Meeting #4

Zoning Bylaws in Other Municipalities

March 8, 2017



What We Heard at Meeting #3

Sticky dot activity results

Top 4 municipalities based on visual preference stick dot activity:

- 1. Whistler (12 dots)
- 2. Port Moody (8 dots)
- 3. Lions Bay (6 dots)*
- 4. Richmond (6 dots)*

*tied for 3rd place

In addition to the municipalities listed above, the following municipalities have been selected because they provide some helpful and relevant examples:

- 5. District of West Vancouver (selected for: flexibility and clarity)
- 6. District of North Vancouver (selected for: sustainability)

The selection of the above municipalities provides a frame of reference for what is possible in Belcarra. It does not mean that regulations from these municipalities will be proposed for Belcarra.



Whistler





Municipality:	Whistler
Address:	2041 Garibaldi Way
Zoning:	RS1
Min Lot Area:	695 sq m (min 928.6 sq m for buildings larger than
	325 sq m)
Max Building Area:	465 sq m (5005 sq ft)
Max Density:	0.35 FSR
Max Height:	7.6 m (25 ft)
Max Coverage:	35%
Sustainability in bylaw?	No

Land:	12,529 sq ft (0.29 acres)
L1:	2,054 sq ft
L2:	900 sq ft
Basement:	1,310 sq ft
Total above	2,954 sq ft
ground:	
Total w/ basement:	4,264 sq ft

Port Moody







Municipality:	Port Moody
Address:	702 Alderside Rd
Zoning:	RS3
Min Lot Area:	375 sq m (4,036 sq ft)
Max Building Area:	(not specified)
Max Density:	0.6 FAR
Max Height:	8m (26 ft) or 3 storeys
Max Coverage:	45%
Sustainability in bylaw?	No

Land:	9,027 sq ft (0.21 acres)
L1:	1,792 sq ft
L2:	1,471 sq ft
Basement:	1,400 sq ft
Total above ground:	3,263 sq ft
Total w/ basement:	4,663 sq ft

Lions Bay



NA	Liana Davi
Municipality:	Lions Bay
Address:	130 Lions Bay Avenue
Zoning:	RS-1 - Single Family Residential - Large
Min Lot Area:	8,092 sq m (87,101 sq ft)
Max Building Area:	(not specified)
Max Density:	0.35 FAR
Max Height:	9 m (29.5 ft) with sloping roof, 7.4 m (24.3 ft)
	with flat roof
Coverage:	30%
Sustainability in bylaw?	No



Land:	14,338 sq ft (0.33 acres)
L1:	3,083 sq ft
L2:	1,898 sq ft
Basement:	941 sq ft
Total above ground:	4,981 sq ft
Total w/ basement:	5,922 sq ft

Richmond



Municipality	Diehmand
Municipality:	Richmond
Address:	5600 Barnard Place
Zoning:	RS1/B - Single Detached
Min Lot Area:	360 sq m (3,875 sq ft)
Max Building Area:	(no specified)
Max Density:	0.55 FAR for the first 464.5 sq m (5,000 sq ft)
	of lot area, then 0.30 FAR for any additional lot
	area
Max Height:	2.5 storeys
Max Coverage:	45%
Sustainability in bylaw?	No



Land:	7,629 sq ft (0.18 acres)
L1:	2,054 sq ft
L2:	1,490 sq ft
Basement:	n/a
Total above ground:	3,544 sq ft
Total w/ basement:	3,544 sq ft

District of West Vancouver







Municipality:	District of West Vancouver
Address:	5028 Pinetree Crescent
Zoning:	RS10
Min Lot Area:	1,115 sq m (12,002 sq ft)
Max Building Area:	(not specified)
Max Density:	0.35 FAR
Max Height:	7.62 m (25 ft), 2 storeys plus basement
Max Coverage:	30%
Sustainability in bylaw?	No

Land:	16,899 sq ft (0.39 acres)
L1:	1,990 sq ft
L2:	1,651 sq ft
Basement:	900 sq ft
Total above ground:	3,641 sq ft
Total w/ basement:	4,541 sq ft

District of North Vancouver







Municipality:	District of North Vancouver
Address:	2740 Panorama Drive, Deep Cove
Zoning:	RS4 - Single-Family Residential
Min Lot Area:	550 sq m (5,920 sq ft)
Max Building Area:	280 sq m (3,013 sq ft)
Max Density:	0.45 FAR
Max Height:	Based on lot dimensions - 6.71 m (22 ft) to 8.53 m (28 ft)
Max Coverage:	35%
Sustainability in	Density bonus provided in single family zones
bylaw?	

Land:	9,215 sq ft (0.21 acres)
L1:	1,771 sq ft
L2:	1,676 sq ft
Basement:	n/a
Total above ground:	3,447 sq ft
Total w/ basement:	3,447 sq ft

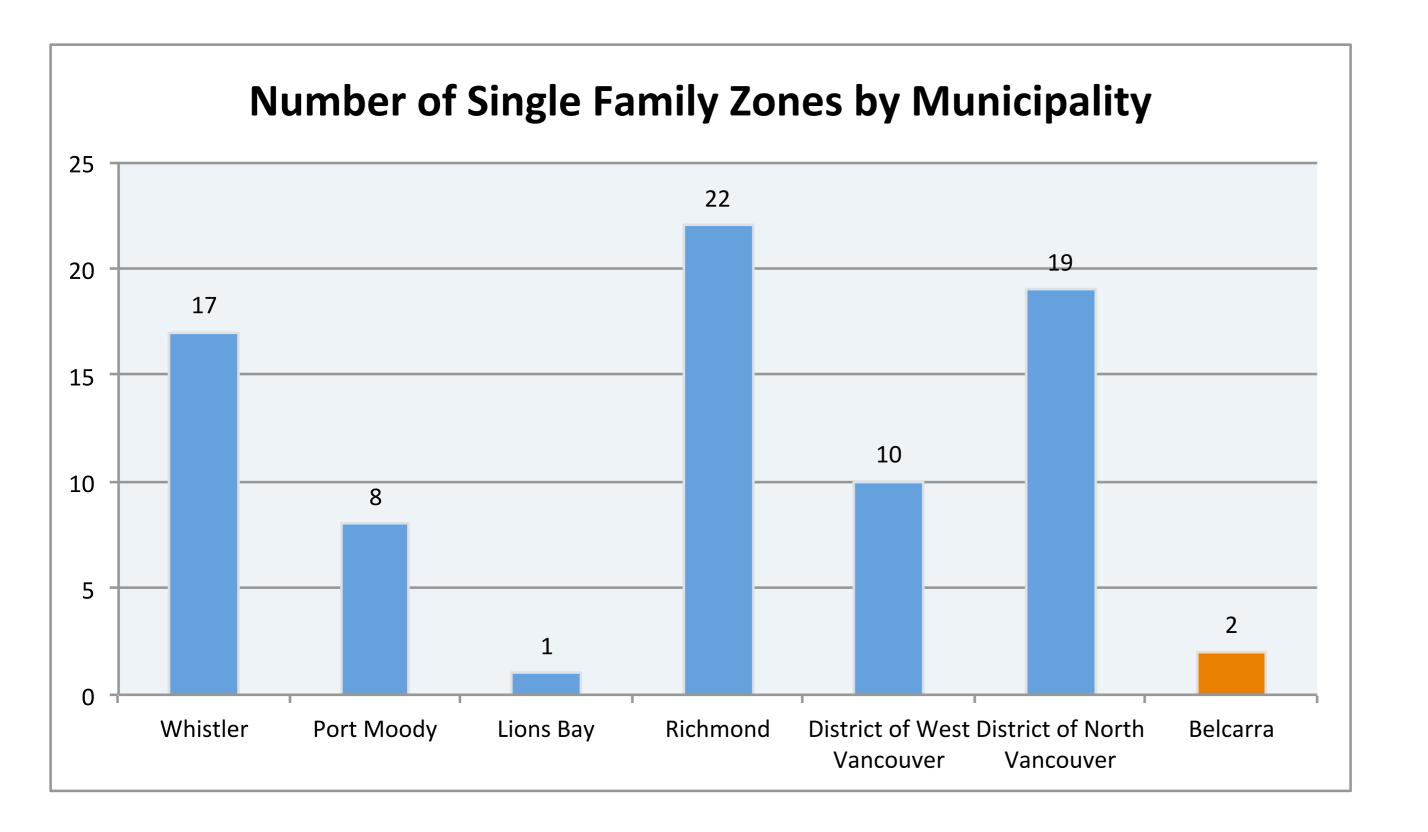
Objectives of Meeting #4

The purpose of Meeting #4 is to develop an understanding of the following topics:

Zoning in Other Municipalities

- How are other municipalities approaching key zoning issues, including:
 - » Height
 - » Floor Area Ratio
 - » Maximum Building Size
 - » Simplicity
 - » Sustainability

Single Family Zoning Across Municipalities



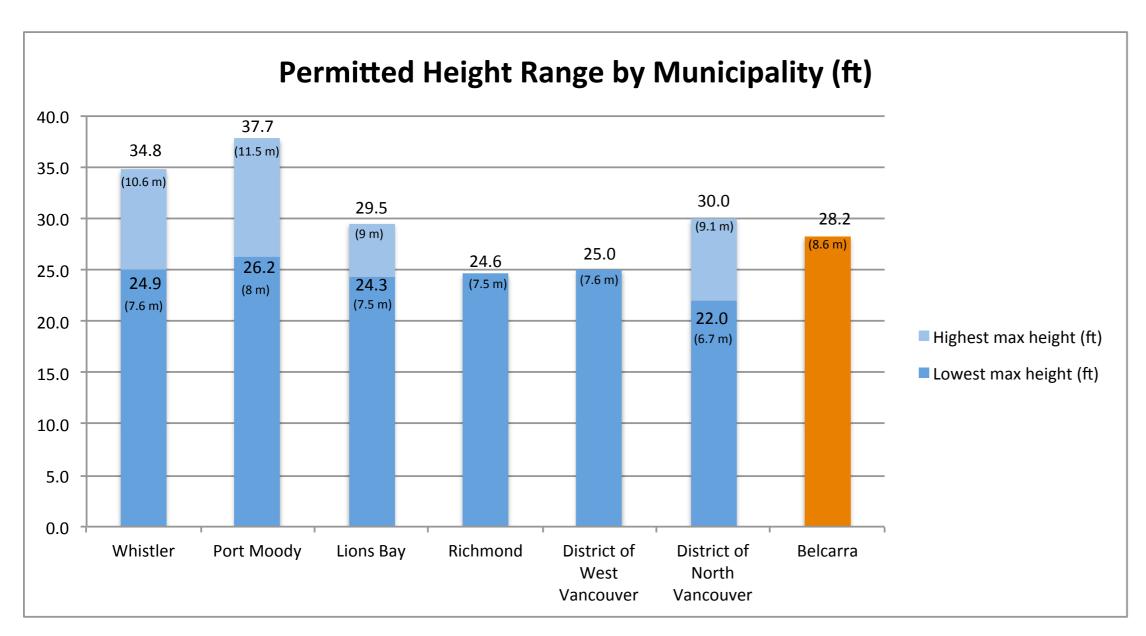
Single Family Zones: Compare and Contrast

The following slides compare and contrast key elements of a Zoning Bylaw in select municipalities. In particular, the slides cover height, floor area ratio, maximum building size, simplicity, and sustainability because these items were identified as priorities by the ZAC.

In some instances, several municipalities are compared. In others, only 2 or 3 are compared. In all cases, samples have been compared to Belcarra as a point of reference. The information has been presented in this way to not only illustrate similarities and differences, but also to encourage discussion.

The purpose of the compare contrast information on the following slides is to provide examples of how other municipalities are approaching their Zoning Bylaws. The ZAC can discuss what is relevant and what is <u>not</u> relevant to Belcarra's Zoning Bylaw.

Height: Maximum Allowed in Single Family Zones



- Heights range by zone, as well as by flat vs. sloped roofs.
- Some municipalities also
 measure by number of floors,
 ranging from 2.5 to 3 floors.

Height Defined: Similarities

Whistler

Definition:

 "Height" means the vertical distance from the grade to the highest point of the roof surface of a flat roof, to the deck line of a mansard roof and to the mean level between the eaves and the ridge of a gable, hip, gambrel or other sloping roof, and in the case of a structure without a roof, to the highest point of the structure.

Calculation of Height:

Additional detail on how height can be calculated is included in the general regulations of the bylaw.

In District Schedule:

Example regulation:

• The maximum permitted height of a building is 7.6 metres.

Port Moody

Definition:

 "HEIGHT" means the vertical distance from the grade adjoining a building or structure to the highest point of the roof surface of a flat roof, to the deck line of a mansard roof, and to the mean level between the eaves and the ridge of a gable, hip, gambrel, or other sloping roof, and to the highest point of a structure other than a building.

Calculation of Height:

Not specified

In District Schedule:

Height and Grade are defined within the RS1 district schedule.

Example regulation:

• The height of the principal building shall not exceed the lesser of 10.5 metres (34.5 ft) for sloping roofs and 9.0 metres (29.5 ft) for flat roofs, or three storeys. For the purposes of height calculation, roofs with a ratio of less than three vertical to twelve horizontal (3:12) are considered to be flat roofs. Roofs with a ratio of three vertical to twelve horizontal (3:12) or more are considered to be sloping roofs

Belcarra

Definition:

 Height (of a building or structure) means the vertical distance from the Average Finished Grade to the highest point of the building or structure.

Calculation of Height:

Not specified

In District Schedule:

Example regulation:

Example regulation.	
Buildings and	Max Height
Structures	
Principal Buildings	8.6 m
Accessory Buildings	7 m
and Structures	

 No portion of the building shall be greater in height than 11.7 metres to be measured from the lowest finished grade adjacent to any exterior wall to the highest part of the building.

Height Defined: Differences

Whistler

Definition:

 "Height" means the vertical distance from the grade to the highest point of the roof surface of a flat roof, to the deck line of a mansard roof and to the mean level between the eaves and the ridge of a gable, hip, gambrel or other sloping roof, and in the case of a structure without a roof, to the highest point of the structure;

Calculation of Height:

Additional detail on how height can be calculated is included in the general regulations of the bylaw. (See attachment)

In District Schedule:

Example regulation:

• The maximum permitted height of a building is 7.6 metres.

Port Moody

Definition:

 "HEIGHT" means the vertical distance from the grade adjoining a building or structure to the highest point of the roof surface of a flat roof, to the deck line of a mansard roof, and to the mean level between the eaves and the ridge of a gable, hip, gambrel, or other sloping roof, and to the highest point of a structure other than a building.

Calculation of Height:

Not specified

In District Schedule:

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Belcarra

Definition:

 Height (of a building or structure) means the vertical distance from the Average Finished Grade to the highest point of the building or structure.

Calculation of Height:

Not specified

In District Schedule:

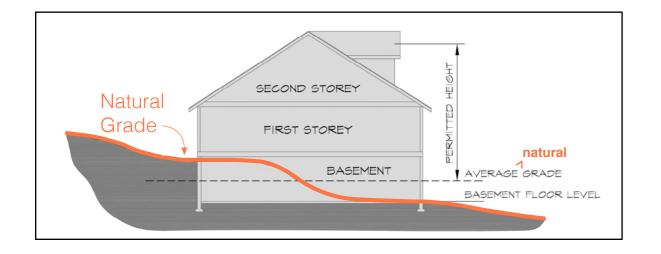
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Buildings and	Max Height	
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Principal Buildings	8.6 m	
Accessory Buildings	7 m	
and Structures		

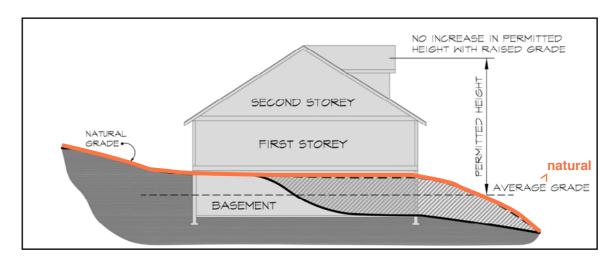
 No portion of the building shall be greater in height than 11.7 metres to be measured from the lowest finished grade adjacent to any exterior wall to the highest part of the building.

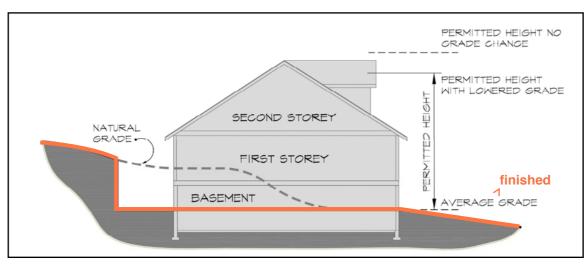
Height: Natural vs. Finished Grade

Natural Grade



Finished Grade





Drawings adapted from City of Victoria material.

- Many municipalities
 use either the average
 finished grade or
 the natural grade
 (whichever is lower)
 as the starting point for
 measuring height.
- This ensures that if land is built up, the height of the building is not increased.

Height: Discussion

What applies to the Village of Belcarra?

Should height be applied uniformly throughout Belcarra?

Is height measurement more important in certain areas?

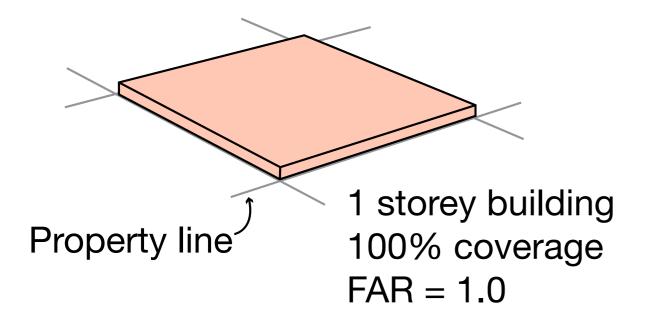
Other questions?

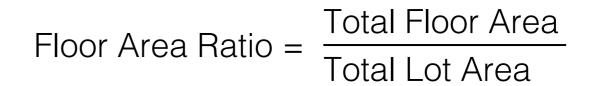


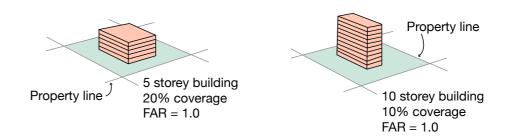
Floor Area Ratio (review)

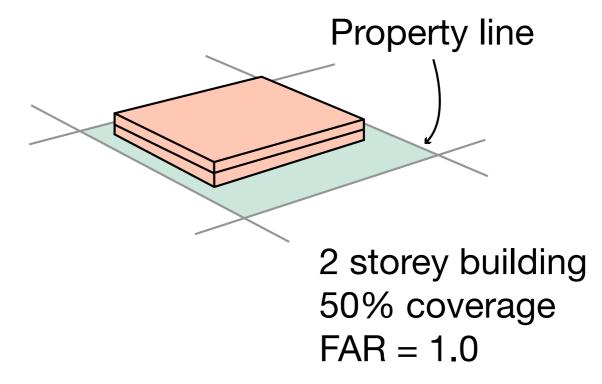
Floor Area Ratio

Floor Area Ratio determines the size of the building as a proportion of the property size. This requires smaller buildings on smaller properties, and allows larger buildings on larger properties.



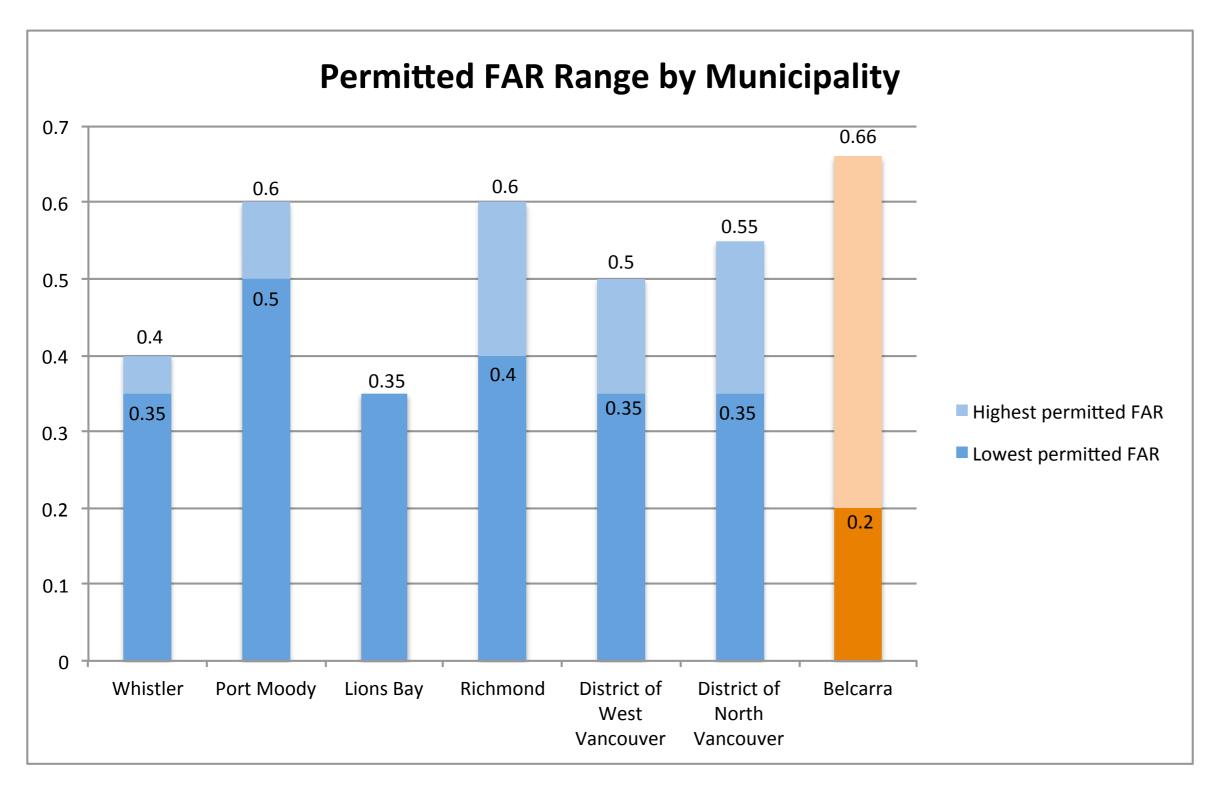






Diagrams adapted from "Planning and Design Criteria" by Joseph De Chiara and Lee Koppelman.

Floor Area Ratio: Range of Minimums Allowed in Single Family Zones



- In some municipalities the permitted FAR varies based on the zone.
- In other municipalities, the **FAR** is dependent on the lot area (such as Belcarra's current bylaw).
- In general,smaller properties have higher FARs because the ratio of building size to lot size is smaller than on a larger lot. For example:
 - 1,000 SF building / 2,000 SF lot = 0.5 FAR
 - 1,000 SF building / 9,000 SF lot = 0.1 FAR
- The District of West Vancouver requires more complex calculations. For example:
 - > 677 sq m = 0.35 FAR
 - > 474 sq m = 0.45 FAR
 - HOWEVER, if your lot area ranges from 474 to 677 sq m, the maximum allowable building size is 237 sq m, regardless of FAR calculations

Floor Area Ratio Defined: Similarities

Whistler

Definition:

- "floor site ratio" means the figure obtained when the gross floor area of all buildings on a parcel is divided by the total usable site area;
- "floor space ratio" means the figure obtained when the gross floor area of all buildings on a parcel is divided by the parcel area.

Port Moody

Definition:

 "FLOOR AREA RATIO" means the figure obtained when the gross floor area of all buildings on a lot is divided by the area of the lot.

Belcarra

Definition:

 floor area ratio means the figure obtained when the gross floor area of a building on a parcel is divided by the area of the parcel.

In District Schedule:

Example regulation (RS1):

- The maximum permitted gross floor area of a detached dwelling is 465 square metres or a floor space ratio of 0.35, whichever figure is lower.
- Notwithstanding any other regulations contained in this section, an additional 56 square metres of gross floor area may be added to a dwelling unit or an auxiliary building for employee use and rental, provided that the floor space ratio on a parcel does not exceed 0.35. ...
- The maximum floor area of an auxiliary building containing both auxiliary parking use and an auxiliary residential dwelling unit is 110 square metres. ...

In District Schedule:

Example regulation (RS3):

• The maximum permitted floor area ratio is 0.6.

In District Schedule:

Example regulation:

 The Maximum Floor Area, Gross, for a Principal Building on a lot shall be in accordance with the lesser of the allowable Floor Area, Gross, Ratio and the allowable Maximum Floor Area, Gross, as shown in the following table according to the lot area.

Lot Area*	Gross Floor Area Ratio	Gross Maximum Floor Area
<1012 m2 (<10,893 ft2)	-	650 m2 (7,000 ft2)
>1012 m2 - 1983 m2 (10,893 – 21,350 ft2)	0.66	743 m2 (8,000 ft2)
>1983 m2 - 4047 m2 (21,351 – 43,560 ft2)	0.4	836 m2 (9,000 ft2)
>4047 m2 – 8094 m2 (43,561 – 87,120 ft2)	0.2	929 m2 (10,000 ft2)
>8094 m2 (>87,120 ft2)	-	1,115 m2 (12,002 ft2)

 A Principal Building shall have a Floor Area, Gross, of not less than 75 m² and have a building width of not less than 7.5 metres....

Floor Area Ratio Defined: Differences

Whistler

Definition:

- "floor site ratio" means the figure obtained when the gross floor area of all buildings on a parcel is divided by the total usable site area;
- "floor space ratio" means the figure obtained when the gross floor area of all buildings on a parcel is divided by the parcel area.

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Floor Area Ratio: Discussion

What applies to the Village of Belcarra?

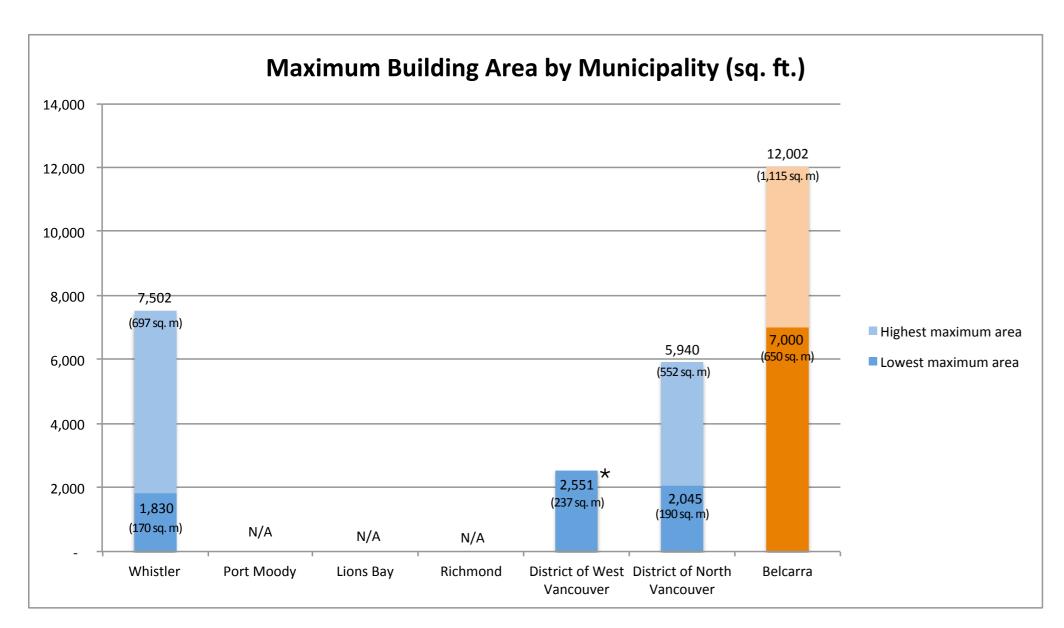
Should floor area ratio be applied uniformly throughout Belcarra?

Is the measurement of floor area ratio more important in certain areas?

Other questions?



Maximum Building Size: Compared



*District of West Vancouver limits building to 237 sq m only for properties between 474 - 677 sq m in area. Otherwise density is regulated by FAR.

- This does not indicate that Belcarra has the largest building areas of the municipalities studied.
 Building areas in other municipalities would be permitted/restricted by FAR, setbacks, etc.
- Additional building area limits are provided in some municipalities for auxiliary buildings.
- In Whistler, to achieve the largest built area in some zones, a covenant is required restricting development on another property (based on ownership of two adjacent properties).

Maximum Building Size Defined: Similarities

Whistler

Definition:

 "gross floor area" means the total area of all floors in all buildings on a parcel, measured to the outside surface of the exterior walls of the building including stairwells, basements and cellars but excluding areas specified in section 26 of Part 5

Gross Floor Area exclusions:

GFA exclusions are listed in the general regulations section of the bylaw. Including (for example):

- basement floor area having an elevation at least 1 metre below the average level of finished ground adjoining the exterior walls of the building, to a maximum of 125% of the floor area of the storey immediately above.
- crawl spaces
- parking areas

In District Schedule:

Example regulation (RS1):

 The maximum permitted gross floor area of a detached dwelling is 465 square metres or a floor space ratio of 0.35, whichever figure is lower. ...

Port Moody

Definition:

"FLOOR AREA, GROSS" means the total
of all floors in a building, measured to the
exterior outer limits of the building, including
all occupied portions of the building and
all areas giving access thereto such as
corridors, hallways, landings, foyers,
staircases, stairwells, enclosed balconies,
mezzanines, enclosed porches or verandahs,
elevator shafts, accessory buildings (except
those used for parking) and equipment
shelters and/or cabinets accessory to
wireless communications antennas.

Gross Floor Area exclusions:

Not specified

In District Schedule:

Example regulation (RS3):

N/A

Belcarra

Definition:

 floor area, gross means the total area of all floors of a building measured to the outermost surface of the exterior walls

Gross Floor Area exclusions:

Not specified

In District Schedule:

Example regulation:

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>8094 m2 (>87,120 ft2)	-	1,115 m2 (12,002 ft2)

• A Principal Building shall have a Floor Area, Gross, of not less than 75 m² and have a building width of not less than 7.5 metres....

Maximum Building Size Defined: Differences

Whistler

Definition:

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Gross Floor Area exclusions:

Not specified

In District Schedule:

Example regulation (RS3):

N/A

Belcarra

Definition:

• floor area, gross means the total area of all floors of a building measured to the outermost surface of the exterior walls

Gross Floor Area exclusions:

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In District Schedule:

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 A Principal Building shall have a Floor Area, Gross, of not less than 75 m² and have a building width of not less than 7.5 metres....

Maximum Building Size: Discussion

What applies to the Village of Belcarra?

Should maximum building size be applied uniformly throughout Belcarra?

Is the measurement of maximum building size more important in certain areas?

Other questions?



Bylaw Simplicity: Input from Municipalities

Slide still in progress

Municipality	Bylaw Simplicity?*	How is simplicity defined?*
Whistler	? ** awaiting input from planning staff	? ** awaiting input from planning staff
Port Moody	? ** awaiting input from planning staff	? ** awaiting input from planning staff
Lions Bay	? ** awaiting input from planning staff	? ** awaiting input from planning staff
Richmond	? ** awaiting input from planning staff	? ** awaiting input from planning staff
District of West Vancouver	Yes	 Plain language Easy to understand / interpret (e.g. slope calculation) Well organized
District of North Vancouver	Yes / No	 Easy to understand for staff and designers More challenging for homeowners to understand technical sustainability elements
Belcarra	No	 Difficult to interpret Lacking clarity Missing key definitions (e.g. inclusions, exclusions)

^{*}Please note: this information is based on input from Planning Staff at each municipality listed. It may not be indicative of the experience of all landowners, builders, or staff.

Bylaw Simplicity: Discussion

What are your thoughts on how each municipality determines simplicity?

What applies to the Village of Belcarra?

Other questions?

Sustainability: Yes or No?

Does the bylaw address sustainability?

Whistler	No
Port Moody	No - May be addressed in update to bylaw
Lions Bay	No
Richmond	No
DWV	No
DNV	Yes - Density bonus provided in single family zones
Belcarra	No

Sustainability Defined: Similarities

Both Qualicum Beach and the District of North Vancouver use EnerGuide as their measure of energy efficiency.

District of North Vancouver:

Bylaw includes "Green Building Regulations," which address solar collector height and location. The bylaw also provides density bonusing for energy performance in single-family residential buildings. The floor space permitted on a lot in any single family residential zone may be increased by 0.2 to 0.8 if the building meets certain Energuide energy performance standards.

See excerpt from Zoning Bylaw (attached).

Qualicum Beach:

Bylaw allows for lower minimum lot sizes (up to 50%) in exchange for the provision of certain amenities in some zones. These include energy efficiency, adaptable design, and electric vehicle infrastructure. Required site area may be reduced by 3% per Energuide point beyond the requirements of the BC Building code.

See excerpt from Zoning Bylaw (attached).

Sustainability: Differences

District of North Vancouver:

Sustainability / energy efficiency based on density bonus.

(2) Single-Family Residential Buildings

Notwithstanding the floor space ratio established in Table 502.2, the floor space permitted on a lot in any single family residential zone, including neighbourhood residential zones, may be increased in increments of 0.02 up to 0.08 for new buildings which meet Built Green 'Gold' and achieve an Energuide energy performance level established in the following Table 4C03.2:

PERFORMANCE TARGET	FLOOR SPACE BONUS			S	
Below Energuide 80	None				
Energuide 80		0.02			
Energuide 82			0.04		
Energuide 84				0.06	
Energuide 86					0.08

TABLE 4C03.2

Qualicum Beach:

Sustainability / energy efficiency based on lot size.

Amenity	Density Bonuses Required Conditions and Reduction in Minimum Site Area	Maximum Reduction
Underground Parking	The required site area for residential uses may be reduced by an amount equal to 25% of the required site area multiplied by the percentage of on-site parking which is provided in an underground parking structure.	25%
Energy Efficiency	Building must exceed the minimum Energuide requirements in the <i>BC Building Code</i> . The Energuide rating must be verified by a Certified Energy Advisor, both before ("as per plans" rating) and after construction (performance evaluation). A \$10,000 bond must be provided to the Town prior to issuance of a building permit, and will be returned after a post-construction energy evaluation is provided by a Certified Energy Advisor that verifies that the energy efficiency of the building meets the Energuide rating required for the necessary density bonus.	25%
	The required site area may be reduced by 3% per Energuide point beyond the requirements of the BC Building Code.	
Adaptable Design	Building must be designed and constructed in accordance with the City of North Vancouver (CONV) adaptable design guidelines. The required site area may be reduced by:	10%
	5% if 100% of the residential units meet the CONV Adaptable Design Guidelines, Level 1 *	
	Additional 5% if 50% of the residential units meet the CONV Adaptable Design Guidelines, Level 2 *	
	* (City of North Vancouver Zoning Bylaw, 1995, No. 6700 Amendment Bylaw No. 2005, No. 7721 - Figure 5 – 1)	
Electric Vehicle	The required site area may be reduced by 10% if:	10%
Infrastructure	 At least one (1) parking space is equipped with an electric vehicle charging station (minimum 240 volt 20 amp); 1-inch conduit is installed between the electrical room and 50% of the parking stalls; and The electrical room includes sufficient space for the future installation of electrical equipment necessary to provide a receptacle to accommodate use by electric charging equipment for 50% of the onsite parking stalls. 	

Sustainability: Discussion

What applies to the Village of Belcarra?

Should sustainability be applied uniformly throughout Belcarra?

How should sustainability requirements address additions and/or renovations?

Other questions?



Next Steps

Meeting #5 - March 29, 2017

Public Open House Prep Meeting:

- Open House overview: what to expect at the Open House
- Open House topics:
 - » Review of process to date
 - » Summary of meetings 1 4
- Open House notification
- Open House comment form
- Review of correspondence and feedback received to date
- Next steps for Phase 2

Presentation #4

Supplementary bylaw precedents from other municipalities

March 8, 2017



Whistler

Height Definition

"height" means the vertical distance from the grade to the highest point of the roof surface of a flat roof, to the deck line of a mansard roof and to the mean level between the eaves and the ridge of a gable, hip, gambrel or other sloping roof, and in the case of a structure without a roof, to the highest point of the structure; (Bylaw No. 614)

(Page 2-4, Whistler Zoning Bylaw)

General Regulations

5. Calculation of Height

- (1) The overall mean level of a roof shall be established as follows:
 - (a) calculate the area of each plane within the roof (in plan view) as a percentage of the area of the entire roof;
 - (b) multiply the mean height of each plane by its percentage of the overall roof area; and
 - (c) add together the weighted averages of the heights of the roof planes to establish the overall mean level of the roof. (Bylaw No. 916)
- (2) Notwithstanding the definition of height in Part 2, where the elevation of the highway servicing the parcel is above the average elevation of the finished grade of the subject parcel, the maximum permissible building height may be increased by the difference in ground elevation between the highway and finished grade of that face of the building that fronts onto the highway to a maximum increase of 3 metres. (Bylaw No. 916)

(Page 5-4, Whistler Zoning Bylaw)

Example Regulation (RS1)

<u>Height</u>

(9) The maximum permitted height of a building is 7.6 metres.

(Page 12-2, Whistler Zoning Bylaw)

Whistler

Floor Area Ratio

Definition

"floor site ratio" means the figure obtained when the gross floor area of all buildings on a parcel is divided by the total usable site area;

"floor space ratio" means the figure obtained when the gross floor area of all buildings on a parcel is divided by the parcel area;

(Page 2-4, Whistler Zoning Bylaw)

Example Regulation (RS1)

Density

- (3) The maximum permitted gross floor area of a detached dwelling is 465 square metres or a floor space ratio of 0.35, whichever figure is lower. (Bylaw No. 905)
- (4) Notwithstanding subsection (3), the maximum permitted gross floor area of a detached dwelling situated on lands within a bare land strata plan is the figure obtained when the total area of a bare land strata plan (exclusive of those portions intended to provide access routes) is multiplied by 0.35 and divided by the maximum total number of bare land strata lots in that plan, and regardless of any provision herein the maximum gross floor area of a detached dwelling shall not exceed 465 square metres.
- (5) The maximum permitted floor area for auxiliary parking use contained in a principal or auxiliary building or structure is 70 square metres. (Bylaw No. 464) (Bylaw No. 905)
- (6) Notwithstanding any other regulations contained in this section, an additional 56 square metres of gross floor area may be added to a dwelling unit or an auxiliary building for employee use and rental, provided that the floor space ratio on a parcel does not exceed .35. This bonus density is subject to the owner entering into an employee housing agreement with the Municipality for the auxiliary residential dwelling unit, the terms of which shall be the Municipality's standard charge terms for employee housing covenants as of the date on which the building permit is issued. (Bylaw No. 1621)
- (7) Notwithstanding paragraph 3 (1) (a) of Part 5, the maximum floor area of an auxiliary building containing both auxiliary parking use and an auxiliary residential dwelling unit is 110 square metres and the maximum permitted gross floor area for an auxiliary building containing only an auxiliary residential dwelling unit is 90 square metres.

 (Bylaw No. 1621)(Bylaw No. 2102)
- (8) Notwithstanding subsection (3), the maximum permitted gross floor area for a detached dwelling on Lot 1; District Lot 1755; Group 1 New Westminster District; Plan LMP 35715 is 281.5 square metres. (Bylaw No. 1919)

(Pages 12-1 and 12-2, Whistler Zoning Bylaw)

Whistler

Floor Area

Definition

"gross floor area" means the total area of all floors in all buildings on a parcel, measured to the outside surface of the exterior walls of the building including stairwells, basements and cellars but excluding areas specified in section 26 of Part 5, (Bylaw No. 1992)

(Page 2-4, Whistler Zoning Bylaw)

General Regulations

- 26. Gross Floor Area Exclusions (Bylaw No. 1992)
- (1) The following are excluded from the gross floor area calculations:
 - (a) For detached dwelling and duplex dwelling buildings:
 - basement floor area having an elevation at least 1 metre below the average level of finished ground adjoining the exterior walls of the building, to a maximum of 125% of the floor area of the storey immediately above;
 - (ii) crawl spaces;
 - (iii) void spaces;
 - (iv) parking areas;
 - (v) elevators;
 - (vi) areas occupied by fixed machinery and equipment; and
 - (vii) exterior wall thickness in excess of 6" (152mm)
 - (b) For all other buildings,:
 - (i) crawl spaces;
 - (ii) void spaces;
 - (iii) parking areas;
 - (iv) elevators;
 - (v) areas occupied by fixed machinery and equipment;
 - (vi) exterior wall thickness in excess of 6" (152mm);
 - (vii) garbage and recycling facilities up to $20m^2$ except for those located in single family and duplex dwellings; and
 - (viii) bicycle storage facilities up to 8m² per dwelling unit except for those located in single family and duplex dwellings.



Whistler

Floor Area (continued)

Example Regulation (RS1)

Density

- (3) The maximum permitted gross floor area of a detached dwelling is 465 square metres or a floor space ratio of 0.35, whichever figure is lower. (Bylaw No. 905)
- (4) Notwithstanding subsection (3), the maximum permitted gross floor area of a detached dwelling situated on lands within a bare land strata plan is the figure obtained when the total area of a bare land strata plan (exclusive of those portions intended to provide access routes) is multiplied by 0.35 and divided by the maximum total number of bare land strata lots in that plan, and regardless of any provision herein the maximum gross floor area of a detached dwelling shall not exceed 465 square metres.
- (5) The maximum permitted floor area for auxiliary parking use contained in a principal or auxiliary building or structure is 70 square metres. (Bylaw No. 464) (Bylaw No. 905)
- (6) Notwithstanding any other regulations contained in this section, an additional 56 square metres of gross floor area may be added to a dwelling unit or an auxiliary building for employee use and rental, provided that the floor space ratio on a parcel does not exceed .35. This bonus density is subject to the owner entering into an employee housing agreement with the Municipality for the auxiliary residential dwelling unit, the terms of which shall be the Municipality's standard charge terms for employee housing covenants as of the date on which the building permit is issued. (Bylaw No. 1621)
- (7) Notwithstanding paragraph 3 (1) (a) of Part 5, the maximum floor area of an auxiliary building containing both auxiliary parking use and an auxiliary residential dwelling unit is 110 square metres and the maximum permitted gross floor area for an auxiliary building containing only an auxiliary residential dwelling unit is 90 square metres.

 (Bylaw No. 1621)(Bylaw No. 2102)
- (8) Notwithstanding subsection (3), the maximum permitted gross floor area for a detached dwelling on Lot 1; District Lot 1755; Group 1 New Westminster District; Plan LMP 35715 is 281.5 square metres. (Bylaw No. 1919)

(Pages 12-1 and 12-2, Whistler Zoning Bylaw)

Other Regulations

- (21) The minimum permitted gross floor area of a detached dwelling is 46.5 square metres.
- (24) An auxiliary residential dwelling unit shall contain a gross floor area no greater than 90 square metres and no less than 32.5 square metres. (Bylaw No. 916) (Bylaw No. 1621)
- (25) In no case shall the gross floor area of the auxiliary residential dwelling unit exceed 40 percent of the gross floor area on a parcel. (Bylaw No. 597) (Bylaw No. 1621)

(Pages 12-3 and 12-4, Whistler Zoning Bylaw)



Port Moody

Height

Definition

"HEIGHT" means the vertical distance from the grade adjoining a building or structure to the highest point of the roof surface of a flat roof, to the deck line of a mansard roof, and to the mean level between the eaves and the ridge of a gable, hip, gambrel, or other sloping roof, and to the highest point of a structure other than a building.

(Page 11, Port Moody Zoning Bylaw)

Example Regulation (RS1)

21.5 Height of Building

For the purposes of calculating the height of a principal dwelling within the RS1 zone, the following definitions of "grade" and "height" apply:

"GRADE" means the average of the existing elevations taken at each corner of the lot as established by survey prepared and certified by a British Columbia Land Surveyor.

"**HEIGHT**" means the vertical distance from grade to the highest point of the roof surface of a flat roof; to the deck line of a mansard roof; and to the highest point of a gable, hip, gambrel or other sloping roof.

The height of the principal building shall not exceed the lesser of 10.5 metres (34.5 ft) for sloping roofs and 9.0 metres (29.5 ft) for flat roofs, or three storeys. For the purposes of height calculation, roofs with a ratio of less than three vertical to twelve horizontal (3:12) are considered to be flat roofs. Roofs with a ratio of three vertical to twelve horizontal (3:12) or more are considered to be sloping roofs

(Pages 49-50, Port Moody Zoning Bylaw)

Port Moody

Floor Area Ratio

Definition

"FLOOR AREA RATIO" means the figure obtained when the gross floor area of all buildings on a lot is divided by the area of the lot.

(Page 10, Port Moody Zoning Bylaw)

Example Regulation (RS3)

23.5 Floor Area Ratio

The maximum permitted floor area ratio is 0.6.

Port Moody

Floor Area

Definition

"FLOOR AREA, GROSS" means the total of all floors in a building, measured to the exterior outer limits of the building, including all occupied portions of the building and all areas giving access thereto such as corridors, hallways, landings, foyers, staircases, stairwells, enclosed balconies, mezzanines, enclosed porches or verandahs, elevator shafts, accessory buildings (except those used for parking) and equipment shelters and/or cabinets accessory to wireless communications antennas.

"FLOOR AREA, NET" means the total area of all floors in a building, excluding mechanical rooms, restrooms, maintenance and service areas, common hallways, plazas or other common space, permanent storage space, elevator shafts, unloading areas and concealed parking areas.

(Page 10, Port Moody Zoning Bylaw)

Example Re	egulation		
		N/A	

Belcarra

Height

Definition

 height (of a building or structure) means the vertical distance from the Average Finished Grade to the highest point of the building or structure;

(Page 7, Belcarra Zoning Bylaw)

Example Regulation (RS-1)

302.2	Buildings and Structures	Maximum Number	Maximum Height
	Principal Buildings ^(f)	1	8.6 m ^(a)
	Accessory Buildings and Structures	2	7 m ^(e)

- (a) No portion of the building shall be greater in height than 11.7 metres to be measured from the lowest finished grade adjacent to any exterior wall to the highest part of the building.
- (b) The Roof Drip Line of any accessory building shall not at any point project beyond an exterior wall more than 60 centimetres.
- (c) All exterior perimeter of an accessory building shall rise vertically at 90 degrees from the foundation throughout the fullest vertical extension of the exterior wall.
- (d) Maximum height of a Fence is subject to Section 215.

(Page 25, Belcarra Zoning Bylaw)

Belcarra

Floor Area Ratio

Definition

 floor area ratio means the figure obtained when the gross floor area of a building on a parcel is divided by the area of the parcel;

(Page 6, Belcarra Zoning Bylaw)

Example Regulation (RS-1)

302.3 Maximum Floor Area, Gross, Ratio and Maximum Floor Area, Gross

(a) The Maximum Floor Area, Gross, for a Principal Building on a lot shall be in accordance with the lesser of the allowable Floor Area, Gross, Ratio and the allowable Maximum Floor Area, Gross, as shown in the following table according to the lot area.

Lot Area*	Floor Area, Gross Ratio	Maximum Floor Area, Gross
<1012 m ² (<10,893 ft ²)	-	650 m ² (7,000 ft ²)
>1012 m ² - 1983 m ² (10,893 – 21,350 ft ²)	0.66	743 m ² (8,000 ft ²)
>1983 m ² - 4047 m ² (21,351 – 43,560 ft ²)	0.4	836 m ² (9,000 ft ²)
>4047 m ² – 8094 m ² (43,561 – 87,120 ft ²)	0.2	929 m ² (10,000 ft ²)
>8094 m ² (>87,120 ft ²)	-	1,115 m ² (12,002 ft ²)

^{*} In all cases, m² shall be the determining figure measurement. Expressions in ft² are approximate and intended as a guide

- (b) Notwithstanding Section 302.3 (a), the maximum allowable Floor Area, Gross, for a Principal Building shall be the maximum Floor Area, Gross, identified for the immediately preceding lot area, according to the sequence of lot areas presented in the above table.
- (c) A Principal Building shall have a Floor Area, Gross, of not less than 75 m² and have a building width of not less than 7.5 metres.
- (d) The Maximum Floor Area, Gross, of all Accessory Buildings on a parcel shall not exceed 130 m² and the maximum building footprint of all Accessory Buildings on a parcel shall not exceed 65.0 m²."
- (e) That lot areas of between 4,047 m² to 8,094 m² with a calculated Floor Area, Gross of less than 836 m² may be increased to 836 m².
- (f) Notwithstanding subsection (a), the allowable Maximum Floor Area, Gross, for a Principal Building on each of the following sites shall be as shown on the following table:

Site Description	Maximum Floor Area, Gross
Lot 4, Block 9, DL 229, Group 1, NWD, Plan 1095.	661 m ² (7,602 ft ²)
Lot 1, DL 229, Group 1, NWD, Plan BCP48005.	791 m² (8,518 ft²)
Lot 4, Block 4, DL 229, Group 1, NWD, Plan 1095.	797 m² (8,577 ft²)
Lot A, DL 229, Group 1, NWD, Plan EPP48542.	878 m² (9,446 ft²)
Lot 37, DL 229 and 4991, Group 1, NWD, Plan 52302	830.8 m ² (8943 ft ²)

Belcarra

Floor Area

Definition

floor area, gross means the total area of all floors of a building measured to the outermost surface of the exterior walls

(Page 6, Belcarra Zoning Bylaw)

Example Regulation (RS-1)

302.3 Maximum Floor Area, Gross, Ratio and Maximum Floor Area, Gross

The Maximum Floor Area, Gross, for a Principal Building on a lot shall be (a) in accordance with the lesser of the allowable Floor Area, Gross, Ratio and the allowable Maximum Floor Area, Gross, as shown in the following table according to the lot area.

Lot Area*	Floor Area, Gross Ratio	Maximum Floor Area, Gross
<1012 m ² (<10,893 ft ²)	-	650 m ² (7,000 ft ²)
>1012 m ² - 1983 m ² (10,893 – 21,350 ft ²)	0.66	743 m ² (8,000 ft ²)
>1983 m ² - 4047 m ² (21,351 – 43,560 ft ²)	0.4	836 m ² (9,000 ft ²)
>4047 m ² – 8094 m ² (43,561 – 87,120 ft ²)	0.2	929 m ² (10,000 ft ²)
>8094 m ² (>87,120 ft ²)	-	1,115 m ² (12,002 ft ²)

^{*} In all cases, m² shall be the determining figure measurement. Expressions in ft² are approximate and intended as a guide

- Notwithstanding Section 302.3 (a), the maximum allowable Floor Area, (b) Gross, for a Principal Building shall be the maximum Floor Area, Gross, identified for the immediately preceding lot area, according to the sequence of lot areas presented in the above table.
- A Principal Building shall have a Floor Area, Gross, of not less than 75 m² (c) and have a building width of not less than 7.5 metres.
- The Maximum Floor Area, Gross, of all Accessory Buildings on a parcel (d) shall not exceed 130 m² and the maximum building footprint of all Accessory Buildings on a parcel shall not exceed 65.0 m²."
- That lot areas of between 4,047 m² to 8,094 m² with a calculated Floor (e) Area, Gross of less than 836 m² may be increased to 836 m².
- (f) Notwithstanding subsection (a), the allowable Maximum Floor Area. Gross, for a Principal Building on each of the following sites shall be as shown on the following table:

Site Description	Maximum Floor Area, Gross
Lot 4, Block 9, DL 229, Group 1, NWD, Plan 1095.	661 m ² (7,602 ft ²)
Lot 1, DL 229, Group 1, NWD, Plan BCP48005.	791 m² (8,518 ft²)
Lot 4, Block 4, DL 229, Group 1, NWD, Plan 1095.	797 m² (8,577 ft²)
Lot A, DL 229, Group 1, NWD, Plan EPP48542.	878 m² (9,446 ft²)
Lot 37, DL 229 and 4991, Group 1, NWD, Plan 52302	830.8 m ² (8943 ft ²)



Sustainability

PART 4C GREEN BUILDING REGULATIONS

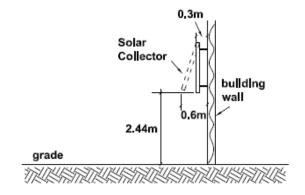
4C01 Intent

The purpose of PART 4C is to consolidate regulations associated with the Green Building Strategy, including the regulation of the size, shape and siting of various green building components.

4C02 Solar Collector Regulations

The installation of solar collectors, including associated exterior mechanical equipment, shall comply with the following regulations:

- (1) Location:
 - (a) Solar collectors may be located on the roof or wall of a building;
 - (b) On the roof of a building, solar collectors:
 - (i) may be located up to 0.6m from the edge of the roof and up to a roof ridgeline;
 - (c) On the wall of a building, solar collectors:
 - (i) may project up to 0.3m measured to the outer surface of the collector when mounted flush to a wall;
 - (ii) may project up to 0.6m at its outermost point where it is necessary to mount the collector at an angle to the wall for solar capture;
 - (iii) must maintain a minimum clearance of 2.44m above grade as measured from the lowest point of the solar collector;



(Bylaw 7829)

Sustainability (continued)

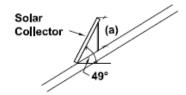
(2) Height:

Solar collectors:

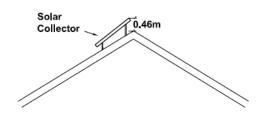
(a) when not flush mounted to a roof, may project above the surface of the roof as noted in the following table and illustrated in the following diagram:

Roof Slope	Permitted Height (a) based on an optimal collector angle of 49 ⁰
Flat	1.98m (6.5ft.)
3 in 12	1.6m (5.26ft.)
4½ in 12	1.43m (4.7ft.)
5 in 12	1.37m (4.5ft.)
6 in 12	1.22m (4ft.)
7 in 12	1.11m (3.65ft.)
8 in 12 and above	0.95m (3.1ft.)

TABLE 4C02.2



(b) notwithstanding the height limits in Table 4C02.2 above, may not project more than 0.46m above the roof ridge, except in the case of a flat roof building or a



building in excess of 28ft. in height;

(Bylaw 7829)



Sustainability (continued)

4C03 Density Bonus for Energy Performance

(1) Commercial, Industrial, Institutional and Multi-Family Residential Buildings:

Notwithstanding the floor space ratio established in a commercial, industrial, institutional or multi-family zone, where a building meets either: LEED – New Construction or LEED – Core and Shell (2009) 'Gold' or, Built Green 'Gold', and achieves a specific energy performance target, the maximum floor space ratio may be increased in accordance with the following Table 4C03.1:

PERFORMANCE TARGET		DENSITY (FSR) BONUS			
LEED - NC/CS (2009) Gold +	Built Green Gold +				
No Commitment	No Commitment	None			
Minimum Baseline 6 / 8 EA 1 Points	Minimum Baseline EnerGuide 80	0.02			
9 / 11 EA 1 Points	EnerGuide 82		0.04		
14 / 16 EA 1 Points	EnerGuide 84			0.06	
19 / 21 EA 1 Points	EnerGuide 86				0.08

TABLE 4C03.1

(2) Single-Family Residential Buildings

Notwithstanding the floor space ratio established in Table 502.2, the floor space permitted on a lot in any single family residential zone, including neighbourhood residential zones, may be increased in increments of 0.02 up to 0.08 for new buildings which meet Built Green 'Gold' and achieve an Energuide energy performance level established in the following Table 4C03.2:

PERFORMANCE TARGET	FLOOR SPACE BONUS				
Below Energuide 80	None				
Energuide 80		0.02			
Energuide 82			0.04		
Energuide 84				0.06	
Energuide 86					0.08

TABLE 4C03.2

(Bylaw 7829)



February 2011

Sustainability (continued)

FSR excerpt from Table 502.2

Floor Space R a) for lots	atio < or = to 464m² (5000ft²)	0.45
b) for lots	> 464m² (5000ft²)	0.35 + 32.5m² (350 sq.ft.)
ceilings	e case of rooms having s greater than 3.66m (12ft) the level of the floor below	that area above 3.66m (12 ft.) shall be counted as if it were an additional floor level for the purpose of determining the total floor area of a building to be included in the calculation of floor space ratio

(Page 427, Belcarra Zoning Bylaw)

Qualicum Beach

Sustainability

19. **Density Bonuses**

For permitted uses in zones that specifically reference this section under the heading "Density Bonus for Amenity", the required site area may be reduced by the amounts in the Table 19A to a maximum of 50%, provided that the required conditions are met. (580.61)

	Density Bonuses	
Amenity	Required Conditions and Reduction in Minimum Site Area	Maximum Reduction
Underground Parking	The required site area for residential uses may be reduced by an amount equal to 25% of the required site area multiplied by the percentage of on-site parking which is provided in an underground parking structure.	25%
Energy Efficiency	Building must exceed the minimum Energuide requirements in the <i>BC Building Code</i> . The Energuide rating must be verified by a Certified Energy Advisor, both before ("as per plans" rating) and after construction (performance evaluation). A \$10,000 bond must be provided to the Town prior to issuance of a building permit, and will be returned after a post-construction energy evaluation is provided by a Certified Energy Advisor that verifies that the energy efficiency of the building meets the Energuide rating required for the necessary density bonus. The required site area may be reduced by 3% per Energuide point	25%
	beyond the requirements of the BC Building Code.	
Adaptable Design	Building must be designed and constructed in accordance with the City of North Vancouver (CONV) adaptable design guidelines. The required site area may be reduced by:	10%
	5% if 100% of the residential units meet the CONV Adaptable Design Guidelines, Level 1 *	
	 Additional 5% if 50% of the residential units meet the CONV Adaptable Design Guidelines, Level 2 * 	
	* (City of North Vancouver Zoning Bylaw, 1995, No. 6700 Amendment Bylaw No. 2005, No. 7721 - Figure 5 – 1)	
Electric Vehicle	The required site area may be reduced by 10% if:	10%
Infrastructure	 At least one (1) parking space is equipped with an electric vehicle charging station (minimum 240 volt 20 amp); 1-inch conduit is installed between the electrical room and 50% of the parking stalls; and The electrical room includes sufficient space for the future installation of electrical equipment necessary to provide a receptacle to accommodate use by electric charging equipment for 50% of the onsite parking stalls. 	
Accessory Residential Rental Unit	Up to 1 additional 'accessory residential rental unit' is permitted for every 3 other dwelling units on the parcel, provided that a contribution of \$2,500 for each 'accessory residential rental unit' is made to the Town's Affordable Housing Reserve Account; and a covenant is entered into with the Town under Section 219 of the Land Title Act that prohibits subdivision of the 'accessory residential rental unit' from the other attached unit. This bonus must be calculated after other density bonuses have been included.	n/a

(Pages 56-57, Qualicum Beach Zoning Bylaw)

