



**Making Space
for Evolving
Industries:**
Economic Viability
of a Creative
Employment
District



**Final Report
April 2019**



This report was produced for the City of New Westminster as part of the Planning Studio Course at UBC's School of Community and Regional Planning (SCARP).

This project was conducted in partnership with City of New Westminster staff and under the mentorship of SCARP faculty.

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Corporation of the City of
NEW WESTMINSTER



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About the SCARP Studio:

SCARP's planning studio (PLAN 526) is an intensive, eight-month professionally oriented course in which graduate students partner with municipalities, community organizations or businesses to work on real planning projects.

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All photographs of study area and New Westminster taken by Emily Huang.

EXECUTIVE SUMMARY

After significant public consultation and study, the City of New Westminster (City) recently approved **OUR CITY 2041: New Westminster's Official Community Plan** (OCP) and **Future Forward: An Economic Development Plan for New Westminster** to guide the municipality in the coming years. In both documents, the City identified the **Lower Twelfth Street Study Area** (Study Area) as a potential **Creative Employment District** (CED) that would be home to ultra-light industrial uses and spaces for makers, artisans, and other creators.

The purpose of this project was to perform an economic viability study of a CED to support future planning for the Study Area. The project was guided by the following **five objectives**:

1. A **case-study** analysis of CEDs that will inform planning in the Study Area;
2. A recommendation of **users** appropriate for a CED;
3. A recommendation of a **mix of land uses** for the Study Area;
4. An **economic viability analysis** of developing buildings for the desired users; and
5. The identification of **policies** for the City of New Westminster to facilitate a CED.

This report details how the prospect of a CED developing in Lower Twelfth Street presents significant opportunities and challenges. The case studies provide diverse examples of employment-generating districts. The economic analysis shows that redevelopment for ultra-light industrial is viable on some sites of the Study Area, and that redevelopment or adaptive reuse of light-industrial space will likely lower the affordability of the Study Area for prospective tenants. The policy review offers tools that can address the challenges that come with the opportunities of a new CED, to ensure the area meets the City's and community's long-term vision.

Facilitating a CED in Lower Twelfth Street should balance the need for affordable light-industrial space and employment with the realities of economically viable redevelopment. The report groups the recommendations into three categories: managing land uses and informing development, attracting desired users, and inspiring urban design and placemaking.



SUMMARY OF KEY FINDINGS AND RECOMMENDATIONS

Below is a summary of the recommendations for policy tools for the City to consider:

MANAGE LAND USES AND INFORM DEVELOPMENT:

- ▶ Introduce **density bonus** provisions in a zoning bylaw, permitting residential floorspace to incentivize the redevelopment of **below-market industrial space**.
- ▶ Where substantial residential density is appropriate, require volunteer amenity contributions (VACs) earmarked for specific projects, or waive them in exchange for the construction of a **public makerspace** or **community centre**.
- ▶ Manage land use conflicts through **careful location of uses** that generate noise, smell, and heavy traffic, and through the use of covenants registered on title where residential uses are in close proximity to light-industrial uses.
- ▶ Consider **allowing office use** in the Study Area as part of the CED, but not requiring it, as the market for office space in New Westminster may not currently support its construction.
- ▶ Encourage developers to build **flexible industrial spaces on the ground floor**, with minimum 15-foot high ceilings, dock loading, and mezzanine or office space.
- ▶ **Relax parking requirements** and encourage new developments to share parking.

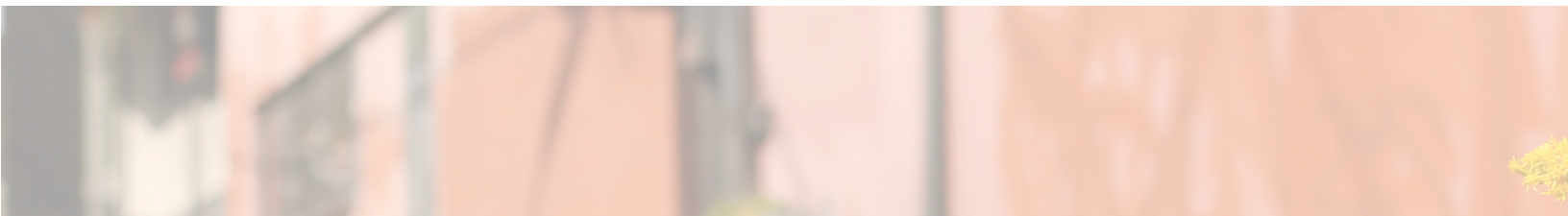
ATTRACT DESIRED USERS:

- ▶ Create **expanded definitions of industrial uses** to accommodate evolving creative businesses and trends.
- ▶ Implement **incentives to attract businesses** appropriate in a CED and support affordability such as:
 - A **Partial Tax Exemption for Rehabilitated Structures** to support small businesses;
 - A **Business License Fee Reduction** for qualifying businesses.
- ▶ Allow **greater flexibility within industrial zoning** to permit higher ratios of accessory retail and restaurants to manufacturing than what is permitted in New Westminster's current zoning.
- ▶ Take an active role in assisting desired users to find appropriate facilities and financing.

INSPIRE URBAN DESIGN AND PLACEMAKING:

- ▶ Create an **urban design** and **placemaking strategy** that celebrates the rich industrial history of Lower Twelfth Street.
- ▶ Facilitate **creative placemaking** opportunities in collaboration with community partners.

As the City attempts to encourage the transition of the Study Area to a CED, careful consideration of land-development economics, development planning, and industrial-urban interfaces is required. This report provides information and analysis that will support future planning. The Study Area represents an exciting opportunity for the creation of a vibrant CED that will serve all New Westminsterites and contribute to a resilient economy and flourishing community.



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Aerial view of Jack Marshall Motors on Twelfth Street and the surrounding area looking south, 1957. Source: New Westminster Museum and Archives. Photo IHP 10133-004

INTRODUCTION

After significant consultation and study, the City of New Westminster (City) recently approved **OUR CITY 2041: New Westminster's Official Community Plan** (OCP) and **Future Forward: An Economic Development Plan for New Westminster**, to help guide the municipality in the coming years. In both documents, the City identified the Lower Twelfth Street Study Area (Study Area) as a potential **Creative Employment District** (CED) that would be home to **ultra-light industrial uses and spaces for makers, artisans, and other creators**. The study area is in the southwest of New Westminster and is roughly bounded by Fourth Avenue and Louellen Street to the northeast, and Stewardson Way and Royal Avenue to the south.

CREATIVE EMPLOYMENT DISTRICT:

A CED is an area focused on employment, which comprises a diversity land uses and types of users. This may include non-traditional combinations, such as ultra-light and light industry with office and flex space or ancillary commercial and retail services, with users ranging from cultural producers to food manufacturers, from artisans and makers to digital and tech creators.¹

FIGURE 1: STUDY AREA MAP IN CONTEXT



1. This definition was based on consultation with the Project Partner and research on other light industrial districts to guide the project's research goals.

OBJECTIVES

This project provides support for the City's future planning by performing an evaluation of the economic viability of a CED in the Study Area. Our research was guided by the following objectives and research questions, which were developed in consultation with our Project Partner and faculty from the University of British Columbia's School of Community and Regional Planning:

- 1 A review of case studies of Creative Employment Districts:**
 - What factors make CEDs successful?
 - How did development of the CEDs occur?
 - What policies or tools contributed to their success?
- 2 Propose a mix of targeted users for the Creative Employment District:**
 - What businesses and users will generate a balanced, non-traditional mix of employment uses?
 - How should users be located within the Study Area to be sensitive to existing and future development, particularly in surrounding residential areas?
- 3 Determine a mix of land uses for a Creative Employment District:**
 - What is an appropriate balance of light and ultra-light industrial, office, commercial, and residential uses?
 - What land uses and built forms are appropriate for the environmental character of the Study Area and the targeted users?
- 4 Explore the economic viability of the proposed uses:**
 - What is the economic feasibility of redeveloping land to accommodate the proposed uses and users?
 - What is the economic feasibility of adapting existing buildings to accommodate the proposed uses and users?
- 5 Identify policies or tools the City could use to ensure that the desired tenants are attracted to the Creative Employment District:**
 - Based on a synthesis of all our research, what tools and policies would be most valuable to the City in its goal to facilitate a CED?

RELEVANCE TO CURRENT PLANS

The Study Area has significant relevance to several plans for the City of New Westminster, and the planning for Lower Twelfth Street could assist in achieving a number of policy goals, directly and indirectly. Below are policy goals and actions from the OCP and Economic Development Plan relevant to the Study Area:

Official Community Plan Policies and Actions:

- **Policy 3.1:** Foster knowledge-based and creative industries that cultivate innovation, promote entrepreneurship and generate employment.
 - **Action 3.1b:** Create a master plan for Lower Twelfth Street that encourages a creative and non-traditional mix of land uses, including residential, commercial, and ultra-light industrial.
- **Policy 3.2:** Protect the industrial land base and encourage employment-intensive and sustainable industrial uses.
- **Policy 2.2:** Support and promote arts and cultural activities that celebrate and contribute to the city's distinct identity.
- **Policy 2.3:** Enhance the city's cultural facilities and creative community spaces.

Economic Development Plan Goals, Strategies, and Actions:

- **Goal 1:** Establish New Westminster's reputation as an ideal location for both start-ups and established businesses to thrive and grow.
- **Goal 2:** Drive New Westminster's commitment to delivery of a positive business experience at city hall.
- **Goal 3:** Secure diversity in the local economic base through recruitment, retention and expansion activities.
- **Goal 4:** Support livability initiatives that make New Westminster a great place to live, work and invest.
 - **Primary Action 1b:** Develop a marketing strategy that targets tech and creative businesses and includes ongoing identification of businesses in these growth sectors.
 - **Primary Action 1e:** Work with the Planning Division in the development of the Lower Twelfth Street Plan that facilitates the area as a creative employment zone that supports a mix of uses such as ultra-light industrial, maker-space, commercial, and retail.
- **Strategy 3:** Build a fertile environment for growth and expansion of business through ongoing collaboration and engagement with key stakeholders.



OUR APPROACH

The SCARP studio team worked with the City of New Westminster to develop an approach for achieving the five objectives. This process resulted in the development of a four-phase research program that included a site analysis of Lower Twelfth Street Study Area (Study Area) and its surroundings, case-studies, qualitative analysis of key informant interviews, an economic viability analysis of individual sites within the Study Area, and a policy analysis.



Phase 1 **Information Gathering** Objective 1

During Phase One, we gathered data through site analysis, case studies, key informant interviews and market research for analysis in the following phase. We focused our research on understanding how mixes of uses and target users function in other Creative Employment Districts that are in jurisdictions comparable to New Westminster. The team gathered this information through studies of six Creative Employment Districts and five individual mixed-use building typologies, alongside key informant interviews.



Phase 2 **Synthesis & Analysis** Objective 2 + 3

In Phase Two, we analyzed information gathered during Phase One, with the goal of determining what set of land uses and types of users would be appropriate for the Study Area. We selected target users and a desirable mix of land uses based on Phase One research. The team analyzed the suitability of those uses for the Lower Twelfth Study Area based on key informant interviews and the Study Area site analysis. Where appropriate, we identified the municipal tools used to facilitate the desired types of users and mix of land uses.



Phase 3 **Economic Analysis** Objective 4 + 5

To test whether the desired tenants and mix of uses identified in this report are economically feasible in the Study Area, we selected four sites on which to perform an economic analysis. When selecting sites, we considered the unique factors of Lower Twelfth Street related to the floodplain, grade, urban-industrial interface, and other challenges, to ensure the market analysis was representative of realistic development expectations. We then ran pro-formas for each site, testing various scenarios of redevelopment.



Phase 4 **Recommendations & Tool Box**

In Phase Four, the team conducted a policy review to find policies which the City could use to help facilitate a Creative Employment District. The team synthesized and analyzed the research from the pro formas, case studies, key informant interviews and policy review to provide recommendations for the facilitation of a Creative Employment District.



Interior of B.C. Electric Railway car barns on Twelfth Street, c. 1912.
Source: New Westminster Museum and Archives. Photo IHP0837.

CONTEXT

HISTORY OF LOWER TWELFTH STREET

A thorough understanding of the historical context and current neighbourhood dynamics is essential for developing a shared vision for the future of Lower Twelfth Street. Our analysis is grounded in the rich history of the Study Area to ensure recommendations are appropriate to the character of New Westminster.

Adjacent to the Brow of the Hill neighbourhood, the Study Area has played a significant role in New Westminster's history. In 1886, the province's first civic gas works was built on the corner of Twelfth Street and Third Avenue. The facility provided energy to New Westminster until the 1930s, when it was left vacant. Unfortunately, the structure collapsed in 2016.¹ The land is owned by the Province of British Columbia.

From the 1890s, Lower Twelfth Street was home to an important part of New Westminster's industrial lands, which developed through the turn of the century. In 1892, the Interurban Railway was built along Twelfth Street, which brought with it a blacksmith shop for the British Columbia Electric Railway. Close by on Twelfth Street and Third Avenue was the Scott Canadian Paper Company coating mill, and the Allard Machine Works was located on Quebec Street until the mid-1960s. These were just a few of the industries that provided jobs for the historically working-class residents of Brow of the Hill.

During the 1930s, driven by the industry on and around Lower Twelfth Street, a diverse mix of housing was constructed in Brow of the Hill. The neighbourhood features detached homes, heritage houses, and apartment buildings that contribute to the unique character of the area.



Vulcan Iron Works on Twelfth St., c. 1915
Source: New Westminster Museum and Archives



The Gasworks on Twelfth St. and Third Ave., c. 1890.
Source: New Westminster Museum and Archives



Westminster Iron Works on Twelfth St. and Queens Ave. with Brow of the Hill in the background, 1952.
Source: New Westminster Museum and Archives.

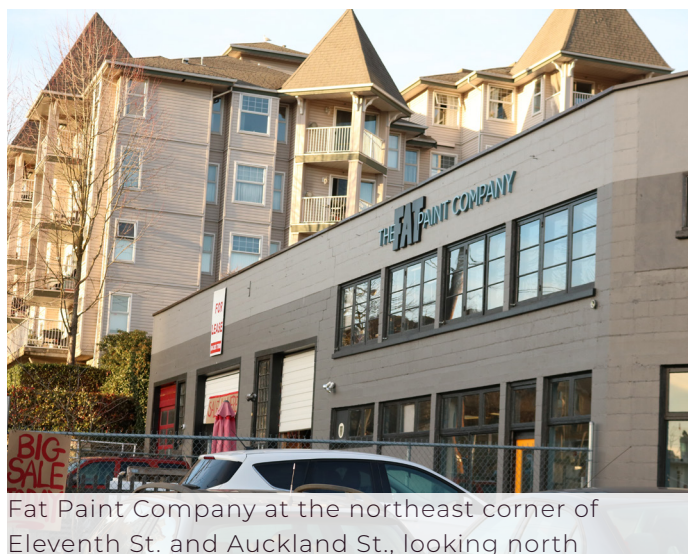
1. BC Register of Historic Places. New Westminster Gas Works. n.d.

Post-World War II, Lower Twelfth Street began to transition from industrial uses to automotive services. Car-sales lots and garages gradually replaced the heavy industries that had been the driver of employment in the area. Many of those auto-oriented services are still present today, with a significant majority of the businesses in the area being related to car sales and services.²

LOWER TWELFTH STREET TODAY

The Study Area is approximately **25 acres** in area, primarily zoned as M-1 Light Industrial along Twelfth Street and M-5 Light Industrial Mixed Use on Royal Avenue and Quebec Street, with portions of Twelfth Street zoned CS-1 Local Commercial and CS-2 Community Commercial. The industrial zonings are for light industrial activities but permit a wide variety of uses from food manufacturing and cafes to machine shops. The industrial bylaws allow for buildings up to six storeys, or 85 feet, with no specifications for floor-area ratio, though the average floor-area ratio for existing buildings in the M-1 and M-5 zones is approximately 0.58, excluding vacant lots.³

In 2004, the City adopted an area plan for Lower Twelfth Street. The award-winning plan focused on residential redevelopment of the area's industrial lands, projecting up to an additional 4,920 housing units in a long-term scenario, which would be accompanied by supporting commercial services and some area for home-based businesses.⁴ The plan saw only minimal uptake and Lower Twelfth



Fat Paint Company at the northeast corner of Eleventh St. and Auckland St., looking north



Looking south at Stewardson Way from Thirteenth St.



Looking north on Twelfth Street towards Third Ave.

2. Denise Cook Design and Birmingham & Wood. New Westminster Neighbourhoods Historical Context Statements: Brow of the Hill. August 2016.

3. City of New Westminister. New West Open Data. Parcel Attributes table.

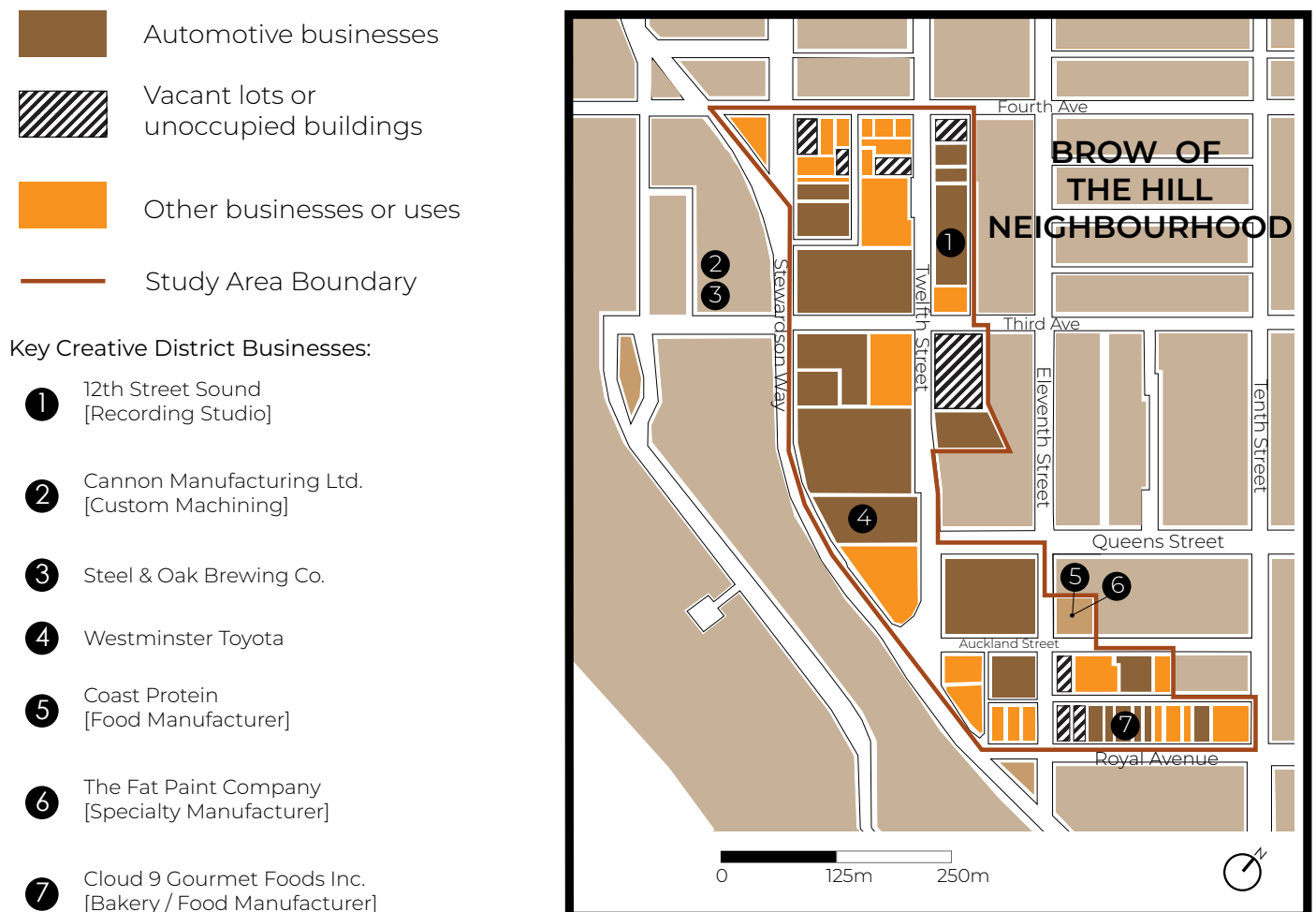
4. The Record (New Westminister). Plans for future of 12th Street wins top award. April 30, 2005.

Street remains characterized by automotive services and sales that have been present since the 1950s. In the last decade, some businesses have opened in or near the Study Area that already fit many of the characteristics described in the OCP's Action 3.1b to create a master plan for Lower Twelfth Street. Interviewees emphasized the importance of Steel & Oak Brewing Co.—which is adjacent to the Study Area—Coast Protein, Fat Paint Company, and others as existing assets of the neighbourhood.

Other important institutions within the Study Area are the Rhoda Kaellis Residence (a supportive housing facility), the Graham Montessori Daycare and Preschool, and the John Knox Christian School, which was under construction at the time of writing this report.

The Study Area includes a **small amount of housing**, with duplexes on Fourth Avenue, and an unoccupied apartment building on Thirteenth Street and Fourth Avenue. Adjacent to the area on Queens Avenue and Twelfth Street is strata complex with 147 units. More residential densification around the Study Area is progressing, with Porte Communities' 88-unit development on Auckland Street and Tenth Avenue, which sold out during presales and was under construction in early 2019.

FIGURE 2: MAP OF STUDY AREA TODAY



LOWER TWELFTH STREET AREA TODAY



Looking north from the intersection of Eleventh St and Quebec St.



Looking southwest along Royal Ave. from Royal Ave and Tenth St.



Looking east from Quebec St. between Eleventh St. and Tenth St.



Looking west from Quebec St at Tenth St.



Looking south at Stewardson Way from Thirteenth St.

The Study Area is surrounded by **Brow of the Hill**, a mostly residential neighbourhood of diverse housing types. To the south of the Study Area, separated by the Skytrain track and Stewardson Way is Quayside Drive, on which there has been significant residential development and parks rehabilitation along the Fraser River. Further east is high-density multi-family housing near the New Westminster Skytrain Station. The close proximity of housing to the Study Area area makes for a marked contrast between the former industrial lands and bordering residential blocks.

While a number of small, innovative businesses have taken advantage of affordable lease rates in the Study Area, the current conditions of the building stock may make the facilitation of a CED difficult. A majority of the building stock is suited for and being used by automotive-oriented businesses. Interviewees familiar with the area and the City did not believe that most of the existing building stock could accommodate the users being examined for a CED.



Street sign at the corner of Eleventh St and Queens Ave.



Looking southeast along Eleventh St from the intersection of Eleventh St and Queens Ave.



Looking northwest on Fourth Ave at the intersection of Fourth Ave and McPhaden St.

ENVIRONMENTAL SITE CONDITIONS

The Study Area has a number of unique features that will influence its future development (See Figure 3). The grade change from Fourth Avenue as one approaches the river is significant, starting an elevation of approximately 30 metres, dropping to five metres at Stewardson Way and Royal Avenue where the land is most level. A large portion of the area's parcels, those closest to the Fraser River, are within New Westminster's floodplain.

As the site of former heavy industrial uses, the Study Area is also affected by **soil contamination**. There are **fifteen sites** within the area that are on the British Columbia Ministry of Environment and Climate Change Strategy's Environmental Remediation Sites database, which records sites that are known, or suspected, to be contaminated. Further information on individual sites are available through records requests to the BC Government.

FIGURE 3: MAP SHOWING SITES REQUIRING ENVIRONMENTAL REMEDIATION



TRANSPORTATION CONTEXT

The Study Area is bounded to the south by Stewardson Way, which feeds into Royal Avenue and Front Street, all of which serve as truck routes and connectors from Vancouver and Burnaby to New Westminster, Coquitlam, and Surrey. Twelfth Street itself also serves as an **important spine** that connects several neighbourhoods to each other, as well as to Burnaby's Kingsway corridor and Metrotown Centres. The location of the Study Area, and New Westminster, make it well-situated as a centre for the region (Figure 4). The New Westminster Skytrain Station is within a fifteen to twenty-minute walk from most of the Study Area, or a less than ten-minute bus trip by the Route 112 bus that operates on Twelfth Street, the heart of the Study Area. Twelfth Street is planned to be a Frequent Transit Network route, as outlined in New Westminster's Master Transportation Plan.



FIGURE 4: MAP SHOWING REGIONAL CONNECTIONS

ECONOMIC AND MARKET TRENDS FOR INDUSTRIAL REAL ESTATE

The pressure on industrial lands in Metro Vancouver has continuously increased in the region's recent history. Over the past forty years, the Lower Mainland has transitioned from a resource-based economy into one based on services, education, and high technology, which occurred under intense real estate-development pressure on a constrained land base. This has begun to have marked effects on industrial lands. Rents for industrial properties rose by 16 percent in 2018 in Metro Vancouver, which followed a 29 percent jump in the previous year.^{5,6} As the industrial landbase shrinks, it is expected that rents and land values will continue to rise, which brings concerns over speculation and a lack of land for employment-generating industrial uses. These market factors are compounded by issues related to servicing, environmental conditions, and jurisdictional challenges, which necessitate robust regional coordination.⁷ Scholars of the region have stated that local and regional governments should send a clear signal that industrial lands will be preserved and adapted to face these pressures and to prepare for new economies.⁸ Metro Vancouver is currently developing a Regional Industrial Lands Strategy, intended to establish a vision for the future of industrial lands across the region to the year 2050, and to provide a set of recommendations to guide a broad range of stakeholder actions to achieve that vision.

Cities across North America, and the globe, are facing similar issues and are planning how industrial and employment lands can be successfully maintained and integrated into urbanized settings. In our initial research, we

identified 15 cities (Appendix A) planning for a revitalization or redevelopment of industrial lands for purposes similar to our definition of a Creative Employment District (CED). This only represents a small sampling of governments that are dealing with the challenge of protecting industrial lands in their cities.

Innovative built forms that challenge the separation of industrial uses from others appeared in much of our research, for example, the mixing of traditional office space with light-industrial facilities. While uncommon, some districts in our case studies have planned mixed industrial-residential on periphery sites that are adjacent to residential neighbourhoods, attempting to develop thoughtful industrial-urban interfaces. The Strathcona Village development in Vancouver has combined residential, retail, and light-industrial space in the same building, a first of its kind in North America (See Appendix C: District and Building Case Studies). It is located close to the Port of Vancouver, the residential neighbourhood of Strathcona, and the Downtown Eastside.

Increasing demand for industrial property has also led developers in Metro Vancouver to turn to stratification and the intensification of industrial properties. This trend is partially driven by business owners who prefer to buy strata properties for operational certainty and to build equity. Several industrial strata properties are under construction in Metro Vancouver, many featuring vertical stacking, with industrial spaces at grade and office and flexspace on the floors above.⁹ The City of Vancouver's recent changes

5. Real Estate News EXchange. Vancouver industrial rental rates jumped 16% in 2018: CBRE. January 29, 2019. <https://renx.ca/vancouver-industrial-rental-rates-jumped-16-per-cent-2018-cbre>

6. CBRE Industrial and Logistics Prime Rent Report. August 7, 2018.

7. Gord Tycho. Regional Industrial Lands Strategy: Issues and Initiatives Summary, BC, Prepared for Metro Vancouver. June 13, 2018. <http://www.metrovancouver.org/services/regional-planning/PlanningPublications/RegionalIndustrialLandsStrategy-IssuesandInitiativesSummary.pdf>

8. Tom Hutton and Trevor Barnes. Metro Industrial Lands Report 2018: The Innovation Economy. July 1, 2018.

9. Eric Aderneck. White Paper: Stratification of Industrial Land in Metro Vancouver, Prepared for: Metro Vancouver, Regional Planning Parks, Planning and Environment Department. August 2018.

to zoning in the lower Cambie Street area appears to have encouraged the development of these mixed-use buildings, with several being constructed now (See Appendix C: District and Building Case Studies).

A recent white paper for Metro Vancouver indicates that much of the demand for industrial strata is from small-scale, artisanal businesses, seeking smaller spaces to service local customer bases.¹⁰ According to the August 2018 report, these businesses include “custom manufacturing, small batch production, and food processing, some relating to the sharing economy, such as facilities with common kitchens.” These users are often seeking industrial units in the 1,000 to 2,500 square-foot range.

What is playing out globally and regionally is also occurring in New Westminster. In New Westminster, the most recent market reports indicate a industrial vacancy rate of 0.2 percent, among the lowest in Metro Vancouver, with no industrial space currently under construction. Reported averages for industrial rents in New Westminster range from \$6.75 per square foot per year¹¹ to \$12.95 per square foot per year, which is close to the regional average.¹²

These trends present unique opportunities and challenges. The climbing value of industrial land has made its preservation and development somewhat more attractive relative to residential uses, which have dominated land development over the past decades. However, this also means tenants and business owners are competing for a scarce and costly resource. Managing these conflicts is a salient point of discussion in Metro Vancouver today.

BUSINESS TRENDS

While increased costs for land and rent are placing more pressure on businesses, smaller operators have been experiencing encouraging growth. Businesses with fewer than 50 employees comprise 98 percent of all businesses in British Columbia, and the number of these small operations grew by 7.6 percent from 2012 to 2017. The largest sector of growth for small businesses was in the professional, scientific, and technical services industries.¹³ In New Westminister, jobs in the creative industries were a significant sector for growth, rising by approximately 21 percent from 2006 to 2016.¹⁴

Small-business beverage and food manufacturers in the province also grew over this period. Revenues from breweries (large-scale businesses included) increased by 45 percent from 2012 to 2017, and revenues in the bread and bakery product manufacturing sector experienced a 98 percent increase in that same period.¹⁵ Key informants identified both of these business types as desirable for the Study Area.

As the Study Area is a relatively small district with unique geographical features that may limit the development of larger industrial facilities, it is likely that smaller businesses such as these may be appropriate to target for a future CED.

10. Ibid.

11. Cushman & Wakefield. Market Beat Vancouver, BC, Q2 2018.

12. Colliers International. Metro Vancouver Industrial Market Statistics Report Q4 2018.

13. Small Business BC, BC Stats, and Ministry of Jobs, Trade and Technology. Small Business Profile 2018.

14. City of New Westminister. Future Forward: An Economic Development Plan for New Westminister, 2018-2023.

15. Government of B.C. Manufacturing Sales by North American Industrial Classification.

CASE STUDIES

The selection of case studies was guided by our definition of a CED as an **area that generates employment through an integrated mix of land uses and activities, such as light and ultra-light industry, creative production, commercial services, and retail space.**¹⁶

In the case study review, we studied plans, neighbourhoods, and light-industrial buildings that had the desired features of our working definition of a CED. Other cities have defined similar areas as “innovation economy hubs,” characterized by “creative product manufacturing” and “digital entertainment and communication technology” sectors.¹⁷ These districts often use former industrial lands to integrate cultural and technology economies with appropriate mixes of retail and office space, with the goal of supporting diverse employment opportunities and a vibrant public realm. A case study comparison chart is available in Appendix B.

The goal of the case studies was to answer the following questions:

DISTRICTS

- Is the district successful?
- What mix of land uses exist in the district?
- What types of users (businesses) are located in the district? Does this mix work?
- What have been the challenges in developing these districts?
- Are there any conflicting uses?
- What have municipalities learned in the planning and implementation of these districts?
- How did development of the district occur?
- What is the zoning and bylaw in place allowing this Creative Employment District to form and thrive?
- What kinds of incentives and policy tools, if any, is the municipality using in the implementation of the district?

BUILDINGS

- What mix of uses are occurring on a single site?
- What building forms are being developed in these districts?
- How does building form address the specific characteristics of that site?
- Are there any conflicts with uses in the building?

16. City of New Westminster. Future Forward: An Economic Development Plan for New Westminster, 2018-2023.

17. City of Vancouver. False Creek Flats Area Plan, Downtown Eastside Railtown Zoning Update, Mount Pleasant Industrial Area Plan.

DISTRICT CASE STUDIES

We analyzed six districts, selected from an initial survey of 15, with similar conditions to the Study Area (see full list of case-study candidates in Appendix A). Districts in municipalities that have **similar context and legislative powers to the City of New Westminster** were preferred. The selected case studies had a **focus on non-traditional mixes of employment-generating uses, such as light and ultra-light industrial, commercial, service, and office**. Based on conversations with the City and description of the Study Area in the OCP, we also selected districts on the basis of their business mixes, with preference given to those that included creative product manufacturers, digital and tech businesses, and food beverage production.

Selected District Case Studies:

- **FALSE CREEK FLATS, VANCOUVER**
- **RAILTOWN, VANCOUVER**
- **MOUNT PLEASANT / LOWER CAMBIE, VANCOUVER**
- **HARBOURSIDE, CITY OF NORTH VANCOUVER**
- **ROCK BAY, VICTORIA**
- **WILMINGTON, DELAWARE, USA**

The full case studies are available in Appendix C, and the results are synthesized in the next section, case study themes.

STUDY AREA CHARACTERISTICS USED IN CASE STUDY SELECTION:

- Population size of New Westminster;
- Similar neighbourhood character;
- Location in, or proximity to, a floodplain;
- Contaminated sites; and
- Steep grades or other landscape challenges.



Rendering of Creative District in Rock Bay, Victoria from the Rock Bay Sub-area Employment Plan, City of Victoria

BUILDING CASE STUDIES

The selection process for the building case studies was focused on buildings that **combined normally segregated uses, or types of users**, on one site. We chose building case studies for their relevance to the City's objectives, as well as to give a picture of what activities were occurring in other mixed-use districts. The findings informed our proposed users and uses, and overall recommendations.

Selected Building Case Studies:

- **JAMMER CAFE, MOUNT PLEASANT, VANCOUVER**
- **THE YUKON, MOUNT PLEASANT VANCOUVER**
- **STRATHCONA VILLAGE, RAILTOWN, VANCOUVER**
- **ROCK BAY SQUARE, VICTORIA**
- **LOWER LONSDALE, CITY OF NORTH VANCOUVER**

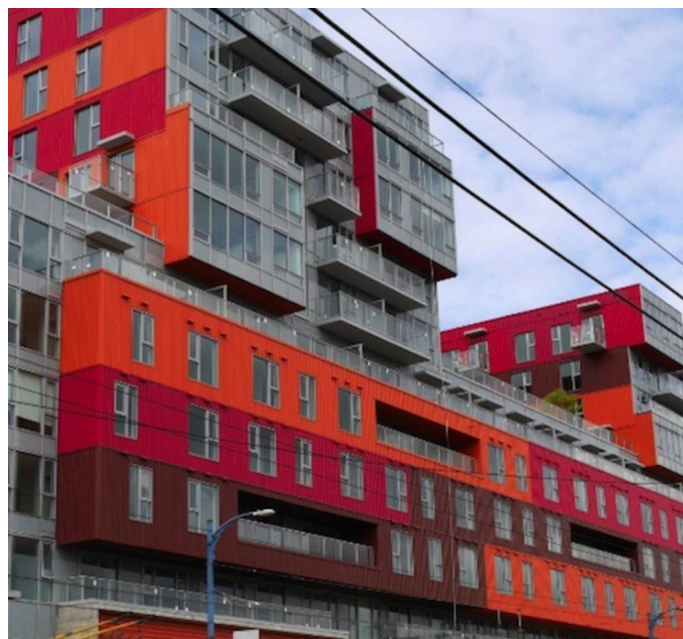


Jammer Cafe, Vancouver. Photo Credit: Simon Liem

KEY INFORMANTS

We consulted key informants such as municipal staff, developers, landowners, and businesses throughout the entirety of the project. Semi-structured interviews with these key informants, both within the Study Area and outside of it, were conducted in person, over the phone, or via email. The responses provided important first-hand experience and insight into issues that were critical to our team's understanding of the area's challenges, opportunities, and the needs of its population. Informants requested not to be identified in the report.

This information informed our policy research, economic analysis, and recommendations. Through case studies of six districts and five buildings within these districts, we identified common themes that were present in the planning and implementation of policies for the districts. These examples, supplemented by key informant interviews inform our recommendations for the planning of a CED in the Study Area.



Strathcona Village, Vancouver. Source: <https://dailyhive.com/vancouver/strathcona-village-belcourt-residence-vancouver>

CASE STUDY THEMES

The contextual analysis, case studies, and key informant interviews became the basis for our initial findings to meet the first three objectives of the project. The themes identified here informed the recommendations for uses and users in this section. They also provided context for the economic analysis and policy review in Phase Three of the research.

Based on the case studies, key informant interviews, and background research, we identified the below themes common to the development of mixed-use light-industrial districts.

CASE STUDY THEMES

1. Zoning must be adapted to emerging trends and the needs of creative employers;
2. Leveraging an area's existing assets is crucial for a smooth transition to a Creative Employment District (CED);
3. Key informants desire a balance of light and ultra-light industrial space, offices, and retail and commercial services;
4. Real estate market pressure on industrial land presents opportunities and challenges; and
5. Implementation of a vision is best supported by broad collaboration and transparency from the municipality.

1. Zoning for creative employers & emerging trends

- Additional density for office space can incentivize the development of industrial buildings
- Redefining manufacturing to include digital and design products helps attract desired users

In several of the case studies, new development of industrial space at grade has been supplemented with **office space on the floors above**. Mount Pleasant has a number of these types of mixed developments with floor space ratio (FSR) ranging from 3.0 to 6.0. Both Mount Pleasant in Vancouver and Rock Bay in Victoria offer **office density for tech and creative uses** in exchange for the provision of industrial space. Interviewees emphasized the importance of incorporating **flexible office space** into the intensification of industrial projects, but market conditions in New Westminster may make these types of developments unviable in the short term.

In New Westminster, the M-1 and M-5 districts allow for up to six storeys in building height, yet few buildings are built to more than two storeys. In the M-1 district, few of the allowable uses are suitable for spaces on the second floor or above. **Adapting zoning to allow for uses that would be appropriate for space above industrial ground floors** will be important to accommodate these emerging trends over the long term.

CREATIVE PRODUCTS MANUFACTURING AND DIGITAL ENTERTAINMENT AND INFORMATION COMMUNICATION TECHNOLOGY

In False Creek Flats, Railtown, and Mount Pleasant, new types of uses were defined to encourage the retention and attraction of office users who were aligned with the visions of these districts. This was the case in Railtown, where the film industry was thriving even though it was not permitted under existing zoning. The City of Vancouver (CoV) wished to retain the presence of these businesses because of their contribution to the economy and character of the district. It created the definitions of **“Creative Products Manufacturing”** (Railtown and False Creek Flats) and **“Digital Entertainment and Information Communication Technology”** (Mount Pleasant), which expanded the definitions of industrial uses to retain and attract those types of businesses. New Westminster could adopt similar definitions to refine permitted office uses and expand the appropriate industrial uses, guiding developers and users in future development.

2. Leveraging Existing Assets

- Clustering of business types already in or near the Study Area (e.g., breweries and food production) is broadly desired
- Improving building stock will be important to retaining and attracting new businesses
- Lower Twelfth Street has a rich history that could inspire future urban design and public realm activation

In each district case study, the associated plans were rooted in using the **existing character and assets of the area**. In Railtown and Mount Pleasant, the CoV created new zoning definitions to retain existing businesses that were not permitted under the previous bylaws. Rock Bay in Victoria, Harbourside in North Vancouver, and Wilmington, Delaware, all pursued similar strategies that sought to preserve, enshrine, and leverage existing assets.

Adjacent to the Lower Twelfth Street Study Area, Steel & Oak Brewing Co. was repeatedly identified by key informants as one of the district's most important assets because of its popularity and ability to draw people. **Clustering of more breweries with food services** was desired by interviewees.

Other businesses in the Study Area such as Coast Protein, Cloud 9 Bakery, and Fat Paint Company are also aligned with the City's vision for creative businesses. However, there are challenges to incorporating more of these types of creative businesses within the existing building stock, much of which is suited for auto-uses and in need of significant investment. Cloud 9 Bakery, for example, plans to vacate its space at the end of its lease this year, partly due to building degradation and limitations to pedestrian access. The bakery originally opened their location in the Study Area because of the inexpensive rent, providing them with affordable kitchen space in which to test specialty baking products.

HISTORICAL CHARACTER

The history of Lower Twelfth Street is an important asset for determining the future character of the Study Area. The neighbourhood's past as a centre for employment and industry may serve as inspiration for fostering a CED that could celebrate and continue its legacy in the context of New Westminster's emerging economy. For example, inspiration for public realm initiatives, art, and urban design could be drawn from the **area's industrial history and historical sites**, such as the former Gas Works property, to revive its distinct character. The Wilmington Renaissance Corporation fosters partnerships between businesses and artists to create urban installations. Similarly, the Mount Pleasant BIA hosts an annual mural fest, commissioning large-scale art pieces on the side of buildings, that celebrates the artists and creative businesses living and operating there.



Westminister Boiler & Tank Company Ltd. building. Looking southwest on Eleventh St between Quebec St and Auckland St.

3. Balancing production, retail and office

- Additional employment will require additional services (e.g., restaurants and cafes)
- Interviewees desire that the area has more retail and office space
- Small-scale producers can sustain higher rents when more retail floorspace is permitted
- Residential uses are a low priority and should be permitted with discretion on transitional sites, adjacent to existing residential neighbourhoods

Attaining a **balance between production, retail, and office space** was a common theme identified in all of the reviewed case studies and in several interviews. Encouraging retail space and employment opportunities is important for drawing people to Lower Twelfth Street and enhancing neighbourhood vibrancy. The proximity of additional shops and services, such as at Columbia Square Plaza, are also integral to a successful CED, especially if employment density increases.

The incorporation of office uses into the Study Area presents challenges for future planning of a CED. New Westminster currently experiences higher office vacancy rates than the rest of the region. Interviewed developers stressed the importance of intensifying industrial land with office space as a long-term necessity. Proposed developments with office space will have to consider the current market conditions in New Westminster, and balance it against the long-term goals for a CED in the Study Area.

In interviews, businesses highlighted that **retail activities are more profitable than production**. Increasing the amount of permitted ancillary retail space in relation to production space can help businesses afford higher rents.

RESIDENTIAL MIXED-USE

Most of the case studies, such as Rock Bay and the False Creek Flats, restricted residential uses to certain areas to reduce land-use conflicts and mitigate real estate speculation. The mix of housing and industrial uses also comes with challenges. A developer of industrial properties felt that industrial buildings mixed with residential made design more difficult. Numerous developers and consultants also stated that mixed-use buildings would significantly raise construction costs for industrial floorspace.

In the case of the Strathcona Village building in Vancouver, which consists of a mix of residential, retail, and industrial uses, the property manager reported that there had been no complaints or conflicts between residents and the light manufacturing businesses on the ground floor. The CD1 zoning for Strathcona Village stipulates that the residential units in the building are subject to “activity zone” noise levels, which permit louder activities.



Source: Steel & Oak Brewing Co.

4. Real Estate Market Pressures

- High values on industrial land encourages development but puts pressure on tenants and prospective landowners
- Stratified industrial is an emerging trend, but speculation is a significant concern

The real estate market for industrial lands in Metro Vancouver presents challenges and opportunities for the prospect of redevelopment in the Study Area. The pressure of **falling vacancy rates and rising rents** has significantly impacted the industrial real estate market in recent years.

These market conditions have resulted in the increase of lease rates and industrial land prices, making the development of industrial land more attractive in high-density urban areas. One recent trend is the **stratification of industrial properties**.^{18,19} Market reports indicate a high demand for smaller industrial strata properties. Interviews with business owners reveal desires to build equity and avoid the uncertainty of climbing rents. However, interviews with planners and developers indicate that market reports may be overestimating the demand from owner-user tenants and that speculation may be driving some of the demand.

Uncertainty over interest rates and continuing pressure on densifying industrial lands can be alleviated by providing tools to business owners to support real estate investment. The Business Development Bank of Canada and the federal Canada Small Business Finance Program are two institutions that could support small businesses with financing for purchasing strata units. Both programs are featured on City of New Westminster's website.



The Yukon by Chard Development, an example of industrial strata mixed with office. Source: <https://charddevelopment.com/project/the-yukon/>

18. JLL. Industrial Market Strata Report Metro Vancouver 2018.

19. Eric Aderneck. White Paper: Stratification of Industrial Land in Metro Vancouver, Prepared for: Metro Vancouver, Regional Planning Parks, Planning and Environment Department. August 2018.

5. The Municipality's Role in Development

- Clear direction on the vision for the Study Area and the land-use decision making process from the municipality desired by developers and landowners
- Developers desire flexibility on design guidelines to make early retention of clients easier and accommodate tenants' infrastructure needs
- Parking requirements should be adapted to the business' needs

In background research and interviews, there was emphasis on having **clear direction from the municipality** for what type of development is appropriate to avoid uncertainty with future proposals. Based on conversations with developers and land owners, they expressed that redevelopment may be stalled due to the uncertainty of future land use planning.

A developer of industrial properties believed that **increased flexibility in design guidelines** to accommodate tenant needs was necessary. As developers sometimes secure larger tenants before making development applications, knowing that the existing guidelines will not conflict with the infrastructure requirements for industrial users can help ease the application process.

Interviewees identified **parking requirements as both a hindrance**, due to their costs, and a necessity for redevelopment and businesses in the Study Area. The businesses and developers we consulted disagreed over the amount of parking necessary, particularly during building construction when street parking may not be accessible. There was also concern over providing parking at establishments that serve alcohol, making them more accessible by car because of risks of impaired driving.

In Harbourside and Rock Bay, limited parking was a concern. One potential solution may be the creation of shared private employee parking lots, co-owned by two or more private landowners, to help keep street parking available for short-term use by customers.

Rock Bay Employment Sub-Area

Land Use Directions and Urban Design



Rock Bay area will continue to serve Victoria's urban industrial district. The area is a key location for heavier, labour-dependent industries. The district contains a mix of businesses engaged in the production, distribution or repair of goods or equipment as well as various employment-generating uses. A guiding principle for this area is "industrial first", meaning that industrial uses are given priority.

Commercial uses are an important part of the area but should not displace industry. Housing is excluded from most of this area because less intensive activities are not compatible with the area (as they generate impacts such as noise from production, truck loading and unloading, late and early shifts, etc.) and because high-density uses can price out important employment-generating uses.

Preservation of these lands from inappropriate land uses is vital to a vibrant economy and to a strong tax base for the City. This area is ideally located close to the Downtown, and central to the region's workforce, workforces and customers. The CRD projects that demand for these industrially zoned spaces will increase over time, putting pressure on existing spaces. At the same time, it is important that land use and zoning policies support the development of newer industrial and flex spaces within the district, providing new businesses with quality spaces that are "business ready."

Within the Rock Bay District, the areas between Douglas Street and Blanshard Street can support higher density housing consistent with the Downtown Core Area Plan (2010). These areas should feature employment or commercial uses located on the ground floor of buildings that front onto Douglas or Blanshard Streets.



Plan for Rock Bay Employment Area by City of Victoria.

Plan

REALIZING THE CREATIVE EMPLOYMENT DISTRICT

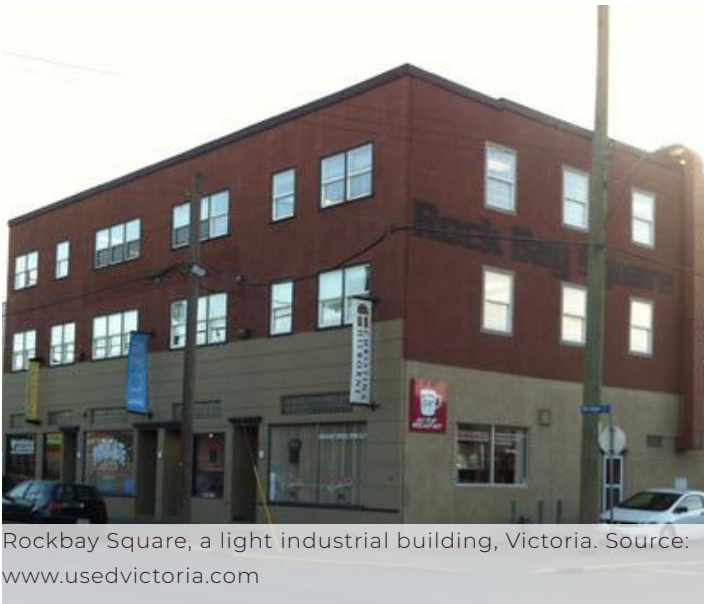
The composition of a Creative Employment District (CED), according to consultations with the City of New Westminster, should be one of a diverse group of land-uses and users that are suitable within an urbanized environment. Here we describe uses and users that emerged from our analyses, and which are envisioned to be a part of a Lower Twelfth Street CED. A summary chart of user needs is found in Appendix D.



Rendering from Wilmington Creative District Strategy



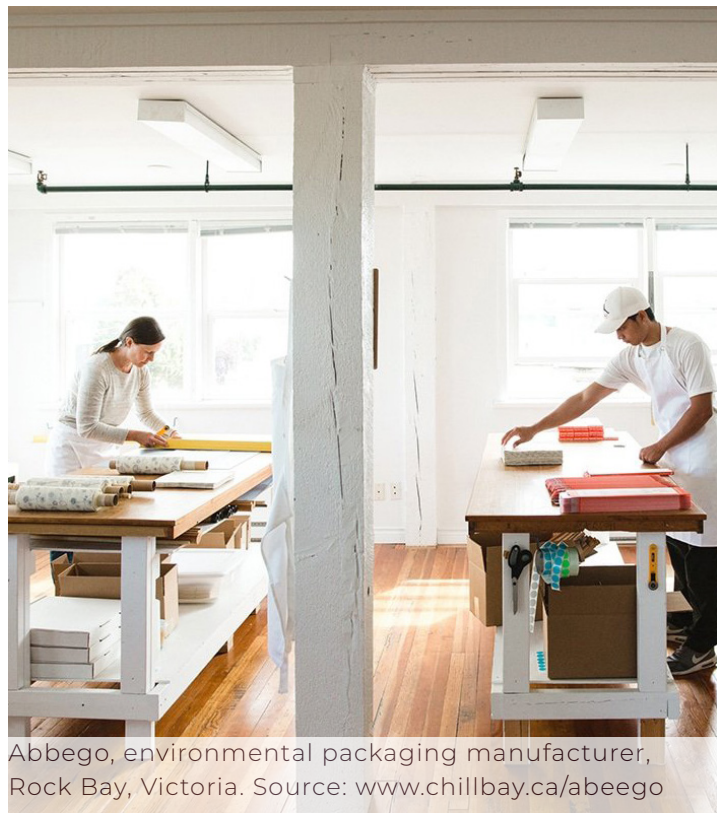
Hootsuite Headquarters, a tech company, Mount Pleasant, Vancouver. Credit: Emily Huang



Rockbay Square, a light industrial building, Victoria. Source: www.usedvictoria.com



Brewery Production. Source: unsplash



Abbego, environmental packaging manufacturer, Rock Bay, Victoria. Source: www.chillbay.ca/abeego

MIX OF LAND USES



LIGHT AND ULTRA-LIGHT INDUSTRIAL

The primary focus of planning for the Study Area should be to facilitate light or ultra-light industrial uses. These uses typically require less raw materials, space, and power, and produce relatively less noise, waste, odour, or nuisances than heavier industrial uses. The majority of these uses would likely be most suitable on the ground floor of buildings due to requirements for high ceilings, loading bay access, and the ability to support machinery.



ANCILLARY RETAIL OR RESTAURANT

Ancillary retail or restaurant use can support the financial viability of a light-industrial manufacturing use and add vibrancy to a CED. The percentage of floor space allowed must be balanced to ensure that the focus on manufacturing is preserved, while allowing flexibility for the more profitable retail space.



OFFICE USES

An emerging trend in industrial development is the inclusion of flex spaces that can accommodate a diversity of office and light industrial uses. Additional office density has been used as a bonus for the development of industrial buildings in Vancouver. Several interviewees cited the inclusion of office space as a method of intensifying industrial land. In New Westminster, current market conditions for offices may make the short-term development of mixed use industrial-office projects difficult. However, including flexible office space may be important for the long-term development of the Study Area.



RESIDENTIAL

As light and ultra-light industrial uses do not produce the same noises, smells, and traffic as traditional industrial uses, there is an opportunity to explore how residential uses might interact with these new light and ultra-light industrial uses. Several case studies (Rock Bay, Victoria; False Creek Flats, Vancouver; and Harbourside in North Vancouver) included plans for mixed-use residential on the boundaries of the Creative Employment Districts at residential-industrial interfaces, which also provides a closeby customer base for ancillary retail and restaurants, and greater activation of the neighbourhood. An appropriate mix of uses should consider the possibility that housing may increase pressure to use land for the more profitable residential uses rather than industrial development.

MIX OF USERS

TYPES OF USERS

These businesses are presented based on their meeting the criteria below or their prominence in case studies, interviews, and background research. We developed these criteria through our research and analysis with input from the Project Partner. The objective of the targeted employment-generating users is to:

- Generate skilled, above-minimum wage employment;
- Reflect the changing nature of industrial uses, with a focus on emerging industries; or,
- Support both manufacturing and the creation of street and neighbourhood vibrancy.

FOOD SERVICE AND DISTRIBUTION



As with breweries, many key informants stated the desire to have more food and beverage services in the area to provide amenities for employees and to draw people to the district. Zoning in case-study districts have typically sought to keep a balance between restaurant and cafe space with other uses in the district to prevent the area from being characterized by food services. In Vancouver's industrial zoning district schedules, restaurants are typically limited to a maximum floor space of 3,200 square feet, and they must be a minimum of 650 feet away from any other restaurant ²⁰

BEVERAGE PRODUCTION



The clustering of breweries was cited as a desirable feature for a CED. Customers often travel to these areas to visit multiple breweries. We observed this trend in Mount Pleasant and in Port Moody's Brewers Row. In British Columbia, breweries have experienced strong growth in recent years with revenues increasing by 45 percent since 2012.²¹ Further study will be required on what portion of floor space should be permitted for non-tasting room production.

CREATIVE PRODUCTS AND DIGITAL MANUFACTURING



New Westminster has experienced growth in the creative industries with a 21 percent increase in jobs from 2006 to 2016.²² Leveraging this growth in the Study Area may be a productive use of office space. The City of Vancouver's experimentation with its new Creative Products Manufacturing and Digital Entertainment and Information Communication Technology definitions offers lessons on how zoning can be created to tailor office or industrial uses to a set of desired users. Attracting the design and technology sectors may increase the number of higher paying jobs in the Study Area, as these sectors typically provide higher than average salaries.

20. For example, City of Vancouver, I-1 District Schedule, Sec. 3.3.6.

21. Small Business BC, BC Stats, and Ministry of Jobs, Trade and Technology. Small Business Profile 2018.

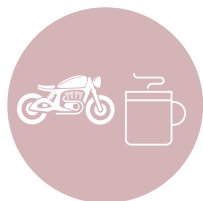
22. City of New Westminster. Future Forward: An Economic Development Plan for New Westminster, 2018-2023.

TYPES OF USERS CONTINUED



MEDICAL EQUIPMENT MANUFACTURING

Medical equipment manufacturing is a growing sector in British Columbia, and is also important within New Westminster relative to the region. There is a significant conglomeration of medical-sector businesses adjacent to the Royal Columbian Hospital on the opposite side of New Westminster, but the users such as medical software companies may not require immediate adjacency to the hospital precinct.



HYBRID BUSINESSES

Transitioning the Study Area from a district mostly characterized by auto-oriented businesses may be aided by the encouragement of hybrid businesses that are suited to buildings that house auto-service businesses. The Jammer Cafe in Mount Pleasant and Wheelies Motorcycles in Rock Bay are both motorbike mechanic shops with food services, which serve meals and provide urban motorcycle owners with work space. These types of businesses may be well suited to the buildings that have the potential for adaptive reuse in the Study Area.



MAKERSPACES

Makerspaces were identified in New Westminster's OCP and Economic Development Plan as desired businesses for the Study Area. In Wilmington, Delaware, the attraction of a makerspace firm was a major achievement of the vision for its Creative District, as it has fostered wide-spread collaboration between the firm and local educational institutions. Makerspaces can provide affordable access to technology and educational resources to support entrepreneurs, artisans, small-business owners, and hobbyists in need of tools and workspace. The communal aspects of shared resources can foster collaboration and community building in the district.



ARTISANS AND ARTIST STUDIOS

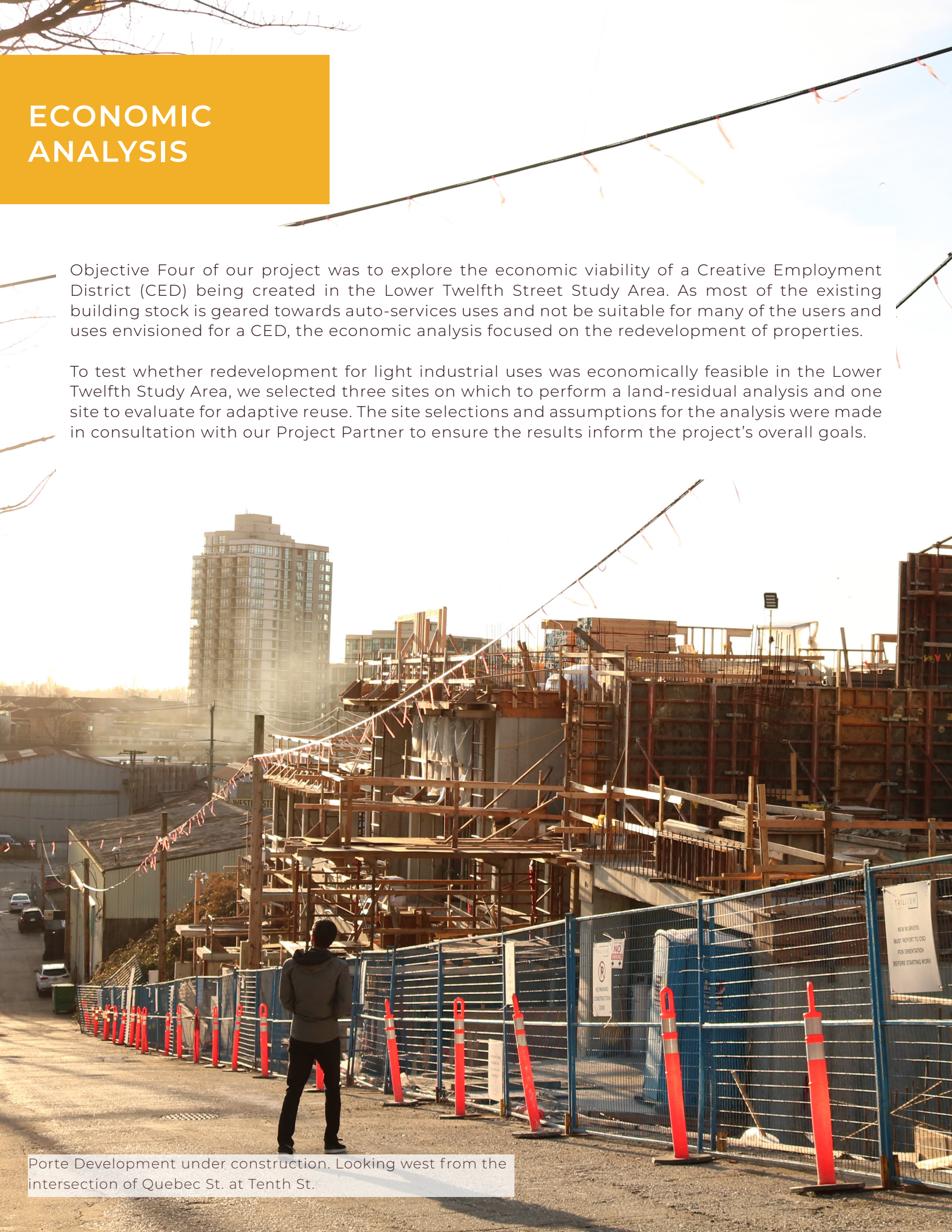
Several of our case studies sought to encourage artist and artisan space in their Creative Districts to contribute to the area's character and cultural capital. This desire was also expressed by respondents to the community consultation for New Westminster's OCP. The City of Vancouver, in partnership with the Vancouver Economic Commission, is developing a plan for the collection and allocation of community amenity contributions through rezoning in the False Creek Flats. It is estimated that the Flats will generate over \$100 million in all development revenues.²³ In addition to infrastructure and public space investments, the intention is to use the funds for community economic development projects in the area, including the creation of an Innovation Hub on city-owned land featuring an affordable incubator space, social enterprises, and arts production.

23. City of Vancouver. False Creek Flats Plan. 2017.

ECONOMIC ANALYSIS

Objective Four of our project was to explore the economic viability of a Creative Employment District (CED) being created in the Lower Twelfth Street Study Area. As most of the existing building stock is geared towards auto-services uses and not be suitable for many of the users and uses envisioned for a CED, the economic analysis focused on the redevelopment of properties.

To test whether redevelopment for light industrial uses was economically feasible in the Lower Twelfth Study Area, we selected three sites on which to perform a land-residual analysis and one site to evaluate for adaptive reuse. The site selections and assumptions for the analysis were made in consultation with our Project Partner to ensure the results inform the project's overall goals.

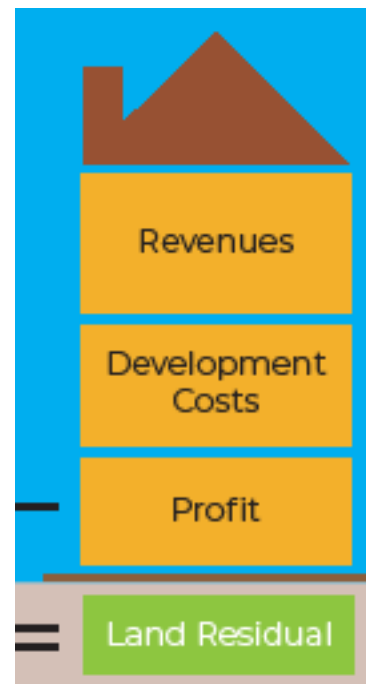


Porte Development under construction. Looking west from the intersection of Quebec St. at Tenth St.

LAND RESIDUAL ANALYSIS

We developed a model to estimate **residual land values** for several different development scenarios. The land-residual analysis compares the expected costs of a development against its expected revenues. The difference between those figures is considered the land residual, or what a developer could afford to purchase the piece of land for (Land Residual = Estimated Revenues – Estimated Development Costs). Those land values were compared against the BC Assessment value for the property. In cases where the proposed uses resulted in a higher value than the BC Assessment value, we deemed redevelopment possible.

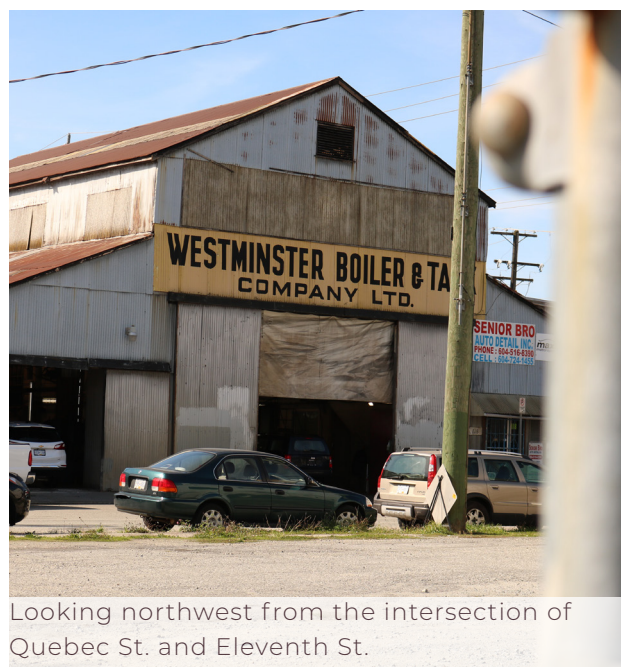
Our model was created based on market research, which included information from construction costing guides and reports on commercial and residential real estate trends. The model included costs from relevant fee schedules from the City of New Westminster, Metro Vancouver, and Translink. These estimates were also informed by interviews with businesses owners, property owners, developers, industrial real estate brokers, and other stakeholders throughout the Lower Mainland. For all sources on cost and revenue estimates, the pro forma is available in Appendix E. To simplify the analysis, we assumed all industrial and residential floorspace would be sold as strata-title, rather than leased property. For industrial properties, strata-title ownership is becoming a trend among small-scale light industrial businesses.²⁴



ADAPTIVE REUSE

To determine the possibility of the adaptive reuse of a building in the Study Area for any of the proposed users, we presumed that a landowner would only invest in a renovation of a building if the expected lease rate of the upgraded space, less the cost of renovations and remaining vacant, raised the property value above the value for its current use. We based our analysis on interviews with landowners and businesses in the area, real estate listings, and the current business composition of the Study Area.

24. Eric Aderneck. White Paper: Stratification of Industrial Land in Metro Vancouver, Prepared for: Metro Vancouver, Regional Planning Parks, Planning and Environment Department. August 2018.



Looking northwest from the intersection of Quebec St. and Eleventh St.

LIMITATIONS

COSTS

Our financial model is based on **assumptions of costs and revenues** that are not necessarily reflective of development on the chosen sites, but they broadly represent development conditions in the Lower Mainland. BC Assessment property values also may not accurately represent the market land value of a property. If landowners of the sites are seeking higher prices than the assessed value, this would reduce the likelihood of redevelopment. The model is also based on a single time point, which will not represent the development of a property that may span several years.

FLOOR-SPACE RATIO (FSR)

As residential floorspace was deemed to be the most value-generating land use, this was the primary variable for determining financial viability. Residential FSRs were increased to the point where land values equivalent to the BC Assessment values were generated to estimate the minimum amount of residential density required to achieve redevelopment. As these figures are based on generalized costing and sales data, the estimates are not precise. Industrial floorspace was limited to a maximum of 1.0 FSR at 100 percent site coverage, because any stacked industrial space would introduce unknown costs due to lack of costing data for those, relatively rare forms of construction.

SITE CONDITIONS

A rigorous analysis of specific site conditions is required for any precision in a land-residual analysis. Due to our methodology, we were unable to quantify some relevant factors related to the sites. For example, the effect of soil contamination on redevelopment is difficult to quantify without collecting soil samples and performing analysis, which was outside the scope of our study. For such issues, we expressed them as risks that may or may not change the economic viability of a project.

KEY FINDINGS OF ECONOMIC ANALYSIS

- 1. Under current zoning, the estimated value of redeveloped industrial land exceeded the BC Assessment value on only one of the four sites analyzed.**
 - Redevelopment for light-industrial uses under current zoning is potentially viable on portions of the Study Area but not all.
 - Redevelopment may proceed slowly under a status quo scenario despite increased demand on industrial land.
- 2. Office space is the least viable land use in the economic models, as develop costs exceed revenues.**
 - While key informants stressed the importance of incorporating office space with industrial use, due to the high construction costs and a relatively less active office market in New Westminster, any new office development would need to sell at a price much higher than average to be successful.
- 3. Residential space supports the highest land value.**
 - Residential development is the most valuable land use and could be used as a subsidy to encourage industrial development.
- 4. Mixed-use (industrial, and/or commercial, residential) projects introduce significant risks and higher costs.**
 - Mixed-use industrial projects require significantly higher construction costs for industrial space.
 - Mixed-use industrial projects in the City of Vancouver are possible because of high demand and a premium on sales prices; the market for this type of product is untested in New Westminster.
- 5. Redevelopment or adaptive reuse will change the affordability of the Study Area.**
 - A rise in rents and strata sales prices will likely occur under any redevelopment or adaptive reuse scenarios.
 - Even with a subsidy, some of the spaces may not be suitable for adaptive reuse.
 - Without some form of subsidy, affordability—one of the area's most valued features—will likely be negatively affected.
- 6. Underground parking is one of the most significant development costs that could be mitigated by the City.**
 - Underground parking represented more than 10 percent of development costs in our model.

SITE ANALYSES



Fourth Ave.

Twelfth St.

Third Ave.

Queen St.

Royal Ave.

Stewardson Way

SITE ANALYSIS: 210 TWELFTH STREET

This site is currently owned and occupied by the Westminster Toyota car dealership, and it is zoned M-1–Light Industrial. The majority of the site is an open-air car sales lot with one two-storey building that features office and retail space. The property fronts onto the west side of Twelfth Street where the main access point is, and backs onto Stewardson Way, which is currently blocked from car and pedestrian access. The land is relatively flat and falls partially within the Fraser River floodplain. The main driveway is accessed via Twelfth Street.

As one of the largest of parcels in the Study Area and being on a level grade, this site has more flexibility in the type of developments it could accommodate. Its distance from residential uses also make it suitable for ultra-light industrial uses that may generate odors, such as breweries, or significant noise, such as machining operations.

SCENARIOS:

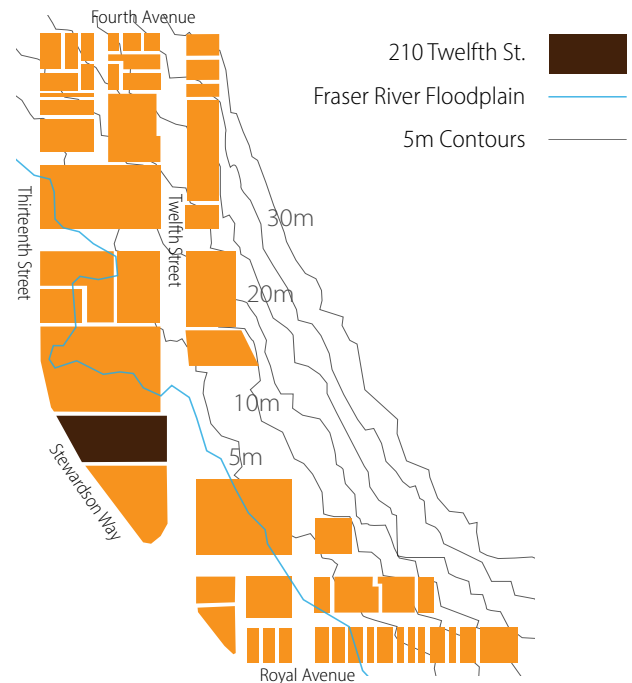
1. Industrial-only at .77 FSR: **Redevelopment possible**

At an FSR of .77, industrial floorspace is maximized to the point where no underground parking would be required by New Westminster by-laws. This would provide approximately 40,000 feet of industrial space that could be divided into several strata units of varying sizes. The size of 210 Twelfth Street could accommodate a large anchor business with a number of smaller spaces in the same complex. Construction costs for industrial properties are relatively lower than the other uses, and because of the rising prices for industrial strata we believe a market-rate industrial-only project under current zoning could support the land value required for redevelopment under current zoning.

2. Industrial-Office Mixed Use: **Redevelopment unlikely**

This form of mixed-use project, featuring ground-floor industrial space with two to three floors of office space above, has become popular in Vancouver's Mount Pleasant neighbourhood. The buildings often cover the entire site and feature

Street Address: 210 Twelfth Street
Zoning: M1 – Light Industrial
Site Area: 54,067 square feet / 5,023 square metres
2019 BC Assessment Taxable Value:
 \$4,997,200.00



underground parking. These developments come with high construction costs to accommodate the mix of uses, and their success relies on the relatively high sales prices of both the industrial and office spaces, upwards of \$1,000 per square foot,²⁵ more than double what we observed elsewhere in the Lower Mainland. Given current market conditions, office space is the least viable land use in our analysis, as develop costs exceed estimated revenues; any development of office space reduces the revenues, according to our model.

3. Industrial-residential: **Redevelopment possible**

Industrial-residential mixed-use buildings

25. Business in Vancouver. New small-space flex

SITE ANALYSIS: 210 TWELFTH STREET

are a relatively rare form, which introduces uncertainty over construction costs and market demand. We based costs on estimates for industrial-office mixed-use buildings, which were provided by a developer of such projects. This more than doubles the hard construction costs of the normally less expensive industrial floorspace because of the need to accommodate residential space that will share the same building shell. This increase significantly reduces the profitability of the industrial portion of the property. Residential floorspace, because of its generation of higher revenues, could subsidize the losses of industrial floorspace. According to our model, an FSR of 2.14 of residential floor space would be required to offset losses from .77 FSR industrial space and to break even with the BC Assessment land value. If this site were suitable for a mid- to high-rise residential development, it may represent the best opportunity to exchange bonus residential density for the provision of below-market light-industrial space. For example, if industrial floorspace were to be sold at 80 percent of the market rate, which we estimated to be \$450 per square foot, the model estimates that a residential FSR of 2.70 would match the BC Assessment value.

SITE RISKS:

This site has been recorded in the BC Ministry of Environment's Environmental Remediation Sites database as having the potential for contamination from adjacent sites, though no extensive testing has been performed. This introduces significant risks that could affect the development of the land. Remediation of the Gas Works site, for example, was estimated to be up to \$1.85 million,²⁶ which in the case of

offices push \$1,000 a square foot. November 21, 2018.
<https://biv.com/article/2018/11/new-small-space-flex-offices-push-1000-square-foot>

210 Twelfth Street would make the industrial-only development unviable. An environmental consultant noted, however, that if underground parking is required for a development this could reduce soil remediation costs because the removal of contaminated material would be accounted for in that process of building a parking facility. The parcel is also partially within the Fraser River floodplain, which may increase costs of construction and underground parking to account for flood resiliency.



26. City of New Westminster. Presentation to Council. New Westminster Gas Works Building – 231 Twelfth Street. n.d.

SITE ANALYSIS: 335 THIRTEENTH STREET & 379 TWELFTH STREET

The results of the analysis for these two sites were grouped, as both parcels feature very similar conditions and assessment values. Both face onto Fourth Avenue, across from residential neighbourhoods. They are in a portion of the Study Area where there is a steep grade as the land slopes toward the Fraser River. Pedestrian access to these sites may therefore be difficult, yet they are both close to stops on the 112 Bus Route.

On 335 Thirteenth Street is Ambrose Apartments, built in 1913. The apartment building also fronts onto Thirteenth Street and is adjacent to a small, triangular park with mature trees, beyond which is Stewardson Way and the elevated Skytrain line. Traffic calming measures prevents vehicle-access from the north on Thirteenth Street. To the south of the building, towards Stewardson Way is a single-detached home, and further down the block is New West Auto Collision and Glass and Ironwood Boats.

On 379 Twelfth Street is a vacant motel. To the south is a used-car sales lot and an auto-services complex, which also includes the recording studio 12th Street Sound. In its current configuration, access to the top floor of the building is available from the laneway on Fourth Avenue, which abuts single-detached residences, and access to the underground parking area is from Twelfth Street at the lower elevation.

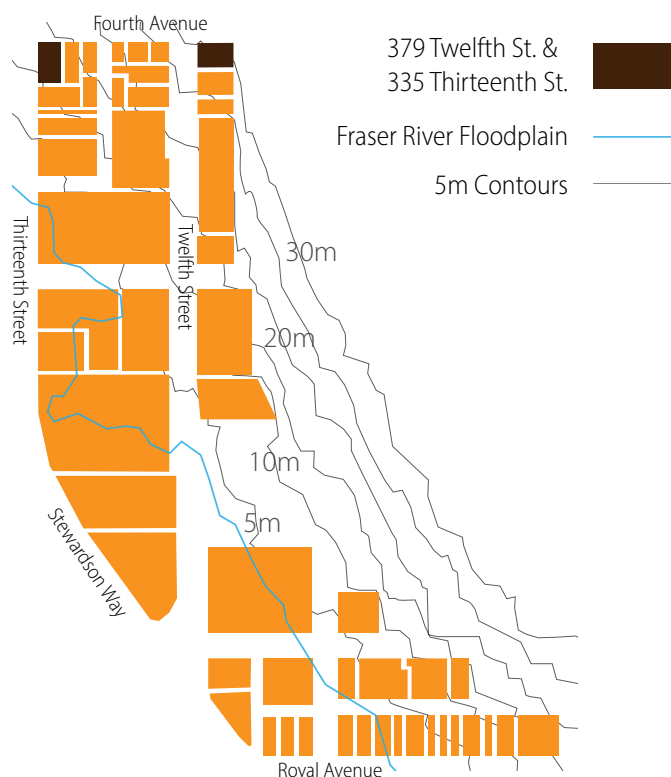
SCENARIOS:

1. Industrial-only: **Redevelopment unlikely**

Despite being the lowest cost form to build, an industrial-only development on either of these parcels is unlikely to support redevelopment because of the relatively higher assessed value of this land. For example, the BC Assessment value of the land on 335 Thirteenth Street, not including the building, is approximately \$135 per square foot, while 210 Twelfth Street is \$92 per square foot. The density of market-rate industrial floorspace required to support an equivalent land value to the BC Assessment value, according to our model, is FSR 1.06. To make redevelopment

Street Address: 335 Thirteenth Street
Zoning: M1 – Light Industrial
Site Area: 10,824 square feet / 1,006 square metres
2019 BC Assessment Taxable Value: \$1,729,000

Street Address: 379 Twelfth Street
Zoning: C2- Community Commercial
Site Area: 9,900 square feet / 920 square metres
2019 BC Assessment Taxable Value: \$1,713,500



possible without any subsidy the FSR for industrial uses would have to exceed that figure, which would require both underground parking and stacked industrial space, further increasing development costs relative to revenues.

SITE ANALYSIS: 335 THIRTEENTH STREET & 379 TWELFTH STREET

2. Industrial-residential: **Redevelopment possible**

As these sites are next to the Brow of the Hill neighbourhood, this is where mixed-use residential buildings may be most appropriate in order to ease transition from industrial uses to the adjacent housing. As in the case with 210 Twelfth Street, residential floorspace could offset the losses from the increased costs of a mixed-use industrial building. Our model estimates that it would require a minimum residential FSR of 3.65 to match the BC Assessment land value, necessitating a mid- to high-rise residential development to create the necessary value for redevelopment with market-rate industrial space. A residential FSR of 4.4 would be required to create an equivalent value if industrial units were sold at 80 percent below market rates.

SITE RISKS

The grade of this part of the Study Area presents the opportunity for innovative forms with different points of access and separation of uses. It may also require specialized constructions that we were not able to capture in our analysis, introducing a risk for redevelopment.

As both of these lots are relatively small, the amount of residential development required to support a light industrial use may not be appropriate. Both sites have surrounding lots that could hold potential for a land assembly to better accommodate the needed residential density. A land assembly would create new options for development. The Ambrose Apartments building is also a heritage asset that could be repurposed, serving as a catalyst for a unique project for that parcel.



379 Twelfth Street



379 Twelfth Street



335 Thirteenth Street



335 Thirteenth Street

SITE ANALYSIS: ADAPTIVE RESUE ON ROYAL AVENUE

Royal Avenue between Tenth Street and Eleventh Street features a number of low-rise buildings, mostly dedicated to auto-oriented businesses on the northern side of the street. On the southern side of Royal Avenue is the rear of Columbia Square, a large shopping centre with a major grocery store and several restaurants and services. The eastern portion of the block has a steep slope, which levels midway to a relatively flat grade going westward towards Eleventh Street. This portion of the Study Area is primarily zoned M-5 for Light Industrial Mixed Use Districts.

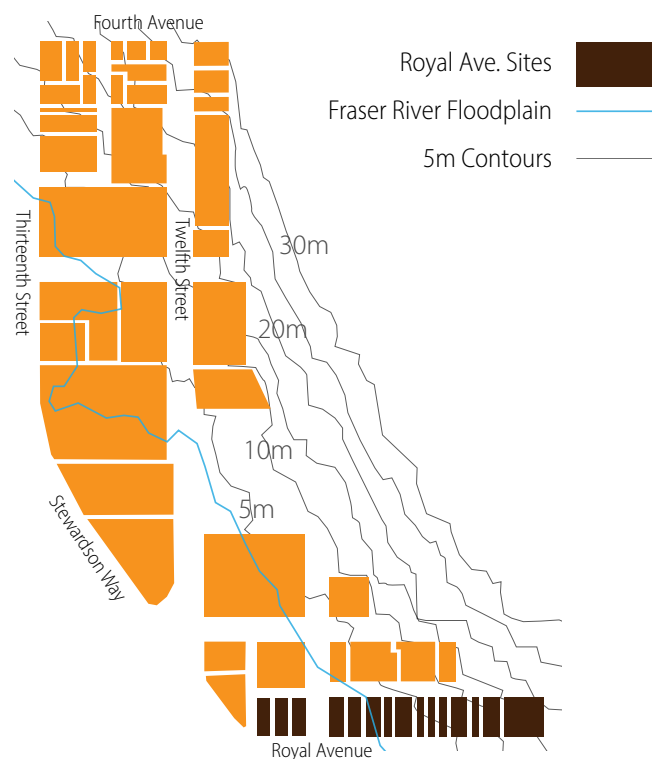
Being in a relatively flat area, with closer proximity to the Skytrain, Royal Avenue may be more appropriate for businesses that draw pedestrian traffic. As several of the buildings were home to auto-oriented businesses, custom motorcycle shops or hybrid-businesses such as motorcycle cafes may be appropriate in this area.

SCENARIO:

Determining the costs of renovating a building for reuse is specific to individual properties, which was outside the scope for this project. However, based on interviews with businesses and landowners in the Study Area, we believe that successful adaptive reuse presents significant challenges.

A key characteristic that attracted many businesses to the Study Area was the low lease rates, which balanced the negative qualities of the area such as difficult pedestrian accessibility. Based on interviews with lessees in the area, the lease rates range from \$10 to \$13 per square foot per year, which is in line with the average rent for industrial spaces in the Tri-Cities and New Westminster. A listing for a renovated industrial space in the Study Area that had been listed for two months at the time of writing was advertised for \$19 per square foot per year, which was lowered from the original asking price of \$22 per square foot per year.

If landowners require an increase of fifty to ninety percent in lease rates for renovated space, any adaptive reuse would likely negatively affect one of the most valued qualities of the Study Area—



affordability. It is unclear if demand exists for industrial properties in the Study Area at that price.

In interviews with business owners, some believed that investment by the tenant in renovating a space may be more attractive to businesses. While this does involve a large initial investment, it can reduce long-term operating costs by preserving lower lease rates. A specialty bakery on Royal Avenue that was opened to test gluten-free products took this approach, renovating a former glass manufacturing operation.



Looking southwest along Royal Ave from the intersection of Royal Ave. and Tenth St.

POLICY ANALYSIS

Objective Five of our project involved identifying policies or tools that the City could use to facilitate development for the desired users and land uses in the CED. To achieve this objective, our team conducted a policy review, extracting relevant policies and tools from case studies, key informant interviews, and background research. These policies were analyzed by looking at the pros and cons of each policy from the perspectives of the City, developers, landowners, and civil society, which included residents, businesses, and community organizations. The following two criteria and their subsequent questions guided the team to work through each policy:

1. Effectiveness

- What are the effects of the policies on the intended goals?

2. Feasibility

- Are the required resources available?
- Does the policy fall under the legal jurisdiction of the City?

Policies were sorted into three categories, guided by our understanding of three goals of the CED in the Study Area:

1. Manage Land Use and Inform Development

- Policies for encouraging new development and managing land uses

2. Attract Desired Users

- Policies for attracting the ideal CED users and businesses

3. Inspire Urban Design and Placemaking

- Policies to support the branding and identity of the CED

The policies determined to be effective and feasible for the Study Area are summarized in the chart on the next page and described in detail below.



Looking northeast along Auckland St from the cul-de-sac at the southwestern end of Auckland St. at Twelfth St.

POLICY EVALUATION CHART

GOAL	POLICY	PROS
Manage Land Use and Inform Development	Density Bonus Program.	<ul style="list-style-type: none"> -Makes the project more viable to a developer by allowing additional floorspace of a more profitable use that can subsidize a less profitable use desired by the City. -Offers clarity to developers and the City, as the allowable bonus density and uses are outlined in the zoning.
	Relaxation of Parking Requirements.	<ul style="list-style-type: none"> -Encourages development by reducing construction costs. -Encourages the use of other modes of transportation. -Supports the City's transportation and pedestrian objectives. -Supports establishing Twelfth Street as a "Great Street" in accordance to the Master Transportation Plan.
	Develop policy to reduce potential land-use conflicts by restricting the locations of noise- and odor-generating uses.	<ul style="list-style-type: none"> -Helps manage the effects of noise and smell on neighbouring residential areas. -Creates effective industrial-urban interfaces.
Attract Desired Users	Require development of flexible industrial buildings with sufficient floor-to-ceiling heights, large floor plates, and other features that will allow the structure to support various types of business users.	<ul style="list-style-type: none"> -Ensures that the built form can accommodate a variety of desired users. -May increase the availability of suitable new light-industrial space. -Future-proofing for potential changes in use, rather than a more traditional industrial development without the potential to adapt.
	City takes active role in recruiting desired Creative Employment District businesses.	<ul style="list-style-type: none"> -Facilitating a desired creative employment business may encourage other similar types of users to be located in the Study Area. -Having a makerspace or nonprofit Community Economic Centre as a tenant may support community building, innovation, and socialization of residents.

CONS	EFFECTIVENESS	FEASIBILITY
<ul style="list-style-type: none"> -Increased residential density may not be desirable for the Study Area, as it may increase land speculation. -Potential for more land-use conflicts. -Creates more parking requirements and increased traffic. 	<ul style="list-style-type: none"> -Aligns developers interests with municipality's goals. -Policy has been used with success throughout the Lower Mainland for other applications. -May be difficult to incentivize industrial development because mixing residential and industrial is a relatively new built form. 	<ul style="list-style-type: none"> -Within the City's jurisdiction. -It is already in use by the City for other applications. -Other municipalities with similar legislative powers are using density bonusing of residential to encourage industrial built form (e.g., District of Squamish).
<ul style="list-style-type: none"> -Some tenants may prefer or require surface parking for customers and easier loading. -Possible resistance from neighbouring residents over concerns that parking demand from Lower Twelfth Street will result in competition for on-street parking in front of their residences. 	<ul style="list-style-type: none"> -Makes the development more financially viable by reducing high costs associated with underground parking. 	<ul style="list-style-type: none"> -Within the City's jurisdiction. -Already in use in City for other applications. -Precedents in Harbourside City of North Vancouver; District of Squamish; Mount Pleasant, Vancouver; Brooklyn, New York.
<ul style="list-style-type: none"> -Conflicts between uses may still arise. -Without adding residential density, redevelopment for light industrial may not be viable on many sites. 	<ul style="list-style-type: none"> -Effective in managing land use, not effective in attracting new development. -Even with covenants in place on residential properties adjacent or interfacing with industrial, some complaints still occur. 	<ul style="list-style-type: none"> -Commonly exercised land use-policy and under City jurisdiction. -Would require staff to do the technical background work to determine where is appropriate for each type of land use, and uses that mix well.
<ul style="list-style-type: none"> -Applies restrictions to a development's built form. -May not meet a developer's objectives or be economically viable. 	<ul style="list-style-type: none"> -Does not attract new development. -Ensures that any development that occurs provides additional light industrial space in the Study Area. 	<ul style="list-style-type: none"> -Within City's jurisdiction. -City can implement by including regulations in an amendment to the zoning bylaw. -City can also consider implementing Development Permit Areas and design guidelines, with the guidelines to be met through the rezoning process.
<ul style="list-style-type: none"> -Desired tenants may not be willing or able to locate to the Study Area. -A makerspace or nonprofit Community Economic Centre may require ongoing support from the City in the form of grants and some staff time to coordinate programs. 	<ul style="list-style-type: none"> -Establishes the desired character of the Study Area. -Encourages the co-location of similar businesses. -Makerspace can act as an incubator for small businesses, producers or artisans. 	<ul style="list-style-type: none"> -Within City jurisdiction, -Requires City staff time to recruit and facilitate. -Precedents in False Creek Flats, Vancouver and Wilmington, Delaware.

GOAL	POLICY	PROS
Attract Desired Users	Business License Fee Reduction for qualifying creative district businesses.	-Attracts desirable users to locate in the Study Area. -Helps reduce burden of higher rents in newer buildings.
	Partial Tax Exemption for Rehabilitated Structures for qualifying creative district businesses.	-May encourage adaptive reuse of older buildings. -May encourage renovation of older buildings by reducing costs operating expenses. -May encourage desired businesses to locate in the Study Area.
	Expand definitions of industrial uses within current zoning to allow more uses (e.g., CPM, PDR, see below).	-Expands opportunities for uses that the City wants to encourage. -Adapts zoning bylaw language to reflect the changing nature of industry and employment. -Introduces new types of users that can potentially afford higher rents.
	Secure makerspace or community economic centre through VACs.	-Helps City secure community amenitie. -Contributes a tenant that may encourage similar uses to co-locate within the Study Area. -Makerspace can act as a start-up incubator for small businesses and artisans.
Inspire Urban Design and Placemaking	Create and implement an urban design and place-making strategy to foster vibrancy, highlight local heritage, and improve the pedestrian experience in the Study Area.	-Brings vitality to city streets . -Fosters a Creative Employment District character distinct to Lower Twelfth Street. -Can build on history of Lower Twelfth. -Attracts development and investment. -Encourages collaboration through community partnerships. -Enhances the pedestrian experience. -Makes the area more accessible to non-motorized vehicle transportation.

CONS	EFFECTIVENESS	FEASIBILITY
<ul style="list-style-type: none"> -May be difficult to write policy to clearly differentiate between qualifying and non-qualifying businesses. -Loss of revenue to the City. -Requires City resources to process applications. 	<ul style="list-style-type: none"> -May attract desired users to the Study Area. -Requires there to be appropriately sized and quality of built form, and vacancy in order for new businesses to move into area. 	<ul style="list-style-type: none"> -Within City's jurisdiction. -Time required to implement and promote. -Precedent in Virginia Beach, Virginia.
<ul style="list-style-type: none"> -Loss of tax revenue for the City. -There are a limited number of existing buildings in the Study Area to be reused. -Difficult to ensure that any reduction in taxes gets passed along to the tenants. 	<ul style="list-style-type: none"> -Encourages the rehabilitation and renovation of existing structures. -May not attract new qualifying creative businesses. -May not result in affordable rents for desirable creative district businesses. 	<ul style="list-style-type: none"> -Within City's jurisdiction. -Would reduce City's tax revenue. -Requires staff time to write and implement new policy; as well as ongoing staff time to manage the program. -Precedent in Virginia Beach, Virginia.
<ul style="list-style-type: none"> -New uses may outcompete more traditional light-industrial uses. -Rents may increase in the Study Area, harming affordability. 	<ul style="list-style-type: none"> -Attracts new types of users not included in previous zoning. -Increases the variety of businesses within the CED. -Changes to zoning can help to market the area as a Creative Employment District. 	<ul style="list-style-type: none"> -Within City's jurisdiction. -Implemented through an amendment to the zoning bylaw. -Requires staff time to research and write zoning amendment, and to be passed by Council. -Precedents in Mount Pleasant, Railtown, False Creek Flats.
<ul style="list-style-type: none"> -Requires a rezoning with enough increased residual land value to justify redevelopment. -May take significant time to collect enough VAC funds to provide desired amenities. -Amenities may not meet all community expectations. 	<ul style="list-style-type: none"> -May have to consider VAC's from development outside of the Study Area (e.g., Downtown). -Effect would be to directly retain a desired user (a makerspace, or community center). -Time for funding, approvals and construction process could be lengthy. 	<ul style="list-style-type: none"> -Within City's jurisdiction. -The City is already collecting VAC's for the provision of other amenities. -Precedent in False Creek Flats, Vancouver.
<ul style="list-style-type: none"> -May not be a high priority due to limited City budget. -Place-making initiatives may require staff time and budget to facilitate. 	<ul style="list-style-type: none"> -May have immediate visual impact, identifying Lower Twelfth as a Creative Employment District. -Can implement this strategy without re-development. -Can build on the success of placemaking efforts already taking place by the Downtown BIA. -May attract people, businesses, and investment to the area. -Partnerships and programming may take time. 	<ul style="list-style-type: none"> -Urban design and place making falls within City's jurisdiction. -Desired urban design can be implemented through an amendment to the current zoning (desired setbacks and building heights); and through Development Permit Areas (DPA's) and urban design guidelines to be implemented through a rezoning. -Small budget required to facilitate partnerships.

MANAGE LAND-USES & INFORM DEVELOPMENT

POLICY: DENSITY BONUS PROGRAM

OVERVIEW:

Municipalities in Metro Vancouver often use height and density bonusing to incentivize developers to provide an amenity or payment to the local government for the allowance to build a greater amount of a more profitable form—for example, the provision of below-market housing in exchange for additional market residential density. This policy is used to incentivize the delivery of amenities that on their own are not profitable for the developer. The results of the policy will depend on the proposed combination of development density, the amenity provision, and ultimate financial viability of any project.

INTENT:

To attract affordable light industrial development to Lower Twelfth Street.

APPLICATION TO NEW WESTMINSTER AND LOWER TWELFTH STREET:

New Westminster currently uses a density bonus program to generate revenue for affordable housing and other amenities. To incentivize secured market rental housing the City currently waives their density bonus payment for this housing form. We suggest that New Westminster explore bonus residential densities or heights for the provision of below-market light industrial floorspace for desired uses. As indicated in the economic viability section, we found that bonus market residential density may facilitate redevelopment with light industrial spaces.

PRECEDENTS:

- False Creek Flats, Vancouver;
- Mount Pleasant, Vancouver;
- Brooklyn, New York;
- District of Squamish (MUD-2 zoning).

EXAMPLES IN OTHER CITIES:

False Creek Flats: In several different zoning districts in the False Creek Flats, increased density is permitted in exchange for affordable work spaces for innovation, showcasing, start-up businesses, artist workshops, and production, distribution and repair businesses.

Mount Pleasant: The I-1A District Schedule requires 1.0 FSR of industrial use and allows for increased density and height (5.0 FSR and 33.5 metres (110 feet)) for additional industrial or digital office use. An amenity share contribution is required for floor area above 3.0 FSR at a rate of \$6 per square foot, and bonus density is restricted to eligible industrial and office uses only.

District of Squamish: The District has developed a mixed use industrial and residential district, the MUD-2 (Mixed Use District) zone, where the bylaw provides 5 metres of bonus height if 75 percent or more of the ground floor space has ceiling heights of 5 metres or higher.



Example of a mixed-industrial residential development proposed in Squamish. Source: Pioneer Way Mixed-Use Development Application to District of Squamish.

MANAGE LAND-USES & INFORM DEVELOPMENT

EXAMPLES IN OTHER CITIES:

District of Squamish: Within the MUD-2 zoning, when 75 percent of the ground floor ceiling height exceeds 5.0 metres, parking requirements are reduced by 25 percent, or to 1.5 stalls per 100 square metres.



Source: Pioneer Way Mixed-Use Development Application to District of Squamish.

PRECEDENTS:

- Brooklyn, New York City;
- District of Squamish;
- Mount Pleasant, Vancouver.

POLICY: RELAX PARKING REQUIREMENTS

OVERVIEW:

Underground parking represents a significant portion of development costs, and existing business owners also find the City's parking requirements to be a challenge to making the best use of their space. Relaxing parking requirements may therefore improve the viability of both new development, and adaptive reuse of existing buildings within the Study Area.

INTENT:

To reduce construction costs and encourage transportation by modes other than motor vehicles.

APPLICATION TO NEW WESTMINSTER AND LOWER TWELFTH STREET:

A reduction in parking requirements may be especially helpful in the southern portion of the Study Area, as it is within walking distance of the New Westminster Skytrain station. To support the long-term viability of a reduction in parking, the City should consider improving pedestrian and cycling links to the New Westminster Skytrain Station.

Within the floodplain, some surface, or below surface, parking could be a viable method of reducing the risk to property improvements within the floodplain, as the parking can be designed to flood.

Some business owners find the City's parking requirements to be a challenge in making the best use of their space. Others said in interviews that the current lack of on-street parking limited customer access to their businesses. To ensure that businesses are not negatively impacted by a lack of on-street parking, a parking management strategy should be introduced in conjunction with the introduction of a reduction in parking minimums. Separate developments could be encouraged to share or pool underground or surface parking to minimize the costs to developers and increase efficiencies.

MANAGE LAND-USES & INFORM DEVELOPMENT

POLICY: MINIMIZE LAND USE CONFLICTS BY CAREFUL LOCATION AND DESIGN OF LIGHT INDUSTRIAL USES

OVERVIEW:

The City of Victoria implemented this policy in its Rock Bay District to facilitate the transition of light industrial to residential near the downtown area. This was to ensure that the form and massing of a low density area interfaces well with a higher density area. This policy creates a buffer between the industrial noise, smell, and traffic, to mitigate conflicts with residential areas. Limiting residential uses to certain areas also helps prevent those uses from outcompeting employment-generating uses on industrial land.

INTENT:

To permit housing only in selective portions of the Study Area to ease the transition from industrial uses with other uses that may be challenged by noise, odor, and other nuisances.

APPLICATION TO NEW WESTMINSTER AND LOWER TWELFTH STREET:

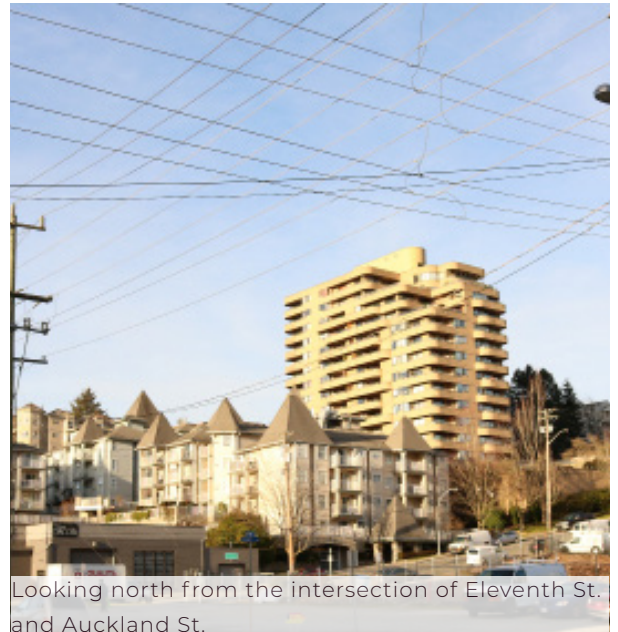
In the development of a neighbourhood plan for the Study Area, the City will need to determine where the residential transition will occur, and incorporate appropriate lighter industrial uses in that transitional zone.

PRECEDENTS:

- Rock Bay, Victoria;
- False Creek Flats, Vancouver;
- Central Eastside, Portland.

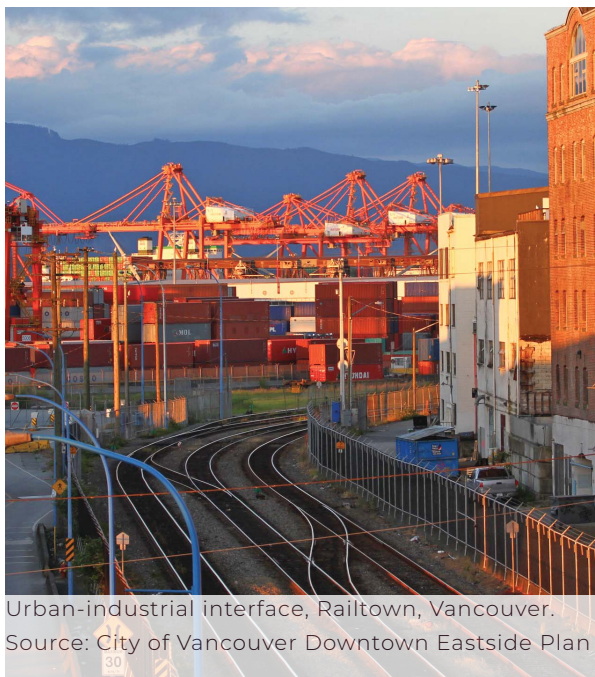


Ironworks Development, example of mixed-use on the "industrial arts frontage" in Rock Bay, Victoria.
Source: <http://www.ironworksliving.com/about.html>



Looking north from the intersection of Eleventh St. and Auckland St.

MANAGE LAND-USES & INFORM DEVELOPMENT



Urban-industrial interface, Railtown, Vancouver.
Source: City of Vancouver Downtown Eastside Plan



Eleventh Street and Auckland

POLICY: USE NOISE BYLAWS AND COVENANTS TO MANAGE LAND-USE CONFLICTS

OVERVIEW:

While lighter forms of industry generally create less nuisance than heavier industry, the proposed CED businesses may still create noise and odors, which can cause conflict with other nearby uses. Management strategies to reduce these conflicts include the requirement of developers to perform acoustical studies and meet acoustical standards inside the new residential units; the use of covenants at the development permit stage to ensure these commitments are met by the developers; and the signing of covenants by new owners of residential properties in mixed-use areas to acknowledge that they are moving into an area where noises and smells of industry may be present.

INTENT:

To reduce land-use conflicts.

APPLICATION TO NEW WESTMINSTER AND LOWER TWELFTH STREET:

Anywhere mixed-use residential and industrial is considered, the City should explore the use of covenants on new residential units in the mixed-use area to stipulate that those units may be exposed to reasonable levels of nuisance.

PRECEDENTS:

- Harbourside, District of North Vancouver;
- District of Squamish;
- Strathcona Village Development, Vancouver.

ATTRACT DESIRED USERS

POLICY: ENCOURAGE DEVELOPMENT OF FLEXIBLE BUILDINGS

OVERVIEW:

Numerous business owners indicated in our interviews that ceilings higher than 15 feet and dock loading were desirable features for industrial space. Requiring these design elements for light-industrial properties would serve the needs of a diversity of light-industrial users.

INTENT:

To ensure that the built form is appropriate for a variety of light industrial users.

APPLICATION TO NEW WESTMINSTER AND LOWER TWELFTH STREET:

Any new developments in the Study Area should be encouraged to have flexible spaces that can accommodate a diversity of ultra-light and light industrial users.

PRECEDENTS:

- Rock Bay, Victoria
- District of Squamish



2716 Rock Bay Avenue, Rock Bay, Victoria. Source: https://www.spacelist.ca/listings/75268/bc/victoria/for-lease/industrial/2716_rock_bay_ave



Mixed-use industrial arts frontage, Rock Bay, Victoria. Source: <https://www.victoriacondominiumguide.com/>



37781 Cleveland Ave. mixed-use industrial development from District of Squamish. Source: Development Application to District

ATTRACT DESIRED USERS

POLICY: TAKE AN ACTIVE ROLE IN SECURING AN ANCHOR TENANT

OVERVIEW:

This approach involves the City taking an active role in seeking out an anchor tenant that could serve as a catalyst for future development in the Study Area. This may include assisting with locating appropriate space or accessing financing. Many Innovation Districts build strategies around attracting a major tenant, such as a post-secondary educational institution, a hospital, or a private firm. For the Study Area, a makerspace presents an attractive anchor tenant in the development of the CED, as it would meet a number of the goals for Lower Twelfth Street described in the OCP and the Economic Development Plan. Makerspaces not only serve as a workshop for creating goods and supporting community economic development but also act as meeting places where people share knowledge and build community ties.

INTENT:

To attract an anchor tenant to establish a distinct character for the CED and inform future development.

APPLICATION TO NEW WESTMINSTER AND LOWER TWELFTH STREET:

The City could devote resources toward recruiting an anchor tenant. This may involve having a liaison, such as a representative from the Economic Development department, working to recruit the desired user or connect one with a developer. This liaison could also provide resources on how to acquire grants and start-up funding.

PRECEDENTS:

- Wilmington, Delaware

Makerspaces serve as welcoming places for innovators and makers to collaborate and access tools and materials for creation. They are known to promote innovation culture and small business growth, acting as a starting point for many innovators.

EXAMPLES IN OTHER CITIES:

The Wilmington Renaissance Corporation (WRC) attributes NextFab, a makerspace, as being a significant catalyst for development of its Creative District.

The makerspace was matched with real estate by WRC and with grant money through a state program in Delaware. WRC continues to support the makerspace and expressed that “aside from public art, new green spaces, and some other scattered development, it is our biggest thing we can point to in the development of the Creative District.”

Between 2006 and 2016, the creative sector experienced significant job growth, with an increase by 20.5% for information and cultural industry jobs and 44.3% for those in the arts, entertainment, and recreation sector. The City could target this growing sector for anchor tenants.

Source: New Westminster's Economic Development Plan (2018)

ATTRACT DESIRED USERS

POLICY: BUSINESS LICENSE FEE REDUCTION FOR QUALIFYING NEW CREATIVE BUSINESSES FOR 10 YEARS

OVERVIEW:

This policy is used as an incentive in Virginia Beach, Virginia, for its Creative District. Creative businesses and property owners wishing to locate in the district have access to a number of incentives. For example, the business license tax reduction is available to businesses that qualify as a creative district business, according to Virginia Beach guidelines. If they qualify, they are eligible to receive a tax rebate for 10 years.

INTENT:

To incentivize desired businesses to locate to the CED.

APPLICATION TO NEW WESTMINSTER AND LOWER TWELFTH STREET:

The City could introduce incentives that reduce fees for qualifying businesses in the Study Area. The City would need to create a guiding document that outlines what businesses qualify.

PRECEDENTS:

- Virginia Beach, Virginia



Virginia Beach Creative District. Source: <http://www.coastalvirginiamag.com/May-June-2016/ViBe-Virginia-Beach/>



Leather wholesaler and retailer in Mount Pleasant

ATTRACT DESIRED USERS



Example of industrial building in Raitown. Source: City of Vancouver Downtown Eastside Plan



The Fat Paint Company, located in the Study Area

POLICY: PARTIAL PROPERTY TAX EXEMPTION FOR REHABILITATED STRUCTURES

OVERVIEW:

This policy is also used in the Virginia Beach Creative District for properties that have been rehabilitated, repaired, or replaced for use by a qualifying creative business. It was created to encourage the reuse of underutilized, aging, and deteriorated buildings located in the district. The owner is required to submit an application and the construction plans, which includes an estimate of the qualifying costs. In Virginia Beach the building is required to be at least 20 years of age to qualify, must be in need of significant repair for commercial or light-industrial use. A minimum 50 percent of the total floor area must be renovated for a qualifying creative district business. If the property owner qualifies, they will receive partial exemption of taxes associated with the increase in the value of the property resulting from the renovation and revitalization of the building. The final value of the structure is compared to the base value. The exemption runs with the land for 10 years or less.

INTENT:

To encourage the renovation and revitalization of underutilized, aging and deteriorated buildings, and to stabilize rents.

APPLICATION TO NEW WESTMINSTER AND LOWER TWELFTH STREET:

The City could utilize this policy in the Study Area to encourage the revitalization of aging, deteriorating buildings. We recommend that the City explore offering tax abatements to landowners who renovate buildings for qualifying CED businesses, which would increase net operating incomes for landlords without putting upward pressure on lease rates.

PRECEDENTS:

- Virginia Beach, Virginia

ATTRACT DESIRED USERSS

POLICY: CREATE NEW USE DEFINITIONS TO PRESERVE DESIRED USES IN THE STUDY AREA, TO ACCOMMODATE NEW FORMS OF MANUFACTURING, AND TO REBRAND LOWER TWELFTH STREET.

OVERVIEW:

To ease transitions of the Study Area into a CED, care will have to be given to preserving existing uses that are important to Lower Twelfth Street, while also being flexible to new types of light-industrial uses that may relocate to the area. San Francisco has taken efforts to protect spaces for Production, Distribution and Repair (PDR) businesses, which provide well-paying jobs for San Franciscans without college educations. PDR zoning prevents the displacement of those uses, which may not be as competitive in the wider market. In Vancouver, the municipality adopted the Creative Products Manufacturing (CPM) definition to expand the definition of light industrial uses, to allow more flexibility in the types of businesses permitted in industrial areas, while still focusing on the production of an end product. These definitions can contribute to branding a district, giving direction to developers to allow for greater certainty in planning.

INTENT:

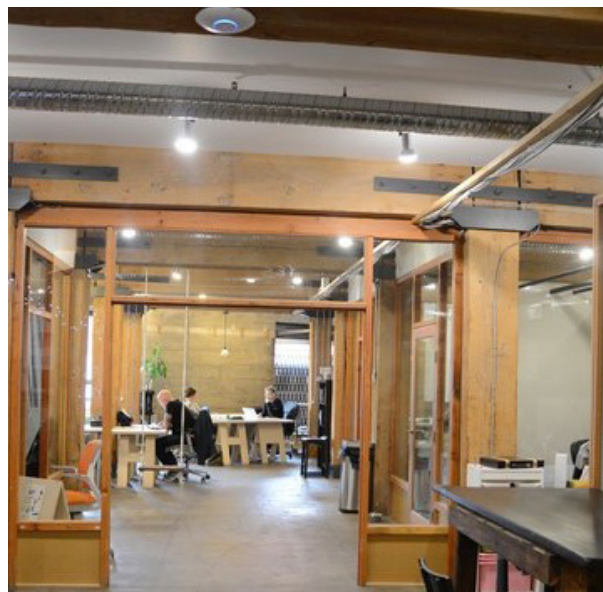
To permit more flexibility in uses, broadening options for new tenants for the Study Area; to encourage high-paying employment; and to enhance the vibrancy of the district by having a greater density of jobs.

APPLICATION TO NEW WESTMINSTER AND LOWER TWELFTH STREET:

While many of the proposed uses are currently permitted in the Study Area's current zoning, the City could create a new definition for light-industrial uses, similar to the PDR and CPM definitions. New industrial definitions may help to brand the area as a CED, which would give direction to developers and businesses for the City's vision in the Study Area.

PRECEDENTS:

- Railtown, Vancouver
- False Creek Flats, Vancouver
- Mount Pleasant, Vancouver



Production Space ('Creative Coworkers') located at 343 Railway Street in Railtown, Vancouver. Source: <https://www.sharedesk.net/spaces/view/6441/the-studio-at-creative-coworkers/>



Source: City of New Westminster Economic Development Plan

ATTRACT DESIRED USERS

POLICY: COLLECT AND USE VOLUNTARY AMENITY CONTRIBUTIONS IN THE STUDY AREA.

OVERVIEW:

Voluntary Amenity Contributions (VACs) are contributions of cash or an in-kind amenity provision made by developers in exchange for more density than is allowable under the zoning. VACs are negotiated with the City as part of a rezoning process. The amount of density that is open for negotiation is usually outlined generally in a community's OCP. Municipalities can collect funds within a specific neighbourhood and then allocate those funds within that neighbourhood, or choose to pool amenity contributions allocate them citywide, according to policy priorities. Only sites on which high densities would be appropriate are likely candidates for the application of a VAC policy.

INTENT:

To facilitate the development of a public makerspace or community centre that can act both as an incubator for artisans and a community gathering space.

APPLICATION TO NEW WESTMINSTER AND LOWER TWELFTH STREET:

The City currently uses VACs in a variety of contexts. The existing policy could be amended to include a provision to allow the City to collect VACs from development in the Study Area and Downtown to be used for the construction of a public makerspace. VACs could be waived if a developer were able to provide an on-site makerspace or community centre. For developments where these facilities would not be appropriate, the City could collect VACs for the purpose of constructing a public facility at another location. Using public land, such as the provincially-owned Gas Works site, as a location for the construction of a public makerspace could ensure that any VACs collected within Lower Twelfth Street and Downtown are maximized.

PRECEDENTS:

- Rock Bay, Victoria
- False Creek Flats, Vancouver
- Central Eastside, Portland

EXAMPLES IN OTHER CITIES:

False Creek Flats (FCF), Vancouver, BC

The FCF's plan includes a Public Benefits Strategy to "support creation of affordable light industrial space, industrial incubators and other economic amenities." The program is expected to cost approximately \$12 million over ten years.

The plan also will "[e]xplore the development of a Flats Fund to help finance building and site retrofits in the Flats, sustainable colocation infrastructure in the Flats, and to generate capital funding for community economic development projects in the area including incubator space, social enterprises and arts production."

INSPIRE URBAN DESIGN AND PLACEMAKING

POLICY: IMPLEMENT URBAN DESIGN AND PLACE-MAKING INITIATIVES TO FOSTER VIBRANCY, ENHANCE LOCAL HERITAGE, AND IMPROVE PEDESTRIAN EXPERIENCE IN THE CED.

OVERVIEW:

Effective urban design and place-making policies should help bring energy and vitality to a CED, while respecting business functions and other needs of the area. These policies can reinforce the creative culture that emerges from these districts. Collaborations between the City, First Nations, local artists, and businesses, can increase the attractiveness of the area for development. Additionally, enhancing a district's history can strengthen the sense of place and neighbourhood character, while preserving culturally significant resources as the city continues to grow.

INTENT:

To bring energy and vitality by supporting the creation of a unique CED and attract the type of business and investments that would thrive in a suitable environment.

APPLICATION TO NEW WESTMINSTER AND LOWER TWELFTH STREET:

New Westminister's vision is to foster a thriving and energetic CED. Implementing urban design and place-making strategies will support this vision, especially on Twelfth Street, which the City hopes will become a "Great Street" with increased foot traffic. This will also attract the type of businesses that the City is looking for in a creative and artistic environment, unique to New Westminister.

PRECEDENTS:

- Rock Bay, Victoria
- Mt Pleasant, Vancouver
- False Creek Flats, Vancouver
- Harbourside, City of North Vancouver
- Squamish, Vancouver
- Wilmington, Delaware

EXAMPLES IN OTHER CITIES:

Mount Pleasant, Vancouver:

- **Art mural program:** From 2016 to 2018, the City of Vancouver committed \$1.5 million in funding for grants and partnerships to highlight the importance of art and culture. This helps enhance the streetscape through initiatives such as annual Vancouver Mural Festival to celebrate the work of artists.



Concrete Canvas Rock Bay Mural Project. Source: www.rockbaymural.com



Concrete Canvas Rock Bay Mural Project. Source: www.rockbaymural.com

- Portland Central Eastside
- San Francisco Central Waterfront
- Brooklyn, New York



SUMMARY OF KEY FINDINGS AND RECOMMENDATIONS

The findings and recommendations presented here are based on a synthesis of all phases of research. The contextual information, case studies, key informant interviews, and economic and policy analyses provided a foundation for these findings. The recommendations are framed as policy responses to the key findings, for the City of New Westminster to consider in the facilitation of a Creative Employment District, and as it moves forward in planning for the Lower Twelfth Street Study Area.

KEY FINDING

1. Under current zoning, an economic analysis of four sites in the Study Area found the following:

- **Site 1 (210 Twelfth Street)** - Redevelopment for industrial uses is **possible**.
- **Site 2 (335 Thirteenth Street)** - Redevelopment for industrial uses is **unlikely**.
- **Site 3 (379 Twelfth Street)** - Redevelopment for industrial uses is **unlikely**.
- **Site 4 (Royal Avenue)** - Adaptive reuse for industrial uses is **unlikely**.

2. Redevelopment or adaptive reuse will likely **raise rents** and the **cost** of industrial floorspace, putting pressure on the affordability of the Study Area.

RECOMMENDATIONS

- ▶ Consider maintaining current zoning on sites where light-industrial redevelopment is already feasible.
- ▶ Reevaluate what uses are most appropriate to sites where light-industrial redevelopment is not financially feasible.
- ▶ Consider introducing a **residential density bonusing program** to facilitate **below-market rents for industrial floorspace** for qualifying Creative Employment District businesses.
- ▶ Consider **waiving VACs** for the construction of a public makerspace or community centre that can act both as an incubator for artisans and a community gathering space.
- ▶ Consider **collecting VACs to establish a fund** to support the public construction of a community makerspace.
- ▶ Implement **incentives that support affordability and adaptive reuse** such as reducing business license fees or property taxes for qualifying creative businesses.
- ▶ Consider taking an **active role in assisting desired users** in finding appropriate facilities as well as government financing supports.

SUMMARY OF KEY FINDINGS AND RECOMMENDATIONS

KEY FINDING

RECOMMENDATION(S)

3. Mixed residential-industrial buildings have **higher construction costs** and have few precedents.

- ▶ Explore what uses are most appropriate for **mixed ultra-light industrial-residential zoning**.
- ▶ Develop **flexible definitions of ultra-light industrial uses** that will broaden the types of users who could operate in the Study Area.
- ▶ Conduct **further market studies** to determine the impact of introducing residential uses to an industrial area.

4. The **land value for office use** is currently unlikely to support redevelopment due to high construction costs and current market conditions.

- ▶ Conduct **further study** on the **need for office space** in a sustainable CED.
- ▶ Consider **permitting office uses** on the condition that light industrial floorspace is provided.

5. Small-scale producers can sustain higher rents when **more retail floorspace** is permitted.

- ▶ Consider greater flexibility in industrial zoning to **permit higher ratios of ancillary retail space** to manufacturing space.

6. **Underground parking** is a significant portion of development costs.

- ▶ Consider the **relaxation of underground parking** requirements to improve economic viability of redevelopment.

7. **High ceilings and dock loading** are desirable for many businesses.

- ▶ Encourage developers to build **flex industrial spaces**, with minimum 15-foot high ceilings, dock loading, and mezzanine or office space.

8. Lower Twelfth Street has a rich history that could inspire **urban design and public realm**.

- ▶ Create an **urban design and placemaking strategy**.
- ▶ Partner with local artists, BIAs, non-profit organizations, and First Nations communities to facilitate creative placemaking opportunities.
- ▶ Support the creation of a mural program and public art installations.

MOVING FORWARD

As the Lower Mainland adapts to rising land values and falling vacancy rates for industrial uses, innovative solutions will be required for the preservation and development of industrial lands. As we observed in our research, developers and local governments are finding creative ways to accommodate industrial activities in a constrained and urbanized land base. Builders are experimenting with mixing residential and industrial uses and municipalities are changing the definitions of industrial to accommodate new economies. For the Lower Twelfth Street Study Area, these regional trends create exciting opportunities and challenges.

The high demand for light industrial space means that redevelopment of properties to facilitate a Creative Employment District in the Study Area may be economically viable. To create greater certainty for new light-industrial developments this may involve permitting residential uses inside the Study Area, which could subsidize the affordable industrial properties. Appropriate additions of retail and offices will also be important for the long-term vibrancy of the area. This would also require building forms that are relatively rare in modern construction, creating the possibility of making Lower Twelfth Street an innovative district that could be at the forefront of mixed-use industrial-urban design.

With this opportunity for innovation, comes pressure on land values that may work against the affordability of the area, which is what originally attracted many of the innovative small businesses who call Lower Twelfth Street home. Protecting the character of the area and ensuring that space is available for artisans, artists, and entrepreneurs who need affordable space will be crucial. Taking a measured approach to redevelopment, and targeting subsidy towards tenants as opposed to land owners, could help ease any transition into a CED.

Planning for a CED in the Lower Twelfth Street Area will require attention to all of these factors and others. As shown in the summary of our Findings and Recommendations above, we believe that there are resources available to achieve the goals for the Lower Twelfth Street Study Area as described in the Official Community Plan and Economic Development Plan.

As the City of New Westminster takes steps to ensure that it is prepared for the changing nature of economies and urbanization, the Lower Twelfth Street Study Area could serve as a model of how urban, industrial, residential, and retail can be blended into a vibrant community that serves a multitude of interests.

APPENDICES



APPENDIX A: INITIAL CASE STUDY CANDIDATES

District	City	Resource
Canadian Cities:		
North Shore Innovation District	District of North Vancouver, BC	https://www.nsidlands.ca/
Harbourside	North Vancouver, BC	http://harboursidewaterfront.com/
Railtown	Vancouver, BC	https://vancouver.ca/files/cov/downtown-eastside-railtown-zoning-update-october-2016.pdf
Mount Pleasant Industrial Area	Vancouver, BC	https://vancouver.ca/home-property-development/mount-pleasant-industrial-area.aspx
False Creek Flats	Vancouver, BC	https://vancouver.ca/home-property-development/false-creek-flats.aspx
Brewer's Row	Port Moody, BC	https://www2.gov.bc.ca/assets/gov/employment-business-and-economic-development/economic-development/learn-from-experts/webinar-posters/presentation_slides_port_moody_brewers_row_22mar18.pdf
Bayfront Industrial Area	Hamilton, ON	https://www.hamilton.ca/city-planning/planning-community/bayfront-industrial-area-strategy
American Cities:		
Automobile Alley	Oklahoma City, Oklahoma, USA	http://automobilealley.org/
West Midway Industrial Area	Saint Paul, Minneapolis, USA	https://www.stpaul.gov/DocumentCenter/View4/76252.pdf
Eastern Neighbourhoods	San Francisco, California, USA	https://sf-planning.org/about-eastern-neighborhoods
Wake Forest Innovation Quarter	Winston-Salem, North Carolina, USA	https://www.innovationquarter.com/
Wilmington Creative District	Wilmington, Delaware, USA	https://www.creativedistrictwilm.com/
North Brooklyn Industrial Area	New York City, USA	https://www1.nyc.gov/site/planning/plans/north-brooklyn-vision-plan/north-brooklyn-vision-plan.page

District	City	Resource
International Cities		
Greenwich Peninsula Creative Quarter	Greenwich, England, UK	https://www.greenwichpeninsula.co.uk/whats-on/the-peninsulist/the-design-district-london/
East London	London, England, UK	

APPENDIX B: CASE STUDY COMPARISON TABLE

District	Lower Twelfth Area, New Westminster, BC	Rock Bay District, Victoria, BC	Mt. Pleasant Industrial Area, Vancouver, BC	Railtown, Vancouver, BC	False Creek Flats, Vancouver	Harbourside, North Vancouver	Wilmington, DE, USA
City Population	~71,000	~85,795	~631,490	~631,490	~631,490	~52,898	~71,106
Site Area (acres)	25	64	50	16	450	90	50
Avg. Rent (per sq. ft.)							
Office							
Industrial	N/A \$7 - \$13	\$11 - \$15 \$10 - \$15	Avg. \$32	\$30 - \$35 \$20 - \$30	\$30 - \$40 \$15 - \$25	Avg. \$25 - \$28	\$27 + (USD) \$10 + (USD)
Characteristics:							
Contamination							
Difficult terrain							
Floodplain							
Mix of Land Uses:							
Light Industrial							
Commercial							
Service							
Office							
Residential							
Zoning & By-Laws	M-1 and M-5 industrial; Some residential exists	Currently heavy industrial and commercial; New land-use policies (new zoning TBD): Industrial Employment; Industrial Arts; General Employment; Residential permitted on upper floors	I-1, I-1A, I-1B industrial; density bonusing for office/flex-space when industrial at-grade	I-4 Industrial: Office max 25% of floor area; Retail max 5,382 sq.ft.; Restaurant max 1,615 sq.ft.; No new residential; No mini-storage	8 zoning districts, majority employment uses, minor residential	Industrial Business Park; Industrial; Public Use and Assembly; Waterfront	Majority commercial (light-industrial, retail, office, warehousing) with multi-family residential permitted
Max FSR	N/A	5.0	6.0	5.0	7.5	2.2	6.0
Max Height (ft.)	85	165	125	100	170	N/A	180

APPENDIX C: CREATIVE EMPLOYMENT DISTRICT AND BUILDING CASE STUDIES

CREATIVE EMPLOYMENT DISTRICT AND BUILDING CASE STUDIES



**False Creek Flats,
Vancouver**



Railtown, Vancouver



**Mount Pleasant Industrial
Area, Vancouver**



**Harbourside, North
Vancouver**



Rock Bay, Victoria



Wilmington, Delaware, USA

MOUNT PLEASANT INDUSTRIAL AREA, VANCOUVER

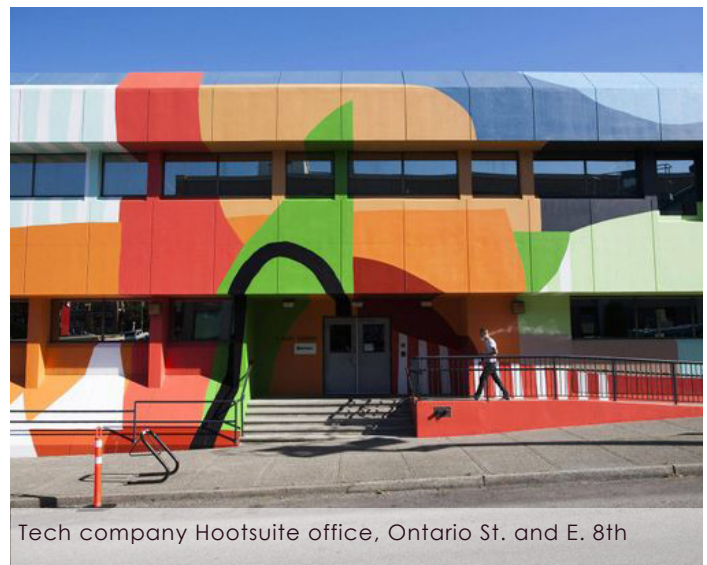
Overview

The Mount Pleasant neighbourhood is centrally located in the City of Vancouver, bounded by 2nd Avenue and 16th Avenue from Cambie Street to Clark Drive. It is in the midst of a diverse range of retail stores, businesses, cafes, microbreweries, and public parks. It was historically a single-family neighbourhood, transforming post-1890 toward industrial use. It has become an area known for affordable production, distribution, and repair space. The area is now frequently visited, with heavy pedestrian and bicycle traffic due to its proximity to transit services and commercial hubs of Cambie Street, Broadway, and Olympic Village. The area is characterized by a distinct artistic environment through large-scale murals painted on the sides of many buildings as part of the annual BIA-driven Vancouver Muralfest. Creative, digital, and tech businesses have

located in Mount Pleasant, partly due to the diverse amenities, vibrant culture, and relaxed zoning. These features have fostered economic innovation, and have resulted in Mount Pleasant having the highest job density in the Metro Core Industrial Area. In response to this employment growth and to encourage even more job opportunities, the City of Vancouver approved further zoning changes in 2016 to allow for more building height and increased digital and tech office uses, with a focus on maintaining light industrial uses, resulting in a total of 700,000 sq.ft. of new office space. The rezoning has resulted in renovations and the new development of taller, higher-density buildings intermixed with existing lower-density and smaller buildings. It has also resulted in rising land values, threatening traditional industrial tenants.

KEY TAKEAWAYS

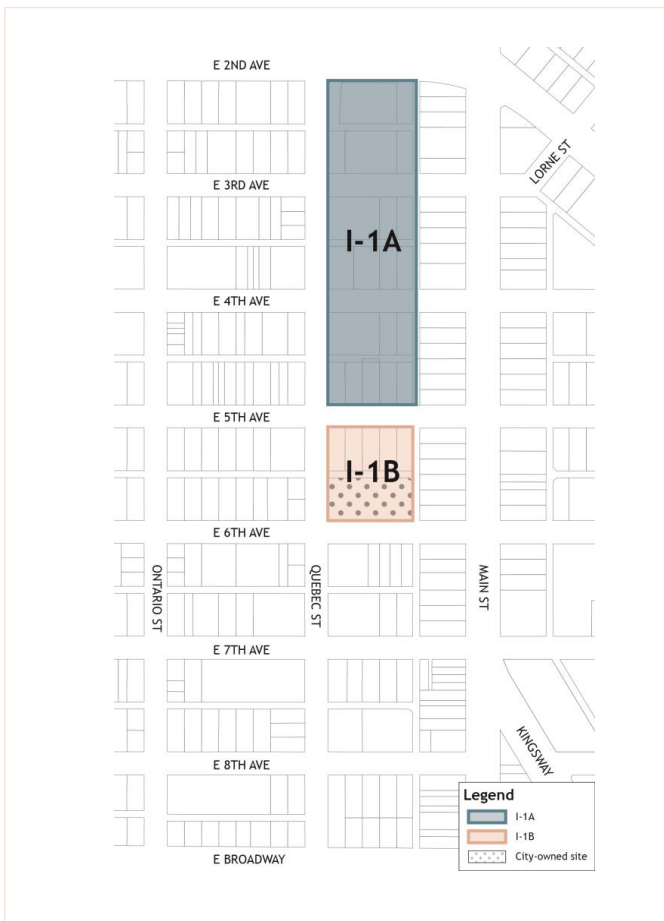
- A **new office use definition** was added to the "Digital Entertainment and Information Communication Technology" category to expand allowable uses for light industrial, creative product manufacturing, and cultural industry (the same designation in Railtown and False Creek Flats).
- The intent of rezoning the area to I-1 in 2013 was to **maintain the historic production, distribution and repair** functions of the area while permitting **additional capacity for office space**.
- After the I-1 rezoning, property owners responded by renovating old buildings and starting new development, increasing office space capacity.
- The new District Schedules (I-1A and I-1B) included **density bonusing** for tech and digital office space to create a specialty area. The schedules allow for a more streamlined development process and certainty for developers while encouraging more innovation in the area.
- The **rezoning permitted restaurant and brewery uses** if they are not in close proximity to an existing restaurant or brewery. This helps service the area and attracts neighbouring residents.



Tech company Hootsuite office, Ontario St. and E. 8th

Statistics

Land size	50 acres
Population Density	~ 8,935.3 per sq. km
Average rent	\$32 per sq.ft
Assessed land value	\$1,253.20 per sq.ft.



Mount Pleasant Industrial Area Zoning

Mix of Uses:

- Digital and tech firms, creative production businesses, microbreweries, office space, industrial space, and arts and culture space.

Key Businesses:

- La Casa Del Artista (music, community, museum space)
- Go Studios (film production studio)
- WorkBC Vancouver (employment center)
- 33 Acres Brewery (brewery)
- Atomic Cartoons (animation studio)
- Lonsdale Leather Warehouse (wholesale leather manufacturing)
- Oak and Fort (garment design and showroom)
- Image Engine Design (visual effects studio)
- Hootsuite (information, tech and communications company)

Municipal Policy + Zoning:

- I-1 Industrial definition and zoning amendments** were made to allow more building density and height to increase job space opportunities:
 - Max. FSR:** 3 - relaxed office space flexibility so that a bonus of 1 FSR of office space could be achieved when at least 1 FSR of industrial use is provided on the ground floor.
 - Updated the **“Digital Entertainment and Information Communication Technology”** definition to encompass digital and creative production rather than just computer software, research and development.
- To facilitate the innovation economy and allow for more mid- to large-scale businesses, a new District Schedule includes **density bonusing and CACs** in limited parts of the district.
- I-1A district zoning (see map to the left) :**
 - Max. FSR:** 5 - If industrial use is provided on the ground floor, allow for industrial or tech and digital space density bonus of up to 2 FSR
 - Max. height:** 110 ft.
 - Increased building setback to enhance pedestrian experience, public realm, and relation to lower buildings
- I-1B district zoning** is a special zone between 5th and 6th Avenue, created to offset the reduced job space resulting from retaining the Simon Fraser Annex heritage building.
 - Max. FSR:** 6
 - Max. height:** 125 ft.

BUILDING CASE STUDY: JAMMER CAFE + THE YUKON

JAMMER CAFE

Address	350 W. 8th Avenue
Zoning	1-1 (Industrial)
FSR	0.87
Mix of Use	Motorbike shop, restaurant and cafe and mezzanine office space
Building Size	5,260 sq.ft.
Rent/sq.ft.	NA
Assessed land value	\$4,892,000

Key Takeaways

- Provides tools and bench space for urban motorcycle owners who don't have access to their own garages, while serving food and coffee from a full kitchen and cafe.
- The business chose its location due to many microbreweries, high-tech corporations, high pass-by traffic location and ease of accessibility.
- Based on a hybrid model for multiple sources of revenue.



Jammer Cafe

THE YUKON

Address	2238 Yukon Street
Zoning	1-1 (Industrial)
FSR	NA
Mix of Use	Light industrial space and office space
Building Size	49,000 sq.ft. (11 units)
Sale Price/sq.ft.	\$1,159/sq.ft.
Assessed land value	\$14,927,000

Key Takeaways

- Developed by Chard, the Yukon is currently under development. It will have four floors of stratified units. The first floor and 50 percent of second floor will be dedicated to light industrial use, with the rest as general office space.
- The design and functionality of the building provides a range of sizes and designs to accommodate a variety of users (e.g., 17-foot ceilings, large freight elevators).
- The marketing was directly influenced by the the City of Vancouver's light-industrial definitions, such as manufacturing, food and drink production, emerging tech and clothing manufacturers, and office use.



The Yukon

FALSE CREEK FLATS, VANCOUVER

Overview

The False Creek Flats (the Flats) is an area long defined by transportation and commerce, close to downtown and the port in the City of Vancouver. The Flats today is relatively underutilized. Representing 18 percent of the city's regionally designated employment lands, the area has only 2.3 percent of its total jobs. Home to more than 600 thriving businesses of various sectors, the area employs nearly 8,000 people, which is anticipated to increase to more than 30,000 by 2047. Covering over 450 acres, 50 percent of the land in the Flats is owned by the City.

The majority of False Creek Flats area is in a floodplain, covered by a number of rail freight yards, and it features an escarpment on two sides with views of the downtown skyline and the North Shore mountains. The Flats are characterized by industrial infrastructure, and unique land-parcel geometries divided by rail and roads. The area is anchored by the Emily Carr University of Art and Design, and the Flats will be

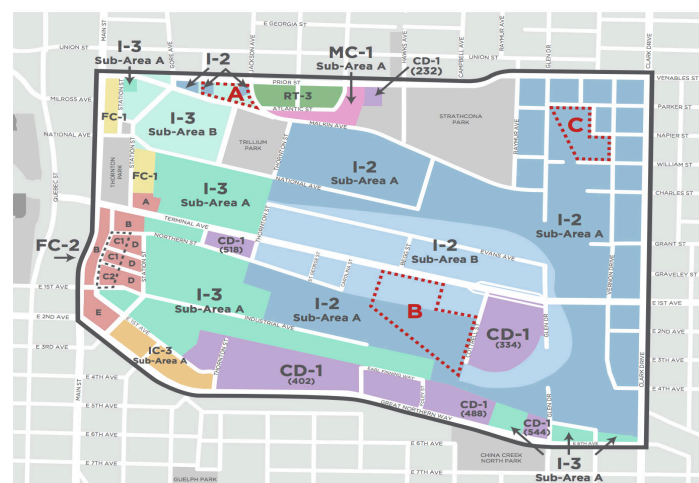
the future home of the new St. Paul's Hospital and Health Campus. Approximately 60 percent of the Flats boundary is adjacent to residential neighbourhoods, making thoughtful transitions between industrial uses and neighbouring surroundings essential.

As an area built largely on fill, contaminated soil, water tables, and land to be affected by rising sea levels, unique challenges exist for underground parking and for the feasibility of certain employment spaces. Innovative parking solutions can help address this while ensuring flexibility in the future in anticipation of continued mode-share shifts.

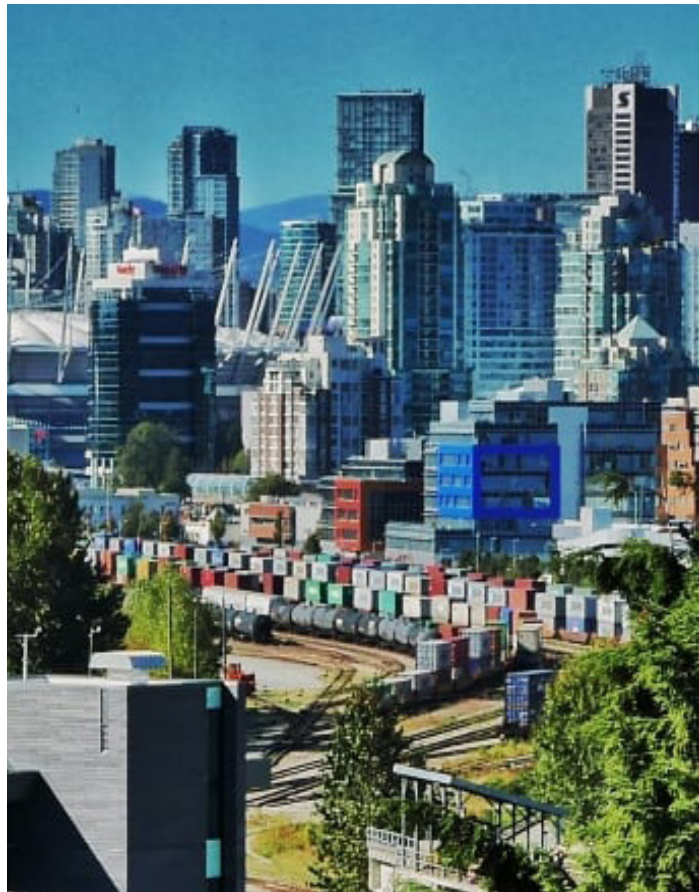
The Flats is well serviced by transit, including skytrain and various bus and bike routes, with additional transportation connections anticipated.

Statistics

Site Area	450 acres
Employment density	17.8 jobs per acre
Average rents	<ul style="list-style-type: none"> Office: \$30-\$40 per sq. ft. Industrial: \$15 - \$25 per sq. ft.
Average sales	\$700 - \$900 per sq. ft.
Assessed land value	\$900 per sq. ft.



False Creek Flats Land Use Map



KEY TAKEAWAYS

- The western part of the Flats represents more diversified mixed-used and business activities that are:
 - Sales and service oriented;
 - Less reliant on large trucks but more frequent deliveries;
 - Developed to be accessible to transit or active commuting; and
 - Served by a sufficient amount of restaurants and cafes.
- The eastern part of the Flats represents more traditional industrial uses that:
 - Require access for large trucks and weekly deliveries;
 - Are near to major highways;
 - Need loading bays and high ceilings; and
 - Benefit from clustering of similar businesses.
- The Flats is divided into **four distinct character sub-areas**, reflecting different geographic features (e.g., railway lines) and economic clusters: Health Hub, Terminal Spine, Creative Campus, and Back-of-House.
- Of particular interest is **zoning district FC-2**, which is intended to facilitate the following: "Hub of innovation and a location for economic experimentation and growth. Ground-floor activations and amenity space (retail, restaurants, artist studios, etc.). Additional height and density in some locations will support historic scale and public spaces in others."
- In order to create affordable living space for artists, the City is considering **artist live/work studios** in the Flats where proposed units are 100% rental, and securing a portion of live-work or housing units for low-income artists at social housing rates, as well as removing the two person occupancy limit for artist live-work studios.
- **Roof-top food growing** is a requirement to support urban agriculture, community gardens, and the local food-related businesses.
- **Link height and densities to securing affordable work spaces** for innovation, showcasing, start-up businesses, artist workshops and production, distribution, and repair.

Mix of Uses:

- 55% Industrial; 25% Mixed-employment (office and industrial); 20% General urban (including some large parks, residential and institutional zoning along the periphery)
- The top five industrial sectors in the Flats are:
 - 17% **Manufacturing**; 15% **Retail trade**; 13% **Arts, entertainment, recreation**; 13% **Wholesale trade agent & distributor**; 9% **Wholesale trade**; 33% Other
- The plan incorporates the following new land-use definitions:
 - The **Digital Entertainment and Information Communication Technology (DEICT)** use was created to encourage the presence of new digital economy businesses within the western sub-areas.
 - DEICT is a permitted use within the one third of acceptable office floor space within the light industrial zones of the plan area.
 - The **Creative Products Manufacturing (CPM)** use was created to support new-economy industrial and office uses for the development of new ideas and the creation of new products.

- The **Bulk Data Storage use** definition was created to support infrastructure for the storage of digital content in appropriate locations within the inner-city industrial areas without limiting the employment potential of the ground-floor industrial spaces.

Key Businesses

- Greater Vancouver Food Bank (food bank)
- Emily Carr University of Art and Design (education)
- St. Paul's Hospital and Health Campus (health care)
- Recycling and waste management
- City of Vancouver police and fire training facilities
- Centre for Digital Media (education)
- Parker Street Studios (studios for artists, photographers, woodworkers, and designers)

RAILTOWN, VANCOUVER

Overview

Railtown is a sub-area within the Downtown Eastside (DTES) Industrial Area, located on the waterfront, adjacent to the Port of Metro Vancouver. Restrictions on height, or on single-business occupancy, has created a small-scale, boutique feel, characterized by heritage brick and concrete industrial buildings. Railtown is highly desirable for office space with a vacancy rate of only 0.3 percent.

Prior to commencing a local area plan for the DTES, Railtown had gradually become home to unlicensed businesses drawn to the area by low rents and flexible spaces. These businesses were only detected during the planning process. Despite pressure to rezone the area from heavier industrial to office uses, the City of Vancouver worked with existing business owners and landlords to introduce a **new zoning district**. The changes continue to permit heavier industrial uses under M-2 zoning, but introduced a more **flexible I-4 zoning**, which allows a **blend of industrial and creative**

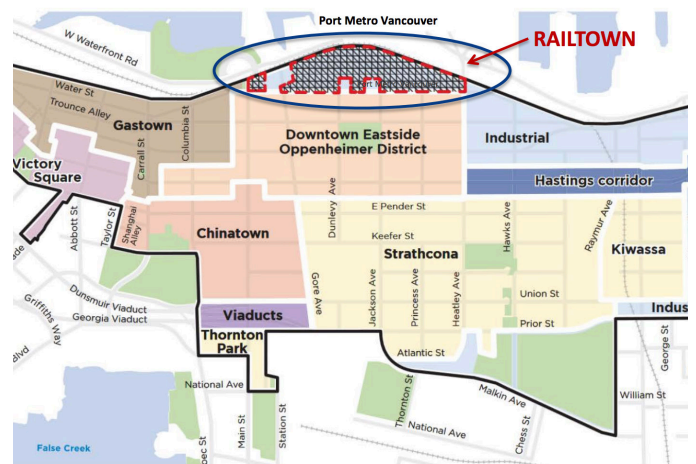
design uses with office use, limiting office space to a maximum of 25 percent of the floor area. The City hopes to retain viable heritage warehouses with historic character, that were already accommodating thriving creative and digital businesses, without destabilizing property and rental values that had been increasing due to speculation.

Statistics

Site Area	16 acres
Population density	Industrial Lands = 552 people (2011)
Average rent	<ul style="list-style-type: none">Industrial: \$20 - \$30New "Class A" Office Space: \$30 - \$35 per. sq.ft.
Assessed land value	~ \$900 per sq. ft.

KEY TAKEAWAYS

- Railtown's applicability to New Westminster is limited, primarily due to the extensive renovation and repurposing of existing heritage industrial buildings, with little new development under the new zoning regulations at this time.
- The rezoning has been positively received by the business community, with many of the unlicensed businesses (previously around 50 percent of all operating businesses) now applying for a license. There are now approximately 80 licensed businesses.
- No approved development projects under new zoning yet, although two applications are currently in progress with one possible enquiry. This is in contrast to media and industrial brokerage reports claiming a flurry of development.
- Some landlords find the 25 percent limit on office space too restrictive.
- Each existing unlicensed tenant must be evaluated to see whether they met the new restrictions on uses in the area.
- Increased opportunity for artist production-use



and studio-use in order to try to reduce pressure on those activities (e.g., film industry). M-2 FSR for artists was limited to 1 FSR, which has been increased to 5 FSR.

- Parking is a challenge for employees working in the area and for visitors. COV planners cited concern that Railtown is moving toward a destination shopping and restaurant district, with congested narrow streets and sidewalks, making loading for businesses more difficult.

Municipal Policy + Zoning

- I-4 Zoning District:
 - **Maximum FSR:** 5.0;
 - **Maximum Height:** 30.5 metres;
 - **Maximum office space:** 235 sq.m (2,530 sq. ft.) or 25 percent of floor area up to a maximum of 1 FSR;
 - **Creative Product Manufacturing:** permitted in 25 percent of floor area, or 50 percent in buildings constructed before 1951;
 - **Retail use:** Limited to 500 sq.m (5,382 sq. ft.);
 - **Restaurant use:** Limited to 150 sq.m. (1,615 sq. ft.);
 - **New residential use prohibited.**

Mix of Uses:

- I-4 district schedule includes a new outright approved manufacturing use: "creative products manufacturing" (CPM), defined as the creation, development, prototyping, and ancillary marketing of products produced in a physical or digital form that are a result of a customized design process.
- All M-2 outright and conditional uses still allowed, including accessory buildings, cultural and recreational; manufacturing; retail; service; transportation and storage; utility and communication; wholesaling.
- Exception is mini storage warehouse

Key Businesses:

- Aritzia (garment designer head office)
- Herschel Supply Co. (garment designer head office)
- Inform Interiors (high end furniture designer, head office)
- Union Wood Co (wood furniture designer)
- Vancouver Urban Winery (winery)
- Tritex Fabrics (fabrics and furniture wholesaler)



Vancouver Urban Winery, located in Railtown

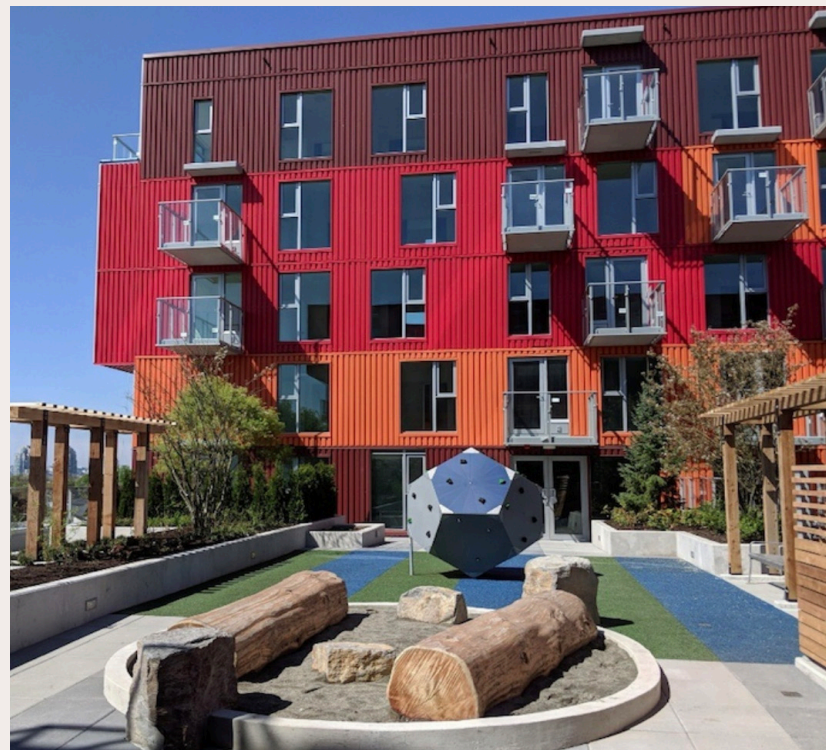
BUILDING CASE STUDY: STRATHCONA VILLAGE

Address	947 East Hasting Street
Zoning	CD-1 (Comprehensive-Development)
FSR	6.15
Mix of Uses	First two floors: Light-Industrial; Commercial; Retail-Strata Floors 3 - 15: Residential
Number of Units	Residential: 280 market rate condos, 70 social housing rental units Industrial/Commercial: 13 units, ranging in size from 2,040 - 5,157 sq. ft. 60,000 sq. ft. total
Rents per sq.ft.	Industrial space: \$30 per sq ft. Social housing : \$375 - \$1,750 per month Sale price per sq. ft.: \$450 - \$700 per sq. ft.
Assessed Land Value	\$131,525,000



Key Takeaways

- Completed in July 2018, Strathcona Village is an industrial, retail, office and residential mixed-use development, the first of its kind in Vancouver. It is testing the model of mixing residential with industrial uses.
- Strathcona Village is part of the City of Vancouver's "let go" area, where a portion of Hastings Street was rezoned from industrial (M-2) to mixed use (CD-1). All projects with residential must contain a minimum of 20% below market social housing units.
- Industrial units offer 19 - 22 ft. ceiling heights.
- It is LEED Silver certified.
- According to the rental manager at Belcourt Residence, the social housing component of the project, there have been no noise or disruption complaints from residents related to the industrial uses so far.



CREATIVE DISTRICT, WILMINGTON, DELAWARE

Overview

In 2014, the Wilmington Renaissance Corporation (WRC) released *A Vision for Wilmington's Creative District*, a strategic plan to help foster creative production and consumption with a focus on "historic preservation, the promotion of the arts, and economic development."

The WRC is a private, non-profit organization with a mission to promote Wilmington's downtown districts' wellbeing. It is partnered with a number of public and private institutions who wish to promote local economic and cultural development in Wilmington. Similar models of non-profit, local economic development organizations exist across the United States in places such as Seattle and New York.

The WRC's plan applies to an area southwest of Wilmington's primary business district, which was selected in part because of existing clusters of cultural institutions, such as theatres, art galleries, and design firms. The area is close to Wilmington's downtown core and riverfront, which has been a focus for redeveloping mixed-use residential communities.

Wilmington is a similarly sized city to New Westminster and acts as a regional centre connected by Interstate 95, which is minutes from the Creative District. Philadelphia, Pennsylvania, is an hour drive from downtown and Baltimore, Maryland, is approximately 90 minutes away. The WRC plan also emphasized job creation and economic development as the foundation for all subsequent activities for the plan, mirroring New Westminster's intentions for the Lower Twelfth Study Area.

Statistics

Land Area	50 acres
Population density	NA
Average rents	<ul style="list-style-type: none">US\$10-27 per sq.ft. for office and retail space
Assessed land value	NA

KEY TAKEAWAYS

- Wilmington is still in recovery from the 2008 financial crash, and much of the plan was created in reaction to conditions that had been exacerbated by the recession (e.g., crime, depressed real estate, and negative perceptions). To address these conditions, the WRC formed a strategy based in the existing assets in the area, which were **cultural in nature**. Significant portions of the plan are related to **marketing and streetscaping to draw in more pedestrians**. New public art installations, green-spaces, and other urban design interventions have helped achieve this.
- Since releasing the plan, the WRC helped **NextFab, a makerspace firm** based in Philadelphia to open its third location in Wilmington's Creative District. NextFab offers members access to "tools, technology, education, events, and services for makers of any skill level," and actively pursues partnerships with local educational institutions and artists. Activities include 3D printing, metalworking, woodworking, jewelry design, electronics, and more.
- A planner with the WRC identified **NextFab's new location as the major achievement** of the plan.
- The WRC also assisted NextFab in finding appropriate facilities and financing through a state program to assist in opening the new location.
- A remaining challenges is the poor condition of existing buildings in the district and the difficulty of incentivizing development for arts activities, which is a low market priority in a relatively weak real estate market.



Municipal Policy + Zoning:

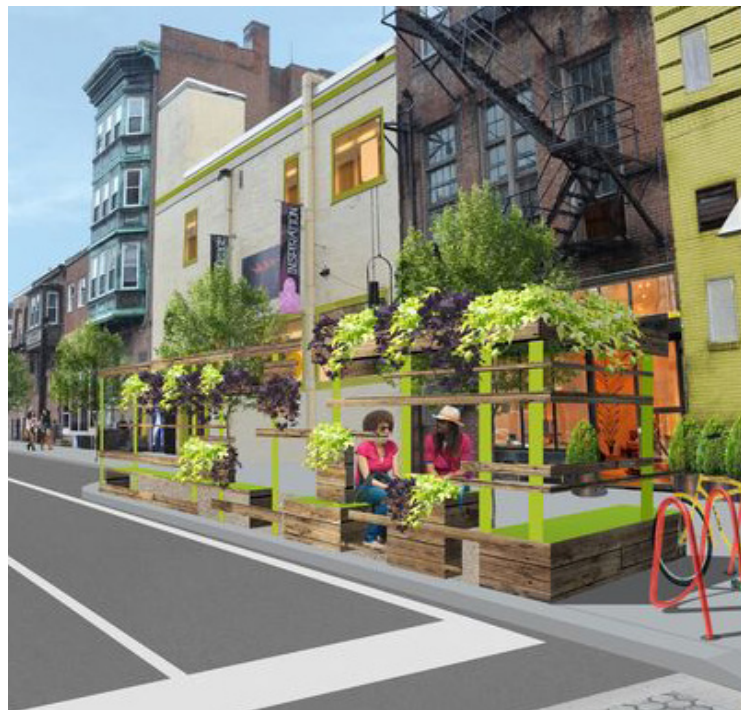
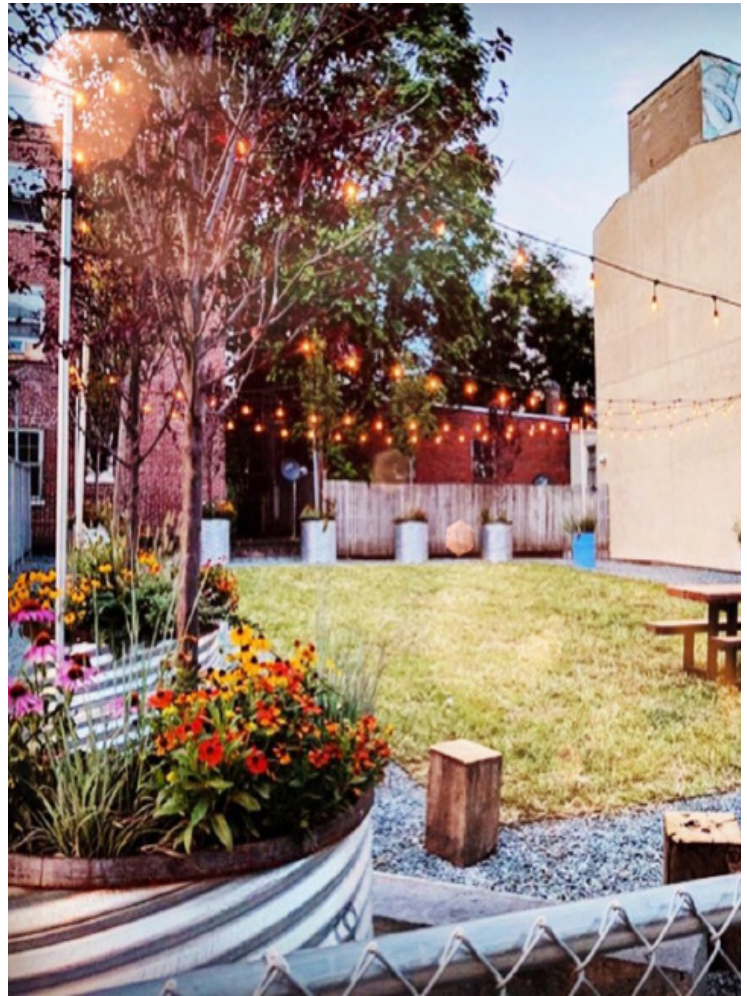
- Majority of the district is zoned for **commercial with a small pocket of residential**.
- The commercial zoning allows for retail, office space and warehousing.
- Current zoning also permits **light-manufacturing operations** ("Finishing, fitting, converting, assembling..."), provided that operations are not at the street entrance.
- **Multifamily and apartment dwellings are permitted** in the commercial zoning.
- The commercial zoning for most of the district allows for a **maximum floor-area ratio of 6.0**, though most buildings in the district do not exceed three-storeys.
- According to the WRC, the municipal zoning was not appropriate for the proposed uses. In particular, the organization felt that a **live/work zoning overlay of the entire district would be necessary** to fulfill the goals of the strategic plan, though the WRC did not believe that current zoning had thus far precluded any desired uses.

Mix of Uses:

- Institutional users (22% of land)
- Parking (20%)
- Commercial (19%)
- Residential (17%)
- Industrial (10%)
- Other (12%)

Key Businesses:

- Clustering of arts institutions, including theatres, concert venues and galleries, on one of the primary streets.
- Media production companies (Short Order and Aloysius Butler & Clark)
- Shared workspaces facility (Artist Ave Station)
- Violin maker and repair shop (David Fromberg Fine Violins)
- Arts-based mental health services organization (Creative Vision Factory)
- NextFab (Makerspace firm).



ROCK BAY, VICTORIA

Overview

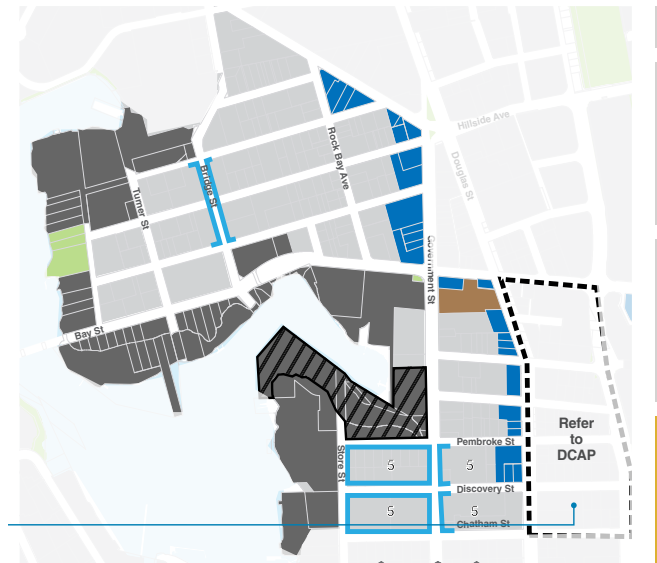
The Rock Bay District is a sub-area representing 23 percent of the City of Victoria's greater industrial Burnside Employment Lands. The area spans from the northern edge of downtown Victoria at Chatham Street along the harbour waterfront to Bay Street. The area transitioned from residential to industrial from the late 1800s to early 1900s, and today it is characterized by a mix of nondescript older buildings, as well as concrete and metal light-industrial and warehouse buildings. Some of the current uses in the area include manufacturing and product wholesaling, storage, building-trade offices, workyards, truck parking, outfitting areas, auto repair and auto sales, much of which is similar to the Lower Twelfth Street area. The Rock Bay District is identified in the City's Official Community Plan as a Core Employment area. Buildings of up to five storeys will be permitted, with a focus on ground-floor light-industrial uses and commercial or light-industrial uses above. Building forms featuring at-grade spaces with limited retail is planned for some parts of the district. The guiding principle for future land use is industry first. The majority of the land use is industrial employment with two industrial arts district frontages intended to evolve as artisan-oriented areas, supporting industrial and artisan production and providing some shopping and services for the area.

KEY TAKEAWAYS

- **Residential development** is **limited** to transitional edges near the downtown core because most business activities would not be compatible with housing and residential uses may price out employment-generating uses.
- Since releasing the plan, development uptake has been slow; formal market assessments, and analysis of incentives and policy tools would benefit Lower Twelfth Street plan.
- Spaces must be able to accommodate light industry, but they are not restricted to industrial uses.
- **Industrial Arts District Frontage** was organic as artisanal businesses were already in the district.

Statistics

Land Area	64 acres
Population density	Part of the Greater Burnside Employment Lands - 17% of Victoria's employment
Average rents	<ul style="list-style-type: none"> • Office building: \$11 per sq.ft. for 22, 835 sq.ft. • Warehouse and office: Ground floor \$13.50 per sq.ft. • Second floor: \$10 per sq.ft. • Second floor office: \$15 per sq.ft.
Assessed land value	NA



Land Use Policies

Legend

- Industrial Employment
- General Employment
- Urban Residential
- Open Space
- Heavy Industrial
- Special Planning Area
- Industrial Arts District Frontage
- # Max. # storeys anticipated = 4 except where otherwise noted

Municipal Policy + Zoning:

The area is undergoing rezoning, although planners are determining whether to do site-specific zoning or to zone the area as a whole.

Various land-use policies have been identified for the area (zoning has not been determined):

- **Industrial Employment Areas:**
 - Businesses generally engaged in production, distribution, and repair (PDR) on ground floor, with possibility of commercial on upper floors
 - Building types should support PDR on ground floor with loading bays and sufficient floor-to-ceiling heights
 - Buildings of up to four storeys and 2.0 FSR are permitted
 - Ground floors with a mezzanine office space are considered two storeys
 - Upper floors should allow commercial uses
 - Retail uses supported only when they are accessory to a primary use
 - Total upper floor commercial space should not exceed ground floor industrial space by more than a two-to-one ratio

Mix of Uses:

- Current uses include heavier industries along the waterfront (dependent on access to water), as well as smaller businesses related to sectors such as design, food and beverage production, breweries, construction, and auto-repair.
- The vision is for a mix of **predominantly industrial uses such as light industrial, high technology, marine industrial, research and development, commercial, office, and ancillary retail.**
- Residential uses are permitted on upper floors in buildings containing light industrial and in one half-block of the Rock Bay District only.

Key Businesses:

- Abeego (developer and manufacturer of environmentally-friendly packaging)
- Parachute Ice Cream (ice creamery)
- Cassidy Woodcraft & Design (furniture maker)
- Arc.hive (artist-run centre that operates as an arts co-lab)
- Vancouver Island Brewing (brewery)
- Wheelies Motorcycles (motorcycle cafe)
- Red Kettle (restaurant)
- PBX Engineering (engineering consultant)

- Residential is not supported
- **Industrial Arts District Areas:**
 - Supports light-industrial PDR
 - Supports limited retail and services. Generally limited to restaurants, coffee shops, art galleries, furniture and design showrooms, grocery or convenience stores, tasting rooms, and similar uses
 - Residential may be supported above industrial uses only in half block transitional zone to downtown. Ground floor accommodating light industrial and flex uses and at least one upper floor of general employment use should be provided, and residential use cannot make up more than 50 percent of the total floor space of any building.
- **General Employment Areas:**
 - Supports a range of uses, including light and service industrial uses which are compatible with other business uses, as well as offices, services, and tourist accommodations.
 - Retail uses supported when fronting on arterial or minor arterial roads.



Wheelies Motorcycle Cafe, Rock Bay



Abeego headquarters, Rock Bay

BUILDING CASE STUDY: ROCK BAY SQUARE

Address	2612 - 2630
Zoning	M3 (Heavy Industrial)
FSR	Max. 5.0
Mix of Uses	Light industrial with ancillary retail and art studios. Businesses such as ice creamery, metalwork shop, furniture repair shop, architectural design, engineering consultant, cafe, art studios, and restaurant.
Number of Units	57
Rents per sq.ft.	Starts as low as \$12/ sq.ft/year
Assessed Land Value	\$4,537,000

Key Takeaways

- Businesses are attracted to the building because of the low rents.
- Building has become a destination for specific uses such as cabinetry, refinishing, and ice cream-making.
- Tenants of building would like to see more restricted parking (reducing unlimited to four hours to enable more customer turnover).
- Tenants would like to increase green space in the area.
- Tenants would like more local-serving services in the area.



HARBOURSIDE, CITY OF NORTH VANCOUVER

Overview

The Harbourside Business Park is a mix of commercial, light-industrial and auto-mall uses located along the waterfront in the City of North Vancouver, approximately 1 kilometre west of the Lonsdale Quay. The area faces transportation connectivity challenges, as it is separated from adjacent land: to the north by railroad tracks, to the east by Squamish Nation land, and to the west by MacKay Creek. The newly improved Spirit Trail has provided improved pedestrian and cyclist access to the area transit via the Lonsdale Quay.

The four properties along the waterfront have received required an amendment to the OCP and a rezoning to change the allowed uses from business park to mixed-use, including residential, office, retail, pub, and light industrial. The waterfront lands for rezoning are bracketed on either end along the water by a private

high school on the west and a marina on the east.

North of the planned mixed-use waterfront lands, is a light-industrial business park with the majority of the buildings being 2-3 two to three storeys with surface parking. The top northwest portion of the area is being used as the North Shore automall, with large buildings surrounded by plenty of surface parking for display cars.

The risk of flooding, the accessibility challenges, the planned urban-light industrial interface, and the relatively similar industrial land values and population of the City of North Vancouver to New Westminster make Harbourside a good comparison to the study area.



Statistics

Area	81.5 acres
Population Density	7.67 people per acre
Average rent	\$25.00 - \$28.00 per sq.ft./year
Assessed land value	\$510 per sq.ft. - \$690 per sq.ft.

KEY TAKEAWAYS

- Higher than anticipated construction costs were incurred for anticipated for the Waterfront mixed-use Harbourside development due to the water table and flood management requirements;
- Even with covenants in place warning new residents in Lower Lonsdale of the noise of adjacent industry, Port Metro Vancouver still receives complaints regarding the noise at the Seaspan building docks, adjacent to the Pier building. The construction of an additional building is expected to improve the noise buffering between this building and the Seaspan building site.
- No professional or semi-professional offices were recommended (e.g., real estate) for a Creative District, in part to reduce high trip-generating uses out of mixed employment areas.
- Current office uses allowed in the zoning bylaw include architecture, engineering, and design; whether these uses meet the objectives of a Creative Employment District should be revisited.
- Live/Work units are not recommended due to issues with taxation and concerns that the addition of land use could lead to increased light-industrial rents and land values.
- There is an increasing demand for employers to meet desires of employees to be close to transit, amenities and services, and to provide amenities.

Municipal Policy - Zoning:

- **OCP:**

- **Harbourside Waterfront (Mixed Use)**

- Low- and mid-rise residential and commercial development, up to 28 metres tall (9 storeys).
 - Allows up to 2.05 FSR; minimum commercial density of 0.70 FSR; and a bonus FSR of up to 0.15 for providing rental housing.

- **Mixed Employment**

- Light-industrial and automotive uses, research and development, business parks, storage, assembly, and service commercial uses.

- **Commercial**

- Commercial uses including retail, office, and services.

- **Industrial**

- Light and heavy industrial uses characterized by port activities, goods production, manufacturing, distribution, storage, and marine-related uses

- **Zoning:**

- **CD-646 Harbourside:** Retail Services, High-Density Residential, Neighbourhood Pub, Liquor Retail, Live/Work Studio, Light Industrial.
 - **Industrial Business Park** (CD-360, CD-361, CD-412, CD-534) (research laboratories, manufacturing, assembly, storage, servicing, wholesaling, distribution of goods including film and music studios, engineering and architectural offices, computer software development, and trade contractor offices);
 - Service Commercial
 - Auto Mall, Auto Mall Commercial and Car Wash
 - Prohibited uses: retail sales; call centres.
 - Built form: Lot Coverage of

approximately 50% and FSR of 0.75 - 1.0 allowed.

- **W-1 Waterfront, CD-366, CD-594:** Light Industrial, Marina, Waterfront, Accessory Retail (20% of the Gross Floor Area).
- **M-3 Special Industrial:** Industrial, Accessory Retail (30% of floor area), and Surveying Office. Buildings up to 40 feet tall.
- **M-5 Light Industrial:** Light Industrial Manufacturing, Warehousing and Wholesaling, Accessory Office or Retail (max 20% of floor area). Max lot coverage of 50% and Max height 9.144 metres (30 feet).

Mix of Uses:



- **Industrial Park:**

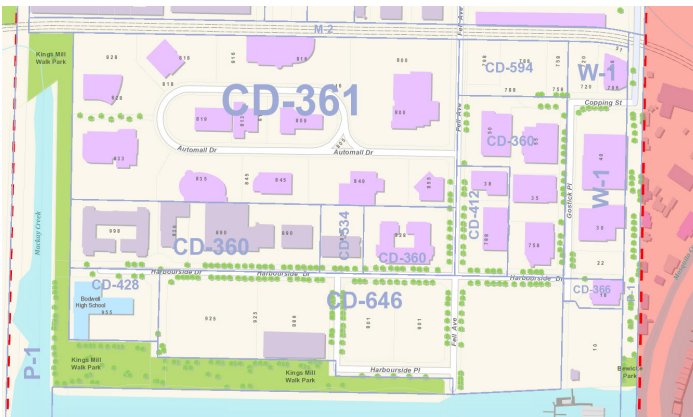
- Manufacturing
 - Food and beverage production
 - Food services
 - Design and engineering offices
 - Wholesaling,
 - Health services

- **Proposed Harbourside Waterfront Mix of Uses:**

Each of the blocks will include ground-floor commercial with retail and office uses, with three to seven storeys of residential use above. There will be five buildings that are residential use only and one building that is intended as affordable rental or seniors housing

Key Businesses

- Thomas Haas Fine Chocolates and Patisserie;
- Black Kettle Brewing
- Ohm Electric Bikes
- Blue Ice Adventures (rock climbing travel and gear wholesale)
- Ryders Sunglasses (design and distribution of cycling sunglasses)
- Capilano Maritime Design; and,
- SAE (School of Audio Engineering) Institute



BUILDING CASE STUDY: LOWER LONSDALE

Address	350 & 370 East Esplanade, City of North Vancouver
Zoning	M4 (Industrial)
FSR	Max. 6.0
Mix of Uses	<ul style="list-style-type: none"> • Small-beverage distribution company • Three construction companies • Exotic automotive sales • Upholstery company • Car storage • Property management company • Modelling agency (Lisbelle Agencies) • Small engineering firm • Brewery
Number of Units	<ul style="list-style-type: none"> • 8 units in 350 East Esplanade • 13 units in 370 East Esplanade
Rents per sq.ft.	\$450 - \$550 per sq.ft. (pre-sales 2016); \$840 per sq.ft. (post-construction 2018)
Assessed Land Value	NA

Key Takeaways

- Locating on a slope allows warehousing access from both first and second floors.
- There is strong demand for this type development (mix of uses, built form, and access to amenities).
- Recommended uses for a Creative Employment District building that attract other tenants: breweries, bakeries, commissaries (kitchens that make restaurant-quality food for delivery or pick-up only), and clothing manufacturers.



APPENDIX D: USER NEEDS CHART

Business Type	Current Location	Key Location Considerations	Key Space Considerations
Beverage Manufacturer (Brewery)	Lower Mainland	-Location with high foot traffic -Locating in areas with lots of residents -Accessible by transit	High ceilings
Beverage Manufacturer (Brewery)	Lower Mainland	-Location with high foot traffic -Accessible by transit -Co-locating with other breweries	High ceilings
Small manufacturer (Coffee roastery)	Lower Mainland	Central location	-High ceiling heights is desired, however, regular ceiling heights work for a small manufacturer -Ventilation (to back alley) -Access to natural gas -Ample electrical power -Loading bay or wide enough doors to fit a handtruck through
Food manufacturer (Bakery)	Lower Mainland	Proximity to home (for owners)	-Doesn't have loading bay at the back, would like one -Mixed use and functional to have bakery and cafe in the same space
Food Manufacturer	Lower Mainland	Accessible to transit	-Loading dock -Enclosed office space
Sail Manufacturer	Vancouver Island	Locating near their market (the marina)	High ceilings (12 ft.)
Furniture Maker/Woodmaking Shop	Vancouver Island	Proximity to home (for owner)	-Accessible space -Large hallways due to big woodworking material -Parking -Power supply
Makerspace	Lower Mainland	-Safer neighbourhood -Low competition from makerspaces in Vancouver	-Standard industrial space -Ground level loading -Standard ceiling height -Large and clean space

Size of Space (Sq.Ft.)	Current Rent (Price per sq. ft. per year)	Balance of Retail to Production Space	Number of Employees
46,918	Not disclosed	30% retail	NA
5,600	\$16 - \$25	25% retail	25
200	~ \$27	100% production	5
3,900	Own the space	25% retail	23
2,800	~ \$13	100% production	4
7,000	Owned	Mostly production, with a little bit of retail.	8
750	\$13 - \$15	100% production	1
12,000	\$12.50	100% production	3

APPENDIX E: PRO FORMAS

Development Scenarios Summary: 210 Twelfth Street – Westminster Toyota

Shaded cells indicate input cells, / Blank each scenario in "Site and Analysis" sheet

	Industrial Only	Industrial - Office (Mkt. Placement Mixed)	Industrial - Residential (Mixed Use)	Industrial - Residential (with Office-mixed Industrial Base) (Mixed)	Residential Only Best Case	Office Only Best Case
	1	2	3	4	5	6
FSM						
Floorplate:	77%	100%	77%	77%	75%	75%
Industrial FSM	0.77	1.00	0.77	0.77	0	0
Office FSM	0	2.00	0	0	0	1.5
Residential FSM	0	0.00	1.7	2.3	1.5	0

Costs

Industrial cost / sq.ft.	\$ 135.00	\$ 335.00	\$ 335.00	\$ 335.00	\$ -	\$ -
Office cost / sq.ft.	\$ -	\$ 335.00	\$ -	\$ -	\$ -	\$ 283.00
Residential cost / sq.ft.	\$ -	\$ -	\$ 335.00	\$ 335.00	\$ 225.00	\$ -
Mixed-use premium	0%	0%	0%	0%	0%	0%

Sales Prices

Industrial sales / sq.ft.	\$ 450.00	\$ 450.00	\$ 450.00	\$ 360.00	\$ -	\$ -
Office sales / sq.ft.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential sales / sq.ft.	\$ -	\$ -	\$ 800.00	\$ 800.00	\$ 800.00	\$ -

Industrial lease rate:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Industrial cap rate	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Office lease rate:	\$ -	\$ 19.00	\$ -	\$ -	\$ -	\$ 19.00
Office cap rate	3.60%	3.10%	3.10%	3.60%	3.60%	3.10%
Residential lease rate:		\$ -	\$ -			
Residential cap rate	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%

Total residential	\$ 7,068,430.11	\$ (37,201,061.03)	\$ 3,004,899.73	\$ 3,104,637.73	\$ 22,122,311.78	\$ (13,837,369.44)
Total residential / sq.ft. Available:	\$ 169.79	\$ (229.35)	\$ 37.48	\$ 30.75	\$ 272.78	\$ (170.87)
Total GRT:	41%	-844%	0%	2%	343%	-377%

APPENDIX E: PRO FORMAS

Scenario	1 Select Scenario	Industrial Only
Shaded cells indicate input cells / 'Scenario Summaries' includes changing variables		

ADDRESS / LOT	239 Fourth Street	Trysta Building
Site and Building Size		
Gross site size	54,067 sq.ft	5,082.00 sq.m
Office parking area	37.16 linear metres	
Total site coverage (base footprint)	77%	
Industrial density (FSR)	0.77	
Office density (FSR)	0.90	
Residential density (FSR)	0.90	
Total assumed density	0.77 FSR	
Total gross floorspace	41,061.77 sq.ft	3,807.71 sq.m
Net leasable floorspace	35,966.00 sq.ft	3,307.50 sq.m or 85% of gross
Net industrial floorspace	35,966.00 sq.ft	3,307.50 sq.m
Net Office floorspace	- sq.ft	- sq.m
Net Residential floorspace	- sq.ft	- sq.m
Average unit size	750.00 sq.ft	69.69 sq.m
Units	0 Units	
Parking		
Parking and loading area (Gross site size - Total site coverage)	12,409.41 sq.ft	1,159.29 sq.m
Industrial parking required (1 space / 1,000 sq.ft)	41 spaces	
Office parking required (1 space / 500 sq.ft)	- spaces	
Residential parking required (1.2 space / unit + .2 space / unit offset)	- spaces	
Total parking/spaces required	41 spaces	
Surface parking available (parking area / 300 sq.ft / space)	41 spaces	
Underground parking required (Total parking - surface parking)	- spaces	
Underground parking area required (spaces * 300 sq.ft)	- sq.ft	
ANALYSIS		
Revenue		
Gross revenue	\$ 25,924,000.00	
Less commissions and marketing costs	\$ 477,750.00	
Net residential sales revenue	\$ 25,446,250.00 or	\$ 371.50 / sq.ft buildable
Project Costs		
	\$ 7,414,000.00 or	\$ 179.50 / sq.ft buildable
Allowance for Developer's Profit	\$ 905,000.00	
Residual Land Value	\$ 7,026,250.00	
Residual Value / sq.ft. buildable	\$ 169.79	
Land lift %	41%	
BC Assessment Value	\$ 4,987,200.00	
Change in Value	\$ 2,039,050.00	
COSTS BREAKDOWN		
		Portion of total costs
Hard and soft costs with financing and marketing	\$ 7,079,000.00	94.51%
Parking	\$ 394,000.00	5.09%
City of New Westminster fees and taxes	\$ 84,100.00	1.09%
Regional government fees and taxes	\$ 51,200.00	0.67%
Profit	\$ 905,000.00	11.90%
		100.00%
REVENUE ANALYSIS		
Desired land lift on estimated current value	0%	
Target residual land value	\$ 4,987,200.00	
Target average price per sq.ft for target residual land value	\$ 169.69	
Floorspace required for land lift at current average price	35,961.77 sq.ft	

APPENDIX E: PRO FORMAS

Development Costs

Construction Costs

Office building (square of adjacent road/landscaping)	\$ 1,100.00 / foot wide (average)	\$ 131,000.00
Site servicing	\$ 177,000.00 / acre (see site)	\$ 268,000.79

Hard Construction Costs

Industrial Floorpace	\$ 134.00 / sq.ft. buildable	\$ 8,961,841.34
Office Floorpace (see Road)	\$ - / sq.ft. buildable	\$ -
Residential Floorpace	\$ - / sq.ft. buildable	\$ -
Mixed-use premium / contingency	6% of sum buildable	\$ -
Access Costs / Soil Analysis	\$ 100.00	\$ -
Subtotal		\$ 8,961,841.34

Paving

Over/Underground Parking Pad	\$ 50,000.00 / space for	0 spaces	\$ -
Over/Surface Parking Pad	\$ 16.00 / sq.ft. of 100sq.ft. / space	41 spaces	\$ 656,000.00
Subtotal			\$ 656,000.00

Soft costs/professional fees

12% of hard costs

\$ 744,321.16

Contingency on hard and soft costs

2% on hard and soft costs

\$ 106,632.40

City of New Westminster Levies/Charges

Review/application Fee	\$ 1,100.00 or \$120.11 / housing unit	Charge if housing > 250 units	\$ 1,100.00
Public Hearing Fee			\$ 600.00
Development Permit Fee	\$ 1,886.35 or \$120.11 / housing unit	Charge if housing > 250 units	\$ 1,886.35
Land Use Registration Fee			\$ 64.18
Building Permit Fee	See schedule		\$ 84,287.13
Sanitation Permit Fee			\$ 1,249.00
Development-Cost Charges (DCCs)			
Industrial	\$ 0.66 / improved site area		\$ 23,081.16
Office	\$ 3.00 / gross sq.ft.		\$ -
Residential	\$ 0.14 / gross sq.ft.		\$ -
School Site Acquisition Charge	\$ 100,000 / res. unit if < 25 units		\$ -
	\$ 300,000 / res. unit if > 25 units		\$ -
Subtotal			\$ 85,983.55

Regional Levies/Charges

Greater Vancouver Sewerage and Drainage District (GVRD) (Industrial)

Non-residential (Industrial + Office)	\$ 0.66 / gross sq.ft.	\$ 40,707.36
Agriculture	\$ 1,075.00 / acre	\$ -
Transfer DCCs (2021 rates)		
Industrial	\$ 0.30 / gross sq.ft.	\$ 11,889.46
Office	\$ 1.00 / gross sq.ft.	\$ -
Agriculture	\$ 1,140.00 / acre	\$ -
Subtotal		\$ 52,596.82

Development Costs Total

\$ 7,321,807.79

Financing Assumptions

Financing rate on development costs	5% (effective monthly interest rate)	0.4244%
Financing	100% of development costs over	2 years in 2 tranches
Interest on development financing		\$ 311,851.01
Subtotal		\$ 311,851.01

Total costs before profit and marketing

\$ 7,633,658.80

Profit margin

13% on gross costs

\$ 992,375.75

Sources

New West: https://www.newwestcity.ca/files/2018/05/Development_Application_Fee_20180501.pdf, <https://www.newwestcity.ca/building-permit-fee>

More West: <http://www.morewestcoast.ca/files/2018/04/Development-cost-charges-report-draft-04-18.pdf>

Transfer: <https://www.surrey.ca/files/2018/04/Transfer-to-development-cost-charges.aspx>

Building Permit Fee

\$ 13.00 For each \$1,000 of value (or portion thereof) up to	\$ 862,000.00	
\$ 10.00 For each \$1,000 of value between	\$ 862,000.00 and	\$ 1,852,000.00
\$ 7.00 For each \$1,000 of value above	\$ 1,852,000.00	

APPENDIX E: PRO FORMAS

Revenues

Industrial Strata	\$	450.00 / sq.ft. saleable	\$ 15,924,083.18
Office Strata	\$	- / sq.ft. saleable	\$ -
Residential Strata	\$	- / sq.ft. saleable	\$ -

Industrial Lease Rate	\$	- / sq.ft. / yr	
		5% Industrial cap rate	
Sale price	\$	- / sq.ft.	\$ -

Office Lease Rate	\$	- / sq.ft. / yr	
		6% Office cap rate	
Sale price	\$	- / sq.ft.	\$ -

Residential Rental Rate		0% / sq.ft. / yr	
		4% Residential cap rate	
Sale price	\$	-	\$ -

Average price per sq.ft	\$	450.00
Target average price per sq.ft	\$	389.66

Total Revenue		\$ 15,924,083.18
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Marketing and Commissions

Commissions/sales costs	2%	on gross revenue	\$ 318,481.66
Marketing	1%	on gross revenue	\$ 159,240.83
Subtotal			\$ 477,722.50

Revenue after marketing and commissions		\$ 15,446,360.68
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APPENDIX E: PRO FORMAS

Development Scenarios Summary: 335 Thirteenth Street - Heritage Apartment Block

Shaded cells indicate input cells / Run each scenario in 'Site and Analysis' sheet

	Industrial Only (Week End)	Industrial - Residential (Week End)	Industrial - Residential (20% below-market industrial lease cost)	Residential Only Test Case	Office Only Test Case	Open scenario
	2	2	3	4	5	6
FSR						
Floorplate	77%	77%	77%	75%	75%	0%
Industrial FSR	1.06	0.77	0.77	0	0	0
Office FSR	0	0	0	0	1.5	0
Residential FSR	0	3.36	4.2	1.5	0	0

Costs

Industrial cost / sq.ft	\$ 136.00	\$ 333.00	\$ 333.00	\$ -	\$ -	\$ -
Office cost / sq.ft	\$ -	\$ -	\$ -	\$ -	\$ 283.00	\$ -
Residential cost / sq.ft	\$ -	\$ 333.00	\$ 333.00	\$ 225.00	\$ -	\$ -
Mixed-use premium	0%	0%	0%	0%	0%	0%

Sales Prices

Industrial rents / sq.ft	\$ 430.00	\$ 450.00	\$ 360.00	\$ -	\$ -	\$ -
Office rents / sq.ft	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential rents / sq.ft	\$ -	\$ 800.00	\$ 800.00	\$ 800.00	\$ -	\$ -

Industrial lease rate	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Industrial cap rate	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Office lease rate	\$ -	\$ -	\$ -	\$ -	\$ 19.00	\$ -
Office cap rate	3.60%	3.60%	3.10%	3.60%	3.10%	3.60%
Residential lease rate		\$ -	\$ -	\$ -	\$ -	\$ -
Residential cap rate	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%

Total residential	\$ 1,724,041.97	\$ 1,746,485.63	\$ 1,766,439.32	\$ 3,897,263.73	\$ (2,856,324.82)	\$ (430,041.97)
Total residential / sq.ft buildable	\$ 150.26	\$ 39.07	\$ 32.84	\$ 240.04	\$ (171.93)	N/A/sq
Total IRR	0%	1%	2%	12%	-26%	-12%

APPENDIX E: PRO FORMAS

Scenario 1 Select Scenario: Industrial Only (Break Even)

Shaded cells indicate input cells / 'Scenario Summaries' includes changing variables

ADDRESS / LOT	830 Thirteenth Street	Marriage Apartment Block
Site and Building size		
Gross site size	10,834 sq.ft	1,093.59 sq.m
Office servicing area	24.84 linear metres	
Total site coverage (base floorplate)	77%	
Industrial density (FIR)	1.00	
Office density (FIR)	0.00	
Residential density (FIR)	0.00	
Total assumed density	1.00 FIR	
Total gross floorspace	11,478.44 sq.ft	1,069.89 sq.m
Net leasable floorspace	9,752.42 sq.ft	906.09 sq.m or 85% of gross
Net industrial floorspace	9,752.42 sq.ft	906.09 sq.m
Net Office floorspace	- sq.ft	- sq.m
Net Residential floorspace	- sq.ft	- sq.m
Average unit size	600.00 sq.ft	55.74 sq.m
Units	0 Units	
Parking		
Parking and loading area (Gross site size - Total site coverage)	2,489.52 sq.ft	229.38 sq.m
Industrial parking required (1 space / 1,000 sq.ft)	11 spaces	
Office parking required (1 space / 300 sq.ft)	- spaces	
Residential parking required (1.2 space / unit + 1 space / unit visitor)	- spaces	
Total parking:spaces required	11 spaces	
Surface parking available (parking area / 300 sq.ft / space)	8 spaces	
Underground parking required (Total parking - surface parking)	3 spaces	
Underground parking:area required (spaces * 300 sq.ft)	900 sq.ft	
ANALYSIS		
Revenue		
Gross revenue	\$ 4,368,593.89	
Less commissions and marketing costs	\$ 371,937.72	
Net residential sales revenue	\$ 4,250,998.06 or	\$ 371.59 /sq.ft buildable
Project Costs	\$ 2,341,468.58 or	\$ 189.86 /sq.ft buildable
Allowance for Developer's Profit	\$ 291,394.95	
Residual Land Value	\$ 1,728,041.87	
Residual Value / sq.ft. buildable	\$ 359.38	
Land lift %	0%	
BC Assessment Value	\$ 1,728,000.00	
Change in Value	\$ (4,976.06)	
COSTS BREAKDOWN		Portion of total costs
Hard and soft costs with financing and marketing	\$ 1,611,532.39	73.43%
Parking	\$ 189,409.09	7.44%
City of New Westminster fees and taxes	\$ 27,432.05	1.08%
Regional government fees and taxes	\$ 24,112.76	0.93%
Profit	\$ 291,394.95	11.50%
		100.00%
REVENUE ANALYSIS		
Desired land lift on estimated current value	0%	
Target residual land value	\$ 1,728,000.00	
Target average price per sq.ft for target residual land value	\$ 459.52	
Floorspace required for land lift at current average price	9,758.76 sq.ft	

APPENDIX E: PRO FORMAS

Development Costs

Construction Costs			
Off-site Parking (Upgrade of adjacent road/lot frontage, etc)	\$ 3,300.00	/ linear front (footage)	\$ 63,993.00
Site parking	\$ 177,000.00	/ acre (lot-size)	\$ 49,991.29
Hard Construction Costs			
Industrial Floorpace	\$ 190.00	/ sq ft buildable	\$ 1,990,947.94
Office Floorpace (no floor)	\$ -	/ sq ft buildable	\$ -
Residential Floorpace	\$ -	/ sq ft buildable	\$ -
Other/Use premium / contingency		8% of costs buildable	\$ -
Average Cost / sq ft buildable	\$ 190.00		
Subtotal			\$ 1,990,947.94
Parking			
Cost / Underground Parking Stall	\$ 50,000.00	/ space for 3 spaces	\$ 250,000.00
Cost / Surface Parking Stall	\$ 15.00	/ sq ft @ 300 sq ft / space 6 spaces	\$ 36,980.00
Subtotal			\$ 286,980.00
Soft cost/professional fees	12%	of hard costs	\$ 238,909.00
Contingency on hard and soft costs	2%	on hard and soft costs	\$ 49,994.29
Cost of New Measurements Issued/Changes			
Planning Application Fee	\$ 3,132.40	or \$130.55 / housing unit	Change if housing > 250 units \$ 3,132.40
Public Hearing Fee			\$ 993.50
Development Permit Fee	\$ 3,999.39	or \$159.95 / housing unit	Change if housing > 250 units \$ 3,999.39
Land Title Registration Fee			\$ 69.18
Building Permit Fee		Searchable	\$ 18,999.99
Construction Permit Fee			\$ 3,940.00
Development Cost Charges (DCCs)			
Industrial	\$ 0.49	/ improved site area	\$ 1,999.99
Office	\$ 2.09	/ gross sq ft	\$ -
Residential	\$ 3.14	/ gross sq ft	\$ -
School Site Acquisition Charge	\$ 1,000.00	/ res. unit if < 25 units	\$ -
	\$ 900.00	/ res. unit if > 25 units	\$ -
Subtotal			\$ 27,993.08
Regional Levies/Charges			
Drainage/Stormwater Sewerage and Onsite Storm DCCs (Searchable)			
Non-residential (Industrial + Office)	\$ 0.09	/ gross sq ft	\$ 10,970.30
Agriculture	\$ 1,072.00	/ unit	\$ -
Transfer DCCs (DCCs fees)			
Industrial	\$ 0.30	/ gross sq ft	\$ 1,943.09
Office	\$ 1.00	/ gross sq ft	\$ -
Agriculture	\$ 1,999.00	/ unit	\$ -
Subtotal			\$ 14,913.39
Development Costs Total			\$ 2,399,349.29
Financing Assumptions			
Financing rate on development costs	5%	(Effective monthly interest rate)	0.00709
Financing	100%	of development costs over 2 years in 2 build/years	
Interest on development financing			\$ 96,247.39
Subtotal			\$ 96,247.39
Total cost before profit and marketing			\$ 2,495,596.68
Profit margin	13%	on gross costs	\$ 324,428.58

Source

New York: https://www.sauwendi.co/databases/TheStrongDevelopment_Application_Fee_3618011.pdf, <https://www.sauwendi.co/building-permit-fee>

Mass: <http://www.mass.gov/econdev/services/land-use/financing/development-cost-charges/Pages/default.aspx>

Tennessee: <https://www.sauwendi.co/About-Us/Texas/Development-Cost-Charges.aspx>

Building Permit Fee

\$ 14.00	for each \$1,000 of work or portion thereof up to	\$ 50,000.00	
\$ 10.00	for each \$1,000 of value between	\$ 50,000.01 and	\$ 100,000.00
\$ 0.00	for each \$1,000 of work above	\$100,000.01	

APPENDIX E: PRO FORMAS

Revenues

Industrial Strata	\$	450.00 / sq.ft. saleable	\$	4,388,590.80
Office Strata	\$	- / sq.ft. saleable	\$	-
Residential Strata	\$	- / sq.ft. saleable	\$	-

Industrial Lease Rate	\$	- / sq.ft. / yr		
		5% Industrial cap rate		
Sale price	\$	- / sq.ft.	\$	-

Office Lease Rate	\$	- / sq.ft. / yr		
		6% Office cap rate		
Sale price	\$	- / sq.ft.	\$	-

Residential Rental Rate		0% / sq.ft. / yr		
		4% Residential cap rate		
Sale price	\$	-	\$	-

Average price per sq.ft	\$	450.00
Target average price per sq.ft	\$	450.52

Total Revenue		\$	4,388,590.80
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Marketing and Commissions

Commissions/sales costs	2%	on gross revenue	\$	87,771.82
Marketing	1%	on gross revenue	\$	43,885.91
Subtotal			\$	131,657.72

Revenue after marketing and commissions		\$	4,256,933.08
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APPENDIX E: PRO FORMAS

Development Scenarios Summary: 379 Twelfth Street – Vacant Model

Shaded cells indicate input cells. / Run each scenario in "Site and Analysis" sheet

	Industrial Only (Market Base)	Industrial - Residential	Industrial - Residential (with Market-orient Industrial Incent Program)	Residential Only Best Case	Office Only Best Case	Open scenario
	1	2	3	4	5	6
FSM						
Floorplate:	77%	77%	77%	75%	75%	0%
Industrial FSM	1.25	0.77	0.77	0	0	0
Office FSM	0	0	0	0	1.5	0
Residential FSM	0	3.66	4.4	1.5	0	0

Costs

Industrial cost / sq.ft	\$ 136.00	\$ 335.00	\$ 335.00	\$ -	\$ -	\$ -
Office cost / sq.ft	\$ -	\$ -	\$ -	\$ -	\$ 283.00	\$ -
Residential cost / sq.ft	\$ -	\$ 335.00	\$ 335.00	\$ 225.00	\$ -	\$ -
Market-use premiums	0%	0%	0%	0%	0%	0%

Sales Prices

Industrial sales / sq.ft	\$ 450.00	\$ 450.00	\$ 360.00	\$ -	\$ -	\$ -
Office sales / sq.ft	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential sales / sq.ft	\$ -	\$ 800.00	\$ 800.00	\$ 800.00	\$ -	\$ -

Industrial lease rate:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Industrial cap rate:	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Office lease rate:	\$ -	\$ -	\$ -	\$ -	\$ 19.00	\$ -
Office cap rate:	3.60%	3.60%	3.10%	3.60%	3.60%	3.60%
Residential lease rate:		\$ -	\$ -	\$ -	\$ -	\$ -
Residential cap rate:	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%

Total residual	\$ 1,721,025.58	\$ 1,734,143.81	\$ 1,717,844.20	\$ 3,307,149.96	\$ (3,066,438.61)	\$ 139,061.27
Total residual / sq.ft buildable:	\$ 139.07	\$ 39.54	\$ 33.56	\$ 236.17	\$ (206.50)	\$ 304.62
Total IRR:	0%	1%	0%	103%	-279%	-126%

APPENDIX E: PRO FORMAS

Scenario

1 Select Scenario: Industrial Only (Break Even)

Shaded cells indicate input cells / 'Scenario Summaries' indicates changing variables

Assumptions / Input	870 Twelfth Street	Valmont Hotel
Site and Building Size		
Shoe store site size	9,900 sq-ft	838.74 sq.m
Office parking area	36.60 Street meters	
Total site coverage (Gross floorplate)	77%	
Industrial density (#/sq)	1.25	
Office density (#/sq)	8.00	
Residential density (#/sq)	8.00	
Total assumed density	1.25 FPR	
Total gross floorspace	12,875.00 sq-ft	1,148.06 sq.m
Net leasable floorspace	10,538.75 sq-ft	977.32 sq.m or 85% of gross
Net Industrial floorspace	10,538.75 sq-ft	977.32 sq.m
Net Office floorspace	- sq-ft	- sq.m
Net Residential floorspace	- sq-ft	- sq.m
Average unit size	600.00 sq-ft	55.74 sq.m
Units	0 Units	
Parking		
Parking and loading area (Shoe store site - Total site coverage)	2,237.00 sq-ft	208.34 sq.m
Industrial parking required (1 space / 1,000 sq.ft)	12 spaces	
Office parking required (1 space / 300-sq.ft)	- spaces	
Residential parking required (1.2 space / unit + 1 space / visitor)	- spaces	
Total parking spaces required	12 spaces	
Surface parking available (parking area / 300 sq.ft / space)	7 spaces	
Underground parking required (Total parking - surface parking)	5 spaces	
Underground parking area required (spaces * 300-sq.ft)	1,500 sq-ft	
ANNUAL REVENUE		
Revenue		
Gross revenue	\$ 4,378,487.50	
Less commissions and marketing costs	\$ 162,858.75	
Net residential sales revenue	\$ 4,215,628.75 or	\$ 371.06 /sq.ft buildable
Project Costs	\$ 2,549,184.75 or	\$ 235.37 /sq.ft buildable
Allowance for Developer's Profit	\$ 890,234.01	
Residual land value	\$ 1,774,409.75	
Residual Value / sq.ft. buildable	\$ 159.67	
Land RR %	0%	
BC Assessment Value	\$ 1,718,509.00	
Change in Value	\$ 7,525.75	
GOVT OVERHEADS		Portion of total costs
Hard and soft costs with financing and marketing	\$ 1,212,887.50	77.38%
Parking	\$ 285,800.00	9.89%
City of New Westminster fees and levies	\$ 36,875.95	0.98%
Regional government fees and levies	\$ 15,281.25	0.59%
Profit	\$ 890,234.01	11.98%
WORKING ASSUMPTIONS		196.09%
Desired land RR on estimated current value	0%	
Target residual land value	\$ 1,718,509.00	
Target average price per sq.ft for target residual land value	\$ 449.35	
Floorspace required for land RR at current average price	10,504.51 sq-ft	

APPENDIX E: PRO FORMAS

Development Costs

Construction Costs

Off-site Parking (Upgrade of adjacent roads/lot area/lot) on existing	\$ 1,300.00 / linear metre (parking)	\$ 288,780.00
	\$ 177,000.00 / acre (paved area)	\$ 48,227.27

Hard Construction Costs

Industrial Floorpace	\$ 298.00 / sq.ft. buildable	\$ 1,888,880.00
Office Floorpace (portable)	\$ - / sq.ft. buildable	\$ -
Residential Floorpace	\$ - / sq.ft. buildable	\$ -
Mid-use premium / contingency	6% of costs buildable	\$ -
Average Costs / sq.ft. buildable	\$ 298.00	
Subtotal		\$ 1,888,880.00

Paving

Cost / Hard-surfaced Parking (full)	\$ 50,000.00 / space for 5 spaces	\$ 250,000.00
Cost / Surface Parking (full)	\$ 16.00 / sq.ft. @ 144 sq.ft. / space 7 spaces	\$ 63,000.00
Subtotal		\$ 303,000.00

Soft costs/professional fees

12% off hard costs

\$ 389,623.27

Contingency on hard and soft costs

2% on hard and soft costs

\$ 47,898.80

City of New Westminster Land Use Charges

Resolving Application Fee	\$ 2,323.40 or \$166.15 / housing unit	Change if housing > 250 units	\$ 2,323.40
Public Hearing Fee			\$ 893.30
Development Permit Fee	\$ 2,888.38 or \$166.15 / housing unit	Change if housing > 250 units	\$ 2,888.38
Land Title Registration Fee			\$ 36.18
Building Permit Fee	See schedule		\$ 38,877.36
Demolition Permit Fee			\$ 1,340.00
Development Cost Charges (DCCs)			
Industrial	\$ 0.66 / improved site area		\$ 4,792.00
Office	\$ 3.04 / gross sq.ft.		\$ -
Residential	\$ 5.54 / gross sq.ft.		\$ -
Recreational Acquisition Charge	\$ 1,480.00 / res. unit F < 21 units		\$ -
	\$ 880.00 / res. unit F > 20 units		\$ -
Subtotal			\$ 58,279.34

Regional Land Use Charges

Greater Vancouver Sewerage and Drainage District DCCs (per sq.ft.)

Non-residential (Industrial + Office)	\$ 0.38 / gross sq.ft.	\$ 21,888.79
Apartment	\$ 1,873.00 / unit	\$ -
Transfer DCCs (2021 rates)		
Industrial	\$ 0.30 / gross sq.ft.	\$ 1,712.80
Office	\$ 1.00 / gross sq.ft.	\$ -
Apartment	\$ 1,848.00 / unit	\$ -
Subtotal		\$ 23,601.59

Development Costs Total

\$ 1,994,579.76

Financing Assumptions

Financing associated development costs	5% effective monthly interest rate	0.5094%
Financing	100% of development costs over	2 years to 2 build-outs
Interest on development financing		\$ 63,888.03
Subtotal		\$ 63,888.03

Total costs before profit and marketing

\$ 1,948,994.76

Profit margin

12% on gross costs

\$ 243,239.46

Notes:

New West: https://www.newwestcity.ca/files/2018/04/Building-Development-Application-Fee_201801.pdf, <https://www.newwestcity.ca/building-permit-fee>

Metro Vanc: <https://www.metrovancouver.org/services/land-use/development-cost-charges/Pages/default.aspx>

Transfer: <https://www.transferbc.ca/About-Us/Transf/Development-Cost-Charges.aspx>

Building Permit Fee

\$ 34.88 For each \$1,000 of work or portion thereof up to	\$ 38,880.00	
\$ 34.88 For each \$1,000 of value between	\$ 38,880.00 and	\$ 120,000.00
\$ 0.88 For each \$1,000 of work above	\$ 288,880.00	

APPENDIX E: PRO FORMAS

Revenues

Industrial Strata	\$ 450.00 / sq.ft saleable	\$ 4,733,437.50
Office Strata	\$ - / sq.ft saleable	\$ -
Residential Strata	\$ - / sq.ft saleable	\$ -

Industrial Lease Rate	\$ - / sq.ft / yr	
	5% Industrial cap rate	
Sale price	\$ - / sq.ft	\$ -

Office Lease Rate	\$ - / sq.ft / yr	
	6% Office cap rate	
Sale price	\$ - / sq.ft	\$ -

Residential Rental Rate	0% / sq.ft / yr	
	4% Residential cap rate	
Sale price	\$ -	\$ -

Average price per sq.ft	\$ 450.00
Target average price per sq.ft	\$ 449.26

Total Revenue	\$ 4,733,437.50
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Marketing and Commissions

Commissions/sales costs	2% on gross revenue	\$ 94,668.75
Marketing	1% on gross revenue	\$ 47,334.38
Subtotal		\$ 142,003.13

Revenue after marketing and commissions	\$ 4,591,434.38
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APPENDIX E: PRO FORMAS

Sources:

Items	Sources	Notes
Development Costs		
Industrial construction costs per square foot	Brownfield Development; Conedirect Cost Index Calculator (http://www.brownfield.com/tools/fooi/fooi.do?act)	Estimate costs for High Quality Warehouses, With 20% Office in New Westminster
Office costs per square foot	Brownfield Development; Conedirect Cost Index Calculator (http://www.brownfield.com/tools/fooi/fooi.do?act)	Estimate costs for High Quality Low-rise Office Buildings in New Westminster
Residential costs per square foot	Alton Group - 2009 Canadian Cost Guide	Mid-point estimate costs for Condo, special surveys included, in Vancouver area
Mixed-use costs per square foot	Developer consultation	Any mixed-use development including ground floor industrial space was estimated at \$400 per square foot.
Off-site landfilled tons of refuse or materials filled	Alton Group - 2009 Canadian Cost Guide	Mid-point estimate for Vancouver area
Site services	Alton Group - 2009 Canadian Cost Guide	Mid-point estimate for Vancouver area
Underground parking cost per stall	Alton Group - 2009 Canadian Cost Guide; Developer consultation	Estimate based on developer estimates, which were in line with higher end costs from Alton Group
Surface parking per space foot	Alton Group - 2009 Canadian Cost Guide	
Soft costs and professional fees	Developer consultation	
Construction costs	Developer consultation	
Financing arrangements	Developer consultation	
Marketing and commission arrangements	Developer consultation	
Revenue Estimates		
Industrial mean price per square foot	IEL - Industrial Sector Market Report Fall 2013	Mid-point between rates of smaller new and renovated industrial space units in Richmond and Burnaby
Office price per square foot	CBRE - Q4 2013 Cap Rates II, Investment Insights; CBRE - Vancouver Office, Q4 2013; Colliers - Investor Q4 2013 Office Metro Vancouver	Price per square foot estimated from average rates and cap rates in New Westminster (average rate per square foot per year / Cap rate = Price per square foot per year)
Residential price per square foot	Condo.ca; RentalHome.ca; TownDevelopment.ca; NorthwestHome.com; CMO.ca - Condo developer demands 10% more money from buyers after New Westminster project hit delays	Prices based on mid-point for real estate listing for resale listing prices of new condo development on justified and realistic