

# Canadian Brownfields Case Study

## Mid-Town Gateway Project



Source: City of Nanaimo

Figure 1: Conceptualization of the Mid-Town Gateway Project

### PROJECT SUMMARY

The Mid-Town Gateway Project (formerly the Boxwood Connector) in Nanaimo, B.C., is remediating a contaminated former coal mining site that became a landfill site. An existing wetland is being restored, a transportation corridor is being built and the site is being readied for commercial and residential redevelopment opportunities. In Phase 1 of the two-phase project, a new wetland was built. Phase 2 is expected to start in 2022 and will lead to construction starting on utilities, roads and intersections once the pre-load material has settled. The Mid-Town Gateway will open new traffic options for cyclists, pedestrians and motorists once complete. The municipality sold surplus land to Island West Coast Developments, which is planning a \$75 million mixed-use development. Re-zoning is expected to take one year with the development's ground-breaking anticipated for 2022.

Nanaimo, British Columbia is located on Vancouver Island's eastern coast and its ferry terminal serves a gateway for trips inland. It is the Island's second-largest city with a population of 98,957 and is seeing steady annual growth in residents.<sup>1</sup> Coal mining in the 19th-century fueled a construction boom and figured prominently in its local economy until demand faded in the mid-20th-century. Coal tailings were used to expand

Nanaimo's shoreline. The Snunéymuxw, a First Nation of the Coast Salish People, were gradually pushed to the southern part of the city as the coal industry boomed.<sup>2</sup>

Today, Nanaimo's economy is benefiting from a 16.7% growth in businesses with

### QUICK FACTS

#### Location

Nanaimo, British Columbia

#### Project type

Site remediation and future redevelopment

#### Site size

Undisclosed

#### Land uses

Recreation, residential, commercial

#### Keywords/special features

Remediation, Coal, Active Transportation, Mixed-Use Development, Naturalized Wetland, Stormwater Retention Pond

#### Website

<https://www.nanaimo.ca/your-government/projects/projects-detail/boxwood-connector-project>

#### Project address

2201 Boxwood Rd., 2221 Bowen Rd.

#### Author

Jean-François Obregón Murillo [in](#)

#### Editors

Christopher De Sousa, Mabel Mai

Case studies were prepared as a course assignment by students enrolled in PL8312/PLE845: Brownfields & Sustainable Development, School of Urban and Regional Planning, Ryerson University (Winter 2021). Information for the case studies was obtained from online sources, available reports, and, in some cases, site visits and direct communication with stakeholders.

If you are aware of any errors or updates to the case studies, please contact [chris.desousa@ryerson.ca](mailto:chris.desousa@ryerson.ca)

The opinions expressed in this case study are those of the authors only and do not represent the opinions and views of either Ryerson University, the School of Urban and Regional Planning, or the Canadian Brownfields Network.



employees during the 2010s.<sup>3</sup> City coffers have benefited from significant non-residential and residential building permit activity. Infrastructure investments in its port and airport bode well for its future. In December 2020, its council passed a resolution to adopt the Doughnut Economic Model, a framework that balances social and environmental needs.<sup>4</sup>

## Background

Nanaimo's industrial history is evident in the Mid-Town Gateway project site. Soil and groundwater contamination occurred because of mining and construction material that were disposed there. Despite this, sustainable intentions are embedded in this project. Its redesign employs Complete Streets principles. The soil remediation process is addressing a legacy of industrial contamination. The site is being renaturalized with a stormwater retention pond and new plantings. As well, the proposed mixed-use development is going to be a mid-rise, compact project. The Mid-Town Gateway project is perhaps representative of the City of Nanaimo's sustainability ethos.

## Site Characteristics

The site is in Nanaimo's Northfield neighbourhood and bordered by Rosstown Rd., Bowen Rd., Boxwood Rd. and Northfield Rd. The site is surrounded almost entirely by single, detached homes. It is also adjacent to a church and low-density retail plazas. The site is next to Beban Park, a large multi-sport complex that is also the site of the Vancouver Island Exhibition (VIEX). The site has been filled in by trees, shrubs and vegetation. The Mid-Town Gateway Project is expected to reduce traffic congestion on Northfield Rd. and Bowen Rd. as well as improve traffic safety in the area.<sup>5</sup>

## History

Nanaimo's coal deposits were reportedly the first known large deposits on the west coast of the Americas with the first shipment being made in 1852.<sup>6</sup> The site is located 200 metres away from the Northfield Mine Shaft. Aerial photos of the site from 1936 indicate the presence of a lake, two nearby coal mine shafts and a rail spur. (Figure 2) By 1958, the rail spur seems to have been decommissioned and coal slag was approaching the lake. The historic Beban Horseracing track was close by, which is now part of Beban Park. By the end of the 20th-

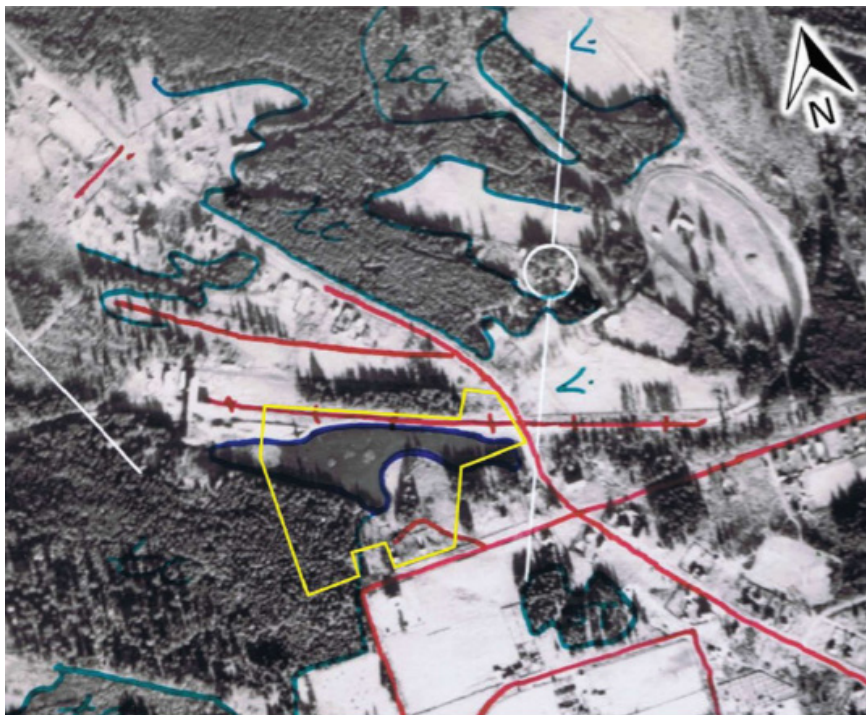


Figure 2: Aerial photo from 1936. A rail spur and coal mines are nearby.

century, the lake had disappeared and vegetation had filled in the site.

## Clean-Up

The site was a former landfill for mining waste disposal and construction fill material.<sup>7</sup> (Figure 3) Shipping out the waste was not cost-effective so the site was divided into different sections.<sup>8</sup> Certain materials were capped with a clay liner to prevent leakage. The municipality conducted geotechnical and environmental studies between 2009 and 2018. A risk management approach for soils included taking samples from nearby earthworms, which showed that the

contamination had not proliferated. There were no novel technologies used to treat contaminated soil. City staff ensured that the contamination's pathways were cut-off from neighbouring vegetation.<sup>9</sup>

Figure 3: Waste uncovered at site during clean-up.



To address the presence of contaminated soils and groundwater are present, a two-Phase project is underway. Phase 1 started in March 2019 with tree removal along the paths of the future roads. The tree clearance occurred in advance of the bird's nesting window, which is indicative of city staff's sustainability mindset.<sup>10</sup> A stormwater detention pond was built with landscaping and plantings are being placed in its vicinity. (Figure 4)

Significant geotechnical studies were carried out to identify historic mining and construction waste as well as layers of organic peat and soft soils. During Phase 1, there was 24,000 cubic metres of pre-load material placed on the site for two years starting in 2019 to compact the soil for future road construction. Once the soils have stopped settling, the pre-load material will be removed from the site in Phase 2. Construction will begin on utilities, roads and intersections in Phase 2. The pre-load material is being monitored until 2021. Engineering work for Phase 2 is ongoing with construction scheduled to start in 2022.

### Planning and Regulatory Issues

Brownfield remediation in B.C. is governed by the Environmental Management Act (EMA), specifically the Contaminated Sites Regulations. The latter has set-up a framework for site identification, assessment, remediation and liability allocation provisions.<sup>11</sup> Brownfield

sites are tracked via a Site Registry, which is mandated under the EMA.<sup>12</sup> B.C. offers regulatory liability closure through a Certificate of Compliance (CoC).<sup>13</sup> Contaminated sites are assessed under the Contaminated Sites Regulations then investigated by the Ministry of Environment (MoE) through a Contaminated Sites Application.<sup>14</sup>

Since the lake that had previously been on the Mid-Town Gateway Project site was filled with construction waste and coal, there is an approval in principle. The actual approval will be obtained when the work is completed, according to Phil Stewart, Manager, Engineering Projects at the City of Nanaimo. McElhanney is navigating the technical aspects of this work.

The MoE approvals process has an extensive environmental report with documentation of all the testing. Hydrogeological testing included a due diligence step with ensuring that the lack had not been connected to a nearby underground aquifer. Tree replacement and restoration work in Phase 1 was done in accordance with the municipality's Tree Protection Bylaw.<sup>15</sup>

### Financing

The project is funded through a mix of municipal funds and development cost charges (DCCs). In 2016, \$1.6 million was funded through DCCs to the then-called Boxwood Connector project for utility upgrades.<sup>16</sup> The

City's General Revenue Fund provided \$2.81 towards the project in 2019.<sup>17</sup> The installation of a stormwater retention pond and utility upgrades is slated for between 2019 and 2023 is estimated to be \$1.16 million.<sup>18</sup> According to the City of Nanaimo, the total cost of Phase 1 of the project is estimated to be \$5.57 million.

The municipality is aligning infrastructure investments with the Mid-Town Gateway redevelopment, earmarking \$19.8 million in mid-town water supply upgrades between 2021-2023.<sup>19</sup> It intends to fast-track the Bowen Road-area project after a water main break in Spring 2020, which is about 1 kilometre from the site. Phase 2 of the project is expected to cost \$12.5 million.<sup>20</sup>

### Design

The project has a mix of green space, roads, cycling paths and land allotted to real estate development. Originally, the chief motivation for remediating the brownfields site was to improve infrastructure to address traffic congestion issues. Thus, its original branding as the Boxwood Connector. The traffic issues improved the municipality started studying the project and it took on a lower priority. By the time city staff restarted the project, the vision changed and active transportation infrastructure improvements became a priority.<sup>21</sup> An additional motivator seemed to be the city prioritizing addressing the liabilities associated with the site. The stormwater retention wetland has been built and is at the centre of the project. Signalization upgrades are being made at three intersections. A Complete Streets approach is being adopted with the installation of new bike lanes, multi-use trails, sidewalks,

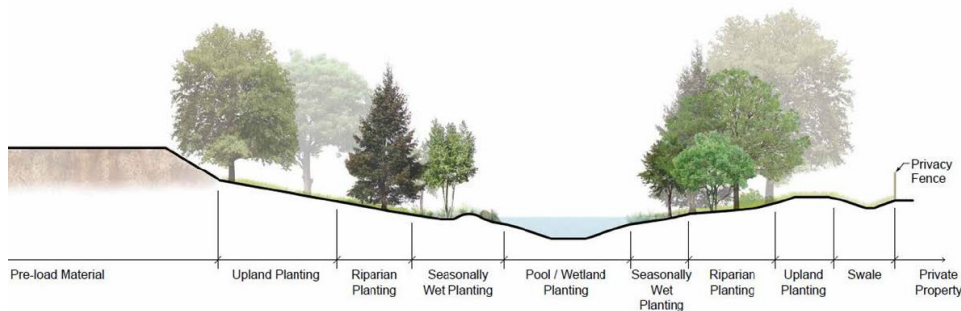


Figure 4: Cross-section of the site with planting of restored vegetation and pre-load material.

transit stops and a roundabout. (Figure 5) Capitalizing on its redevelopment potential seems to be a more recent factor motivating the city's clean-up if we take the project's rebranding to the Mid-Town Gateway Project in 2020.

### Development Potential

The municipality sold surplus land to Island West Coast Developments, which is planning a \$75 million 175-unit housing development, grocery store, and retail and office space.<sup>22</sup> The developer is expected to submit a rezoning application to the City of Nanaimo, according to Director of Development Applications, Jeremy Holm.<sup>23</sup> The rezoning process is expected to take one year. The project's groundbreaking is anticipated to occur in 2022 at the start of the project's Phase 2.<sup>24</sup> There is no indication on the city's website whether Phase 2 will see further clean-up of the lands. It is worth noting that the development proposal's status is dynamic and that its specifications are subject to rezoning, approvals and revisions.

Once the mixed-use development is completed, residential municipal property tax is expected to be at \$2,154.66 per unit in 2021 at an average assessed property value of \$299,999 per condominium unit.<sup>25</sup> Thus, property tax would yield \$377,046 annually for city coffers. The site's commercial property has an estimated value of \$4 million given the mix of office, retail and a grocery store.<sup>26</sup> This would generate \$28,481 in annual property tax revenue for the City of Nanaimo. In total, it would generate \$405,527 annually. However, this is notwithstanding further development that would occur thanks to the mixed-use project. These estimates were prepared based on nearby condominium and commercial properties for sale.<sup>27 28</sup>

### Lessons Learned

The project was expected to occur in the early-2010s, however traffic patterns changed and it was delayed until 2016-2022.<sup>29</sup> In the previous timetable, municipal staff had already conducted the provincial approvals process. However, provincial regulations changed in the later 2010s after the project had been delayed. This caused staff to redo a good part of the work that had already been done, e.g. sampling. The work associated with the approvals required significant upfront time and resources. As

a result, it prevented city staff from being innovative with the project.<sup>30</sup>

### Endnotes

- [1] "State of the Nanaimo Economy 2020," The City of Nanaimo, <https://www.nanaimo.ca/docs/property-development/reimagine-nanaimo/state-of-the-nanaimo-economy-2020.pdf>, p.1
- [2] "Nanaimo's Historical Development," The City of Nanaimo, <https://www.nanaimo.ca/docs/about-nanaimo/nanaimohistoricaldevelopment.pdf>, p. 8
- [3] "State of the Nanaimo Economy 2020," p.1
- [4] "Reimagine Nanaimo And The Doughnut Economics Framework," The City of Nanaimo, <https://pub-nanaimo.escribemeetings.com/filestream.ashx?DocumentId=33077>, December 14, 2020, p.1
- [5] "Connector road meant to help ease traffic at Bowen and Northfield," Nanaimo News Bulletin, <https://www.nanaimobulletin.com/news/connector-road-meant-to-help-ease-traffic-at-bowen-and-northfield/>, March 1, 2019.
- [6] "The Coal Mine," Nanaimo Museum, <https://nanaimomuseum.ca/permanent-exhibit/the-coal-mine/>, March 20, 2021
- [7] "Mid-Town Gateway Project," The City of Nanaimo, <https://www.nanaimo.ca/your-government/projects/projects-detail/boxwood-connector-project>.
- [8] Personal Communication, P. Stewart, February 17, 2021.
- [9] Ibid.
- [10] "Road network improvements will bring traffic relief to Bowen and Northfield," The City of Nanaimo, <https://www.nanaimo.ca/NewsReleases/NR-190228RoadNetworkImprovementsWillBringTrafficReliefToBowenAndNorthfield.html>, February 28, 2019.
- [11] De Sousa, C., Ridsdale, R., Lima, I., Easton, M. (2018) The State of Brownfields in Canada: Renewing Canada's National Brownfield Redevelopment Strategy. Toronto: Report prepared for the Canadian Brownfield Redevelopment Strategy. Toronto: Report prepared for the Canadian Brownfields Network, Brownfields Research Lab at Ryerson University. Pg. 11.
- [12] Ibid.
- [13] Ibid.
- [14] Ibid
- [15] <https://www.nanaimo.ca/NewsReleases/NR190228RoadNetworkImprovementsWillBringTrafficReliefToBowenAndNorthfield.html>

- [16] "2016-2020 Five-Year Financial Plan," The City of Nanaimo, [https://www.nanaimo.ca/docs/your-government/budget-and-finance/2016\\_2020approvedfinancialplan.pdf](https://www.nanaimo.ca/docs/your-government/budget-and-finance/2016_2020approvedfinancialplan.pdf), May 2, 2016, p.4
- [17] <https://www.nanaimo.ca/docs/property-development/reimagine-nanaimo/state-of-the-nanaimo-economy-2020.pdf>, p.54
- [18] <https://www.nanaimo.ca/docs/property-development/reimagine-nanaimo/state-of-the-nanaimo-economy-2020.pdf>, p.27
- [19] Saaki, G., "City of Nanaimo's financial plan includes \$314 million for projects," Nanaimo News Bulletin, <https://www.nanaimobulletin.com/news/councillors-have-a-chance-to-tweak-project-timelines-in-city-of-nanaimos-financial-plan/>, December 2, 2020.
- [20] Personal Communication, P. Stewart, February 17, 2021.
- [21] Wilson, C., "Telus, Omicron bid to join Nanaimo rental-building boom," Western Investor, <https://www.westerninvestor.com/news/british-columbia/telus-omicron-bid-to-join-nanaimo-rental-building-boom-1.24273668>, January 27, 2021.
- [22] Ibid.
- [23] <https://www.nanaimo.ca/NewsReleases/NR190228RoadNetworkImprovementsWillBringTrafficReliefToBowenAndNorthfield.html>
- [24] Personal Communication, P. Stewart, February 17, 2021.
- [25] "Property Tax Estimator," The City of Nanaimo, <https://www.nanaimo.ca/property-tax/estimator.aspx>, March 19, 2021
- [26] Ibid.
- [27] "2025 Bowen Rd," Realtor.ca, <https://www.realtor.ca/real-estate/22442429/2025-bowen-rd-nanaimo-central-nanaimo>, March 19, 2021
- [28] "409 1900 Bowen Rd," Realtor.ca, <https://www.realtor.ca/real-estate/22938144/409-1900-bowen-rd-nanaimo-central-nanaimo>, March 19, 2021
- [29] Personal Communication, P. Stewart, February 17, 2021.
- [30] Ibid.