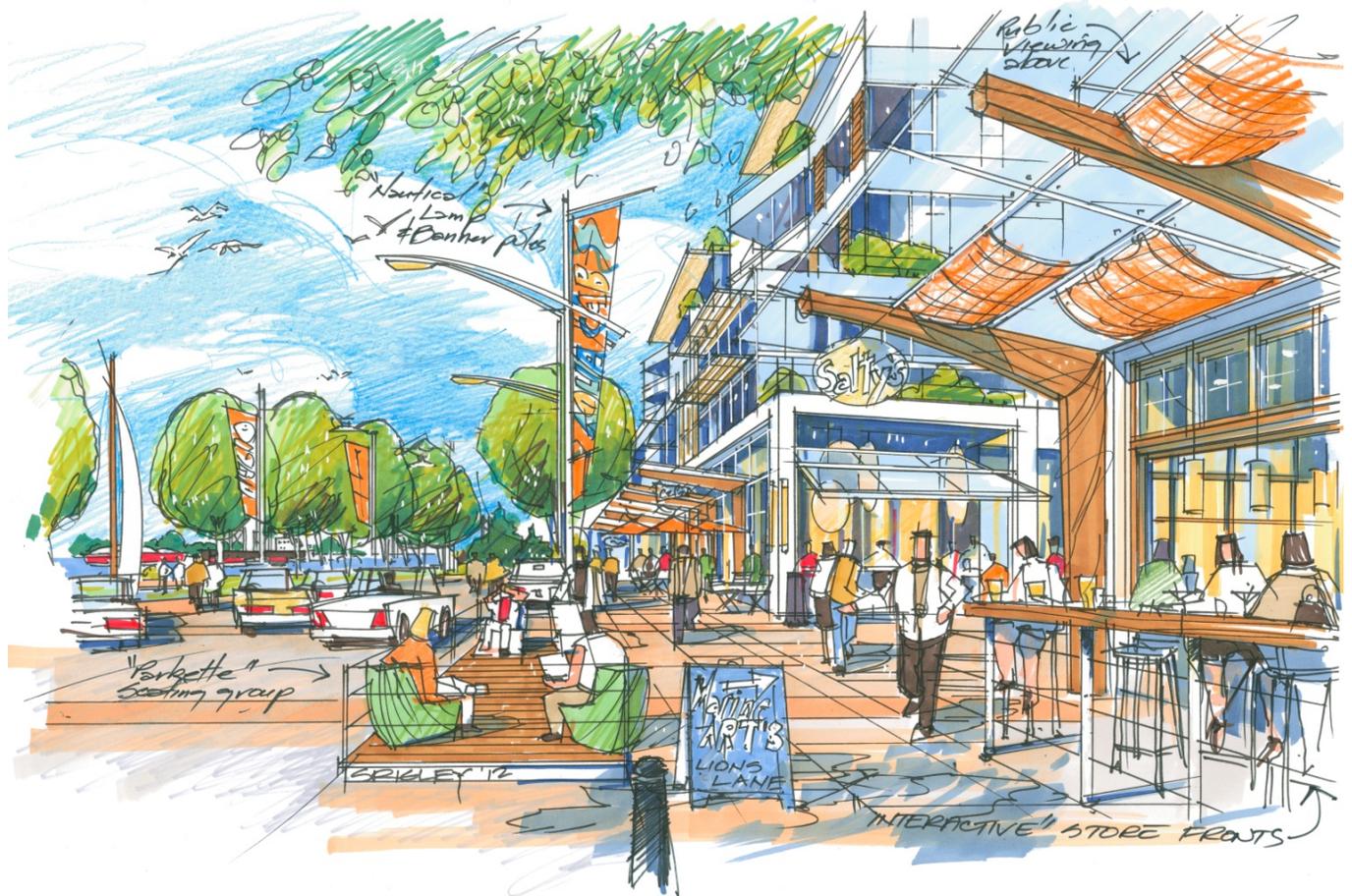


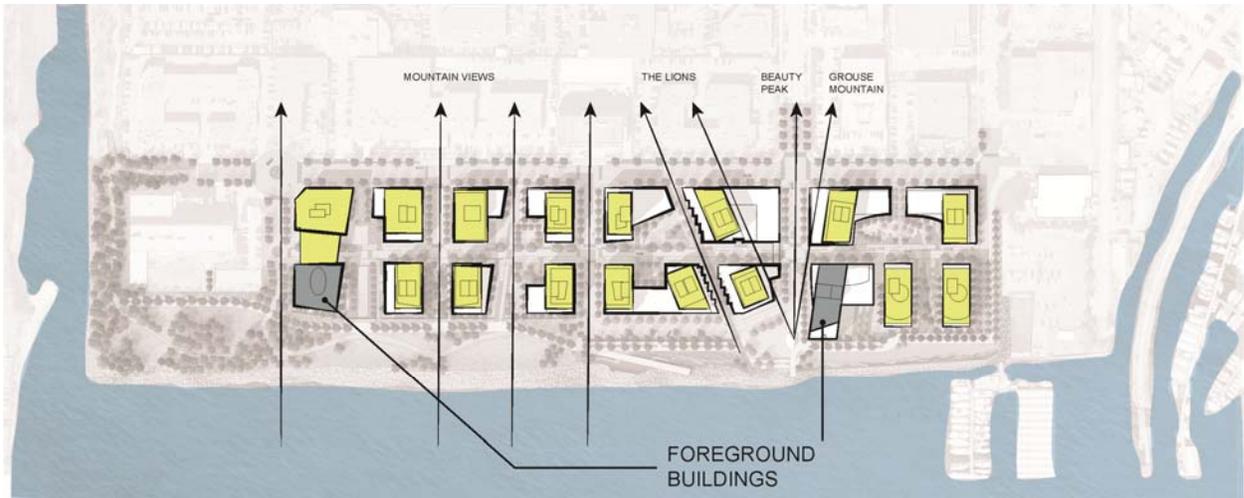
# Harbourside Waterfront Development Permit Area Guidelines



December 9, 2013 | Version 9.1

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# Part I – General Regulations

## 1.0 General

### 1.1 Introduction

The Harbourside Waterfront Development Permit Area boundary and justification is described in the City of North Vancouver Official Community Plan Bylaw, 2002, No.7425, Schedule H.



Figure 1. Harbourside Development Permit Area boundaries

The City designates Development Permit Areas (DPAs) to provide Council and staff with the ability to shape development beyond what is possible through policy or zoning regulations. These DPAs will shape development of the Harbourside Waterfront to help deliver: 1) a high quality life for people in the City of North Vancouver through multifamily and commercial development which has a form, character and open space design of high quality; and 2) revitalization of a commercial area; 3) conservation of energy; 4) conservation of water; and 5) reduction of greenhouse gas emissions.

Where land has been designated by the City of North Vancouver as a Development Permit Area (DPA), the landowner must first be issued a Development Permit by the City before developing the land. In accordance with section 920(1) of the Local Government Act, RSBC 1996, c 323, land within a DPA must not be subdivided, and construction of, addition to, or alteration of a building or other structure must not be commenced, until the landowner obtains a development permit. In addition, land within a DPA designated for protection of the natural environment or for protection of development from hazardous conditions must not be altered until the landowner obtains a Development Permit.

These development permit guidelines (the "Guidelines") are to be considered as part of development proposals on the site and in conjunction with any zoning provisions and development covenant(s) for the Harbourside Waterfront area. The issuance of a Development Permit must be in accordance with all applicable Guidelines. A Guideline will not be applicable to a specific Development Permit, only where the City has deemed that such Guideline is inapplicable to that specific Development Permit.

Every application for a Development Permit must be accompanied by:

- 1) Plans demonstrating:
  - a. the proposed location of all buildings and structures;
  - b. the proposed siting of parking areas, and mobility networks and access (walking, bikes, cars, transit);
  - c. the extent and nature of existing and proposed landscaping, including details of trees to be maintained or proposed to be planted;
  - d. the proposed exterior finish, materials, and colour of buildings and roofs;
  - e. the proposed location, number, dimension and type of signage;
- 2) Preliminary engineered frontage drawings;
- 3) Detailed descriptions about the how the development will comply with the City's:
  - a. energy performance requirements;
  - b. adaptable design requirements;
  - c. flood management and sea level rise requirements, including any such requirements included in covenants registered on title to the property which is the subject of the development permit application;
  - d. community amenities requirements associated with that particular phase of the development as outlined within the legal agreements on title;
- 4) A summary report outlining transportation indicators and the monitoring plan results from previous phases of construction;
- 5) A synopsis of design intent indicating how the proposal meets the objectives of the overall community, as well as the role it plays in its specific site location in relation to the precinct characteristics; and
- 6) A drawing showing how proposed phase will contribute to the overall Public Art Plan.

Applicants are required to provide a checklist or statement indicating how their proposal complies with the Guidelines. Where some element of the design does not comply with a Guideline, a justification describing the divergence and the reason must be provided.

The City will require security to ensure the installation and maintenance of landscaping in compliance with the Guidelines. All Development Permit applications must include a professional landscape plan prepared by a Landscape Architect (BCSLA).

## 1.2 Exemptions

Notwithstanding the designation of an area as a DPA, the Local Government Act provides that conditions may be specified under which a development permit is not required. In the Harbourside Waterfront DPA, a development permit is not required in the case of:

- A subdivision which consists of a parcel line adjustment or consolidation where no additional lots are created;
- A subdivision for park purposes;
- An internal alteration (a change or extension in the interior of a building relating to any matter or thing regulated by the B.C. Building Code);
- Temporary buildings or structures that are erected either for offices for construction or marketing purposes for a period that is not expected to exceed the duration of such construction;
- Road or utility works or landscaping within a dedicated road right of way or strata road; and/or
- Green space or trail improvements on City-owned land.

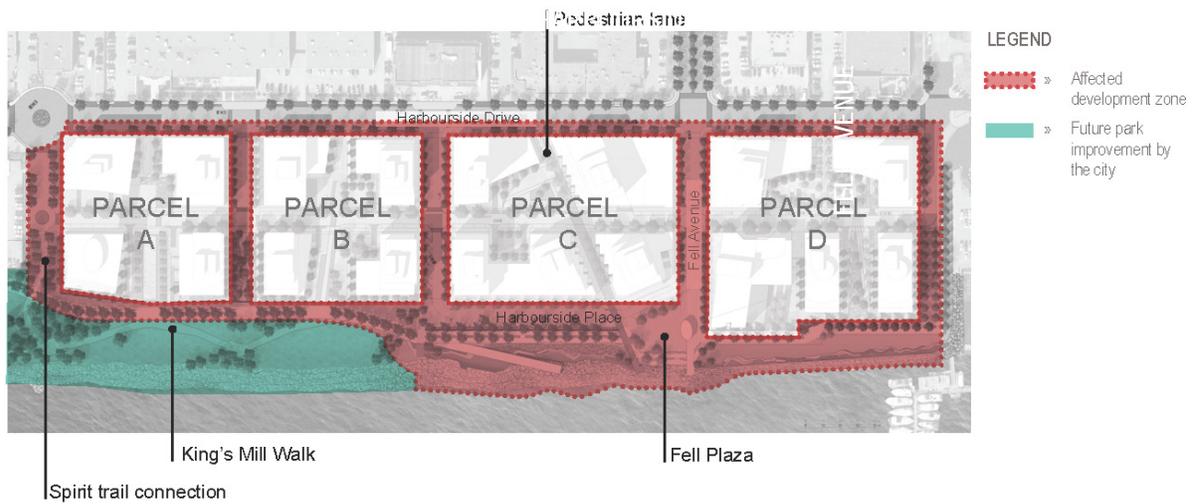


Figure 2. Conceptual site plan and key elements. (Note: Parcels A through D reflect the layout for Harbourside Waterfront development. The original lot numbers A, B, 43, 44, and 45 are shown in Figure 1.)

## 1.3 Amendments

A Development Permit amendment may be required for minor amendments to Development Permits already issued and registered on title, at the discretion of the Director of Community Development, including in the following cases:

- Renovations or changes to the exterior finish of buildings or landscaping which are less than 15 square metres (161 square feet) in area;
- Minor fencing;
- Green space or trail improvements on privately owned lands;
- Removal of invasive vegetation if the invasive vegetation is replaced with additional landscaping which differs from the Development Permit already approved.

## Part II – Environmental Guidelines

### 2.0 Energy & Greenhouse Gas Emissions

#### → Objectives

- a) Design the land use mix, transportation system, buildings and energy systems to exceed the energy and carbon performance of conventional developments at the time of construction.

#### 2.1 Buildings

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- 2.1.1 Use whole building energy modeling to optimize demand and supply, and passive and active systems.
- 2.1.2 Exceed energy performance requirements under Zoning Bylaw, 1995 No. 6700 (the “Zoning Bylaw”) and/or the BC Building Code, whichever is highest, with the aim of a five percent energy use intensity improvement.
- 2.1.3 Work with Lonsdale Energy Corporation to reduce carbon intensity beyond typical construction in the City for equivalent buildings through the district energy system.
- 2.1.4 Optimize passive building design opportunities (efficiency, heating, cooling, daylighting and ventilation) to reduce energy and carbon use.
  - Within site constraints, orient buildings to optimize passive solar heating potential. Most passive solar heating gain can be achieved by facing within approximately 20 degrees of solar south. For single loaded buildings, orient the building on an east-west axis and/or ensure a south facing roof aspect. For buildings that are double loaded, consider orienting the building on a north-south axis to ensure that units on both sides of the building receive some amount of solar exposure.
  - Where possible, residential buildings should be designed to receive daylight and natural ventilation from at least two sides or from one side and a roof. Dwellings should have a choice of aspect: front and back, or on two sides (for corner units).
  - Within site constraints, develop building siting, form, and scale to minimize interference with view corridors or solar access for existing or anticipated development, and shadowing impacts on adjacent residential buildings and usable open spaces. Include sun/shade diagrams of the subject development and the surrounding properties at the following times:
    - March 21: 9 a.m., 12 noon, 3 p.m.
    - June 21: 9 a.m., 12 noon, 3 p.m.
    - September 21: 9 a.m., 12 noon, 3 p.m.

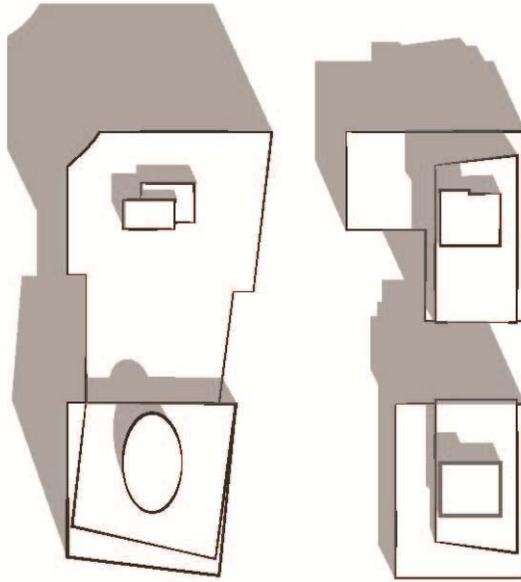


Figure 3. Sun shade diagrams can help determine the siting of buildings to minimize overshadowing of adjacent open spaces and buildings

- Design landscaping and buildings to provide solar access in winter, and in summer shading of afternoon sun and management of the urban heat island effect. Install deciduous trees and landscaping and/or shading devices on southern and western exposures to reduce undesired solar gain in summer and filter solar heat and light in the summer. Use light coloured sidewalks, plazas, greenways and paths to reduce the urban heat island effect.

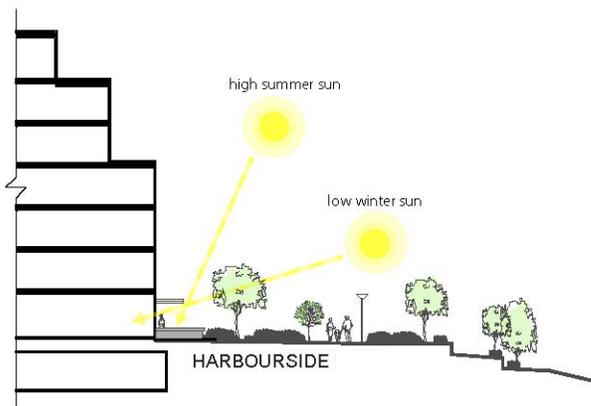


Figure 4. Design to allow light penetration into interior living spaces in winter, and protect from direct sunlight in the afternoon hours of summer

- Integrate courtyards and greenways into the design to allow direct sunlight penetration.
- Maximize daylight penetration by locating windows high on walls or by using clerestories and light shelves. To limit solar gain in summer months, external solar shading (e.g. recessed balconies, overhangs, and louvers), should be considered, especially on the south and west elevations of buildings. Balance the benefits of reducing solar gains in summer with the benefit of increasing solar gains in the winter by taking advantage of the different seasonal sun angles.

- 2.1.5 Install smart automation technologies such as timers or occupancy sensors, and programmable thermostats.
- 2.1.6 Use Energy Star appliances.
- 2.1.7 Use high efficiency exterior private realm lighting, such as LEDs, and direct and shade lighting to minimize light pollution and maximize energy service. Energy efficient motion or photo sensitive technologies should be considered, along with safety and security considerations.
- 2.1.8 Provide energy conservation, operation and maintenance information to tenants and residents.
- 2.1.9 Avoid Hydro chlorofluorocarbon (HCFC)-based refrigerants in new HVAC&R (heating, ventilation, air conditioning and refrigerating) systems, and halons in fire suppression equipment.

## **2.2 Transportation**

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*Guidelines to achieve transportation-related energy and greenhouse gas objectives are addressed in Section 4.7 Circulation, Access and Parking, Section 4.8 Streets, and Section 4.9 Active Transportation and Transit.*

## 3.0 Water

### → Objectives

- a) Reduce potable water use in buildings and on sites.
- b) Minimize the negative effects of stormwater.

### 3.1 Potable Water Conservation

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- 3.1.1 Reduce potable water use and generation of wastewater in commercial and residential buildings through the installation of:
- Low-flow plumbing fixtures;
  - Dual-flush or high-efficiency toilets; and
  - ENERGY STAR appliances.
- 3.1.2 Minimize and where possible eliminate the use of potable water for irrigation by applying the following techniques:
- Drought-tolerant vegetation or xeriscaping that minimizes or eliminates the need for long-term irrigation (beyond the first 3-5 years);
  - If irrigation is required, use water efficient systems (e.g. drip irrigation, moisture detection control systems, high efficiency spray) and/or systems that make use of rainwater.



Figure 5. Rainwater captured from rooftops can be used to irrigate landscapes

## 3.2 Rainwater Management

*For further related guidelines, see Section 4.10 Landscape and Public Realm*

- 3.2.1 Landscape design should be intended to limit impervious cover to absorb and filter stormwater and reduce sedimentation of receiving waters (Burrard Inlet). Design systems to achieve a target for total suspended solids at the point of discharge to receiving waters of 25 mg/l during dry conditions and 75 mg/l during storm events, or targets that meet best practices at the time the Development Permit is issued.
- 3.2.2 Direct overland flooding from impermeable surfaces to planted areas, permeable areas and rain gardens and minimize the use of catch basin and storm drains.
- 3.2.3 Install rainwater runoff controls to mimic the natural runoff system through infiltration of rainwater on-site. These controls could include: bioswales, infiltrations trenches, storage in ponds or constructed wetlands, rain gardens, or road/curb configurations. They should assist in mitigating peak volumes of street runoff entering into the municipal storm sewer system. Such systems should be highly visible features and should include educational elements such as interpretive signage.
- 3.2.4 Consider methods to collect, re-use and recycle rainwater, including re-use of rainwater run-off in open areas for water features that provide landscape amenity and/or for landscaping of the public realm.



*Figure 6. Visible rainwater controls help to build public awareness around stormwater management.*

- 3.2.5 Meet the requirements of *Urban Runoff Quality Control Guidelines for British Columbia*, as amended or replaced, both during and after construction.
- 3.2.6 Incorporate green roofs, including urban agriculture plots for residents on at least 50% of the available roof area of residential and mixed-use buildings, while also making efforts to incorporate green roofs into the design of commercial buildings where possible, and at a minimum, using roof space to control and reduce stormwater run-off.



*Figure 7. Green roofs can help reduce the rate and volume of stormwater run-off and improve water quality*

- 3.2.7 All development must incorporate equipment to remove oil wastes and sediments from rainwater run-off.
- 3.2.8 Landscaped areas will be used to remediate surface run-off that is not captured by equipment.

## Part III – Form & Character Guidelines

### 4.0 Harbourside Waterfront Mixed Use Guidelines

#### → Objective

The mixed use development of Harbourside Waterfront aims to revitalize the harbourfront lands to create a vibrant destination and complete community, anchoring the western end of the City and enhancing the waterfront experience along the North Shore. Development of Harbourside Waterfront aims to create an attractive destination with a mix of retail, office and diverse residential uses that serve to animate and add public spaces and services to the City's waterfront.

Specific form and character objectives:

- Ensure that the form and character of intensive residential, multi-family, commercial and mixed use waterfront development is a desirable addition to the City of North Vancouver, particularly with regard to the City's West Waterfront goals and objectives and in respect to the North Shore Spirit Trail;
- Ensure that commercial vitalization is realized through initial phases of development;
- Ensure that development delivers desirable public realm, landscaping, exterior design and finish of buildings and structures at each phase of development; and,
- Ensure that there is a sense of completion at each phase of development.

#### 4.1 Use of Natural Site Characteristics

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- 4.1.1 Animate the waterfront by creating a significant focal point and place for public gathering and significant public art at the foot of Fell Ave and the south portion of Harbourside Place.



*Figure 8. Conceptual illustration of focal points and gathering places linked together along the waterfront*

- 4.1.2 Incorporate open spaces as central organizing features.
- 4.1.3 Connect adjacent areas by pedestrian and bicycle paths to create a walking and cycling friendly neighbourhood.

#### 4.1.4

Development design should use natural site characteristics to:

- Celebrate the site's waterfront setting with views of Burrard Inlet and the City of Vancouver to the south and mountain views to the North;
- Take advantage of its waterfront location by engaging and animating the public waterfront through the selection of land uses and design of shoreline features;
- Recognize the adjacent patterns of natural features as well as industrial and marine activities adjacent to the site and located in Burrard Inlet;
- Restore and enhance the ecology of the shoreline and riparian areas; and
- Use greenways to connect to nearby parks and creek areas.



*Figure 9. Conceptual illustration of terraced public spaces integrated with shoreline features to provide an engaging waterfront experience that retains some natural elements*

## 4.2 Building Siting, Orientation and Views



Figure 10. Key view corridors of the mountains and oceans are preserved through building height, siting and orientation

- 4.2.1 Orient taller building elements in a north/south direction to balance the need to reduce energy consumption, minimize privacy and noise conflicts, and provide daylight access to public and private spaces, while also maximizing public views of the North Shore mountains to the north and Burrard Inlet and the City of Vancouver to the south. See Figure 10.
- 4.2.2 Orient lower buildings in an east/west direction to frame views of the North Shore Mountains to the north and Burrard Inlet and the City of Vancouver to the south, and to the water, as well as to allow light penetration into the interior blocks and courtyards. See Figure 10.
- 4.2.3 Clearly define the street, waterfront, or open space edge with a 1 storey to a 5 storey street wall.
- 4.2.4 Create an interesting interface between buildings and the sidewalk to support pedestrian leisure and commercial activity, including using varied colours and materials, and ensuring frequent doorways and windows.

- 4.2.5 Consider design measures to mitigate noise and vibration impacts for buildings in close proximity to industrial areas. Noise attenuation measures could include orienting buildings and openings away from the source noise, using triple glazed windows, reducing the ratio of windows to wall area, placement of vegetation, acoustic barriers, etc.
- 4.2.6 Orient buildings toward the street, maximizing the number of residential and commercial units with direct overview of public areas in order to increase security.
- 4.2.7 Provide weather protection for pedestrians on all commercial frontages.
- 4.2.8 Define principal doorways and windows.
- 4.2.9 Modulate semi-private and semi-public spaces along streets and mews.
- 4.2.10 Maximize transparency and porosity (penetrable shop fronts) along commercial frontages.
- 4.2.11 Animate open spaces and paths by locating key activity generating uses close by and by providing appropriate seating, lighting, public artwork and other elements to add interest and activity.
- 4.2.12 The maximum floor plate dimension of portions of buildings exceeding 5 storeys in height should be 35 m (see Figure 11).
- 4.2.13 In order to minimize shadows, in the east-west direction, the maximum floor plate width above 5 storeys should not exceed 20 m (see Figure 11). Office buildings are excepted from this guideline.
- 4.2.14 The spatial separation between portions of buildings exceeding 5 storeys in height should be:
- (1) on the same block face – a minimum of 24 m with 40 m preferred;
  - (2) across north-south streets from each other – 22.8 m ;
  - (3) across the east-west Mews – 16.2 m (see Figure 11).
- 4.2.15 Balconies and bay windows may protrude into setbacks and spatial separations by a maximum of 0.75 m.
- 4.2.16 The portion of any building oriented toward Kings Mill Walk or the Spirit Trail and exceeding 5 storeys should be stepped back by a minimum of 3.0 m.
- 4.2.17 Foreground buildings may be exempted from maximum floor plate dimensions, siting and setback and stepback requirements.
- 4.2.18 DPA and Zoning Bylaw setback requirements, floor plate dimensions, building separations, and stepbacks may be varied in the Development Permit, subject to the approval of the Director of Community Development, provided the following criteria have been met:
- (1) buildings do not have living spaces directly facing one another; and,
  - (2) privacy and overlook issues have been fully addressed; and,
  - (3) the proposed design has been reviewed and approved by the Advisory Design Panel.

- 4.2.19 Buildings should be accentuated on street corners through the use of architectural details, massing and/or prominent building entries.
- 4.2.20 Modulate building faces in width, height, depth and finishes and accentuate building entries to visually 'break down' large building walls.

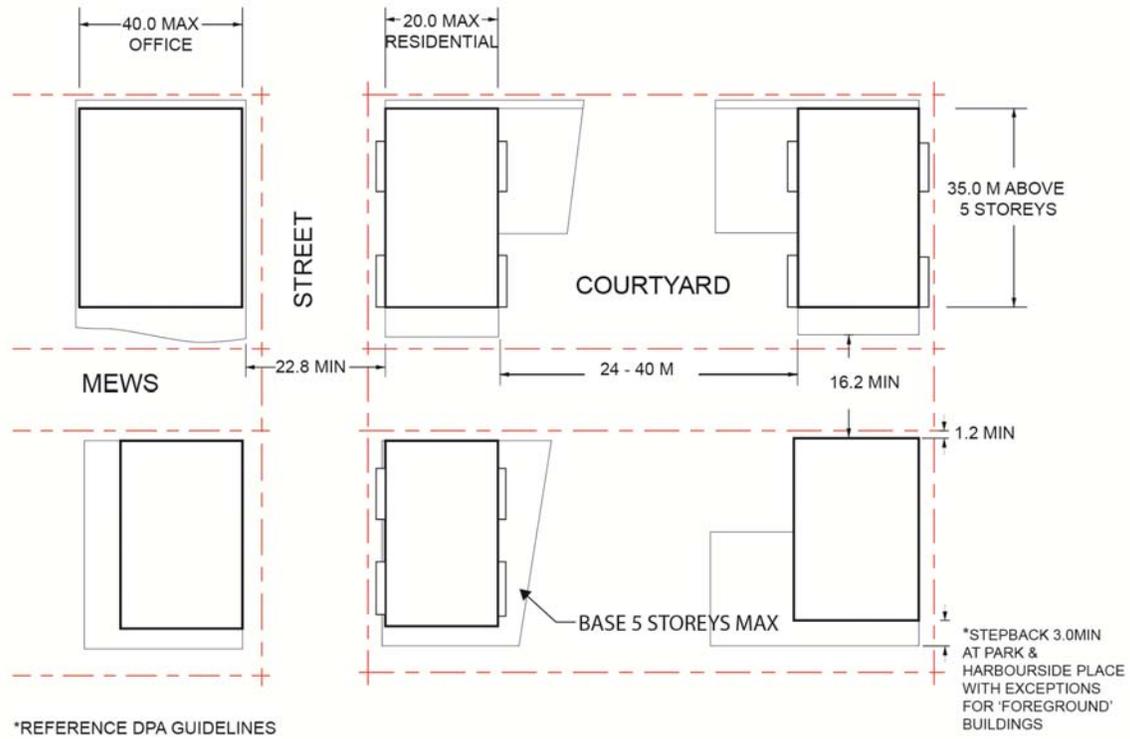


Figure 11. Key dimensional requirements for building siting and orientation.

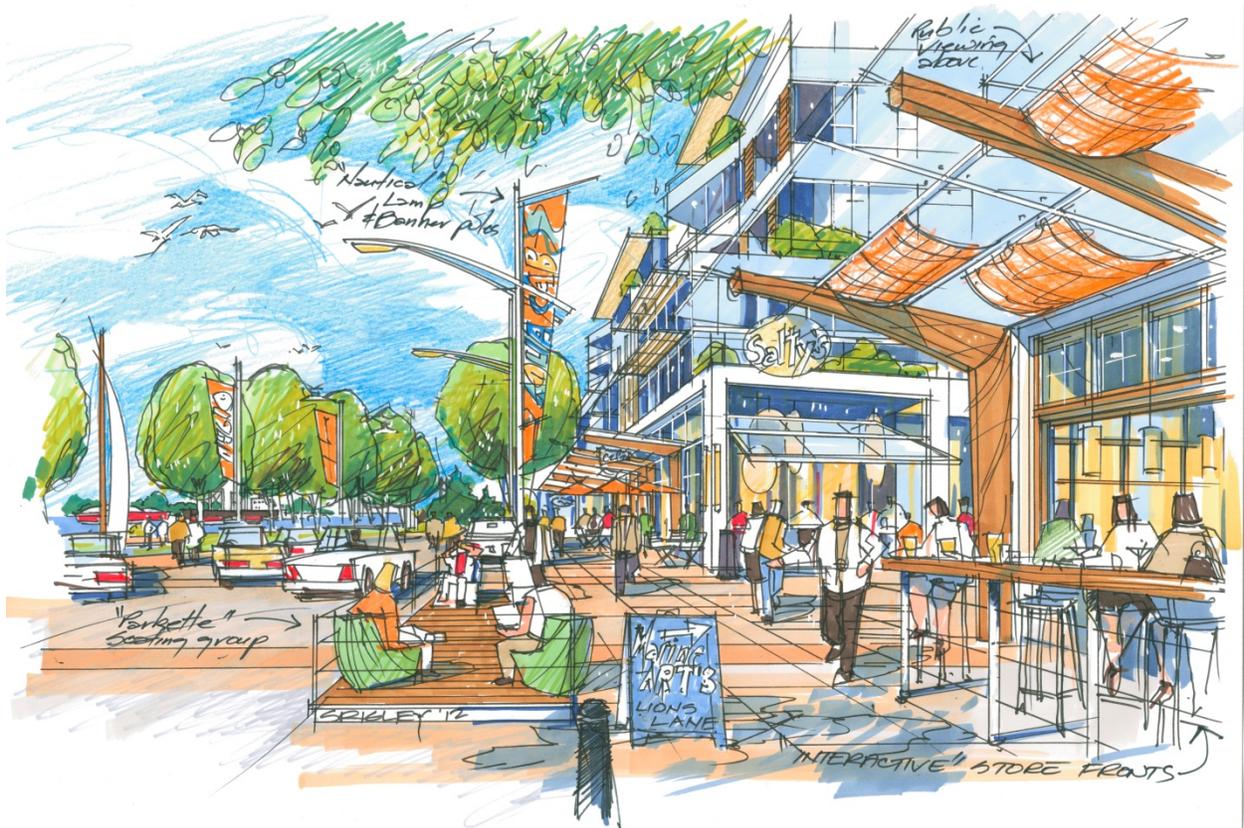


Figure 12. Integrate modulated, transparent and permeable commercial facades to create a vibrant streetscape

- 4.2.21 Site buildings to maximize opportunities for creating usable, and well-integrated private open spaces and public or semi-public amenity areas.
- 4.2.22 Design private open spaces to increase liveability in the neighbourhood by balancing the need for privacy with the desire for vibrancy and public activity. Refer to Section 4.11 Open Spaces.

### 4.3 Building Form, Height & Massing

The Harbourside Waterfront development is planned to include ground floor office and/or retail uses areas along Fell Avenue, Harbourside Place and Harbourside Drive. Buildings are intended to be a combination of stand-alone residential uses, stand-alone commercial uses and mixed uses.

- 4.3.1 Create a diversity of architectural expression in the form and character of buildings by varying massing, architectural design and material selection across the neighbourhood; and with consideration of engaging a variety of architectural and design firms;

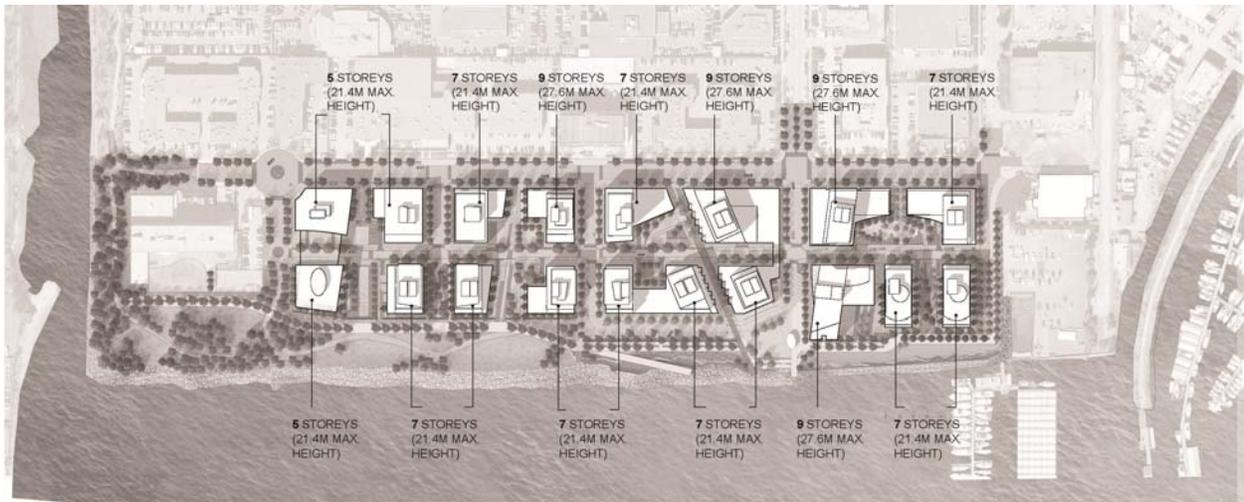


Figure 13: Building heights

- 4.3.2 Comply with building height requirement outlined in the Official Community Plan and in the Zoning Bylaw.
- 4.3.3 Building forms must follow the recommended characteristics described and illustrated with regard to Figure 14, below:

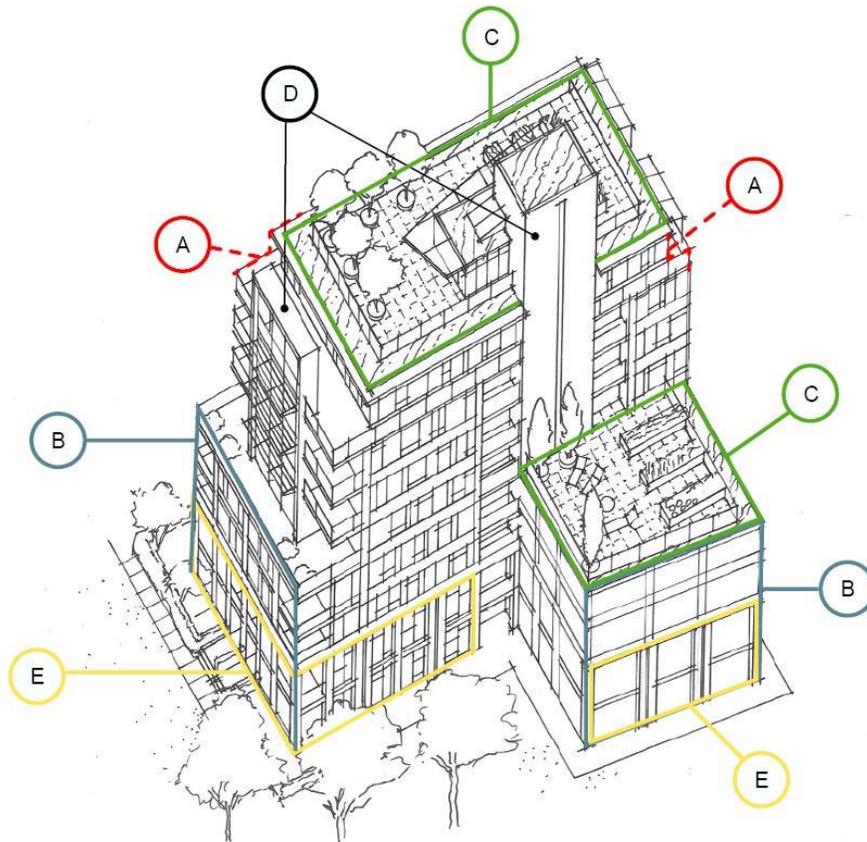


Figure 14. Use Step-backs and lower podium heights to help maintain pedestrian-scale

**A. Step-back at upper floors:**

- Create minimum step backs of at least 3 m on southern elevations of all building elements above the fourth floor. Step backs should be integrated with material changes. Foreground buildings would be excluded from this requirement.

**B. Podium and building wings:**

- Limit building height to a 4-storey scale expression adjacent to the park and Spirit Trail, except for the unique foreground buildings which should be allowed to exceed this maximum.
- East-west podiums along Harbourside Drive should be kept to a maximum 5-storey scale expression. Variation in the podium heights between 3, 4 and 5 storeys are strongly encouraged.
- Taller ceiling heights for commercial spaces are encouraged along Fell Avenue and Harbourside Place.

**C. Rooftops:**

- Roof areas are encouraged to be developed as a combination of usable common and private areas, intensive green roof areas and urban agriculture areas, where appropriate. See Figure 15.
- Both elevator and stair access to usable rooftop areas is strongly encouraged.
- Elevator equipment rooms and other rooftop appurtenances are to be limited in number, minimized in off-site visual impact and architecturally integrated in built form.

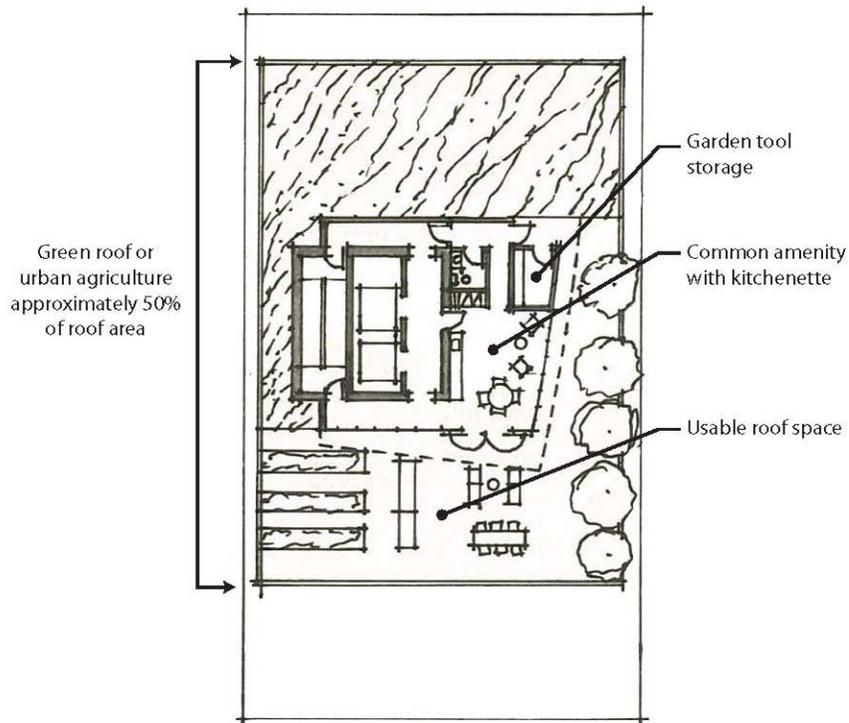


Figure 15. Possible layout of usable roof

**D. Interconnecting Forms:**

- Allow for a variety of interconnecting form elements that link between base, middle and top components.

**E. Base Expression:**

- Create 1 to 5 storey street scale expression exploring different approaches to fenestration, recessed entries, balcony configurations, and materiality all relating to a human scale along street frontages and courtyard exposures. Variation of architectural expression and heights in this range is encouraged. See Figure 16.



Figure 16. One to five storey base expression enhances human scale along street frontages and public open spaces.

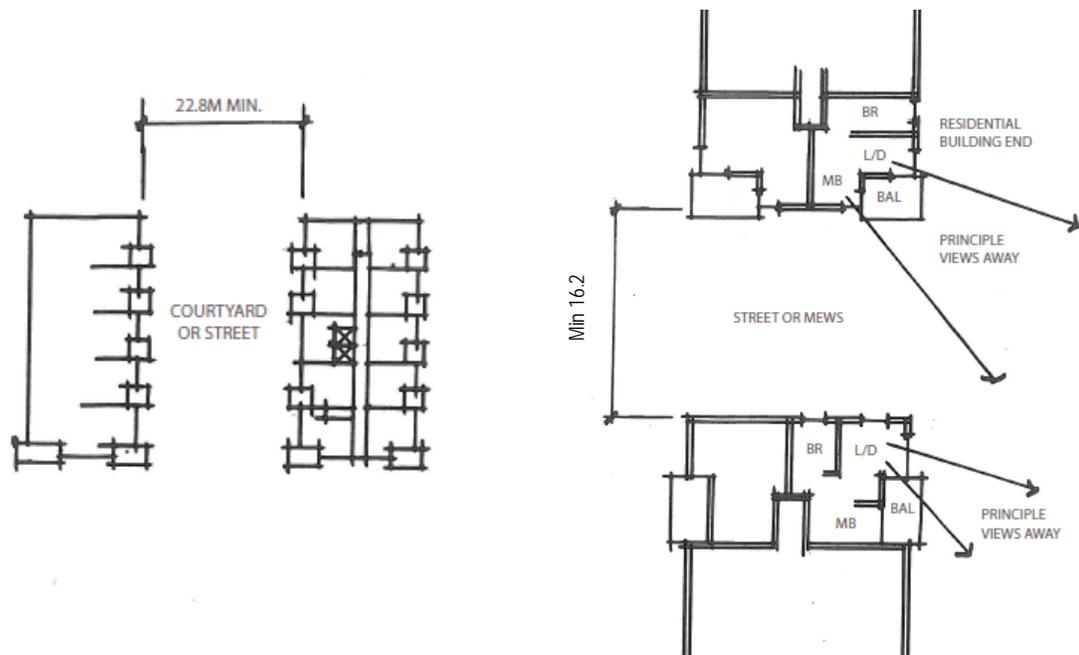


Figure 17. Minimum separation distances will be greater for buildings with living spaces looking towards one another versus buildings with living spaces looking outwards or away from one another. Also refer to Figure 11.



Figure 18. Conceptual illustration of the varied form and material expression creating a rich sense of place and distinctive character

- 4.3.3 The design and detail of buildings and of publicly accessible private spaces should complement the design of the public realm through the use of complementary materials, forms and motifs. Aspects to consider include paving, lighting, planting, driveway crossings, pedestrian entrances and walks, seating, display windows, weather protection, garbage storage, recycling, and loading facilities.
- 4.3.4 Building heights shall be as generally indicated in Figure 18.5, with a maximum of four buildings achieving a height of 27.5 m. Consideration can be given to alternate locations for the four 27.5 m buildings provided that the proposed locations preserve view corridors and maintain lower building forms closer to the water.

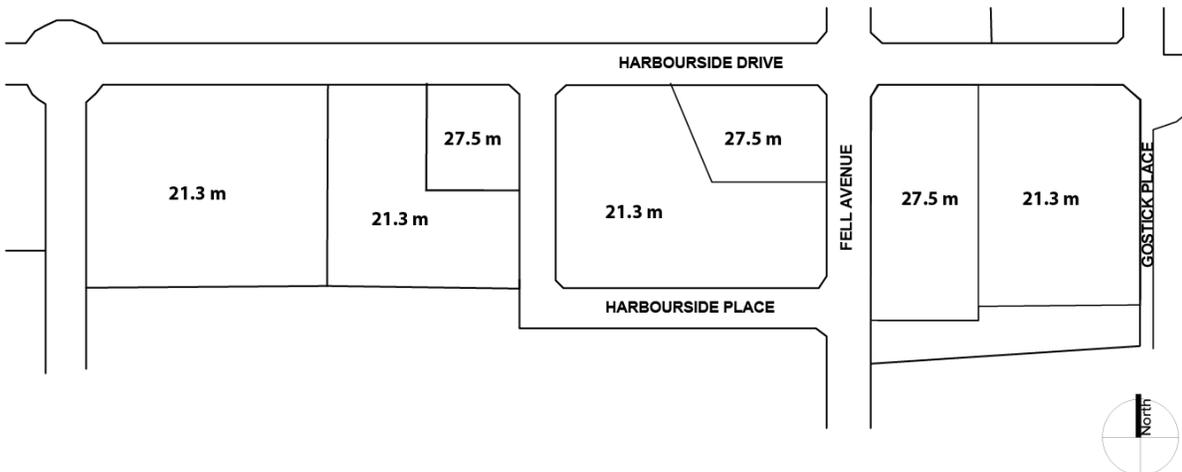


Figure 18.5 General locations of taller Buildings

## 4.4 Building Materials

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- 4.4.1 Use a palette of materials, textures and colours that are consistent with the industrial and waterfront characteristics of the surroundings to create a distinct neighbourhood identity and “sense of place”
- 4.4.2 Select rugged materials and durable building finishes that are intended to combine with materials of a more highly finished nature. Brick, concrete, galvanized steel, finished stone, heavy timber and glulam wood structural elements, form the basis of the hardy “industrial chic” vocabulary.
- 4.4.3 More highly finished products such as prefinished aluminum cladding, painted steel and anodized aluminum, and spandrel glazing are encouraged to offset the industrial with a nautical or marine reference.
- 4.4.4 Use glazing colour to support cohesive design.
- 4.4.5 Generally use building materials with origins from British Columbia and the Pacific Northwest where they are available and price comparable.

## 4.5 Weather Protection & Shadowing

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- 4.5.1 Provide weather protection at all common entries to buildings.
- 4.5.2 Create substantially continuous pedestrian weather protection in the active retail heart of the development through the use of canopies over sidewalks at all commercial retail frontages with a recommended minimum depth of 2.4m, (8 ft.), increased in areas of high pedestrian activity where appropriate. See Figure 19.
- 4.5.3 Allow daylight to reach common and public areas through the proportion of height to width of buildings and adjacent streets/open space.



*Figure 19. Sidewalks should include pedestrian weather protection along all retail street frontages.*

## 4.6 Safety, Security & Accessibility

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- 4.6.1 Apply principles of Crime Prevention Through Environmental Design (“CPTED”) to create safe, secure and pleasant buildings and open spaces accessible to people of all abilities.
- 4.6.2 Encourage casual surveillance and “eyes on the street,” through the placement of windows, balconies and active street-level uses. Avoid blank, windowless walls.
- 4.6.3 Take into account the following factors to design urban spaces which people feel safe to use:
- Lighting (designed to maximize visibility of faces and minimize glare);
  - Sightlines (ability to see the route ahead, and to observe open spaces from buildings);
  - Entrapment Spots (avoid small areas shielded on three sides);
  - Movement Predictors (avoid unchangeable routes or paths which offer no choice to pedestrians);
  - Visibility by Others (design for seeing and being seen);
  - Wayfinding is clear;
  - Land Use Mix (avoid single use areas; include day and night uses so people are present most of the time);
  - Activity Generators (design places to accommodate uses which attract people and provide opportunities for surveillance); and
  - Sense of Ownership (linked with responsive space management and participatory design; fits with the features of street-facing layouts, well-defined access, through routes and well-used public spaces).



Figure 20. Orient buildings to provide overlook of public spaces and increase safety and security

- 4.6.4 A minimum of 25% of units shall be designed to Level Two adaptable design standard, with consideration given to increasing the number of units that meet Level Two or Level Three adaptable design standards. Consider 'visitability' access for all residences. Consider additional adaptive features for 'aging in place'.
- 4.6.5 Create accessible public and private spaces that consider users with special needs such as people with disabilities, the elderly, parents with strollers, and young children.
- 4.6.6 Accommodate people of all abilities by ensuring that pedestrian routes and access points are fully accessible to the mobility impaired (including those with strollers), with a minimum clear width of 1.8 m.
- 4.6.7 Minimize segregation of people with disabilities from people without disabilities, by integrating seamless grade changes (wide and accessible ramps) into overall circulation routes (i.e. without use of separate ramps).
- 4.6.8 Avoid the use of "stramps" or ramps with drop-offs to stairs, which are a big hazard to wheelchair users and the visually impaired.
- 4.6.9 Integrate high contrast colours and design elements as well as legible tactile surfaces at key wayfinding points, in order to address the needs of people with visual impairments.
- 4.6.10 Include two let-downs at intersections for improved directionality and other standard designs where possible, such that streetscapes and the public realm can be "read" and understood by people who are visually impaired.
- 4.6.11 Consider curbless streets or use of rollover curbs along the length of on-street parking areas to greatly enhance street accessibility and ensure freedom of movement for people with motorized wheelchairs, while continuing to protect the public realm from negative impacts from motor vehicles.
- 4.6.12 Where appropriate, consider physically separated paths between different modes of travel.
- 4.6.13 Avoid slip hazards by applying maintenance guidelines that incorporate best practices for surface cleaning (with regard to leaf / snow removal), or consider planting evergreen trees instead of deciduous trees in proximity to major pedestrian pathways.
- 4.6.14 Encourage seating with backrests in publicly accessible areas. A minimum seat depth of 40 cm should be provided for seats without backrests or with backrests less than 30 cm high. A minimum seat depth of 35 cm should be provided for seats with backrests at least 30 cm high.
- 4.6.15 Disabled parking spaces must be located as close to the main entrances of buildings as possible.
- 4.6.16 Curb ramps or mountable curbs should be used to allow wheelchair users to directly access the sidewalk.
- 4.6.17 Landscaping along the sidewalk should be strategically located as to not restrict movements by wheelchair/ stroller users exiting their vehicles.

## 4.7 Circulation, Access & Parking

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*Many of these guidelines also address the Energy & Greenhouse Gas Emission Management Objectives in Section 2.0.*

- 4.7.1 Location of parking entrances to the underground parking structures must mitigate the impacts of motor vehicles on pedestrians and the public realm.
- 4.7.2 Parking entrances must be integrated into the buildings or landscape, and exposed walls and soffits must be architecturally treated.
- 4.7.3 Sight visibility requirements must be met at the parkade entrances to ensure safety for vehicles and pedestrians.
- 4.7.4 Clearance at garage entrances must be able to accommodate the largest commercial vehicle accessing the internal loading bay, and have a minimum clearance height of 2.134m.
- 4.7.5 Residential parking access, loading and service areas are encouraged to be shared by adjacent commercial uses.
- 4.7.6 Consideration may be given to reducing the required residential and commercial parking below the amounts required under the Zoning Bylaw, provided that:
  - (1) The decrease can be justified based on a parking demand study;
  - (2) Means of meeting anticipated parking demand have been identified (e.g. the availability of parking in a nearby facility); and,
  - (3) Means of reducing anticipated parking demand have been identified.
- 4.7.7 Provide separate and secure parking for each residential building with direct vertical access to each main building entrance.
- 4.7.8 Pool visitor parking for residential and commercial buildings where possible.
- 4.7.9 Include clearly identified visitor parking. Consider short term retail parking regulations, to encourage a high turnover of users.
- 4.7.10 Locate surface parking areas so they do not visually dominate either the development or the public domain surrounding the development; underground parking is encouraged.
- 4.7.11 Incorporate preferential parking for carpool, car share and electric vehicles to encourage alternative modes of transportation.
- 4.7.12 Accommodate some on-street parking, and drop-off to support the commercial needs of the community.
- 4.7.13 To reduce parking demand and car ownership and support housing affordability, provide a minimum of one car-share vehicle per phase of development, and evaluate opportunities for unbundling parking from residential units (to be sold separately).
- 4.7.14 Efforts should be made to provide on-site parking at a level consistent with the sustainability objectives outlined in this DPA and market demands, and to support visitor use. Development should discourage the predominance of cars by restricting parking times and introducing pay parking for some on-site parking spaces.

- 4.7.15 Facilitate and promote the use of electric vehicles by providing 20% of structure parking spaces with access to electric supply, and supply rough-in conduits and provide two level 2 charging stations for each commercial building.
- 4.7.16 Parkade entries will have clear and effective wayfinding and incorporate CPTED strategies.

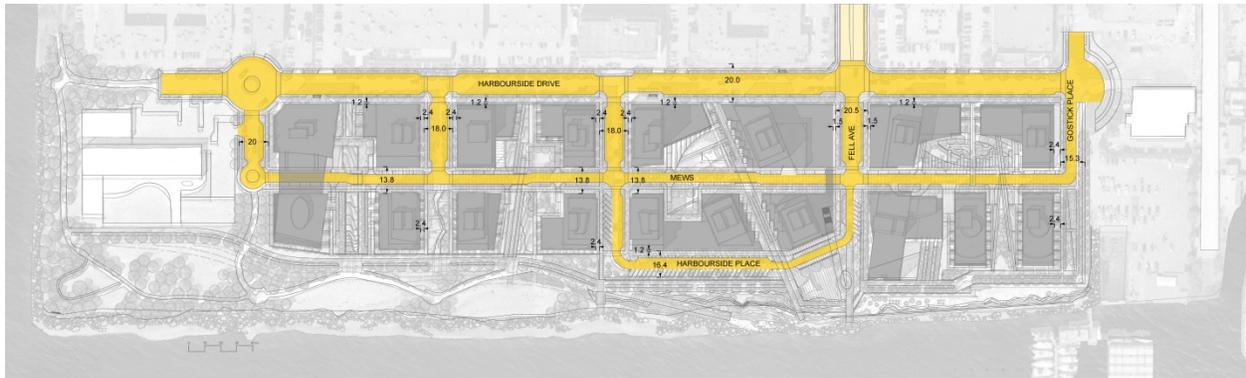


Figure 21. Conceptual illustration of streets, circulation and setbacks

## 4.8 Streets

*Note: Most of these guidelines also address Energy & Greenhouse Gas Emission Management Objectives in Section 2.0. Section 2.0 objectives should be cross-referenced.*

- 4.8.1 Prioritize circulation within the development in the order of pedestrians, cyclists, transit vehicles and private vehicles. Street network and open spaces shall create an integrated network that supports universal accessibility.
- 4.8.2 Maximize pedestrian access and permeability while limiting access and through traffic circulation for motor vehicles except for high activity commercial areas underground parking, and service access.



*Figure 22. Conceptual illustration of alternative street design standards that are encouraged and must satisfy the City Engineer's performance standards.*

- 4.8.3 Explore alternative design street standards (e.g. special paving, bollards rather than curbs) within the development area to enhance the attractiveness and low-impact development objectives of Harbourside Waterfront, while effectively managing maintenance costs and satisfying the City Engineer's performance standards. Refer to Streetscape Design Guidelines, which will be registered on title to the subject property.
- 4.8.4 Offer a finer grain network with the provision of pedestrian right-of-ways in addition to public streets, together with usable entrance terraces, fencing, signage, canopies, planters, street trees and lighting etc. at street frontages, appropriate to residential or commercial usage.
- 4.8.5 The East/West neighbourhood mews at Harbourside Waterfront may accommodate an extension of the public pedestrian realm into the vehicular realm and serve a multi-purpose function.
- 4.8.6 The mews and new north south streets will serve as the main access through residential neighbourhoods, accommodating pedestrian movement, cyclists and vehicular traffic.
- 4.8.7 Design Harbourside Place and the southmost block of Fell Avenue as the retail "high street" that defines the heart of the Harbourside Waterfront community. These streets must border or embrace the active retail, public, and community facilities and open spaces.

- 4.8.8 Design the southernmost areas of Harbourside Place so that the roadway may be closed off to traffic for special events. Carefully design driving and pedestrian areas to appear as an integrated, shared surface, to be universally accessible to persons with disabilities, and to use materials which identify it as a special and unique area, provided that the City Engineer's performance and safety standards are met.
- 4.8.9 Neighbourhood street edges may be defined by ground oriented residential buildings providing a layering of public and private spaces with patios and terraces accessing tree-lined sidewalks. Planted street edges and corner bulges, while maintaining site lines for all road users, will function to enhance the neighbourhood character and create a distinctively intimate street environment without posing sight visibility issues or increasing risk for cyclists on the designated bike routes.
- 4.8.10 Access to the site should accommodate accessible pedestrian and cyclist mobility as well as the movement of goods and services through the community, and function as important cross-town commuting routes. Planted medians, tree lined boulevards, improved sidewalks and bikeways, and corner bulges on side streets are encouraged to reduce the scale of the street corridor and to support active modes of transportation.

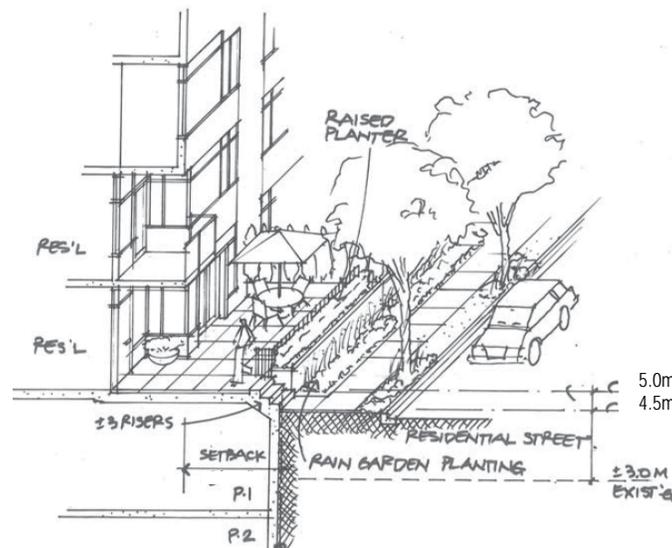
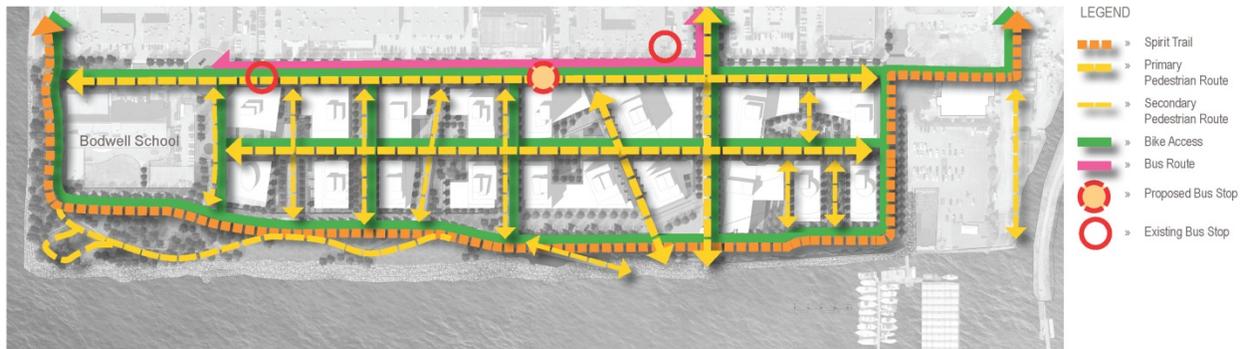


Figure 23. Conceptual illustration of layered patios and terraces marking the interface between public and private space

- 4.8.11 A cohesive street character should be created across the development by selecting thematically consistent street elements such as paving, plantings, lighting, and street furniture. Variation across different areas such as the diagonal north-south lane, the proposed plaza at the foot of Fell Avenue or the retail area should exist within a broader thematically coherent suite of elements. See Streetscape Design Guidelines registered on title to the subject property.
- 4.8.12 Consider areas adjacent to the mews as potential locations for green courtyards which may provide for a variety of uses such as outdoor areas of restaurants, residential yards and programmed and un-programmed landscaped areas for relaxation and play.

## 4.9 Active Transportation & Transit

*Note: Most of these guidelines also address Energy & Greenhouse Gas Emission Management Objectives in Section 2.0. These objectives should be cross-referenced.*



Pedestrians, Bikes and Transit

*Figure 24. Conceptual illustration of sustainable transportation network*

Harbourside Waterfront will be a mixed use development where vehicle trips are minimized by providing working, living, commercial and recreation and leisure opportunities within walking distance of each other. Land uses are supportive of the existing and future needs of the area to reduce external trips and lower peak vehicle demand periods

- 4.9.1 To meet the objective of a walkable neighbourhood, create an amenity rich space that supports a variety of supportive pedestrian infrastructure, potentially including trails, paths, boardwalks, sidewalks, pedestrian bridges, plazas and open spaces that provide a range of universally accessible experiences for the pedestrian.
- 4.9.2 Provide a variety of facilities for cyclists connect to the Spirit Trail along the waterfront as well as on-street cycle route.



*Figure 25. Integrate buildings with outdoor pedestrian spaces to enhance the walkability of the neighbourhood*

- 4.9.3 Provide secure and universally accessible pedestrian walkway connections on-site and to City sidewalks including:
- Connecting and integrating buildings with pedestrian-oriented open spaces such as narrowly-spaced streets, courtyards, gardens, patios, and other landscaped areas;
  - Providing pedestrians and cyclists with more route choice and permeability both on and off-street;
  - Providing safe, effectively-lit sidewalks and pedestrian paths;
  - Slowing vehicular traffic through the development; and
  - Designing aesthetically pleasing streets, sidewalks and street furniture that can be well maintained over the longer term.
- 4.9.4 Consider marked and enhanced pedestrian crossings at mid-block locations and intersections.
- 4.9.5 Include an arrival and departure gateway node for transit users on Harbourside Drive within the development with strong pedestrian, cycling infrastructure and social vitality. Consider including the following features in the sustainable transportation gateway:
- Café or similar services close to node;
  - Wi-Fi access (for bus tracking);
  - Weather-protected, safe and secure location;
  - Appropriate signage and lighting;
  - End of trip bike facilities including, safe, covered bike parking and some access to charging facilities for electric bikes; and
  - Safe access to the Spirit Trail for diverse pedestrians and cyclists.
- 4.9.6 Where transit routes exist provide transit shelters that are designed with consideration to adjacent commercial uses, where possible.
- 4.9.7 Provide “end of trip” facilities within buildings for cyclists (i.e. shower, locker and changing room) to make cycling a more viable and attractive transportation mode. Consider surpassing Zoning Bylaw requirements.
- 4.9.8 Design street infrastructure to encourage cycling:
- Develop a bike plan as part of street and site design;
  - Design the bike network to accommodate seasoned commuters and recreational cyclists as well as children, young adults and seniors; and
  - Locate safe end of trip facilities for visitors at residential and commercial locations, with a portion that are weather protected and some that allow for electric bike charging.

## 4.10 Landscape, Site Furnishings & Public Art

For further related guidelines, see Section 3.2 Rainwater Management

- 4.10.1 Consider positioning a series of mid-block “parklets” at Harbourside Place and the foot of Fell Avenue between parallel parking stalls along mid-block conditions to provide additional outdoor seating and animation within the pedestrian sidewalk realm opposite to street retail (see Figure 26).

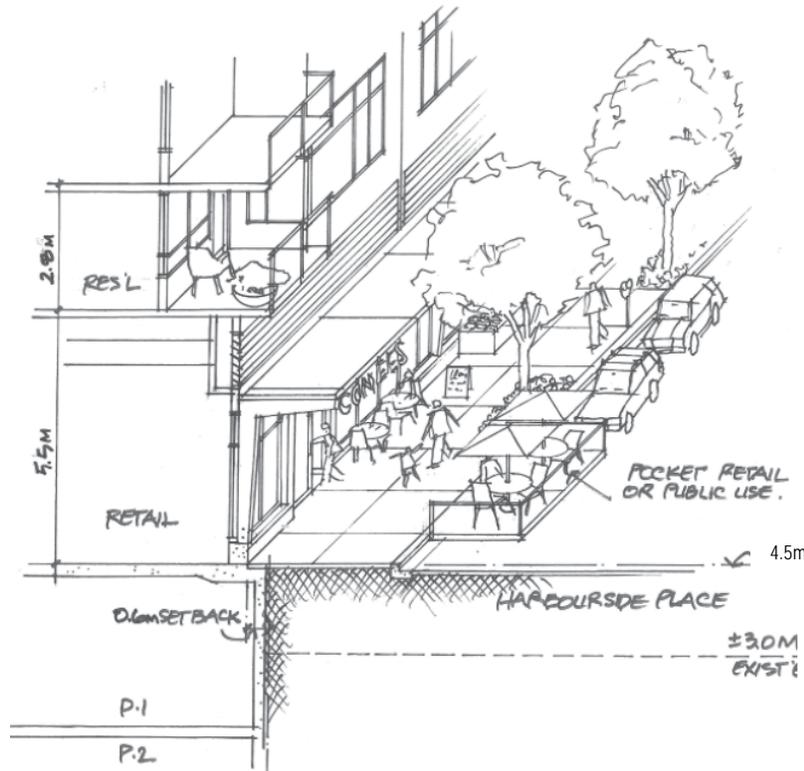


Figure 26. Conceptual illustration of a Harbourside Place “parklet”

- 4.10.2 Prior to Development Permit issuance, furnishings should be selected for different areas such as the public waterfront, streets, parks and each of the development parcels from a thematically coherent suite of elements, reflecting an industrial/marine character. There should be a combination of industrial/marine aesthetic fixtures that may include benches, bollards, trash and recycling receptacles, and bike racks all of which will be used to create a unique neighbourhood identity. See Figure 27.



Figure 27. Examples of maritime elements to enhance the public realm

4.10.3 Reflect maritime elements from the adjacent industrial areas in the public realm and site furnishings. These include the shipping cleats, pile/pier structures, cabling and lighting surrounds, and material finishes that are robust, resistant to salt corrosion reinforce the waterfront industrial character of the site, and are at least equivalent to City standards in their construction and materiality. See Figure 27.



Figure 28. *Public art integrated into the design of the public realm*

4.10.4 For the surface materials of site furnishings utilize long-lasting materials including certified hardwoods and metal finishes in order to minimize long term maintenance requirements. Simple yet sophisticated design and construction methods should aim to reduce construction and maintenance costs.

4.10.5 Integrate public art into the overall design of the public realm both as stand-alone and integrated pieces. See Figure 28.

- Public art should have a focus on the themes of: sustainability; industrial maritime; and/or community place-making.
- Consider educational public art and interpretative displays to foster interest and awareness of sustainability features such as the sea level rise flood management plan, district energy system; its historical and current social and economic significance in ship building and a vantage of marine activity.
- The plaza at the foot of Fell Avenue at the waterfront provides an opportunity for a significant signature public art installation.
- The plaza and its public art components should be installed in Phase 1 of development.

4.10.6 Trees within the neighbourhood are intended to enhance local ecological conditions, reduce the urban heat island effect, improve the pedestrian realm, and define the overall neighbourhood character and place.

4.10.7 Street end views to the waterfront should be given consideration in the placement and planting of trees.

4.10.8 Street, boulevard and public realm trees should be selected with consideration of disease tolerance, scale and character, colour, canopy shade, hardiness, allergenic risks and sustainability attributes. The City of North Vancouver's Street Tree Master Plan (2004) should be referenced and the City will work in conjunction with the project landscape architect to determine the appropriate tree species.

4.10.9 Incorporate a planting strategy that is intended to enhance local ecological conditions, reduce the urban heat island effect, improve the pedestrian realm, and define the overall neighbourhood character and place. Hardy and durable plant material that is drought resistant, primarily native or non-invasive introduced species, low maintenance, pest resistant and adaptable should be used.

## 4.11 Open Spaces

The open spaces within the Harbourside Waterfront community will become part of an interconnected system of parks and open space including an improved and expanded King's Mill Walk, as determined by a City-led and public parks planning process. It is anticipated that King's Mill Walk will be extended along the waterfront and will respect and maintain the existing uses within King's Mill Park including the designated dog park, places to access the water's edge and spaces for passive seating and recreation. Future anticipated uses are expected to compliment these program features with a focus on increasing access to the water's edge, as well as creating more opportunities for active recreation, seating, viewing, and children's play. It is anticipated that Kings Mill Walk will be designed with strong and direct linkages to the neighbourhoods and residents to the north and with strong east west connectivity via the Spirit Trail. The ultimate park design will add to the contiguous Spirit Trail as a unique, waterfront-oriented, multi-use and fully accessible greenway that will provide access across the North Shore. See Figures 29 and 30.

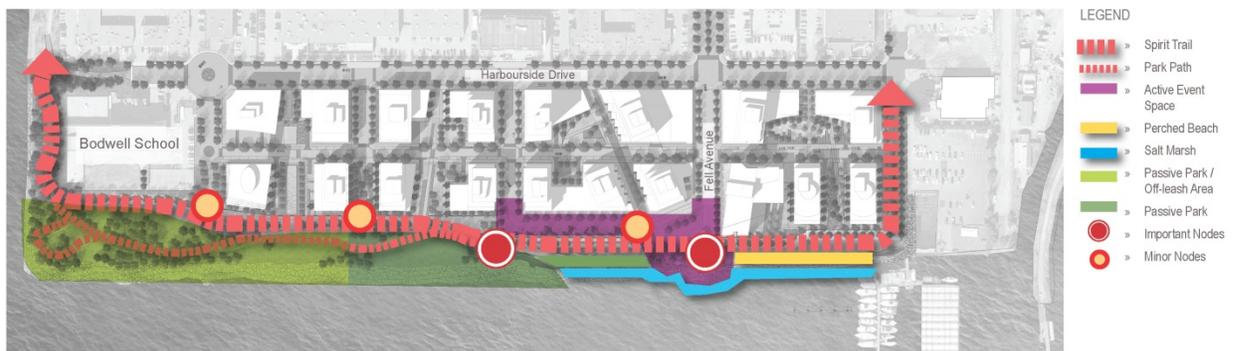


Figure 29. Conceptual illustration of waterfront linkage design concepts

4.11.1 Provide a number of smaller neighbourhood green spaces within the larger open space system. Children's play areas may be designed in one or more of these neighbourhood green spaces that could include courtyards and/or building rooftops. These play areas could include flexible play environments that stimulate creativity and exploration. In addition to play areas, urban agriculture, rainwater collection, biodiversity, and recreation shall be considered in all neighbourhood green spaces.

Public Passages Through Site

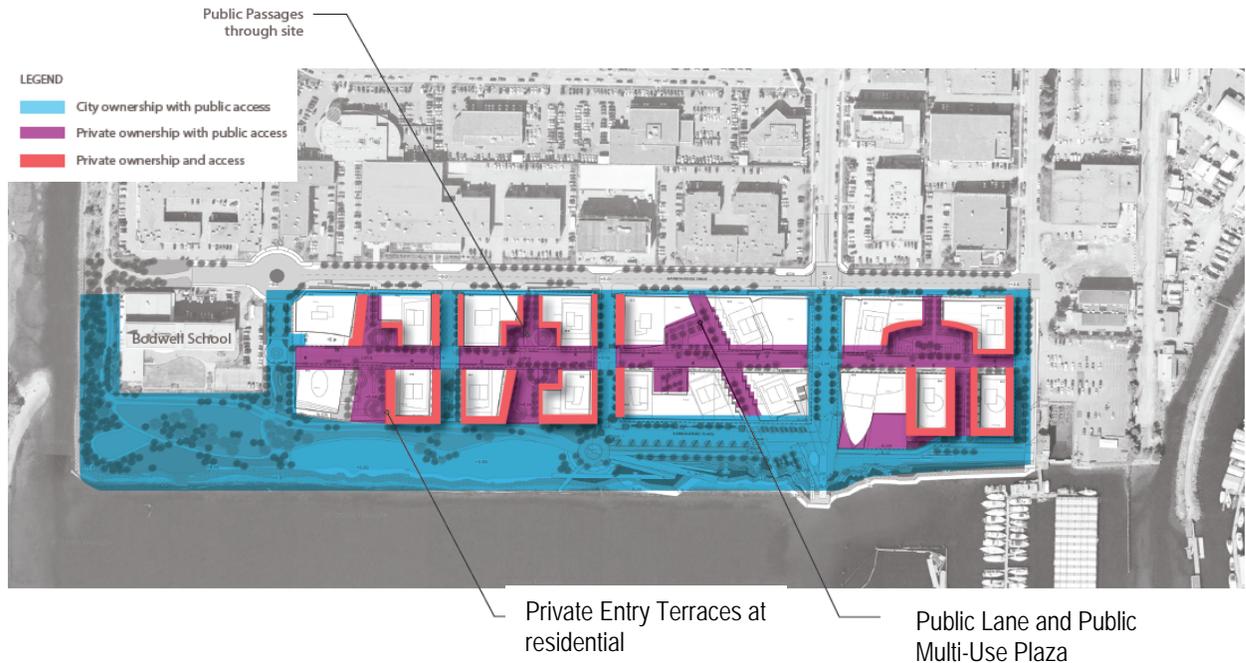


Figure 30. Conceptual illustration of the hierarchy of spaces from private, semi-private, and semi-public to public

- 4.11.2 Provide a network of publicly accessible open spaces. These would include linear green spaces as street extensions of the north south street right of ways, as well as publicly accessible passages through development sites. Linear green spaces defined within street right-of-ways will enable connectivity between the street system and the waterfront park space and serve as major pedestrian and cyclist connections. They should create more intimate open space experiences offering places for outdoor seating, viewing the mountains and water, as well as places to celebrate and manage rainwater runoff. Publicly accessible passages through development sites will enable connectivity between the development courtyards and the waterfront park space. They shall have a public feel, not be perceived as private open space for the surrounding residences and should connect and integrate with proposed public right-of-way linkages and public park space. See Figure 30.
- 4.11.3 Provide street end plazas and/or green spaces that become the pedestrian oriented extensions to the north south streets in areas of the plan designated as nodes. The design of these areas should reflect the neighbourhood character areas and be recognized as important nodes and places within the Harbourside Waterfront community. See Figure 29.
- 4.11.4 Design the proposed plaza at the southmost area of Fell Avenue to act as the neighbourhood heart and centre of the Harbourside Waterfront community. The plaza and its extension to the waterfront is intended to be one of the most active and flexible spaces in the community. It may serve as a public gathering place, ceremonial space, performance space, outdoor market place, place for socializing, and a place for play. See Figure 31.

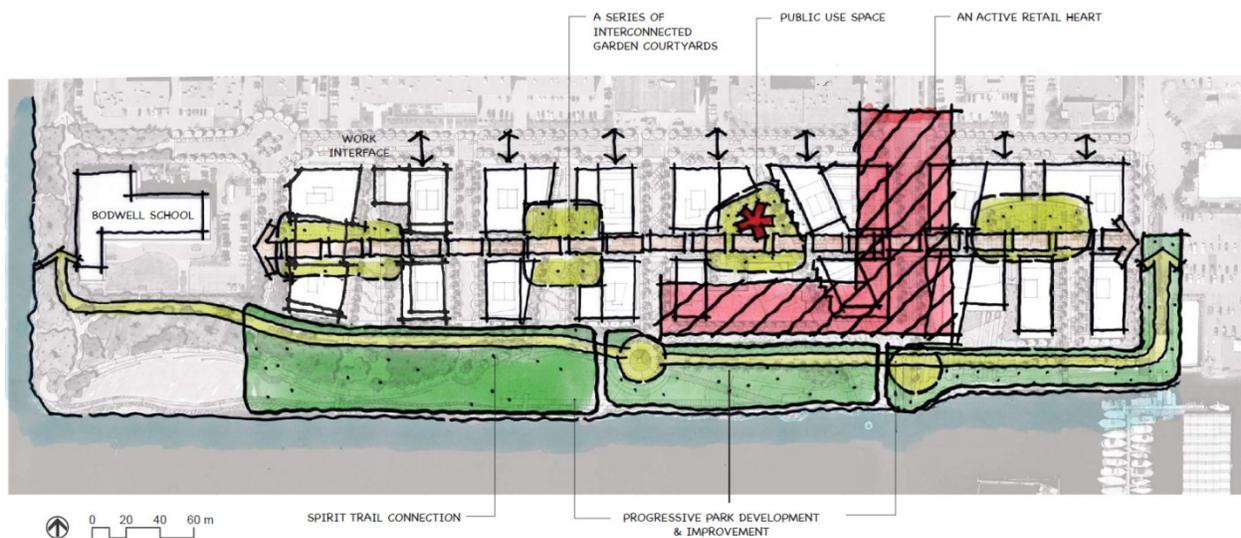


Figure 31. Conceptual illustration of key public realm components, i.e. open green spaces, garden courtyards, and active retail areas

- 4.11.5 Harbourside Place Plaza located at the “elbow” of Harbourside Place should be designed to act as an important node that connects the westerly section of King’s Mill Park with the more active, urban ‘high street’ and waterfront promenade to the east. It is intended to be a place for seating, orientation and an opportunity to integrate environmental public art relating to or celebrating the wind, the sun and/or the rain. See Figure 31.
- 4.11.6 Green spaces must incorporate methods for rainwater runoff control and capture that mimic the natural runoff system through infiltration of rainwater on-site. These rain gardens must be designed to be highly visible features and should incorporate educational elements, such as signage, in order to help communicate the overall stormwater story.

## 4.12 Signage & Wayfinding

- 4.12.1 Link all pedestrian sidewalks and multi-use trails to the Spirit Trail and the wider trail network that connects to Lonsdale Quay/ Seabus, utilizing the wayfinding system developed for the Spirit Trail.
- 4.12.2 Signage that adds colour and character to the built form is encouraged.
- 4.12.3 Coordinate commercial signage with the overall design of the building, landscaping, and public realm. Rooftop / parapet signs are prohibited on both commercial and residential buildings.
- 4.12.4 Where possible, employ materials for signage that are consistent with the public realm furnishings and are inspired by and reflect maritime elements from the adjacent industrial areas. These include the shipping cleats, pile/pier structures, cabling and lighting surrounds, and material finishes that are robust, resistant to salt corrosion and reinforce the waterfront industrial character of the site.
- 4.12.5 To facilitate creative and attractive signage consistent with this section 4.12, Development Permits issued may vary the standards in the Sign Bylaw, 1992, No. 6363.

## 4.13 Lighting

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- 4.13.1 Consider light pollution, energy efficiency, safety, security, and aesthetics in the design and selection of lighting. Lighting should minimize light pollution both to the sky and excess light on the ground. Glare conditions should be reduced especially on the foreshore where city and water views predominate. Lighting should generally be directed downwards with some exceptions for signage and architectural lighting. See Figure 32.
- 4.13.2 The design of light fixtures should reflect the character themes of each neighbourhood. LED or other high efficiency lighting technology should be used on streets and light levels should generally meet IES guidelines for road class and activity
- 4.13.3 Use high efficiency, human-scaled lighting in pedestrian areas such as paths and entrances for night time visibility, safety and security. Exterior motion and photo-sensitive fixtures are discouraged.
- 4.13.4 Public realm lighting is subject to review and approval by the City's Streetscape Planner.



Figure 32. Conceptual illustration of “street” lighting of the pedestrian accessible “Lions Lane”