software used to optimize design for energy performance?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Thermal Mass</u> (only applicable to houses)				
	Is interior thermal mass used to store passive solar gains and reduce indoor temperature swings?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Interior Layout</u> (only applicable to houses)				
	Will interior layout facilitate the passive design strategies chosen for the project?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Solar Shading</u>				
	Will shading strategies (i.e., overhangs, eaves, louvers and sunshades) be used to help regulate solar gains?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Natural Light</u>				
	Will natural light be used to reduce the need for artificial lighting?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Natural Ventilation</u>				
	Will ventilation be accomplished by natural means?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Heat Recovery Ventilator</u>				
	Is a heat recovery ventilator (HRV) installed in the building so that it reclaims waste energy from exhaust airflows to heat incoming fresh air?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>

	<u>Real-time Energy Display</u> <sup>5</sup>				
	Does real-time energy monitoring display up-to-minute feedback to occupants on energy consumption?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Other, please describe.</u>				
<b>1.2</b>	<b>Efficient Systems</b>				
	<u>Efficient Space Heating System</u>				
	For houses, are any of the following appliances installed in the project?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<input type="checkbox"/> An EPA certified woodstove;				
	<input type="checkbox"/> An ENERGY STAR furnace.				
	<input type="checkbox"/> An EPA high efficiency gas stove or fireplace;				
	<input type="checkbox"/> An EPA certified pellet stove;				
	For multi-unit residential projects, are measures taken to improve space heating efficiency?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Efficient Water Heating System</u>				
	Are boilers or water heaters Energy Star rated? <b>OR</b> Is an on-demand water heater installed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Heat Pump</u>				
	Is a heat pump used to provide space heating and/or domestic hot water heating?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>3</b>
	<u>Appliances</u>				
	Are all major appliances ENERGY STAR rated?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<u>Lighting</u>				
	Are ENERGY STAR qualified light fixtures used instead of regular incandescent bulbs wherever possible?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
<b>1.3</b>	<b>Alternative Sources</b>				
	<u>Solar Hot Water</u>				
	Is there any solar hot water system installed by a SolarBC registered installer?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	Is any other system utilized in this project to harvest renewable energy?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>3</b>
<b>1.4</b>	<b>EnerGuide Rating (only applicable to houses or multi-unit residential building up to 21 units)</b>				
	Does an energy assessment by a certified energy advisor confirm that the new building meets an EnerGuide rating of 80 or higher? <b>OR</b> Is the new building an ENERGY STAR qualified home?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>10</b>
	For renovation to an existing building, how much improvement does the project achieve in EnerGuide Rating?				<b>n/a</b> <sup>6</sup>
	EnerGuide Rating before renovation _____ EnerGuide Rating after renovation _____				

<sup>5</sup> Note that BC Hydro will replace existing mechanical meters with smart meters for their customers. Make sure the energy display monitor is compatible with the new smart meter.

<sup>6</sup> Total points will depend on the improvement in EnerGuide Rating based on an energy assessment by a certified energy advisor. 1 point is awarded for every point improvement below EnerGuide 80 and 2 points for every point improvement above EnerGuide 80. For example, if the report suggests that your house had a EnerGuide Rating of 57 and could achieve a Rating of 85 if all recommended measures are incorporated, your available points will be (80-57)X1+(85-80)X2=33. If after selecting to implement several measures during renovation, your project achieved an EnerGuide Rating of 82, your total earned points will be (80-57)X1+(82-80)X2=27.

<b>2</b>	<b>Water</b> Not applicable if no water systems or fixtures are installed.			
<b>2.1</b>	<b>Reduce Water Demand/Efficient Systems</b>			
	<u>Water Uses</u> Are the fixtures installed in your project only for essential water uses (toilet, clothes washer, kitchen tap, dishwasher, washroom faucet, showerhead, and irrigation, if applicable), not for recreational or decorative uses (swimming pool, fountain)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E <b>1</b>
	<u>High Efficiency Water Fixtures</u> Do water fixtures have the following flow rates or better? Dual Flush Toilet: 4.1(or less) and 6 litre per flush <b>OR</b> Low-Flow Toilet 4.8 litre per flush <b>OR</b> No Flow Toilet/waterless composting toilet	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E <b>1/1/3</b>
	Faucet aerator: 6 litres per minute (1.5 GPM)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E <b>1</b>
	Dishwasher: an ENERGY STAR model with a water factor below 22 litre/cycle (5.8 gal/cycle)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E <b>1</b>
	Showerhead: 6 litres per minute(1.5 GPM)			<b>1</b>
	Clothes washer: Energy star model with a water factor equal or below 7.5 gal/cycle/ft3 (1.0 litre/cycle/litre)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E <b>1</b>
	<u>Landscaping</u> Does the proper plant selection eliminate the use of irrigation system, once the plants are established?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E <b>1</b>
	<u>Irrigation Systems for Landscaping (not including agricultural use)</u> If an irrigation system is installed, is the system designed and installed by a Certified Irrigation Designer and Technician?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E <b>1</b>
	Is drip irrigation installed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E <b>1</b>
	Does the irrigation system have a smart controller?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E <b>1</b>
<b>2.2</b>	<b>Alternative Sources</b>			
	<u>Greywater Reuse</u> Is there any greywater system in place that uses non-potable water for toilet flushing, irrigation or other non-potable uses?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E <b>1</b>
	<u>Rainwater Collection</u> Is rainwater harvested in a cistern with a minimum capacity of 2,000 liters for toilet flushing, irrigation or other non-potable uses?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E <b>1</b>
	Is rainwater harvested in a cistern with a minimum capacity of 18,000 liters for toilet flushing, irrigation or other non-potable uses?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E <b>1</b>

<b>3</b>	<b>Health</b>				
3.1	<b>Interior Paints</b>				
	Do all interior paints and finishes in the project contain no or low Volatile Organic Compounds (VOC) paints?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
3.2	<b>Interior Adhesives and Sealants</b>				
	Do all interior adhesives, sealants and sealant primers such as tile adhesives, window sealants, and caulk in this project contain no or low VOC?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
3.3	<b>Carpet</b>				
	Are all carpet systems in this project Green Label or Green Label plus?	<input type="checkbox"/> Yes <input type="checkbox"/> N/A	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
3.4	<b>Composite Wood or Agrifiber Products</b>				
	Do all composite wood products including particle board, medium density fiberboard (MDF), plywood, wheat board, strawboard, panel substrates and door cores contain no added urea-formaldehyde?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
3.5	Other, please explain.				
<b>4</b>	<b>Materials</b>				
4.1	<b>Local Materials</b> (i.e. harvested and processed on Vancouver Island)				
	Is graded site-cut timber used for structural elements of the project?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	For houses, are at least 4 of the following assemblies locally harvested and processed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	<input type="checkbox"/> Exterior wall framing/wall structure; <input type="checkbox"/> Interior wall framing;				
	<input type="checkbox"/> Flooring; <input type="checkbox"/> Siding or masonry; <input type="checkbox"/> Decking				
	<input type="checkbox"/> Roofing; <input type="checkbox"/> Insulation				
	For multi-unit residential projects, is at least 10% of building materials by cost is locally harvested and processed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
4.2	<b>Low Embodied Energy Materials</b>				
	Are materials with low embodied energy used as structural or envelope components in this project? E.g. wood, clay, straw bale, stone.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
4.3	<b>Materials with Recycled Content</b>				
	For houses, are materials with at least 25% post-consumer recycled content <sup>7</sup> and over \$3,000 in value are used in this project?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>
	For multi-unit residential projects, does a minimum of 10% of building materials by cost contain at least 25% post-consumer recycled content?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> P/E	<b>1</b>

<sup>7</sup> Post-industrial (or pre-consumer) recycled content must be counted at half the rate of post-consumer content.

4.4	<b>Reused Materials</b> Will salvaged or reused material be used in the project?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> P/E	<b>1</b>
4.5	<b>Rapidly Renewable Materials</b> For houses, are rapidly renewable materials (i.e., bamboo, cork, straw, natural linoleum products, wool, wheatboard, strawboard, etc.) used in the following applications? <input type="checkbox"/> Over 50% of flooring by coverage area <input type="checkbox"/> Over 80% of built-in cabinetry by coverage area For multi-unit residential projects, are rapidly renewable building materials used for 5% of the total cost of all building materials?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> P/E	<b>2</b>
4.6	<b>Forest Stewardship Certified (FSC) wood</b> By cost, is over 20% of the wood used in this project Forest Stewardship Council (FSC) Certified wood?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> P/E	<b>1</b>
4.7	<b>Construction Waste Management</b> By weight, is over 50% (for houses)/ 80% (for multi-unit residential project), of construction waste diverted from landfill?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>1</b>
4.8	Other, please explain.		
<b>5 Additional Merits</b>			
5.1	<b>Fire Hazard</b> If the proposed project is in an area rated as being at extreme or high risk of Wildland Urban Interface (WUI) fire on the FireSmart Hazard Rating, are the design and construction strategies that make the building FireSmart according to FireSmart Manual incorporated?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> P/E	<b>2</b>
5.2	<b>Vegetated Roof</b> Does the building include a vegetated roof system?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> P/E	<b>2</b>
5.3	<b>Social Significance</b> Does this project provide any social benefits to the community?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> P/E	<b>2</b>
5.4	<b>Education Potential</b> Does this project provide any green building education opportunity?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>3</b>
5.5	Other, please describe (1 point for each identified merit).		

# CHECKLIST & GUIDE (2011)

For each question, the Guide includes:

- Why do we care?
- Definition
- Resource
- Example actions

### Section A: Location and Site Design

#### Location

##### 1 Future Growth

###### *Why do we care?*

New developments in Village Centres or within Growth Containment Boundary (GCB) help curb rural sprawl and create compact complete communities that provide opportunities for people to live in close proximity to services, employment and amenities. This development pattern has the greatest potential to reduce automobile dependence, supports the provision of public transit and other forms of transportation, facilitates the use of more resource and energy efficient infrastructure and building types, and ultimately results in a significant reduction in greenhouse gas (GHG) emissions and improvement of residents' well-being.

###### *Definition*

Growth Containment Boundary (GCB) as defined in RDN Regional Growth Strategy is the boundary between what is considered 'urban' in the context of our electoral areas and that what is considered rural. Lands within the GCB are intended to accommodate some additional growth to facilitate the creation of compact, more complete communities which include places to live, work, learn, shop and access services.

###### *Resource*

Regional District of Nanaimo Regional Growth Strategy and/or RDN Map [www.rdn.bc.ca](http://www.rdn.bc.ca)

##### 2 Infill

###### *Why do we care?*

Infill development is new construction on vacant or underused lots in the established neighbourhoods and business districts. These sites are typically located closer to the centre of the community and are more likely to be served by public infrastructure, such as roads, water and sewer lines. There are many benefits of infill development including making better use of urban land supplies while reducing consumption of forest and agricultural land, replacing abandoned areas with functioning assets, lowering costs of public services such as transit, sidewalks, water and sewer, school, and public safety (police, fire, ambulance), and avoiding or limiting site disturbance.

###### *Definition*

Infill refers to the use of land within a built-up area for further construction.

##### 3 Neighbourhood Connectivity

###### *Why do we care?*

Projects that are located in close proximity to services, employment and amenities have great potential to reduce occupants' dependence on personal automobile and make other forms of travel more viable. Choosing such a project location encourages a more active and healthier lifestyle and could also result in reduction of greenhouse gas emissions related to personal travel.





# LESSONS FROM PILOT

- **Not difficult but intimidating**
- **Require some level of staff assistance to complete**
- **Some questions are more relevant than others**
- **Challenging to achieve the highest level of incentive**





# CHECKLIST & GUIDE (2013)

- **Score based**
- **2 to 4 pages**
- **Two main factors:**
  - **Size**
  - **EnerGuide rating**
- **Optional bonus points**
  - **Certification**
  - **Specific measures**





# RDN Sustainable Development Checklist

## New Construction and Renovation of Residential Development

File Number: \_\_\_\_\_

Effective May 1<sup>st</sup>, 2013

First Name: \_\_\_\_\_

Last Name: \_\_\_\_\_

Subject Property Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

Total Area of Living Space (ft<sup>2</sup>) 2,400 sf Total Number of Bedrooms 3

(Check **Home Size Table** on Page 4 to see the home size number that applies to your project.)

EnerGuide Rating 83

Is the first page of the energy assessment report attached? Yes  No

Are bonus points from the Sustainable Development Checklist pursued? Yes  No

(Check **Incentive Table** on page 4 to see if you need bonus points to qualify for the Checklist Incentive.)

If so, are the completed Sustainable Development Checklist and supporting documents attached? Yes  No  Not applicable

**EXPIRY DATE: Six months after occupancy or final date on file.**

Incentives are limited and will be provided on a first come first served basis until rebate funds run out. If you have any questions about the program, call 250-390-6510 or email [sustainability@rdn.bc.ca](mailto:sustainability@rdn.bc.ca).

**BONUS POINTS (optional): Complete either Option A or Option B below to pursue bonus points.**

**Option A: Shortcut**

<b>Point</b>	Has the project achieved one of the following standards?		
<b>10</b>	LEED* or Built Green Platinum, or ENERGY STAR®	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<b>7</b>	LEED or Built Green Gold	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<b>5</b>	LEED or Built Green Silver	Yes <input type="checkbox"/>	No <input type="checkbox"/>

\*Leadership in Energy and Environmental Design

**Option B: Step-by-step**

<b>Point</b>	<b>Category</b>		
<b>1</b>	<b>Location</b>		
	Is the project located on lands within the Growth Containment Boundary?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	<b>OR</b>		
	Does the project involve the reuse of an existing building?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	<b>OR</b>		
	Is the project located within 3 kilometres (10-minute bike ride) of 5 of the listed destinations?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	<input type="checkbox"/> Community/social centre <input type="checkbox"/> Recreational facility <input type="checkbox"/> School <input type="checkbox"/> Transit stop <input type="checkbox"/> Health care <input type="checkbox"/> Coffee shop <input type="checkbox"/> Financial institution <input type="checkbox"/> Shop/market <input type="checkbox"/> Restaurant <input type="checkbox"/> Childcare facility <input type="checkbox"/> Park		
	<b>OR</b>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Is the project located within 400 metres of a transit stop?		
<b>3</b>	<b>Renewable Energy Systems</b>		
	Are any of the following systems installed as part of the project by a qualified technician? *	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Solar hot water	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Photovoltaic	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Geoexchange		
<b>2</b>	<b>Rainwater Management</b>		
	Is rainwater harvested in a cistern with a minimum capacity of 4,546 liters (1,000 gallons) for toilet flushing, irrigation or other uses?*	Yes <input type="checkbox"/>	No <input type="checkbox"/>

<b>1</b>	<b>Site</b>		
	Are all existing mature trees (the trunk diameter is greater than 20 cm, measured 1.5 m above the ground) on site either retained or replaced with new trees?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	<b>OR</b>		
	Is a rain garden incorporated to encourage natural infiltration of rainwater?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	<b>OR</b>		
	When clearing land, is downed wood or debris left in buffer areas or grinded rather than being burned as 'waste'?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	<b>OR</b>		
	Is less than 20% of the property covered in impervious surface such as roofs and pavements (including building footprint, driveway, patio and footpath)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<b>2</b>	<b>Greywater Reuse</b>		
	Is there any greywater system in place for toilet flushing, irrigation or other non-potable uses?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<b>2</b>	<b>Building Materials</b>		
	Is site-cut timber used for structural components in this project? *	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	<b>OR</b>		
	Are materials with low embodied energy used as structural or envelope components in this project? E.g. clay, straw bale, stone.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<b>2</b>	<b>Vegetated Roof</b>		
	Does the building include a vegetated roof system on 50% of the roof area (not including roof area of a garage or other accessory buildings)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<b>1</b>	<b>Electric Vehicle Charging Station</b>		
	Is a Level 2 Electric Vehicle Charging Station installed in this project? *	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<b>1</b>	<b>Public Education</b>		
	Does this project provide any green building education opportunities?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

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**Total  
Bonus  
Points**

\*Note: Additional incentives may be available for these specific items. Please check [www.rdnrebates.ca](http://www.rdnrebates.ca) for eligibility criteria and application details.

### RDN Office Use Only

Look up the **Home Size Table**<sup>1</sup> below and circle the size that applies to this project.

Home Size Table												
Maximum home size (ft2) by number of bedrooms	Home Size	Size 0 or smaller	Size 1	Size 2	Size 3	Size 4	Size 5	Size 6	Size 7	Size 8	Size 9	Size 10
≤1 Bedroom		1050	1090	1135	1180	1225	1275	1325	1375	1430	1485	1545
2 Bedrooms		1600	1665	1730	1795	1865	1940	2015	2095	2180	2265	2350
3 Bedrooms		2200	2285	2375	2470	2565	2670	2770	2880	2995	3110	3235
4 Bedrooms		3000	3120	3240	3370	3500	3640	3780	3930	4080	4245	4410
5 Bedrooms		3300	3430	3565	3705	3850	4000	4160	4320	4490	4670	4850

The **Incentive Table** shows the minimum score needed to qualify for the incentive.

Incentive Table											
Incentive	Size 0 or smaller	Size 1	Size 2	Size 3	Size 4	Size 5	Size 6	Size 7	Size 8	Size 9	Size 10
\$1,000	85	86	87	88	89	90	91	92	93	94	95
\$750	82	83	84	85	86	87	88	89	90	91	92
\$500	77	78	79	80	81	82	83	84	85	86	87

Is the application form completed? Yes  No

Are supporting documents submitted? Yes  No

EnerGuide Rating 83 + Bonus Points 3 = Total Score 86

The applicant is eligible to receive \$ \$750

Reviewed and approved by \_\_\_\_\_ Date \_\_\_\_\_

<sup>1</sup> Adapted from the Home Size Adjustment Table developed by Canada Green Building Council LEED for Homes program.



# LESSONS LEARNED

- Engage early in the process
- Turn into outreach and education opportunities
- Combine rebates to increase the total incentive amount
- Require little staff resource to administer
- Ensure applicants are aware of the Checklist





**THANK YOU.**

**Ting Pan**

**Regional District of Nanaimo**

**[tpan@rdn.bc.ca](mailto:tpan@rdn.bc.ca)**

**(250)390-6506**