



City of Richmond

Report to Committee

To: Planning Committee
From: Cecilia Achiam
Acting Director of Development
Re: Small Lot Residential Zoning

Date: December 3, 2007
File: 08-4430-01/2007-Vol 01

Staff Recommendation

1. That the Staff Report dated December 3, 2007, from the Director of Development regarding Small Lot Residential Zoning, be referred to the Greater Vancouver Home Builders Association (GVHBA) and the Urban Development Institute (UDI) for comment and discussion; and
2. That staff bring forth final recommendations on the "Single-Family Housing District (R1-0.6)", based on the input from the GVHBA and UDI.

Cecilia Achiam, MCIP, BCSLA
Acting Director of Development

EL/WC:blg

FOR ORIGINATING DEPARTMENT USE ONLY					
ROUTED TO:		CONCURRENCE		CONCURRENCE OF GENERAL MANAGER	
Engineering/Planning.....		Y <input checked="" type="checkbox"/> N <input type="checkbox"/>			
REVIEWED BY TAG		YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	REVIEWED BY CAO	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

Staff Report

Origin

At the September 6, 2006 Public Hearing, the following referral motion was made:

- “(1) That staff examine and set a standard for the types of soil to be used for infill on properties, and*
- (2) That staff, with regard to smaller sized lots, examine the square footage of each home to be constructed on those lots, and the maximum usage, and*
- prepare a report to the Planning Committee on these matters.”*

The purpose of this report is to respond to these two referral motions.

PART I – Residential Fill Deposit Quality

Finding of Facts

At the present time, City staff does not have the ability to enforce any standards regarding the quality or quantity of fill material that may be deposited onto Richmond properties. It was identified in a recent Report to the Community Safety Committee regarding the Revised Soil Removal and Fill Deposit Regulation Bylaw No. 8094 that the City is not legislatively permitted to prohibit the deposit of soil or other material by reference to its quality.

Recent experience with the Revised Soil Removal and Fill Deposit Bylaw, adopted by Council on November 13, 2007, has made it readily apparent that neither the Minister of the Environment or the Minister of Energy, Mines and Petroleum Resources will endorse any City of Richmond bylaw which attempts to regulate the deposits of soil fill based on its quality.

Analysis

Upon adoption of the recently endorsed Flood Plain Management Bylaw (granted Third Reading on November 26, 2007) and in response to the on-going issues related to perimeter drainage, tree retention and residential building heights, the Building Approvals Department will be requesting and reviewing a Lot Grading Plan as part of the Building Permit review process. Requiring a Lot Grading Plan will enable staff to determine the average finished site grade and control the quantity of fill being placed on a property.

Recommendation

The Building Approvals Department will be requiring a Lot Grading Plan as part of the Building Permit review process for single-family homes where fill is being utilized to manipulate existing site grades. This lot grading plan review will enable Building Approvals staff to monitor the amount and location of fill deposited on residential lots.

Should City staff become aware of any potential soil quality issues during the redevelopment phase, that information will be forwarded to the Province for appropriate action since legislative authority regarding the quality of fill material rests within provincial jurisdictions.

PART II – Small Lot Residential Zoning

This part of the report will focus on Single-Family Housing District (R1-0.6) since the referral motion was initiated as part of a single-family redevelopment application along an arterial road and the Single-Family Housing District (R1-0.6) zone is the most commonly applied zone for this type of development. Similar amendments for other single-family zoning districts will be investigated should the concept be accepted by Council.

Background

Single-Family Housing District (R1-0.6) was created in 2003 under the provision of the Arterial Road Redevelopment Policy so that single-family housing could be built with a density of 0.6 Floor Area Ratio (FAR) for properties along arterial roads where lanes are required.

The Single-Family Housing (R1-0.6) zoning district is modelled after Single-Family Housing District (R1). However, R1-0.6 permits a higher density (0.60 maximum FAR vs. 0.55 maximum FAR in R1) and higher maximum lot coverage (50% vs. 45% in R1). R1-0.6 also differs from the R1 district in that it:

- permits porches and verandas to encroach into the front yard setback;
- allows bay windows, fire places, and chimneys forming part of the principal building to encroach into the front, rear, and side yard;
- permits dormers within the building height envelope;
- allows a garage accessed from the rear lane and located within 1.2 m (4 ft.) of the rear property line. This garage may be connected to the principal building through an enclosed room; and
- permits crawl spaces under 0.914 m (3 ft.) in height to be excluded from the FAR calculations.

The intent of Single-Family Housing District (R1-0.6) is to accommodate infill single-family housing developments along arterial roads where lane dedications are required. The purpose of the additional density (from 0.55 to 0.60 FAR) was to improve the feasibility of the redevelopment given the required lane dedication and smaller lot sizes. More flexible development regulations were established to allow for better utilization of land, to encourage design variety and pedestrian-oriented streetscapes while attempting to avoid construction of sterile box houses. Recently, many concerns have been raised regarding these compact lot developments. Both Council and staff feel that the intent of the R1-0.6 zoning district may not be achieved under the current approach.

Analysis

Staff have reviewed a number of recently completed compact single-family residential developments and the information received from public in response to rezoning applications on sites along arterial roads with lane access. Staff feel the perceived problem areas within the Single-Family Housing (R1-0.6) zoning district may be grouped into the following categories:

House Size and Building Massing

Through an examination of recent building permits for Single-Family Housing District (R1-0.6) zoned lots, staff have identified the following R1-0.6 zoning provisions as key contributors to overall house size and building mass.

- *Floor Area Ratio (FAR)* – The FAR regulates the overall size of building by specifying a maximum ratio of building floor area to lot area. The R1-0.6 district permits a 0.6 FAR applied to a maximum of 464.5 m² (5,000 ft²) of lot area with a 0.3 FAR applied to the balance of the lot area in excess of 464.5 m² (5,000 ft²). The increased FAR permitted in the R1-0.6 district (0.60 FAR vs. 0.55 FAR in R1) is intended to off-set the loss of land area associated with lane dedication and the smaller lot sizes. The current FAR provisions warrant review in light of the revised Arterial Road Redevelopment Policies adopted by Council in June, 2006 and concerns related to overall house size.
- *Garage Size* – The R1-0.6 zoning district permits a garage area up to a maximum of 50 m² (538 ft²) to be excluded from the calculation of FAR. The 50 m² (538 ft²) garage FAR exemption is intended to enable a single-family home to provide for enclosed storage for two (2) vehicles without adversely impacting the habitable area of a single-family house. The 50 m² (538 ft²) garage exemption is consistent with that provided in the R1 district. This clause is consistently being used to facilitate garages built to the maximum FAR exemption.
- *Covered Porches and Decks* – An additional 10% of the maximum FAR is allowed, provided that it is used exclusively for covered areas open on one or more sides (i.e. covered entry porches, sun decks or patios). The intent of permitting this additional FAR was to encourage the provision of covered entry porches, which enhance building articulation and streetscape appearance. Designers are currently using this clause to build covered decks above the ground floor of the dwellings, which increases the bulk of the building. Designers are also using this clause to build covered patio on the side of the dwelling. These areas are usually very dark as it is only open to the narrow side yard and used for outdoor storage. Furthermore, these two types of covered areas can also be designed to be easily enclosed at a later date.

- *Building Setbacks* – The R1-0.6 district permits a single storey detached garage to be located a minimum 1.2 m (4 ft.) from the rear property line abutting the lane. An additional setback provision intended to enable an enclosed room between a detached garage and the house is now being used by designers to build houses that extend along the ground floor from the 6 m (20 ft.) front yard setback to within 1.2 m (4 ft.) of the rear property line. The reduced rear yard setback for a detached garage was intended to enable a small rear yard between the house and the garage to be provided. As this is not being achieved, the rear yard setback provisions need to be revisited.

Lot Coverage

The lot coverage provisions within the Single-Family Housing District (R1-0.6) enable 50% of the lot area to be covered by buildings and structures and 80% of the lot area to be covered by a combination of buildings, structures and non-porous surfaces. These two (2) provisions are intended to limit a building footprint and the amount of hard surfacing on a lot. Staff have recently received concerns on the current lot coverage provisions as they relate to the amount of hard surfacing on a lot, which effectively reduces landscaping opportunities.

Landscaping & Private Outdoor Space

Site landscaping has numerous benefits, including improving site aesthetics and water permeability while also providing ecological benefits to the City as a whole. The Arterial Road Redevelopment Policies contained within the Official Community Plan (OCP) require that a landscape plan for the front yard be provided as part of the approval process for single-family rezoning applications along arterial roads. While the landscape plan requirement addresses streetscape appearance along the arterial road, an additional requirement for private outdoor space outside front yard warrants consideration.

Some of the house designs currently being built on compact lots have no private back yards. Where space is available for a private backyard, this area is often entirely paved with hard surfaces. A private outdoor space, outside the front yard setback, would increase the liveability of compact lots by providing a secure private outdoor space.

Recommendations

The City's Lane Establishment and Arterial Road Redevelopment Policies encourage single-family residential and coach house developments on properties along arterial roads where access to an existing, fully operational municipal lane is available. Staff have identified the potential locations for compact lot developments throughout the City and have studied the possible configurations of these compact lots (**Attachment 1**). The anticipated average size of the future compact lots is approximately 360 m² (3,875 ft²). The anticipated lot widths range from 9.05 m (30 ft) to 10.67 m (35 ft.). Based on the analysis and the findings on the potential compact lot configurations, staff have examined the implications of the potential problem areas on the future compact lots and propose the following changes to the Single-Family Housing District (R1-0.6):

House Size and Building Massing

- **Floor Area Ratio (FAR) - Reduce the area of the lot that the 0.6 FAR applies to from 464.5 m² (5,000 ft²) to 360 m² (3,875 ft²)**

Based on an examination of where R1-0.6 lots would potentially be permitted (through a rezoning application) 360 m² (3,875 ft²) represents the anticipated average lot area (**Attachment 1**). A 0.3 FAR density would be applied to the balance of the lot area exceeding 360 m² (3,875 ft²). This will primarily only effect the larger R1-0.6 lots and the density reduction would only take effect after a house size of approximately 260 m² (2,800 ft²) including garage, has been achieved.

- **Garage Size - Reduce the FAR exemption for garage and accessory buildings from 50 m² (538 ft²) to 45 m² (485 ft²)**

The reduced garage area will accommodate side-by-side parking of two (2) vehicles and some limited storage space. A 45 m² (485 ft²) garage FAR exemption is consistent with that provided in the Comprehensive Development (CD/61) district used in the Odlin Area. A small outdoor shed (maximum 10 m² [107 ft²]) would also be permitted.

- **Covered Porches and Decks - Restrict the additional 10% of the maximum FAR for covered areas open to two or more sides to ground-oriented porches**

Ground oriented porches enhance the streetscape and liveability of a lot while not adversely effecting the massing of the house. Restricting this bonus FAR to the ground floor of a building would be consistent with the original intent to encourage the provision of covered entry porches. Restricting the covered areas open to two or more sides will encourage a more liveable patio design. Restricting the bonus FAR to the ground floor will not prohibit a house design that provides a covered deck on the upper floor of the building, but will require that such a deck is included in the calculation of FAR. Including these types of covered areas in the FAR calculation is appropriate since these types of covered areas influence the overall building massing.

- **Building Setbacks - Change rear yard setback provisions to clarify that if the garage is attached to the principal building the minimum rear yard setback shall be 6.0 m (20 ft.)**

The reduced rear yard setback for a detached garage was intended to enable the provision of a yard between the garage and the house. This intent is not being achieved under the current approach.

Lot Coverage

- **Reduce the lot coverage for buildings, structures and non-porous surfaces from 80% to 70%**

The maximum lot coverage for buildings permitted in Single-Family Housing District (R1-0.6) is 50%. The rest of the permitted lot coverage would accommodate driveways, pathways, open decks, outdoor parking spaces, etc. The lower "hard surfaces" lot coverage will not adversely impact house construction, but may not be able to accommodate all of the 6 m wide driveway, large open deck or patio, and concrete walkway along one side of the dwelling at once on a smaller compact lot. Alternatives include building a detached garage, reducing the size of open deck or patio, use of stepping stones or gravels on walkways, and use of permeable paving on driveways, parking pads, and patios. The lower lot coverage along with the other recommendations in this report will collectively improve site permeability, landscaping opportunities, and aesthetic appearance of compact residential lots.

The lot coverage calculations for both buildings and non-porous surfaces would be checked during the Building Permit process to ensure compliance. Staff also recommend adding criteria to the zoning bylaw to clearly establish what constitutes non-porous surfaces and a minimum of 25% of the lot be restricted to landscaping with live plant material.

- **Restrict the maximum driveway width to 6 m (20 ft.)**

A 6 m wide driveway is adequate to park two (2) vehicles side by side. Restricting the maximum driveway width will improve site permeability and landscaping opportunities.

Landscaping & Private Open Space

- **Require a small private outdoor space with a minimum area of 20 m² (215 ft²) and a minimum depth or width of 3 m (10 ft.) outside the front yard setback**

Provision of private outdoor amenity space is encouraged by the Official Community Plan (OCP). Providing a private outdoor space outside the front yard setback will improve site permeability, landscaping opportunities, and liveability of these lots. The Comprehensive Development (CD/61) zoning district used in the Odlin Area requires 40 m² (430 ft²) of a private outdoor space free of accessory buildings, structures, covered walkways, and non-porous surfaces. Staff understand that 20 m² (215 ft²) is small but feel that it is adequate for the compact lots fronting on arterial roads with a front yard setback of 6 m (20 ft.).

- **Increase the minimum building separation from 1.2 m (3.9 ft.) to 3 m (10 ft.)**

The provision of a minimum building separation was included in the zoning district to satisfy building code requirements. With the eaves of the roofs usually projected 0.3 m (1 ft.) to 0.6 m (2 ft.) beyond the building faces, the gap between the principal dwelling and the detached garage is often minimal. Increasing the building separation between the principal dwelling and the detached garage will open up this area and encourage private outdoor space be located between the two buildings, instead of on the side yard next to the detached garage and abuts the rear lane. On the deeper lots, this area may be expanded and become more usable. This restriction will not be applied to accessory buildings which have an area of 10 m² (107.64 ft²) or less.

The 0.6 FAR base density and the maximum 50% lot coverage for buildings are maintained because the above recommendations together should address the concerns related to house size and maximum usage of the compact lots in an effective and a more flexible manner than by reducing the base FAR and maximum lot coverage. The above recommendations have been reviewed by the Building Approvals Department, and no concerns were raised. The proposed amendments to R1-0.6 will not impede the ability of these compact lots to accommodate secondary suites. A copy of the draft, "revised: Single-Family Housing District (R1-0.6) details" is attached (**Attachment 2**).

Next Steps

1. Forward the revised Single-Family Housing District (R1-0.6) details to the Greater Vancouver Home Builders Association (GVHBA) and Urban Development Institute (UDI) for comment and discussion;
2. Bring a final Staff Report to Planning Committee, with recommendations regarding amendment to the Single-Family Housing District (R1-0.6); and
3. Review all other standard single-family residential zoning districts and bring forward a Staff Report to Planning Committee with recommendations regarding amendments to these single-family housing districts.

Financial Impact

None.

Conclusion

Planning Committee and Council have asked staff to examine:

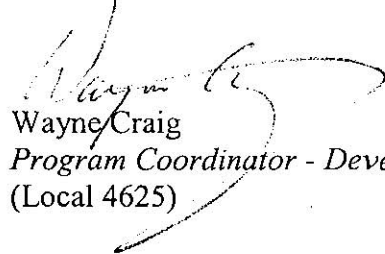
- Set standards for the types of soil to be used for infill on residential properties; and
- Compact lot single-family zoning regulations with specific focus on the maximum size of homes and the maximum lot coverage permitted on those lots.

To control the amount of fill being placed on single-family residential lots, the Building Approvals Department will be requesting and reviewing lot grading plans as part of the Building Permit process. Since fill quality is within provincial jurisdictions, staff recommend that any concerns regarding quality of the soil being deposited on a Richmond property be forwarded to the appropriate Provincial Ministry for review.

Staff have reviewed the Single-Family Housing District (R1-0.6) zone created in 2003, and have identified some zoning provisions that should be revisited at this time. Based on the studies prepared by staff, eight (8) amendments to the R1-0.6 zoning district are proposed. However, prior to implementing the proposed amendments, it is recommended that this Staff Report be referred to the Greater Vancouver Home Builders Association (GVHBA) and Urban Development Institute (UDI) for comment and discussion. Once comments from GVHBA and UDI have been received, staff will bring forward a Staff Report detailing the proposed Zoning Bylaw revisions.



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Attachment 1: List of Potential Compact Lot Locations and Possible Configurations

Attachment 2: Draft Revised Single-Family Housing District (R1-0.6) Zoning

List of Potential Compact Lot Locations and Possible Configurations

Location	Width (m)	Depth (m)	Area (m²)
Williams Road (between No. 4 & No. 5 Roads)	9.14	33.53	306.46
No. 1 Road (between Blundell Road & Steveston Highway.)	9.45	33.53	316.86
No. 1 Road (between Blundell Road. & Steveston Highway)	10.26	31.68	325.04
Williams Road (between No. 4 & No. 5 Roads)	10.07	32.31	325.36
No. 1 Road (between Blundell Road & Steveston Highway)	9.50	34.58	328.51
No. 3 Road (between Francis and Williams Roads)	9.24	35.89	331.62
No. 1 Road (between Blundell Road & Steveston Highway)	9.14	36.36	332.33
Williams Road (between No. 4 & No. 5 Roads)	10.21	32.92	336.11
Williams Road (between No. 4 & No. 5 Roads)	10.06	33.53	337.31
Blundell Road (between No. 2 & Gilbert Roads)	9.05	37.68 *	341.00
Williams Road (between No. 4 & No. 5 Roads)	10.06	35.36	355.72
Williams Road (between No. 4 & No. 5 Roads)	10.06	36.98	372.02
No. 5 Road (between Williams Road & Steveston Highway)	10.06	41.92	421.72
Francis Road (between No. 2 & Gilbert Roads)	10.67	39.63 *	422.85
Railway Avenue (between Granville Avenue & Blundell Road)	9.29	45.72 *	424.74
Gilbert Road (between Granville Avenue & Blundell Road)	10.21	47.34 *	483.34

* After Lane Dedication

Note: A rezoning and subdivision application would be required prior to development.
Rezoning applications require a statutory Public Hearing prior to approval.

202(A) SINGLE-FAMILY HOUSING DISTRICT (R1 – 0.6)

The intent of this zoning district is to accommodate single-family housing where provisions have been made for vehicle access to be provided from a lane.

202(A).1 PERMITTED USES

RESIDENTIAL, limited to **One-Family Dwelling**;
BOARDING & LODGING, limited to two persons per **dwelling unit**;
HOME OCCUPATION;
AGRICULTURE;
ACCESSORY USES, including one **Secondary Suite** subject to Section 201.09.

202(A).2 PERMITTED DENSITY

.01 Maximum Number of **Dwelling Units**: One.

.02 Maximum **Floor Area Ratio**:

0.60 applied to a maximum of 360 m² (3,875 ft²) of the **lot** area, together with 0.30 applied to the balance of the **lot** area in excess of 360 m² (3,875 ft²); plus

- (i) 10% of the floor area total calculated above for the **lot** in question, which area must be **used** exclusively for covered areas of the principal **building**, which are open on two or more sides. These covered areas must be located not more than 0.6 m (2 ft.) above the lowest horizontal floor; and
- (ii) 45 m² (484 ft²) which may be **used** only for **accessory buildings** and off-street parking;

PROVIDED THAT

- (i) any portion of floor area which exceeds 5 m (16.4 ft.) in height, save and except an area of up to 10 m² (107.6 ft²) **used** exclusively for entry and staircase purposes, shall be considered to comprise two floors and shall be measured as such;
- (ii) **floor area ratio** limitations are not applicable to one accessory building less than 10 m² (107.6 ft²) in area.

202(A).3 MAXIMUM LOT COVERAGE

- 01 For the purpose of this subsection only, a *non-porous surface* is any constructed surface on, above, or below ground that does not allow precipitation or surface water to penetrate directly into the underlying soil.
- .02 The maximum lot coverage for **buildings** only shall be 50%; and the maximum lot coverage for **buildings** and any non-porous surfaces or **structures** inclusive shall be 70%.

- .03 A minimum of 25% of the **lot** area is restricted to landscaping with live plant material.

202(A).4 MINIMUM & MAXIMUM SETBACKS FROM PROPERTY LINES

.01 **Front Yard:** 6 m (19.7 ft.) EXCEPT THAT:

- (i) porches and verandas which form part of the principal **building**, are less than 5 m (16.4 ft.) in height, and are open on those sides which face a **public road** may be located within the **front yard** setback, but shall be no closer to the **front property line** than 4.5 m (14.8 ft.);
- (ii) bay windows, fire places and chimneys forming part of the principal **building** may project into the **front yard** for a distance of not more than 1 m (3.3 ft.); and
- (iii) the ridge line of a front roof dormer may project horizontally up to 0.914 m (3 ft.) beyond the **residential vertical envelope (lot depth)** but no further than the **front yard** setback.

.02 **Side Yard:** 1.2 m (3.9 ft.) EXCEPT THAT:

- (i) where a **side property line** abuts a **public road**, the minimum **side yard** to that property line shall be 3 m (9.8 ft.);
- (ii) bay windows, fire places and chimneys which form part of the principal **building** may project into the **side yard** for a distance of not more than 0.6 m (2 ft.); and
- (iii) the ridge line of a side roof dormer may project horizontally up to 0.914 m (3 ft.) beyond the **residential vertical envelope (lot width)** but no further than the **side yard** setback.

.03 **Rear Yard:** 6 m (19.7 ft.) EXCEPT THAT

- (i) for a **corner lot** where a **side yard** setback abutting a **public road** is maintained at a minimum of 6 m (19.7 ft.) the **rear yard** setback shall be 1.2 m (3.9 ft.);
- (ii) an **accessory building** of more than 10 m² (107.6 ft²) in area that is **used** exclusively for off-street vehicle parking may be located within the **rear yard** setback area but no closer than:
 - a. 3.0 m (9.8 ft.) to a **property line** abutting a **public road**; or
 - b. 1.2 m (3.9 ft.) to any other **property line**;
- (iii) bay windows which form part of the principal **building** may project into the **rear yard** setback for a distance of 1 m (3.3 ft.) or one-half of the **rear yard**, whichever is the lesser.

- .04 There is no **property line** setback requirement for an **accessory building** that has an area of 10 m² (107.6 ft²) or less.

202(A).5 MAXIMUM HEIGHTS

- .01 **Buildings:** 2½ storeys, but in no case above the **residential vertical envelope (lot width)** or the **residential vertical envelope (lot depth)**;
- .02 **Structures:** 9 m (29.5 ft.).
- .03 **Accessory Buildings:** 5 m (16.4 ft.).

202(A).6 MINIMUM LOT SIZE AND DIMENSIONS

- .01 A **One-Family Dwelling** shall not be constructed on a **lot** of less than 270 m² (2,906.4 ft²) in area.
- .02 A parcel to be created by subdivision and intended for use as the site of a **one-family dwelling** shall have a minimum **frontage** and **width of lot** of 9 m (29.5 ft.) and a minimum **depth of lot** of 24 m (78.7 ft.). For **corner lots**, an additional 2 m (6.6 ft.) is required for the minimum **frontage** or **width of lot**.

202(A).7 MINIMUM BUILDING SEPARATION SPACE

- .01 3.0 m (9.8 ft.).

202(A).8 OFF-STREET PARKING

Off-street parking shall be developed and maintained in accordance with Division 400 of this bylaw.

202(A).9 MINIMUM TOTAL AREA OF PRIVATE OUTDOOR SPACE

A private outdoor space with a minimum area of 20 m² (215.3 ft²) and a minimum width or depth of 3.0 m (9.8 ft.) shall be provided outside of the **front yard** free of **accessory buildings**, covered walkways, and off-street parking.

202(A).10 MAXIMUM DRIVEWAY WIDTH

- .01 For the purpose of this subsection only, a *driveway* is any non-porous surfaced or paved portion of the **lot** that is **used** to provide space for vehicle parking or vehicle access to or from a **public road** or lane.
- .02 The maximum driveway width shall be 6 m (19.7 ft.).