

RODGERS CREEK AREA PLAN WORKING GROUP

Report to the Council of the District of West Vancouver

March 11, 2008

on the

**“Rodgers Creek Area Development Plan, Overview Report (March 7, 2008)
submitted by the Rodgers Creek Landowners”**

1.0 INTRODUCTION

The Rodgers Creek Working Group was established by Council in January 2007. The Working Group was charged with envisioning a future community for the Rodgers Creek Area and providing expert advice in preparing a plan for the Rodgers Creek Area of the community, consistent with the direction set out in the Official Community Plan.

The Operating Guidelines of the Working Group are attached as Appendix A.

2.0 PURPOSE

The purpose of this report is to present the Working Group's conclusions on the key issues of the Rodgers Creek Area Development Plan, Overview Report dated March 7, 2008.

3.0 DEVELOPING THE PLAN

The Overview Report is the result of several years of work towards building a consensus on the development of the Rodgers Creek planning area. It reflects:

- The input of the public at the June and December 2007 Open Houses, and recreation groups at a series of meetings organized by District staff,
- The technical work done by specialist professional consultants and District staff,
- The consideration of the landowners,
- The Official Community Plan (OCP) policies for the Upper Lands, and
- The direction of the Rodgers Creek Working Group.

The Working Group undertook a variety of activities over the past 12 months. In addition to viewing the site, reviewing technical information and providing direction for the Open Houses, the Working Group established Key Organizing Principles (see Appendix B), structured by the four Community Building Principles of the Official Community Plan, to set out the objectives for the Area

Development Plan. Notably, the Working Group considered the “Principles and Objectives for Rodgers Creek Area Plan” developed and adopted by West Vancouver Streamkeeper Society, and included them as Key Organizing Principles. Finally, the Working Group provided specific direction on a number of significant issues that shaped the proposal set out in the Overview Report:

- In response to public comment at the June 2007 Open House, the Working Group revised the Organizing Principles by adding principle 2.13 which reads *“identify existing recreational activities within and adjacent to the planning area and consider opportunities to retain, enhance and/or connect with these recreational activities”*. This principle led to consultations with trail users, both mountain bikers and hikers, and a proposal in the Overview Report to address the impacts of development on existing trails and to establish a process for relocation as development proceeds.
- A more socially diverse mix of housing was advocated. The Working Group was aware that the general massing and siting of buildings was achieving a desirable fit with the topography but was producing very large apartment unit sizes. They were also cognizant of the key OCP policies on this matter: one policy which allowed *“for a gross density of 2.5 dwelling units per acre in the Future Neighbourhoods Area”* and another policy which provided for reviewing *“the methods of establishing dwelling unit and square footage “density” to ensure that the methods provide a form and encourage development that is both environmentally sensitive and supportive of community housing objective.”* The Working Group requested the proponents to develop an option that provided a wider mix of unit sizes within the same footprint. The result was Option B which maintained not only the general massing and siting of Option A but also the Option A floor area of approximately 1.875 million square feet. After much discussion and debate, the Working Group advocated for Option B for its benefits to social diversity and other sustainable development objectives such as promotion of transit services and support for a future Cypress Village with a range of services and amenities.
- The housing mix for Areas 3 and 4, located in the central part of the planning area, was refined through facilitation by the Working Group of cooperation by multiple landowners, and the interests of Mulgrave School as a key stakeholder.
- Direction to include accessory housing in detached homes, such as coach houses or granny flats, and in multiple family apartments, as lock-off spaces. This provision is considered another measure to increase the diversity of housing and the social mix in the Rodgers Creek planning area.
- A Chippendale Road extension alignment that enhances safety by separating truck traffic from residential areas and Mulgrave School
- Evaluation of the sustainable best practices in the Plan, including presentations from experts in the field of sustainable development. Through this work, the Overview Report includes commitments to a range

of best practices for green buildings and innovative infrastructure to ensure that development in the Rodgers Creek planning area will be significantly more sustainable than previous projects in the District.

4.0 **THE PROPOSED AREA DEVELOPMENT PLAN**

The Proposed Area Development Plan covers 215 acres of land. The majority of the land is owned by British Pacific Properties. There are two other landowners: one owner of a 5 acre lot; and one consortium owning three 5 acres lots. Mulgrave School is located immediately adjacent to the planning area, and although not an owner of land in the planning area, has a special interest in the planning area – in terms of possible future expansion of the school facilities into a 5 acre parcel to the immediate north of the school, and because previous plans called for the Chippendale extension to traverse the northwest corner of the school property.

Land in the Rodgers planning area is currently zoned RS7 and RS8 which, subject to a Development Permit and subdivision, would allow a maximum of 375 housing units. The OCP calls for an Area Development Plan to be prepared before developing land in the Upper Lands, and amongst other things, “allows for a gross density of 2.5 dwelling units per gross acre”(i.e., a total of 538 dwelling units). The Area Plans are to establish future land use and development objectives for neighbourhoods and to create more detailed Development Permit guidelines for subsequent implementation and subdivision designs.

The key features of the proposed Area Plan set out in the Overview Report are:

- Preservation of environmentally sensitive areas and creation of large conservation areas – about 55% of the total site area of 215 acres
- Six distinct and separate development areas
- Approximately 1.875 million sq. feet of floor area, either as 538 housing units (Option A) or 736 housing units (Option B)
- A mountain pathway and trail network that connects the development areas to one another, to a future Cypress Village, and to the existing neighbourhoods
- Numerous and varied public places that support multiple activities
- A diversity of housing in each neighbourhood
- A variety of housing types and sizes, ranging from single family to townhouses to apartment units to accessory housing units
- Roads that are functional, have a minimum footprint and engender an ambiance that makes for charming and intimate neighbourhoods
- A commitment to ‘green’ buildings and infrastructure, that is, buildings and infrastructure that reduce energy and water consumption, reduce greenhouse gas emissions, enhance sustainability and create a healthy living environment.

4.0 **KEY RECOMMENDATIONS OF THE WORKING GROUP**

The Working Group considers a number of components of the Overview Report crucial to the overall plan proceeding. These plan components are discussed below within the framework of the four Community Building Principles of the Official Community Plan.

4.1 **Establish a sensitivity and connection to the natural environment and mountain qualities**

The Rodgers Creek Area Plan has been developed on the basis of 'letting the landscape inform the plan'. In this case, the landscape has been more than a backdrop for development. It has directed the plan by:

- being the key determinant of where development should and should not go,
- shaping the form of buildings through design principles for achieving a fit of buildings to the land, and
- reinforcing an environmentally sensitive approach to construction of roads across creeks and trails through sensitive terrain.

The role of the natural environment in determining where development should and should not go deserves further mention. Watercourses were assessed; landscape, heritage, archaeological and recreational resources were identified; and geotechnical and topographical conditions reviewed. Once completed, the inventory and assessment maps were overlaid in a process referred to as a 'sieve analysis' to reveal the complex interrelationships among many factors in the landscape and to identify areas where development planning should focus. This approach was pioneered by Ian McHarg in his book "Design with Nature", but is rarely applied with such rigor. Amongst other things, it has allowed watercourses and their riparian areas to be preserved, habitat to be protected and steeper slopes to be avoided.

Recommendation 1: The Working Group commends the owners and District staff for adhering faithfully to the direction set out in the OCP.

4.2 **Create a Strong Community**

Building a strong community in the Rodgers Creek area is probably the greatest challenge facing development. Part of this challenge is the mountainside terrain combined with the proliferation of watercourses, both of which discourage contiguous development and thus social interaction. More fundamental is the matter of context – 215 acres of forested land located distant from commercial and community services.

The Mountain Path, Trail Network and Gathering Places

To deal with this context, the plan proposes a mountain pathway and trail network that links neighbourhoods and includes places and destinations with multiple and diverse activities. The mountain pathway and trail network is described in detail in the Overview document.

Recommendation 2: The Working Group recommends that the District ensure timely delivery of the Mountain Path and trail network, along with installation of the many and diverse activity nodes along it.

Future Village

A Future Village in the vicinity of the first switchback on Cypress Bowl Road provides a key context for the proposed Area Plan. The proposed Future Village will provide a social and economic focus for the Upper Lands and the new McGavin Field.

Recommendation 3: The Working Group encourages the District and British Pacific Properties, as a major landowner in the Future Village area, to commence planning for the Future Village.

Mulgrave School

Mulgrave School is located immediately adjacent to the planning area, and although not an owner of land in the planning area, has a special interest in the planning area. The possible location of the future extension of Chippendale across the northwest corner of the school property was the first concern of the school. A Chippendale extension alignment (see discussion under 4.4) that links to upper Cypress Bowl Road and that does not travel along the north boundary of the school resolves the school's concerns in this regard and this has been confirmed by the School.

The second primary interest of the school relates to retaining the option, from a land use perspective, of expanding school facilities to all or part of the 5 acres to the immediate north of the school site, assuming the school was able to acquire the property. This expansion would relate exclusively to facilities and would not involve an increase in enrolment. Initially, this proposed expansion was for purposes of a sports field, although other facilities such as additional parking and headmaster housing have been suggested.

Placing a large flat facility such as a sports field on steep terrain is a concern to the Working Group. The District advised the Working Group in early February, 2008 that Mulgrave School and the District are discussing possible arrangements that would allow Mulgrave School to use the future McGavin Field on a regular basis. Further, the District views this as an exciting opportunity to work with independent schools to the benefit of both parties.

***Recommendation 4:** The Working Group is comfortable with retaining the option for Mulgrave School facilities, other than a full-sized sports field, to be located on all or part of the 5 acres to the immediate north of the existing school site, and recommend that the OCP Area plan bylaw make provision for such an opportunity. Mulgrave School, once it acquires the property, would be required to obtain a rezoning and development permit to use the lands for school purposes. The Working Group further recommends that the District consider any school expansion proposal based on the following factors:*

1. *the extent to which the proposal reflects a sensitivity to the natural environment;*
2. *the impact of traffic on the adjacent residential neighbourhoods; and*
3. *the loss of small lot housing.*

Chippendale Road Extension

Staff, the landowners and the consultants retained by the landowners reviewed the alignment options for Chippendale at some length. While many alignments were considered, two alignments were analyzed in detail:

- a Chippendale Road extension that links to Lower Cypress Bowl Road and has a downhill grade of 8%; and
- a Chippendale Road extension that links to Upper Cypress Bowl Road and has an uphill grade of 10%.

After much discussion (see Appendix C for the comparison) and after considering a wide variety of criteria, and finally balancing functional objectives with environmental impacts, the alignment that goes to upper Cypress Bowl Road was identified by staff as the preferred alignment. This alignment is a departure from that shown in the OCP, but is strongly supported by the Working Group. In reaching this conclusion the Working Group notes that:

- The upper Chippendale alignment provides a superior opportunity to manage truck traffic – with this alignment trucks departing lands adjacent to Chippendale Road will be required to travel uphill to Cypress Bowl Road and then down via Cypress Bowl Road.
- The upper Chippendale alignment provides better transit routing in the near future
- The upper Chippendale alignment provides an overall road network that keeps Mulgrave School traffic off residential streets.
- The two alignments have a similar level of environmental impact

The detailed comparison of the upper and lower alignment is provided in Appendix C.

***Recommendation 5:** The Working Group strongly supports the Chippendale Road extension to upper Cypress Bowl Road, rather than to lower Cypress Bowl Road as shown in the OCP.*

4.3 Encourage a diverse community

Housing

The proponents have prepared a plan, at the request of the Working Group, that shows two density options:

- Option A which is based on the OCP policy of a maximum density of 2.5 units per acre and results in 538 housing units; and
- Option B which uses the same floor area as Option A of 1.85 million square feet and yields 736 housing units.

Option B shares the same road, trail and servicing network as Option A. These options also share the same height, bulk and massing of buildings and have footprints that are virtually the same. The increased number of units is achieved principally by reducing the average size of apartment units:

- in Option A apartments average 2255 sq. ft. in size, with 10% of the units under 1000 sq. ft. in size, and
- in Option B apartments average 1635 sq. ft. in size, with 30% of the units under 1000 sq. ft. in size.

The result of this change is a significant increase in housing diversity, both in terms of unit size (for example, units under 1000 sq. ft. in size increase from 6% in Option A to 21% in Option B) and unit type. In order to maintain this diversity, it will be important to take measures to preclude lot consolidation and unit consolidation. Details of the housing diversity are presented on page 27 of the Overview Report.

Option B is not just about housing diversity, it is about social diversity. Different household types (for example, singles, families and empty nesters) have different housing needs. With different housing types and sizes, the opportunity is available for different household types to reside in the Rodgers Creek Area and, thus, for increased social diversity.

Option B provides a number of other significant benefits to the community:

- Options A and B use the same infrastructure – for example, no more roads are necessary under Option B than under Option A. This provides for more efficient use of the road, water, sewer and trail infrastructure.
- The greater number of units in Option B supports transit services by increasing the financial viability of transit. For transit systems to provide effective service, the routing and the frequency of service are important variables. With an increased number of units, the opportunity for more frequent service increases.
- The greater number of units in Option B, particularly in Area 5, supports the Future Village to the immediate west. The viability of the Future Village as a commercial area will depend on the size of its market. Consequently, providing more, rather than less, units in proximity to the Future Village is important in supporting the economic viability of the

commercial services and amenities in the Future Village. A viable Future Village has consequences not just for access to services, but also in reducing travel and thus environmental impact.

- Finally, Option B is the responsible alternative, supporting initiatives to 'go green' and reduce climate change, and make effective use of the limited non-agricultural land resource.

***Recommendation 6:** The Working Group strongly recommends Option B as it performs substantially better from a social, environmental and economic sustainability perspective.*

Accessory Housing

Accessory Housing refers to secondary suites, coach houses, granny flats and lock-off units. The Working Group encouraged the landowners to make provision for such housing and established Organizing Principle 3.02 to reflect the importance of such housing in providing rental housing and supporting social diversity. The proposed plan suggests encouraging and enabling such housing rather than requiring it.

***Recommendation 7:** The Working Group fully supports encouraging and enabling Accessory Housing (including by not counting an accessory unit as a housing unit for purposes of density calculation) as the plan performs substantially better from a social sustainability perspective.*

4.4 Focus on environmental and economic sustainability

Sustainability Initiatives

The proposed Area Plan sets a new standard for sustainable development of a project of this size – 55% of the planning area is retained as conservation areas, environmentally sensitive areas are protected, a diversity of housing is proposed, neighbourhoods have a variety of land uses, a Mountain Path and trail network that links neighbourhoods is provided, and 'green' building and infrastructure are proposed.

***Recommendation 8:** The Working Group strongly supports all the sustainability initiatives set out in the Overview Report and emphasizes the importance of ensuring the delivery of the 'green' initiatives and of encouraging other initiatives over time as the plan area develops.*

Roads Standards

West Vancouver has long recognized the importance that roads play in creating ambiance and a quality community. In the mid-90's the District undertook a roads study in response to a perception that new and rehabilitated roads were destructive to the traditional and highly valued character of West Vancouver's residential streets, and at variance with the needs of mountain topography. In

1999 Council adopted the Guidelines for Residential Roads which recognizes that roads should be of human scale, blend with the landscape, and contribute positively to community ambience.

The roads standards proposed in the Overview Report are consistent with the District's efforts to create safe communities where the aesthetic of roads is recognized as a significant contributor to character and quality.

Recommendation 9: The Working Group fully supports the road standards proposed in the Overview Report and encourages ongoing diligence to ensure that implementation does not stray from the concepts set out in the Overview Report.

5.0 **CONCLUSION**

Planning for Rodgers Creek began years ago when the Upper Lands Study of 2001 was initiated. This study paved the way with a new approach to development of the Upper Lands.

The Rodgers Creek Area Development Plan Overview Report submitted by the landowners has been prepared with the guidance of the Working Group but, more than anything, it has demonstrated an unprecedented level of co-operation and collaboration among all participants. It too has 'paved the way' in setting a new standard for planning in West Vancouver, and in communities generally.

The key recommendations of the Working Group are:

Recommendation 1: The Working Group commends the owners and District staff for adhering faithfully to the direction set out in the OCP.

Recommendation 2: The Working Group recommends that the District ensure timely delivery of the Mountain Path and trail network, along with installation of the many and diverse activity nodes along it.

Recommendation 3: The Working Group encourages the District and British Pacific Properties, as a major landowner in the Future Village area, to commence planning for the Future Village.

Recommendation 4: The Working Group is comfortable with retaining the option for Mulgrave School facilities, other than a full-sized sports field, to be located on all or part of the 5 acres to the immediate north of the existing school site, and recommend that the OCP Area plan bylaw make provision for such an opportunity. Mulgrave School, once it acquires the property, would be required to obtain a rezoning and development permit to use the lands for school

purposes. The Working Group further recommends that the District consider any school expansion proposal based on the following factors:

1. the extent to which the proposal reflects a sensitivity to the natural environment;
2. the impact of traffic on the adjacent residential neighbourhoods; and
3. the loss of small lot housing

Recommendation 5: The Working Group strongly supports the Chippendale Road extension to upper Cypress Bowl Road, rather than to lower Cypress Bowl Road as shown in the OCP.

Recommendation 6: The Working Group strongly recommends Option B as it performs substantially better from a social, environmental and economic sustainability perspective.

Recommendation 7: The Working Group fully supports encouraging and enabling Accessory Housing (including by not counting an accessory unit as a housing unit for purposes of density calculation) as the plan performs substantially better from a social sustainability perspective.

Recommendation 8: The Working Group strongly supports all the sustainability initiatives set out in the Overview Report and emphasizes the importance of ensuring the delivery of the 'green' initiatives and of encouraging other initiatives over time as the plan area develops.

Recommendation 9: The Working Group fully supports the road standards proposed in the Overview Report and encourages ongoing diligence to ensure that implementation does not stray from the concepts set out in the Overview Report.

Appendices:

- A – Working Group Terms of Reference
- B – Rodgers Creek Working Group, Key Organizing Principles for the Rodgers Creek Area Plan
- C – Comparison of Chippendale Road Alignment Options

APPENDIX A

DISTRICT OF WEST VANCOUVER WORKING GROUP GUIDELINES

RODGERS CREEK AREA PLAN WORKING GROUP

1.0 PURPOSE

To envision a future community for the Rodgers Creek Area and establish detailed principles for the Area Development Plan, taking into consideration the Upper Lands principles and processes described in the Official Community Plan. Community facilities and potential land use patterns in adjacent lands may be part of the consideration.

2.0 DUTIES

The Working Group will assist staff in the development of a Rodgers Creek Area Plan by:

- reviewing the work done to date,
- establishing detailed principles for the Area Development Plan
- providing direction on issues associated with implementation aspects of the Area Development Plan.

Once a draft Area Development Plan is prepared, the Group will review and provide advice on the draft plan. The advice of the Group will be forwarded to Council as part of a staff report.

3.0 ORIGINS OF WORK/PROJECT BACKGROUND

The OCP provides policies to guide the development of the Upper Lands – objectives for the Upper Lands, four community building principles, a framework for identifying and acquiring public lands to meet long term community needs, and development strategies. It also provides that Area Development Plans be prepared “in order to establish future land use and development objectives for neighbourhoods and to create more detailed Development Permit guidelines for subsequent implementation and subdivision designs.” The scope of an Area Development Plan is set out in Policy UL6 (see attached OCP 2004, pages 107 and 108).

The four community building principles which are to guide all actions in the Upper Lands are:

1. create a strong community
2. establish a sensitivity and connection to the natural environment and mountain qualities
3. encourage a diverse community
4. focus on environmental and economic sustainability

APPENDIX A

The Upper Lands section of the OCP 2004 is attached and forms part of the Operating Guidelines.

4.0 COMPOSITION

4.1 Community Representation: 9 community members providing expert or specialist advice, or representative of a particular district-wide group with a major interest in the future of the Rodgers Creek Area:

- 1 from West Vancouver StreamKeepers
- 1 leading edge developer
- 1 Engineer with an understanding of mountainsides and sustainability
- 2 individuals with an environmental background
- 3 members with a background in Planning, Architecture and Landscape Architecture and an understanding of mountainsides and sustainability
- 1 citizen interested in the future of the Rodgers Area

4.2 Potential Conflict of Interest: Members should declare possible conflicts of interest to their working group Chairperson. The Chairperson will determine whether or not the member should be excused from participating in a discussion. (For reference, conflict of interest guidelines are in the Council Committee General Terms of Reference.)

4.3 Council Lead: Councillor Day

4.4 Staff Lead: Geri Boyle, Manager, Community Planning

5.0 LANDOWNER ROLE

British Pacific Properties (BPP) is the principal land owner within the Rodgers Creek Area. There are three others landowners in the planning area: Roeck's with one 5 acre lot, the Wong holdings of three adjacent 5 acres lots and Mulgrave School. These landowners may be present at all meetings of the Working Group, unless the Group determines that they wish to meet In-Camera. It is anticipated that the landowners, or their consultants, will present information to the Working Group to increase the Working Group's understanding of:

- the attributes of the area,
- the opportunities and challenges that development of the area presents, and
- the development interests of the landowners.

See also Section 9.0.

6.0 TERM, SIGNIFICANT MILESTONES AND DESIRED OUTCOME

APPENDIX A

Adoption by West Vancouver Council of an Area Plan for Rodgers Creek.

7.0 MEETING SCHEDULE

The Working Group will meet throughout the planning program. Councillor Rod Day will Chair the Working Group. A meeting schedule and dates will be established at the first meeting based on the area planning program.

8.0 DECISION MAKING APPROACH

The Working Group meetings will be productive sessions where issues are discussed and debated. The objective will be to reach consensus, but in the absence of consensus direction/advice of the Working Group will reflect the majority opinions of the Working Group.

9.0 SUPPORT/PROFESSIONAL SERVICES UTILIZED

In addition to Planning staff, staff from Environment, Parks, Engineering and Community Services will be available to meet with the Working Group throughout the process. A considerable body of work has also been undertaken by BPP. Those consultants are available as well to act as resources to the group.

10.0 APPROVED BUDGET

A nominal budget is required for the Working Group to cover meeting room expenses, if necessary, and refreshment

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APPENDIX B

KEY ORGANIZING PRINCIPLES FOR RODGERS CREEK AREA PLAN

<i>OCP Community Building Principle 1 for the Upper Lands – establish a sensitivity and connection to the natural environment and mountain qualities</i>	
1.01	Keep development outside of environmentally sensitive areas (i.e. riparian areas, steep slopes, geotechnical hazard lands) and protect significant natural features; place both environmentally sensitive areas and significant natural features in public ownership wherever possible (<i>OCP Policy page 101 and 103</i>)
1.02	Avoid fragmentation of environmentally sensitive lands by creating large, continuous forested / natural areas throughout the planning area (<i>OCP Policy page 101</i>)
1.03	Avoid wide-scale clearing intended solely to provide uninterrupted, panoramic views, and minimize tree clearing on single family lots
1.04	Employ site sensitive built forms by <ul style="list-style-type: none"> • designing buildings to step into the terrain and using material and colours that harmonize with the forest setting; and • minimizing footprints and visual impacts (<i>OCP Policy page 108</i>)
1.05	Minimize the need for 'constructed' responses by providing for road layouts, design standards and alignments that are sympathetic to the terrain and minimize site disruption including clearing of entire road right-of-ways, as set out in the Roads Policy 1999
1.06	Watercourses remain open and unimpeded, and are protected from change of course, piping, unnatural erosion and other human impacts.*
1.07	Provide multi-use utility corridors to minimize impact on the landscape
1.08	Trails may be provided along creek corridors, when located so as to minimize the impacts on riparian areas (<i>OCP Policy page 101</i>)
1.09	Natural, undisturbed areas (open spaces) and green connectivity belts are maximized and planned into housing complexes, and horizontal connections are treated as importantly as vertical connections.*
<i>OCP Community Building Principle 2 for the Upper Lands – create a strong community</i>	
2.01	Concentrate higher densities in areas that will foster strong community interaction (including a proposed commercial centre located to the west of the planning area) and outside environmentally sensitive lands
2.02	Ensure that the concerns and impact of new development on existing development adjacent to the planning area are identified and considered

APPENDIX B

KEY ORGANIZING PRINCIPLES FOR RODGERS CREEK AREA PLAN

2.03	<p>Provide a 'mountain pathway' defined as:</p> <ul style="list-style-type: none"> • an east-west multi-use path, with gentle grades, for future residents of the planning area and the community at large; and • a path that provides a connection to the natural setting and a physical connection to each neighbourhood within the Rodgers Creek Planning Area, and to a future commercial centre and neighbourhoods to the west; and • a path that provides a variety of experiences and opportunities for people to meet, interact and connect (<i>OCP Policy page 101</i>)
2.04	Ensure that all destinations and public spaces including the mountain pathway (both its primary and secondary routes) provide for multiple activities by a variety of age groups and capabilities
2.05	Within the future Collingwood and Mulgrave Neighbourhoods, provide activity nodes along the mountain pathway that bring neighbours into regular social contact with each other. In the future development area at the west end of the Rodgers Creek Planning Area, provide community amenity buildings and facilities in addition to activity nodes along the mountain pathway.
2.06	Incorporate cultural heritage (such as logging and skilift history) and natural features (such as viewpoints, boulders and waterfalls) in activity nodes
2.07	Connect pedestrian and vehicle networks (including transit and cycling) into existing networks and with future amenities, including trails to and from the mountain
2.08	Include appropriate vehicle staging areas to ensure access to various public amenities and facilities
2.09	Provide for clear way-finding
2.10	Ensure all residential buildings are integrated into the landscape and have easy access to the mountain pathway
2.11	Continue the 1000-foot connector as the major east-west connecting road above the Upper Levels Highway (<i>OCP Policy page 101</i>)
2.12	Consider potential areas of synergy through the integration of Rodgers Creek Planning Area with future developments west of the Rodgers Creek Planning Area, including a proposed commercial centre
2.13	Identify existing recreational activities within and adjacent to the planning area and consider opportunities to retain, enhance and/or connect with these recreational activities
<i>OCP Community Building Principle 3 for the Upper Lands – encourage a diverse community</i>	
3.01	Facilitate a diverse and more complete community by providing a variety of housing types and unit sizes
3.02	Provide opportunities for accessory housing such as coach houses, carriage houses

APPENDIX B

KEY ORGANIZING PRINCIPLES FOR RODGERS CREEK AREA PLAN

	and suites over garages and in the main dwelling, and do so by excluding them from total unit count
3.03	Ensure non-single family housing types include ground-oriented options such as duplexes, triplexes and townhouses
3.04	Ensure single family housing accounts for no more than 20% of the total housing units in the Rodgers Creek Planning Area (<i>OCP Policy page 102: this policy provides for at least 40% non-single family homes in the entire Upper Lands; a higher percentage of non-single family is anticipated in the Rodgers Creek Planning Area</i>)
3.05	Integrate housing with public/quasi public spaces and facilities, and connect with schools within the planning area and with the proposed commercial centre to the west
<i>OCP Community Building Principle 4 for the Upper Lands – focus on environmental and economic sustainability</i>	
4.01	Reduce the car-centric nature typical of new development with a focus on an effective movement system for pedestrian, cyclists and transit (<i>OCP Policy page 101</i>)
4.02	Green / sustainable design and operation standards, to a municipal standard that is being developed, form the foundation for building design
4.03	Strive for innovative, green infrastructure design and operation standards that minimizes immediate and life cycle cost
4.04	Treat rainwater as a resource, not a problem
4.05	Contribute to a resilient natural environment including healthy, properly functioning watercourses. Minimizing impervious surfaces and designing storm water systems to enhance watercourses are examples of measures that should be used to contribute to a resilient natural environment.*
4.06	Ensure that sustainability encompasses social sustainability, along with environmental and economic sustainability
4.07	Fish and fish habitat are conserved and protected*
4.08	Native vegetation is retained*

* From "Principles and Objectives for Rodgers Creek Area Plan" adopted by West Vancouver Streamkeeper Society May 2, 2007

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THE WATERFRONT COMMUNITY

MEMORANDUM

Date: December 13, 2007
 To: Rodgers Creek Technical Advisory Committee
 From: Brent Dozzi, P. Eng., PTOE
 Manager Roads and Transportation
 Re: **Chippendale Road Alignment - Mulgrave Neighbourhood (Area 4)**

Our File: 1785.03

The following comparative analysis is of two alignments for Chippendale Road through the Mulgrave Neighbourhood.

	Alignment	
	Lower Option	Upper Option
Classification	Chippendale Road links to Lower Cypress Bowl Road only. Two lane collector road.	Chippendale Road links to Upper Cypress Bowl Road only. Two lane collector road.
Location	Inbound/outbound intersection at approximately 0.6 kilometres from Highway 1 (Exit 8) along Lower Cypress Bowl Road.	Inbound/outbound intersection at approximately 3.9 kilometres from Highway 1 (Exit 8) along Upper Cypress Bowl Road.
Road Geometry	Meets Transportation Association of Canada (TAC) <i>Geometric Design Guidelines for Canadian Roads</i> .	Meets Transportation Association of Canada (TAC) <i>Geometric Design Guidelines for Canadian Roads</i> .
Intersection Operation	Traffic signal required at intersection with Lower Cypress Bowl Road based on Levels of Service.	Traffic signal not required at intersection with Upper Cypress Bowl Road based on Level of Service.
Traffic Operation	Concentrates local, school and truck traffic along a singular route through Lower Mulgrave Neighbourhood.	Disperses local, school and truck traffic along multiple routes through Upper and Lower Mulgrave Neighbourhood.
Truck Route Operation	Outbound truck traffic routes down grade at 8% through residential and school zones.	Outbound truck traffic routes up grade at 10% separate from residential and school zones.
Mulgrave School	Mulgrave School traffic would be required by MOT to use Chippendale Road and the signalized intersection at Lower Cypress Bowl Road as an egress. Mulgrave School traffic would be combined with local and truck traffic.	Mulgrave School would continue to use Cypress Lane as an access/egress and work with MOT independently to resolve outstanding traffic safety concerns. Mulgrave School traffic would be separate from local and truck traffic.
Creek Crossings -	Tributaries L, N, P, R and Pipe Creek.	Tributary L, M/N, P, Q, R and Pipe Creek.

Date: December 13, 2007
 To: Rodgers Creek Technical Advisory Committee
 From: Brent Dozzi, P. Eng., PTOE
 Re: **Chippendale Road Alignment (Area 4)**

Chippendale Road	Four culverts and one bridge.	Six culverts.
Creek Structures - Chippendale Road	Tributaries L, N, P(x3), Q and R.	Tributaries L, P(x2), R and Pipe Creek.
Creek Crossings - Mulgrave School and Neighbourhood	Seven culverts.	Four culverts and one half bridge.
Creek Structures - Mulgrave School and Neighbourhood	Road disturbance of riparian zones for both roads is similar. No impact to tailed frog zone.	Road disturbance of riparian zones for both roads is similar. Impact to tailed frog zone.
Environment	Lower Route and associated roads will add less impervious surface than Upper Route.	Upper Route and associated roads will add more impervious surface than Lower Route
Impervious Surface	Vehicular and truck traffic travelling down grade through residential zone.	Vehicular and truck traffic travelling up grade through non-residential zone.
Noise	Highway 1 (Exit 8): 1.5 kilometres. Highway 1 (Exit 10): 2.5 kilometres. Future Village: 2.5 kilometres.	Highway 1 (Exit 8): 4.8 kilometres. Highway 1 (Exit 10): 2.5 kilometres. Future Village: 2.5 kilometres.
Local Access (Center of Mulgrave Neighbourhood)	Emergency responder must travel 1.5 kilometres to Center of Mulgrave Neighbourhood.	Emergency responder must travel 4.8 kilometres to Center of Mulgrave Neighbourhood.
Emergency Access (Center of Mulgrave Neighbourhood)	Transit routing along Chippendale Road to Lower Cypress Bowl Road to Village to Upper Cypress Bowl Road requires backtracking along Upper Cypress Bowl Road.	Transit routing along Chippendale Road to Upper Cypress Bowl Road to Village to Lower Cypress Bowl Road requires no backtracking along Cypress Bowl Road.
Transit Access	Precludes opportunity for Mulgrave School to develop a playing field immediately to the north. Significant impact to Roeck property and very significant impact to Wong property.	Maintains opportunity for Mulgrave School to develop a playing field immediately to the north. No impact to Roeck property and significant impact to Wong property.
Owners and Development	There is little opportunity for traffic calming given the grade and alignment.	Variation of alignment and grade allows for "contextual" traffic calming.
Traffic Calming	Wider road cross sections have impact on size of cuts and fills. Pipe Creek Bridge construction might delay opening of Chippendale Road.	Narrower road cross sections have impact on size of cuts and fills. No delay to opening of Chippendale Road by bridge construction.
Constructability	Isolates Cypress Village East neighbourhood - Areas 5 and	Isolates Lower Mulgrave Neighbourhood - Area 4.
Community		

December 13, 2007

To: Rodgers Creek Technical Advisory Committee

From: Brent Dozzi, P. Eng., PTOE

Re: **Chippendale Road Alignment (Area 4)**

	6.	No change to trails.	Mountain Trail must cross Chippendale Road.
Recreation			