Mulholland & Parker
Land Economists Ltd.

Market Research & Financial Analysis Final Report

For: Municipality of North Cowichan

December 2023

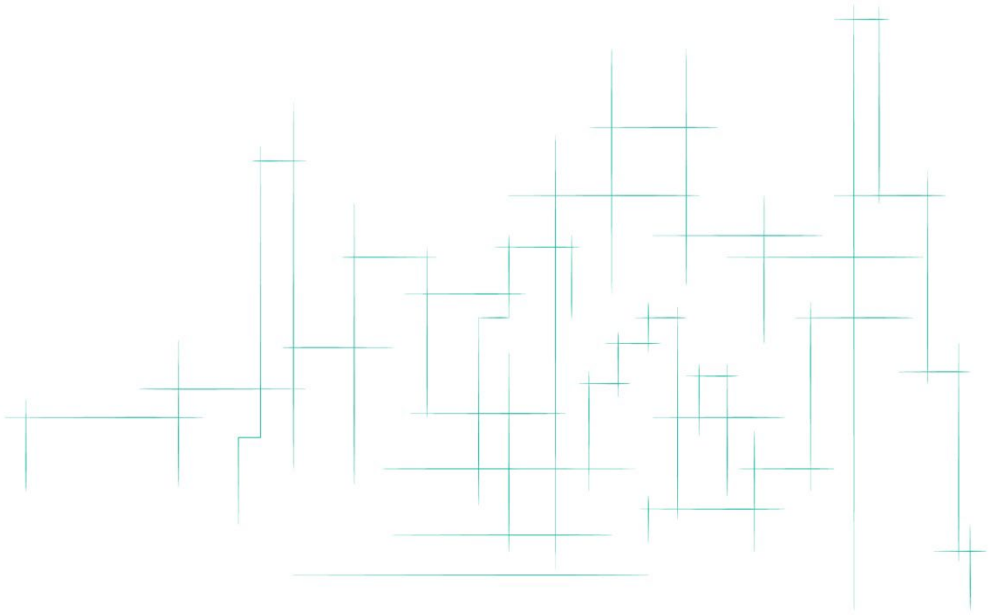

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Table of Contents

1 Introduction

Mulholland Parker Land Economists (MPLE) has been retained by the Municipality of North Cowichan (the Municipality) to perform market research and financial analysis pertaining to residential development economics and community amenity contributions (CACs).

MPLE understands that North Cowichan has experienced several years of high residential demand marked by rising market housing costs. We understand that most development requires rezoning, and that corresponding CACs have been negotiated on an ad-hoc basis for each application, but that the Municipality would prefer to create more certainty for staff and developers by introducing CAC targets in a CAC policy document.

With this objective in mind, MPLE provides the following work program:

1) Project kickoff: MPLE has met with Municipal staff to discuss the project's methodology, data requirements, deliverables, reporting, and timing. We have also reviewed the Municipality's Zoning Bylaw, Official Community Plan (OCP), Development Cost Charge Charges (DCC) Bylaw, Subdivision Bylaw, Draft Affordable Housing Policy and Implementation Plan, and the Local Area Plans for Chemainus, Crofton, Bell McKinnon, and University Village.

2) Market research: MPLE used online sources as well as interviews with local market experts such as realtors, developers, and builders to gain a nuanced understanding of local residential pricing, sizing, construction costs, and market trends. This work took place in August 2023.

3) Financial analysis: MPLE created a pro forma financial model looking at a wide selection of parallel hypothetical developments: these developments vary in terms of built form, location, magnitude of design requirements, and other parameters that may emerge during this project in consultation with the Client.

   Each scenario analyzed within this model uses the market research presented in this report to identify project costs, revenues, and timing. The model identifies for each scenario what a developer might afford to pay for the land in order to achieve a standard level of project performance. Land value defined in this way is called residual land value and is the correct basis for calculating appropriate CACs.

   We use this model to identify appropriate CAC targets, which may differ by built form and location and also to answer other questions that may emerge during this process, such as estimating the impact of municipal design requirements, etc.

4) Sensitivity analysis: MPLE performed additional financial analysis to test the impact of several variables on development viability with the aim of understanding the likely impact of future changes to market conditions and municipal policy.

5) Stakeholder engagement event: MPLE travelled to North Cowichan in late October 2023 to complete a scoped engagement with local development community representatives to solicit views and ground-truth assumptions.

6) Council presentations: MPLE has remotely deliver one presentation to the Municipality's Mayor and Council, which took place after the market research step. Another presentation is anticipated in December 2023 to present final results and commentary.

2 Long-term Trends

2.1 Population

Figure 1: Average annual population growth over time in North Cowichan and British Columbia[1]

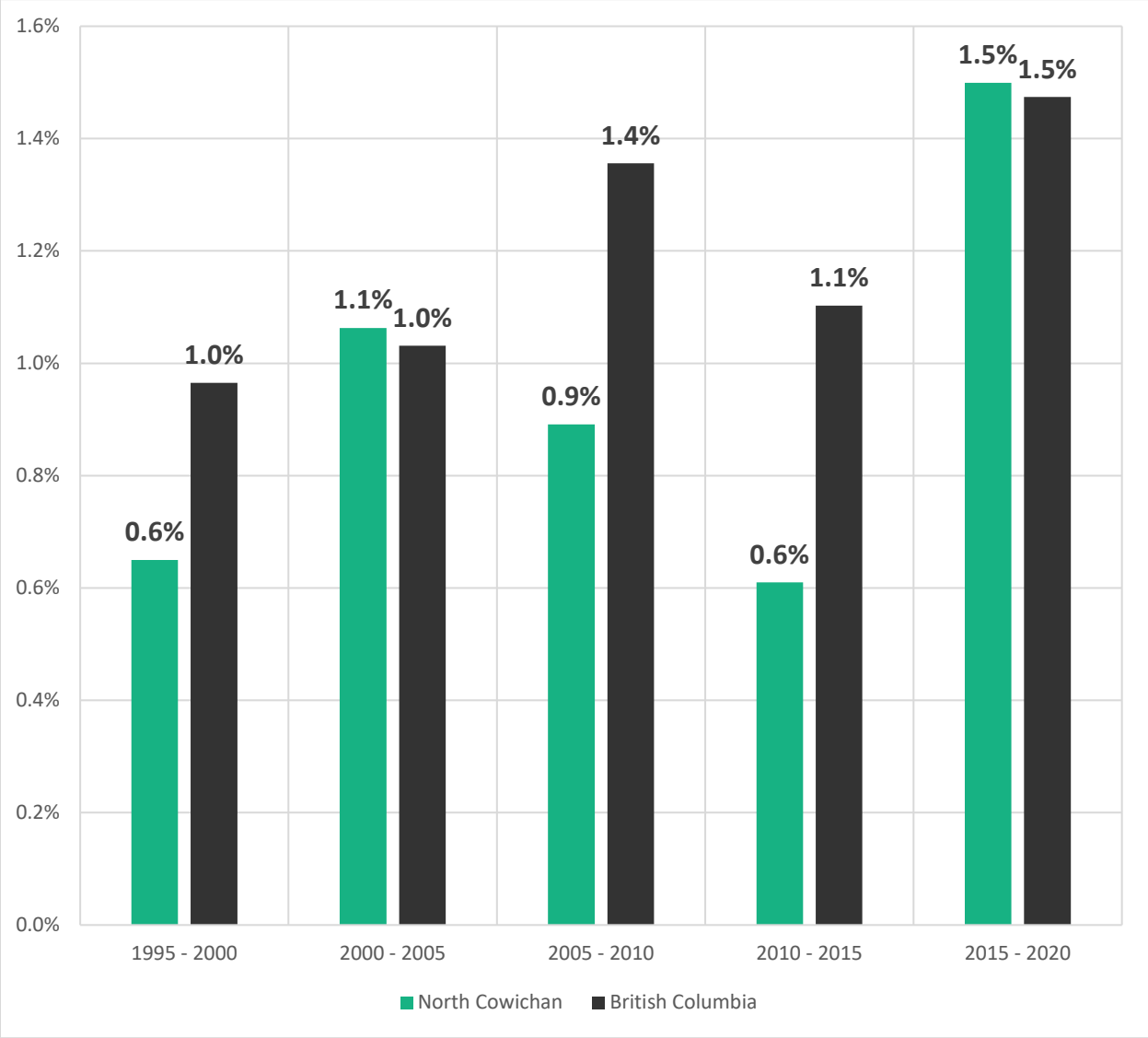


Table 1: Average annual population growth over time in North Cowichan and British Columbia[1]

Year	North Cowichan	British Columbia
1995	25,305	3,724,500
2000	26,138	3,907,738
2005	27,557	4,113,487
2010	28,807	4,400,057
2015	29,696	4,648,055
2020	31,990	5,000,879

[1] Source: Statistics Canada (1996, 2001, 2006, 2011, 2016, & 2021). Census of Canada.

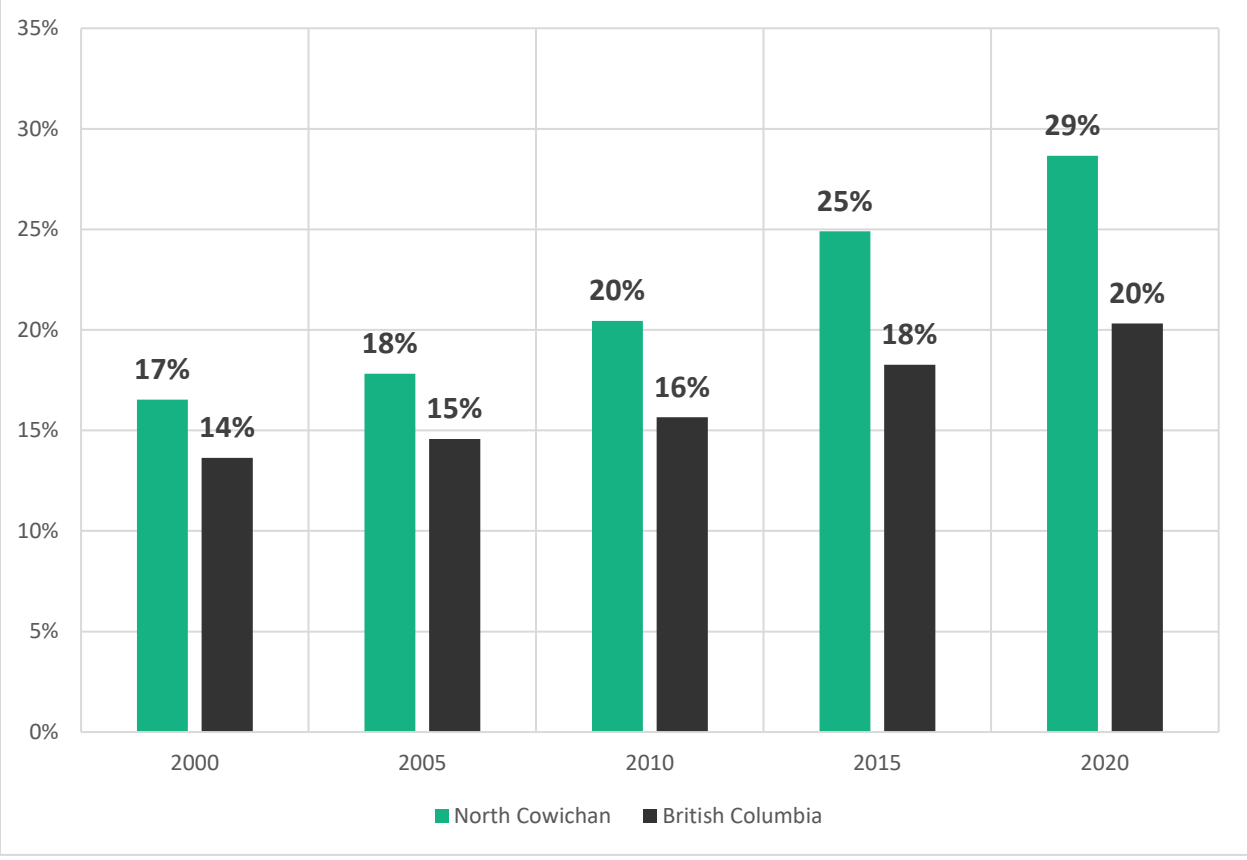
From 1995 to 2020, British Columbia grew in population from about 3.7 million to about 5.0 million, achieving overall growth of 34% over these 25 years or average annual growth of about 1.2%. During the same quarter-century, North Cowichan grew in population from about 25,000 to almost 32,000, achieving overall growth of 26% or average annual growth of about 0.9%. The pace of growth in North Cowichan has generally been slower than the province as a whole.

Figure 1 above compares the paces of growth in North Cowichan and the province during the last five five-year census periods. The annual pace of growth in North Cowichan has generally ranged from a low of 0.6% (achieved in the 1995 – 2000 and 2010 – 2015 periods) to a high of 1.5% (only achieved in the most recent 2015 – 2020 period). Growth in the province outpaced North Cowichan in three of the five periods, always significantly (a difference of about 0.5%) whereas when North Cowichan outpaced the province, it did so only very marginally (a difference of 0.03% in both cases).

Of the quarter-century represented above, the 2015 – 2020 period was the period of most rapid growth for both jurisdictions in both absolute and relative terms. The exceptional nature of this period was starker in North Cowichan than in the province as a whole, as it significantly exceeded all of the previous four census periods.

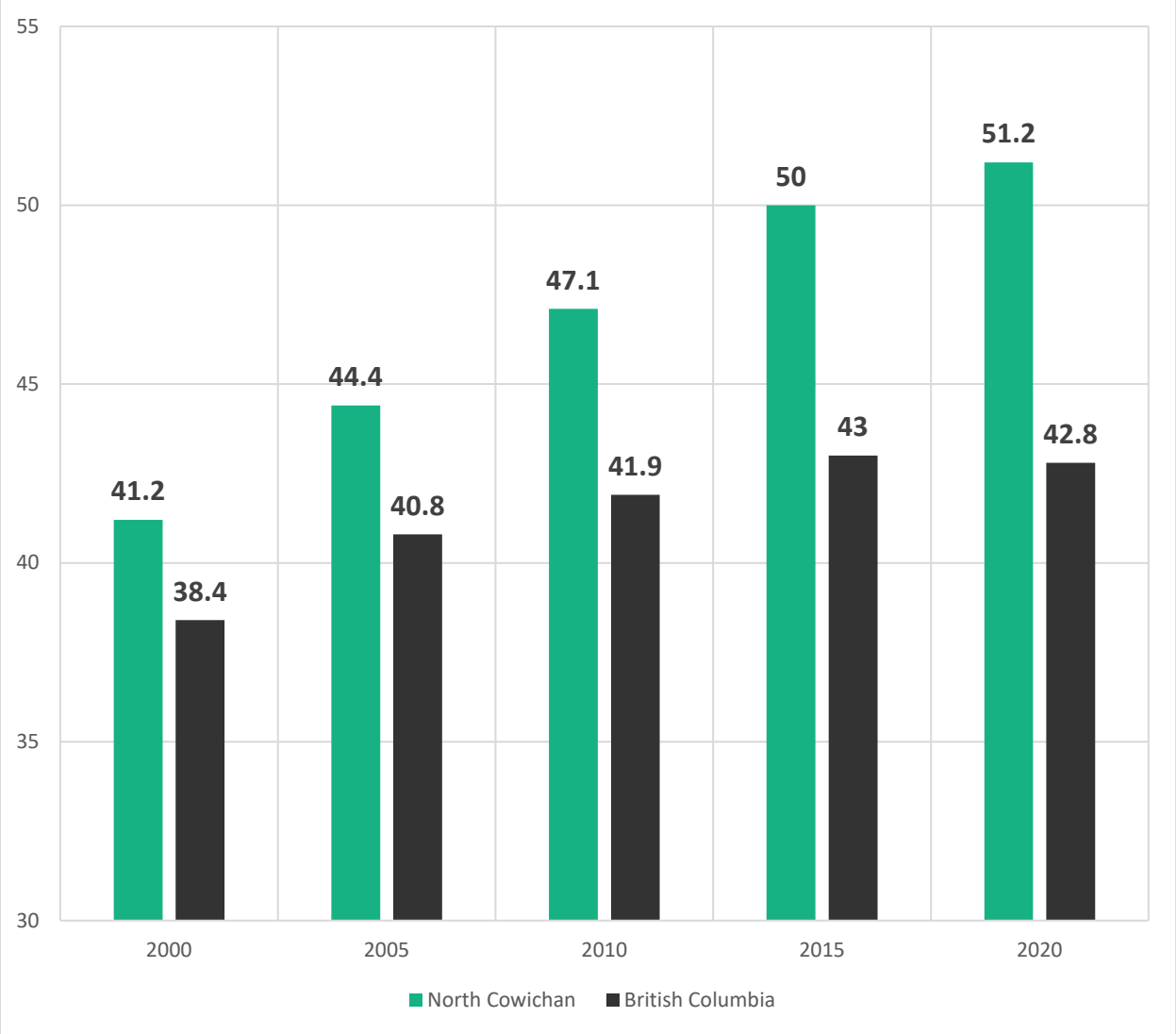
2.2 Seniors

Figure 2: Share of population aged 65+ over time in North Cowichan and British Columbia[2]



[2] Source: Statistics Canada (2001, 2006, 2011, 2016, & 2021). Census of Canada.

Figure 3: Median age over time in North Cowichan and British Columbia[3]



Figures 2 and 3 above show that like much of the developed world, British Columbia aged during the first two decades of the twenty-first century, with the share of population aged 65 or older increasing from 14% to 20% and the median age increasing from 38 to 43 years. Throughout this period, North Cowichan had a more elderly population than the province as a whole but it also aged faster than the province, with its share of population aged 65 or older increasing from 17% to 29% and its median age increasing from 41 to 51.

In other words, not only is North Cowichan generally a retirement destination within the province, but this status has solidified and intensified over time, possibly as a result of economic specialization and feedback loops: as seniors cluster increasingly in the region, the local economy caters more to their needs and less to those of younger demographics, making the region relatively more attractive to seniors and less attractive to younger demographics. Examples of this dynamic might include the presence of seniors-oriented housing and the relative lack of employment opportunities.

[3] Source: Statistics Canada (2001, 2006, 2011, 2016, & 2021). Census of Canada.

2.3 Housing Development

Figure 4: Completed housing units per year in North Cowichan over time[4]

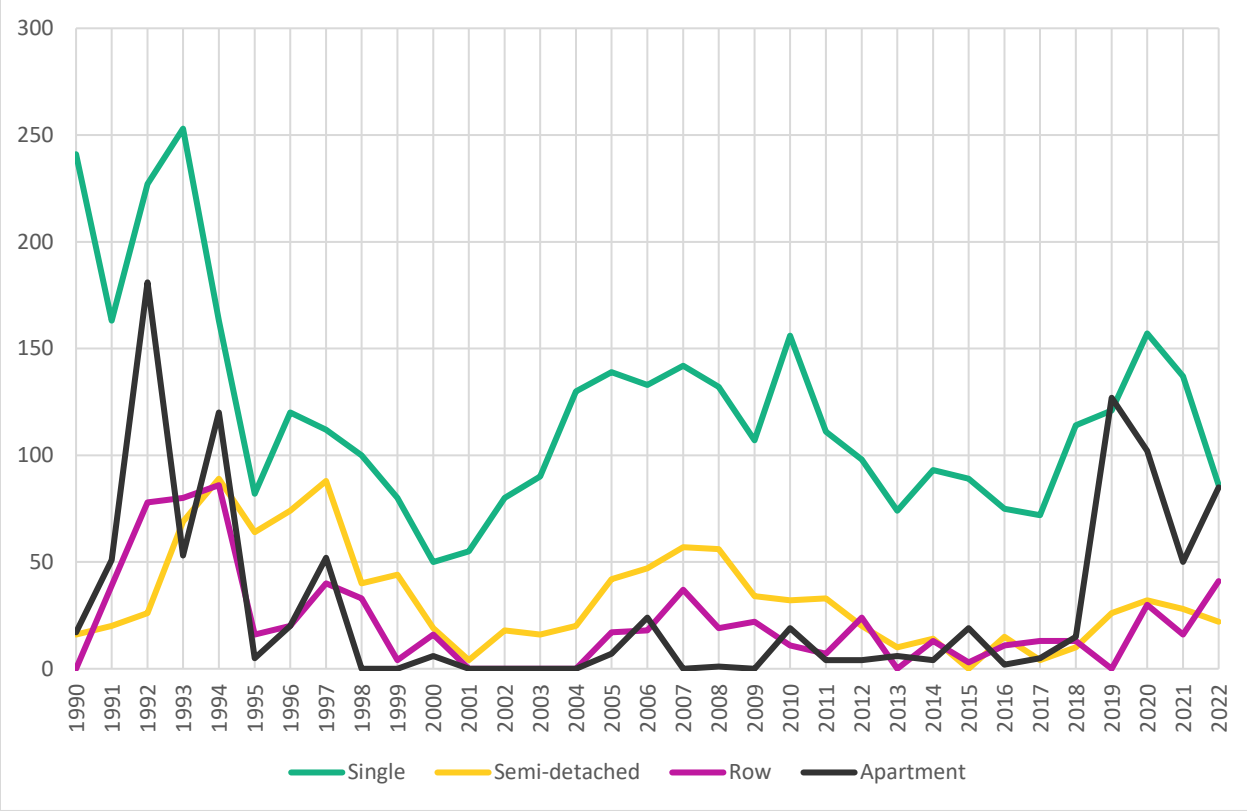


Table 2: Average annual completed housing units in North Cowichan over time[4]

Period[5]	Single detached	Semi-detached[6]	Row house[7]	Apartment	TOTAL
1990 – 1992	210	21	39	83	353
1993 – 1995	166	74	61	59	360
1996 – 1997	111	67	31	24	233
1999 – 2001	62	22	7	2	93
2002 – 2004	100	18	0	0	118
2005 – 2007	138	49	24	10	221
2008 – 2010	132	41	17	7	196
2011 – 2013	94	21	10	5	130
2014 – 2016	86	10	9	8	113
2017 – 2019	102	13	9	49	173
2020 – 2022	127	27	29	79	262
1990 – 2022	121	33	21	30	205
2013 – 2022	102	16	14	42	173

[4] Source: Canadian Mortgage and Housing Corporation (2023). Housing Market Information Portal

[5] Note that Table 2 uses 3-year periods in the interest of space.

[6] Semi-detached housing is a CMHC category basically identical to duplex in this context.

[7] Row house is a CMHC category basically identical to townhomes in this context.

Figure 4 and Table 2 above show that in terms of overall residential development pace:

- From 1990 – 2022 about 205 new units of housing were completed in North Cowichan per year
- Housing development was most rapid from 1990 – 1994, with an average annual development pace of almost 400, achieving a peak of 512 units completed in 1992
- Housing development then slowed to a pace of about 200 units per year from 1995 – 1999
- 2000 – 2004 represents the slowest period of residential development in North Cowichan, with an average pace of about 100 units per year, achieving a nadir of only 59 units in 2001
- From 2005 – 2017, development maintained a middling pace of about 160 units per year, fluctuating approximately between 100 and 200 units per year
- Finally, in the 2018 – 2022 period development, the pace of development increased once more to levels not seen since the mid-1990s, achieving an average of 265 units per year and with no year falling below 230 units. 2020 was a particularly aggressive year for housing development with 321 new units, the biggest year since 1994
- During the entirety of this 33-year period, single detached housing made up 59% of new supply, duplexes made up 16%, townhomes made up 10%, and apartments made up 14%
- Whereas in the last ten years (2013 – 2022), single detached housing still made up 59% of new supply, duplexes made up 9%, townhomes made up 8%, and apartments made up 24%
- Comparing the 33-year composition with the 10-year composition (the previous two bullet points) shows an outcome that is unusual in Southern BC: proportionally the pace of single detached development in North Cowichan has not decreased despite OCP direction. But note that the pace of apartment development has increased, which is typical.

But these overall trends mask variation by building type over time:

- The pace of single family housing development has averaged 121 units per year during this period, with the period of most rapid development occurring in 1990 – 1994 with an average of more than 200 single detached homes per year, achieving a peak of 253 in 1993. From 1993 – 2000, the pace of single detached development slowed, reaching a low of only 50 new single detached homes in 2000. From 2001 – 2004, the pace of single increased once more to more than 100 units per year, and since then has fluctuated mostly in the range of 90 – 130 units per year, achieving peaks of 156 in 2010 and 157 in 2020, and nadirs of 74 in 2013 and 72 in 2017. The last few years have been particularly dynamic

- The pace of semi-detached development (mostly duplexes) has averaged 33 units per year during this period, with the period of most rapid development occurring in 1993 – 1997 with an average of 77 units per year, achieving a peak of 89 units in 1994. Since 1997, the pace of duplex development has fluctuated but generally trended downward, exhibiting peaks of 57 in 2007 and 32 in 2020, and nadirs of 4 in 2001, no completions in 2015, and 4 in 2017

- The pace of townhome development has averaged 21 units per year during this period, with the period of most rapid development occurring in 1992 – 1994 with an average of more than 80 units per year, achieving a peak of 86 units in 1994. Since 1994, townhome development has achieved an average pace of 15 units per year and generally remained below 40 units per year with a period of zero completion from 2001 – 2004. 2022 was an unusually active year of townhome completions at 41, the biggest year since 1994

- Apartment development is generally more dynamic than other housing types because individual buildings rarely contain fewer than 20 units. Three distinct periods of apartment development are evident:

    - From 1991 – 1997, apartment construction in North Cowichan was rapid, achieving an average annual pace of almost 70 units per year and a peak of 181 units completed in 1992

    - From 1998 – 2018, very little apartment development occurred in North Cowichan, achieving an average annual pace of less than 6 units per year. Like townhomes, no apartments were completed in 2001 – 2004 and the same can be said for 1998 – 1999

    - Since 2019, apartment development in North Cowichan has dramatically resumed, achieving and average annual pace of more than 91 units per year and a peak of 127 units completed in 2019.

In summary, the pace of housing development in North Cowichan was most rapid in the mid-1990s and has also surged from 2019 onward; this most recent period of rapid growth is largely due to apartment construction.

3 Recent Trends and Current Market Conditions

MPLE has interviewed ten local experts including realtors, developers, and builders. They expressed a range of opinions and perspectives on North Cowichan's housing market but were remarkably consistent in their belief that there is indeed a housing crisis throughout British Columbia and North Cowichan is no exception. Housing prices are increasingly beyond the means of households with typical incomes due to a profound shortage of homes. This confirms the findings of the Cowichan Valley Regional District's (CVRD'S) Regional Housing Needs Assessment published in 2021.

3.1 Inflation and Interest Rates

Considerable inflation occurred in the first half of 2022. Estimates of inflation in Victoria (the geographically closest available reference) indicate 6% inflation in the first five months of 2022, compared to a long-term annual average of 2.1%.[8] Rapid inflation has had profound impacts on North Cowichan's housing market – both direct and indirect – and the subject deserves some discussion and analysis.

This recent bout of inflation is due to recent historical forces:

- Both the COVID-19 Pandemic and the following Russian invasion of Ukraine (both ongoing at the time of this report) caused worldwide logistical problems and shortages, increasing prices
- Canadian consumer-facing sectors are also increasingly prone to monopoly or oligopoly (dominance of a sector by a small number of large companies). Examples include telecommunications, groceries, gas stations, and banks. Widespread price fixing between these large companies is suspected and occasionally discovered.[9] This increases the price of consumer goods and services, and funnels funds to the shareholder class and corporate management elite
- Financial supports for households and industries during COVID also increased the money supply, fueling inflation.

The Bank of Canada – Canada's arms-length monetary body – controls the Policy Interest Rate. This is the rate at which banks can borrow from the Bank of Canada as a lender of last resort. It therefore represents a "floor" for most borrowers in the economy. It is hard to acquire financing for less than this amount. Raising interest rates in this way is an attempt to stem inflation through two means:

- The "carrot": household savings accrue to financial institutions who proceed to lend these funds. According to orthodox economic thought, at higher interest rates, financial institutions should be able to afford to offer higher interest rates to households who use these institutions for saving and should be incentivized to do so through competition. Unfortunately, Canada's

[8] Source: British Columbia (2023) Consumer Price Index. Retrieved from https://www2.gov.bc.ca/gov/content/data/statistics/economy/consumer-price-index in August 2023.

[9] Two recent examples of officially identified price fixing include bread prices in Canada's grocery stores (https://en.wikipedia.org/wiki/Bread_price-fixing_in_Canada) and fuel prices in British Columbia (https://docs.bcuc.com/documents/proceedings/2019/doc_54384_c1-2-allan-eliesen-submitting-report.pdf)

financial sector is dominated by a few large banks (oligopoly), and there is little evidence of higher interest rates being passed on to Canadian savers in recent months.[10]

- The "stick": when interest rates increase, existing mortgages and other forms of debt become more expensive to carry, either immediately in the case of floating rate arrangements, or at the time of renewal in the case of fixed rate arrangements. This diverts household funds from other forms of spending to debt servicing, which decreases the money supply. Evidence suggests that this mechanism still works in Canada as inflation has slowed noticeably since May 2022, although both inflation and high debt costs represent hardship for households, so this treatment promises no short-term relief for most.

In the wake of recent inflation, the Bank of Canada – over several discrete increments – increased the Policy interest rate from 0.25% in February 2022 to 5% by mid-July of 2023, its highest value since 2001. This is the standard approach to fighting inflation and appears to be working as inflation has slowed considerably in the last 12 months.

Another way of reducing the money supply is by increasing tax rates, but this is an unpopular option that the federal government has heretofore largely avoided. The last meaningful revision of federal income tax rates occurred in 2016 and saw a corresponding decreased in some rates (down from 22% to 20.5% on income from $45,000 - $91,000; and up from 29% to 33% on income above $200,000). The use of taxation as an inflation-control mechanism has not occurred in the current COVID-driven inflationary period. Consumption taxes – taxation on the portion of income not saved – represent an even more direct taxation-based method, also this approach would represent a radical departure from economic orthodoxy.[11]

Inflation and resulting high interest rates in combination have a profound and challenging impact on the housing development industry as they make both construction and financing more expensive for developers while reducing households' capacity to pay for housing.

[10] Evans, Pete & Patel, Nisha (2023, March 2). Interest rates have skyrocketed. So why hasn't the rate on your savings account budged? *Canadian Broadcasting Corporation*. Retrieved from https://www.cbc.ca/news/business/interest-rates-analysis-1.6764143.

[11] Klein, Ezra (2022, 1 October). There Is a Tax that Could Help with Inflation. *The New York Times*. Retrieved from https://www.nytimes.com/2022/10/01/opinion/inflation-consumption-tax-rich.html

3.2 The Supply Side

3.2.1 Interview Results: Barriers to Development

Section 3.2.1 reflects only the opinions of those local experts interviewed by MPLE, rather than MPLE's own thoughts, which are expressed afterwards in Section 3.2.2.

Local experts interviewed by MPLE agreed universally that it is difficult to build housing in the Municipality of North Cowichan today. Many interview subjects claimed that very few multi-family projects have advanced lately (however, see Section 3.2.2 on pg. 12 below). Our interview subjects identified four principal factors that explain developers' current difficulties, two of which are outside of Municipal control and two of which are within Municipal control:

1) High costs: Between the worldwide phenomenon of rapid inflation and a local shortage of labour in the Cowichan Valley, construction costs have doubled in the last two years. In recent months construction costs have stabilized but not reduced. This is essentially a form of "sticky pricing", a widespread phenomenon whereby economic actors are quick to increase prices but slow to reduce them.

2) High interest rates: as discussed in Section 3.1 above, high interest rates make it more expensive for developers to borrow money, reducing their financial liquidity and increasing overall costs.

3) Slow approvals: According to numerous interview subjects, the Municipality's development approvals process is extremely slow. Acquiring development approvals can take 2 or 3 years, which is very punishing in an era of high interest rates as typically a developer acquires land using debt and must service this debt during the approvals process. On a large project, one year of debt can represent millions of dollars in additional costs. The combination of slow approvals and high interest rates was identified by interview subjects as the single greatest challenge to housing development in North Cowichan, a far greater barrier than municipal requirements such as offsite frontage upgrades and EV charging. Interview subjects also complained that it can be very difficult to get help or suggestions from Municipal staff, adding to delays in approvals.

4) Restrictive land use designations within the OCP: There is a conflict between the Municipality's environmental objectives and its housing affordability objectives. Both sets of objectives are laudable and defensible, but the environmental objectives tend to limit development whereas housing affordability would require an increase in housing supply. In addition, many households consider moving to the Cowichan Valley in pursuit of low-density living, so there is a disconnect between the region's appeal and the Municipality's policy direction. Interview subjects point out that some serviced land was removed from the Urban Containment Boundary (UCB) on Maple Bay Road and Moose Road, which would have been ideal for single family development desired by families.

The housing crisis has proven resilient to policy changes so far at all levels of government, and therefore further changes from senior governments are anticipated. Items that could make a big difference include reduction or elimination of GST for new homes, and curtailment of municipal zoning privileges.

3.2.2 MPLE Commentary on Interview Results

In investigating the claim that very few multi-family projects have advanced in North Cowichan lately (see Section 3.2.1 on pg. 11 above), MPLE found that 2022 was in fact an unusually big year for housing starts[12] for townhomes (45 starts, with an average year from 2013 – 2022 being 17 starts) and apartments (338 starts, with an average year from 2013 – 2022 being 69 starts).[13] In other words, this alleged development slowdown has not yet appeared in Canadian Mortgage and Housing Corporation (CMHC) data. This does not imply that our interview subjects are incorrect, only that the slowdown is a recent phenomenon and would currently appear only in the development approvals pipeline. If so, then it is likely to appear in future years of CMHC data as the current delay in development approvals eventually becomes a lack of new construction projects.

Regarding items 2) and 3) in the bullet point list on pg. 11 above, a newly emerging strategy for developers to deal with the combined impact of high interest rates and slow approvals is delayed purchasing agreements that are binding but not closed. This allows projects to advance without money changing hands, thereby saving the developer interest costs during the entitlements phase. Technically this is strictly as detrimental to the land seller as it is beneficial to the developer, but it is the developer's economics that determine project viability, and this approach appears to represent a way forward.

Regarding item 3) above, solutions to expedite approvals and thereby reduce developer financing costs include hiring more staff and adopting a more streamlined system. But ultimately MPLE recognizes that Municipal staff understand their own policies and procedures best and would be best equipped to identify approaches that are likely to succeed.

Regarding item 4) above, MPLE would point out that the housing shortage driving the housing crisis is provincial and national in scale rather than local, and that no single municipality is large enough to solve the problem alone. The solution requires increased supply, but even if North Cowichan committed to increasing supply and completely reorganized its OCP to pursue this end, it would not be enough to balance the local housing market because demand for housing in the Cowichan Valley comes from across Canada and this surplus demand is too great. The country is a single housing market, and for that market's surplus demand to be satisfied, many municipalities across BC and ideally across Canada will need to increase housing supply. The scale of increased supply must match the scale of surplus demand, and this will require land use reform at a much larger scale than the Municipality of North Cowichan.

Moreover, although it is true that many households consider locating in North Cowichan to access lower-density housing more affordably than in other Canadian regions and that realtors and developers are in the business of satisfying that demand, that does not imply that the Municipality must prioritize these desires over other policy objectives or even that it is practical or achievable to do so. Regarding the nationwide housing shortage, the Municipality can only do so much to sustainably increase supply within its own borders, and MPLE would encourage it to do so.

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[12] "A housing start is defined as the beginning of construction work on the building where one dwelling units will be located." (Canadian Mortgage and Housing Corporation. 2023. Monthly Housing Starts and Other Construction Data Tables).

The beginning of construction on an apartment building with 60 units would therefore represent 60 housing starts, for example.

[13] Canadian Mortgage and Housing Corporation (2023). Housing Market Information Portal.

3.2.3 CMHC Rental Construction Financing Initiative

According to local experts, most new multi-family developments in North Cowichan today are purpose-built rental apartments constructed by retirement funds and other investment firms with conservative long-term approaches. There is currently a rush to build purpose-built rental housing because the borrowing economics are very favourable at present. This rush might explain the remarkably large 338 apartment starts reported by CMHC in North Cowichan in 2022, as mentioned above. The economics of purpose-built rental housing are likely favorable due to the CMHC's Rental Construction Financing Initiative (RCFI), part of the federal government's 2020 National Housing Strategy.

The RCFI finances up to 100% of the costs of a project's residential component and up to 75% of its non-residential component. It offers 50-year amortization and permits a debt coverage ratio[14] of 1.1 on the residential component and 1.4 on the non-residential component. These are extremely attractive terms by the standards of recent decades. To access the financing, a project must satisfy the following requirements:[15]

- Financial viability under the debt coverage ratios defined above
- Affordability, either:
    - Criteria A: Total residential rental income of the project must be at least 10% below market; and a minimum of 20% of units must be affordable with rents at or below 30% of the median housing income in the subject area, or
    - Criteria B: The proposal has been approved under other municipal, provincial, or federal housing programs or initiatives
- Energy efficiency requirements
- Accessibility requirements
- Application fee: $200 per unit for the first 100 units, then $100 per unit thereafter to a maximum of $55,000. And 0.3% of the non-residential loan amount if it exceeds $100,000.

These are manageable requirements and appealing incentives, and the program appears to be generating results in North Cowichan and elsewhere. It is a promising example of the kind of national-scale intervention that any solution to the housing crisis will require.

[14] The ratio of net operating income to mortgage payments in a project's first year of full operation. This metric is used to ensure that a project's debt burden is proportional to its net revenue potential.

[15] Source: Canadian Mortgage and Housing Corporation (2020). Rental Construction Financing Initiative.

3.3 The Demand Side

The COVID-19 Pandemic was expected to cool Canada's housing market. Instead, after an initial brief hiccup in the second quarter of 2020, the market set sales records across the country in 2020 and topped these records in 2021. Over the first 10 months of 2021 alone, more than 580,000 homes were bought and sold, surpassing the amount from the entire previous year, when a record 552,423 homes changed hands. Overall, the national MLS Home Price Index finished 2021 up a record 25 per cent from 2020.[16] As one interviewed realtor observed, COVID accelerated many households' plans, inducing many to relocate promptly who might have otherwise waited several years. For realtors, it was three years of business condensed into one.

The COVID housing boom was geographically lopsided, with housing prices in urban centres stagnating while demand for housing in more peripheral areas soared. The Cowichan Valley was no exception to this general trend and saw a huge surge in demand from mid-2020 to early 2022. This demand came from across Canada: according to one realtor, the scale of migration from Ontario to the Cowichan Valley during this period was unprecedented.

When the Bank of Canada increased interest rates by a factor of 20 (from 0.25% to 5%), residential price growth across Canada slowed, ceased, or even reversed depending on geography. Another factor contributing to the collapse in demand for homeownership was the removal of COVID-related financial supports, reducing the influx of cash. According to realtors, housing prices in the Cowichan Valley peaked in February 2022 and have since decreased by 5% on average. The pace of sale is also much slower than during the COVID housing boom.

Local realtors report that currently:

- Property listings above $900,000 receive little interest and tend to drop their prices
- Property listings from $700,000 - $900,000 are moving promptly
- Property listings under $700,000 are receiving multiple offers, pushing their prices upward
- Therefore, in general, prices are "compressing" towards the $700,000 - $900,000 range. Price compression is typical of the current unusual market state characterized by suddenly reduced purchaser liquidity amidst chronic shortage.

High interest rates reduce demand for homeownership by making mortgages less affordable, but downsizing seniors with existing property assets to liquidate do not need mortgages and are therefore unaffected by interest rates. It is younger people and families who suffer due to high interest rates. Seniors have dominated the Cowichan Valley market for some time, but the current market context only accelerates this tendency.

Local realtors report that the lack of 3-bedroom units in North Cowichan also discourages families, although the Municipality's Draft Affordable Housing Policy and Implementation Plan promises to address this issue.

[16] Source: Drudi, C. (2022). Pivot Magazine: *Canada's housing market is breaking records at an alarming rate*.

4 Residential Development Parameters

This section summarizes the local unit size, price, and cost parameters indicated by MPLE's market research. These inputs will form the initial basis for the forthcoming financial analysis in this project's next phase.

4.1 Unit Size

4.1.1 Size of Single Detached Homes

Figure 5: Floorspace of single detached homes versus year built[17]

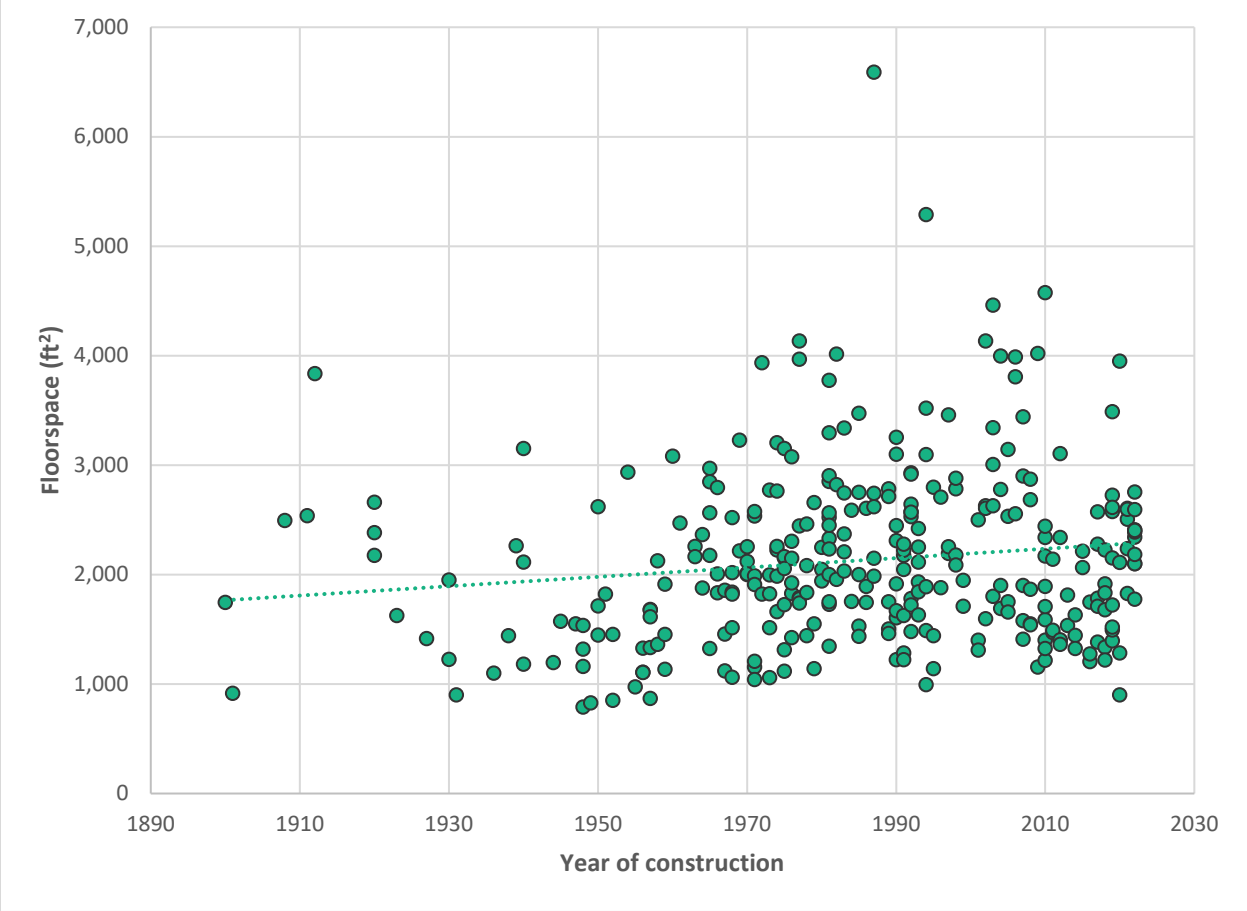


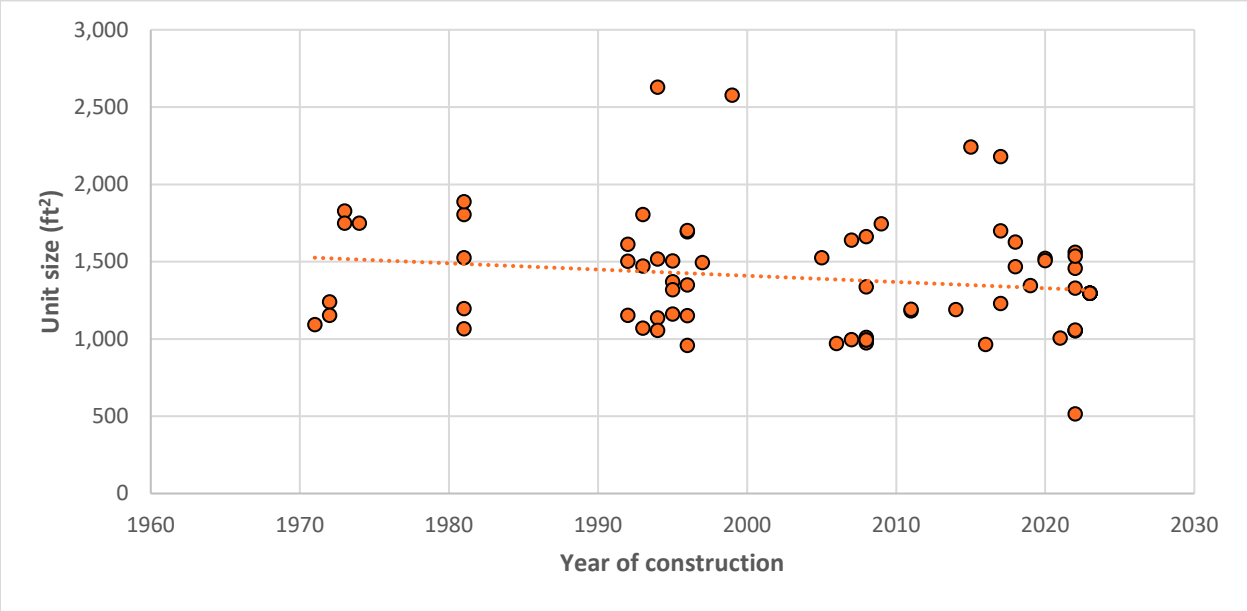
Figure 5 displays the year of construction and total floorspace of each single detached home sold on MLS in North Cowichan within the roughly 16-month period from 2022-03-22 to 2023-07-31, referred to henceforth as the MLS data period.

Single detached homes in North Cowichan generally range is size from 1,000 ft^2 to 3,500 ft^2 with relatively few units above or below this range. Like most other communities, single detached homes constructed in North Cowichan have generally become larger over time, with an average among recently constructed homes of **about 2,290 ft^2.**

[17] Source: MLS sales in North Cowichan from 2022-03-22 to 2023-07-31

4.1.2 Townhome Size

Figure 6: Townhome size versus year built[18]



Townhomes in North Cowichan generally range in size from 1,000 ft^2 to 2,000 ft^2 with relatively few units above or below this range. Like most other communities, townhomes constructed in North Cowichan have generally become smaller over time, with an average among recently constructed units of **about 1,315 ft^2.**

4.1.3 Apartment Size

Figure 7: Apartment size versus year built[18]

[18] Source: MLS sales in North Cowichan from 2022-03-22 to 2023-07-31

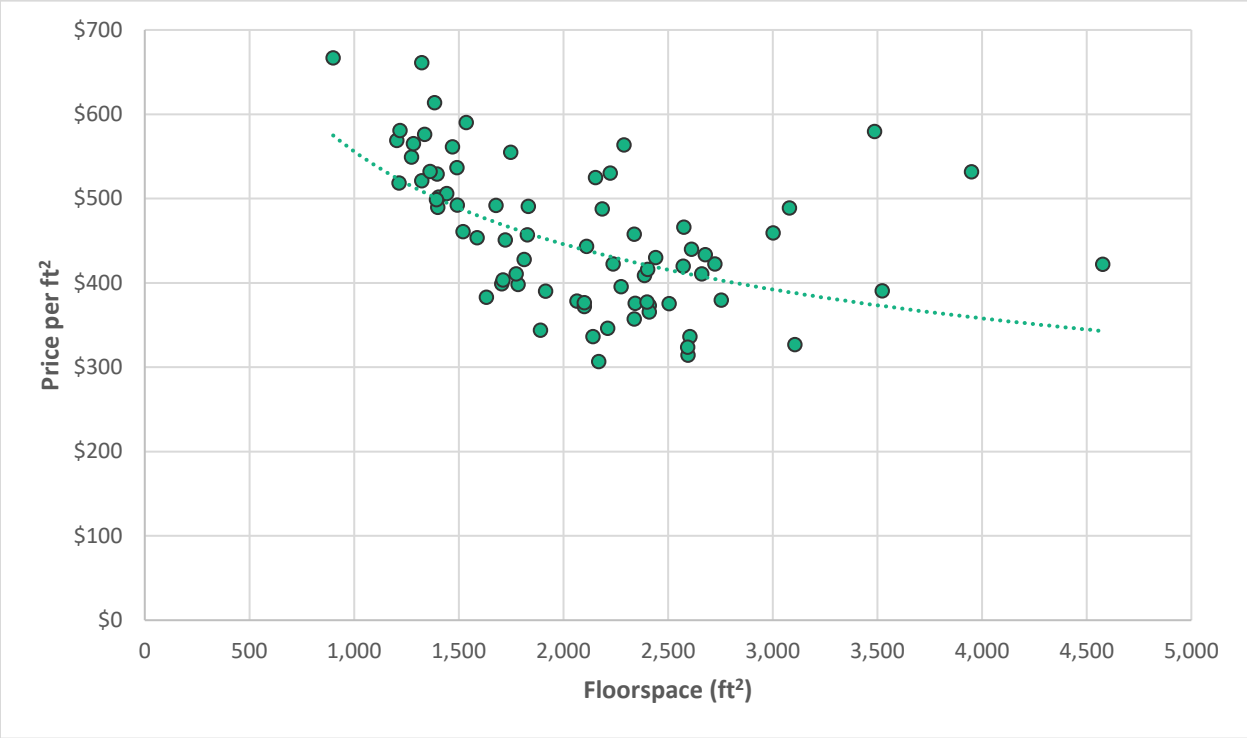
Strata apartments in North Cowichan generally range in size from 600 ft^2 to 1,000 ft^2 with relatively few units above or below this range. The data presented in Figure 7 suggests that apartments in North Cowichan have gotten larger over time, but this would be unusual and MPLE is skeptical of this interpretation since only six apartments sold during the MLS data period were built in the twenty-first century. In the forthcoming financial analysis, MPLE will assume typical unit sizes like the following:

- One-bedroom: 600 ft^2
- Two-bedroom: 800 ft^2
- Three-bedroom: 1,100 ft^2.

4.2 Prices

4.2.1 Single Detached Home Prices

Figure 8: Floorspace versus price per ft^2 among single detached homes built since 2010[19]

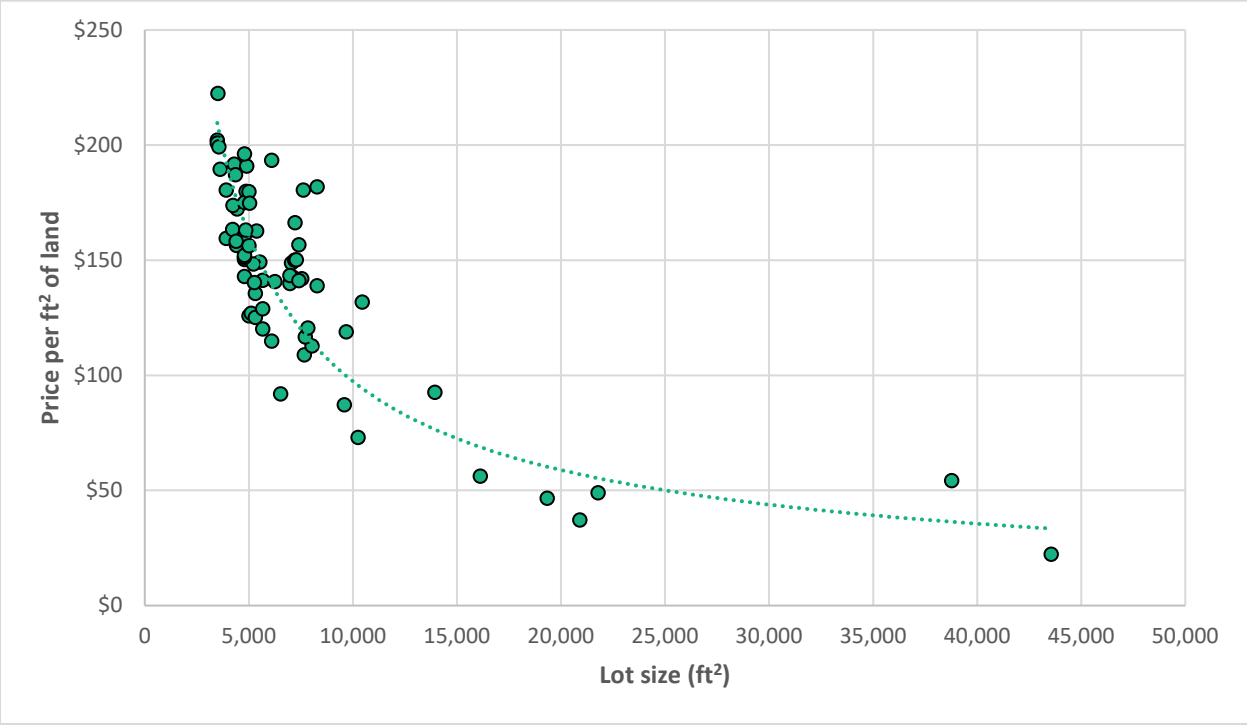


In general, there is a negative relationship between unit size and price per square foot: larger units cost more in total but less per unit of area. North Cowichan's housing market is no exception and exhibits this tendency like most communities. According to the sales data presented in Figure 8, a typical 2,290 ft^2 single detached home would cost $426 per ft^2 or about $975,000 per unit. Realtor interviews suggest that for a brand new single detached home, a slightly higher price of **about $1 million ($437 per ft^2)** would be achievable.

Figure 9 below shows that a similar negative relationship exists between lot size and price per square foot of land.

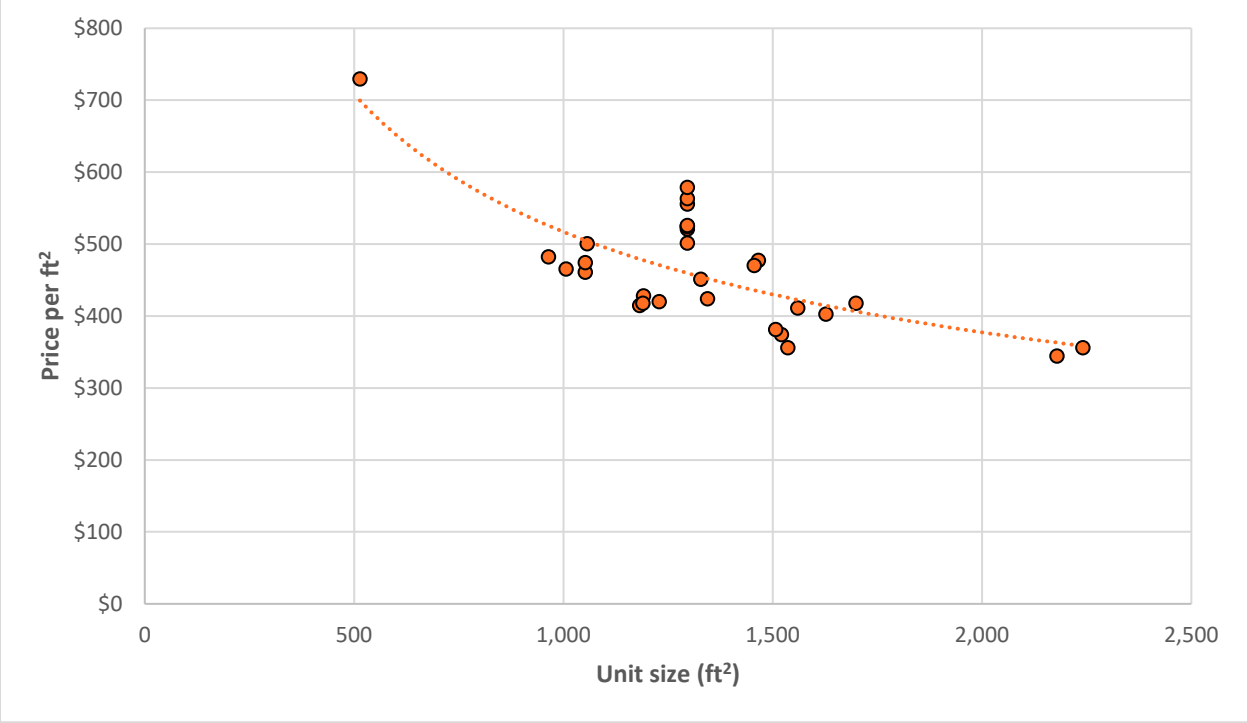
[19] Source: MLS sales in North Cowichan from 2022-03-22 to 2023-07-31

Figure 9: Lot size versus price per ft^2 of land among single detached homes built since 2010[20]



4.2.2 Townhome Prices

Figure 10: Unit size versus price per ft^2 among townhomes built since 2010[20]



[20] Source: MLS sales in North Cowichan from 2022-03-22 to 2023-07-31

Figure 10 suggests that the market price for a typical 1,315 ft^2 townhome is about **$457 per ft^2 or about $601,000 per unit.** Realtor interviews suggest that this price is roughly appropriate, but that in practice townhome prices vary considerably based on the number of storeys: units with fewer storeys are more desirable due to their greater utility to seniors.

4.2.3 Strata Apartment Prices

During the MLS data period, only two apartments built since 2010 were sold on MLS in North Cowichan, providing insufficient data to draw conclusions. However, realtor interviews suggest that prices of **$500 - $600 per ft^2** would be appropriate for brand new strata apartments, indicating roughly the following prices per unit:

- One-bedroom: 600 ft^2 for $360,000
- Two-bedroom: 800 ft^2 for $440,000
- Three-bedroom: 1,100 ft^2 for $550,000.

4.2.4 Rental Apartments

Figure 11: Unit size versus monthly rent per ft^2 among rental listings in August 2023

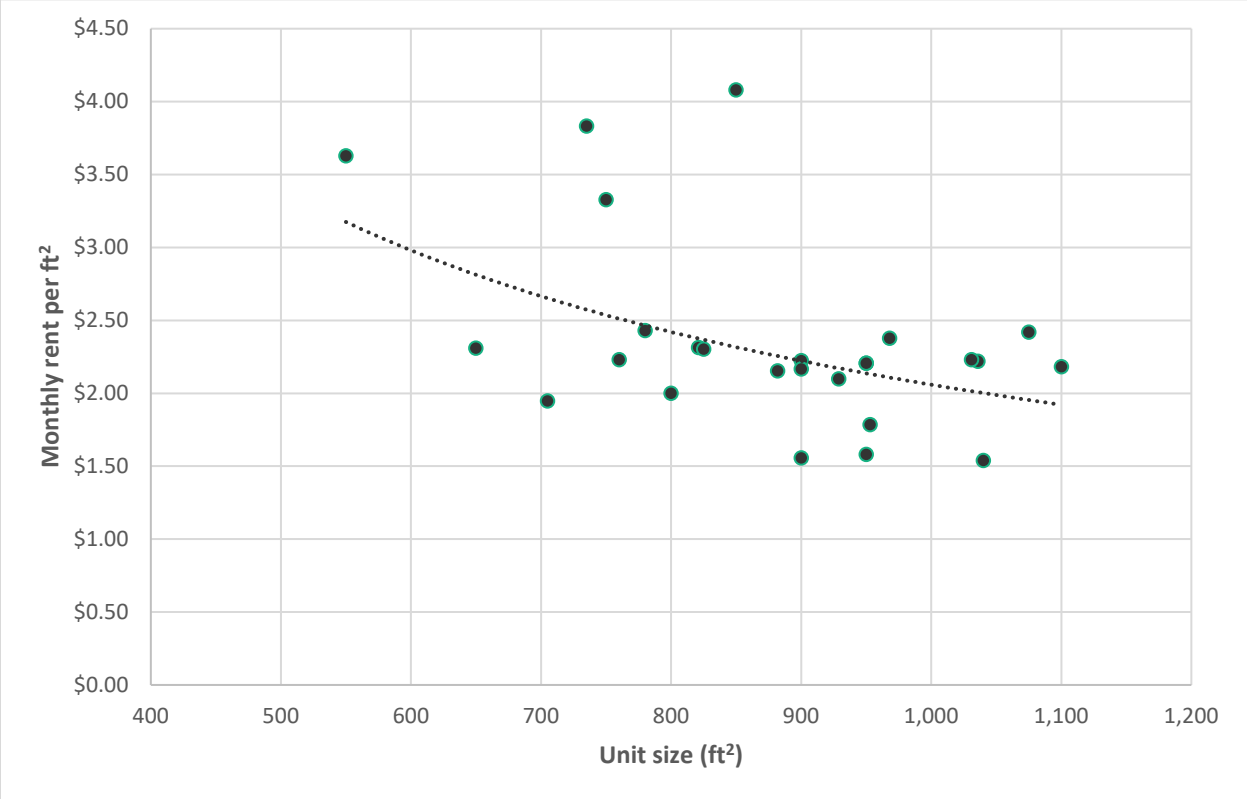


Table 3: Rental rates by bedroom count among rental listings in August 2023

Bedroom count	Average monthly rent	Median monthly rent
1-bedroom	$1,714	$1,500
2-bedroom	$2,019	$1,949
3-bedroom	$2,731	$2,650

MPLE surveyed rental listings in North Cowichan on a day in August 2023. The results of this survey are displayed in Figure 11 and Table 3 above. Note that Figure 11 and Table 3 reflect somewhat different universes of units because not all listings state the unit's floorspace, sometimes just indicating the number of bedrooms.

These results combined with realtor interviews and data from the Willow Crossing apartment building at 4111 Crossland Place suggest the following rental rates:

- One-bedroom: 635 ft^2 for $1,650 per month
- Two-bedroom: 820 ft^2 for $1,900 per month
- Three-bedroom: 1,030 ft^2 for $2,350 per month.

4.2.5 Price Differences for Local Area

Local realtors, builders and developers had the following comments on each of the five local areas that will be the focus of the forthcoming financial analysis:

- Chemainus has very little employment of its own as well as poor access to employment centres. It is therefore mostly attractive to seniors.

- Crofton's desirability as a residential destination continues to be negatively impacted by the mill; speculators always show interest in the area when there is talk of closing the mill. The neighbourhood also has poor accessibility.

- Bell McKinnon is sought-after and has the highly desirable attributes of natural beauty and rural feel. It is also central with good access to office and retail destinations. With the forthcoming hospital and servicing, it is expected to be the most in-demand of North Cowichan's urban centres.

- Berkey's Corner inspired mixed opinions from realtors. Some focused on its history of lower socioeconomic status and deemed it less desirable than other areas, whereas others identified it as North Cowichan's real urban core with a high degree of future potential.

- University Village evoked a similar range of reactions to Berkey's Corner, with some realtors focusing on its lower socioeconomic status and others focusing on its brand-new high school and future potential.

Drawing on this feedback from realtors, MPLE believes it is reasonable to assume one set of prices and rental rates for Bell McKinnon – the most desirable of the identified areas – and another set of prices and rental rates for the other four areas.

5 Land Lift and Community Amenity Contributions

This section presents the underlying legal and economic basis for CACs.

Note that in November 2023, since the completion of this analysis and the draft version of this report, the Government of British Columbia has passed legislation (Bills 44 and 46) to reform the province's land use system and in particular to end the negotiated and ad hoc nature of community amenity contributions in favour of a system of fixed rates (amenity contribution charges or ACCs), bringing amenities more in line with infrastructure (the established development cost charge or DCC system).

Section 5 of this report is likely to be rendered partially obsolete and outdated by these proposed changes but is included here in its entirety in the interest of posterity and completeness. View this section as a guide to how amenity contributions used to operate.

5.1 Legal Basis

Notwithstanding the infrastructure and parkland requirements acquired through a development cost charge (DCC) framework, amenities and contributions from development (including affordable housing contributions) in BC are typically obtained through two general approaches:

1. Density bonusing, in which the zoning bylaw establishes the permissible density with and without a contribution and sets the amount and type of contribution required for additional density.

   Since it is part of the zoning bylaw, bonus density is available as of right and is not up to Council discretion if the contribution requirements are met.

2. Community amenity contributions (CACs), in which a contribution is negotiated as part of the rezoning process; this remains a matter of Council discretion. The Municipality's proposed Affordable Housing Policy is an example of a CAC approach.

In British Columbia, density bonusing is expressly enabled in the Local Government Act (LGA):

> Section 482
>
> (1) A zoning bylaw may:
>
> (a) establish different density regulations for a zone, one generally applicable for the zone and the other or others to apply if the applicable conditions under paragraph (b) are met, and
>
> (b) establish conditions in accordance with subsection (2) that will entitle an owner to a higher density under paragraph (a).
>
> (2) The following are conditions that may be included under subsection (1) (b):
>
> (a) conditions relating to the conservation or provision of amenities, including the number, kind and extent of amenities;

(b) conditions relating to the provision of affordable and special needs housing, as such housing is defined in the bylaw, including the number, kind and extent of the housing;

(c) a condition that the owner enter into a housing agreement under section 483 before a building permit is issued in relation to property to which the condition applies.[21]

It is now accepted that the amenity contributions listed in Section 482.2 may take the form of cash as long as this cash is put towards said amenities.

Unlike density bonusing, CACs are not expressly enabled by the LGA but are considered part of the normal rezoning process. In other words, negotiation prior to rezoning is permissible by default and amenity contributions are part of this process. However, the Ministry of Community, Sport and Cultural Development has published a guide to CACs which reiterates that they should be voluntary and discretionary for both parties:

> Local governments do not have legal authority to require applicants for rezoning to pay CACs. They must ensure that any CACs are obtained as part of a negotiation process. Local governments must also not commit to pass a rezoning bylaw on the condition that CACs are provided. Council and regional board members are legally required to remain open-minded on a proposed rezoning, until they have heard the public's perspectives at the public hearing.
>
> It is important to keep in mind that zoning is intended to implement the community plan and should not be seen as a revenue source. Being perceived to be "selling zoning" can undermine public confidence in the community plan and the council/regional board's commitment to the plan.[22]

Rental tenure zoning – permitted through Section 481.1 of the LGA – is distinct from affordable housing and does not require a density bonus.

But note that the Province recently amended the LGA to eliminate the need for a Public Hearing where a zoning amendment aligns with the Official Community Plan. Proposed amendments to the Act also include enabling staff to approve minor amendments to Development Permit variances. Both proposed amendments have the potential to reduce timelines, reduce costs, and improve certainty for housing developers, including developers of rental or affordable housing projects.

CACs fill a funding gap to pay for those community amenities – fire halls, park improvements, public art, daycare space, affordable housing, and many other items – that are not currently funded through the DCC system.

[21] Local Government Act (2015). Queen's Printer, Victoria.

[22] Ministry of Community, Sport and Cultural Development (2014). Community Amenity Contributions: Balancing community planning, public benefits and housing affordability. Retrieved on 2018/04/27 from http://www.cscd.gov.bc.ca/lgd/intergov_relations/library/CAC_Guide_Full.pdf

5.2 Flat Fee Versus Site Analysis

Despite the imperative to keep CACs flexible and open-ended for the reasons listed in the Ministry guide cited above, municipalities in BC have increasingly released schedules of CAC targets much like DCC rates. This "flat fee" approach has the advantage of:

- Improving transparency and fairness
- Increasing developer and investor confidence
- Reducing administrative costs for developers and governments
- Facilitating faster development
- Allowing public input regarding rates and requested amenities.

Because it is built into the zoning bylaw and needs to be formulaic, density bonusing almost always uses a flat fee approach, but not all municipalities approach CAC negotiations in this way. Many still rely on a project-by-project "site analysis" approach to CACs, in which each major rezoning application is analyzed to determine the contribution it can financially support. The site analysis approach is most appropriate for unusual or uncertain projects such as:

- Comprehensive developments
- Rezonings not anticipated in the OCP
- Large, phased projects.

But the site analysis approach is not preferred by developers or most municipalities because it:

- Creates uncertainty regarding project costs, reducing investor and developer confidence
- Is administratively challenging, which is difficult for small developers and inexperienced municipalities
- Tends to slow the development process
- Is perceived as less fair as it may result in different contribution rates for different applicants.

With the advent of Bill 46, the flat fee approach will be required by law.

5.3 Setting Rates

There are two basic approaches to determining density bonus contribution rates or CAC negotiation targets:

1. Level of service: contribution rates or CAC targets are allocated to developments based on the pre-determined amenity requirements of the community or area.
2. Land lift: contribution rates or CAC targets are allocated to developments based on how much they are able to contribute, which is in turn based on the increase in the project's land value that occurred or would occur due to increased density or change in use. This is discussed in more detail below.

Developers typically prefer the "level of service" approach because it is perceived as fairer and sometimes produces lower rates. However, since the level of service approach is not connected to developments' ability to pay – instead being based on the community's needs – it is possible for rates generated in this way to overburden developers. This is particularly true if affordable housing is included in the "level of service", since the scope and scale of Canada's housing shortages makes this item effectively bottomless. Thus, a blended approach should be used: rates should be in line with the community's needs (level of service approach), but not more than developments can support (land lift approach).

5.4 Land Lift

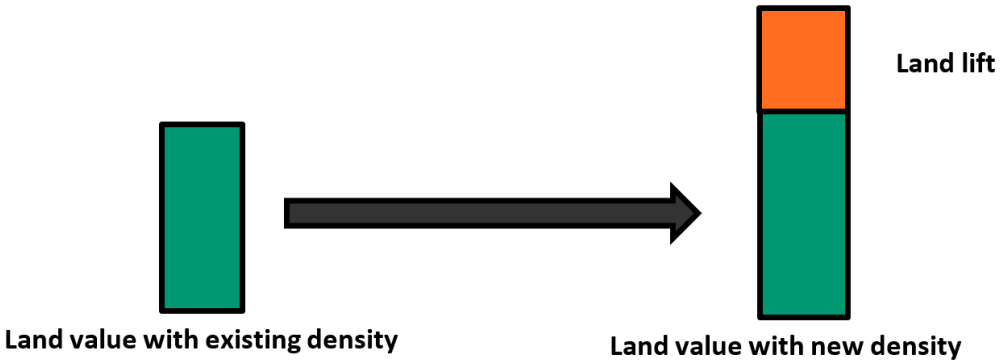
Because it results directly from the increase in density, the increase in land value from one density to another – called "land lift" – may be attributed to the rezoning or the bonus density and is therefore arguably the result of City policy rather than developer work.

That permitting denser or more valuable projects on the same site tends to produce increases in land value is demonstrably true in the market, but the market is also fluid, flexible, and subject to speculation. For this reason, estimating the amount of land lift from a particular rezoning or density bonus through market research is impossible. A better approach to estimating land lift is theoretical: if costs and revenues are all set by the market and estimable, then assuming a constant profit margin – say 15% profit to costs – the corresponding value of the land that would produce that profit margin may be determined. How this "residual land value" changes with density reveals the land lift from a rezoning or density bonus.

When a parcel changes hands after rezoning, the purchaser might pay more than this theoretically derived amount or less, in which case they are likely to achieve a greater or narrower profit margin. In general, land values do rise and fall basically in line with these theoretical estimates.

An example of calculating land lift follows. Figure 12 reflects hypothetical residential development based on two densities: a base density permitted under current zoning, and a revised density permitted after a rezoning.

Figure 12: Land Value at Base Density versus Land Value at Rezoned Density



In the example above, with entitlements granting an increase in density there is a rise in the value that a developer could afford to pay for that same parcel of land. The bar on the left represents the base value

for the land under current zoning that a developer might pay based on current expectations of revenues and costs, as well as an allowance for developer profit. The bar on the right shows the base value for the land plus the increased value the developer could pay for the land with a higher density of development permitted, again based on current expectation of revenues and costs along with an allowance for profit.

It should be noted that this increase in land value is reflective of the change in permitted density and or use. It is not a value that is representative of the native development rights carried under existing zoning, and as such the current property owner should not expect to achieve this value for their land on the right if they are assuming no costs or risks in trying to rezone their land. The value on the left represents current market values for land, inherent in which is the value increases over the years the property has been held through increases in market value for land.

5.5 Impact of CACs on Land Value

The revenue from a project is set by the market and out of the developer's control, so assuming a developer intends to achieve a given profit margin, if CACs are required for a rezoning or if a cash contribution is required for bonus density, then the developer must lower their costs elsewhere to maintain the project's profitability. Most costs are also set by the market and out of the developer's control, except for the price of land.

In other words, CACs or bonus density contributions should decrease the land's value, basically "dollar for dollar", rather than impacting profit margins or product prices. That is, if $1 million of CACs were required from a project, this would have resulted in a $1 million decrease in the land's value. In MPLE's experience this is exactly what occurs in jurisdictions with CACs or density bonusing, once the land market has time to adjust to the new policy framework.

Density bonus rates and CACs should not exceed the land lift for a given project, because that would increase the project's costs more than the added density increased the project's revenues. In other words, the land lift amount acts as threshold above which CACs or density bonus payments are likely to negatively impact project viability. A developer would have no reason to use the CAC or density bonusing policy in that scenario because the added burden would be bigger than the added benefit.

In closing, land lift reflects the impact of changing density, and the land lift exists with or without CAC or density bonusing policies. In jurisdictions without such policies, or where those policies are avoided or not applied, the land lift still exists but is captured by the developer or the land vendor, or in most cases split between the two. CAC and density bonusing policies simply allow the public to access some share of the land lift so that the neighbourhood benefits from the added density.

Financial analysis allows land lift to be estimated so that CAC rates may be carefully set to avoid exceeding the land lift amount. MPLE typically recommends that municipalities seek 50% - 75% of the land lift amount to allow for:

- Site-specific variations in development economics
- Market shifts
- Analytics error
- Additional development incentives for property owners and developers.

6 Methodology and Assumptions

MPLE has developed a financial model analyzing the development economics of hypothetical sites under several scenarios of land use, location, site size, density, and policy. The purpose of this model is to determine the magnitude of amenity contributions that developments in the Municipality may support and how this amount varies by scenario.

Note that although this financial analysis still uses an up-to-date and accurate financial model, its underlying methodology for estimating supportable CAC rates is based on a legal paradigm that is likely to become outdated soon, namely the land lift approach discussed in Section 5. It is included here in the interest of completeness.

6.1 Methodology

This analysis uses a standard developer proforma wherein estimates of revenues and costs are inputs and the remaining variable is the desired output. In typical proformas this output is usually profit, following a revenue minus costs equals profit formula. For a residual land valuation, however, an assumption on developer's return needs to be included in order to leave the land value as the variable to solve for. For these analyses MPLE determines the residual value based on the developer achieving acceptable project performance. The performance metric and target values used vary by land use as follows:

- For single family dwellings: profit of 10% on total project costs
- For duplexes: profit of 12% on total project costs
- For multi-family residential or large-site duplex and townhome developments: profit of 15% on total project costs
- For rental residential: annual internal rate of return (IRR)[23] to total project costs of 5.5%
- For commercial: annual IRR to total project costs of 7.75%
- For projects containing a mix of the above: the project's costs and revenues are divvied up and allocated to the different portions and each portion of the project supports a certain amount of land value by achieving its proper performance metric as defined above.

Project performance targets differ based on market expectations and risk level, with larger projects imposing greater risks and requiring greater financial returns.

The residual value is the maximum supported land value a developer could pay for the site (under the density and conditions tested) while achieving an acceptable return for their project. This means that a

[23] The internal rate of return (IRR) is the interest rate of a hypothetical asset that produces interest at the same pace as the project in question. A measure of project performance. A higher IRR represents faster profit, or greater profit over the same timeframe. IRR is a better measure of project viability than simple profit-to-cost for projects that generate revenue over a long timeframe because the former reflects the time value of money whereas the latter does not.

developer could pay the indicated value for the land, develop and sell the finished product, and achieve the target performance metric. If by chance the land were bought for less than the indicated value, this would result in an increased profit for the developer and conversely if bought for more than the value indicated there would be less profit for the developer.

MPLE has calculated the magnitude of available amenity contributions by first determining the value of each hypothetical site in the "base" scenario – this is discussed in Sections 6.2 and 6.3 below – and then calculating the total amount of community amenity contribution that that developer would be able to provide under higher-density scenarios while still supporting that same land value. In short, this method treats the total amenity contribution as the residual item by treating the land value under the base scenario as a fixed cost.

This methodology is equally applicable to density bonusing and CAC policy mechanisms.

6.2 Example Rezoning Applications Provided

The ideal approach to calculating the precise quantity of land lift generated by a particular rezoning is to look at that site's specific size, constraints, existing zoning, and proposed density and type of development (the Site Analysis approach described in Section 5.2, pg. 23). However, the purpose of the current exercise is to estimate generally supportable CAC rates based on the general state of North Cowichan's development industry.

In order to ensure that this generic analysis is as applicable as possible to the type and size of rezoning applications that the Municipality tends to receive, MPLE requested a sample of typical rezoning applications, which are summarized below:

Table 4: Sample rezoning applications provided by MNC

#	Existing zoning	Site area (m^2)	Existing parcels	Average existing parcel area (m^2)	Proposed use
1	R1 – Residential Rural	101,981	Probably one	101,981	CD6 zone – mix of townhomes and apartments
2	R3 – Residential One & Two-Family	627	1	627	8 townhomes
3	R3 – Residential One & Two-Family	15,300	1	15,300	R3 zone – mainly townhomes
4	A2 – Rural	23,737	1	23,737	56 units including 14 townhomes, 10 duplex units, and single family with suites
5	R1 – Residential Rural	19,783	2	9,892	Townhomes
6	C2 – Commercial General	926	1	926	Ground floor commercial with apartments above
7	R1 – Residential Rural	23,771	1	23,771	278 units: apartments and/or townhomes
8	R1 – Residential Rural	19,897	1	19,897	102 units: apartments, townhomes, and/or plexes
9	R3 – Residential One & Two-Family	50,929	Probably three	16,976	CD17 zone – 300 units
10	A2 – Rural	45,787	Not indicated	Not indicated	CD4 – minimum lot size of 325 m^2
11	R3 – Residential One & Two-Family	834	1	834	One 4-plex and 2 small single family lots
12	R3 – Residential One & Two-Family	891	1	891	30 “micro units”
13	R3 – Residential One & Two-Family	4,871	3	1,624	R7 zone – 16 townhomes
14	R3 – Residential One & Two-Family	8,807	1	8,807	100 units
15	Hypothetical	2,528	4	632	Six-storey apartment
16	Hypothetical	728	1	726	4-plex
17	Hypothetical	1,460	2	730	R7 – Multi-family residential

From this selection of seventeen examples – all chosen by Municipal staff to represent typical rezoning scenarios – MPLE has inferred the following principles to guide the design of hypothetical redevelopment scenarios for analysis:

- Of the fourteen examples with identified existing zoning, all but one[24] are zones that permit only one residential building consisting of a single family or two-family (duplex) dwelling. Rezoning from this type of zone to a higher-density land use is clearly the typical rezoning scenario in North Cowichan, so in this analysis MPLE assumes this type of use to be the existing use against which all proposed uses are compared for purposes of land lift calculation.
- Of the sixteen examples with identified existing parcel counts, all but one[25] exhibit existing parcels with average area in the following two distinct ranges:
    - Urban lots in the range of 627 m^2 – 926 m^2 (11 – 16 lots per ha)
    - Large lots in the range of 8,800 m^2 – 102,000 m^2 (1 – 10 ha per lot)

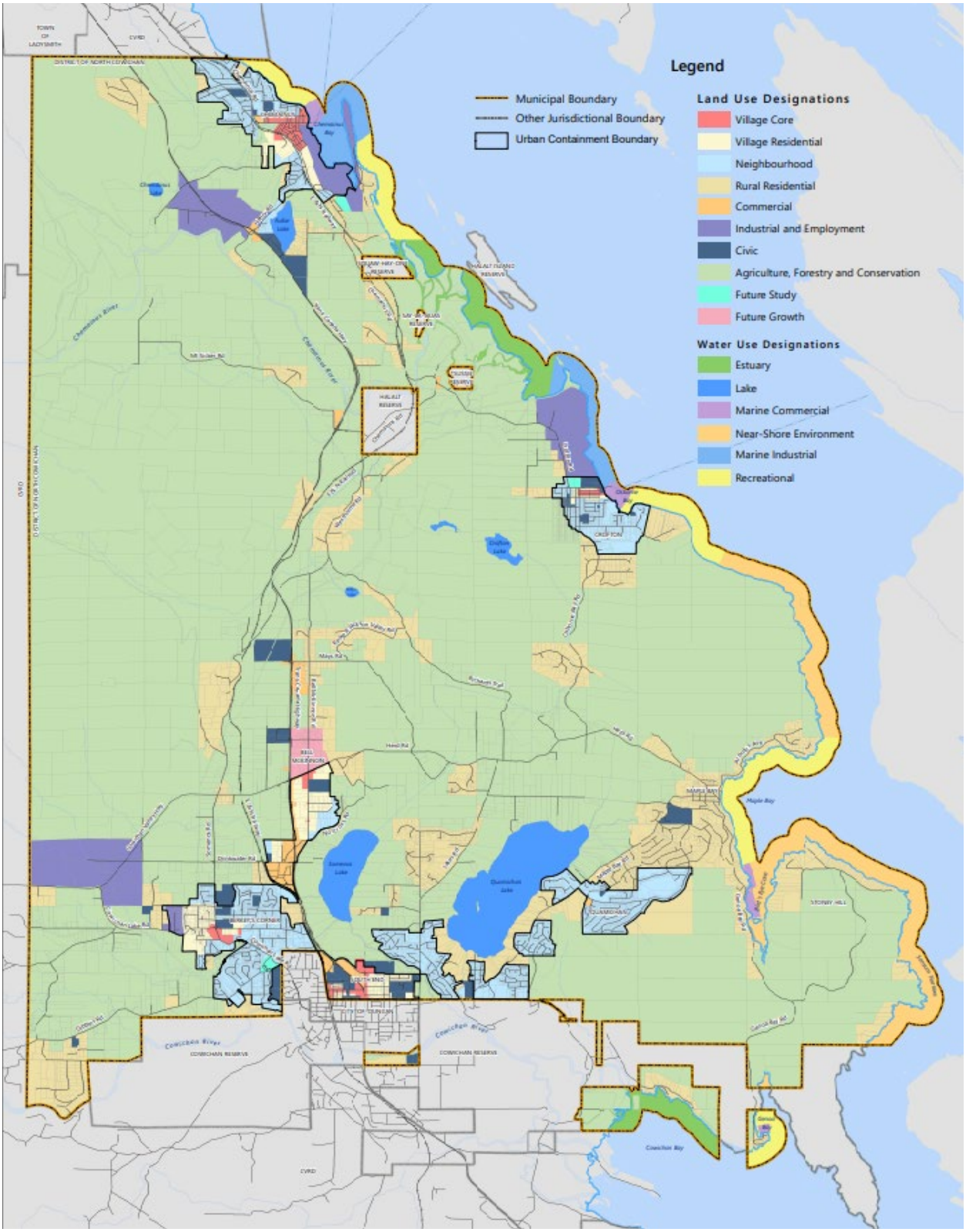
    From this it is clear that two kinds of rezoning are typical in North Cowichan – rezonings of land already subdivided into urban lots, and rezoning of large lots at or above about one hectare in size. MPLE therefore analyzes both types of scenario, as discussed in Section 6.3 below.

[24] The singular exception is Example #6, which has the existing zoning of C2 – General Commercial.

[25] The singular exception is Example #13, which exhibits an average lot size of 1,624 m^2.

6.3 Development Scenarios

Figure 13: Local areas and land use designations (from North Cowichan's OCP)



MPLE has analyzed development scenarios that vary based on three parameters:

- Geography – we analyze development in five Local Areas as indicated in Figure 13 above:
    - Chemainus
    - Crofton
    - Bell McKinnon
    - Berkey's Corner
    - University Village

- Site size – we analyze development on sites of two sizes as informed by the example rezonings discussed in Section 6.2 above:

    - A 3,000 m^2 site currently consisting of four 750 m^2 parcels: this size is large enough to accommodate any of the land uses contemplated (see below) but consists of typical urban lots

    - A 2.4 ha (24,000 m^2) site currently zoned as a single parcel[26]: this is approximately the average size of large lots seeking rezoning in North Cowichan

- Land use:
    - Single family homes (for base scenario)
    - Duplex at 750 m^2 per lot (for base scenario)
    - Duplex at 500 m^2 per lot (for base scenario)
    - Townhomes at two densities[27]
    - Strata apartments at two densities[27]
    - Rental apartments at two densities[27]
    - Mixed-use of commercial at-grade and strata apartments above, at two densities[27]
    - Mixed-use of commercial at-grade and rental apartments above, at two densities[27].

Combining these parameters would yield 90 development scenarios, but as you will see in Section 6.4, the development parameters (built form assumptions, cost assumptions, and revenue assumptions) of Berkey's Corner and University Village turn out to be identical for our purposes, reducing the effective number of scenarios to 72. Berkey's Corner and University Village are therefore referred to collectively as South End for the remainder of this report.

[26] Apartment and mixed-use land uses are not analyzed at this site size as this would yield implausibly dense development. Realistically, development with apartments is best understood as a series of smaller-scale developments.

[27] The two densities applied vary by geography, as defined in Section 6.4.1 below.

6.4 Assumptions

6.4.1 Built Form Assumptions

For purposes of financial analysis, MPLE has made the following assumptions regarding built form:

- Single family homes:
  - On urban lots: 213 m^2 of floorspace per home[28]
  - On large lots: 280 m^2 of floorspace per home[28]
- Duplex units: 155 m^2 of floorspace per unit (310 m^2 per building)[28]
- Townhomes:
  - 122 m^2 of floorspace per unit[28]
  - In Chemainus and South End:
    - Lower density tested: 0.5 FSR[29, 30]
    - Higher density tested: 1.1 FSR[31]
  - In Crofton:
    - Lower density tested: 0.35 FSR[32]
    - Higher density tested: 1.1 FSR[33]
  - In Bell McKinnon:[11]
    - Lower density tested: 1.1 FSR
    - Higher density tested: 1.8 FSR
- Apartment parameters for strata, rental, mixed-use strata, and mixed-use rental:
  - Unit size and composition (approximate):
    - 1-bedrooms: 45% of units, 55 m^2 per unit
    - 2-bedrooms: 45% of units, 74 m^2 per unit
    - 3-bedrooms: 10% of units, 102 m^2 per unit
    - Average unit size: 68 m^2

[28] This is the average unit size suggested by MLS data for new product of this type.

[29] Floor space ratio, a measure of built density equal to a development's floorspace divided by its land area.

[30] This density is suggested by the R3-MF, R6, R7, and R7-A zones in the Municipality's Zoning Bylaw.

[31] This density is suggested by the Bell McKinnon Local Area Plan.

[32] This density is suggested by the Crofton Local Area Plan.

[33] This density was instructed by Municipal Staff.

- Parking:
    - Parking requirement: [34]
        - 1.65 parking stalls per residential unit
        - One parking stall per 20 m^2 of commercial floorspace
    - Since underground parking is much more expensive to construct than surface parking (see Section 6.4.2 below), parking is assumed to be at-grade as space permits (assuming 10% of site area goes to landscaping), with the remaining parking located underground

- Apartment parameters for strata and rental, but not mixed-use:
    - 85% building efficiency[35]
    - In Chemainus, Crofton, and South End:
        - Lower density tested: 1.2 FSR[36]
        - Higher density tested: 2.5 FSR[37]
    - In Bell McKinnon:
        - Lower density tested: 1.1 FSR[38]
        - Higher density tested: 2.5 FSR[37]
- Mixed-use:
    - Building composition:
        - 83% residential (five storeys of six)
        - 17% commercial (one storey of six)
    - Building efficiency:
        - Residential: 85%
        - Commercial: 100%
    - In Chemainus, Bell McKinnon, and South End:[38]
        - Lower density tested: 1.8 FSR
        - Higher density tested: 2.5 FSR
    - In Crofton: [39]
        - Lower density tested: 1.2 FSR
        - Higher density tested: 1.6 FSR.

[34] From Section 21 of the Municipality's Zoning Bylaw.

[35] Building efficiency is the ratio of a buildings saleable or leasable floorspace to its gross floorspace.

[36] This density is suggested by the Crofton Local Area Plan.

[37] This density was instructed by Municipal Staff.

[38] This density is suggested by the Bell McKinnon Local Area Plan.

[39] This density is suggested by the Crofton Local Area Plan.

6.4.2 Cost Assumptions

For purposes of financial analysis, MPLE has made the following assumptions regarding project costs:

- Lands costs:
  - Land price as required to achieve performance targets defined in Section 6.1, pg. 26
  - Property transfer tax[40]
  - Additional closing costs of $50,000
- Hard costs:
  - Site servicing and geotechnical:
    - Small site (3,000 m^2) developments:
      - $12,500 per lot for single family or duplex on 750 m^2 lots
      - $60,000 for other land uses
    - Large lot (2.4 ha) developments:
      - $50,000 for single family development
      - $200,000 for other land uses
  - Servicing connections:
    - Small site developments:
      - $7,500 per lot for single family or duplex
      - $50,000 for other land uses
    - Large lot developments:
      - $7,500 for single family
      - $600,000 for 500 m^2 lot duplex development
      - $480,000 for other land uses
  - Building construction:[41]
    - Single family, duplex, and townhomes: $2,605 per m^2
    - 4-storey apartments:[42] $3,170 per m^2
    - 6-storey apartments[43] and mixed-use: $3,270 per m^2

[40] Property transfer tax is defined here: https://www2.gov.bc.ca/gov/content/taxes/property-taxes/property-transfer-tax

[41] Building costs reflect a blend of several sources including Altus Canadian Construction Cost Guide, Butterfield Cost Consultants, interviews with local experts, and analysis of the local market.

[42] 4-storey apartments include all lower-density apartment scenarios (see Section 6.4.1 above) that are not mixed-use.

[43] 6-storey apartments include all higher-density apartments as well as mixed-use.

- Parking construction:
  - $6,125 per surface parking stall
  - $60,000 per underground parking stall
- Furniture, fixtures, and equipment:
  - For lower-density apartment developments: $100,000
  - For higher-density apartment developments: $150,000
- $50,000 of landscaping, signage, and lighting costs for all apartment and mixed-use developments as well as all large lot developments with more than one dwelling
- Tenant improvements of $377 per m^2 of commercial
- Hard cost contingency of 10% of all hard cost items above

- Soft costs:
  - Project management:
    - Small site townhome development: 1% of total project costs
    - All apartment and mixed-use developments as well as all large lot developments with more than one dwelling: 2% of total project costs
  - Architect fee: 1% of building construction costs, including contingency
  - Engineering fee: 1% of hard costs
  - Research and appraisal:
    - $1,000 per single family lot or duplex lot in small site development
    - $5,000 for small site townhome development
    - $10,000 for all other developments
  - Surveying:
    - $1,000 per single family lot or duplex lot in small site development
    - $5,000 for small site townhome development
    - $10,000 for all other developments
  - Accounting:
    - $1,000 per single family lot or duplex lot in small site development
    - $5,000 for small site townhome development
    - $10,000 for all other developments
  - Legal costs:
    - $1,000 per dwelling
    - $50,000 for commercial component of mixed-use development

- Insurance: hard costs times 0.15% plus 0.03% for each month of construction (see financing costs below)

- Rezoning and development permit fees as defined in the Municipality's Fees and Charges Bylaw. Rezoning fees are not applied to as-of-right scenarios (single family and small site duplex)

- Development Cost Charges:[44]

    - In Chemainus:
        - $10,028 per lot subdivided (applies to large lot duplex developments)
        - $6,116 per duplex lot in all scenarios (in addition to above)
        - $7,655 per townhome
        - $5,820 per apartment
        - $20.91 per m^2 of commercial floorspace
        - $1,521 per commercial parking stall

    - In Crofton:
        - $8,968 per lot subdivided (applies to large lot duplex developments)
        - $5,652 per duplex lot in all scenarios (in addition to above)
        - $6,890 per townhome
        - $5,268 per apartment
        - $16.68 per m^2 of commercial floorspace
        - $1,521 per commercial parking stall

    - In Bell McKinnon:[45]
        - $11,732 per lot subdivided (applies to large lot duplex developments)
        - $17,082 per duplex lot in all scenarios (in addition to above)
        - $12,888 per townhome
        - $8,809 per apartment
        - $58.72 per m^2 of commercial floorspace
        - $1,521 per commercial parking stall
        - $7,261 per ha on commercial sites

[44] The Municipality's DCC bylaw indicates one set of rates for July 2012 – December 2013, a second set of rates for January 2015 – June 2015, and a third set of rates for July 2015 onward. Since the calculations that produced these estimates are more than eight years out of date, the Municipality instructed MPLE to apply an inflation factor.

MPLE has applied an inflation factor of 25%, equal to the total CPI increase in Victoria reported by BC Statistics from July 2015 to July 2023 – which was the most recently published CPI date at the time of this analysis. Source: https://www2.gov.bc.ca/gov/content/data/statistics/economy/consumer-price-index

[45] For Bell McKinnon, municipal staff instructed MPLE to apply a DCC of $33.42 per m^2 to all development plus $7,261 per ha on commercial sites in addition to that discussed in Footnote #24 above.

  - In South End:
    - $11,732 per lot subdivided (applies to large lot duplex developments)
    - $6,722 per duplex lot in all scenarios (in addition to above)
    - $8,810 per townhome
    - $6,537 per apartment
    - $25.30 per m^2 of commercial floorspace
    - $1,521 per commercial parking stall

- GST: No GST on rental projects, per recent announcements from the Federal government

- Utilities during construction:
  - $1,000 per single family lot or duplex lot in small site development
  - $10,000 for other small site developments
  - $12,000 - $20,000 for large lot developments, depending on number of phases

- Property taxes during planning, construction, and sales phases

- Advertising and promotion:

  - Small site townhome development: 1% of value upon completion

  - All apartment and mixed-use developments as well as all large lot developments with more than one dwelling: 2% of value upon completion

- Lease commission: 20% of normalized annual commercial rent

- New home warranty: $2,000 per dwelling

- Post-construction strata fee: $2,000 per townhome or strata apartment

- Post-construction customer service: $2,000 per dwelling

- Corporate overhead:

  - Small site townhome development: 1% of total project costs

  - All apartment and mixed-use developments as well as all large lot developments with more than one dwelling: 2% of total project costs

- Miscellaneous soft costs: 2% of all soft cost items above

- Soft cost contingency: 10% of all soft cost items above

- Financing costs:
    - Phasing assumptions:[46]
        - All small site and single family redevelopment: 1 phase
        - Large lot duplex: 2 phases
        - Large lot townhomes below 1.1 FSR: 2 phases
        - Large lot townhomes at 1.1 FSR: 3 phases
        - Large lot townhomes at 1.8 FSR: 5 phases
        - For purposes of residual land valuation, each subsequent annual phase is discounted at a rate of 10% per year.
    - Planning time:
        - As-of-right development: 4 months
        - Developments requiring rezoning: 12 months
    - Construction time:
        - Large lot single family (one building): 6 months
        - Small site single family (4 buildings): 8 months
        - Other scenarios: 12 – 24 months, depending on number of phases
    - Interest rate:
        - For small sites: 10%
        - For apartments or large sites: 7%
    - Interest on equity:[47]
        - For small sites: none
        - For apartments or large sites: 10%
    - Loan to value ratio:[48]
        - Land loan: 50%
        - Construction loan: 75%

[46] Breaking a large project into multiple phases reduces overall financing costs by reducing the overall lag time between capital outlay and cost recovery. We aim for no more than one year of product per phase in each scenario. Some costs are modified to reflect diseconomy of scale as more phases are added.

[47] Represents the opportunity cost of the developer's investment.

[48] For projects or portions of projects producing products for sale (everything but rental and commercial), the magnitude of financing available is determined by the loan to value ratio, which is the ratio of the amount borrowed (loan) versus total project costs (value).

- Takeout financing:[49]
  - Debt service cost ratio:[50] 1.25
  - Amortization: 25 years.

6.4.3 Revenue Assumptions

For purposes of financial analysis, MPLE has made the following assumptions regarding project revenues, all based on local property sales and rental data as well as interviews with local experts. Local realtors reported that products in Bell McKinnon would command a premium compared to products elsewhere in North Cowichan. The quantitative extent of this qualitative difference is hard to determine, so MPLE has applied a 2% premium to residential prices and rents in Bell McKinnon compared to elsewhere:

- Single family homes:
  - Outside of Bell McKinnon:
    - On small lots: $5,587 per m^2 or about $1,190,000 per home[51]
    - On large lots: $7,406 per m^2 or about $2,074,000 per home
  - In Bell McKinnon:
    - On small lots: $5,700 per m^2 or about $1,214,000 per home
    - On large lots: $7,554 per m^2 or about $2,115,000 per home
- Duplex: [51]
  - Outside of Bell McKinnon:
    - On 750 m^2 lots: $4,821 per m^2 or about $747,000 per unit
    - On 500 m^2 lots: $4,792 per m^2 or about $743,000 per unit
  - In Bell McKinnon:
    - On 750 m^2 lots: $4,917 per m^2 or about $762,000 per unit
    - On 500 m^2 lots: $4,888 per m^2 or about $758,000 per unit
- Townhomes:
  - Outside of Bell McKinnon: $4,925 per m^2 or about $601,000 per unit
  - In Bell McKinnon: $5,024 per m^2 or about $613,00 per unit

[49] For projects or portions of projects that are held as revenue-generating properties upon completion, the available financing – called "takeout financing" – is a mortgage against the project's normalized net income.

[50] The debt service cost ratio is the ratio of normalized net income to mortgage payments within a given duration.

[51] Note that this is somewhat greater than the price suggested by MLS data and reported in the Market Research Interim Report, but is more in line with the rate implied by local developer opinion on serviced land prices.

- Strata apartments:
    - Outside of Bell McKinnon:
        - 1-bedroom: $6,460 per m^2 or about $355,000 per unit
        - 2-bedroom: $5,920 per m^2 or about $438,000 per unit
        - 3-bedroom: $5,385 per m^2 or about $549,000 per unit
        - Average price of $6,036 per m^2 or about $412,000 per unit
    - In Bell McKinnon:
        - 1-bedroom: $6,589 per m^2 or about $362,000 per unit
        - 2-bedroom: $6,038 per m^2 or about $447,000 per unit
        - 3-bedroom: $5,493 per m^2 or about $560,000 per unit
        - Average price of $6,157 per m^2 or about $420,000 per unit
- Sales commission of 3% on all products above
- Rental apartments:
    - Rental rate:
        - Outside of Bell McKinnon:
            - 1-bedroom: $1,700 per month
            - 2-bedroom: $1,950 per month
            - 3-bedroom: $2,350 per month
        - In Bell McKinnon:
            - 1-bedroom: $1,734 per month
            - 2-bedroom: $1,989 per month
            - 3-bedroom: $2,397 per month
    - Vacancy rate:
        - First year: 5%
        - Second year: 2%
        - Ongoing: 1%
    - Operating costs equal to 30% of gross income
    - Periodic structural maintenance of $80 per m^2 every five years

- Annual capitalization rates:[52]
  - At present: 3.9% [53]
  - At disposition, after 30 years of operation: 7%

- Commercial:
  - Annual net rental rate: $377 per m^2
  - Vacancy rate:
    - First year: 10%
    - Second year: 5%
    - Ongoing: 2%
  - Annual operating costs: $130 per m^2
  - Structural reserve fund: 1% of revenue minus operating costs
  - Periodic structural maintenance of $80 per m^2 every five years
  - Annual capitalization rates:
    - At present: 5.75% [53]
    - At disposition, after 30 years of operation: 10%.

[52] The capitalization rate of a revenue-generating asset is the amount of net revenue it produces in a given time-period (typically one year, as in this case), divided by the sale value of that asset. A lower capitalization rate indicates a higher sales price. Capitalization rates are therefore a measure of investor appetite.

[53] Source: Altus Canadian Cap Rate Guide for Q2 2023.

7 Results

Note again that the methodology presented here is likely to become obsolete soon due to land use reforms proposed by the Government of BC. This analysis reflects the old paradigm and should be understood in that context.

7.1 Residual Value and Land Lift Results

Applying the methodology described in Section 6 produces the following results:

Table 5: Residual land value by scenario

Site	Land use	Chemainus	Crofton	Bell McKinnon	South End
Small site – 3,000 m^2	Single family	$1,200,000	$1,200,000	$1,277,000	$1,200,000
	Duplex (750 m^2 lot)	$952,000	$924,000	$969,000	$919,000
	Duplex (500 m^2 lot)	$1,111,000	$1,114,000	$1,169,000	$1,108,000
	Townhomes (lower density)	$540,000	$336,000	$1,254,000	$525,000
	Townhomes (higher density)	$1,275,000	$1,298,000	$1,947,000	$1,242,000
	Strata apartments (lower density)	-$2,524,000	-$2,499,000	-$1,782,000	-$2,556,000
	Strata apartments (2.5 FSR)	-$10,161,000	-$10,110,000	-$9,976,000	-$10,227,000
	Rental apartments (lower density)	-$230,000	-$200,000	$350,000	-$260,000
	Rental apartments (2.5 FSR)	-$4,200,000	-$4,150,000	-$3,900,000	-$4,300,000
	Strata mixed-use (lower density)	-$7,190,000	-$3,289,000	-$7,102,000	-$7,235,000
	Strata mixed-use (higher density)	-$10,871,000	-$5,263,000	-$10,755,000	-$10,932,000
	Rental mixed-use (lower density)	-$3,975,000	-$1,370,000	-$3,835,000	-$4,010,000
	Rental mixed-use (higher density)	-$6,080,000	-$2,515,000	-$5,850,000	-$6,105,000
Large lot – 2.4 ha	Single family (one dwelling)	$766,000	$766,000	$800,100	$766,000
	Duplex (750 m^2 lot)	$2,347,000	$2,391,000	$2,535,000	$2,280,000
	Duplex (500 m^2 lot)	$2,450,000	$2,505,000	$2,670,000	$2,365,000
	Townhomes (lower density)	$2,587,000	$2,105,000	$5,280,000	$2,485,000
	Townhomes (higher density)	$4,895,000	$5,030,000	$9,250,000	$4,690,000

Each cell of Table 5 shows the residual land value supported by its unique combination of geography, land use, and site size. Negative entries indicate projects that are not financially viable under current market conditions and would require cash subsidies to become viable. Note that:

- The as-of-right land use represents the base residual land value that a proposed rezoning would need to exceed to generate land lift:
    - For small site scenarios, this as-of-right land use is single family or duplex and bears a land value of about $1.2 million for the hypothetical 3,000 m^2 site containing four or lots
    - For large lot scenarios this as-of-right land use is single family and bears a land value of about $766,000 ($800,000 in Bell McKinnon) for the hypothetical 2.4 ha single lot site

- On small sites, townhome development is viable (it generates positive land value) but does not support more land value or significantly more land value than single family or duplex development on the same site. The exception is in Bell McKinnon, where a very high townhouse density of 1.8 FSR is achieved

- Apartment or mixed-use development of any tenure is not viable in North Cowichan today with the exception of low-density rental apartments in Bell McKinnon. This is discussed in more detail in Section 7.4

- Both the marginal nature of townhome development and the non-viability of apartment and mixed-use development referred to in the previous two bullet points may change in time as market conditions shift: with high interest rates, high costs, and stagnant prices, it is currently a difficult time to develop

- In contrast to small site rezoning, the rezoning of large lots yield land lift: this is intuitive because the existing zoning allows only one dwelling on a large property, so in these cases the hypothetical rezoning creates a significant increase in overall density and unit count. This land lift is expressed per unit and per square meter in Table 6 below:

Table 6: Land lift by large lot scenario

	Land use	Chemainus	Crofton	Bell McKinnon	South End
Per unit	Duplex (750 m^2 lot)	$24,703	$25,391	$27,108	$23,656
	Duplex (500 m^2 lot)	$21,050	$21,738	$23,374	$19,988
	Townhomes (lower density)	$18,514	$19,447	$20,703	$17,477
	Townhomes (higher density)	$19,081	$19,705	$23,863	$18,134
Per m^2	Duplex (750 m^2 lot)	$159	$164	$175	$153
	Duplex (500 m^2 lot)	$136	$140	$151	$129
	Townhomes (lower density)	$152	$159	$170	$143
	Townhomes (higher density)	$156	$162	$196	$149

The impact of geography comes into clearer view in Table 6: development in Bell McKinnon supports the greatest land lift followed by Crofton and Chemainus, with South End supporting the least land lift. These results reflect Bell McKinnon's special attractiveness but otherwise are a product of each local area's different DCC rates.

A general trend of about $150 of land lift per square meter of development is evident. This amount is somewhat greater for larger-lot duplex development ($155 - $165 per m^2) and somewhat lower for smaller-lot duplex development ($130 - $150 per m^2). Denser townhome developments produce greater land lift per square foot, indicating economy of scale. But note that the highest-performing land use – high-density townhome development in Bell McKinnon – is at a very high density of 1.8 FSR which may not be achievable in all locations.

7.2 Recommendations

MPLE performed some sensitivity analysis with respect to lot size and found that these results are robust at or above about 1 hectare but that land lift per existing lot decreases for smaller lots to eventually produce results similar to those indicated in Table 6 above.

MPLE typically recommends that municipalities seek 50% - 75% of land lift for community amenities. Under the present challenging economic circumstances, we recommend 50% in this case, which is about $75 per square meter of gross floor area.

We therefore recommend the following CAC policy:

1) **That the Municipality seek community amenity contributions of $75 per square meter of proposed single family, plex, or townhome gross floor area, whenever**

2) **The existing zoning permits only one single family dwelling or one two-family dwelling per lot, and**

3) **The existing lot is greater than one hectare in size.**

So, for example, consider the case of a 2 ha parcel rezoned for townhome development at a density of 1.1 FSR:

- Land area = 2 ha = 20,000 m^2
- Gross floor area = 1.1 × 20,000 m^2 = 22,000 m^2
- Community amenity contribution = 22,000 m^2 × $75 per m^2 = $1.65 million.

We further recommend **that the Municipality introduce this CAC charge gradually over a period of at least 2 years** – for example $25 per m^2 in the first year rising to $75 per m^2 in the second year – so that the market may adjust to the newly anticipated costs: remember that CAC costs come from land lift and should ultimately be reflected in somewhat lower land prices, but that this only works if landowners and developers can anticipate them.

7.3 Affordable Housing

Community amenities may take the form of cash – as assumed above – or may be delivered in-kind. One popular community amenity for municipalities to acquire through rezoning is affordable housing, and the Municipality of North Cowichan has produced a Draft Affordable Housing Policy and Implementation Plan (DAHPIP) with precisely this aim. This document defines an affordable dwelling as:

- "In the case of housing units offered for sale, a dwelling unit for which the purchase price is at least 20% below the market value
- In the case of housing units offered for rent, a dwelling unit for which the rent charged is no more than the Average Rent for a dwelling unit with the same number of bedrooms." (DAHPIP, pg. 2)

The DAHPIP proposes to require that a minimum of 10% of all units in any housing development project be secured affordable housing units.

For each of the 16 rezoning scenarios identified as suitable for CACs (those scenarios shown in Table 6, pg. 43), MPLE has calculated the share of units that could be required as affordable housing that would be equivalent to a cash CAC of $75 per m^2 (the supportable CAC rate identified in Section 7.2). This share is identified below:

Table 7: Land lift by large lot scenario

Land use	Chemainus	Crofton	Bell McKinnon	South End
Duplex (750 m^2 lot)	12.5%	12.5%	12.5%	12.5%
Duplex (500 m^2 lot)	12.5%	12.5%	12.5%	12.5%
Townhomes (lower density)	12.2%	11.8%	13.9%	12.2%
Townhomes (higher density)	13.9%	13.9%	15.5%	13.9%

As indicated in Table 7, an affordable housing share of about 12.5% (one in eight units) is equivalent to a CAC cash contribution of $75 per m^2, so MPLE concludes that this affordable housing requirement would be supportable on large-lot rezonings of the kind identified in Section 7.2. However, note the following limitations:

- This affordable housing supply would come from land lift, and so would not be supportable for apartment, mixed-use, or rezonings of small lots under current market conditions
- This affordable housing requirement would be *instead of* rather than *in addition to* the $75 per m^2 cash contribution identified above. The MNC could also split the contributions, requiring 10% affordable units plus a contribution of $15 per m^2 on gross floor area
- MPLE only tested the affordability requirement defined for homes-for-sale and has not tested the viability of affordable rental housing as this tenure does not fit the duplex and townhouse developments that support contributions in today's market.

7.4 Apartment Viability

To better understand why apartments and mixed-use projects are not viable in North Cowichan today, consider the following example which represents a hypothetical 4-storey apartment building in Bell McKinnon:

- Average price (revenue) of $6,165 per m^2 or $422,000 per unit. After commission that yields $409,000 per unit
- Hard costs of $315,000 per unit, consisting of:
    - Building cost of $3,170 per m^2 or $255,000 per unit
    - Parking cost of $25,000 per unit
        - 1.65 units per stall (per Zoning Bylaw)
        - 16% of stalls are underground: $60,000 per stall
        - 84% of stalls are at-grade: $6,125 per stall
    - Other hard costs (servicing, connection fees, common space fixtures & equipment): About $6,300 per unit
    - 10% contingency on above: $29,000 per unit
- Soft costs of $56,000 per unit (18% of hard costs). This includes about $8,800 per unit of DCCs
- Financing (interest) costs of $30,000 per unit

So hard, soft, and interest costs equal about $398,000, leaving on $11,000 per unit in the project budget for land value, CACs, affordable housing, and profit. Even if all of this was assigned to profit, that would be 2.7% profit, well below the level required by lenders.

The informed observer may note that developers today are still submitting applications for apartment developments in Bell McKinnon. Why would this be if it is currently impossible to make money on such projects? Here are some possible explanations:

- Developers are building affordable rental housing under the CMHC's Rental Construction Financing Initiative. This might produce some very low but positive IRRs, which might still be attractive to REITs with their long-term perspective
- Developers acquired the land a long time ago and are treating land as a sunk cost
- Developers are gambling on strata prices and market rents in excess of our assumptions, that is, they are assuming that prices will rise rapidly in the near future. It is worth noting that – for lack of local examples – our apartment revenue assumptions are among this model's most tenuous.
- Developers are settling for a break-even development so they do not have to lay off staff, etc. Developers will often settle for smaller profit margins in a tight market. That may be fair, but it makes a poor basis for public policy as it is not sustainable.

Some combination of the above factors is likely at play.

8 Sensitivity Analysis

Using the financial model detailed in Section 6, MPLE has tested the impact on development feasibility in North Cowichan of changes to the following variables:

- Residential revenues (both sales prices and rental revenues)
- Construction costs
- Development cost charges
- Parking requirements
- Interest rates
- Duration of approvals process.

To perform this investigation, we have tested all scenarios in the Bell McKinnon and South End local areas as these represent the upper and lower ends respectively of development feasibility in North Cowichan. Results from these two areas are broadly applicable to both Chemainus and Crofton.

34 combinations of geography, land use, and density as discussed in Section 6.3 are subjected to 26 permutations of economic assumptions, yielding a huge number of total scenarios considered in this section; graphics are therefore generally broken into three groups to facilitate interpretation:

- Small-site ground-oriented scenarios (single family, duplex, and townhome)
- Small-site apartment and mixed-use scenarios
- Large site scenarios.

Development feasibility is generally indicated with residual land value. Because Bill 46 makes the land-lift paradigm obsolete in British Columbia, the residual land values of different uses are not directly compared in this section but may still be informally compared to suggest the likely direction of developer interest.

For ease of interpretation, MPLE assumes that development on small sites is viable if it supports a land value of greater than one million dollars, and development on large sites is viable if it supports a land value of two million dollars.

A range of 80% - 120% of current assumptions is applied to all six parameters to facilitate more direct comparison between parameters. These six parameters are tested one-at-a-time for ease of understanding, but in practice they will vary together as market forces respond to one another. As a simplified heuristic, their combined impacts should be expected to sum.

8.1 Impact of Changes to Residential Revenue

MPLE has adjusted both sales and rental revenue down to 80% of current market levels and up to 120% of current market levels.

To interpret the graphics in Section 8, note that steeper slopes indicate more sensitivity (development viability is more responsive to the parameter in question) and the viability threshold is the approximate point at which development becomes economically viable, as discussed on pg. 47.

Figure 14: Impact of residential revenue on small-site ground-oriented development feasibility

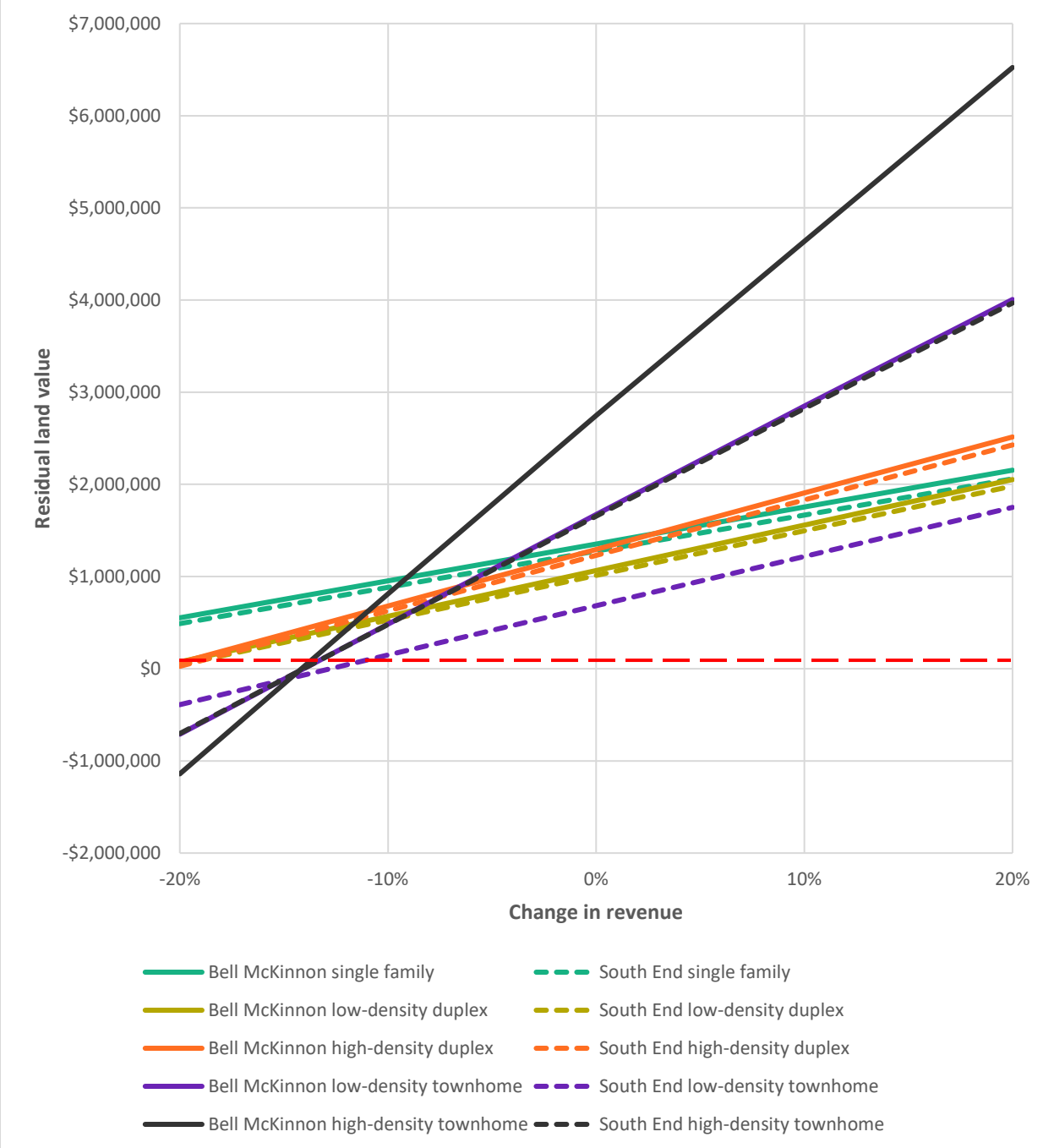


Figure 15: Impact of residential revenue on apartment and mixed-use development feasibility

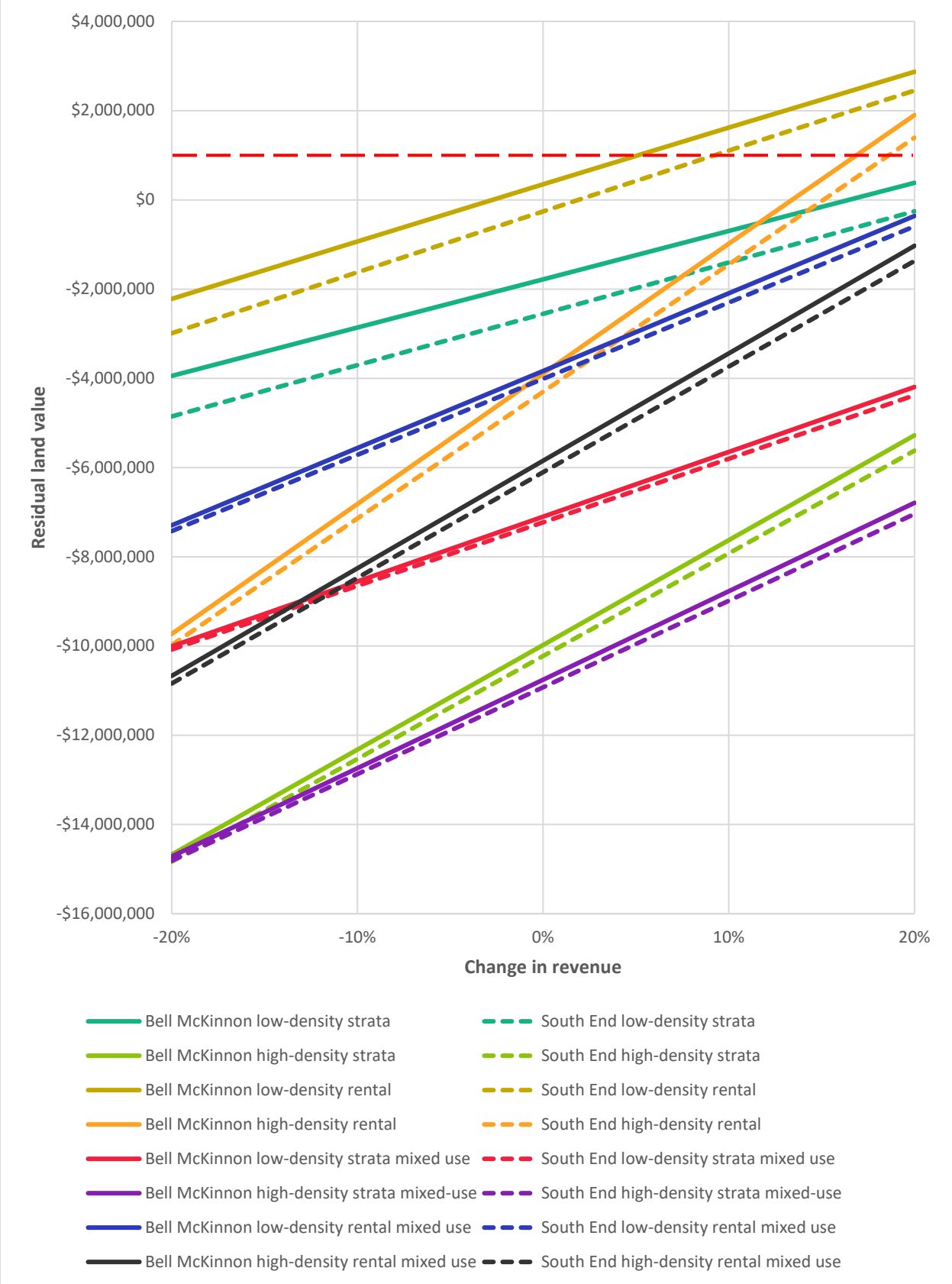


Figure 16: Impact of residential revenue on large-site development feasibility

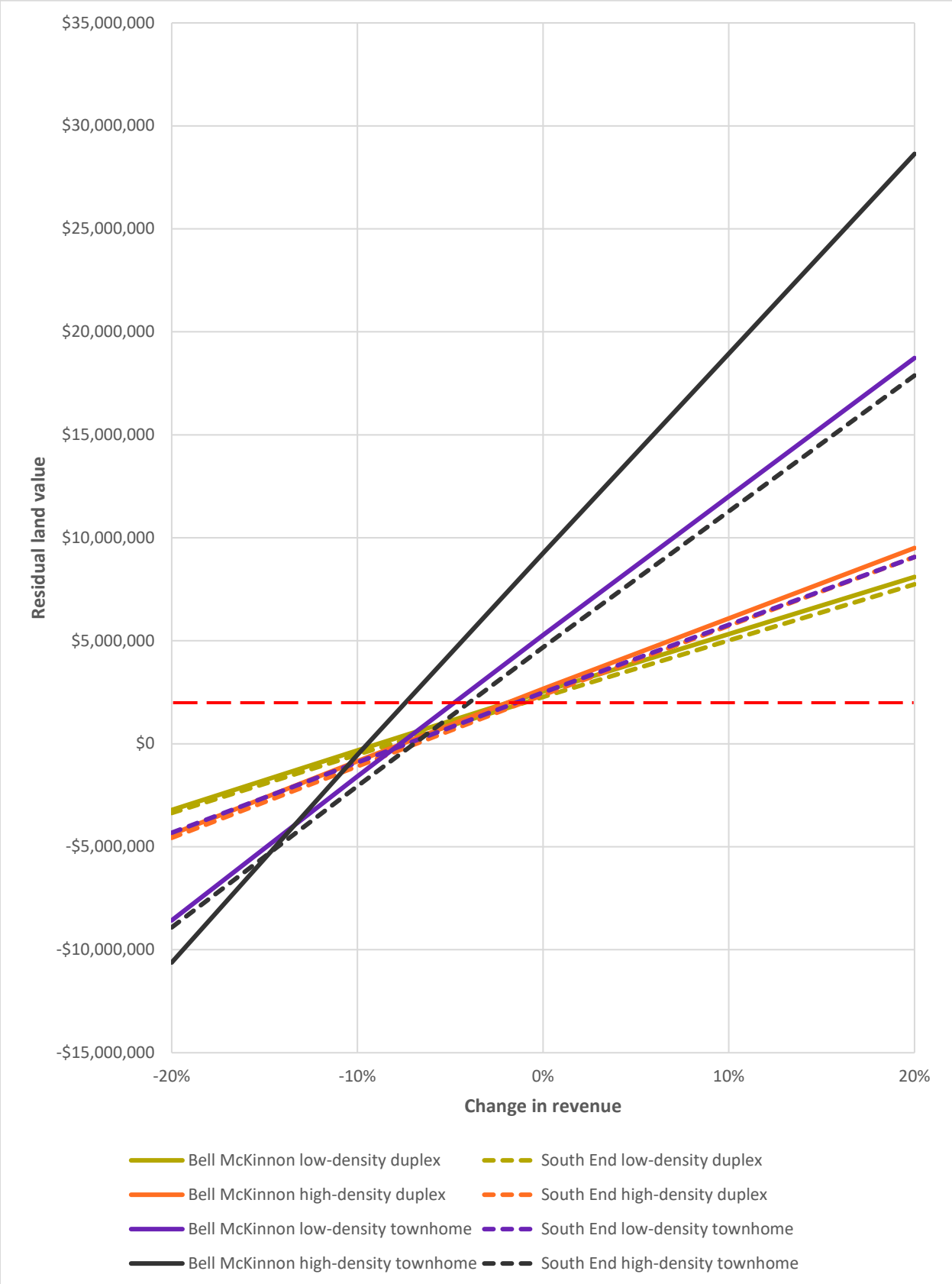


Table 8: Impact of residential revenue on development feasibility

		Land use	Sensitivity (slope)[54]	Viability threshold[55]
Bell McKinnon	Small site	Single family	$400,000	-9%
		Low-density duplex	$494,000	-1%
		High-density duplex	$612,000	-5%
		Low-density townhome	$1,179,000	-6%
		High-density townhome	$1,916,000	-9%
		Low-density strata apartments	$1,082,000	+26%
		High-density strata apartments	$2,349,000	+47%
		Low-density rental apartments	$1,273,000	+5%
		High-density rental apartments	$2,908,000	+17%
		Low-density strata mixed-use	$1,453,000	+56%
		High-density strata mixed-use	$1,982,000	+59%
		Low-density rental mixed-use	$1,734,000	+28%
		High-density rental mixed-use	$2,410,000	+28%
	Large site	Low-density duplex	$2,829,000	-2%
		High-density duplex	$3,475,000	-2%
		Low-density townhome	$6,826,000	-5%
		High-density townhome	$9,815,000	-7%
South End	Small site	Single family	$393,000	-7%
		Low-density duplex	$485,000	-0%
		High-density duplex	$601,000	-4%
		Low-density townhome	$535,000	+6%
		High-density townhome	$1,168,000	-6%
		Low-density strata apartments	$1,150,000	+31%
		High-density strata apartments	$2,303,000	+49%
		Low-density rental apartments	$1,360,000	+9%
		High-density rental apartments	$2,843,000	+19%
		Low-density strata mixed-use	$1,425,000	+58%
		High-density strata mixed-use	$1,943,000	+61%
		Low-density rental mixed-use	$1,708,000	+29%
		High-density rental mixed-use	$2,368,000	+30%
	Large site	Low-density duplex	$2,776,000	-1%
		High-density duplex	$3,409,000	-1%
		Low-density townhome	$3,347,000	-1%
		High-density townhome	$6,699,000	-4%

[54] Change in land value per 10% change in revenue compared to the current market

[55] Development is viable if revenues are above this level, which is indicated as a change with respect to the current market. So, for example, a value of 0% means this development is just viable in the current market, a value of -5% means that revenues could drop by 5% and this project would still be viable, and a value of +5% means that revenues would need to increase by 5% for this development to be viable.

Entries in this column are colour-coded red if they are unviable in the current market.

8.2 Impact of Changes to Construction Costs

MPLE has adjusted construction costs down to 80% of current market levels and up to 120% of current market levels. This includes building construction, site servicing and geotechnical, and parking construction since these hard cost variables can be expected to fluctuate together.

Figure 17: Impact of construction costs on small-site ground-oriented development feasibility

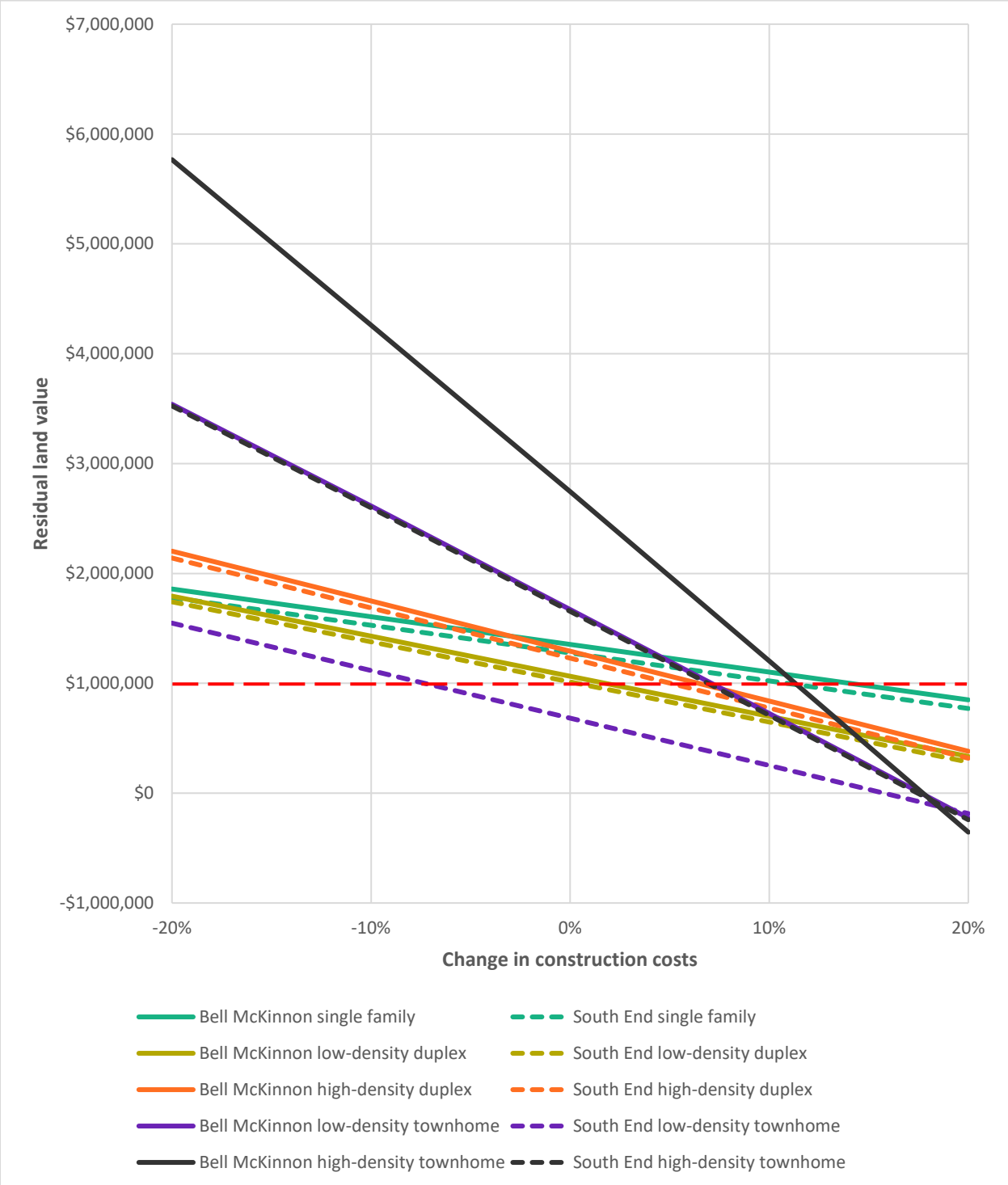


Figure 18: Impact of construction costs on apartment and mixed-use development feasibility

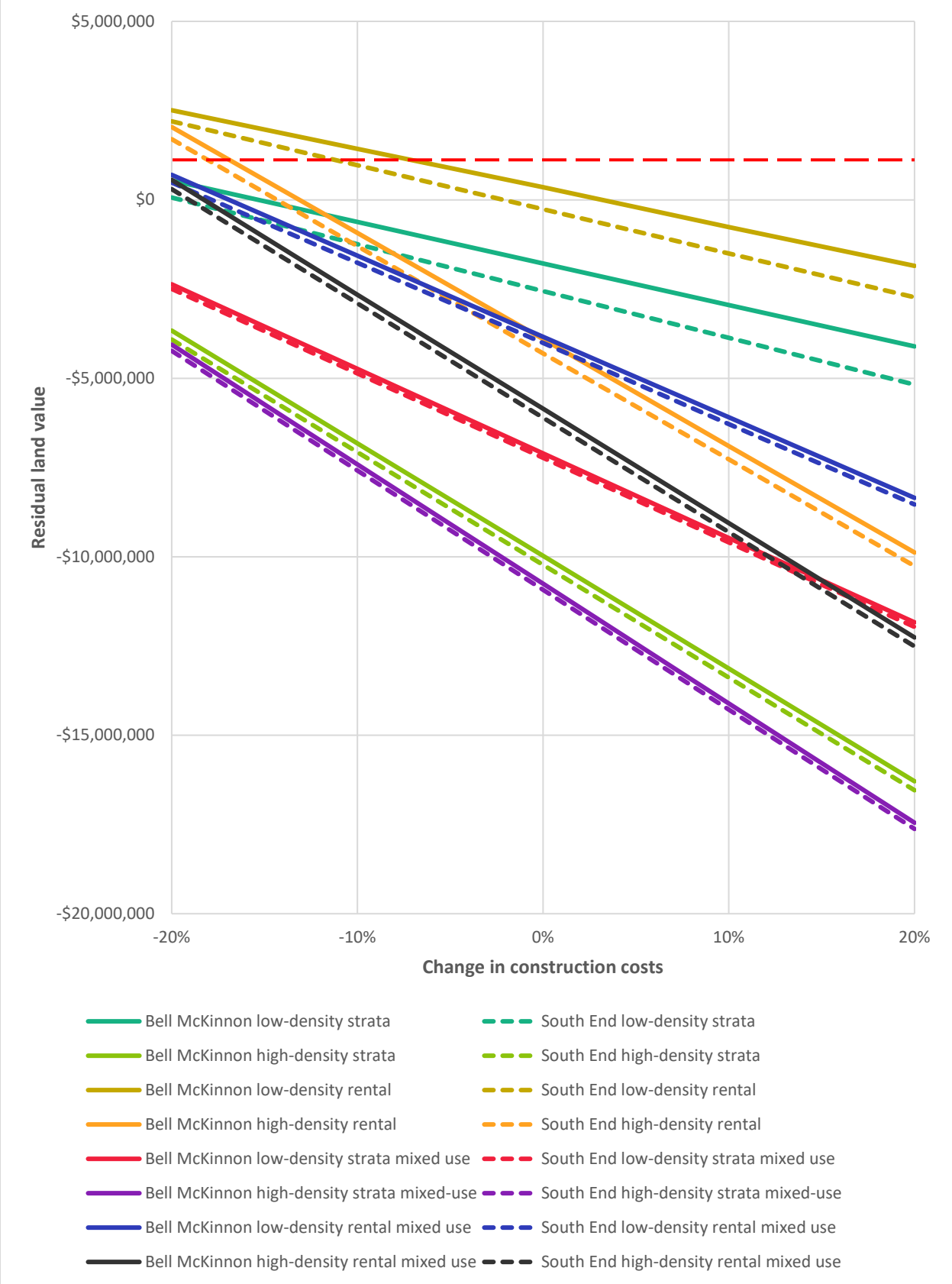


Figure 19: Impact of construction costs on large-site development feasibility

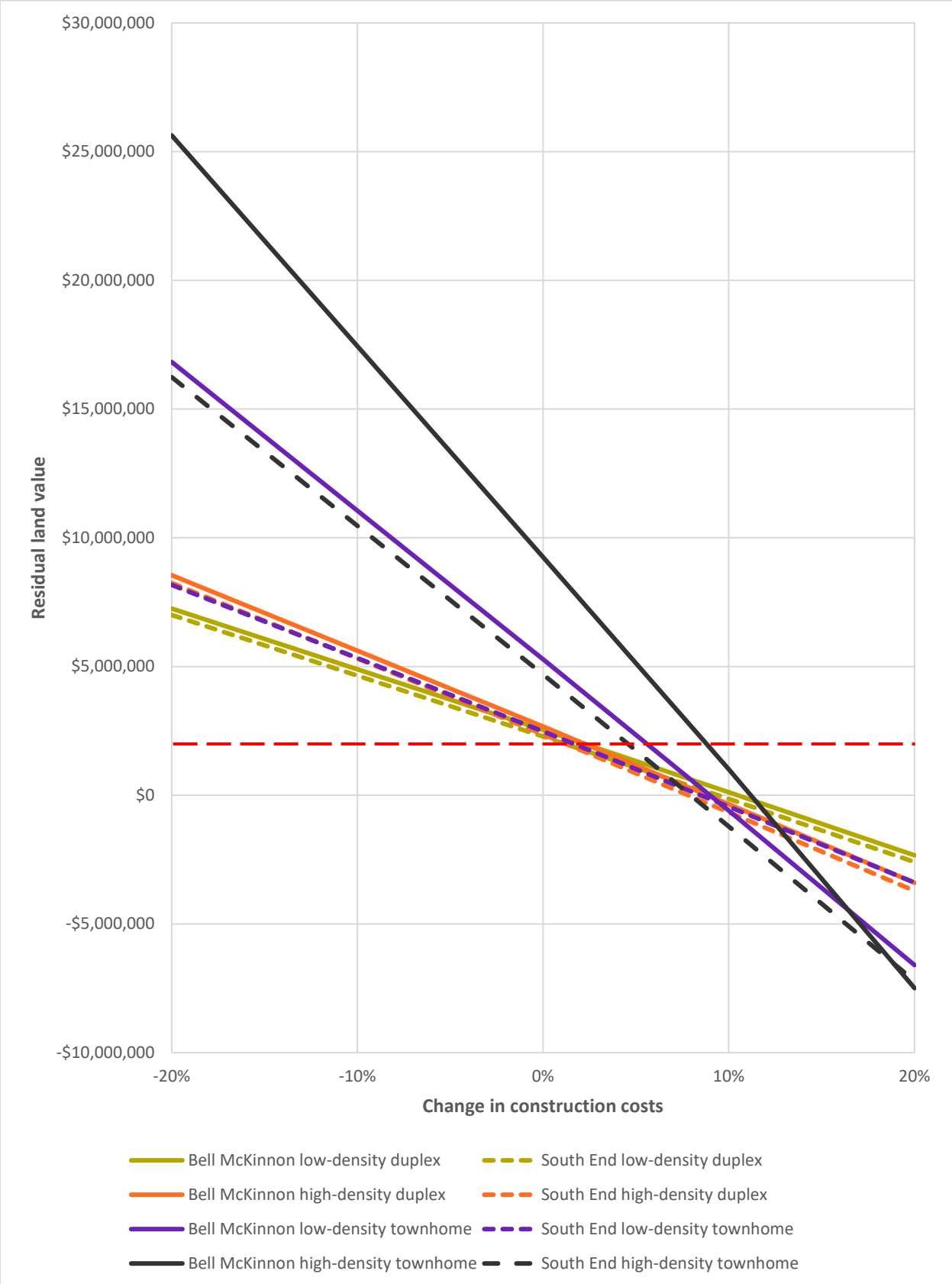


Table 9: Impact of construction costs on development feasibility

		Land use	Sensitivity (slope)[56]	Viability threshold[57]
Bell McKinnon	Small site	Single family	-$252,000	+14%
		Low-density duplex	-$365,000	+2%
		High-density duplex	-$455,000	+6%
		Low-density townhome	-$942,000	+7%
		High-density townhome	-$1,531,000	+11%
		Low-density strata apartments	-$1,161,000	-24%
		High-density strata apartments	-$3,157,000	-35%
		Low-density rental apartments	-$1,090,000	-6%
		High-density rental apartments	-$2,980,000	-16%
		Low-density strata mixed-use	-$2,368,000	-34%
		High-density strata mixed-use	-$3,349,000	-35%
		Low-density rental mixed-use	-$2,263,000	-21%
		High-density rental mixed-use	-$3,205,000	-21%
	Large site	Low-density duplex	-$2,396,000	+2%
		High-density duplex	-$2,987,000	+2%
		Low-density townhome	-$5,856,000	+6%
		High-density townhome	-$8,280,000	+9%
South End	Small site	Single family	-$252,000	+11%
		Low-density duplex	-$365,000	+0%
		High-density duplex	-$456,000	+5%
		Low-density townhome	-$433,000	-7%
		High-density townhome	-$942,000	+7%
		Low-density strata apartments	-$1,311,000	-27%
		High-density strata apartments	-$3,157,000	-36%
		Low-density rental apartments	-$1,233,000	-10%
		High-density rental apartments	-$2,990,000	-18%
		Low-density strata mixed-use	-$2,368,000	-35%
		High-density strata mixed-use	-$3,349,000	-36%
		Low-density rental mixed-use	-$2,255,000	-22%
		High-density rental mixed-use	-$3,203,000	-22%
	Large site	Low-density duplex	-$2,398,000	+1%
		High-density duplex	-$2,990,000	+1%
		Low-density townhome	-$2,890,000	+2%
		High-density townhome	-$5,863,000	+5%

[56] Change in land value per 10% change in construction costs compared to the current market

[57] Development is viable if construction costs are below this level, which is indicated as a change with respect to the current market. So, for example, a value of 0% means this development is just viable in the current market, a value of +5% means that costs could increase by 5% and this project would still be viable, and a value of -5% means that costs would need to decrease by 5% for this development to be viable.

Entries in this column are colour-coded red if they are unviable in the current market.

8.3 Impact of Changes to Development Cost Charges

MPLE has adjusted development costs charges down to 80% of current levels and up to 120% of levels currently represented in the model, which are already above current rates. Note that the Municipality of North Cowichan charges DCCs to single family lots at the time of subdivision, meaning that DCCs do not apply to single family lots for our purposes, since in this analysis single family lots are assumed to be already subdivided.

Figure 20: Impact of DCCs on small-site ground-oriented development feasibility

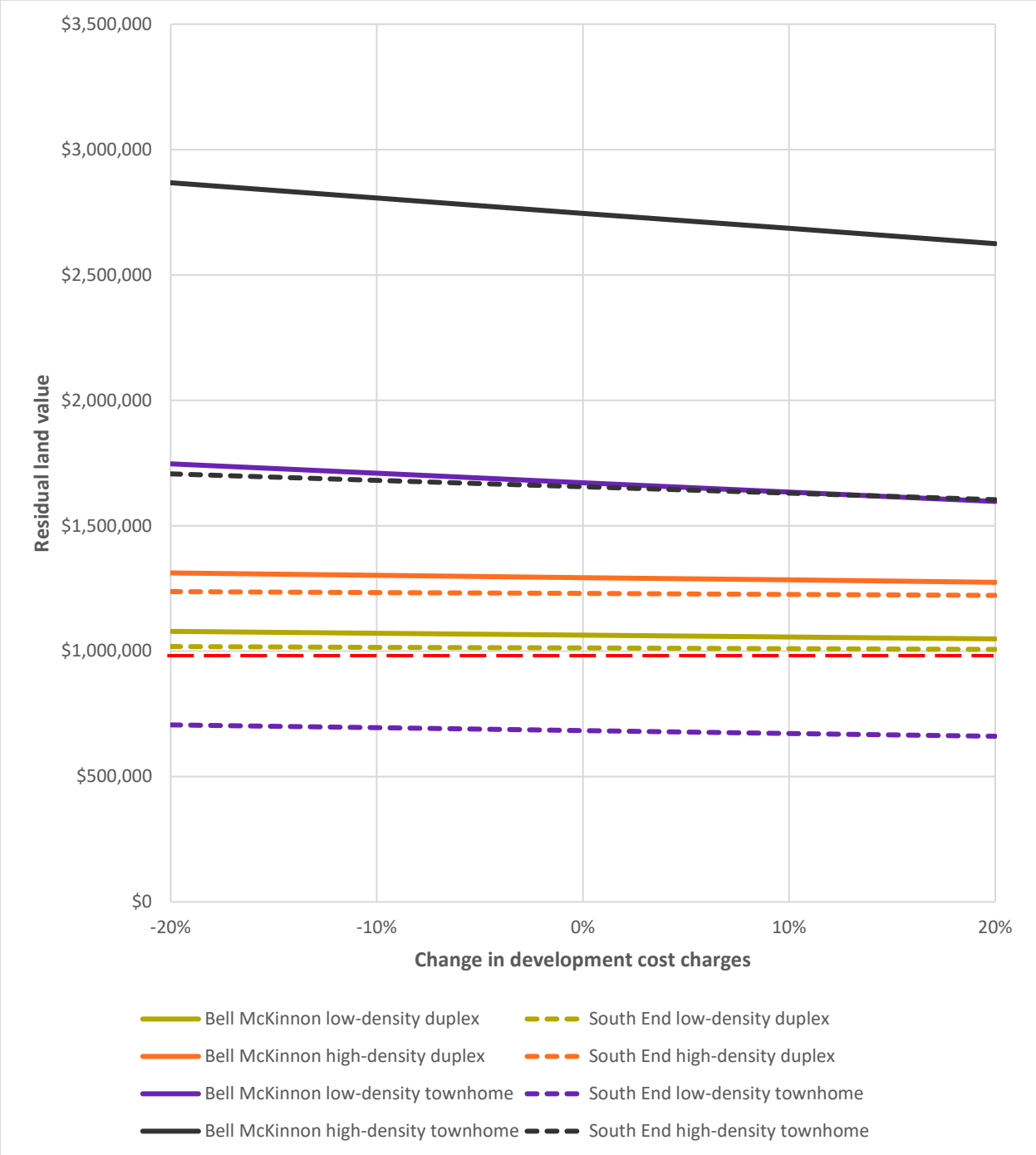


Figure 21: Impact of DCCs on apartment and mixed-use development feasibility

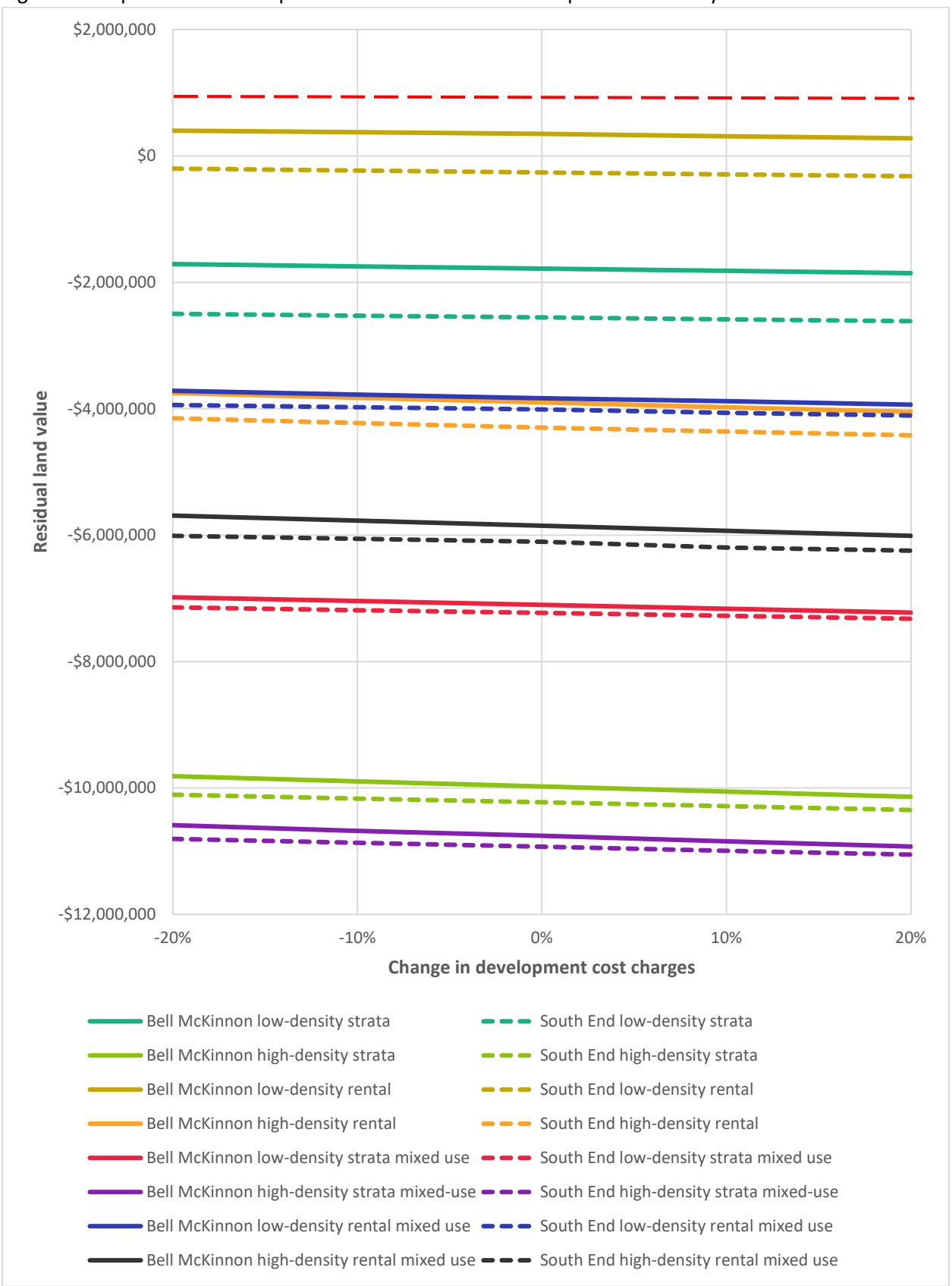


Figure 22: Impact of DCCs on large-site development feasibility

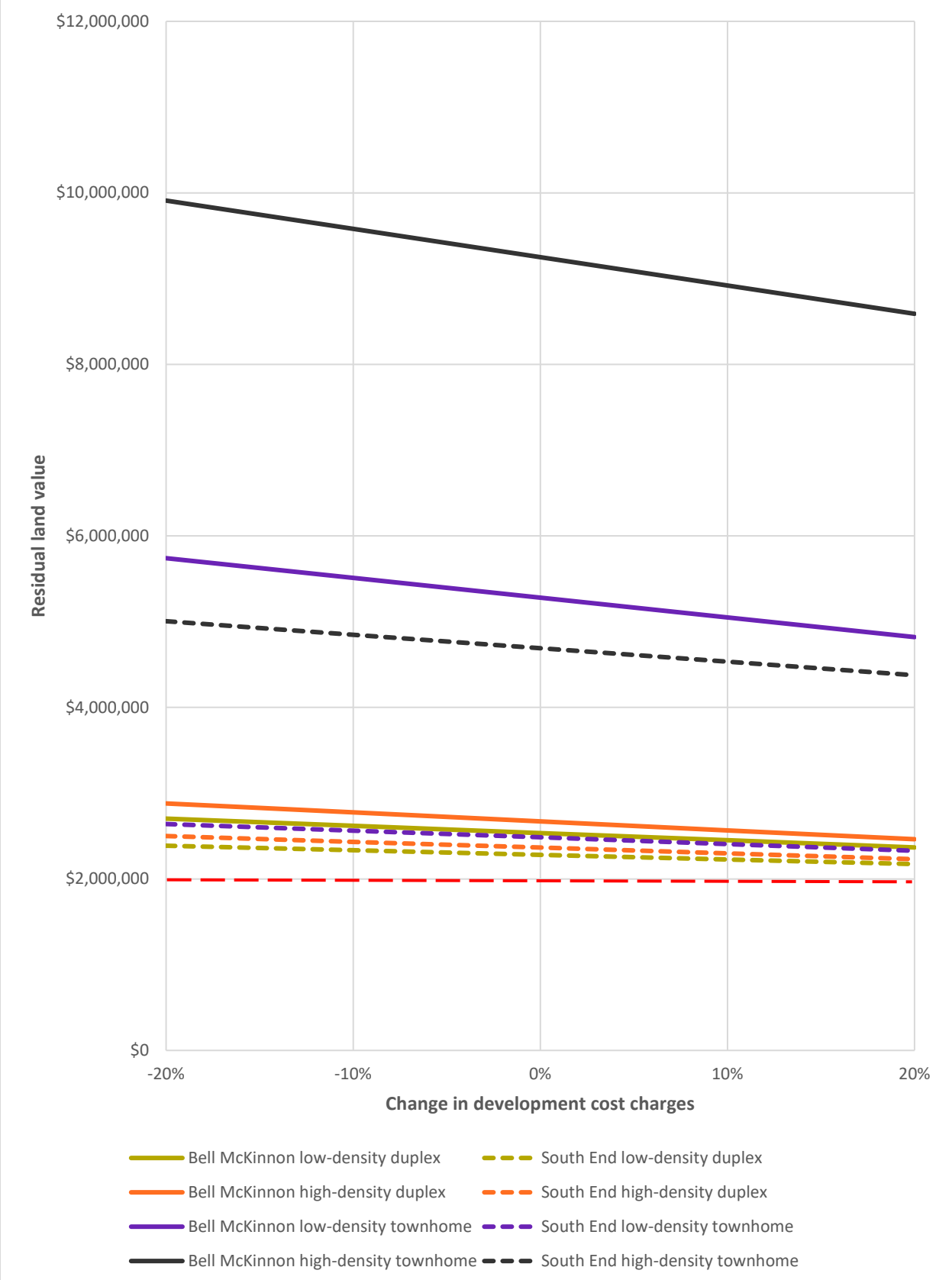


Table 10: Impact of development cost charges on development feasibility

		Land use	Sensitivity (slope)[58]	Viability threshold[59]
Bell McKinnon	Small site	Low-density duplex	-$7,500	+85%
		High-density duplex	-$9,400	+313%
		Low-density townhome	-$38,000	+179%
		High-density townhome	-$61,000	+287%
		Low-density strata apartments	-$36,000	-773%
		High-density strata apartments	-$82,000	-1,347%
		Low-density rental apartments	-$30,000	-217%
		High-density rental apartments	-$75,000	-653%
		Low-density strata mixed-use	-$61,000	-1,339%
		High-density strata mixed-use	-$85,000	-1.391%
		Low-density rental mixed-use	-$55,000	-879%
		High-density rental mixed-use	-$80,000	-856%
	Large site	Low-density duplex	-$84,000	+64%
		High-density duplex	-$104,000	+64%
		Low-density townhome	-$230,000	+143%
		High-density townhome	-$330,000	+220%
South End	Small site	Low-density duplex	-$2,900	+44%
		High-density duplex	-$3,800	+613%
		Low-density townhome	-$11,000	-279%
		High-density townhome	-$26,000	+255%
		Low-density strata apartments	-$29,000	-1,216%
		High-density strata apartments	-$61,000	-1,856%
		Low-density rental apartments	-$30,000	-420%
		High-density rental apartments	-$68,000	-785%
		Low-density strata mixed-use	-$45,000	-1,829%
		High-density strata mixed-use	-$62,000	-1,916%
		Low-density rental mixed-use	-$42,000	1,200%
		High-density rental mixed-use	-$59,000	1,209%
	Large site	Low-density duplex	-$54,000	+52%
		High-density duplex	-$68,000	+54%
		Low-density townhome	-$78,000	+62%
		High-density townhome	-$158,000	+171%

[58] Change in land value per 10% change in DCCs compared to model assumptions.

[59] Development is viable if DCCs are below this level, which is indicated as a change with respect to the DCC rates assumed in the model. So, for example, a value of 0% means this development is just viable at assumed rates, a value of +5% means that rates could increase by 5% and this project would still be viable, and a value of -5% means that rates would need to decrease by 5% for this development to be viable.

Entries in this column are colour-coded red if they are unviable in the current market. These red entries suggest impossible values: DCC rates cannot decrease by more than 100%. This implies that it would be impossible to make these developments viable by reducing DCC rates. They simply do not have enough of an impact.

8.4 Impact of Parking Requirements

Parking requirements only impact apartments and commercial space, so other built forms are excluded from this section. Note that MPLE has tested increments equivalent to 10% increases or reductions in parking requirements; the current parking requirement – including visitor parking – is 1.65 stalls per unit, so the 10% intervals are 0.99, 1.155, 1.32, 1.485, and 1.65 stalls per unit. We did not test the impact of increases above 1.65 stalls per unit as this seems economically and environmentally ill-advised and politically unlikely.

Figure 23: Impact of parking requirements on apartment and mixed-use development feasibility

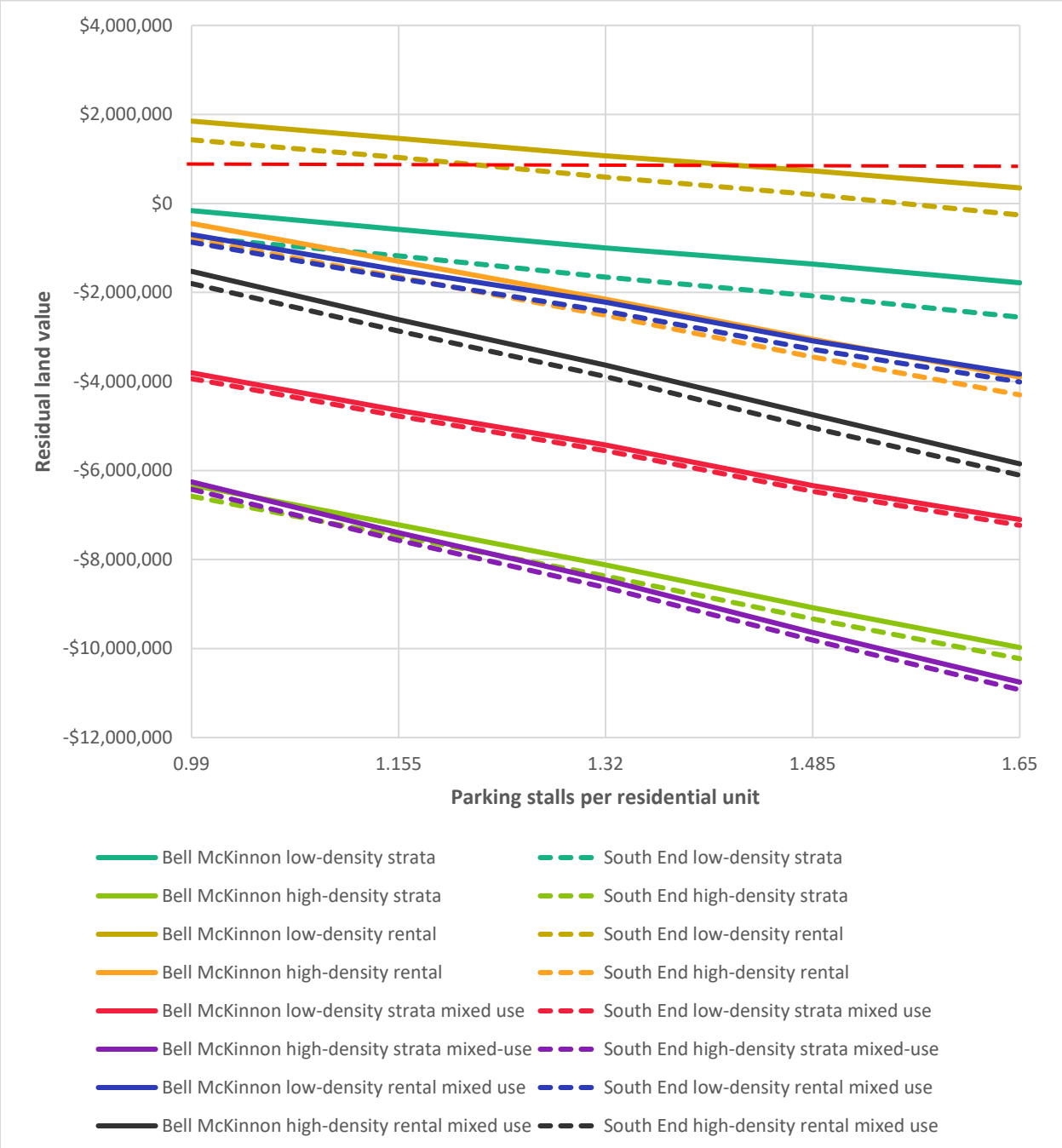


Table 11: Impact of parking requirements on apartment development feasibility

	Land use	Sensitivity (slope)[60]	Viability threshold[61]
Bell McKinnon	Low-density strata	-$405,000	0.52
	High-density strata	-$913,000	-0.33
	Low-density rental	-$375,000	1.36
	High-density rental	-$863,000	0.71
	Low-density strata mixed-use	-$824,000	0.03
	High-density strata mixed-use	-$1,125,000	-0.07
	Low-density rental mixed-use	-$784,000	0.63
	High-density rental mixed-use	-$1,081,000	0.60
South End	Low-density strata	-$450,000	0.35
	High-density strata	-$913,000	-0.38
	Low-density rental	-$423,000	1.16
	High-density rental	-$875,000	0.65
	Low-density strata mixed-use	-$824,000	0.00
	High-density strata mixed-use	-$1,126,000	-0.10
	Low-density rental mixed-use	-$785,000	0.60
	High-density rental mixed-use	-$1,076,000	0.56

[60] Change in land value per 10% change in parking requirements compared to model assumptions.

[61] Development is viable if parking requirements per unit are below this level. So, for example, a value of 1.65 means this development is just viable with assumed parking requirements, a value of 2.0 means that requirements could increase to two stalls per unit and this project would still be viable, and a value of 1.2 means that requirements would need to decrease to 1.2 stalls per unit for this development to be viable.

All scenarios represented here are unviable at present, so entries in this column are colour-coded if they suggest impossible values: Parking requirements cannot decrease below zero stalls per unit. This implies that it would be impossible to make these developments (developments with strata apartments) viable by reducing parking requirements. They simply do not have enough of an impact.

8.5 Impact of Interest Rates

MPLE has tested increments equivalent to 10% increases or reductions in interest rates; for purposes of this analysis, the current interest rate is assumed to be 7%, so the 10% intervals are 5.6%, 6.3%, 7%, 7.7%, and 8.4%. This rate is applied consistently to all forms of debt within each scenario.

Figure 24: Impact of interest rates on small-site ground-oriented development feasibility

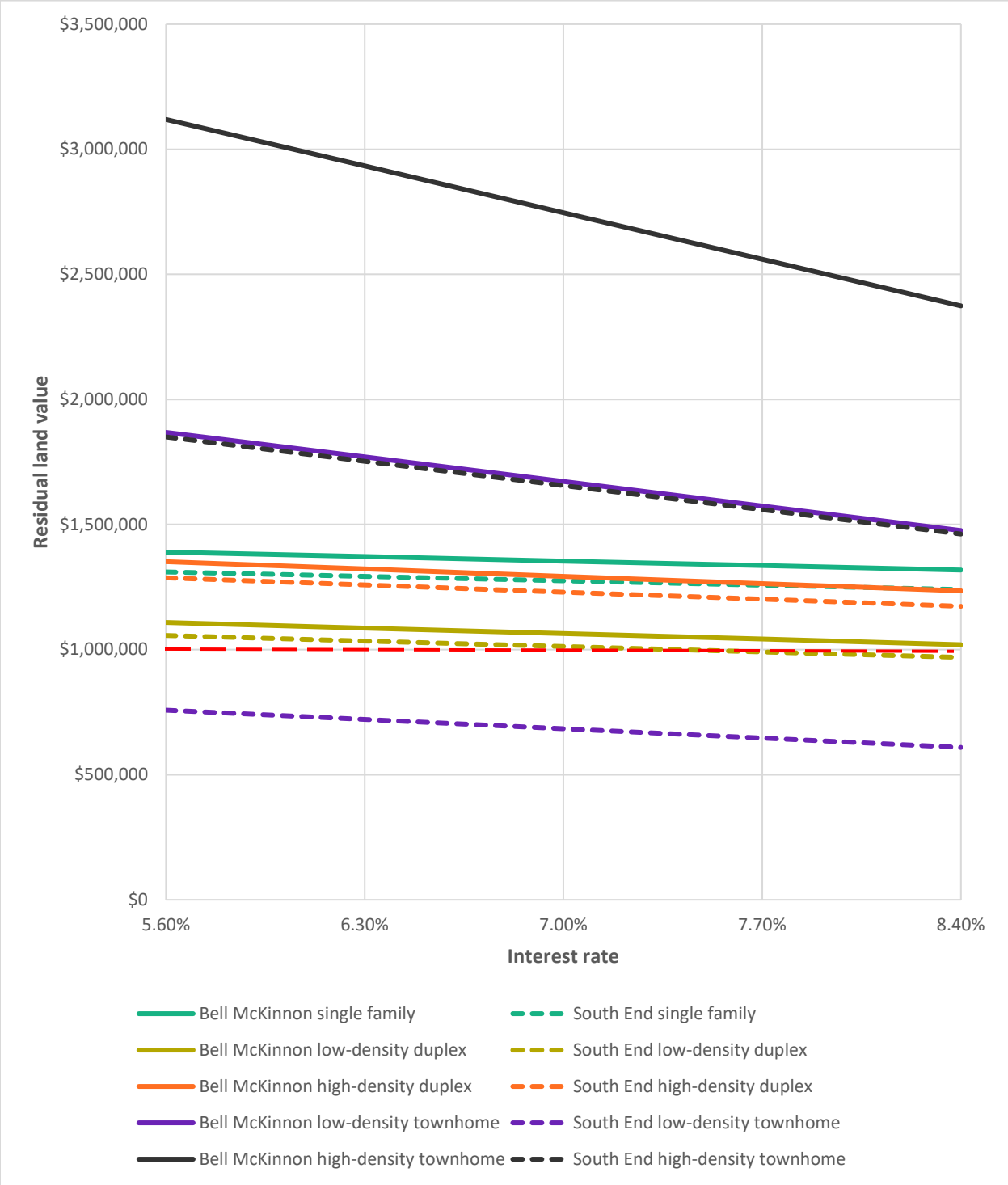


Figure 25: Impact of interest rates on apartment and mixed-use development feasibility

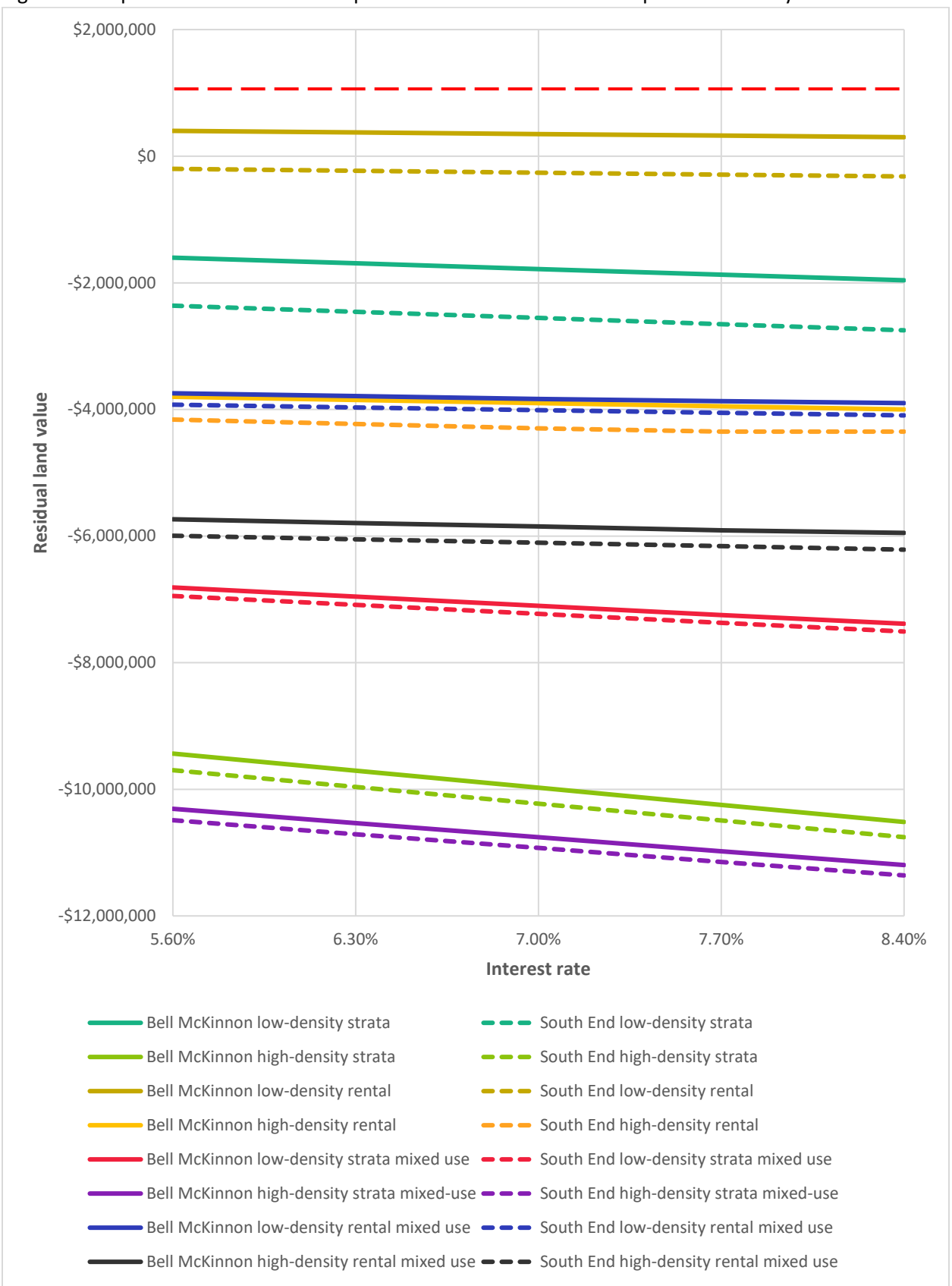


Figure 26: Impact of interest rates on large-site development feasibility

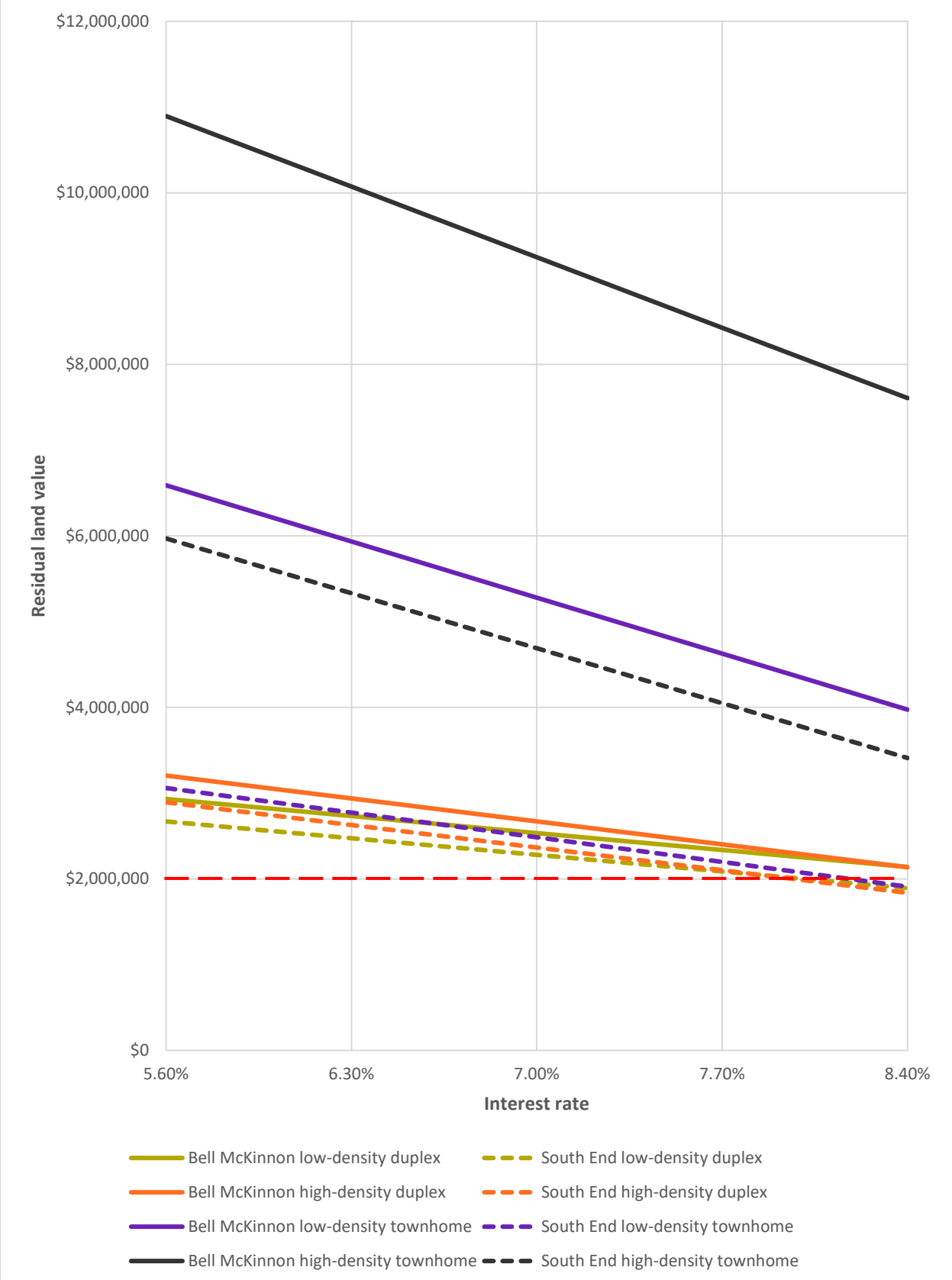


Table 12: Impact of interest rates on development feasibility

		Land use	Sensitivity (slope)[62]	Viability threshold[63]
Bell McKinnon	Small site	Single family	-$18,000	21%
		Low-density duplex	-$22,000	9%
		High-density duplex	-$29,000	14%
		Low-density townhome	-$98,000	12%
		High-density townhome	-$186,000	14%
		Low-density strata apartments	-$89,000	-15%
		High-density strata apartments	-$270,000	-21%
		Low-density rental apartments	-$25,000	-11%
		High-density rental apartments	-$50,000	-62%
		Low-density strata mixed-use	-$143,000	-33%
		High-density strata mixed-use	$222,000	-30%
		Low-density rental mixed-use	-$39,000	-80%
		High-density rental mixed-use	-$54,000	-82%
	Large site	Low-density duplex	-$195,000	9%
		High-density duplex	-$264,000	9%
		Low-density townhome	-$288,000	11%
		High-density townhome	-$640,000	13%
South End	Small site	Single family	-$18,000	18%
		Low-density duplex	-$22,000	7%
		High-density duplex	-$29,000	13%
		Low-density townhome	-$37,000	1%
		High-density townhome	-$97,000	12%
		Low-density strata apartments	-$97,000	-19%
		High-density strata apartments	-$265,000	-23%
		Low-density rental apartments	-$30,000	-22%
		High-density rental apartments	-$48,000	-71%
		Low-density strata mixed-use	-$141,000	-34%
		High-density strata mixed-use	-$218,000	-31%
		Low-density rental mixed-use	-$42,000	-76%
		High-density rental mixed-use	-$55,000	-83%
	Large site	Low-density duplex	-$198,000	8%
		High-density duplex	-$267,000	8%
		Low-density townhome	-$654,000	8%
		High-density townhome	-$822,000	10%

[62] Change in land value per 10% change in construction costs compared to the current market

[63] Development is viable if interest rates are below this level. So, for example, a value of 70% means this development is just viable in the current market, a value of 10% means that interest rates could increase to 10% and this project would still be viable, and a value of 3% means that interest rates would need to decrease to 3% for this development to be viable.

Entries in this column are colour-coded red if they are unviable in the current market. Negative values in this column suggest impossible values: interest rates cannot practically fall below zero. This implies that it would be impossible to make these developments viable by reducing interest rates. They simply do not have enough of an impact.

8.6 Impact of Approval Times

MPLE has tested increments equivalent to 10% increases or reductions in approval times; for purposes of this analysis, the current approval time is assumed to be 12 months since this analysis deals strictly with serviced properties within North Cowichan's Urban Containment Boundary, so the 10% intervals are 9.6 months, 10.8 months, 12 months, 13.2 months, and 14.4 months.

We assume that approval time is brief and invariant for parcels that do not require rezoning, so small-site single family and small-site duplex are excluded from this section. We also exclude apartment developments because under current market conditions these projects generally support negative land value, meaning that they carry no interest cost during their approvals phase. This nonsensical outcome is strictly the result of programming and only occurs in unviable projects, so is not worth consideration.

Figure 27: Impact of approval times on small-site ground-oriented development feasibility

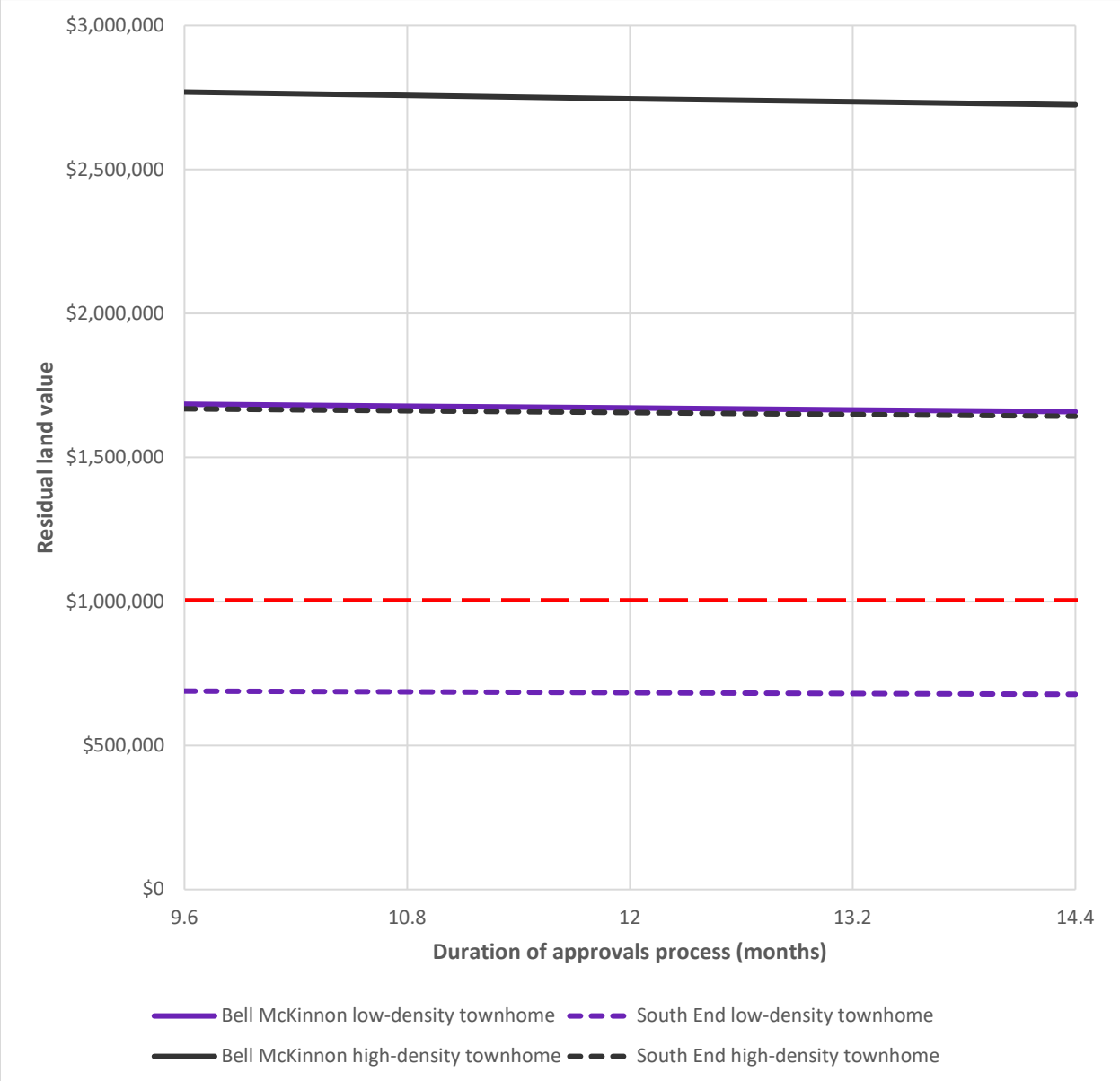


Figure 28: Impact of approval times on large-site development feasibility

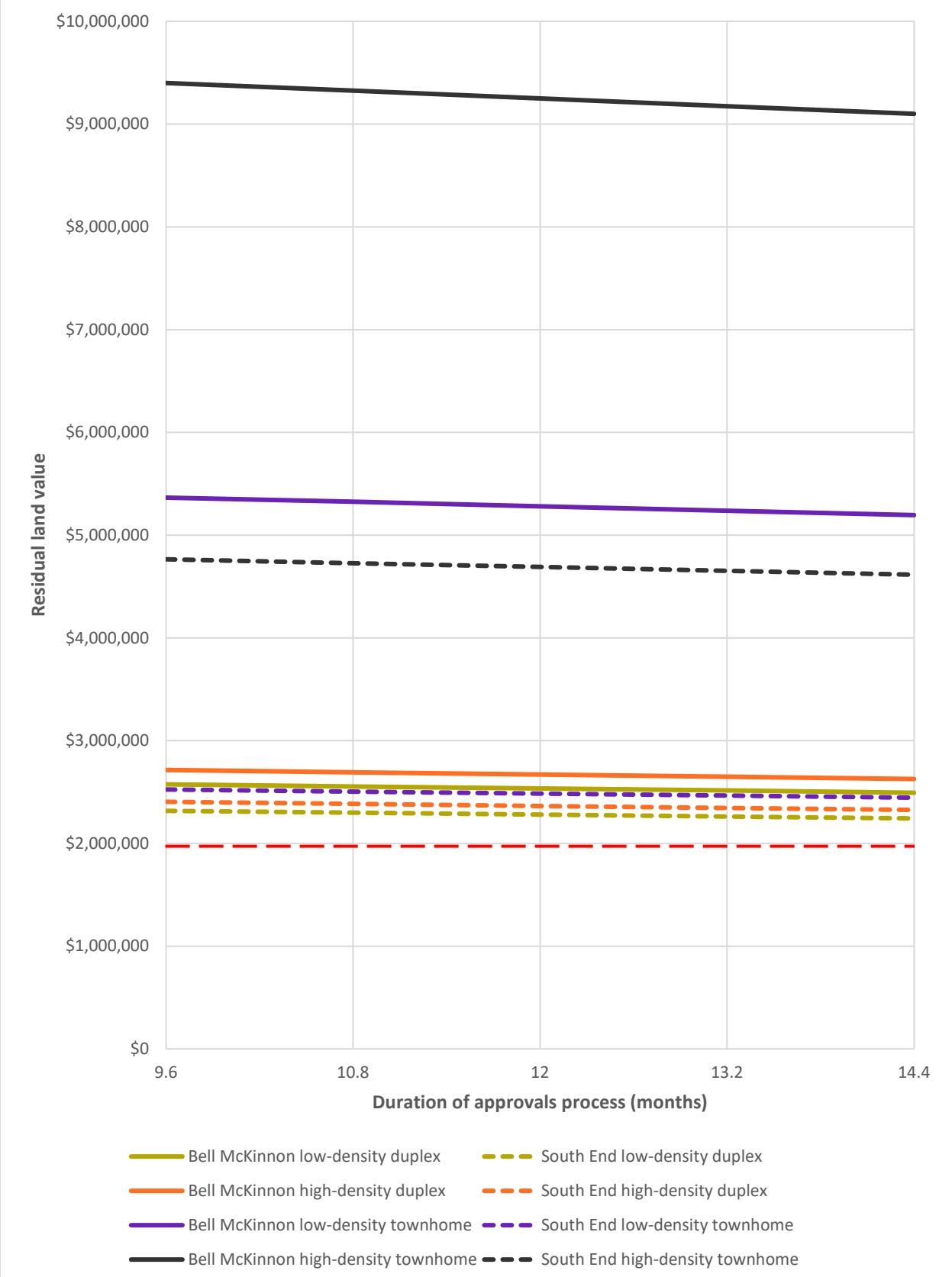


Table 13: Impact of approval times on development feasibility

		Land use	Sensitivity (slope)[64]	Viability threshold[65]
Bell McKinnon	SS	Low-density townhome	-$6,500	136
		High-density townhome	-$11,000	202
	Large site	Low-density duplex	-$21,000	43
		High-density duplex	-$22,000	49
		Low-density townhome	-$43,000	105
		High-density townhome	-$75,000	128
South End	SS	Low-density townhome	-$2,800	-122
		High-density townhome	-$6,500	133
	Large site	Low-density duplex	-$19,000	30
		High-density duplex	-$20,000	34
		Low-density townhome	-$20,000	41
		High-density townhome	-$38,000	98

[64] Change in land value per 10% change in duration of approvals period compared to model assumptions.

[65] Development is viable if the duration of the approvals period is below this level, which is indicated in months. So, for example, a value of 12 means this development is just viable at assumed rates, a value of 18 means that the approvals period could increase by 6 months and this project would still be viable, and a value of 6 means that the approvals period would need to decrease by 6 months for this development to be viable.

Entries in this column are colour-coded red if they are unviable in the current market. This red entry suggests an impossible value: the approvals period cannot be less than zero months. This implies that it would be impossible to make this development viable by shortening the approvals period. It simply does not have enough of an impact.

8.7 Sensitivity Analysis Results

Sections 8.1 – 8.6 indicate the following trends:

- In general, higher-density built forms tend to exhibit greater sensitivity (greater slopes) which explains why higher-density development tends to overtake lower density development as the higher and better use as a market matures and revenues increase over time.
- Ground-oriented built forms (single family, duplex, and townhomes) are generally viable under present market conditions while apartment and mixed-use buildings are not
- Low-density rental apartments are almost viable, requiring only slight changes to support competitive land value. Higher-density apartments and mixed-use developments require more substantial market shifts to become viable, and individual parameters are essentially insufficient to render them financially feasible. A combination of factors would be required
- For ground-oriented units, revenue is the most important factor, followed by construction costs. For apartments and mixed-use developments, the reverse is true. This reflects the powerful impact of parking costs on higher-density built forms
- Parking requirements are the third most powerful factor and by far the most impactful parameter under Municipal control. But note that this only impacts apartment and mixed-use viability. Many scenarios become viable when parking requirements are reduced to about 0.60 stalls per unit. This is a major reduction, but it could be an impactful intervention, particularly in combination with other changes and policies
- The other three parameters have proportionally far less impact. In order of importance, they are interest rates, DCCs, and approval times.

MPLE recommends that the MNC reduce parking requirements to facilitate apartment development.