

qathet Regional District Housing Capacity Analysis

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Executive Summary

The following report documents the Housing Capacity Analysis conducted by Licker Geospatial Consulting Ltd. (LGeo), which models housing capacity in the electoral areas of qathet Regional District (qRD) based on current Official Community Plan (OCP) land use policies and zoning regulations to understand the district's existing capacity for residential growth. To serve as the basis for a future capacity analysis, LGeo completed a current state profile for all residential buildings within the four Electoral Areas, concluding that qRD's existing housing stock consists of 4,425 dwelling units under 19 residential land use types, predominantly being low-density rural and suburban land use designations.

The purpose of the analysis is to understand the capacity for future housing growth in the qRD based on present conditions and current land use policies. To this end, three capacity approaches were developed;

1. Absolute Capacity - The theoretical maximum housing capacity that can be accommodated on a parcel given its land use and size, under current policy.
2. Relative Capacity - Similar to Absolute Capacity, with a more conservative approach to lot subdivision. This more conservative approach is based on existing lot size averages, rather than minimums.
3. Realizable Capacity - A near-term capacity forecast, that assumes only the most desirable parcels (with a high likelihood of redevelopment) will be developed to their Relative Capacity.

This approach allows for an understanding of what is conceptually possible under current policy conditions, and what is likely from a development standpoint. The number of Net New Units forecasted regionally under the three capacity approaches are as follows:

1. Absolute Capacity - 10,359 Net New Units
2. Relative Capacity - 8,755 Net New Units
3. Realizable Capacity - 1,576 Net New Units

All electoral areas are forecasted to accommodate growth under the three capacity scenarios. Area A and Area B have the highest net new unit forecast under absolute and Relative Capacity scenarios, while Area A and Area D have the highest net new unit forecast under the Realizable Capacity scenario.

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Context

Key Terminology and Abbreviations

| | |
|--------------------------------|--|
| Absolute Capacity | Determines the maximum housing capacity that can be accommodated on a given parcel given its land use and minimum subdivision size. See the “Approach” section for a more detailed description of Absolute Capacity. |
| Community of Interest | Describes communities that are of particular note for the purposes of this study, due to notable existing residential units or forecasted future capacity. When boundaries of communities of interest are mapped, these reflect Designated Place Boundaries from Statistics Canada, 2021. |
| Relative Capacity | Determines the maximum housing capacity that can be accommodated on a given parcel given its land use and average subdivision size. See the “Approach” section for a more detailed description of Relative Capacity. |
| Redevelopment Potential | Each parcel is ranked based on how likely a residential parcel is to redevelop in comparison to other parcels in each qRD electoral area based on available assessment and local contextual data. This score is an output of LGeo’s development likelihood model. See the Technical Methods appendix for a more detailed description of the development likelihood model. |
| Realizable Capacity | A more restrictive lens on Relative Capacity which selects only the parcels that have been determined to have the highest likelihood of development (.i.e, Redevelopment Potential). See the “Approach” section for a more detailed description of Realizable Capacity. |
| Net New Units | Refers to the difference between the gross total housing capacity using either the absolute, relative or realizable method and the current number of units sourced from 2024 BC assessment data (most recent available). |
| Total Units | Refers to the gross total housing capacity using either the absolute, relative or realizable method. |
| OCP | Official Community Plan |
| ALR | Agricultural Land Reserve |
| qRD | qathet Regional District |
| BIR | Building Information Report from BC Assessment |

Introduction

qathet Regional District (“the district” or qathet or qRD) is a large and diverse regional district home to approximately 20,000 residents over 500,000 hectares, including four electoral areas (EAs) and one municipality.

The following report documents the Housing Capacity Analysis conducted by Licker Geospatial Consulting Ltd. (Licker or LGeo), which models housing capacity in the electoral areas (EAs) of qathet Regional District (“the district” or qathet or qRD) based on current Official Community Plan (OCP) land use policies and zoning regulations to understand the district’s existing capacity for residential growth. Through this analysis, LGeo completed a current state profile for all residential buildings within the four Electoral Areas, and used this to create a development likelihood model and three different housing capacity models. This report presents a summary of findings and provides data useful for growth management, as well as insight to support electoral area planning in ways that contribute to the place-specific character of qRD’s communities. Additionally, this report presents the methods and results of this analysis, and is intended to create a shared understanding of development considerations in the qRD, especially as they relate to the capacity of the land base for increased population growth.

This report provides both a regional overview as well as a snapshot of each electoral area (EA). Electoral Area A has been split into two portions - the mainland area to the west of the coast and Savary Island, to accommodate Savary Island’s own unique Official Community Plan (OCP). Each electoral area includes findings related to growth considerations, potential constraints to development and the interplay between land use policy and capacity for new housing. Within the Electoral Areas, three communities of interest were identified to serve as peripheral references for the study: Lund, Van Anda and Gillies Bay, shown in Figure 1 below.

The conclusions of this Housing Capacity Analysis can be used to support new policies related to new infrastructure development, alterations of land use policies and growth stimulation in the qRD. These conclusions are relative to the region and the electoral areas, meaning the regional and each electoral area section of the report are intended to be stand alone alongside the Introduction and Data and Approach.

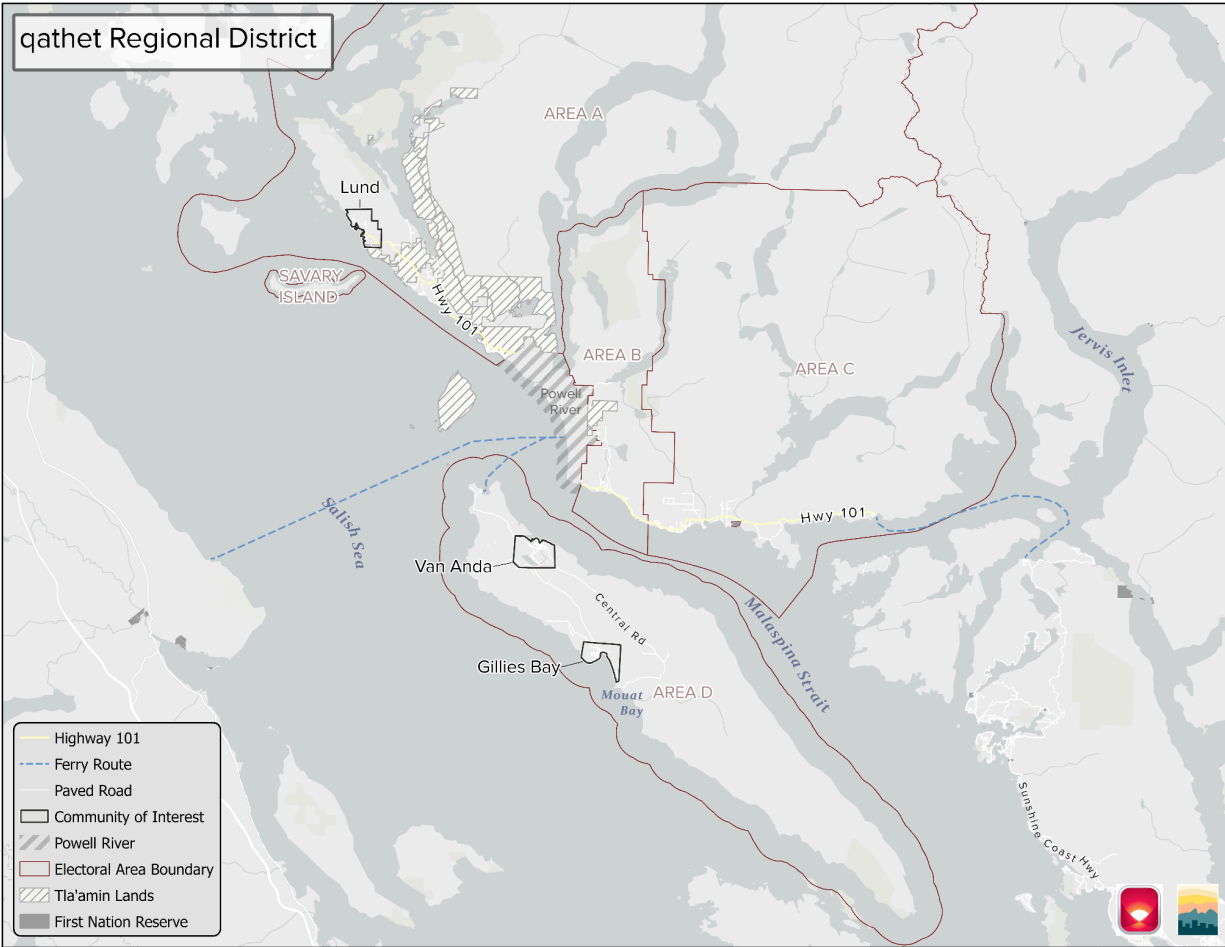


Figure 1. Map of qathet Regional District.

The structure of this report is as follows:

1. The *Data and Approach* section details the data used and a summary of the methodology used for the housing capacity analysis;
2. The *Current State* section outlines the findings of the qathet Regional District Current State Memo presented to qRD staff in November of 2025. This current state profile informs logical groupings of buildings for the housing capacity analysis;
3. The *Regional Overview* section details the results of the housing capacity analysis at the regional scale;
4. The *Electoral Area Specific Overview* sections detail the results of the housing capacity analysis for each electoral area independently;
5. The *Next Steps* section contains recommendations for monitoring, additional analyses and future uses of this data;

6. Finally, the *Technical Methods* appendix provides a more detailed version of the methods summary found in *Data and Approach*.

Data and Approach

Data Inventory

In order to develop a current state baseline, LGeo collected the following data from qRD staff, and various open data sources:

Table 1: Data inventory for qathet Regional District housing capacity analysis

| Data | Source | Use Category | File |
|--|-----------|--------------------------------------|--|
| Most recent BC Assessment data (Building Information Report - BIR) - Raw | qRD | Boundaries, planning and/or land use | CurrentBCAssessmentFabric |
| Parcel fabric | qRD | Boundaries, planning and/or land use | PMBC_ParcelPolygon |
| Address points | qRD | Boundaries, planning and/or land use | qRDCivicAddresses |
| Zoning | qRD | Boundaries, planning and/or land use | ZoningBoundaries ConsolidatedZoningLayers |
| Official Community Plan land use | qRD | Boundaries, planning and/or land use | OCPBoundaries ConsolidatedOCPLandUseDesignation |
| Steep slope | qRD | Potential Constraints | SavaryIslandSlopeHazardStudy Area_B_and_C_Hazard_Study (LandslideHazard, LandslideHazardAdditionalSetback, LimitofStudyArea) Area_D_Hazard_Study (LandslideHazardGB, LandslideHazardVA, LimitofStudyArea_AreaD, RecommendedAdditionalSetback) |
| Floodplain | qRD | Potential Constraints | FluvialHazard LimitofStudyArea FluvialHazard_AreaD LimitofStudyArea_AreaD IslandForecastedHWM IslandsForecastedWaveRunupArea IslandsPresentHWM |
| Riparian areas | qRD | Potential Constraints | AreaA_NaturalHazard AreaA_RiparianAreas AreaB_RiparianAreas AreaC_RiparianAreas TexadaRiparianAreas |
| Environmentally sensitive areas | qRD | Potential Constraints | SensitiveEcosystemsInventory |
| Parks | qRD | Boundaries, planning and/or land use | Created spatial layers for use from open data |
| Community sites | qRD | Potential Constraints | qRDOwnedLands qRDLeasedLands CommunityFacilities |
| Agricultural Land Reserve | Open Data | Potential Constraints | Created spatial layers for use from open data |

| Data | Source | Use Category | File |
|--|---------------|--------------------------------------|--|
| Municipal Infrastructure (sewer & water) – service area polygon data (Including Lund Water, Lund Sewer and Myrtle Pond Water Service Boundaries) | qRD | Infrastructure | ServiceBoundaries |
| Private Infrastructure (sewer & water) - any information on service areas/capacity | qRD | Infrastructure | ImprovementDistrictBoundaries |
| Roads | Open Data | Infrastructure | Created spatial layers for use from open data (Digital Road Atlas) |
| Boundary Areas | Open Data | Boundaries, planning and/or land use | Created spatial layers for use from open data |
| Savary Island conservation lands | qRD | Potential Constraints | Savary_Conservation_Parcels |
| Savary Island Crown provincial parcels | qRD | Potential Constraints | CrownProvincial |

From the above information, qRD identification fields such as *GISLINK* and *Addresses* were used to associate the parcel data (spatial) to the BC Assessment Building Information Report data (tabular). Furthermore, other datasets (such as water service areas) were attributed based on spatial overlap. From the process above, the following data represents some of the information that was attributed to each parcel:

- Existing buildings and their characteristics (age, floor area and units, type, value); and
- Available contextual data at the parcel-scale, such as:
 - a. Agricultural Land Reserve (ALR)
 - b. Current units per hectare (UPH)
 - c. Parcel size
 - d. OCP Land use
 - e. Constraints
 - Regionally owned and / or leased land
 - Community facilities
 - Highway setback
 - f. Water and sewer servicing status and proximity
 - g. Proximity to Powell River
 - h. Proximity to paved roads
 - i. Hazards
 - Steep slopes/landslide hazards
 - Fluvial hazards
 - Natural hazards/riparian areas

This attribution process provided a basis for developing the development likelihood model and three different housing capacity models. The results from this data attribution effort are summarized in the *Current State Results* section.

Approach

The project team started with an assessment of the current state of residential parcels in qRD by assembling and preparing the above data. This was presented to qRD's qRD's planning, asset management, emergency management, and GIS staff in a "Current State Memo" in November 2025 to ensure the accuracy of project data and that it reflects the knowledge and experience of qRD's staff. This Current State Memo included summaries of existing housing units by OCP land uses, jurisdiction, proximity to infrastructure (water and sewer servicing and paved roads) and potential development constraints to consider as part of the capacity analysis.

Following this memo, the project team made updates to the data based on recommendations by qRD staff and proceeded with the housing capacity analysis. Housing capacity is a measure of how much housing, or how many dwelling units, can be built given any number of considered conditions including constraints that make building too challenging and the bylaws that govern what can and cannot be built in an area. The criteria for each method can be seen side by side in Table 2 below. This analysis is comprised of three methods for calculating housing capacity, which layer these constraints, as well as Redevelopment Potential, which is a component of the third housing capacity method:

Absolute Capacity - This approach determines the **theoretical maximum** housing capacity that can be accommodated on a given parcel given its land use and size, under current policy. Minimum parcel size is used to subdivide all lots where possible, and then a single family dwelling with a secondary suite and auxiliary dwelling unit (where applicable) is built on each resulting lot. This demonstrates a theoretical maximum capacity available in the electoral areas given current land use policy, if all of the land was considered available. Absolute Capacity considers complete and partial constraints to development.

Relative Capacity - This approach is similar to Absolute Capacity, but uses an average parcel size provided by the district when subdividing in lieu of the minimum. The result is a more conservative approach to subdivision and thus lower capacity than the theoretical maximum shown in Absolute Capacity, while still considering all unconstrained land as available for development.

Redevelopment Potential - This approach creates a selection criteria for sites that are likely to be realized in the near term from the results of LGeo's development likelihood model. LGeo included three components when creating the Redevelopment Potential criteria:

- a. **High Rural Redevelopment Score** - Parcels with the top 20% of rural redevelopment scores region-wide are selected for potential to redevelop. See Technical Methods for a more detailed description of rural

redevelopment score.

- b. **Realizable Vacant Lots** - Vacant parcels that are greater than 1 hectare in size and are within 1 kilometre of the highway.
- c. **Parcels with active subdivision approval** - Parcels qRD staff have indicated as having an active subdivision approval.

Realizable Capacity - This approach provides a more restrictive, albeit realizable, lens on capacity by selecting only the parcels that have been determined to have Redevelopment Potential, as above, rather than all unconstrained residential land.

Table 2. Summary of the elements of each of the three housing capacity models (Absolute Capacity, Relative Capacity and Realizable Capacity).

| | Absolute Capacity | Relative Capacity | Realizable Capacity |
|---|--------------------------|--------------------------|----------------------------|
| Parcel Subdivision based on | minimum parcel size | average parcel size | average parcel size |
| Constrains qRD lands (owned and leased) | ✓ | ✓ | ✓ |
| Constrains community facilities | ✓ | ✓ | ✓ |
| Constrains highway setback | ✓ | ✓ | ✓ |
| Constrains Community Watershed parcels | ✓ | ✓ | ✓ |
| Score for distance to water, sewer and paved roads | ✗ | ✗ | ✓ |
| Score for total land value per acre | ✗ | ✗ | ✓ |
| Bonus for proximity to Powell River | ✗ | ✗ | ✓ |
| Bonus for water and sewer servicing | ✗ | ✗ | ✓ |
| Penalty for hazard layers present on parcel | ✗ | ✗ | ✓ |
| Parcels with the top 20% of Rural Redevelopment Scores | ✗ | ✗ | ✓ |
| Vacant parcels within 1km of Highway 101 and buildable area > 1 hectare | ✗ | ✗ | ✓ |
| Parcels with active active subdivision approval | ✗ | ✗ | ✓ |

Dwelling Versus Unit - a Note on Secondary Suites

An important consideration when reviewing capacity forecasted under Absolute Capacity, Relative Capacity, and Realizable Capacity models is that a dwelling can contain more than one unit. Many land uses in the region (see table A1 in *Appendix A: Technical Methods* section) allow for single family dwellings with suites (SFD-S). While this is one *dwelling*, in the capacity model it is counted as two *units* as the suite can house an additional household. This consideration is important to keep in mind while interpreting the results in the subsequent sections of this report since the totals refer to ***units*** and not ***dwellings***.

A more comprehensive description of the technical methods employed in the creation of these models is included in the Technical Methods Appendix of this report. When presenting the results of the three capacity models, the project team decided to primarily focus on net new capacity units instead of total capacity units, which is the capacity that is additional to existing housing. The rationale being that net new capacity provides a clearer picture of the district's remaining capacity compared to the current existing housing stock. An exception to this approach can be found in the absolute / Relative Capacity regional overview results sections. Here, the emphasis is placed on clarifying the breakdown of available capacity by residential archetype (new dwelling units vs suites or additional dwelling units), which is best shown as total capacity units.

Data Limitations

As with any model, the housing capacity model described in this report is a simplification of real-world conditions, as it must necessarily be. The goal of any forecasting effort is to make the best forecast possible today. In other words, the outputs described in this report are reliant on the assumptions utilised in the model, which are based on best available current information and staff input on historic growth and development patterns in the region. Should the available information related to assumptions change, the model and thus forecast should subsequently be updated. Both the assumptions and structure of the model used in the capacity forecast are unique to this effort, and must be considered both when reviewing these outputs and comparing them to other forecasting efforts.

Similarly, the quality of the outputs is dependent on the availability, quality and accuracy of the source information and is foundational to the accuracy and usefulness of the forecast. Careful consideration of the source data's characteristics and potential limitations is essential when interpreting and relying on forecasts for decision-making

and planning. An example of data limitations is that all forecasting is based on parcels. In practice, some parcels are multi-area or “split” parcels, with different land uses. However, these rare cases were reviewed to ensure there were no major impacts to forecasted capacity by adjusting max allowed density to match the land use area (weighted UPH) and were not manually separated. The forecast is also reliant on the accuracy of the present day residential inventory, which is entirely based on BC assessment data. While we have made reasonable efforts to assure the quality and reliability of source information, it is not within the scope of this project to guarantee all source data quality.

Current State

The Current State Memo was originally delivered to qRD project staff in November 2025. The purpose of the Current State Memo was to provide an overview of the initial data and relevant information pertaining to the profile of land use in qathet Regional District (qRD). The primary use of this memo was to largely ensure the accuracy of data: by summarizing our findings from this assessment for review by qRD's planning staff, our team was able to understand if our findings and data reflected the knowledge and experience of qRD's staff to an acceptable degree. Following the completion and presentation of the Current State Memo, the information summarized was used to model future change and capacity for development.

Some key findings from the Current State Memo and how they relate to the Housing Capacity Analysis are outlined below.

Existing Housing Distribution and Density

The assessment shows that qRD's existing housing stock is predominantly low-density and widely dispersed across rural and suburban land use designations. Most residential units are located within standard Residential, Suburban Residential, Rural Village, and Low-Density Residential OCP land uses. Higher-density designations, such as Multi-Family Residential, account for a very small share of total units, despite their high housing densities. This indicates that land uses which permit higher densities currently play a limited role in meeting overall housing supply.

A finding of interest at this stage of the project was the presence of residential units within non-residential land use categories, including Agricultural Land Reserve (ALR), Resource Lands, and Privately Managed Forest Lands. These units are largely consistent with provincial allowances or historical approvals and are generally considered built-out with limited or no additional residential capacity. In addition, approximately 289 float homes were identified through BC Assessment data. As these units are not located on land, they were treated separately and excluded from density calculations.

Overall, approximately 82% of residential units fall under qRD jurisdiction, with the remaining 18% under provincial jurisdiction. This distinction is important for understanding where local land use policy can meaningfully influence future housing outcomes.

Infrastructure Servicing and Redevelopment Feasibility

Infrastructure servicing is a limiting factor for the potential of concentrated development in the region. Only about 6% of existing residential units within the electoral areas are

currently connected to sewer and water services, primarily located in Lund and areas near the Powell River municipal boundary. While proximity to service boundaries were analyzed as an indicator of future servicing potential, the majority of parcels are located several kilometres from existing infrastructure, significantly reducing near-term feasibility for intensified development.

After presenting these results to qRD it was established that servicing, or lack thereof, usually has minimal impact on the development of single family dwellings, which constitute the majority of development in the region. The large majority of parcels in the qRD electoral areas are serviced by on-site wells and septic disposal systems. As such, the role of servicing in analyses in the following stages of this project were tempered to better reflect the development trends of the region.

Road access presents a more mixed picture. While roughly 57% of residential units are within 50 metres of a paved road, over 30% are located more than one kilometre away. These more remote parcels could face higher development costs and are therefore at reduced likelihood of redevelopment. Through discussions with the qRD it was decided that proximity to paved roads, and more importantly the highway, is usually a significant factor in a parcel's (especially currently vacant parcels) likelihood of developing.

Constraints on Development Capacity

The assessment identified and categorized development constraints into complete constraints, partial constraints, and penalties to redevelopment. Complete constraints, such as qRD-owned lands, community facilities, and community watershed parcels¹, affect a minimal proportion of qRD's residential parcels across all electoral areas. Area D has the most affected parcels, at 3% of total residential parcels. As a result, complete exclusions are not a dominant factor influencing housing capacity on the regional scale.

Physical constraints such as steep slopes and fluvial hazards affect some parcels across the region, but they do not substantially limit existing residential areas overall. Partial constraints such as riparian and highway setbacks reduce buildable area in select locations, while penalty-based constraints, including steep slopes, and flood risk, vary across the district. Steep slopes represent the most prominent potential limitation, particularly in coastal areas and on Savary Island (Area A). How these factors were ultimately applied in capacity analysis was a topic of discussion with the qRD, given that many existing homes are already located within areas subject to these constraints. A more in depth explanation of how these constraints were ultimately incorporated into the development likelihood model can be found in the Technical Methods appendix of this report.

¹ With the exception of Lund watershed, where if a parcel is vacant, one Single Family Dwelling per parcel was permitted.

Implications for Subsequent Project Stages

Collectively, the Current State findings demonstrate that qRD's housing supply is dominated by non-serviced rural properties and housing development is usually limited by access and geographically specific constraints. These baseline conditions directly informed the development of redevelopment scores and capacity scenarios in later stages of the project, ensuring that future growth assumptions are grounded in observed realities rather than theoretical land use density potential.

Housing Capacity Analysis: Regional Overview

This section outlines the results of LGeo’s qRD Housing Capacity Analysis at the regional scale. The purpose is to provide analysis results aggregated up to the regional level for the three different housing capacity models (Absolute Capacity, Relative Capacity and Realizable Capacity) and the development likelihood model. Reporting on the regional level in this way allows for conclusions that can focus on comparing outcomes across Electoral Areas. This provides helpful context when trying to understand the district as a whole and how electoral areas differ in their potential future housing capacity. Please note, it is strongly recommended that the reader first read the sections above, which provide important context and orientation for the content described in the following sections.

Total absolute and Relative Capacity results in this section are broken down by residential archetype: dwellings or suites & ADUs. It is informative to illustrate this archetype distinction to clarify that the total and net new capacity results LGeo presents do not refer only to new stand-alone dwelling units, but also to suites and additional dwelling units that are integrated within these new dwellings or added to existing single family homes.

The Regional District currently contains 4,425² dwelling units, and has 19 residential land use types³ with unique capacity considerations, illustrated in the figure below. Within the electoral areas, qRD contains three communities of interest for the purpose of this study: Lund, Van Anda, and Gillies Bay.

² This information is based on the 2024 BC Assessment’s BIR, accessed March 2025.

³ See Appendix A: Technical Methods Table A1 for detailed list.

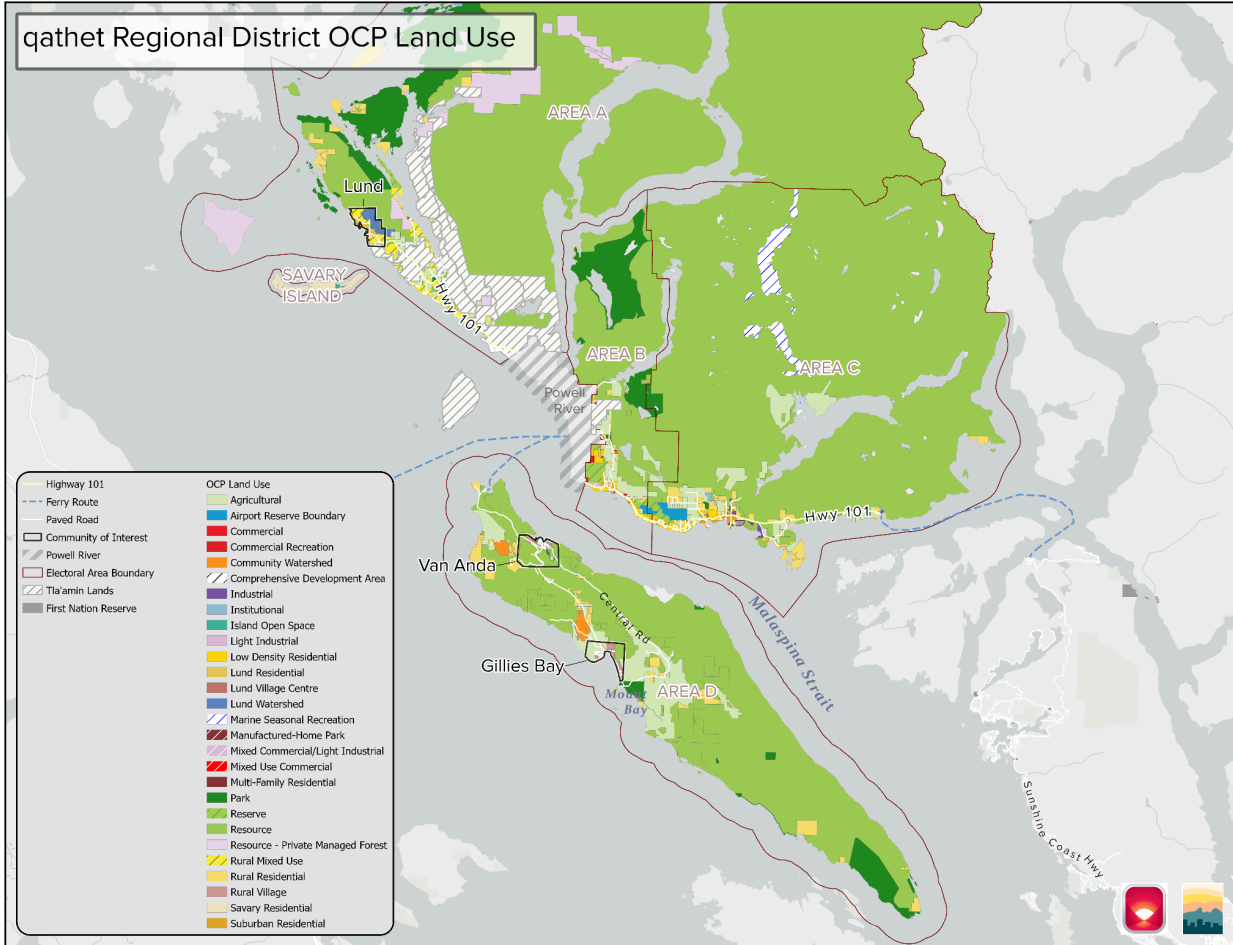


Figure 2. Regional OCP Land Use map.

Absolute Housing Capacity

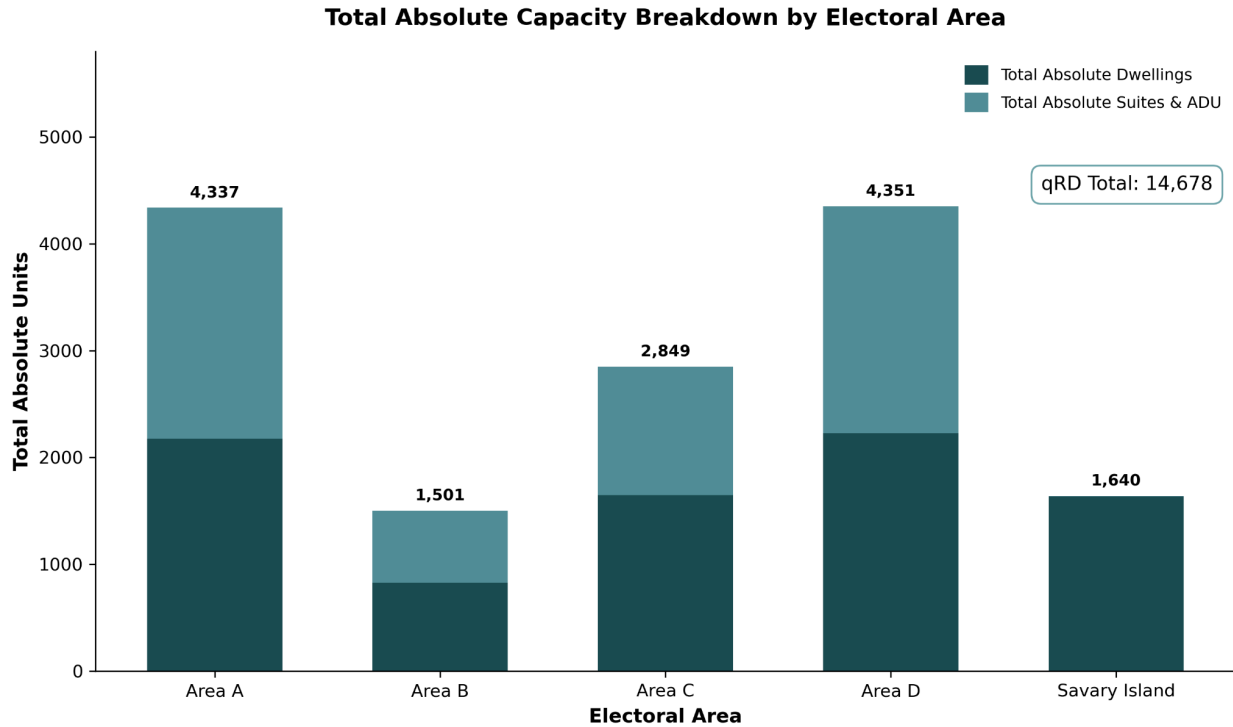


Figure 3. Total Absolute Capacity results broken down by unit type, comparison for Region.

The qathet Regional District has a total Absolute Capacity of 14,678 units and a net new Absolute Capacity of 10,359 new units. High capacity volumes are concentrated in Electoral Area D and Electoral Area A, predominantly within Rural Residential land use areas. This can be seen in the darker teal hotspots in the figure below. Values are lowest in Area B, reflecting its high proportion of Low Density Residential land uses that permit a minimum subdivision size of one hectare, as well as its relatively small residential land base within the qRD. Consequently, the model results in a larger proportion of suites being added to existing dwellings (increasing from one unit to two units in a dwelling) rather than new subdivisions being created.

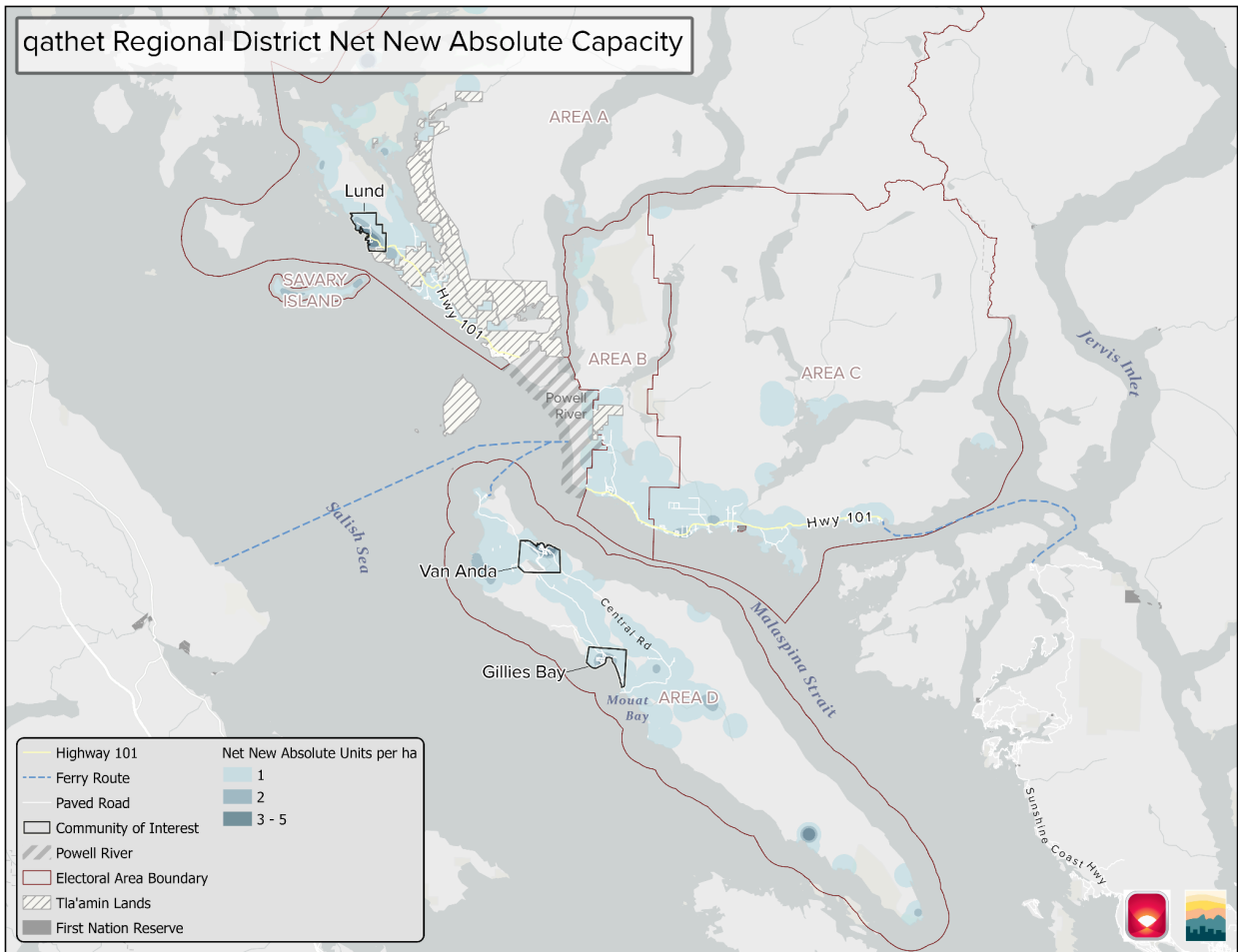


Figure 4. Regional absolute net new housing capacity.

Relative Housing Capacity

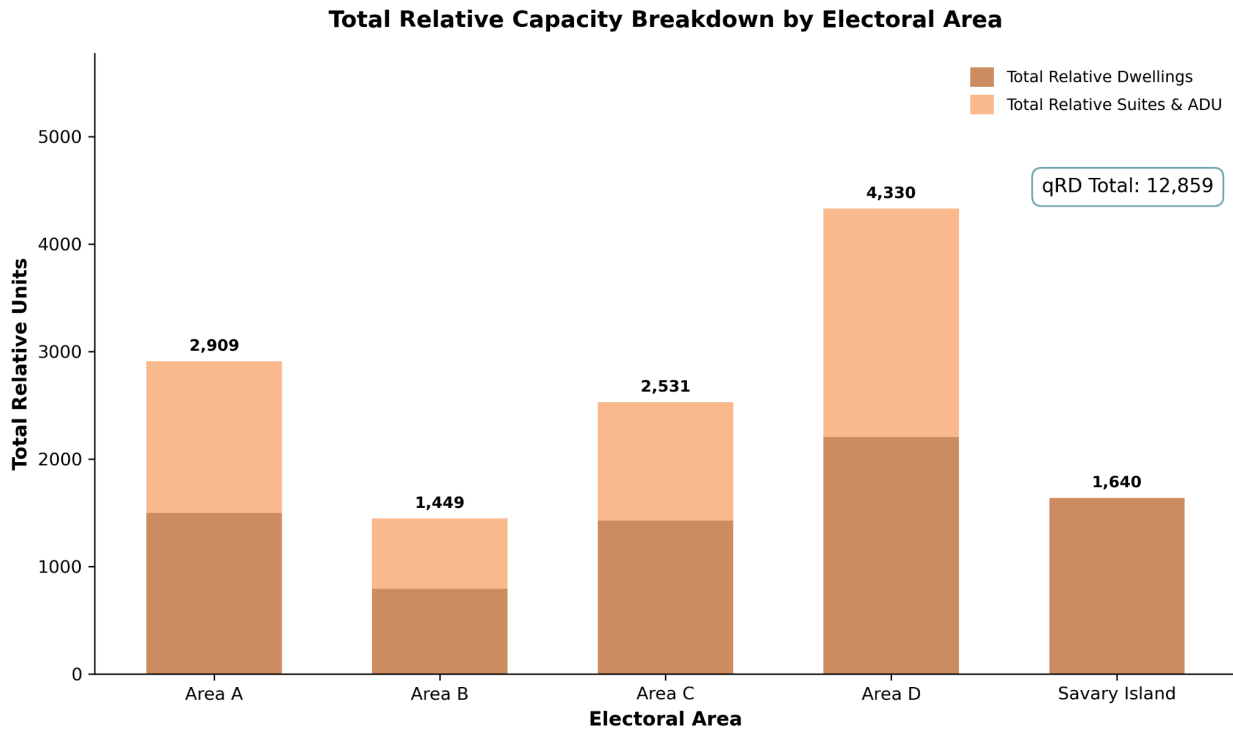


Figure 5. Total Relative Capacity results broken down by unit type, comparison for Region.

The qRD has a total Relative Capacity of 12,859 units and a net new Relative Capacity of 8,755 new units. As with Absolute Capacity, the two electoral areas with the largest Relative Capacity are D and A. However, under relative conditions (mean parcel sizes for subdividing) Area A's total capacity reduced by 39% compared to the absolute scenario. This attrition is due to Lund Village Center and Lund Residential's minimum subdivision being 0.2 hectares for Absolute Capacity and 0.4 hectares for Relative Capacity. Area D's capacity remains unchanged between scenarios due to none of its residential land uses having an identified average parcel size.

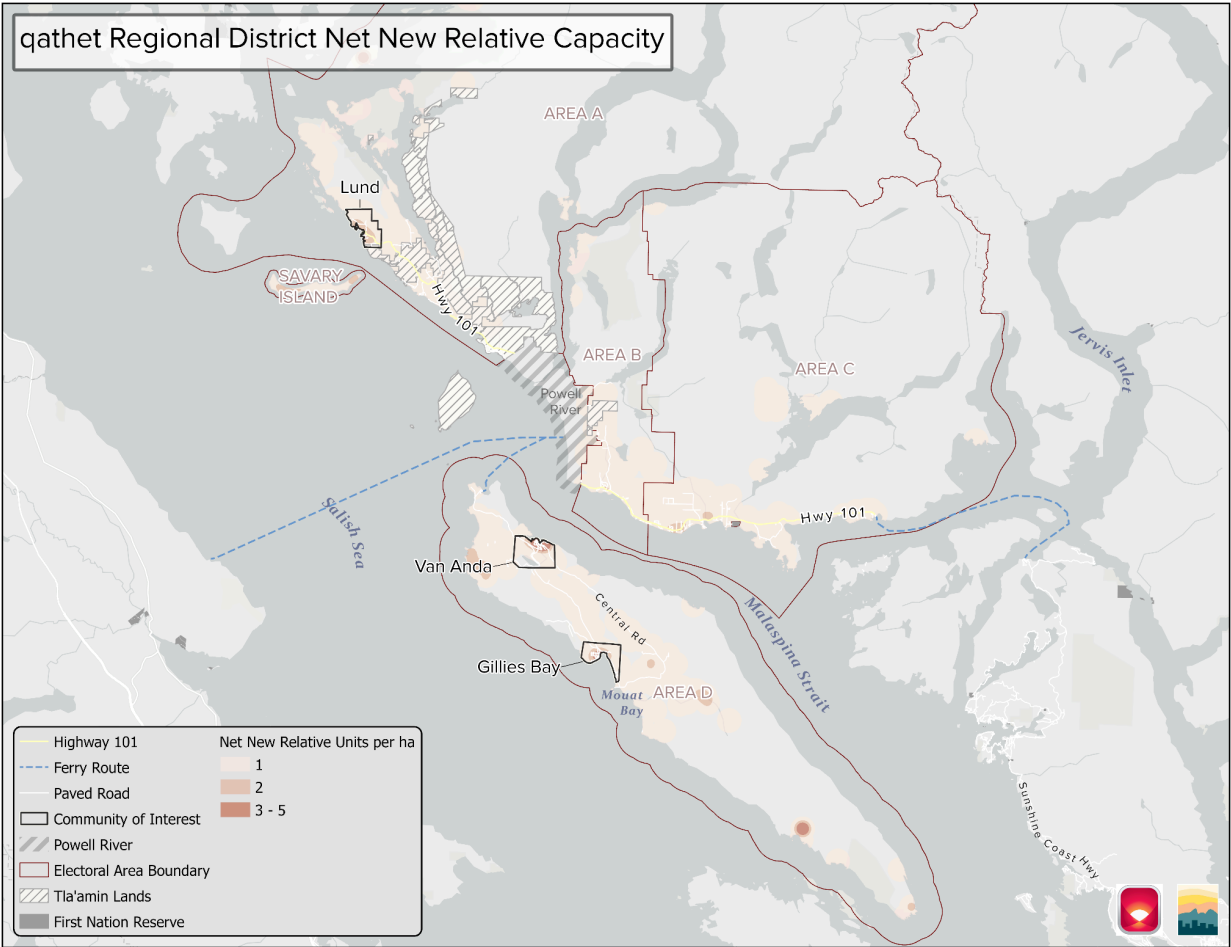


Figure 6. Regional relative net new housing capacity.

Redevelopment Potential & Realizable Housing Capacity

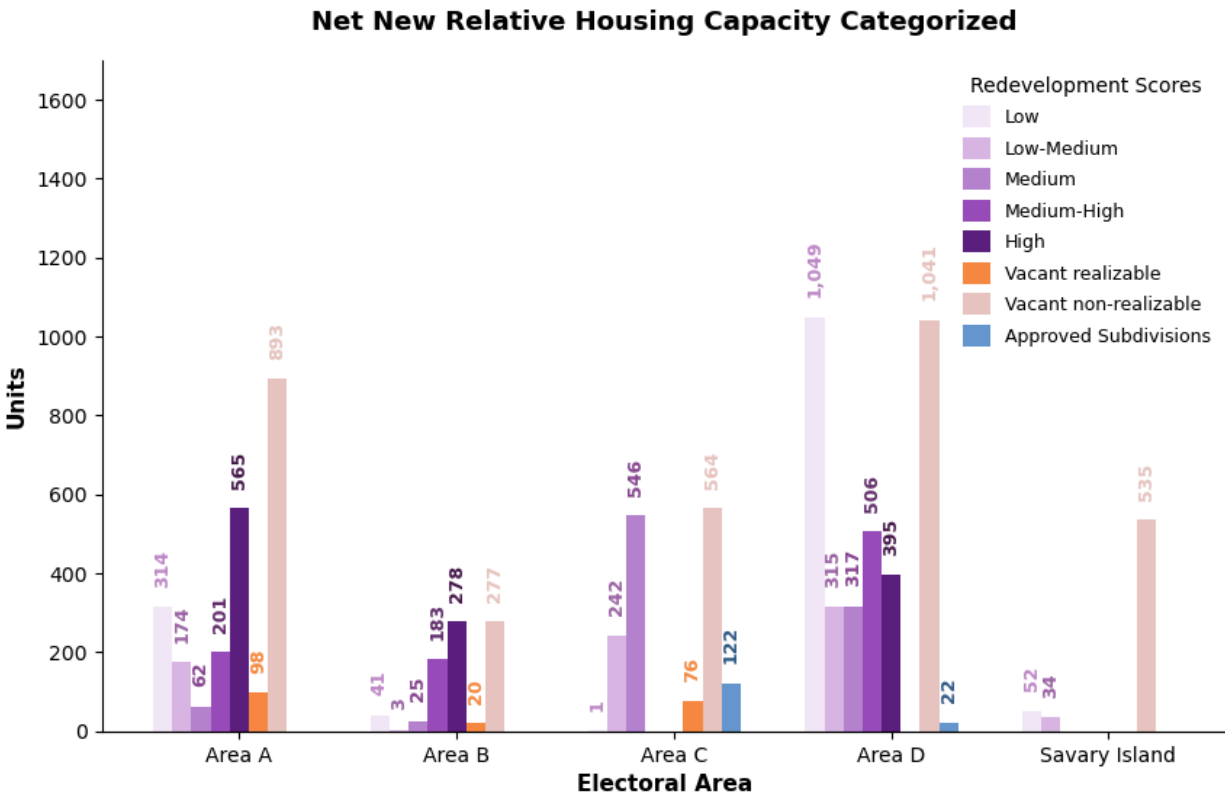


Figure 7. Regional number of parcels per Electoral Area by Redevelopment Potential

The qRD has a high concentration of high redevelopment scores in Areas A, B and D, which can be seen by the darkest purple bars in the figure above. Areas C and D are the only areas with active subdivision applications, and Areas A and C have a large number of queried vacant sites (within 1 km of Highway 101 and larger than or equal to 1 hectare). Savary Island and Area D have a high concentration of low redevelopment scores mainly due to their gaps in growth supportive infrastructure (water, sewer, paved roads). All areas have proportionally high incidence of vacant non-realizable parcels, which indicate vacant parcels where absolute and Relative Capacity is identified to be unlikely to be realized due to constraints.

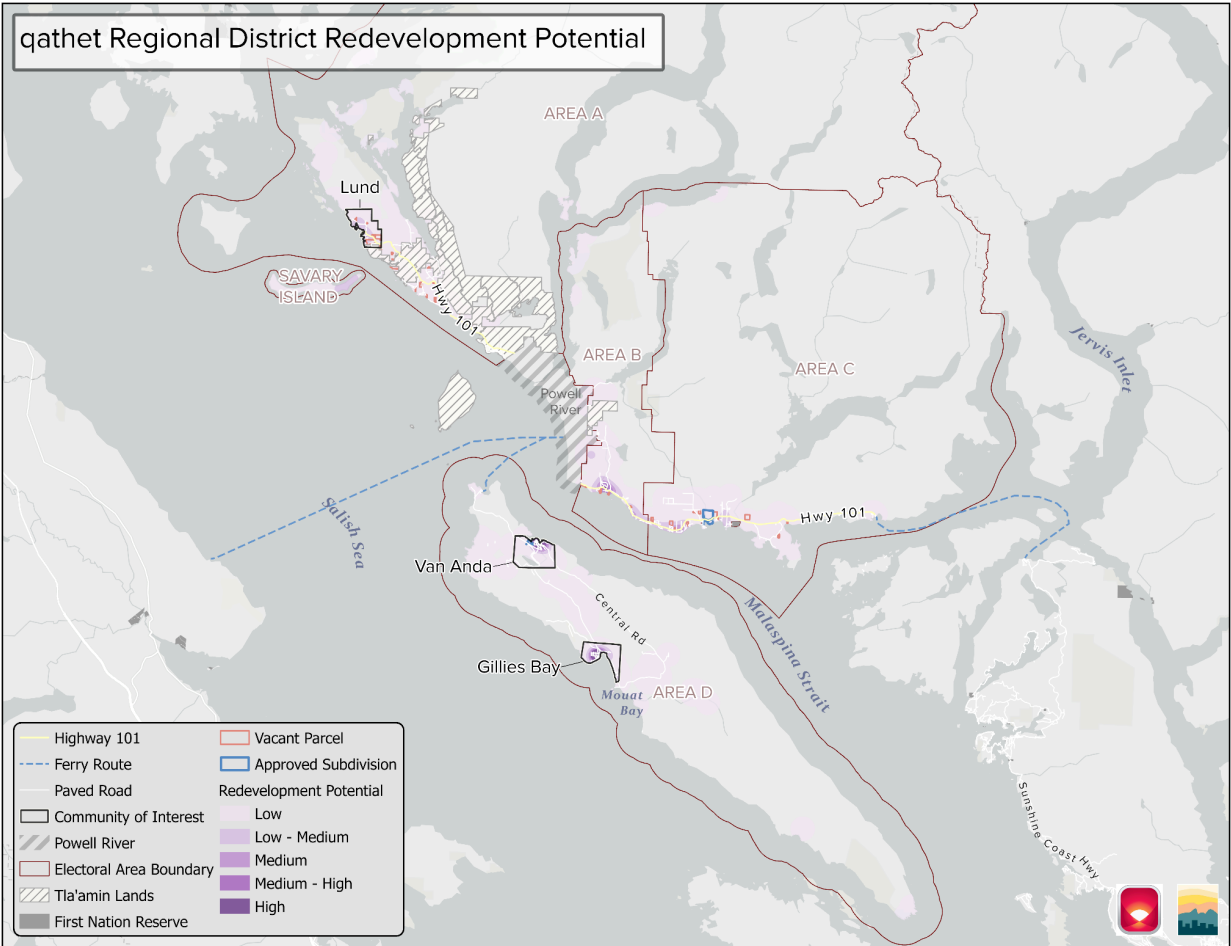


Figure 8. Regional Redevelopment Potential distribution

As mentioned in the capacity model definitions, the Redevelopment Potential factors considered when selecting realizable growth sites consist of the following three components: high redevelopment scores, queried vacant sites (within 1 km of Highway 101 and larger than or equal to 1 hectare), and approved subdivisions.

Once these filters have been applied the resulting net new Realizable Capacity can be calculated. The figure below outlines by area the breakdown of Redevelopment Potential factors and the corresponding Realizable Capacity for each electoral area.

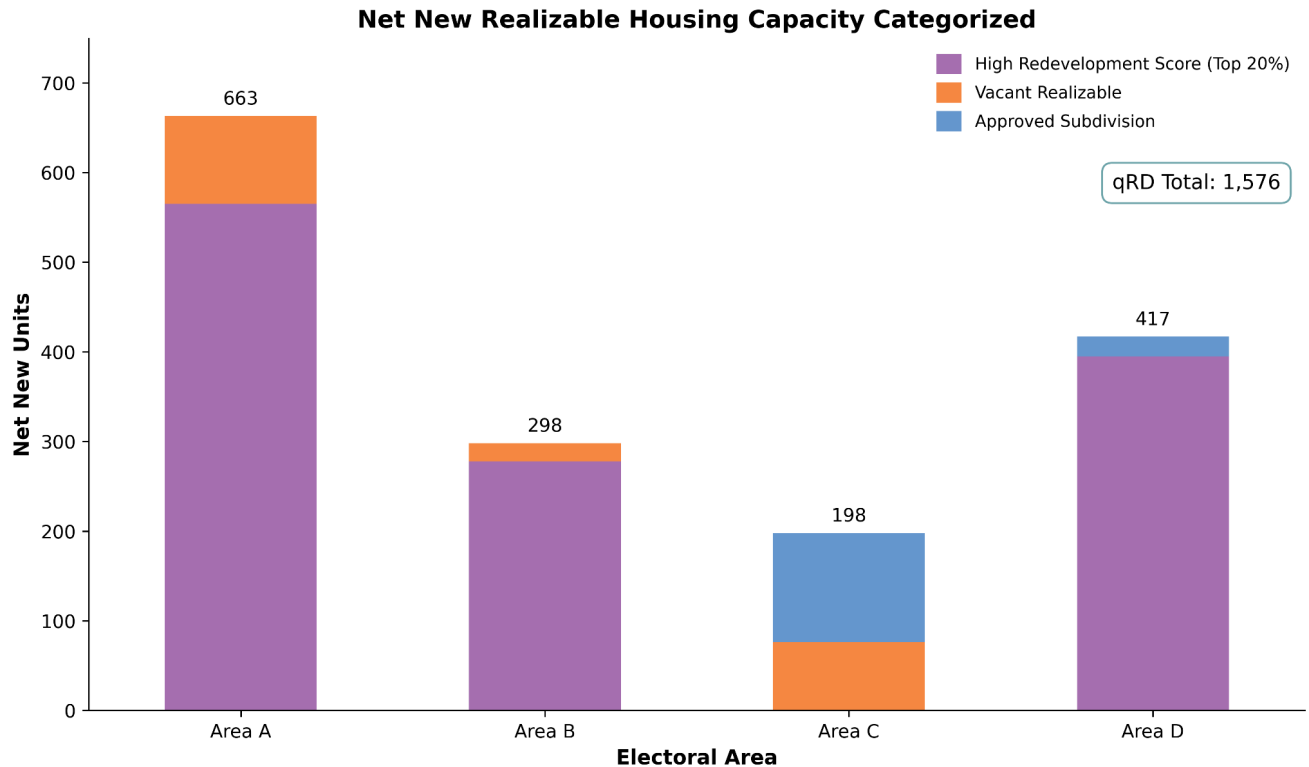


Figure 9. Regional net new Realizable Capacity categorized by Redevelopment Potential.

The qRD has a net new Realizable Capacity of 1,576 units. These are concentrated in certain areas across the Electoral Areas, which are as follows:

- Area A excluding Savary Island: Lund due to existing infrastructure and servicing, proximity to Highway 101, and an absence of identified hazard areas;
- Area A Savary Island: As this is a boat accessible island with no servicing, there is no Realizable Capacity;
- Area B: Myrtle Point which has some areas with water servicing and is in close proximity to Powell River’s infrastructure and limited hazards;
- Area C: Lang Bay has clusters of residential parcels adjacent to Highway 101 and minimal identifiable hazards allowing for some realizable vacant parcels. There is an approved subdivision in this area but due to distance from water and sewer servicing no parcels scoring high for redevelopment; and
- Area D: Van Anda and Gillies Bay due to existing servicing. While Texada island is not proximal to Highway 101, there are minimal hazards (mostly landslide hazard among the hills in Van Anda and along the coast at Gilies Bay).

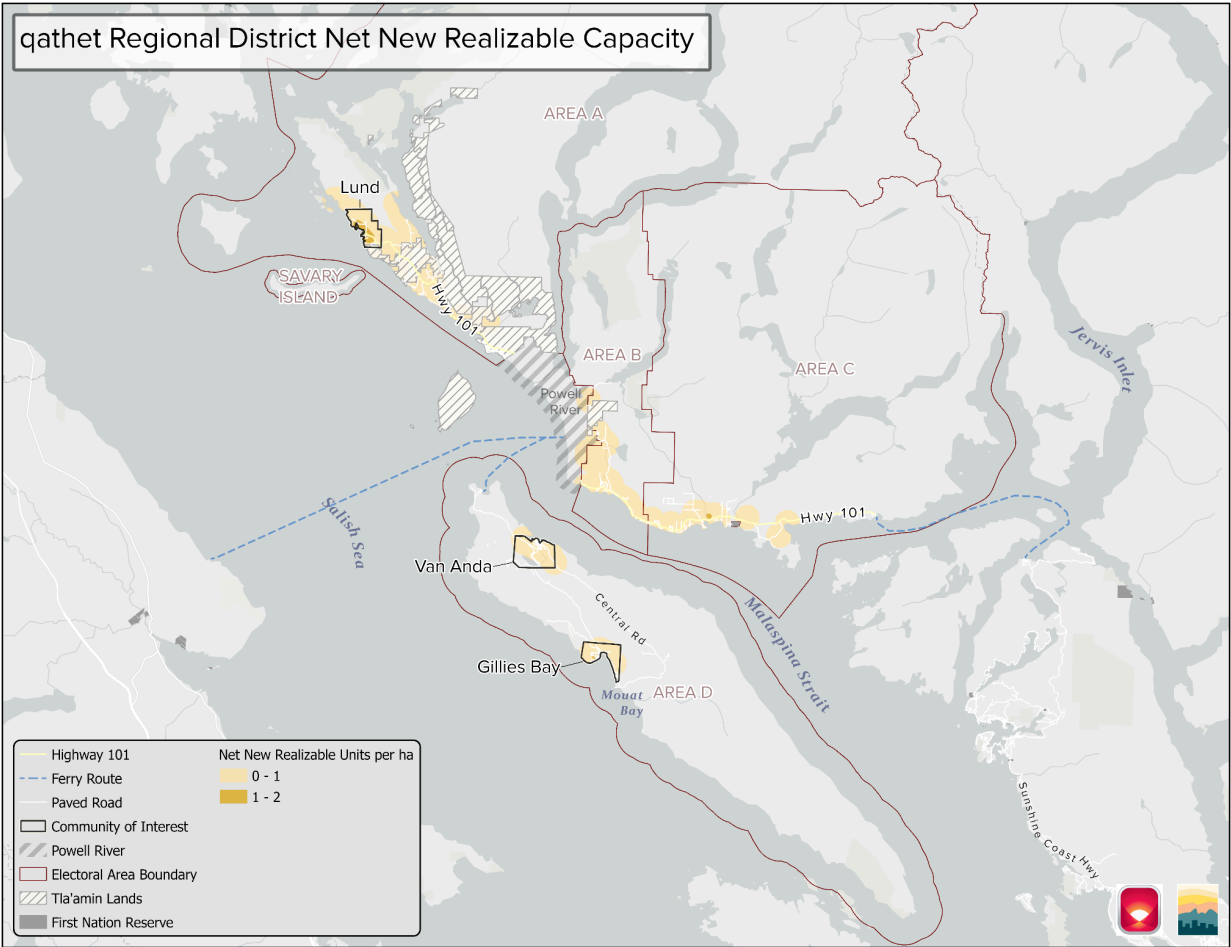


Figure 10. Regional realizable net new housing capacity.

Conclusions

The total net new Absolute Capacity for all the qRD electoral areas is 10,359 units. The total net new Relative Capacity is 8,755 units, and the total net new Realizable Capacity is 1,576 units. Realizable Capacity reflects where growth capacity is most likely to be realized in the near-term, while Relative Capacity reflects a conservative theoretical maximum housing capacity that could be accommodated given current land use and development constraints.

The figure below shows the Absolute Capacity, Relative Capacity and Realizable Capacity for each area in the district and the results are discussed in the following paragraphs. Regionally, Absolute Capacity is reduced by 16% when compared to Relative Capacity, as a result of more conservative subdivision sizes, and Realizable Capacity is further reduced by 82% when only the land most likely to develop is considered.

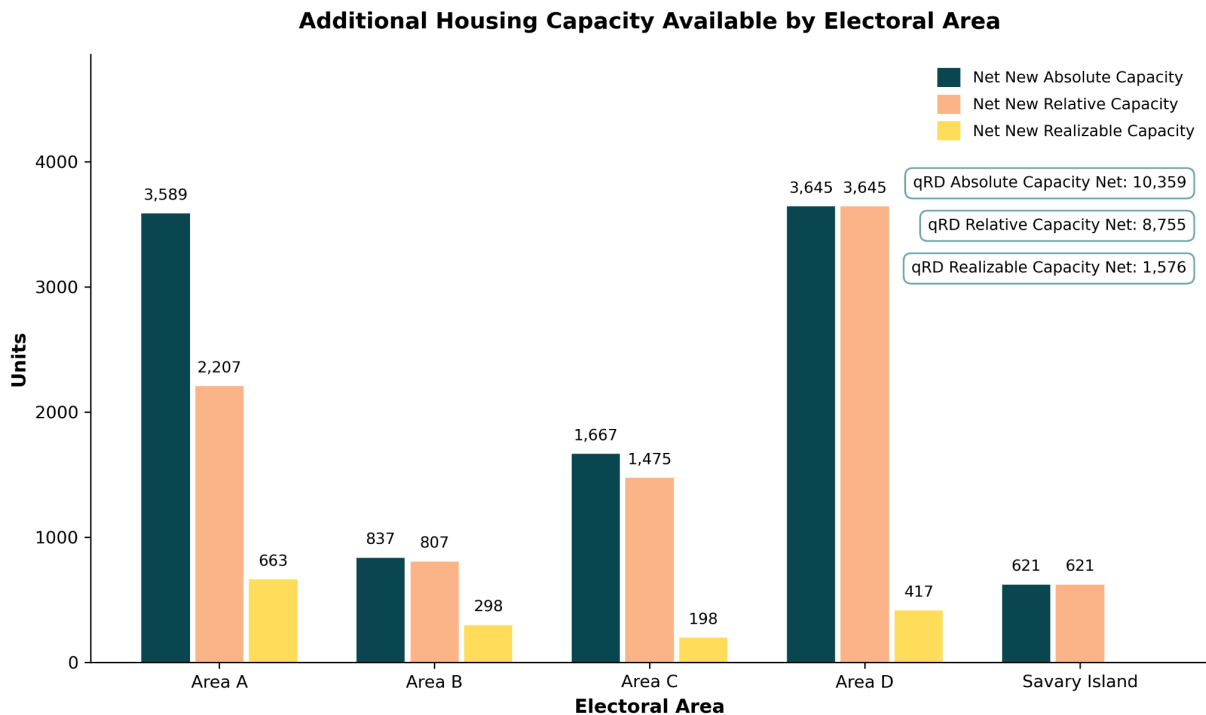


Figure 11. Regional Capacity Analysis results comparison.

Areas A and D show the highest Absolute Capacity with a combined total of 70% of the region's capacity between them, as well as the highest Realizable Capacity at 67% of the region's total Realizable Capacity.

Neither of Areas D (Texada Island) or Savary Island see any decrease in their estimate between absolute and Relative Capacity. This is due to both areas being made up of residential land uses without an associated average parcel size, in which case the density measure of analysis defaults to the minimum parcel size also used for Absolute Capacity. Conversely, Area A sees a fairly significant drop (39%) between absolute and Relative Capacity, showing that capacity within this electoral area is sensitive to subdivision lot sizes.

The Realizable Capacity of an area is a result of its Redevelopment Potential across the region. Area A is estimated to have the most net new realizable units, where 30% of its Relative Capacity is most likely to develop when considering development across the region, with our modelling showing clustering of higher potential for Realizable Capacity around Lund. Area B also sees a higher percentage of its potential capacity being realizable at 37%. Areas C, and D see similar levels of realizable development capacity, with 13%, and 11% of Relative Capacity being likely to develop, respectively. Savary Island is of special note, as it does not have any net new Realizable Capacity (0 units). Areas B and C see most of their estimated Realizable Capacity in coastal regions near and within existing clusters of development, consistent with historical development trends.

Housing Capacity Analysis: Electoral Area Breakdown

This section outlines the results of LGeo’s qRD Housing Capacity Analysis at the Electoral Area scale. The purpose is to provide analysis results aggregated up to the regional level for the development likelihood model and three different housing capacity models (Absolute Capacity, Relative Capacity and Realizable Capacity) that were created for the study. Please note, it is strongly recommended that the reader first read the sections above, which provide important context and orientation for the content described in the following sections.

Electoral Area A - Excluding Savary Island

Area A currently has 753 units, and has four residential land use types with capacity for accommodating more units: Lund Residential (served), Lund Village Centre (served) Rural Mixed Use, and Rural Residential, illustrated in the figure below. Area A contains one Community of Interest for the purpose of this study: Lund.

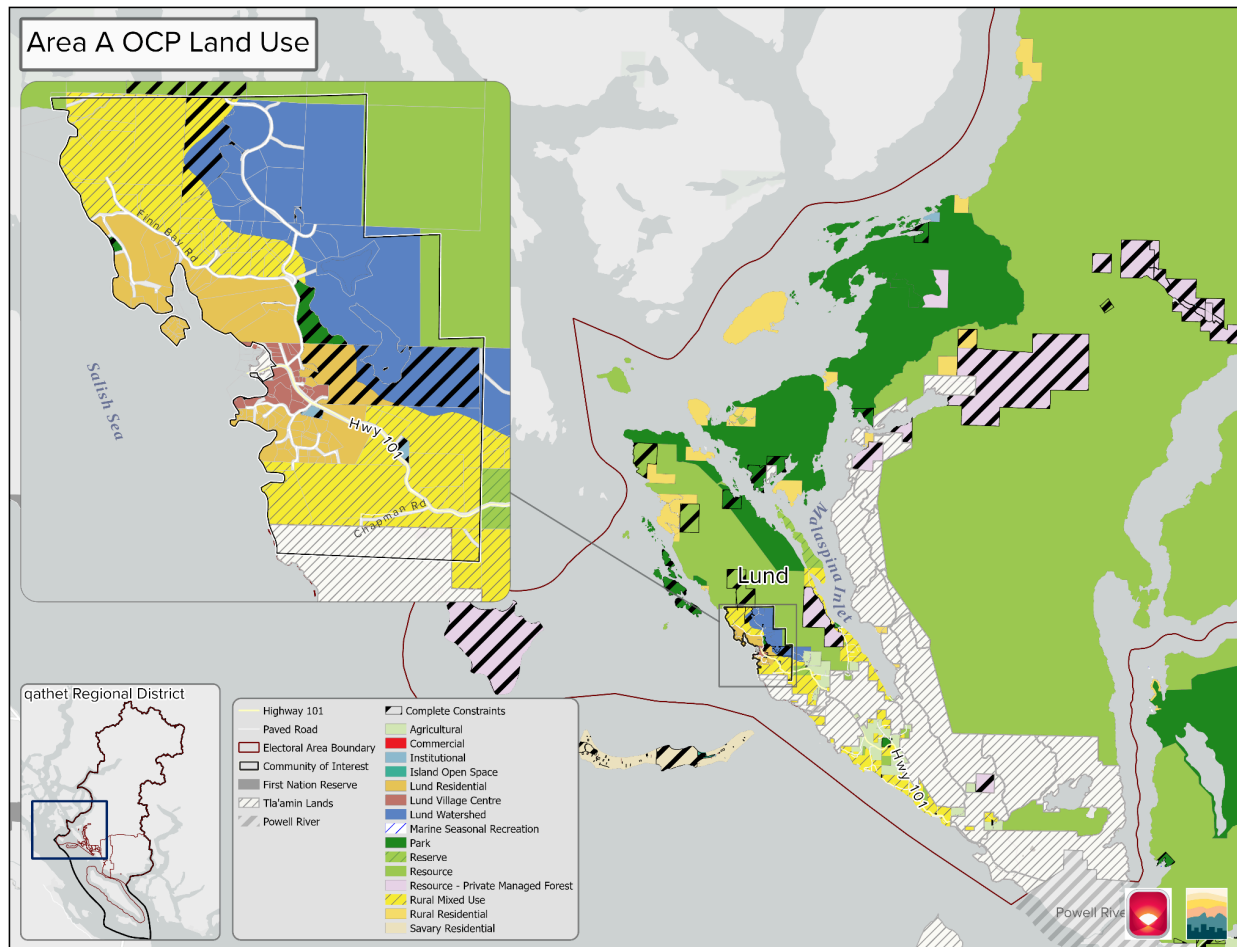


Figure 12. Electoral Area A, OCP Land Use.

Absolute Housing Capacity

Area A has a net new Absolute Capacity of 3,589 units. This is concentrated in Lund within the Lund Residential and Lund Village Center serviced land use areas, and on rural residential land use islands. This can be seen in the darkest blue areas in the figure below. Of note, some rural islands are assigned capacity under absolute and Relative Capacity scenarios as they are large lots with residential land use, but do not appear in Realizable Capacity analysis as they are unlikely to be developed due to difficulty of access.

Lower levels of net new Absolute Capacity are distributed along the coastal areas of Area A (seen in light blue in the figure below) in areas designated as Rural Mixed Use and Rural Residential. Due to the total land area designated as Rural Mixed Use and Rural Residential in Area A, they have the highest cumulative number of net new Absolute Capacity units for Area A land uses.

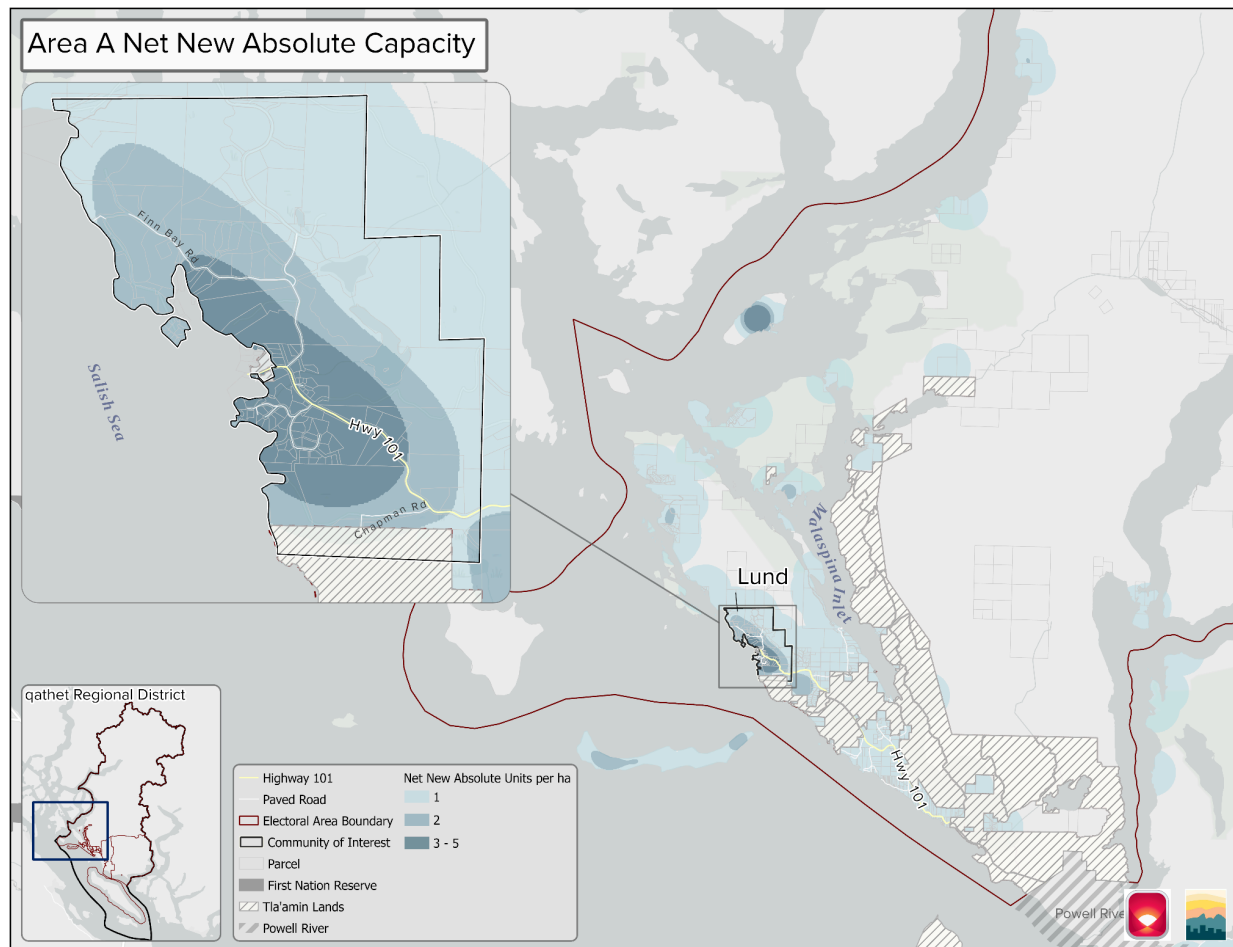


Figure 13. Electoral Area A, net new absolute housing capacity.

Relative Housing Capacity

Area A has a total net new Relative Capacity of 2,207 units. As with Absolute Capacity, this is concentrated in Lund and on remote single-parcel islands. The reduction in units is due to average parcel sizes for subdividing being larger than the minimum used in the Absolute Capacity scenario. For Lund Village Center and Lund Residential the parcel size doubles from 0.2 hectares used in Absolute Capacity to 0.4 hectares used in relative.

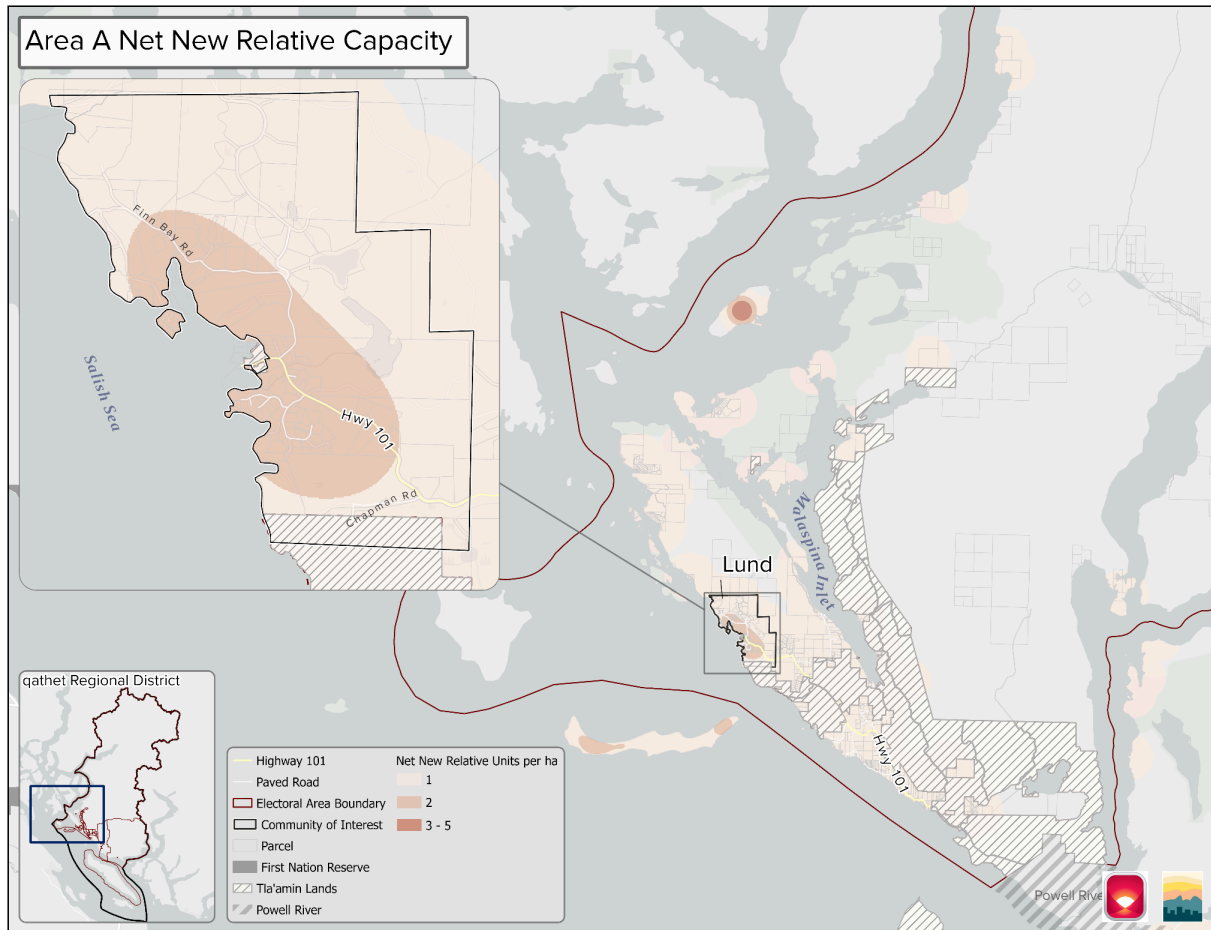


Figure 14. Electoral Area A, net new relative housing capacity.

Redevelopment Potential & Realizable Housing Capacity

Net New Relative Housing Capacity Categorized

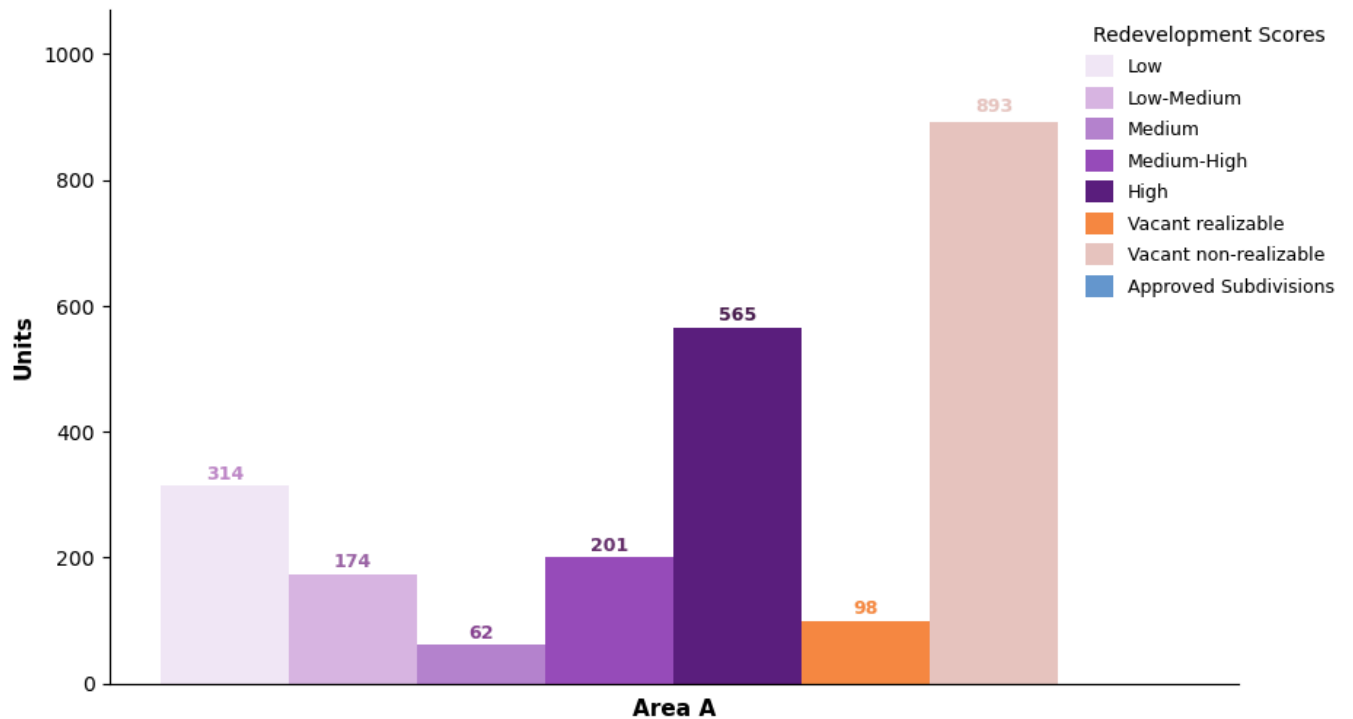


Figure 15. Electoral Area A net new relative housing capacity summarized by redevelopment score.

Electoral Area A has a high concentration of high redevelopment scores in Lund, which can be seen in the darkest purple areas in the figure below. This is due to proximity to existing infrastructure and Highway 101, and an absence of identified hazard areas. The rest of the area has a variety of scores ranging from Low to Medium-High. These areas have larger parcel sizes and lower numbers of net new relative housing capacity.

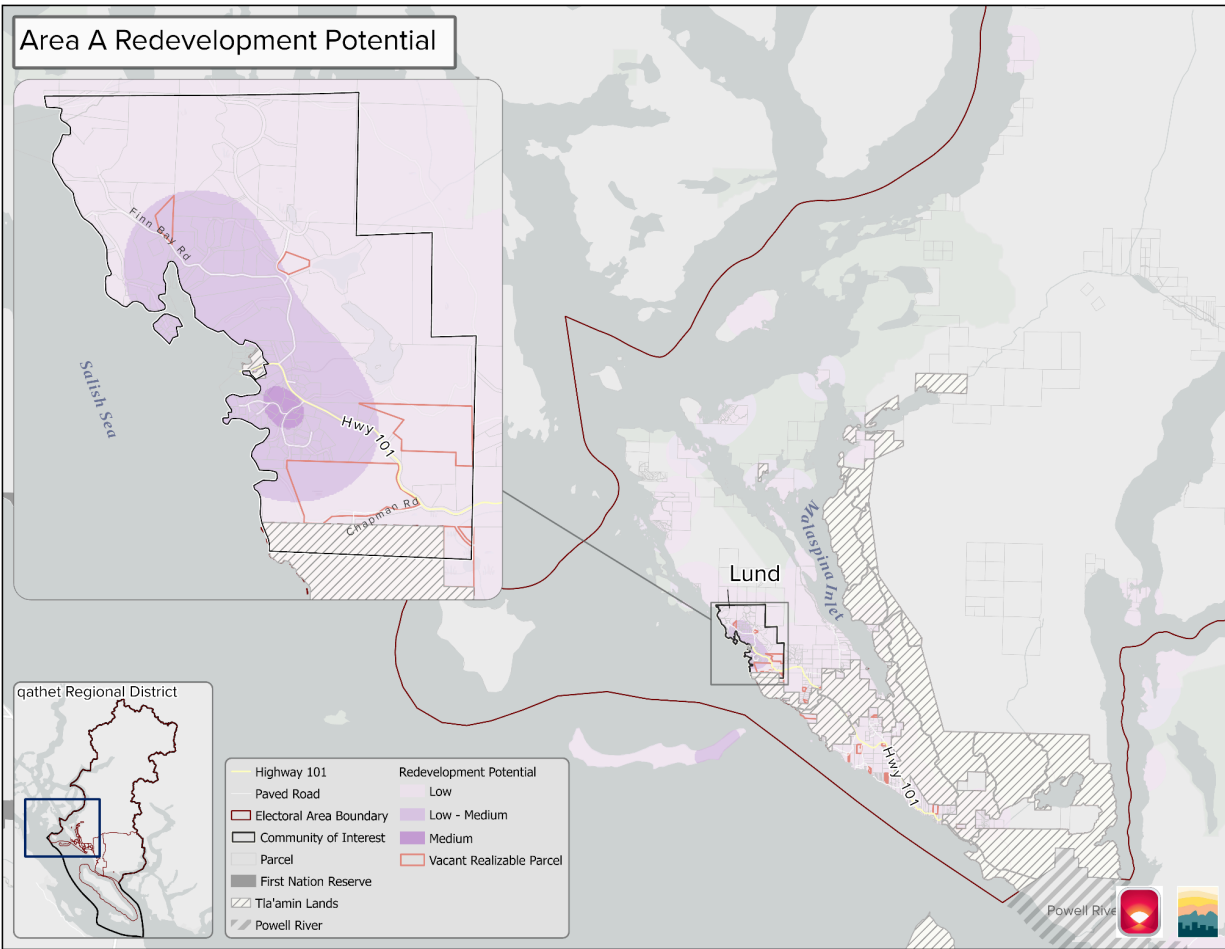


Figure 16. Electoral Area A Redevelopment Potential distribution

As mentioned in the capacity model definitions, the Redevelopment Potential factors considered when selecting realizable growth sites consist of the following three components: high redevelopment scores, queried vacant sites (within 1 km of Highway 101 and larger than or equal to 1 hectare), and approved subdivisions.

Once these filters have been applied the resulting net new Realizable Capacity can be calculated.

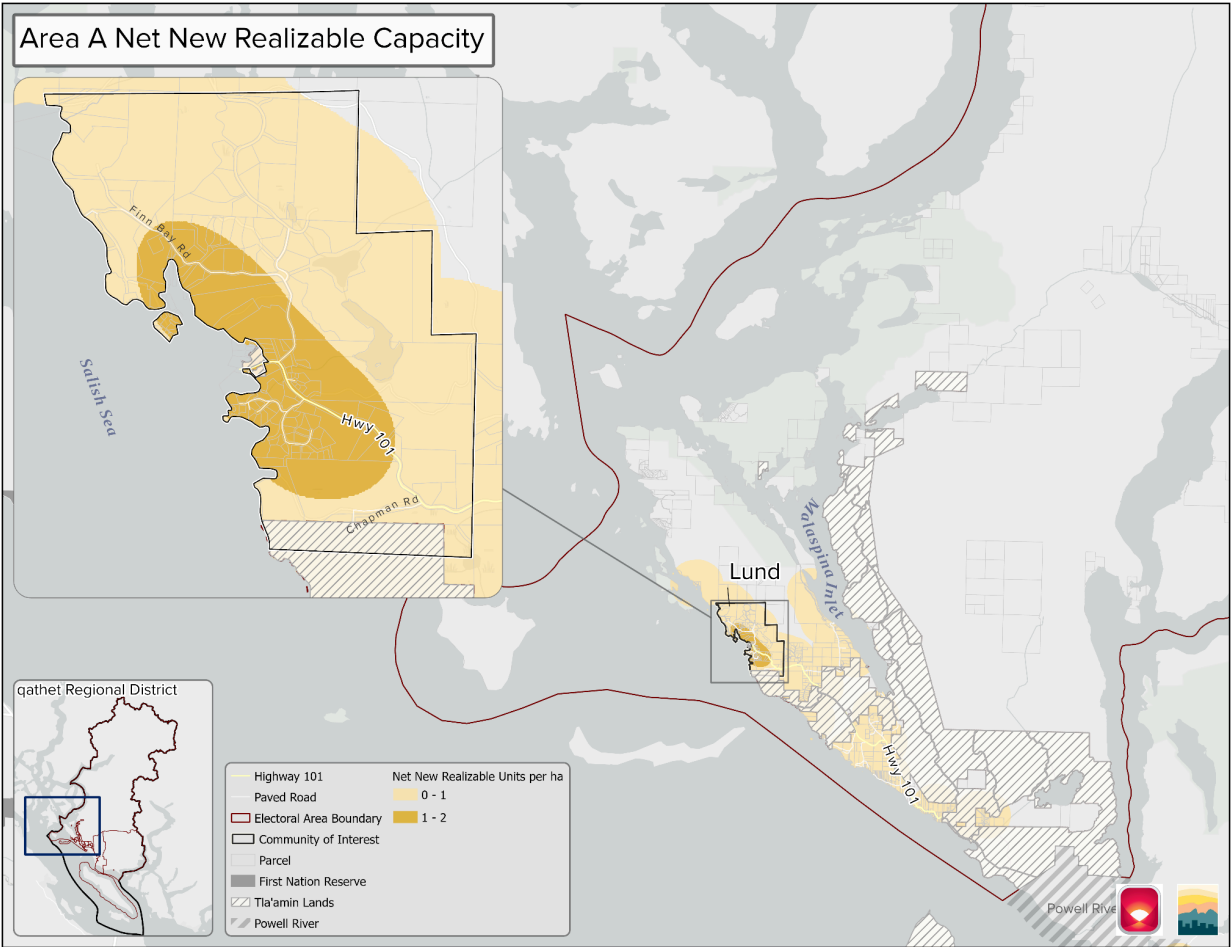


Figure 17. Electoral Area A, realizable net new housing capacity.

Electoral Area A has a net new Realizable Capacity of 663 units. This can be seen in the darkest colour of yellow in the figure above. The concentration of net new Realizable Capacity within and around Lund is due to high redevelopment scores and five large queried vacant parcels.

Conclusions

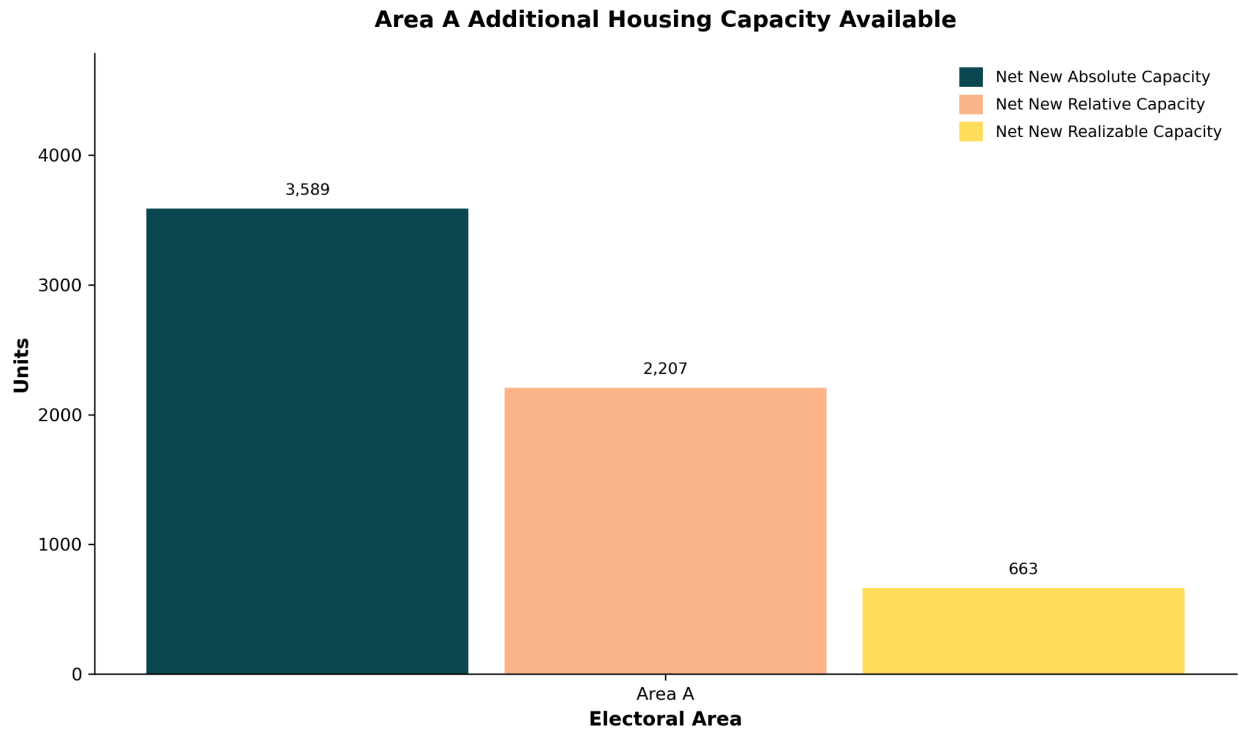


Figure 18. Electoral Area A Capacity Analysis results comparison.

Electoral Area A has the second highest net new Absolute Capacity in the qRD Electoral Areas, and the highest net new Realizable Capacity. Net new Relative Capacity values are average for qRD Electoral Areas. Electoral Area A sees roughly a 39% decrease in estimated units when moving from estimates of Absolute Capacity to Relative Capacity. A further reduction of 70% is seen when comparing the estimates of Relative Capacity to Realizable Capacity. These values are explained further in each section above.

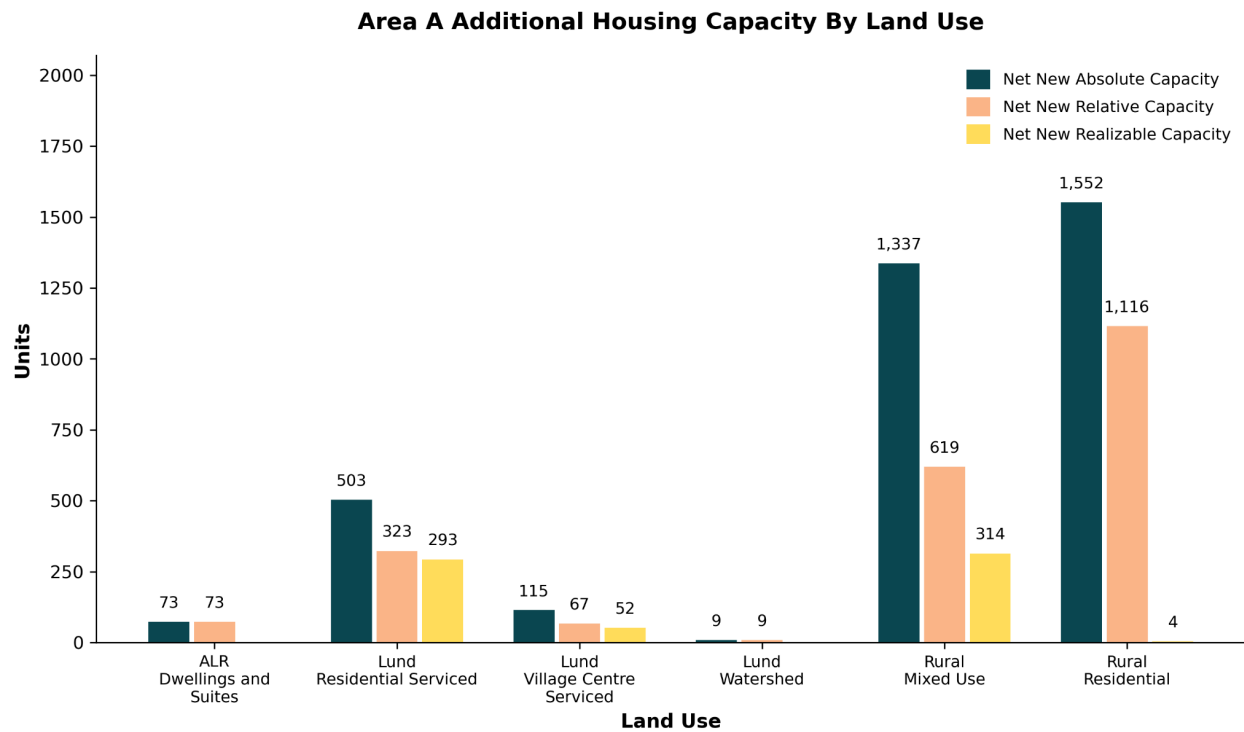


Figure 19. Area A capacity results, broken down by land use category.

While Rural Mixed Use and Rural Residential have the highest numbers of new absolute and Relative Capacity units, they are dramatically reduced in Realizable Capacity. This is due to their proximity to infrastructure and highway 101. In Area A, many of these land uses are in remote areas, including small islands.

The greatest volumes of net new Realizable Capacity units come from lands designated as Rural Mixed Use and Lund Residential (serviced). The Rural Mixed Use land use parcels within Lund partially overlap with water service areas and have good proximity to Highway 101. As distance from Lund increases, the parcels are less likely to be serviced but maintain fair proximity to Highway 101.

Electoral Area A - Savary Island

Savary Island is part of Electoral Area A, however, their land use is dictated by a unique OCP specific to the island, rather than the Area A OCP. Savary is composed largely of recreational properties that are water access only. The island currently has 1,023 units, and has one designated residential land use: Savary Residential, illustrated in the figure below. Savary Residential has capacity for accommodating more units under absolute and Relative Capacity scenarios but has no capacity for growth under the Realizable Capacity scenario.

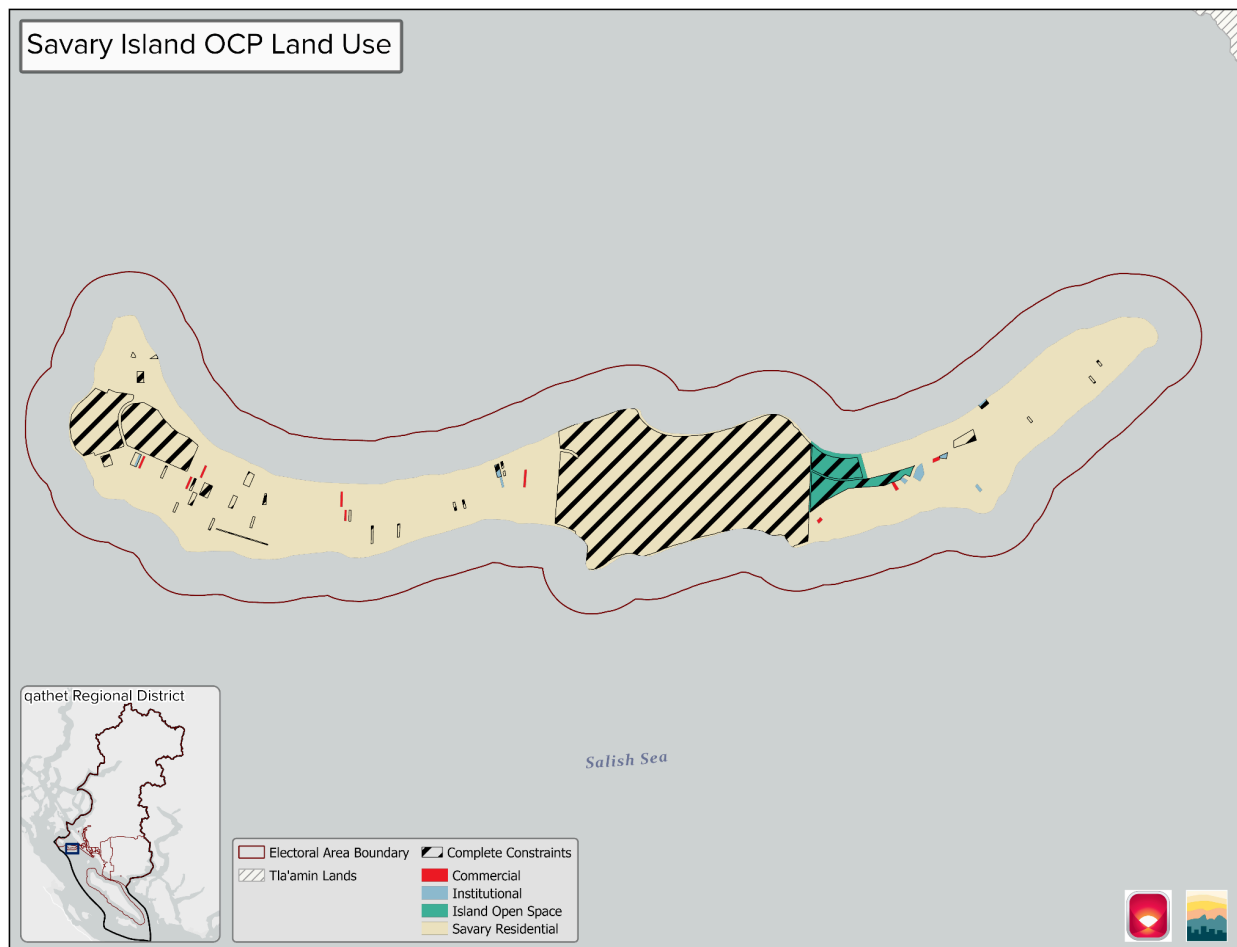


Figure 20. Electoral Area A (Savary), OCP Land Use.

Absolute & Relative Housing Capacity

As mentioned in the capacity model definitions, in cases where an average parcel size assumption is not provided for a land use designation, the model defaults to the minimum parcel size when subdividing. Consequently, Savary Island has the same net new absolute and Relative Capacity of 621 units. The island is essentially fully built out (since the existing subdivisions are smaller than those outlined in the OCP), and the one designated residential land use does not support secondary suites. Therefore, the overwhelming majority of the net new absolute and Relative Capacity units represent undeveloped or large parcels. Net new absolute and Relative Capacity values are concentrated on the island peripheries, this can be seen in the darkest blue (Absolute Capacity) / orange (Relative Capacity) areas in the figures below. Slightly higher values are observed on the west side compared to the eastern side, primarily due to more vacant parcels⁴ and fewer constrained parcels.

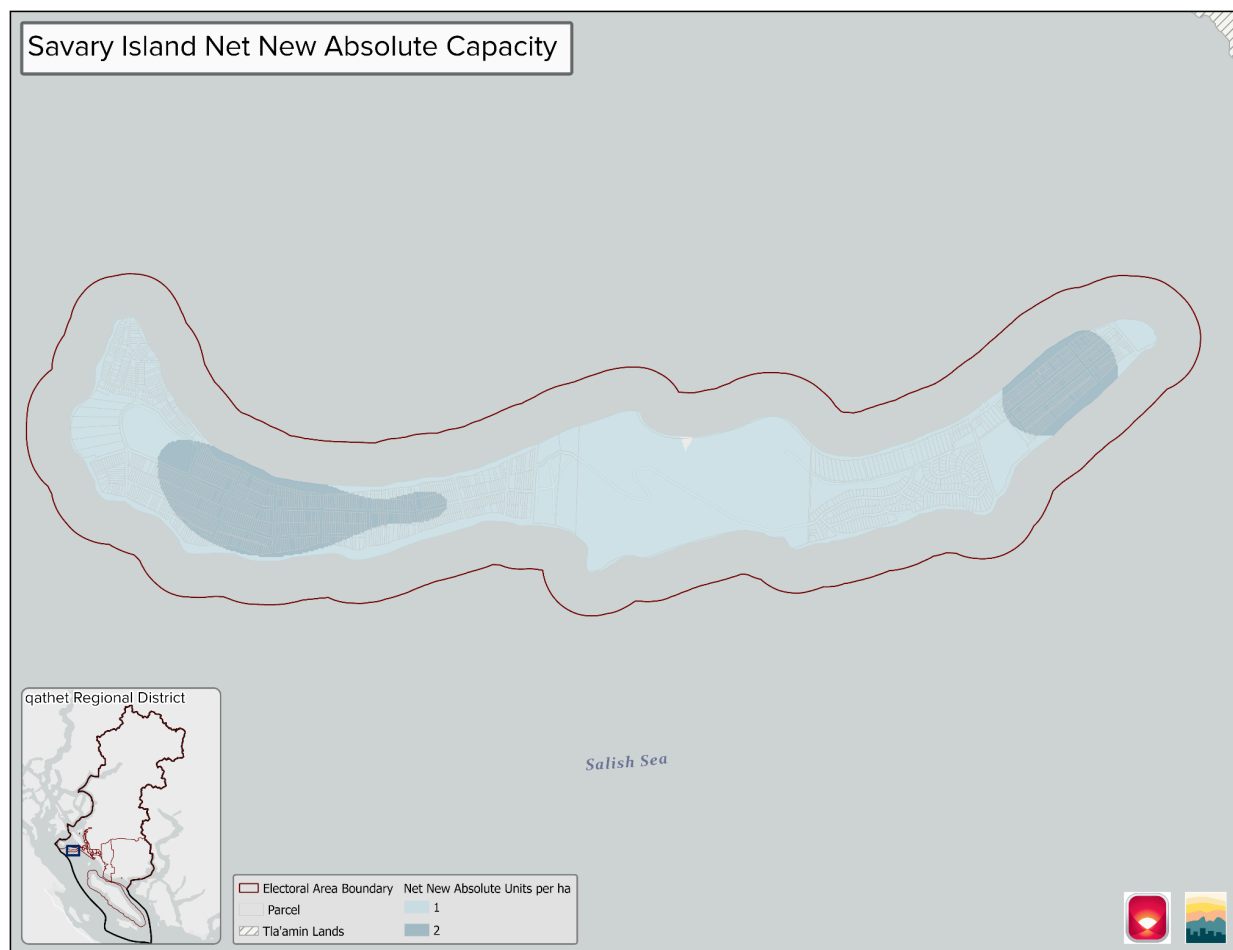


Figure 21. Savary Island, absolute net new housing capacity.

⁴ As per most recent available BC Assessment data

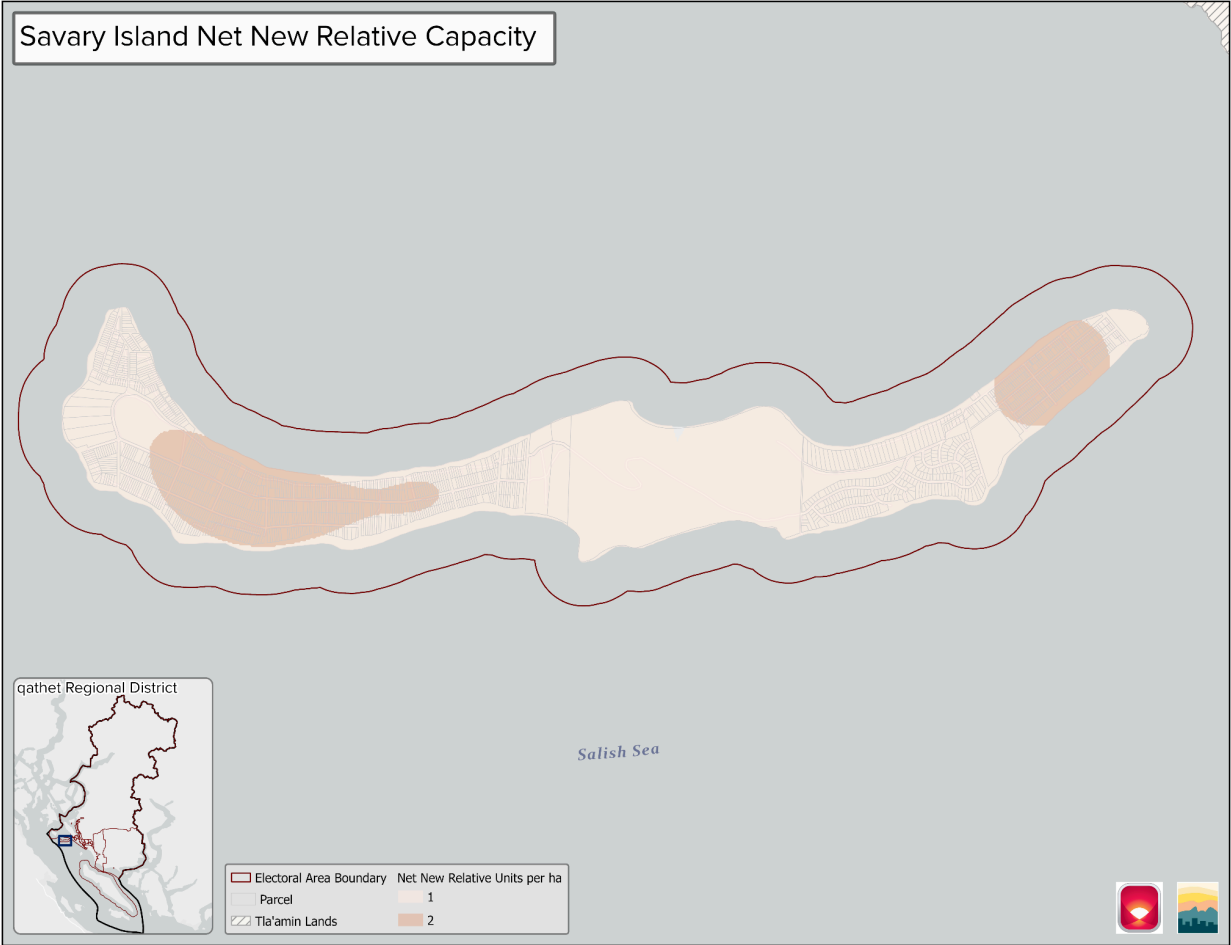


Figure 22. Savary Island, relative net new housing capacity.

Redevelopment Potential & Realizable Housing Capacity

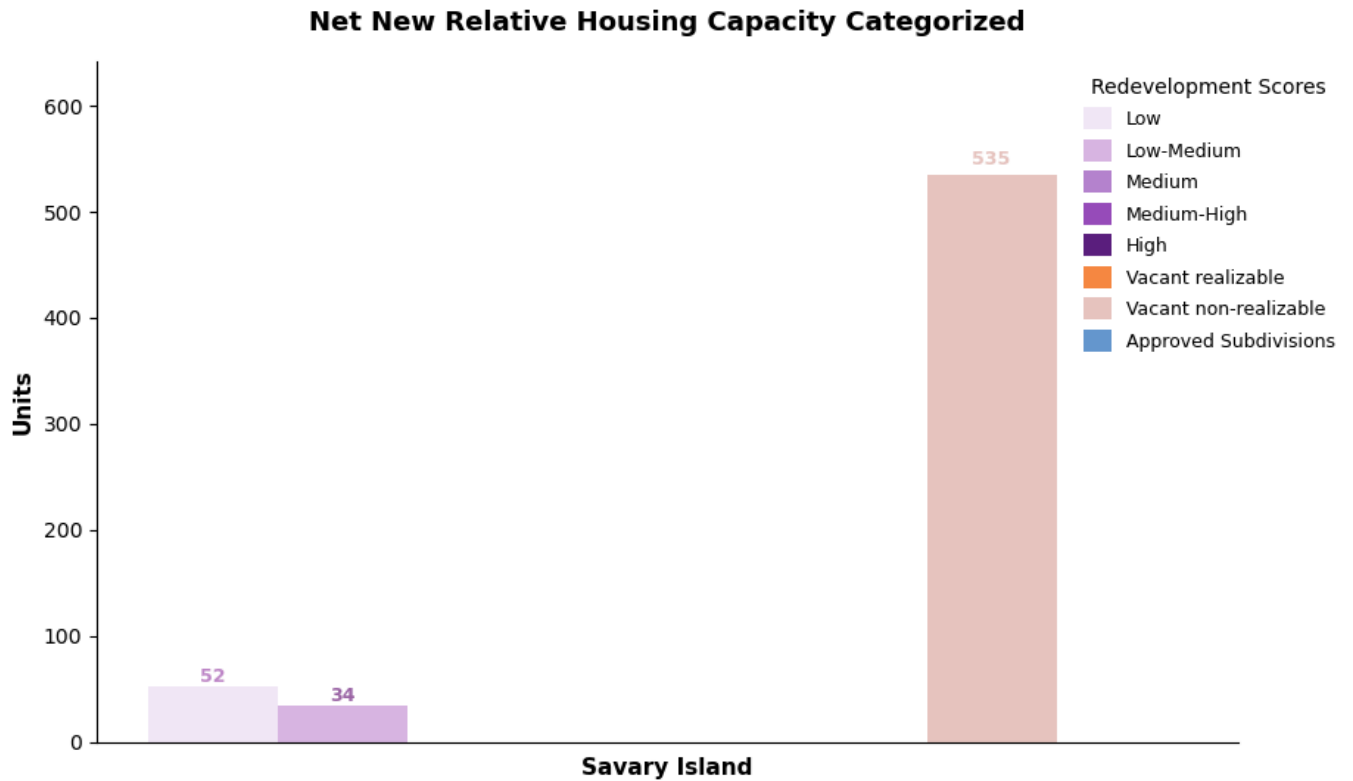


Figure 23. Electoral Area A Savary Island net new relative housing capacity summarized by redevelopment score.

The figure above shows the number of relative units categorized by their redevelopment score. Savary Island has a high concentration of non-realizable vacant parcels (535) and a distribution of low and low-medium redevelopment scores (52 and 34 units respectively). Vacant parcels on the island are not realizable for increased capacity due to their limited size and distance from Highway 101. Low redevelopment scores on the island are a result of a gap in servicing, specifically water sewer and paved roads, that would facilitate additional capacity. This suggests that all relative units for Savary Island are not likely to be redeveloped. Therefore, Savary Island within Electoral Area A has no new Realizable Capacity as a result of this analysis.

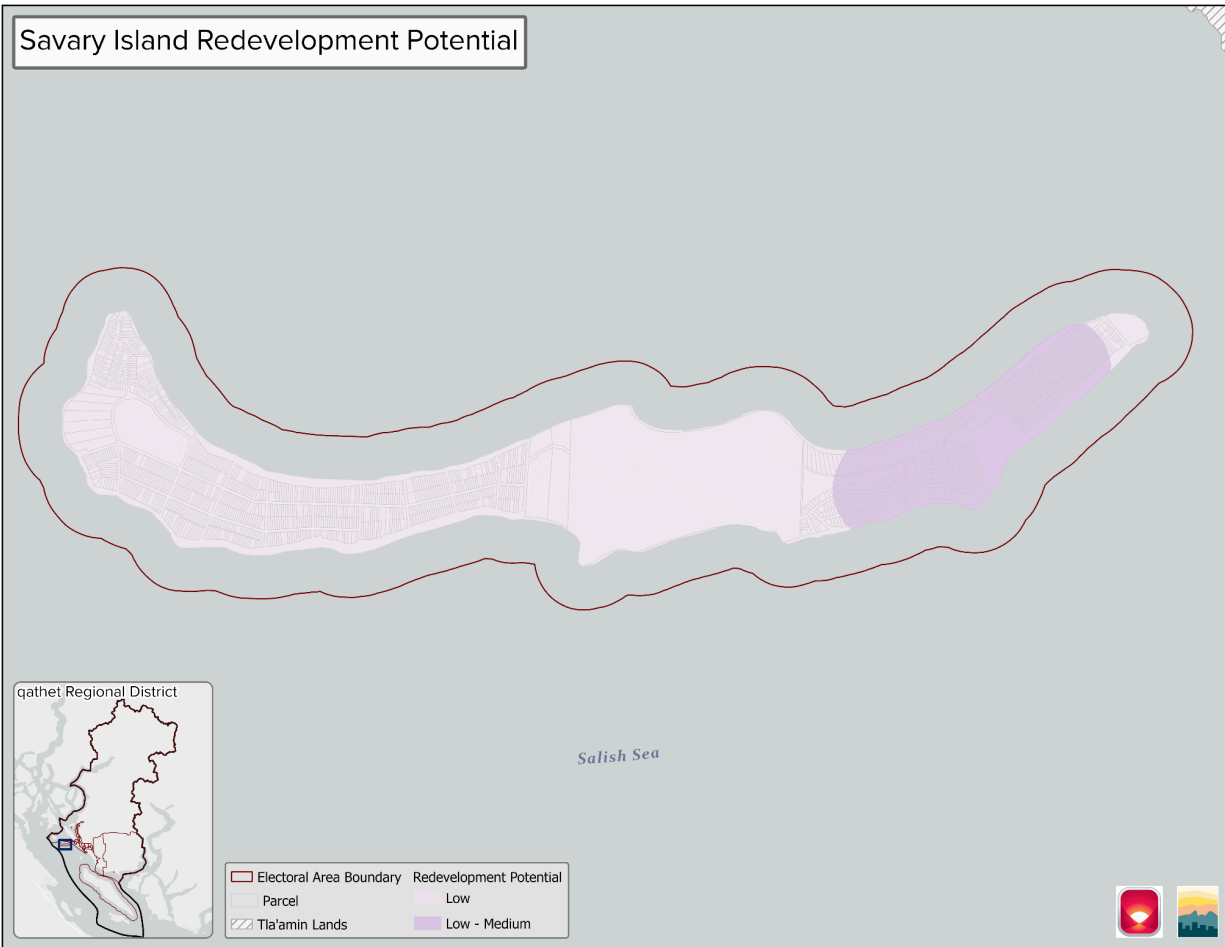


Figure 24. Savary Island Redevelopment Potential distribution

In the figure above, the eastern side of the island has received a higher redevelopment score than the rest of Savary Island. This is due to a limitation in how distance to infrastructure was calculated, which has inaccurately attributed parcels closest to the mainland with the servicing on the mainland. Currently this has no impact on the results of the three capacity analyses, but should be noted for clarity of interpretation.

Savary island has no net new Realizable Capacity, and therefore is not included as an additional figure.

Conclusions



Figure 25. Savary Island Capacity Analysis results comparison.

In the absence of an average parcel size assumption for Savary Residential – the sole residential land use for Savary Island – the model for absolute and Relative Capacity were calculated using minimum parcel sizes (4 ha). This results in identical absolute and relative capacities of 621 units. As further discussed in the Redevelopment Potential & Realizable Housing Capacity section above, there are no identified areas with Realizable Capacity for units on Savary Island.

Absolute Housing Capacity

Area B has a net new Absolute Capacity of 837 units. This capacity is clustered around Highway 101, at Bradford Road. These units are in Low-Density Residential and Suburban Residential land use areas, and are anticipated at an average of two units per hectare. A small amount of net new Absolute Capacity is shown outside this node, in areas designated as Low-Density and Rural Residential.

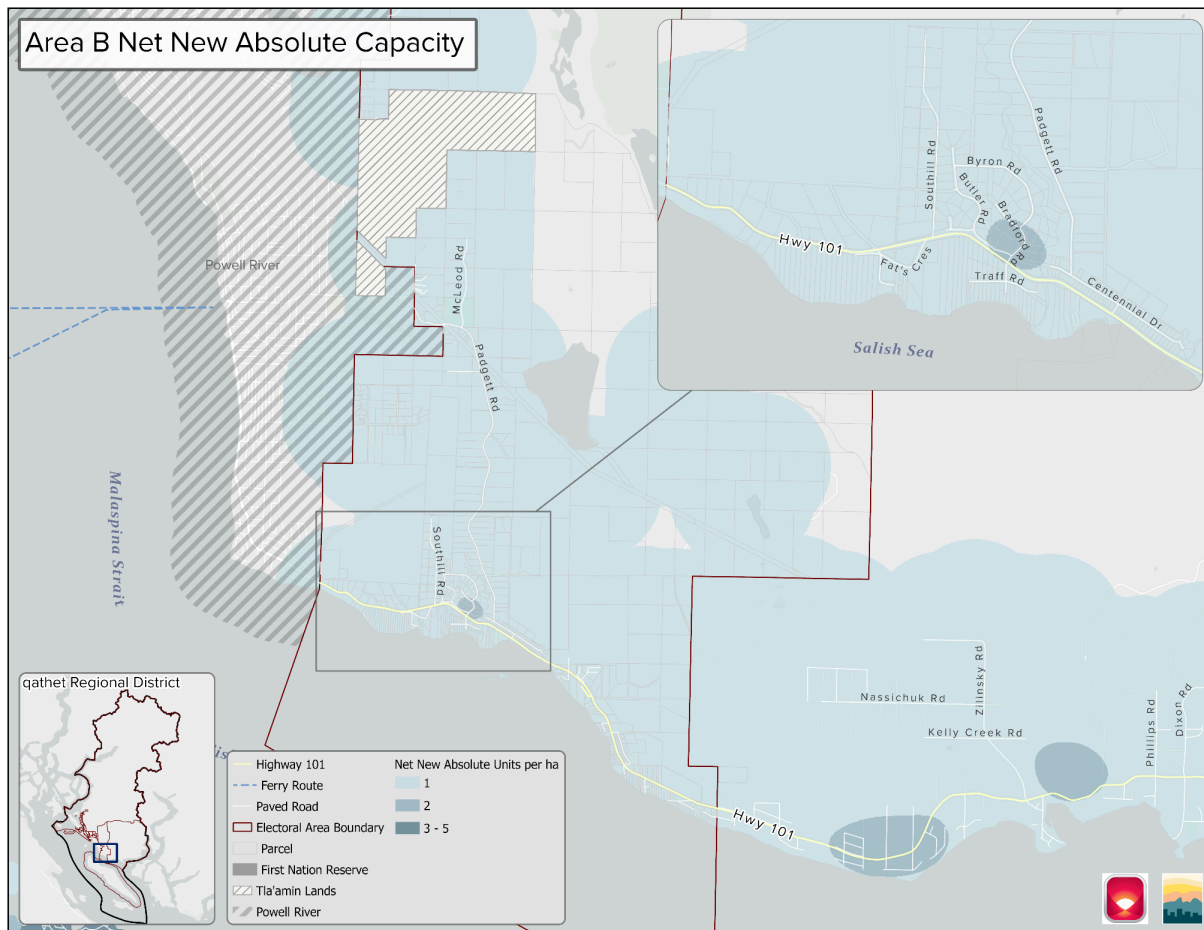


Figure 27. Area B, absolute net new housing capacity.

Relative Housing Capacity

Area B has a net new Relative Capacity of 807 units. Relative Capacity shows the same distribution as Absolute Capacity (Figure 28), concentrated around Highway 101 at Bradford Road.. The reduction from 837 net new Absolute Capacity is due to the average parcel sizes for subdividing increasing by ~40% from 1.4 hectares to 2 hectares in Rural Residential Areas, resulting in fewer subdivisions. This change affects 9 parcels, yielding a reduction in only 30 Net New Units. While Suburban Residential land use has a different average parcel size for subdividing, this applies only to fully serviced parcels and none of the parcels with this land designation have full servicing, while 76 parcels have water servicing. For Low-Density Residential land use, the minimum and mean parcel size for subdividing are the same, so there are no less Net New Units available in these areas.

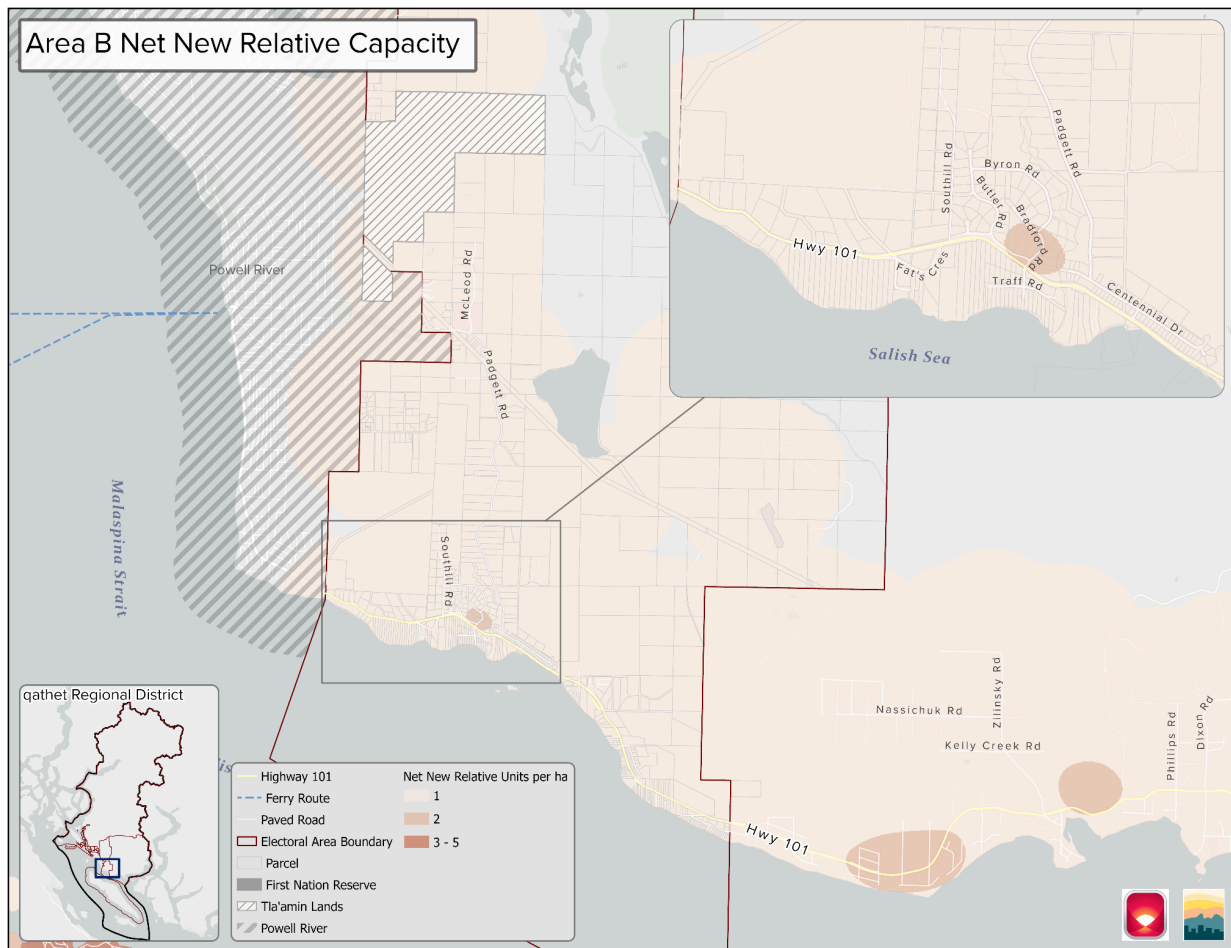


Figure 28. Area B, relative net new housing capacity.

Redevelopment Potential & Realizable Housing Capacity

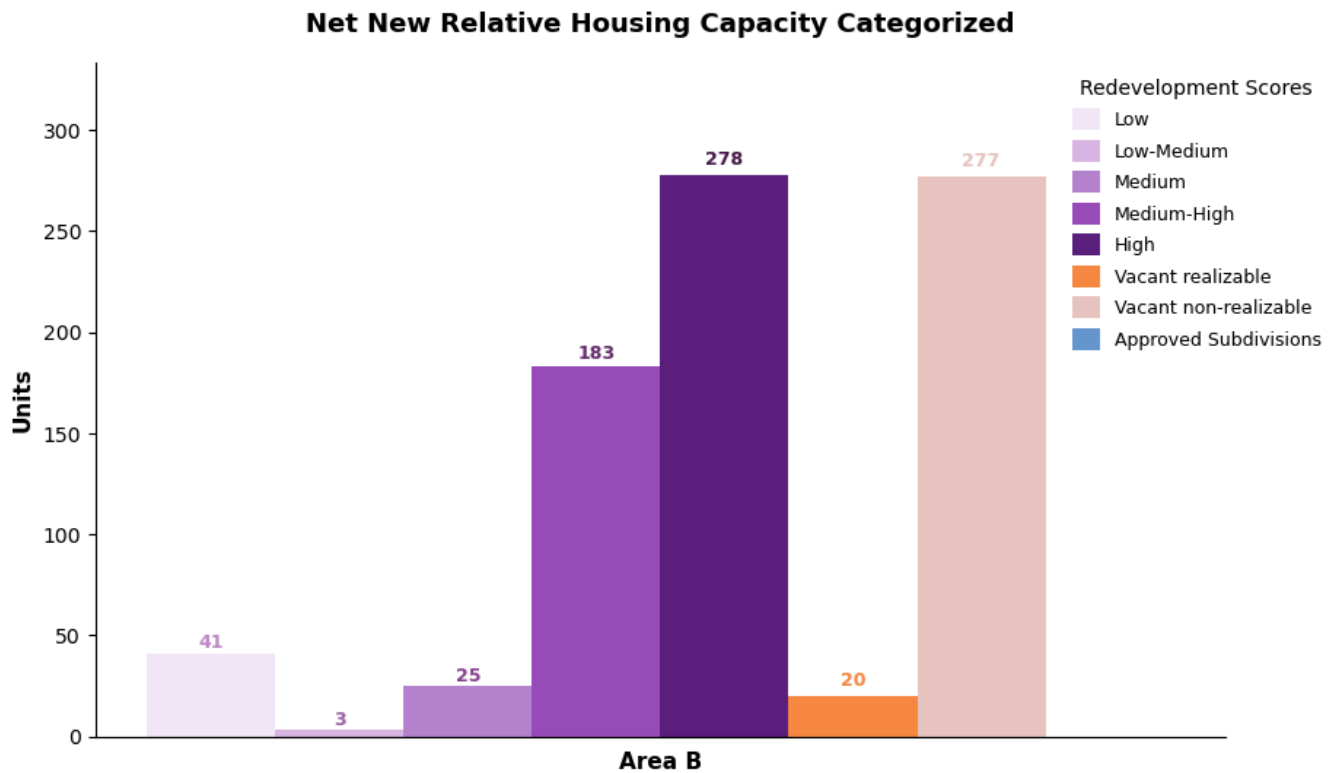


Figure 29. Electoral Area B net new relative housing capacity summarized by redevelopment score.

Electoral Area B has a relatively high concentration of high redevelopment scores (shown in purple on the figure below and in the chart above) around Myrtle Point around Highway 101 and Bradford Road. The high scores in this area are due to existing infrastructure, including paved roads, either have water servicing or are in close proximity to water servicing and relative proximity to sewer servicing in adjacent Powell River. Total value of land per acre varies, with waterfront properties tending to have higher values than inland properties.

Consistent with other regions, redevelopment values are lowest in unserviced areas located farther from paved roads and the coastline, where redevelopment costs are expected to increase proportionally. 277 vacant parcels were identified as non-realizable due to small size and distance from highway.

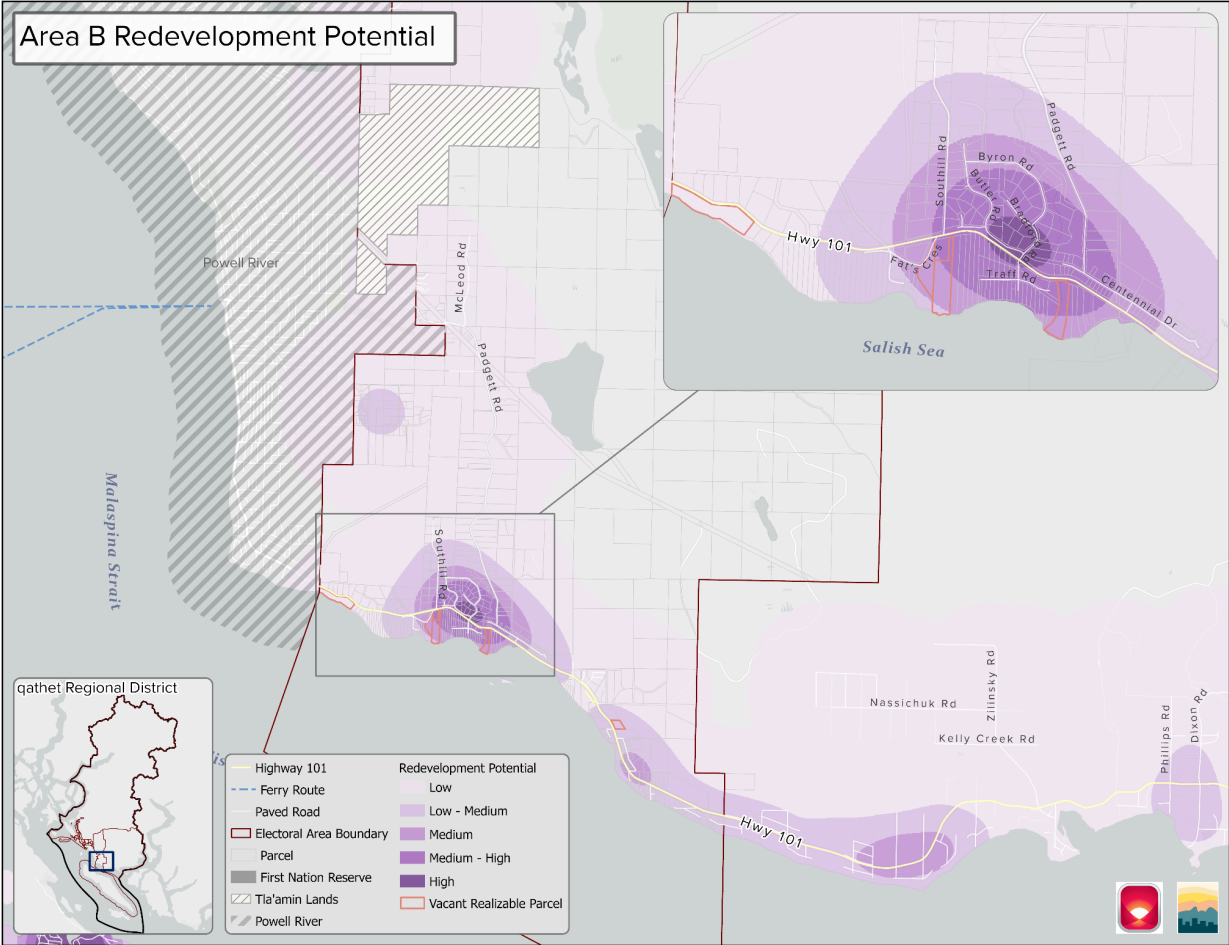


Figure 30. Area B Redevelopment Potential distribution

Electoral Area B has a net new Realizable Capacity of 298 units (278 units with high Redevelopment Potential and 20 units from vacant parcels with realizable units). This is concentrated in the same Suburban Residential and Low-Density residential areas as with absolute and relative capacities. The total area is large enough that there is no hot spot within Area B in the figure below, and net new realizable capacity is limited to no or 1 new unit in the area.

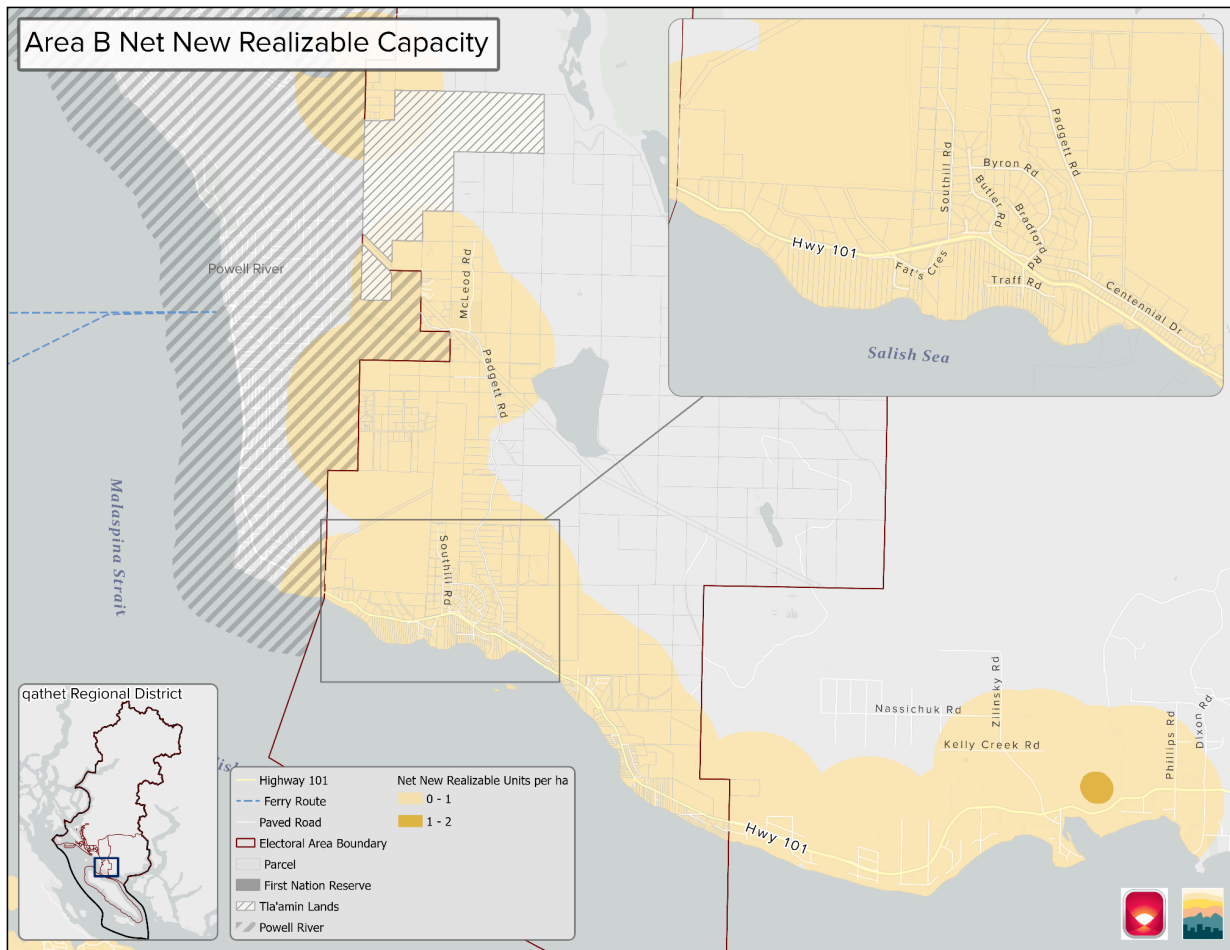


Figure 31. Area B, net new realizable housing capacity.

Conclusions

Electoral Area B has the lowest number of absolute and Relative Capacity in the qRD electoral areas (excluding Savary) and is in the middle for Realizable Capacity. Absolute Capacity is only reduced by 4% when compared to Relative Capacity. All the reduction occurs in areas with Rural Residential land use. Realizable Capacity is reduced by 63% when compared to Relative Capacity which is spread across land uses. All parcels in the ALR are removed, only 6 units of net new Realizable Capacity are in Rural Residential with the rest distributed between Low-Density and Suburban Residential land use areas.

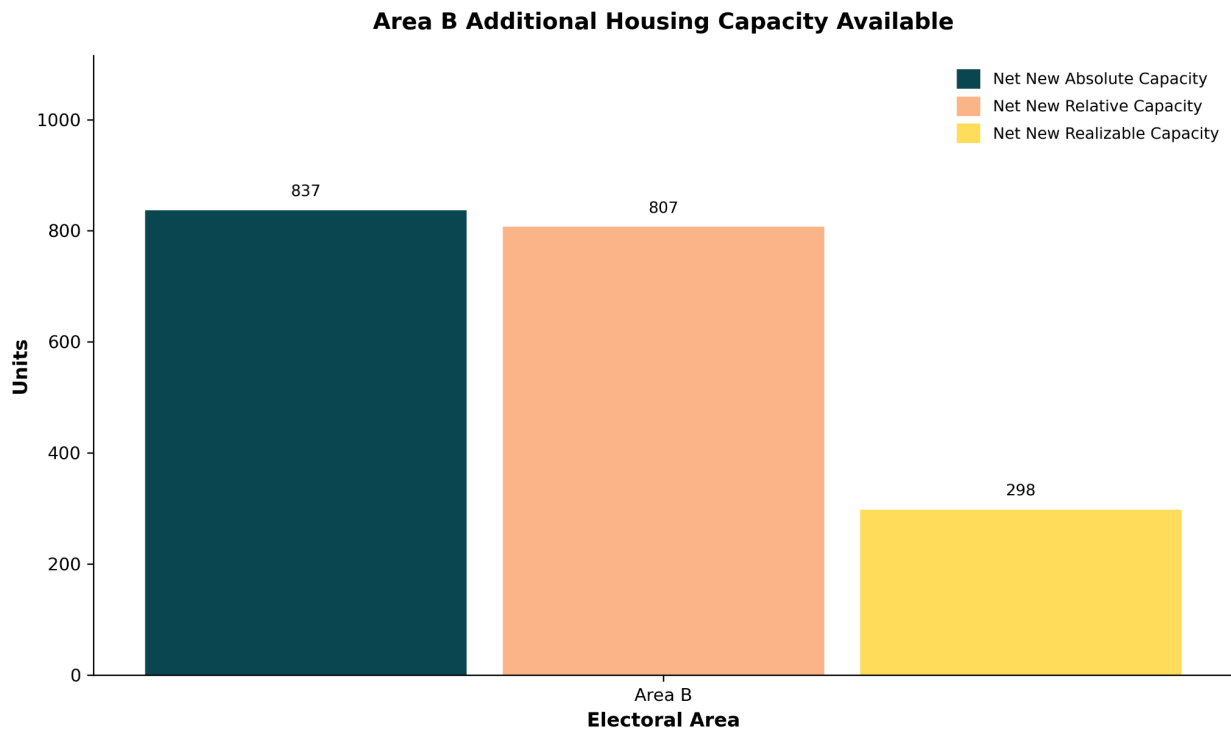


Figure 32. Area B Capacity Analysis results comparison.

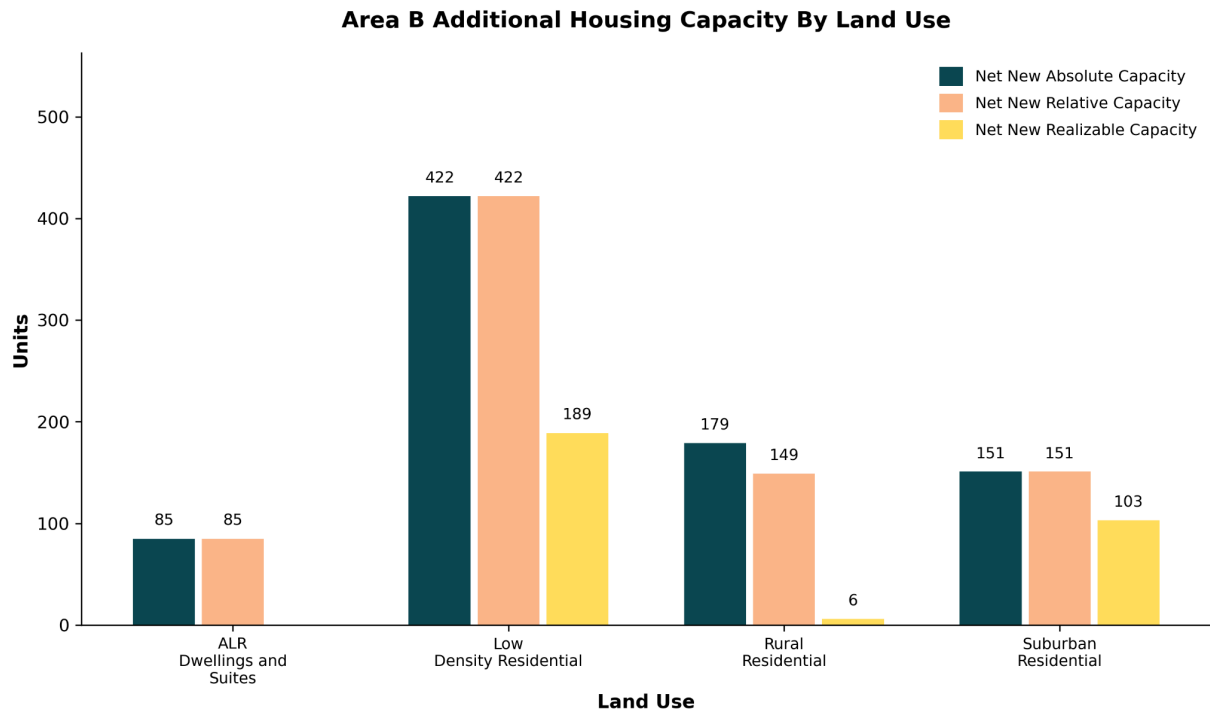


Figure 33. Area B capacity results, broken down by land use category.

Electoral Area C

Area C currently has 1,212 units, and has three residential land use types with capacity for accommodating more units: Low - Density Residential, Rural Residential, and Suburban Residential. Additionally, there is land in Electoral Area C in the Agricultural Land Reserve (ALR), illustrated in the figure below.

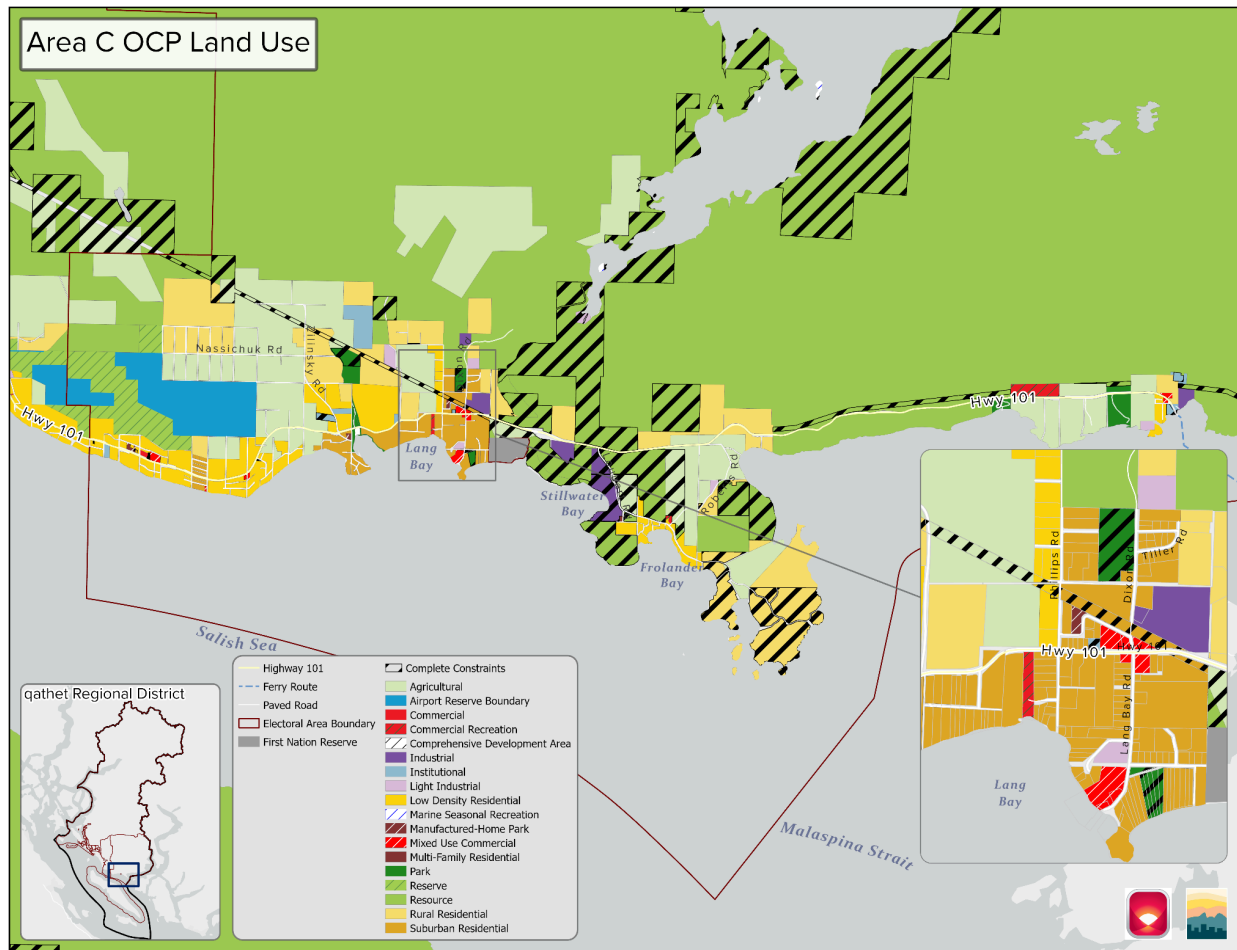


Figure 34. Electoral Area C, OCP Land Use.

Absolute Housing Capacity

Area C has a net new Absolute Capacity of 1,667. This is concentrated in the coastal areas along Highway 101 and predominantly in areas with Low Density - Residential land use. Capacity is highest in the areas west of Lang Bay which can be seen in the darker blue areas in the figure below. These regions have higher net new Absolute Capacity due to the number of parcels with Low Density - Residential land use clustered in relatively close proximity near the coastline. Net new Absolute Capacity decreases quickly in Electoral Area C with distance from the coastline, as there is less land designated for residential uses, as such values are lowest in inland areas. Additional

capacity is also located around Stillwater and Saltery Bay in areas with residential land uses.

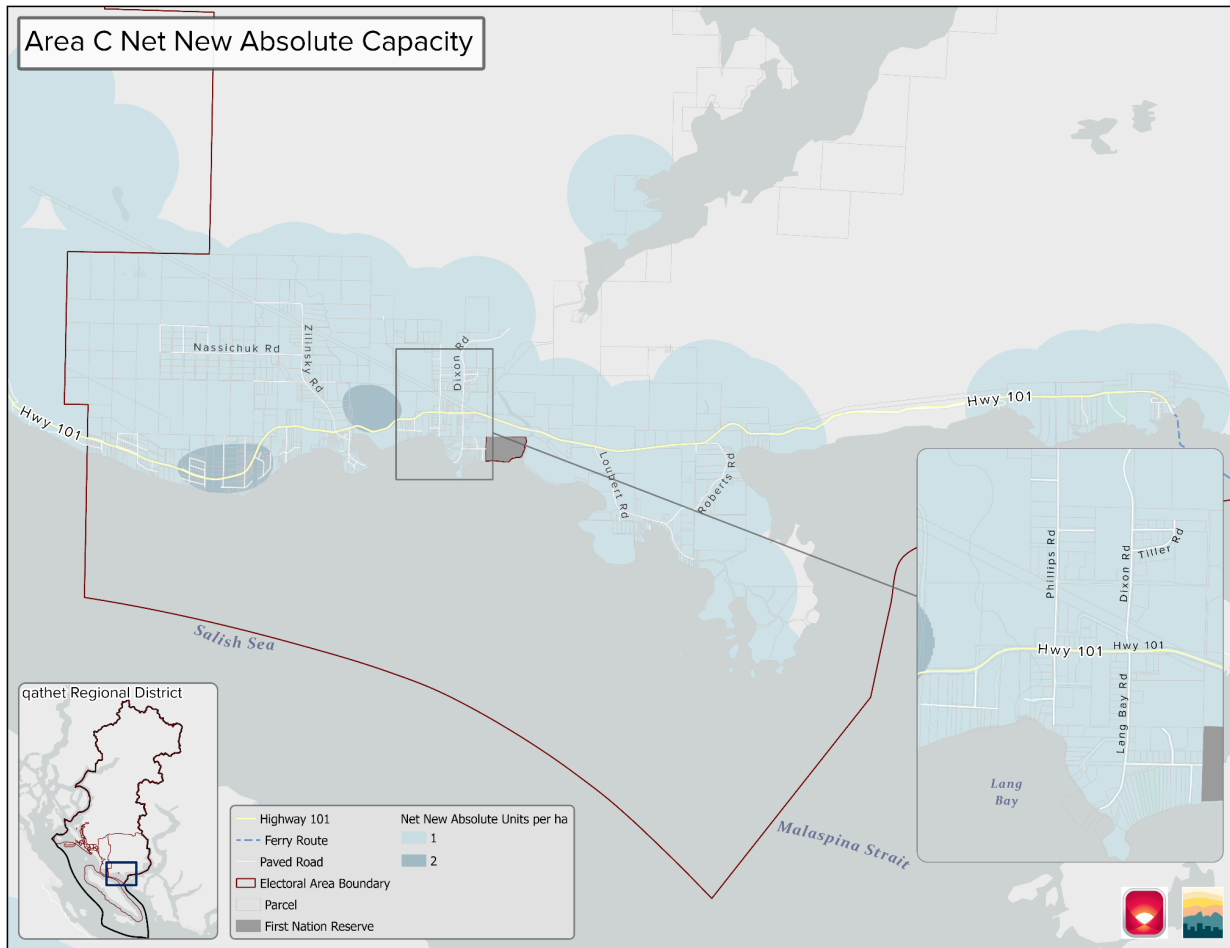


Figure 35. Area C, absolute net new housing capacity.

Relative Housing Capacity

Area C has a net new Relative Capacity of 1,475. Net new Relative Capacity is the same as Absolute Capacity in three of the five land uses/types (ALR, Comprehensive Development Area and Low - Density Residential). It is only 2 units less than Absolute Capacity in Suburban Residential, due to the minimum parcel size being the same as the average parcel size. Rural Residential is the only land use in Area C that saw a significant reduction between Absolute Capacity and Relative Capacity, due to the application of an average parcel size that is larger than the specified minimum, resulting in fewer overall subdivisions and lower capacity. The largest decreases between absolute and Relative Capacity occur on Rural Residential parcels north of Highway 101. The figure below shows the spatial distribution of net new Relative Capacity across Area C (orange).

The highest concentrations of capacity are located west of Lang Bay, similar to the pattern observed for net new Absolute Capacity. This reflects the concentration of

Low-Density Residential land uses in close proximity near the coastline, where minimum parcel size continues to apply. As a result, absolute and Relative Capacity outcomes across Area C remain broadly similar. Additional capacity is also identified east and south of Lang Bay and Saltery Bay, where residential land uses are present.

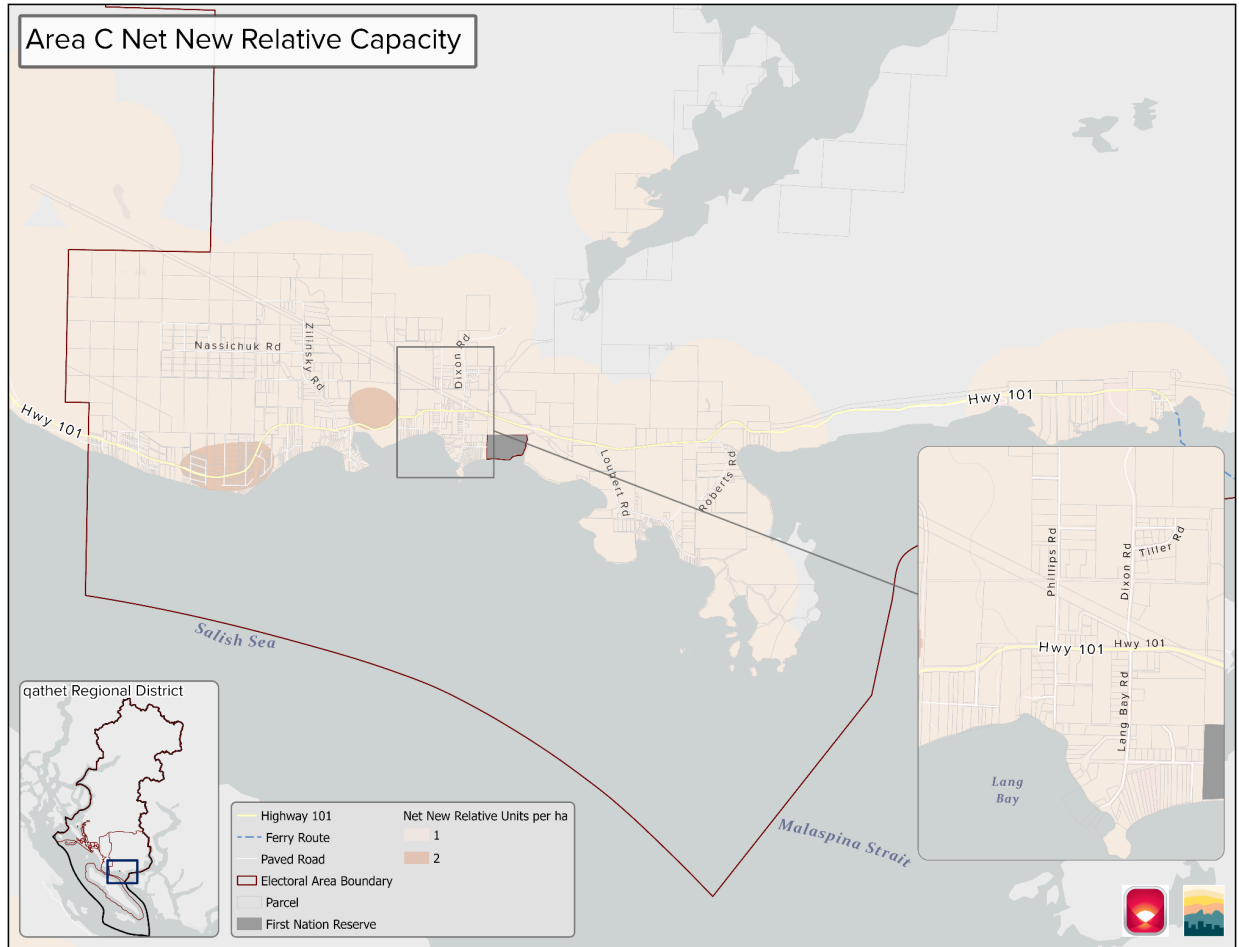


Figure 36. Area C, net new relative housing capacity.

Redevelopment Potential & Realizable Housing Capacity

Net New Relative Housing Capacity Categorized

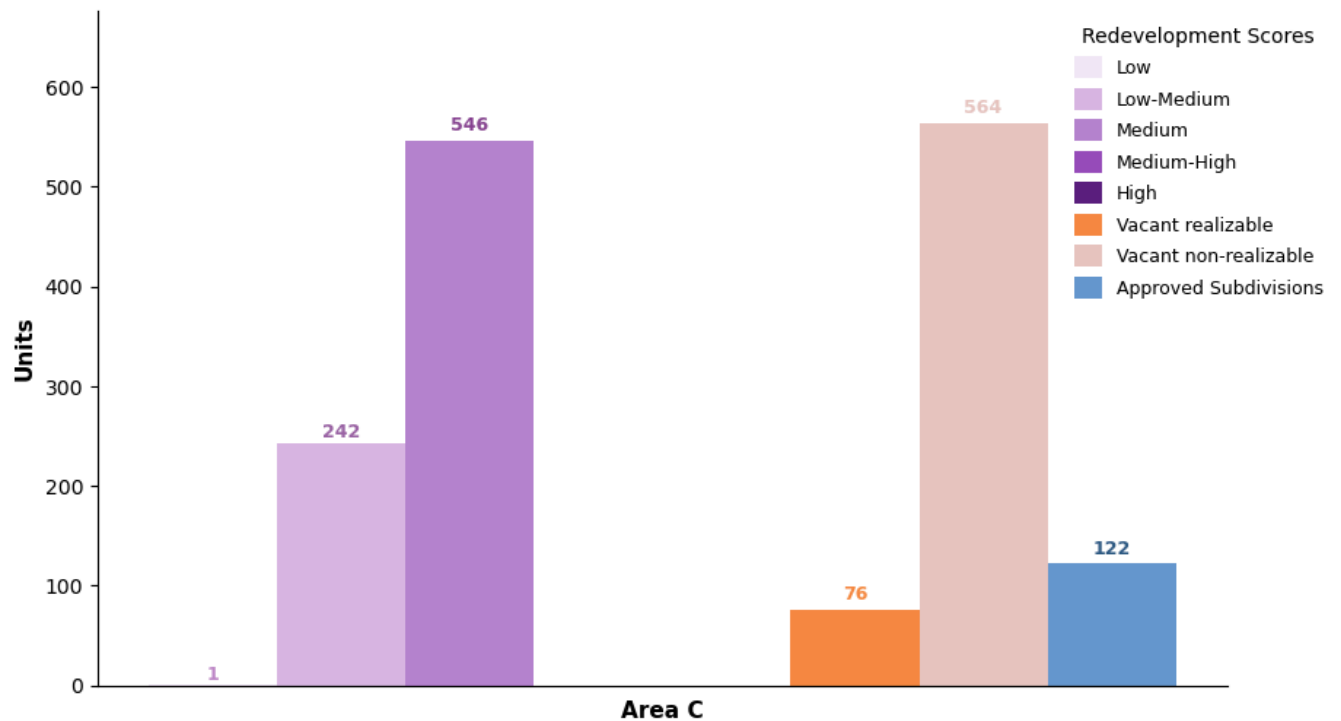


Figure 37. Electoral Area C net new relative housing capacity summarized by redevelopment score.

Area C contains a high concentration of parcels with vacant, non-realizable development scores. Approximately 60% of parcels in Area C show at least some likelihood of redevelopment, and roughly two-thirds of those fall into the medium redevelopment category or are already approved for subdivision. The absence of high and medium-high redevelopment scores are due to the lack of servicing.

The figure below highlights the areas with the highest likelihood of redevelopment (in this case medium-purple), particularly Lang Bay and the coastal regions to its west, where residential land uses are most concentrated. Coastal areas east of Lang Bay around Stillwater, as well as parcels near Saltery Bay, also show Redevelopment Potential, though to a lesser degree due to the more dispersed pattern of residential land use in those locations.

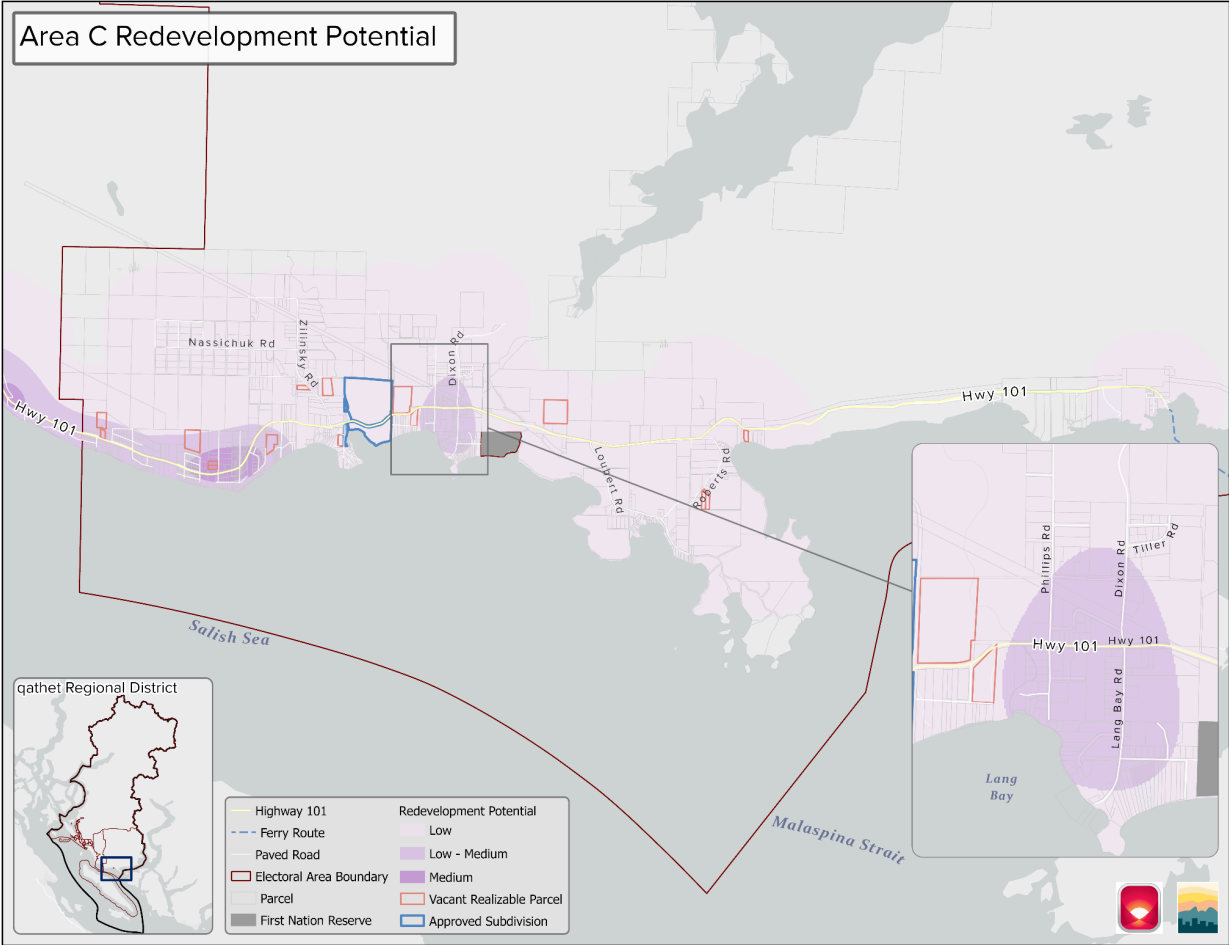


Figure 38. Area C Redevelopment Potential distribution

Area C has a net new Realizable Capacity of 198 units. The figure below shows the dispersal of these units across the coastal regions of Area C in yellow. Slightly higher density of capacity occurs just to the west of Lang Bay where there is a large approved subdivision.

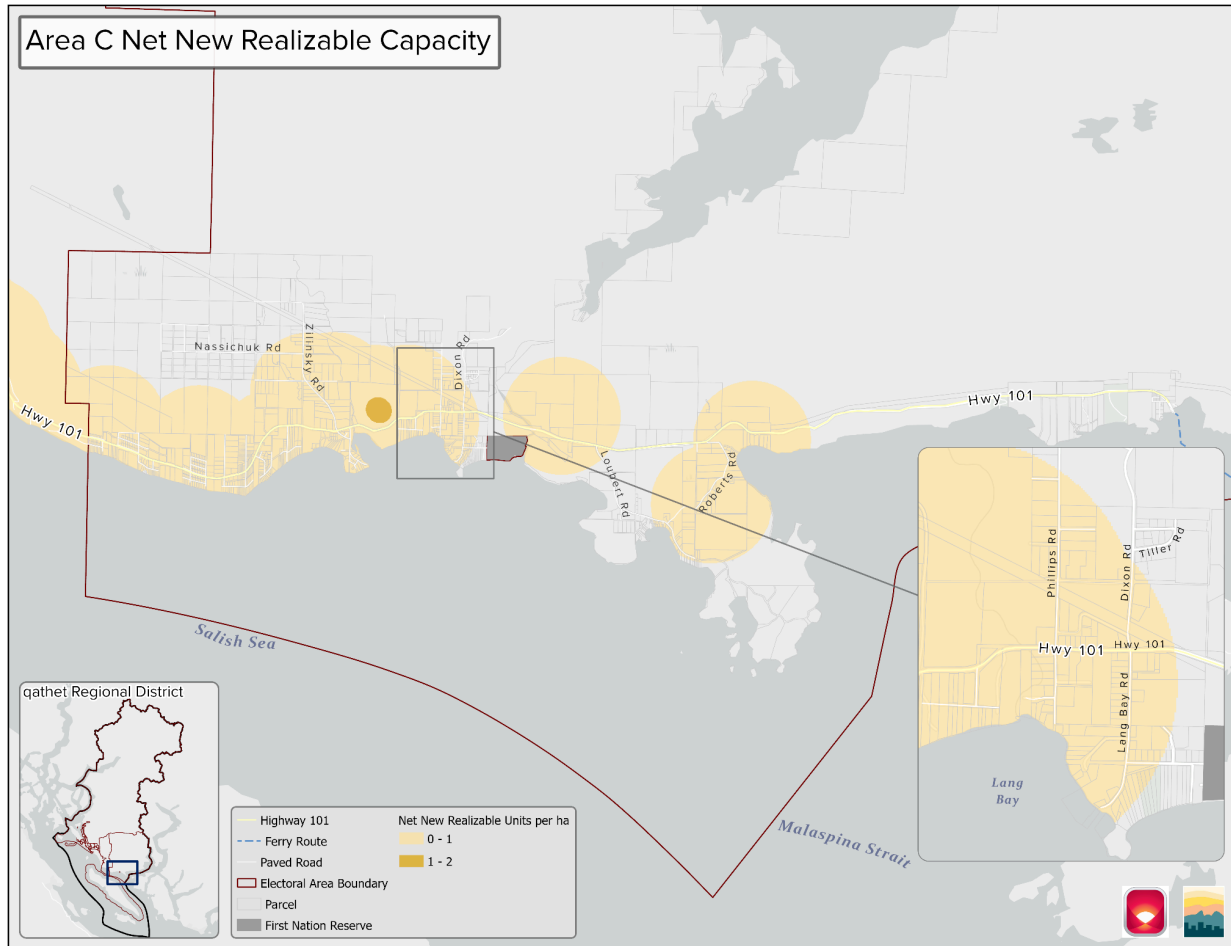


Figure 39. Area C, net new realizable housing capacity.

Conclusions

Area C has the lowest Realizable Capacity across the region and is in the middle for absolute and Relative Capacity of the qRD Electoral Areas. Absolute Capacity is only reduced by 14% when compared to Relative Capacity. For most of the land uses, the average parcel sizes were not provided, and as such were calculated as the same as Absolute Capacity. Realizable Capacity is reduced by 88% when compared to Relative Capacity, and 90% when compared to Absolute Capacity. Most additional Realizable Capacity is seen in the Comprehensive Development Area land use, which has a large approved subdivision for 122 units. Rural Residential is reduced by 90%, Low - Density Residential by 94% and Suburban Residential by nearly 98%, and ALR constrained down to 0 Realizable Capacity.

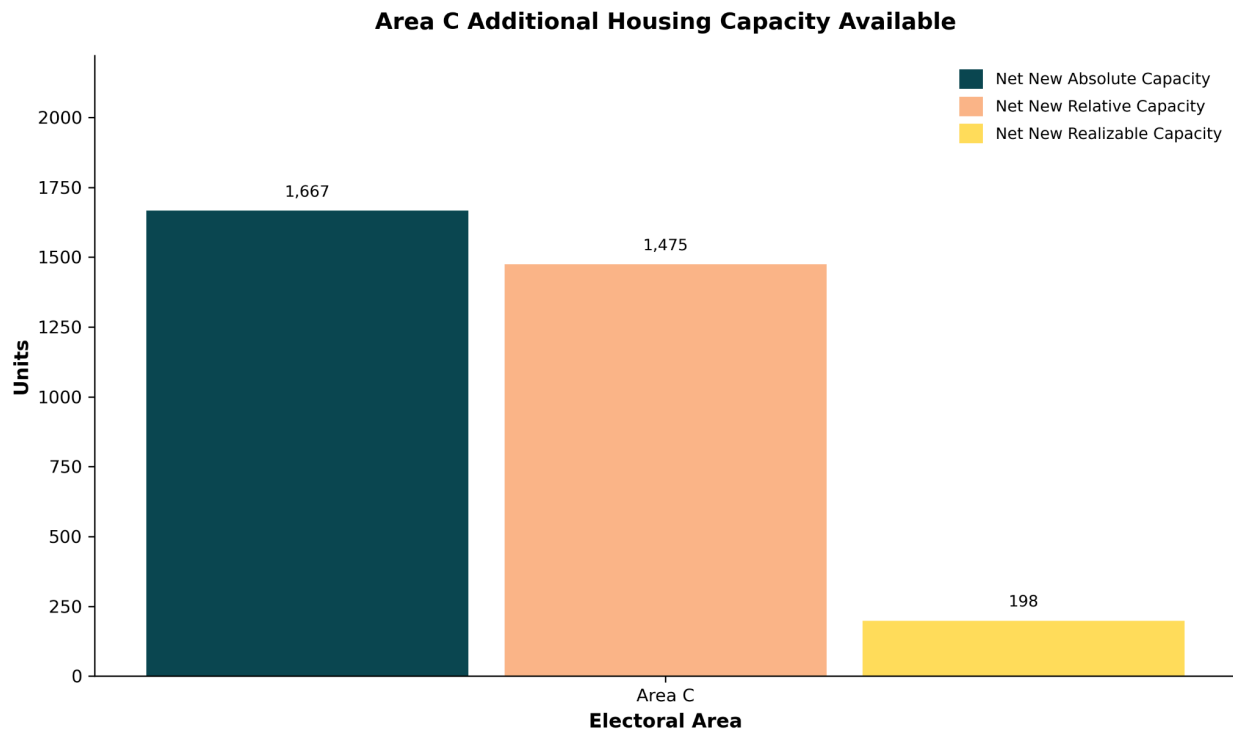


Figure 40. Electoral Area C Capacity Analysis results comparison.

Area C Additional Housing Capacity By Land Use

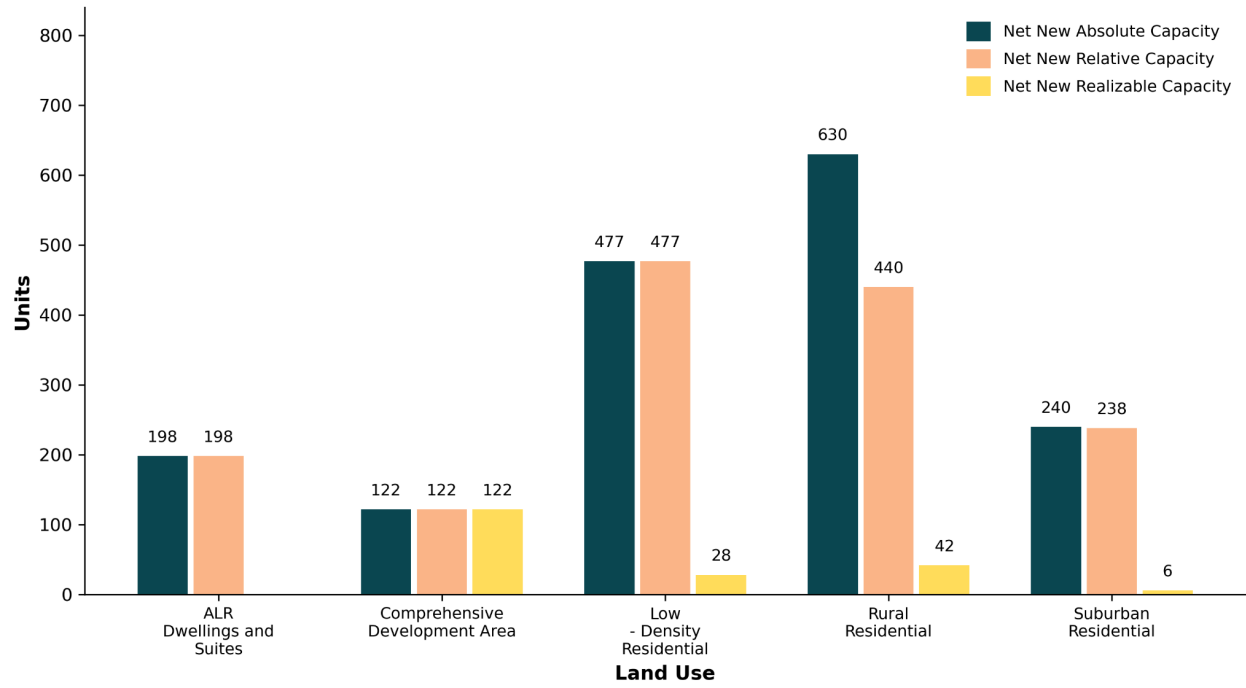


Figure 41. Area C capacity results, broken down by land use category.

Electoral Area D

Area D currently has 1,420 units, and has three residential land use types with capacity for accommodating more units: Rural Residential, Rural Village (serviced), and Rural Village (unserviced), illustrated in the figure below. Of these, only Rural Village (serviced) shows capacity for growth under the Realizable Capacity scenario, while the others show capacity for growth under absolute and Relative Capacity scenarios. Area D contains two communities of interest for the purpose of this study: Van Anda and Gillies Bay.

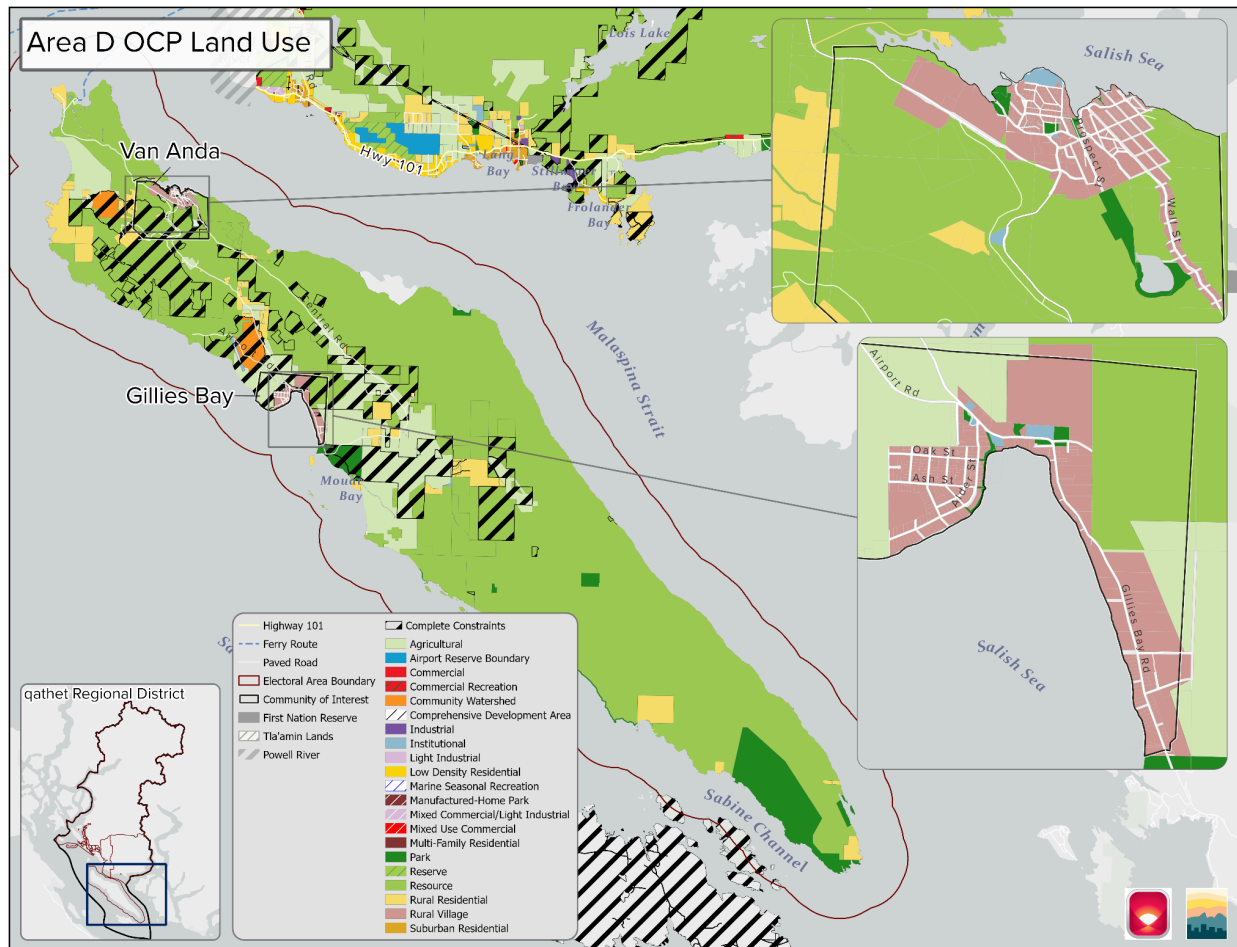


Figure 42. Electoral Area D, OCP Land Use.

Absolute Housing Capacity & Relative Housing Capacity

As mentioned in the capacity model definitions, in cases where a land use does not have an average parcel size assumption, the model defaults to the minimum parcel size when subdividing. Consequently, Area D has the same net new absolute & Relative Capacity of 3,645 units.

Absolute and Relative Capacity in Area D is clustered around Van Anda and Gillies Bay, the two largest communities on the island. This is shown in blue in the figure below. Some additional capacity is seen elsewhere on the island around large parcels or smaller tightly clustered parcels. However, most of these areas outside the two larger communities are limited by physical constraints and as such are not identified as viable in the pursuant Realizable Capacity model.

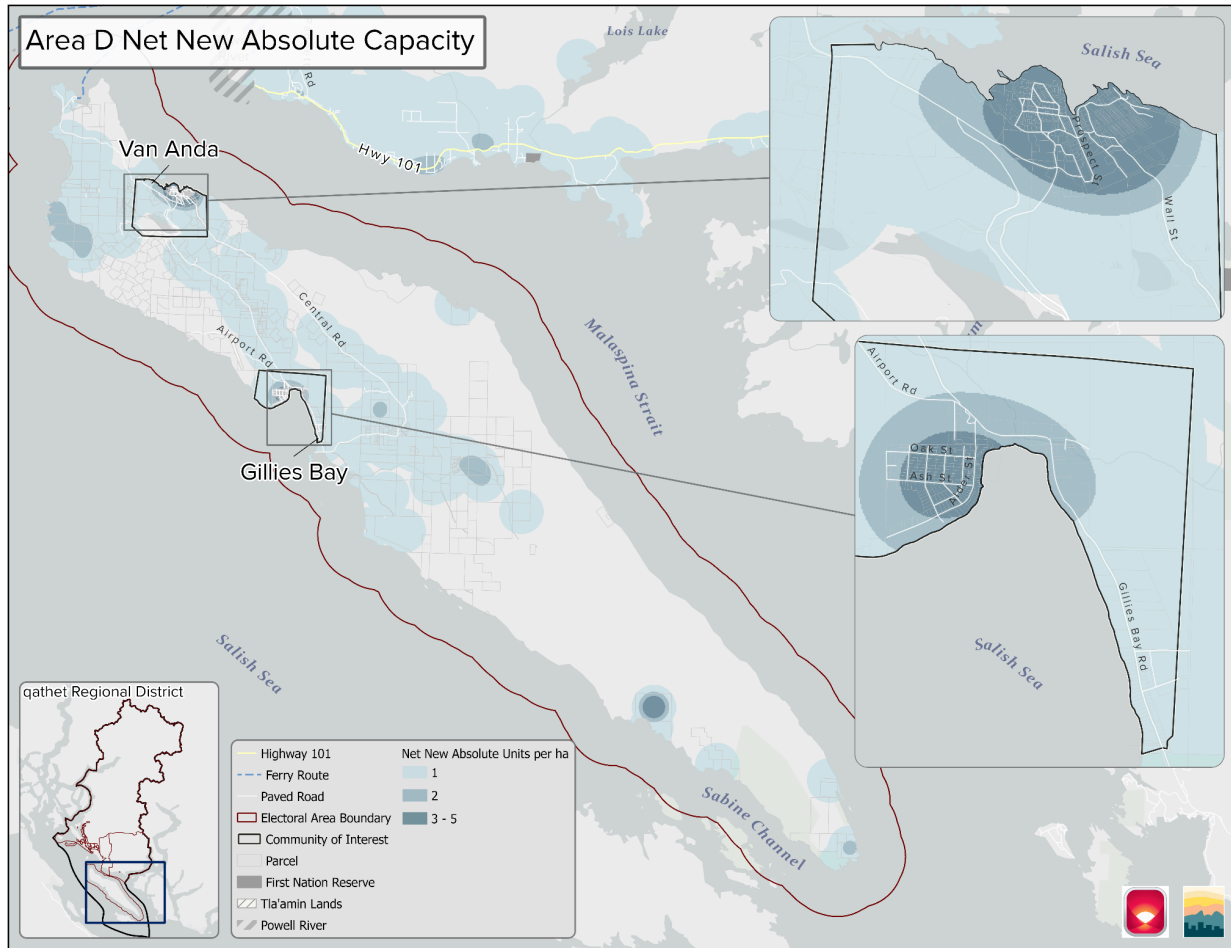


Figure 43. Area D, absolute net new housing capacity.

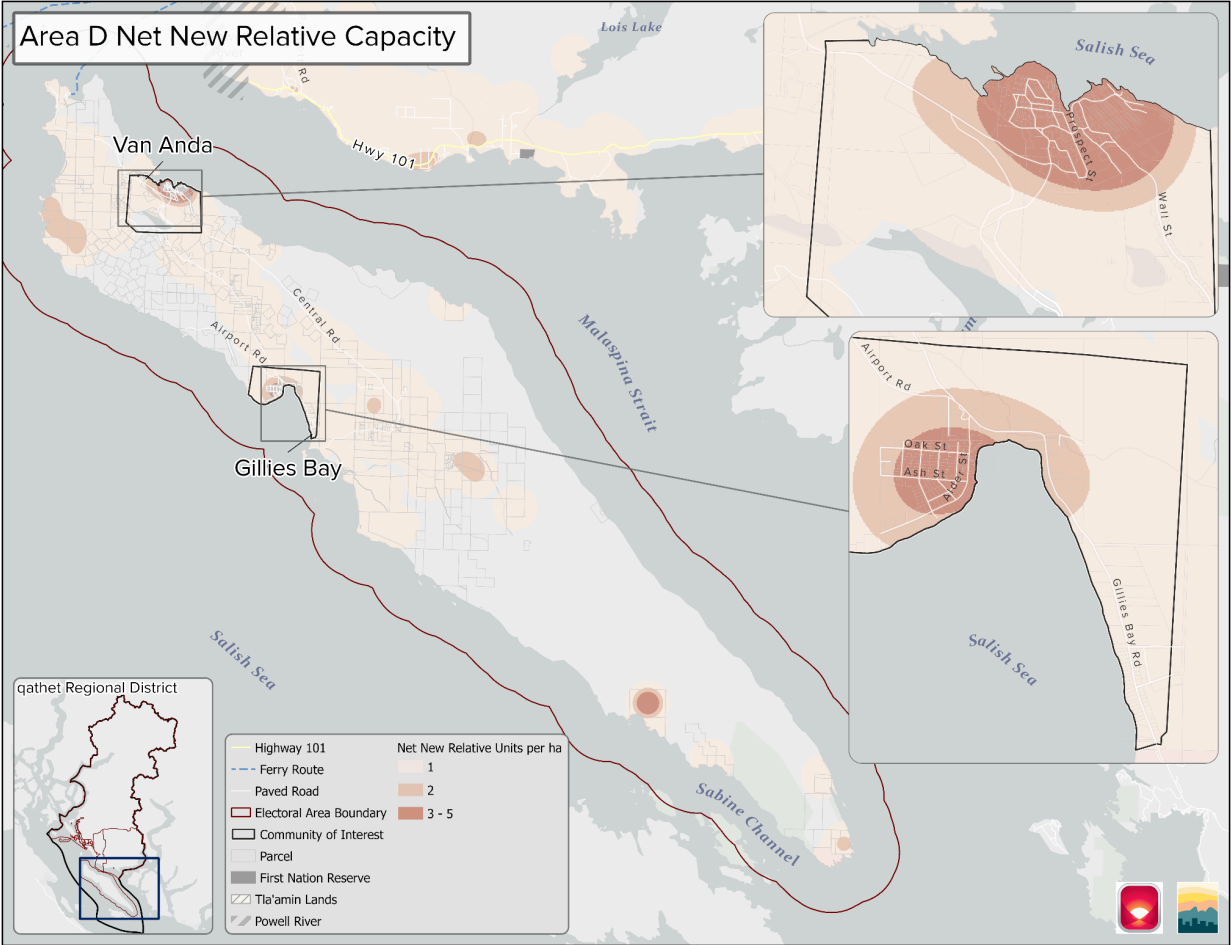


Figure 44. Area D, relative net new housing capacity. This scenario shows the same results as Absolute Capacity above.

Redevelopment Score & Realizable Housing Capacity

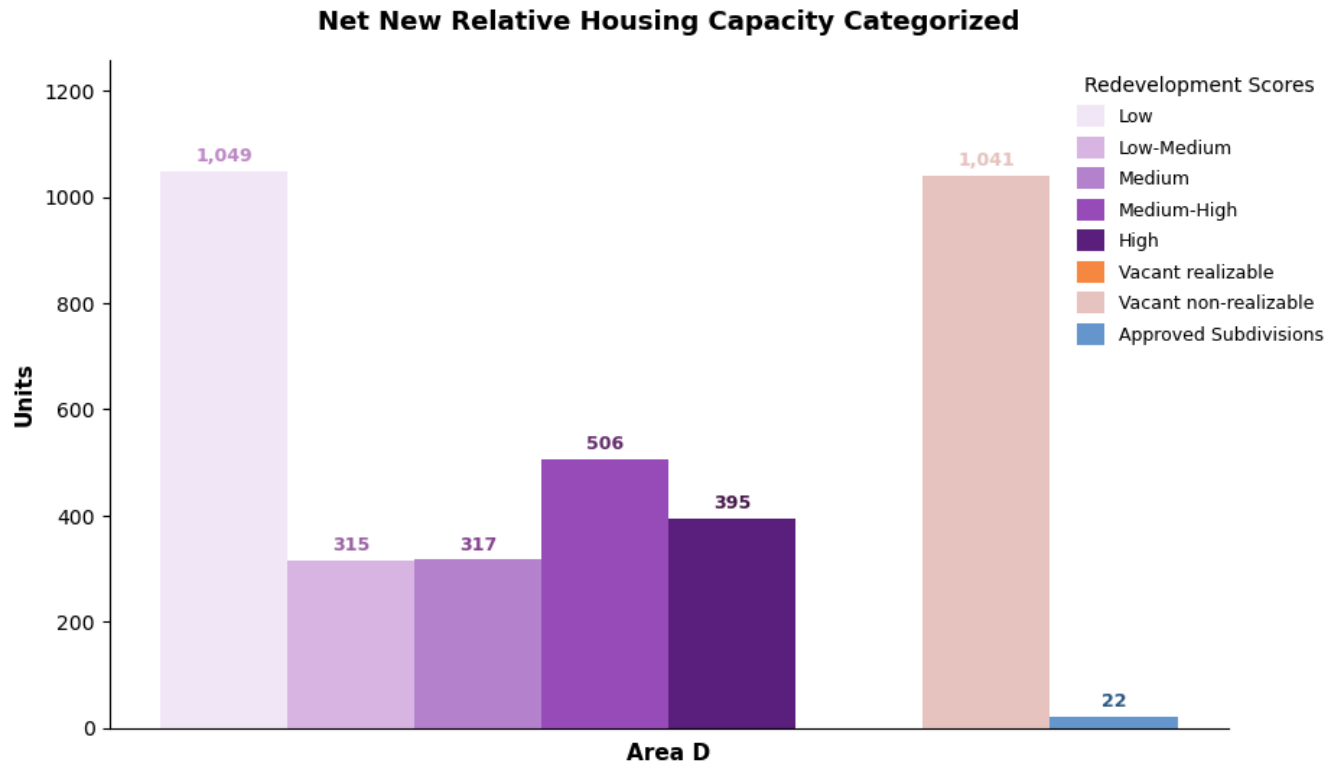


Figure 45. Electoral Area D net new relative housing capacity summarized by redevelopment score.

Just below 40% of parcels in Area D show at least some likelihood of redevelopment. Roughly 5% of those fall into the low and low-medium redevelopment category, but represent a large number of units (1,049 and 315 units respectively out of a total of 3,645). This suggests that most units are not likely to be redeveloped. Another 1,041 units were modeled on vacant parcels, however due to environmental constraints, none of these are deemed viable.

The figure below shows the clustering of Redevelopment Potential scores in purple, with highest (and thus most realizable) redevelopment scores shown in darkest purple. This largely mirrors results of absolute and Relative Capacity modeling, with the majority of high redevelopment scores clustered around Van Anda and Gillies Bay. Other units with lower redevelopment scores are shown in lighter purple mainly along roads connecting the two communities.

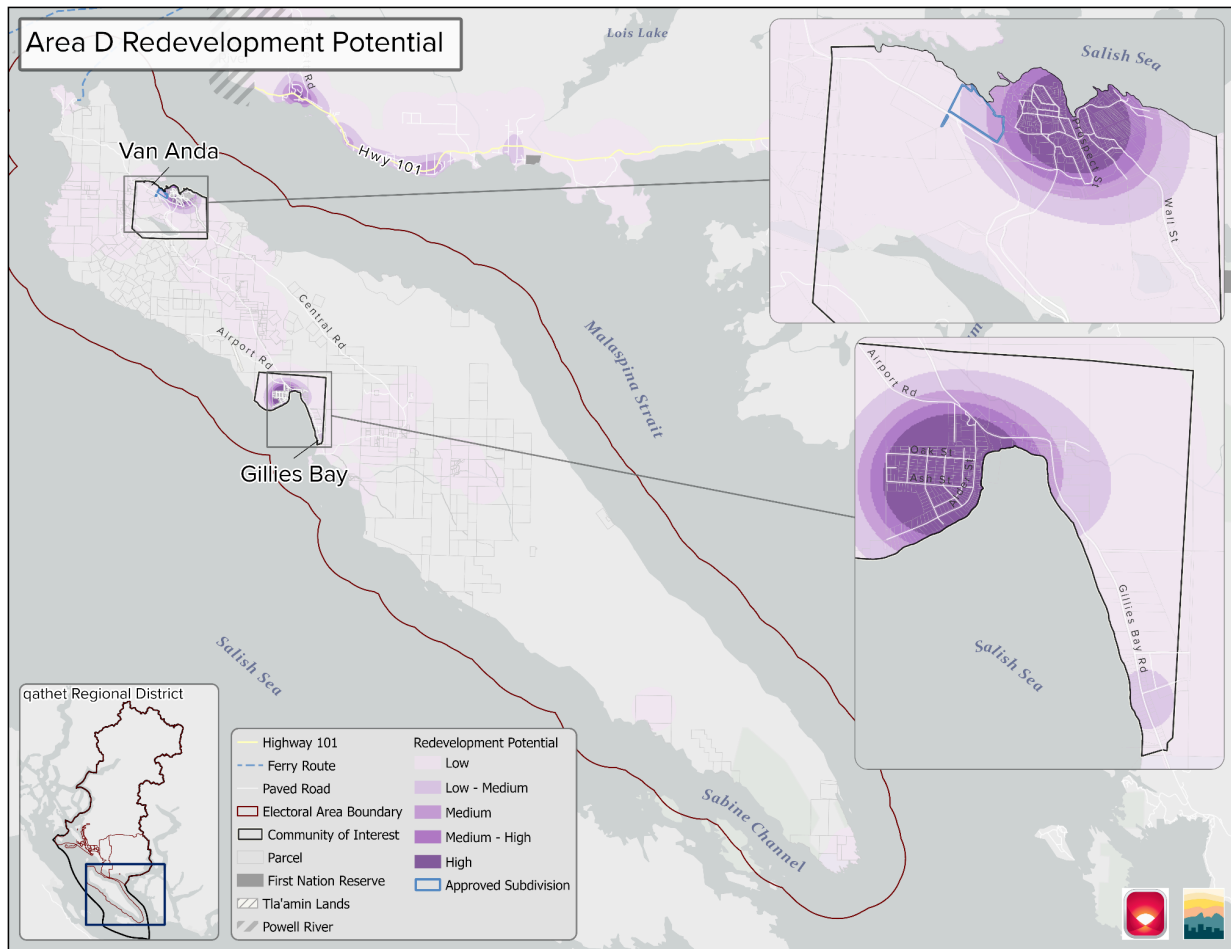


Figure 46. Area D Redevelopment Potential distribution

As mentioned in the capacity model definitions, the Redevelopment Potential factors considered when selecting realizable growth sites consist of the following three components: high redevelopment scores, queried vacant sites (within 1 km of Highway 101 and larger than or equal to 1 hectare), and approved subdivisions. In Area D, there are no viable vacant sites as Highway 101 does not exist on the island. Thus, units with the highest redevelopment scores and the approved subdivision, shown in the figure above, are selected as net new realizable units. The net new realizable units are shown in yellow in the figure below.

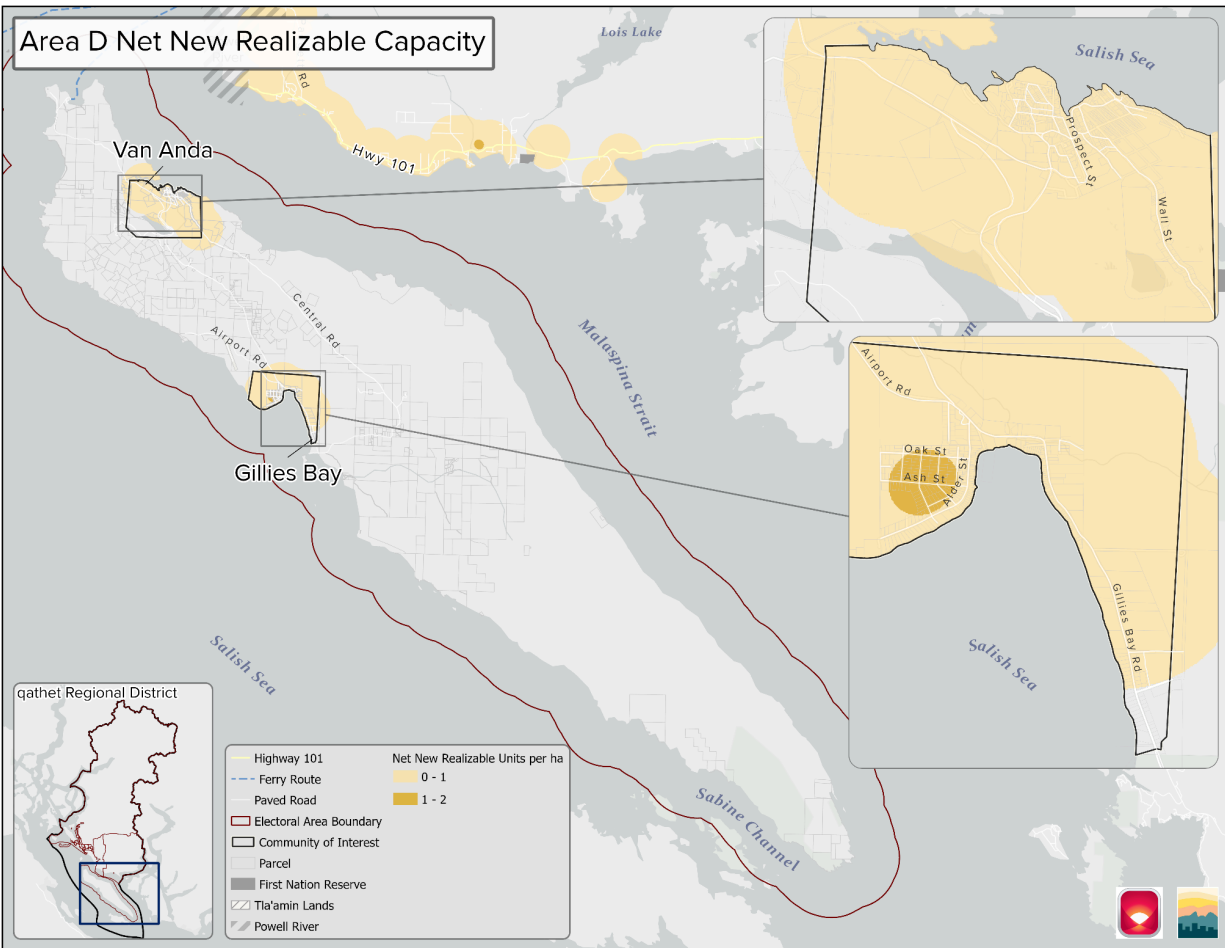


Figure 47. Area D, realizable net new housing capacity.

Area D has a net new Realizable Capacity of 417. This capacity is located on Rural Village designated parcels concentrated around Van Anda and Gillies Bay, and are serviced areas.

The highest cluster of Net New Units are located on the west side of Gillies Bay, shown in the darkest yellow in the inset in the figure above. However, Van Anda has more total land area that is estimated to have Realizable Capacity. This is due to the relatively tighter clustering of residential parcels in Gillies Bay, as compared to larger and further apart parcels in Van Anda. Areas outside of these two communities are not expected to see significant redevelopment, because the 20% of parcels with the highest redevelopment scores are all located within Gillies Bay and Van Anda. Parcels outside these communities are in the bottom 80% of redevelopment score parcels, and thus are not captured as net new realizable units.

Conclusions

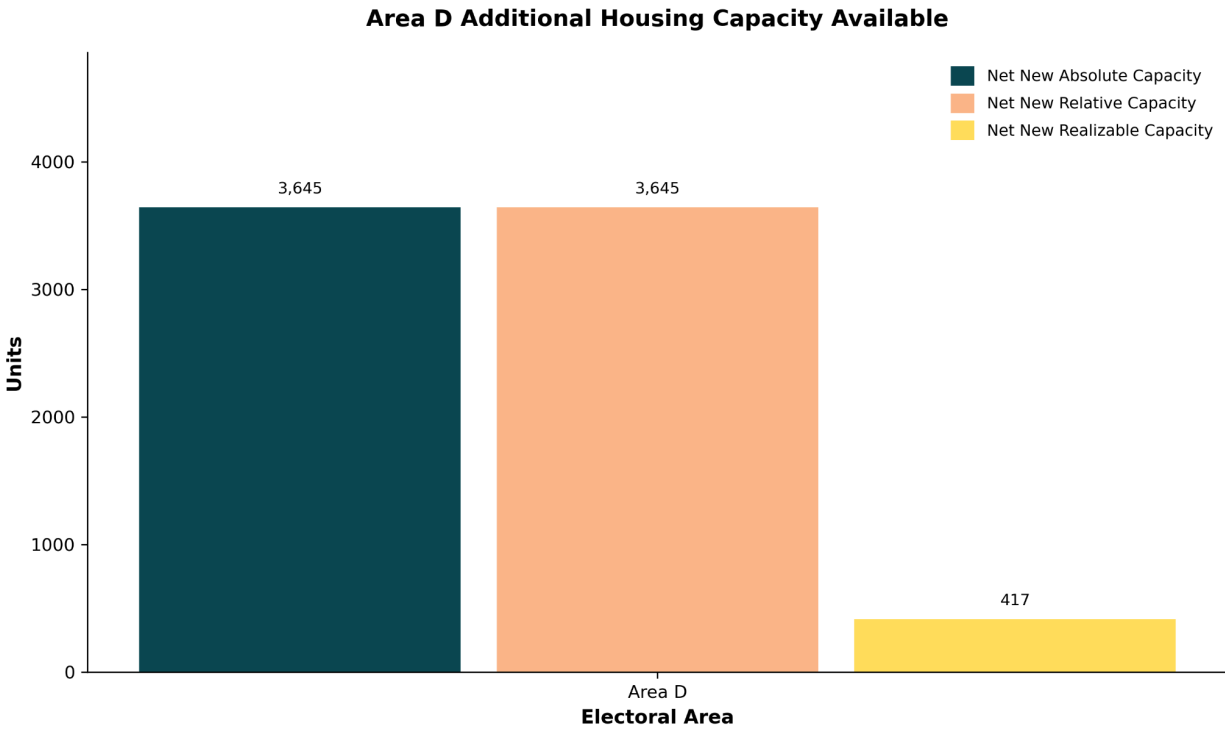


Figure 48. Area D Capacity Analysis results comparison.

In the absence of an average parcel size assumption for land uses on Texada Island, the model for absolute and Relative Capacity were calculated using minimum parcel sizes. This results in identical absolute and relative capacities of 3,645 units. However, a significant reduction is seen when considering Realizable Capacity for redevelopment, with a net new Realizable Capacity of 417. The figure below shows that all new realizable units are located on serviced Rural Village designated parcels.

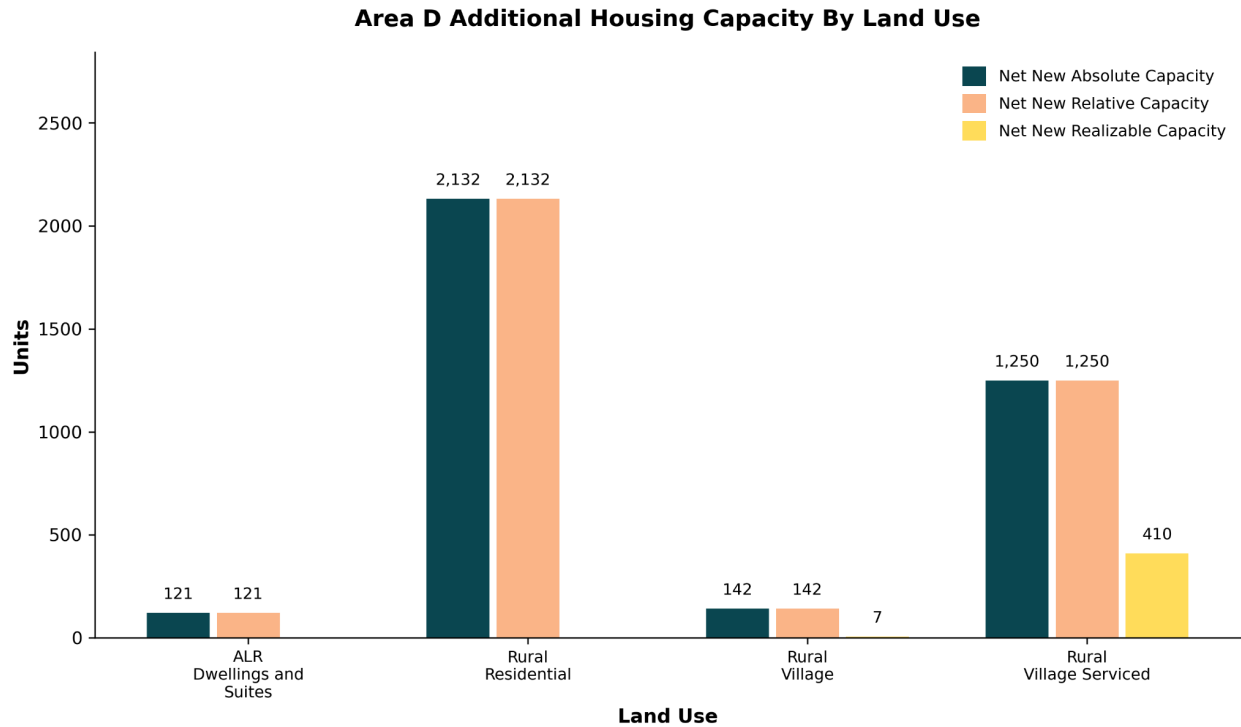


Figure 49. Area D capacity results, broken down by land use category.

Although 417 units of net new Realizable Capacity is a significant reduction from the Absolute Capacity of 3,645, it is also a significant increase from the existing 1,420 units on the island. Area D has the second highest total number of net new realizable units, with Area A at 663 units, and Area B and C at 298 and 198 new units respectively. This relatively high number of realizable units in Area D is a result of high redevelopment scores around Van Anda and Gillies Bay. These high redevelopment scores are a product of paved roads and servicing which increase the suitability of parcels to accommodate increased growth.

Next Steps / Project Extensions

This project represents a first-cut assessment to evaluate capacity for residential growth and development in the qRD. As this is an initial effort, there are several possible project next steps or extensions that can be executed in the coming years. Broadly, these can be broken down into the following categories:

Policy making

Comprehension of capacity, both regionally and by electoral area can help inform land use policy especially with regards to statutory land use and ultimately implementation through zoning. Fundamentally, the outputs of this project can be used to inform changes to land use, specifically with regards to density and servicing but also secondarily with regards to constraints to development via development permit areas. This is most impactful in areas where under-allotted land uses (from a maximum density perspective) are contributing to a dearth of Absolute Capacity and thus potentially stifling future development.

Further, Relative Capacity assumptions utilized in this project can also be used to inform development and design guidelines with an eye towards aligning absolute and Relative Capacity which would suggest that developments will be built to their allowable maximums. An additional extension would be to finalise the Relative Capacity input tables for all land uses which would enable the exercise above.

Realizable Capacity can be used for infrastructure and service planning as it indicates, with some degree of realism how much development could occur in an area given the current policy context. This model of potential growth outcomes can also be used to assess systematic gaps in infrastructure and other constraints to development which have been identified in this report.

Finally, capacity information should be tracked as land use policy changes in the region. The information shared in this report can be a powerful tool to explore and evaluate the likely outcomes of new land use policy especially in regards to enabling future developments.

Monitoring

All of the information presented in this report can be tracked through time, especially the data shared in the baseline report and all of the capacity analyses. Monitoring changing housing stocks (via baseline data) can help inform how well qRD residents are currently being housed and help the qRD monitor its housing goals as well as assist the qRD in comprehending access to services and infrastructure.

The capacity data should be tracked over time with an understanding that capacity for

growth should trend upwards whenever possible. New developments (either in application or construction) should be tracked and assessed by their impact to capacity and the qualities or their development contexts. This information can be used to update the assumptions of the Realizable Capacity model with the goal of a higher degree of prediction accuracy over time.

Additional Analysis and value-added use of the data

The information developed for this project can be used for multiple additional analytical objectives including:

- Baseline data can be assessed from an access to services perspective by understanding the relationship between dwellings and regional services
- Baseline data can be assessed by service area or by proximity to services
- Baseline data (especially locations of dwellings) can be used as inputs into climate risk modeling and vulnerability assessments
- Baseline data and capacity modeling can be used to inform water conservation measures and water system planning more generally
- Baseline data can be used to inform climate mitigation modeling and energy system planning
- Capacity profiles can be generated by place-of-interest as opposed to electoral area
- Capacity profiles can be generated by service area or proximity to services which (as mentioned) can directly inform system planning
- Information from this study can be reviewed in combination with data from Powell River to explore and inform urban expansion conversations
- Baseline data can be expanded upon to create a housing target buildout that would estimate what a future state regional district may look like at a set growth level and time in the future. For example, what growth may look like in the regional districts if the provincial housing needs report target was met.
- Input assumptions can be further refined and expanded upon, for example giving an average subdivision size to all land uses in order to improve upon the difference between Absolute Capacity and Relative Capacity.

Appendix A: Technical Methods

Current State

Housing

The current state work largely depends on data from the Building Information Report (BIR) obtained from the BC Assessment Authority. The BIR is a dataset that compiles the tax records of every assessed building within a jurisdiction. LGeo's analysis adds a spatial component to the BIR by associating it to the qRD's parcel fabric. In instances where multiple building information records exist for a single parcel, and vice versa, the data is flattened using LGeo's protocols. The BIR is known to be a challenging data source to work with, so high-level quality assurance and quality assessment were performed.

An analysis of the BIR data was executed to understand the current conditions in the community. This work is impactful for planning purposes as it indicates the overall supply and diversity of housing in the area, and illustrates potential opportunities for infill developments. Within this report, we present certain findings from the current state model that facilitate the understanding of the supply and diversity of housing for the qRD at present. Additionally, this information aids in the interpretation of the housing capacity model results and how they impact the future supply and diversity of housing.

Infrastructure

The current state work also included a review of existing infrastructure. The team identified parcels water and sewer servicing status using municipal infrastructure service area data provided by the qRD. For unserviced parcels, distances to the nearest water and sewer service boundaries were measured using straight-line ("as the crow flies") distances. Parcels that are close to existing servicing are more likely to be connected to water and sewer should service areas be expanded, and thus are more likely to be able to accommodate increased housing capacity in the future.

Proximity to paved roads was calculated in a similar manner, with a straight-line ("as the crow flies") distance from each parcel to the nearest paved road. Paved roads were created by filtering BC's Digital Road Atlas records to include those with line surface codes of "P" for paved and exclude records with a line type code of "RU" for roads unclassified or unknown. As with water and sewer servicing, proximity to paved roads increases a parcel's likelihood of redevelopment and densification.

Housing Capacity Analysis

Absolute Capacity

The Absolute Capacity of the qRD is calculated by building out each parcel to the maximum density allowable under each land use designation using the *Minimum Parcel Size (hectares)* in the table below.

Table A1. Residential land uses and maximum units per hectare (UPH) from qathet Regional District Official Community Plans, minimum parcel size (hectares) and housing types to build. (* requires proof of water and sewer servicing that meets provincial standards)

| Jurisdiction | Land Use | Servicing | Minimum Parcel Size (hectares) | Average Parcel Size (hectares) | Density Description | Max UPH | Avg UPH | Secondary Suite Supported | Accessory Dwelling Unit Supported |
|--------------|---------------------|--|--------------------------------|--------------------------------|--|---------|---------|---------------------------|---|
| A | Lund Village Centre | Connected to sewer and water supply system | 0.2 | 0.4 | Based on sewer and water approvals | 5 | 2.5 | ✓ | ✓ |
| A | Lund Village Centre | On-site septic and well | 1 | | 1 dwelling or serviced building per parcel up to 1.0 ha in area + 1 dwelling or serviced building for each additional 1.0 ha of land | 1 | 1 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| A | Lund Residential | Connected to sewer and water supply system | 0.2 | 0.4 | Based on sewer and water approvals | 5 | 2.5 | ✓ | ✓ |
| A | Lund Residential | On-site septic and well | 1 | | 1 dwelling or serviced building per parcel up to 1.0 ha in area + 1 dwelling or serviced building for each additional 1.0 ha of land | 1 | 1 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| A | Rural Mixed Use | On-site septic and well | 1 | 2 | 1 dwelling or serviced building per parcel up to 1.0 ha in area + 1 dwelling or serviced building for each additional 1.0 ha of land | 1 | 0.5 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| A | Rural Residential | On-site septic and well | 1.4 | 2 | 1 dwelling or serviced building per parcel up to 1.4 ha in area + 1 dwelling or serviced building for each additional 1.4 ha of land | 0.7 | 0.5 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |

| | | | | | | | | | |
|----------|-------------------------|---|---------------------------|---------------------------|--|-----|-----|----------|---|
| A | Lund Watershed | On-site septic and well | subdivision not supported | subdivision not supported | 1 dwelling per parcel up to 2.0 ha in area + 1 dwelling for each additional 2.0 ha of land | 0.5 | 0.5 | X | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| A | Savary Residential | On-site septic and well | 4 | | 1 dwelling per parcel up to 2.0 ha in area + 1 dwelling for each additional 2.0 ha of land | 0.5 | 0.5 | X | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| B | Suburban Residential | Connected to water supply system + On-site septic | 0.25 | 0.4 | 1 dwelling per parcel up to 0.4 ha in area + 1 dwelling for each additional 0.4 ha of land | 4.0 | 2.5 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| B | Suburban Residential | On-site septic and well | 1 | | 1 dwelling per parcel up to 1.0 ha in area + 1 dwelling for each additional 1.0 ha of land | 1 | 1 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| B | Low Density Residential | On-site septic and well | 1 | | 1 dwelling per parcel up to 1.0 ha in area + 1 dwelling for each additional 1.0 ha of land | 1 | 1 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| B | Rural Residential | On-site septic and well | 1.4 | 2 | 1 dwelling per parcel up to 2.0 ha in area + 1 dwelling for each additional 2.0 ha of land | 0.7 | 0.5 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| C | Suburban Residential | Connected to water supply system + On-site septic | 0.25 | 0.4 | 1 dwelling per parcel up to 0.4 ha in area + 1 dwelling for each additional 0.4 ha of land | 4 | 2.5 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |

| | | | | | | | | | |
|----------|---------------------------|---|-----|---|--|-----|-----|---|---|
| C | Suburban Residential | On-site septic and well | 1 | | 1 dwelling per parcel up to 1.0 ha in area + 1 dwelling for each additional 1.0 ha of land | 1 | 1 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| C | Low - Density Residential | Connected to water supply system + On-site septic | 0.4 | 1 | 1 dwelling per parcel up to 1.0 ha in area + 1 dwelling for each additional 1.0 ha of land | 2.5 | 1 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| C | Low - Density Residential | On-site septic and well | 1 | | 1 dwelling per parcel up to 1.0 ha in area + 1 dwelling for each additional 1.0 ha of land | 1 | 1 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| C | Rural Residential | On-site septic and well | 1.4 | 2 | 1 dwelling per parcel up to 2.0 ha in area + 1 dwelling for each additional 2.0 ha of land | 0.7 | 0.5 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| D | Rural Village | Connected to water supply system + On-site septic | 0.4 | | Based on water and septic approvals | 2.5 | 2.5 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| D | Rural Village | On-site septic and well | 1 | | Based on water and septic approvals | 1 | 1 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |
| D | Rural Residential | On-site septic and well | 1 | | Based on water and septic approvals | 1 | 1 | ✓ | Depends on size of parcel. Subject to servicing* and if density provisioning can be met |

* requires proof of water and sewer servicing that meets provincial standards

Relative Capacity

The Relative Capacity of the qRD is similar to Absolute Capacity, but the *Average Parcel Size* (hectares) is used to build out each parcel instead of using the *Minimum Parcel Size* (hectares) in the table above. Where an average parcel size does not exist, the minimum parcel size is used instead. This difference reflects a more likely scenario for subdivisions of properties.

Development Potential Modelling

To anticipate locations of potential dwelling increases, the project team calculated a Rural Redevelopment Score for each parcel. Based on available assessment and local contextual data (such as ALR, land use etc), all residential parcels are ranked based on how likely they are to redevelop in comparison to other parcels in each qRD electoral area. This redevelopment score consists of the four core components, constraints and bonus/penalty additions which are listed below. To create a redevelopment score for each parcel, we considered the following core components:

1. **Distance to Sewer Servicing:** Calculated using service area data provided by qRD.
2. **Distance to Water Servicing:** Calculated using service area data provided by qRD.
3. **Distance to Paved Road:** Calculated using the Digital Road Atlas data accessed through the BC Open Data catalogue.
4. **Total Value of Land per Acre:** Comes from the 2024 BIR, accessed March 2025.

Proximity measures 1 through 3 were chosen as they increase the desirability and feasibility of developing parcels from a servicing perspective. For example, parcels that are not presently serviced by sewer or water, or are far away from major roads, will be more costly to develop. This makes them less likely to redevelop and densify, thus infrastructure is a major component of predicting future residential land use change. Total Value of Land per Acre represents another financial feasibility aspect of redeveloping or densifying a parcel.

The team calculates a base redevelopment score for all unconstrained parcels based on the above four components. A parcel that is identified as constrained is excluded from analysis as it is not likely to redevelop. Constraints to development were developed in collaboration with qRD staff. For this project, general constraints applied include:

- qRD lands (owned and leased);

- Community facilities (such as recreation centres);
- Highway setbacks; and
- Community Watershed parcels³.

Once the base redevelopment score is calculated, bonuses and penalties are applied to create a final Rural Redevelopment Score which are based on parcel attributes. As with constraints, the bonuses and penalties were developed in collaboration with qRD staff, and are as follows:

Bonus:

- Parcels that are proximate to Powell River⁴; and
- Parcels which have water and sewer servicing.

Penalty:

- Parcels with riparian areas;
- Parcels within the steep slopes hazard layer; and
- Parcels within the fluvial hazard layer.

³ This applies to parcels in the Lund watershed and the Community watershed on Texada Island.

⁴ The closer the parcel is to Powell River, the larger the bonus is for that parcel.

Table A2. Elements of the Rural Redevelopment Score calculated for each unconstrained residential parcel in qathet Regional District Electoral Areas. The Rural Redevelopment Score is the sum of the four base redevelopment score components + the sum of the bonus scores - the sum of the penalty scores for each parcel.

| | Maximum Possible Score |
|--|-------------------------------|
| Base redevelopment score | |
| Distance to Sewer Servicing | 1 |
| Distance to Water Servicing | 1 |
| Distance to Paved Road | 1 |
| Total Value of Land per Acre | 1 |
| Bonus | |
| Parcels that are proximate to Powell River | 1 |
| Parcels which have water and sewer servicing | 0.25 |
| Penalty | |
| Parcels with riparian areas | 0.1 |
| Parcels within the steep slopes hazard layer | 0.25 |
| Parcels within the fluvial hazard layer | 0.25 |

Realizable Capacity

The Realizable Capacity of the qRD is calculated by applying the Redevelopment Potential to the Relative Capacity. As with Relative Capacity, each parcel is built to the maximum density allowable under each land use designation using the *Average Parcel Size (hectares)* in **Table A1**. Then the Rural Redevelopment Score and Redevelopment Potential is calculated (as detailed in the section above). Realizable Capacity is then calculated to include:

- Parcels with the highest 20% of Rural Redevelopment Scores
- Parcels identified as vacant and within 1km of Highway 101; and
- Parcels with development permits.

The result of Realizable Capacity is to ground Absolute and Relative Capacity in a more likely future state. For example, if a parcel has a large Absolute Capacity, but has hazards or is far from existing servicing and paved roads it is unlikely to develop. The Realizable Capacity model works to exclude these parcels from results.

Assumptions and Limitations

In preparing the data for the housing capacity analysis, the project team in collaboration with qRD staff had to make a number of assumptions. These are detailed below:

- The models assume that if a parcel is unserviced, it has septic and well;
- Hydrants were used to approximate absence of water servicing;
- Any parcel in the ALR was built out to have 2 residential units based on Agricultural Land Commission restrictions. However, if the current number of units exceeds this number, the current units are used for the Absolute Capacity;
- Parcels in the Lund watershed and the Community watershed on Texada Island do not increase in density; and
- Single-family dwelling with a suite (SFD-S) is the densest housing form considered by the models with the exception of adding ADUs in Lund Village Centre and Lund Residential land uses.

This analysis also includes some limitations due to data availability, quality and completeness. These are detailed below:

- There are no paved roads on Savary Island, but it was suggested to add a small bonus for well maintained gravel roads on the island. However, based on available data and project scope the project team was unable to define these roads. However, as Savary Island is boat accessible only and without formal servicing this omission is not impactful to analysis results.