

Clarendville Municipal Plan Review



Background Report 2021-2031
March 19, 2021

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1.0 Introduction

The purpose of this report is to provide a background analysis for the preparation of an updated Municipal Plan and Development Regulations, 2021 -2031, for the Town of Clarenville. As the community grows and changes and demands for land and development increase, the need for leaders to make sound decisions regarding future development is ever more critical.

To facilitate council's decision making this background report will inform the preparation of a discussion paper: A Strategy for Growth and Change. The Strategy paper is the culmination of Phase 1 of the Municipal Plan Review. Its basis is the analysis of background data, results of stakeholder and initial public consultation, discussions with staff, the Public Works and Planning Committee and Council. The Strategy for Growth is the important interface between the Background Report and the Municipal Plan. The growth strategy will inform the Municipal Plan and Development Regulations 2021 – 2031, through the creation of new policies and the amendment of existing policies that enhance and promote council's vision for growth.

1.1 Locational Context

Centred among three peninsulas: Avalon, Burin and Bonavista, Clarenville is situated on the coastal edge of the Atlantic Ocean where slopes rise upwards of 152 metres above sea level forming a ridge of broken peaks. The ridge falls sharply to the ocean and the coast line is characterized by moderate to severe slopes. A series of valleys penetrate the coastal ridge and Clarenville has developed in a narrow strip between the coast and the ocean formed by the Lower Shoal Harbour River and Dark Hole Brook and the extension of Lower Shoal Harbour and its tidal mud flats. The flats surrounding the river are marshy and subject to flooding during spring runoff. And the river is the main drainage course for the land behind the coastal ridge. The harbour is considered one of Newfoundland's deepest, best sheltered, and ice-free port on the east coast, making Clarenville a desirable location for shipping and recreational boating.

1.2 Development History and Settlement Patterns

Settled in 1891 through the amalgamation of the smaller settlements of Lower Shoal Harbour, Dark Hole, Brook Cove, Broad Cove and Red Beach, the town has historically been a hub of commerce and industry. It was the location of one of 5 terminals built by the Reid Newfoundland Trans-Island Railway. In 1911 the establishment of the Bonavista Peninsula Branch Line solidified Clarenville's place as a hub for the region.

In the 1930s - 40s with the founding of an asphalt plant, and later a creosote plant to preserve railway ties, a shipyard and the rail line promoted growth and the diversification of the economy. Clarenville was chosen as the location for the first Transatlantic Telephone Cable in June 1955 due to its seclusion from the open ocean water depth of the harbour. And later became the site for the second Transatlantic Telephone Cable in 1959.

1.3 Land Use Patterns and Activities

Incorporated in 1951, the town became a hub for a number of federal and provincial government departments as well as several NGO agencies. Since the 1970s and the opening of the Come by Chance Oil Refinery, and later the Bull Arm fabrication site, the town has experienced more public sector growth and construction leading to a greater demand for personal services.

Today, Clarenville's municipal boundaries extend beyond its built-up areas. Including back lands

west of the Trans Canada Highway, the municipal area covers 141 square kilometres. The built-up area, comprising the original Clarenville and Shoal Harbour townsites (amalgamated in 1993), as well as newly developing areas in between, comprise 12-15 square kilometres, or about ten percent of the total municipal area.

The built-up town is divided into two primary development areas – the original community of Clarenville and Shoal Harbour. The original development pattern of both communities was influenced by the landform of the area. The most amenable land for development was low-lying and relatively flat areas near Smith Sound and Shoal Harbour River. The Newfoundland railway was a major influence. Constructed in the 1890's, it winds through both communities near the banks of Smith Sound and Shoal Harbour River.

Clarenville's main built-up areas are still concentrated within a few hundred metres of the waterfront. The Clarenville portion of town extends for 4.5 kilometres along the shoreline. In recent years, it has expanded toward the Trans Canada Highway. Whereas Memorial Drive and Marine Drive were once the main business district, the commercial centre is now concentrated along Manitoba Drive. With Manitoba Drive reaching its capacity, Shoal Harbour Drive has become the new commercial expansion area. The Trans-Canada Highway and route 230A pass through the town providing good access.

The Shoal Harbour portion of town lies mostly north of Shoal Harbour. Hugging the shoreline, its built-up area extends from about a kilometre upstream of the river mouth north to the Random Island causeway. Constrained from developing westward by the steep hillsides, the Shoal Harbour town site is over four kilometres in length but rarely more than 300 or 400 metres in depth. While recent development has been mostly residential, the area has a number of longstanding businesses scattered along Harbour Drive and Balbo Drive.

The Clarenville and Shoal Harbour communities are physically separated by Bare Mountain. Until recently, the old Bonavista Highway (aka Memorial Drive) provided the only access between the two communities. Shoal Harbour Drive, built over Bare Mountain, provides a second connection. With capacity for new development on Manitoba Drive reaching its limit, Shoal Harbour Drive is the dominant location for new commercial development and is also the most promising area for residential expansion of the town. To enhance new development, a new connecting road, Thompson Drive now joins Manitoba Drive to Shoal Harbour Drive. Future road network expansion may see the extension of O'Mahoney Drive to the TCH.

The largest portion of Clarenville's municipal area, lies outside the built-up town, mainly west of the Trans Canada Highway. These areas are notable for lakes, rivers, wetlands, valleys, and hillsides. They comprise a major portion of the town's protected drinking water supply area fed by the Shoal Harbour River watershed. The White Hills Ski Resort is also located in the back-land area west of the Highway.

2.0 Community Profile

The community profile is based on Statistics Canada 2016 census data in addition to the NL Department of Finance Community Accounts data and provides information and analysis of key economic and social indicators such as: population, number of households, median age, economy, median household income, income support, employment insurance, housing stock, as well as other selected topics. Data and analysis provided by the Department of Finance, the Town of Clarenville is within Local Area 55: Smith Sound-Random Passage, in Economic Zone 15, and within the Bonavista Rural Secretariat Region (7). The Clarenville-Bonavista District RCMP provides policing services to the municipality.

2.1 Economic and Social Setting

From 1981 to present day, Clarenville has experienced fairly consistent growth with an average growth rate of 4.8% over 7 census periods. Since the 1970s public sector growth and construction has resulted in a greater demand for personal services. This growth, good transportation networks and its position in the region have ensured Clarenville's position as a regional service centre for a rural population of approximately 96,000 people living within a 100km radius of the town securing its economic viability.

Clarenville's land mass equates to 141 km² with a population density of 44.7 people per square kilometre, up from 42.9 in 2011, while the province has a land mass of 370,514 km² and a population density of 1.4, unchanged from 2011. Clarenville reports 2,809 private dwellings in total with 2,500 occupied by usual residents and the province reports 264,739 private dwellings occupied by 218,673 usual residents. Both Clarenville and the province saw an increase in total private dwellings in 2016 of 8.7% and 5.8% respectively.

The 2016 census data reveal Clarenville's population grew by 4.2% or 254 people for a total of 6,291. The province's population also increased between 2011 and 2016 although somewhat more conservatively at 1% or 5,180 people, for a total of 519,716, while the population of Economic Zone 15 (Clarenville-Bonavista) decreased by 3.1% or -855 people.

In 2011, the average size of census families in private households for Clarenville was 2.8 and 2.7 for the province and the same in the 2016 census data. However, the 2016 data also reveal a lower average household size for Clarenville at 2.5 and 2.3 for the province when other non-census family types are considered. See Tables 1 and 2 below.

Table 1: Family Characteristics Compared

Census Family Characteristics	Clarenville	NL Province
Total census families in private households by family size	1,910	161,010
2 persons	960	91,965
3 persons	475	36,220
4 persons	395	26,060
5 or more persons	85	6,760
Average size of census families	2.8	2.7

Source: Statistics Canada 2016 Census Data

Table 2: Private Households Compared

Private Households by household size	Clareville	NL Province
Total	2,500	218,675
1 person	580	53,755
2 persons	910	88,715
3 persons	485	37,700
4 persons	415	28,270
5 or more persons	115	10,235
Number of persons in private households	6,130	512,255
Average household size	2.5	2.3
Total population	6,291	519,716

Source: Statistics Canada 2016 Census Data

2.1.1 Income and Employment Insurance Comparisons

With respect couple family income and lone parent family income Community Accounts reveals the following. In 2017 the average couple family income in Clareville was \$118,000, \$91,700 for Economic Zone 15 and \$108,400 provincially respectively, and \$116,200 nationally. Meanwhile, in 2017, lone parent families showed incomes of \$52,496 in Clareville, \$49,900 in Zone 15, and \$57,354 provincially.

In Clareville the median total income (before tax) for private households was \$76,032 while provincially it was \$67,272, a difference of almost \$9,000. The incidence of individuals receiving income support in 2019, was the same for Clareville and the province as 7.6% of the population. The incidence of employment insurance for those who collected employment at some point in 2019, was 24.2% for Clareville and 5.5% greater for the province at 29.7%.

2.1.2 Labour Force Rates

The 2016 labour force participation rate (measured as 15 years and older) was 56.2% in Clareville or 6.7% higher than the provincial rate of 49.5%, while the unemployment rate for Clareville was 11.5% and 4.1% lower than the provincial rate of 15.6%. Thus, indicating that Clareville has a reasonably strong economy.

Total participation in the labour force was recorded as 3,180 individuals in Clareville and 256,855 provincially. Of those reported employment in Clareville, 4.61% worked from home while 84.40% worked at their usual place. (The data are tabulated by StatsCan for one reference week in May for the 2016 census.) Table 3, following depicts occupation categories and participation by males and females in Clareville.

Table 3: Work by Occupation for Clareville Residents

Occupation	Town of Clareville			
	Males (Employed)	Females (Employed)	Males (% of Total)	Females (% of Total)
Health	65	220	22.8%	77.2%
Business, finance, and administration	80	265	23.2%	76.8%
Education, law and social, community and government services	125	285	30.5%	69.5%
Sales and service	205	405	33.6%	66.4%
Art, Culture, Recreation and Sport	10	15	40.0%	60.0%
Management	145	135	51.8%	48.2%
Natural and applied sciences	200	30	87.0%	13.0%
Manufacturing and utilities	75	10	88.2%	11.8%
Trades, transport, and equipment operators	490	20	96.1%	3.9%
Natural resources, agriculture, and	35	..	87.5%	..

production			
Source: Department of Finance, Community Accounts 2016			

2.1.3 Self-Reliance Ratio

The self-reliance ratio is the measure of a community's dependence on government transfers such as Canada Pension, Old Age Security, Employment Insurance, Income Support Assistance, and the like. A higher self-reliance ratio indicates a lower dependence. In 2017, Clarenville's self-reliance ratio was 83.4%, while provincially the self-reliance ratio was 79.9%.

These key indicators imply that the town is generally prosperous in terms its economy, population, labour force, and self-reliance especially as compared Economic Zone 15 and the province. Table 4 below, **Comparison of Key Demographic Benchmark Indicators**, illuminates the general economic and social health of the community in comparison to Economic Zone 15: Clarenville-Bonavista and the province. In addition to the discussion preceding, it captures other socio-demographic data that illuminate Clarenville's positive economic prospects for the future.

Table 4: Comparison of Key Demographic Indicators as Benchmark

2016 Key Indicators: Clarenville, Economic Zone 15, and NL Province			
	Clarenville	Economic Zone 15	Province
Population – 2016	6,291	27,095	519,716
Population – 2011	6,036	27,950	514,536
Total Population change	254	-855	5,180
% Population change	4.2%	-3.1%	1.0%
Population distribution %			
0 to 14 years	17.9%	13.6%	14.3%
15 to 64 years	64.6	69.6	66.2
65 years and over	17.5	17.3	19.4
85 years and over	2.5	2.1	1.8
Median age	42	51	46
Average age	41	-	44
Residual net migration% (2018)	0.46%	0.37%	-0.12%
Residual net migration total	29	105	-615
Population 2018	6320	27,125	513,921
Total private dwellings	2,809	11,730	265,739
Private dwellings occupied by usual residents	2,500	-	218,673
Median value of dwellings	\$250,518	-	\$219,228
Avg value of dwellings	\$259,828	-	\$243,157
% Home ownership	68.9%	84.8%	76.8%
% Homeowners w/mortgage	61.5%	-	49%
% spending 30% income or more on shelter	7.3%	-	10.6%
Avg. owned dwelling monthly shelter costs	\$1,163	\$707	\$981
Avg. rental dwelling monthly shelter costs	\$876	\$765	\$836
TL. dwellings constructed 2011-2016	325	795	16,120
Single Detached Dwelling Units	1,840	10,525	160,245
Apartment Units	165	295	11,645
Rented Dwellings % of Total	31%	15.2%	23%
Avg. Household Size	2.5	-	2.3
Avg. Census Family Size	2.8	-	2.7

Avg. Couple family income	\$118,000	\$91,700	\$108,400
# Lone-Parent Census Families	250	-	24,250
Avg. Lone parent family income	\$52,496	\$40,900	\$57,354
Incidence of income support in 2019	6.6%	4.6%	7.6%
Avg. income support benefits - 2019	\$9,200	\$8,800	\$9,400
2019 Incidence of employment insurance	24.2%	44.5%	29.7%
2019 Avg. employment insurance benefit	\$9,200	\$11,100	\$10,300
Self reliance ratio	83.4%	72.2%	79.9%
Labour Force Participation	56.2%	43.3%	49.5%
<u>Level of Schooling:</u>			
W/O High School Certif.	19.1%	29.9%	23.4%
High School Certificate	80.9%	70.1%	76.6%
Trades or Non-University	39.8%	34.4%	42.3%
University	15.4%	7.1%	14.8%
Sources: Dept of Finance, Community Accounts, Statistics Canada 2016 Census Data			

2.1.4 Municipal Services and Expenditures

In its 2020 budget prepared for the Department of Environment, Climate Change, and Municipalities, Council allocated the following funds for the services it provides to residents of Clarendville. Broad budget categories are broken down in Table 5 below.

Table 5: Town of Clarendville Municipal Services Budget 2020					
Protective Services	Budget	Sub-total	Planning & Development	Budget	Sub-total
Fire protection	\$311,050	\$388,320	Planning & zoning	\$100,000	\$188,950
Emergency prepared & response	\$ 3,500		Community Improve & development	\$ 28,100	
Municipal enforcement	\$ 73,770		Tourism & marketing	60,850	
Transportation Services	Budget	Sub-total	Recreation & Culture Services	Budget	Sub-total
Vehicle maintenance	\$290,000	\$2,622,290	Rec Administration	\$651,520	\$1,154,500
Streets/sidewalks	\$1,077,055		Rec facilities	\$454,500	
Snow removal	\$955,625		Culture facilities	\$ 8,000	
Lighting	\$173,400		Rec/culture programs	\$ 40,500	
Traffic services	\$ 50,000				
Other transportation services	\$ 76,210				
Environmental Services	Budget	Sub-total	Fiscal Services		Sub-total
Water supply	\$1,066,827	\$1,558,387	Tax revenues		\$4,110,724
Sewage collection & disposal	\$91,160		Government transfers		
Garbage collection & disposal	\$360,000		Other income sources		
Other environmental	\$ 40,400				
Total All Municipal Services 2020: \$11,483,016					

Council has prepared this budget based on expenditures and income including tax revenue, government transfers and investment income and proposes a balanced budget for 2020. Careful deliberation has resulted in a moderate 2% increase (or \$228,890) in the budget over 2019. Other than fiscal services, transportation accounts for 23% of the budget, followed by environmental

services at 13.6% and recreation and cultural services at 10.1% of the budget, respectively. Residents of Clarenville are well serviced with a superior network of streets and sidewalks, good water and sewer servicing, and excellent recreation and cultural facilities and programs.

2.2 Population

The 2016 census indicates Clarenville's population was 6,291. This represents an increase of 4.2% or 254 people since 2011. Over the same period, the entire province experienced a population increase of 1.0% since 2011 or the equivalent of 5,180 people.

The median age in Clarenville reported in 2016 was 42 a slight increase from 41 in 2011, while the 2016 median age in Newfoundland and Labrador was 46, an increase from 44. Over the last 3 census periods the median age has increased by 3.4 years indicating Clarenville's population is aging, although less quickly than that of the province. Table 6 provides a breakdown of Clarenville's population by gender and five-year age groups compared to the provincial population from the 2016 Census.

Table 6: Age Characteristics by 5-Year Age Groups – 2016 Census Data								
Age	Clarenville				NL Province			
	Total	Male	Female	% total	Total	Male	Female	% total
	6,291	3,025	3,265	100%	519,715	253,930	265,790	100%
0-14 yrs.	1,125	585	540	17.9%	74,440	38,200	36,240	14.3%
0-4	375	200	175	6.0	22,365	11,430	10,930	4.3
5-9	375	200	175	5.6	22,365	11,430	10,930	5.0
10-14	400	205	195	6.4	26,035	13,340	12,700	5.0
15-64 yrs.	4,065	1,970	2,095	64.6	344,245	168,555	175,695	66.2
15-19	400	210	185	6.4	27,255	13,980	13,275	5.2
20-24	305	160	150	4.8	27,700	13,915	13,785	5.3
25-29	340	165	180	5.4	28,245	14,095	14,150	5.4
30-34	375	180	195	6.0	29,405	14,185	15,215	5.7
35-39	430	175	255	6.8	30,740	14,555	16,185	5.9
40-44	495	260	235	7.9	34,505	16,745	17,765	6.6
45-49	500	235	270	7.9	38,665	18,740	19,920	7.4
50-54	445	210	240	7.1	42,620	20,730	21,890	8.2
55-59	380	180	195	6.0	43,080	21,035	22,045	8.3
60-64	390	195	195	6.2	42,025	20,570	21,460	8.1
65 years+	1,100	470	635	17.6	101,025	47,170	53,855	19.4
65-69	345	155	190	5.5	37,485	18,310	19,180	7.2
70-74	240	125	125	3.8	26,170	12,720	13,445	5.0
75-79	205	80	125	3.3	16,950	8,015	8,935	3.3
80-84	150	65	90	2.4	11,060	4,885	6,175	2.1
85 years+	155	50	105	2.5	9,360	3,245	6,125	1.8
85-89	105	35	65	1.7	6,175	2,300	3,875	1.2
90-94	35	10	25	0.6	2,485	790	1,695	0.5
95-99	20	5	15	0.3	610	140	475	0.1
100+ yrs.	5	0	5	0.1	90	20	75	0.0

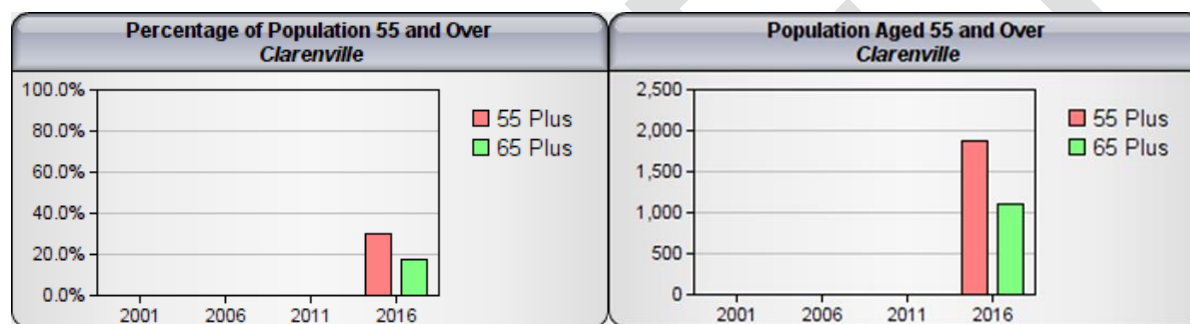
Source: Statistics Canada 2016 Census Data

Community Accounts prepared a Seniors Profile demographic analysis in 2018. With regards to the population of Clarenville those aged 55 and over equal 1,885 or 30.0% of the community's total population and 186,130 individuals or 35.8% of the population of the province. The population aged 65 and over was 1,110 representing 17.6% of town's total population, and 101,025 or 19.4% of the provinces population as shown in Tables 6 and 7. Thus, the province has a slightly higher rate of individuals in these seniors' categories.

Table 7: Population Distribution (%) by Broad Age Groups						
	Clareville			NL Province		
	TL	Male	Female	TL	Male	Female
Total – Distribution %	100.0	100.0	100.0	100.0	100.0	100.0
0 to 14 years	17.9	19.3	16.5	14.3	15.0	13.6
15 to 49 years	45.2	45.8	45.0	41.6	41.7	41.5
50 years and over*	39.4	32.5	38.9	45.8	44.4	47.1
55 years and over*	30.0	29.7	31.5	35.8	34.0	36.6
15 to 64 years	64.6	65.1	64.2	66.2	66.4	66.1
65 years and over*	17.5	15.5	19.4	19.4	18.6	20.3
85 years and over	2.5	1.7	3.2	1.8	1.3	2.3
Average age of the population	41.0	39.5	42.4	43.7	42.9	44.6
Median age of the population	41.9	40.7	42.9	46.0	45.4	46.6

Source: Statistics Canada 2016 Census Data
 * Broad Age Groups as defined by Community Accounts – Seniors Profile, 2018

Graphs 1 and 2 below illustrate Clareville’s population 55 years and over.



Graph 1: Community Accounts, 2016

Graph 2: Community Accounts, 2016

Clareville’s youth population (0-19 years) equals 1,525 or 24.2% of the towns population and is smaller than the senior’s population 55 years and over. The working age group 15 to 64 years comprises 4,065 individuals in Clareville or 64.6% of the total population and is slightly larger for the province at 344,245 or 66.2% of the population. The discrepancy is due to greater numbers of younger individuals captured by this broad age group in Clareville while the province has a greater number of individuals in the 50+ years ages. Thus, the province continues to see larger numbers of individuals in the older age groups.

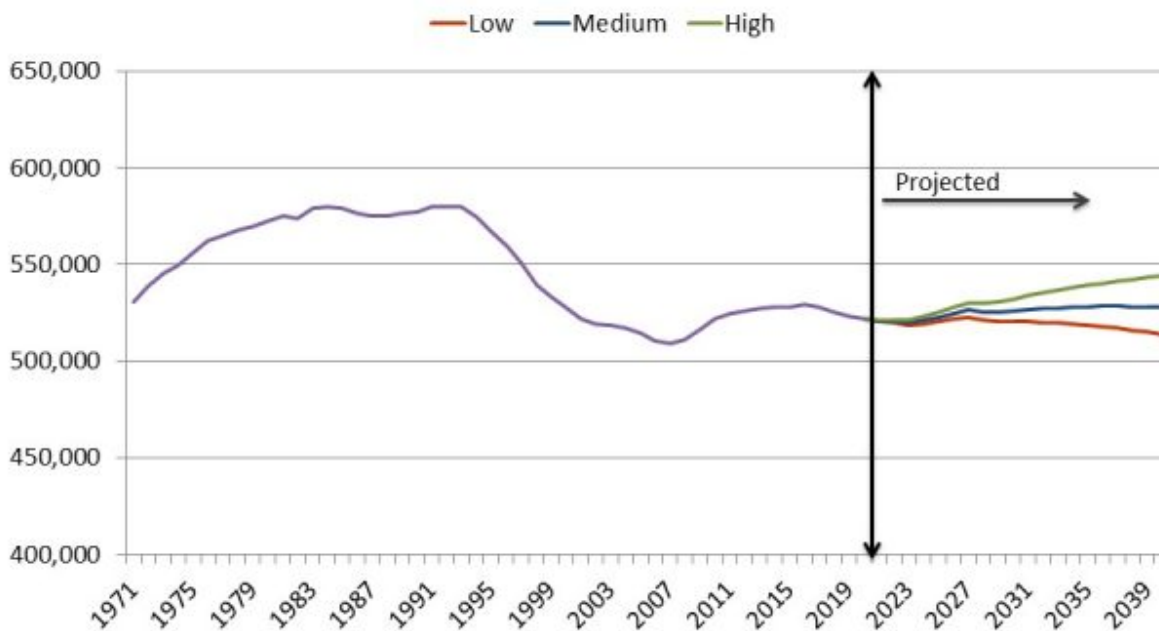
2.2.1 Future Population - Projections to 2040

Population projections are produced periodically by the Economic and Project Analysis Division of the Department of Finance¹. Projections provide population by age (5-year age groups) and gender based on geographic regions in the province to the year 2040. The population projection method integrates the Department’s economic and labour market forecasts and is designed to project the province’s population and various sub-provincial regions, including economic zones. The system makes assumptions about fertility, mortality, and migration to produce three different population projections for Newfoundland and Labrador. These forecasts outline low, medium, and high scenarios. The Department indicates the medium scenario is considered to be the “most likely” scenario and is integrated with government’s economic forecast and used for planning purposes.

¹ Government of Newfoundland and Labrador, Department of Finance, Economic and Project Analysis Division, Population Projections, 2019.

Graph 3 illustrates the trajectory of Newfoundland’s population over several decades from 1971 to current and illustrates the projected population forecasts until the year 2040.

Graph 3: NL Provincial Population Projections to 2040



Source: Statistics Canada; Department of Finance

2.2.2 Medium Scenario

The onset of oil production in 1997 marked a period of improvement in economic conditions in Newfoundland and Labrador. After years of strong economic growth and high demand for labour for major projects, the province experienced net in-migration and population growth from 2008 to 2016. Net in-migration averaged about 2,300 per year during this period.

However, population decline occurred from 2017 to 2019, reflecting natural decline and a return of net out-migration due to a slowing economy and employment losses, before becoming positive again in 2020. Going forward, net migration is expected to be positive for the projection period but is not expected to offset the natural population decline until 2024. Population growth is anticipated from 2024 to 2027 in response to improved labour market conditions.

In the longer term, labour shortages due to population aging are expected to result in more in-migration. By 2040, net in-migration increases to around 3,100. Net in-migration will average about 2,300 per year over the entire projection period from 2020 to 2040.

Thus, while total population of the province is expected to increase by 1.1% by 2040, most regions of the province will continue to record significant population decline while a few others will experience population growth.

2.2.3 Residual Net Migration

Residual net migration is calculated by subtracting the current population from the population in

the previous year and then removing the affect that births and deaths has on the population. By doing so, the remainder or residual is the number of people who migrated into or out of the area.

Community Accounts data updated to 2018 shows that the population of Economic Zone 15 has increased by 0.37% or 105 individuals for a total of 27,125. At the same time, the population of Clarenville increased by 0.46% to 6320, representing 29 of the 105 individuals who migrated into Economic Zone 15. Meanwhile, the province suffered a decrease of 615 (-0.12%) to a total of 519,100 people in 2018 and a corresponding increase in 2020. This change in population is a result of residual net migration. More discussion of this appears in Section 2.3 Future Population.

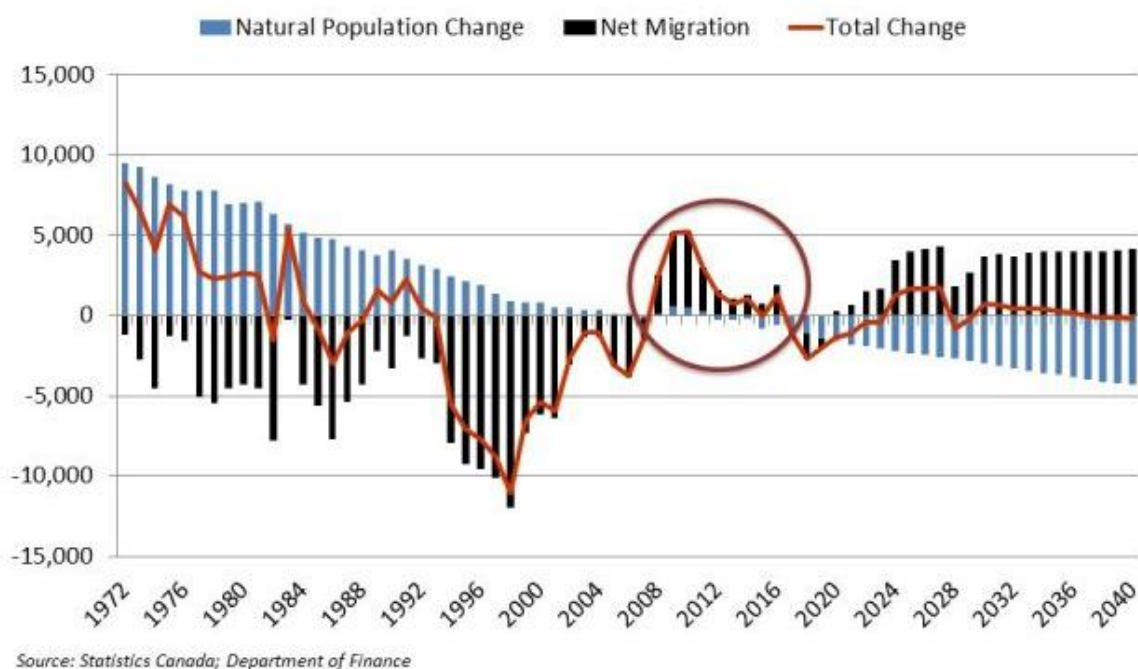
Residual net migration will continue to have a positive effect on population growth in Clarenville in the foreseeable future, in part attributable to the 50+ population living in the town's catchment area as they relocate to this service hub to be closer to medical facilities and personnel, public services, retail and commercial opportunities and appropriate housing. Other individuals will migrate to the town as older populations retire and more employment opportunities become available.

2.2.4 Aging

All Canadian provinces are faced with an aging population and are very concerned with the challenges this presents for the delivery and financing of social services. However, in Newfoundland and Labrador, in addition to low fertility rates, the aging phenomenon has been exacerbated by high rates of out-migration among young people in the most fertile child-bearing age range. As a result, the province's population has aged much more rapidly than any other province in the country over the last 50 years. The province's median age has gone from five years lower than Canada's in 1971 to over six years higher than Canada's in 2020. The aging trend will likely continue for years to come. This shown in Graph 4 depicting the effects of aging and in-migration on the province.

The median age in the province is expected to increase from 47.4 years of age in 2020 to 49.9 years in 2040. Rapid aging of the population is perhaps one of the most important demographic challenges confronting the province because of its significant implications for government.

The aging trend is expected to be more pronounced in rural areas of the province as youth out-migration from these areas continues. For example, in Economic Zone 7 on the province's Great Northern Peninsula the median age is currently 56 years, over eight years higher than for the province as a whole and is expected to increase to over 63 years by 2040. Thus, the impacts of aging will vary across regions.



Graph 4: Total Population Change in NL 1972-2040 (projected)

2.3 Housing Demand

According to the 2016 Census, there were 2,500 dwellings in Clarenville, compared to 2,365 in 2011² for an increase of 135 units total or 27 per year. Of these, 1,840 were detached houses and 165 were apartments. Single family households accounted for 1,850 dwellings, while there were 30 multiple family households and 615 non-family households. Table 8: Dwelling Characteristics shows predominant dwelling types for the town as compared to the province. The bulk of the housing stock, or 705 dwelling units, was constructed between 1960 and 1981. Housing construction has fluctuated over the intervening years with a construction low of 140 units between 2001-2005. Construction increased between 2011-2016 to 325 housing units.

Table 8: Dwelling Characteristics

Household and dwelling characteristics	Clarenville		NL Province	
	Total	%	Total	%
Total - Occupied private dwellings by structural type of dwelling	2,500		218,675	
Single-detached house	1,835	73.4%	160,245	73.3%
Apartment in a building that has five or more storeys	0	0	750	0.3
Other attached dwelling ³	650	26%	56,245	26%
Semi-detached house	90	3.6	8,545	4.0
Row house	80	3.2	10,390	5.0
Apartment or flat in a duplex	310	12.4	25,235	11.5
Apartment in a building that has fewer than five storeys	170	6.8	11,645	5.3
Other single-attached house	0	0	435	0.2

² Dwellings do not include private farm or reserve dwellings.

³ Means the subtotal of these categories: semi-detached, rowhouse, apt or flat in a duplex, apt in a bldg less than 5 storeys, & single attached house

Movable dwelling ⁴	15	0.6	1,430	0.65
Total Number of persons in private households	6,130	100%	512,255	100%
Source: Statistics Canada 2016 Census				

As reported by the 2016 Census, 68.9% of homes in Clarenville were owned versus rented compared to 76.8% home ownership for the province and 67.8% home ownership nationally.

The 2016 average monthly shelter costs for owned dwellings in Clarenville was \$1,163 and \$984 provincially or \$179 lower. In Clarenville, the average monthly shelter costs paid by those who rented in 2016 was \$876, while provincially, it was slightly lower at \$836 monthly.

The average assessed residential values for 2016 based on market values as of January 2014 from the Municipal Assessment Agency for the Municipality of Clarenville were \$240,200. Real-estate data available for 2021 indicates an average asking price for a single detached home as \$252,625, with an average selling price of \$207,837.

2.3.1 Housing Affordability Threshold

Statistics Canada uses a housing affordability threshold developed by Canada Mortgage and Housing Corporation (CMHC) based on the proportion of average total income of a household that is spent on shelter. Thus, households that spend 30% or more of their total income on shelter costs are said to have a “housing affordability” problem. Emerging data from Community Accounts (2018) indicate that age groups 50 and older exceed the affordable housing threshold both in Clarenville and for the province. As the aging population increases, the availability of affordable housing may become more critical. Housing developers in Clarenville indicate there are wait lists into 2021 for seniors’ affordable rental units. Table 9 summarizes relevant statistics.

Table 9: Home Ownership by Senior Age Groups and Affordability Threshold

Home Ownership and Housing Affordability for Ages 50 and Over						
Primary household maintainer age	Above 30% income threshold		Home-Owner		Renter	
	Clarenville	Province	Clarenville	Province	Clarenville	Province
50 yrs. & over	16.9%	15.9%	72.7%	83.7%	27.3%	16.3%
55 yrs. & over	17.5%	16.2%	71.7%	84.1%	27.8%	15.9%
65 yrs. & over	19.2%	16.8%	68.8%	83.4%	30.4%	16.6%
Source: Community Accounts, Seniors Profile 2018						

⁴ Means mobile homes & other movable dwellings such as houseboats, recreation vehicles & railway cars

2.3.2 Housing Demand for the Planning Period 2021-2031

The predominant housing type will continue to be the single detached home which is currently 73.4% or $\frac{3}{4}$ of the total housing stock in Clarenville and is the same provincially. While the percentage of other attached dwellings is 26% and 7.2% lower than reported in the last municipal plan review period. The stock of semi-detached and row houses has increased slightly. The popularity of the single detached home will continue. By the 2041, the senior populations will make up 25% of the total population in Canada. Atlantic Canada has the highest percentage of seniors in the country at 35% of the total. 2016 census statistics reveal that Newfoundland and Labrador has the second highest proportion of seniors at 35.6% of its total population, only slightly less than New Brunswick at 35.8%. Housing affordability for seniors has been identified as a concern by CMHC (as in Table 9 above) and will drive the need for more rental housing in Clarenville in the form of semi-detached, and multiple unit one-storey housing that meets the CMHC affordability threshold.

2.3.3 Building Activity

A review of building permits over the ten-year period, 2010 to 2020, indicates a wide range of construction activity for both residential and commercial buildings. High numbers of building and renovation permits were issued both for residential and commercial uses. For instance, in 2011, permits were issued for 96 housing starts, 3 auxiliary apartments, and 156 renovations, while commercial permits were issued for 13 new buildings, extensions to 10 existing buildings and renovations to 20 existing buildings. This high level of activity likely coincides with large scale projects stimulated by the oil and gas sector and a high level of economic prosperity in Newfoundland and the region. 2014 saw a 57% decrease in the number of housing starts a slight increase in auxiliary apartments and a 10% increase in renovations. Commercial activity decreased more significantly, with a 77% decrease in new construction, an 80% decrease in building extensions and a 40% decrease in renovation work. The number of building starts in both categories has decreased or remained static until 2019 with an average 20 housing starts in the 5-year period and 4 commercial building starts. But residential renovations remained active with an average of 159 residential renovation permits issued between 2015 and 2019. Meanwhile, renovations to commercial building increased every year for an average of 27 permits issued every year for the same timeframe.

Building permit revenue was almost \$18 million for residential construction in 2011. While residential renovation permits amounted to almost \$2.25 million. In 2011, commercial permits amounted to just over \$16 million. However, permits for commercial renovation equaled a high of \$9.3 million in 2019.

2.4 Building Activity in an Unprecedented Year: 2020

Excessive snow events and the coronavirus pandemic have had a huge effect on the province, the region and Clarenville alike. To stimulate the economy, the provincial government introduced the Residential Construction Rebate Program to offer homeowners a 25% pre-tax rebate on new residential construction and renovations. Mandated public lockdowns during the first quarter of 2020, inspired residents to undertake renovation projects to their existing homes and gardens in anticipation of further lockdown measures due to covid-19 later in the year. The high level of uptake in the program was not anticipated resulting in an extension to the construction completion date beyond March 31, 2021. A proposed study of costs/benefits to the construction industry and the economy may expand the program into 2022.

Homeowners in Clarenville took good advantage of the program. In a year with uncertainty and job-losses, 189 renovation permits were issued for a total of \$1.46 million dollars. There were only

3 residential building starts. Although The total number of residential development permits issued was 192 (to August 2020), the lowest in the 10-year period, and 45% less than 2010 but only 6% less than 2019. Given the unprecedented circumstances, this development activity was nonetheless significant.

On the commercial side, renovation/extension permits were issued for a value of approximately \$2.4 million and a similar result to 2015, with the lowest number of permits being issued in 2010.

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3.0 Community Consultations

A methodology for community consultation to support this Municipal Plan Review for the Town of Clarendville was prepared and vetted by staff and the Public Works and Planning Committee (PWPC). Creating a logo and brand for the Review supported a web presence for the dissemination of information informing residents about the project, facts about planning and the existing documents and opportunities for public engagement.

For the Background Phase of the Review stakeholders and staff identified by the town were interviewed. This was followed by a survey questionnaire on the Survey Monkey platform and available to residents via the town's website and Facebook page. Summaries of results of these consultations appear in Appendix A.

Due to ongoing province wide covid-19 restrictions, public meetings scheduled for Phase 2 of the Review will be held virtually. Where possible the results of these public virtual meetings will be recorded and posted online for the benefit of residents who did not attend the sessions but are interested in the progress of the work.

The opinions and input gathered through the stakeholder meetings and survey questionnaire are described in greater detail in section 4.0 Emerging Planning Issues and are further grouped as Land Use Issues and Environmental Issues.

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4.0 Emerging Planning Issues

Land Use Issues

The land use issues identified below result from the analysis of the demographic data presented earlier, a review of the current planning documents and studies prepared for the town since 2006, recent data and studies from government sources such as Statistics Canada, Department of Finance, Community Accounts, the Report of the Interdepartmental Land Use Committee (ILUC), and CMHC, as well as the informed opinion of stakeholders and residents' responses to the survey questionnaire.

4.1 Residential Uses

Housing Demand for the Planning Period 2021-2031

The predominant housing type will continue to be the single detached home which is currently 73.4% of the total housing stock in Clarendville. While the percentage of other attached dwellings is 26% and 7.2% lower than reported in the last municipal plan review period. The stock of semi-detached and row houses has increased slightly. The popularity of the single detached home will continue.

By the 2041, the senior populations will make up 25% of the total population in Canada. Newfoundland and Labrador has the second highest proportion of seniors at 35.6% of its total population, only slightly less than New Brunswick at 35.8%.

Housing affordability for seniors has been identified as a concern by CMHC (as in Table 11 above) and will drive the need for more rental housing in Clarendville in the form of semi-detached, and multiple unit one-storey housing that meets the CMHC affordability threshold. Stakeholders corroborated this and at least one developer is creating affordable rental housing for the seniors' market.

In the current Development Regulations, the Residential zone permits single and double dwellings. Subsidiary apartments are permitted in single dwellings. Row dwellings and apartment buildings can be permitted at the discretion of Council. This existing Residential zone authorizes Council to allow a mixing of higher density housing forms with single-unit dwellings. Subsidiary apartments are one of the most common means in the town to accommodate affordable housing.

A concern was raised that in some subdivisions, legal covenants are being used to require substantially larger dwellings than the minimum size set out in the zoning standards. This seems to be counterproductive to goals to increase the supply of affordable housing and create a more integrated and complete community.

4.2 Mixed Uses

While Clarendville as a whole is growing steadily, this growth is not equal in all areas. Some areas, particularly the older *downtown* and waterfront areas along Memorial Drive and Marine Drive, have experienced some decline. A number of commercial buildings have become vacant or underused as businesses have moved to new quarters in the Manitoba Drive/Shoal Harbour Drive area.

For example, vacant commercial buildings may offer potential for residential uses and vice versa. Because these areas already have a mix of uses, there is minimal potential for significant land

use conflicts as long as appropriate conditions are put on new developments. Conditions should include the submission of engineering reports and drawings as needed, to ensure that municipal storm and sewer systems can accommodate the proposed redevelopment. See section 4.9 for discussion of Stormwater Management.

4.3 Commercial Uses

The current Clarenville municipal plan designates a various areas for commercial and industrial development. The main concentration of commercial development extends from Memorial Drive in the vicinity of the Clarenville Shopping Centre, along Manitoba Drive, and more recently along Shoal Harbour Drive. Other commercial areas are scattered throughout the town mainly on Memorial Drive, Marine Drive, and Balbo Drive. With Manitoba Drive developed to near capacity, the most likely area for future commercial developments is in the vicinity of Shoal Harbour Drive.

As the number of commercial uses increase it creates more strain on the storm sewer system in the dense commercial area generally extending from Shoal Harbour Drive to Manitoba Drive and to Memorial Drive. The Town's consulting engineer has identified specific areas of concern, suggested remediation to the storm sewer system, and recommended a stormwater management plan. This is explained in detail in section 4.9 Stormwater Management.

4.4 Industrial Uses

Industrial areas include the marine site in the vicinity of Clarenville shipyard, the Myers Place Industrial Park, and behind St. Jude's Hotel on the Trans Canada Highway. With the industrial area on Myers Place developed to capacity, the area behind St. Jude's offers the best potential for large industrial developments. It is separated from residential areas of the town and has direct access to the Trans Canada Highway.

An added advantage is that some water and sanitary sewer servicing in this area. Any future expansion would require extension and upgrades to the water and sanitary sewer system, as well as storm water management. Tilley's Road is some of Clarenville's oldest infrastructure and has shown signs that its at the end of its service life. Also, water pressure and water quality would be of concerns in this area. Thus, proposals for new industrial uses will need to be evaluated on a case by case basis.

4.5 Subdivision Development

Development has occurred throughout the town, with new subdivisions ranging in capacity from 20 lots to over 100. They are located mostly in existing built-up areas of both Clarenville and Shoal Harbour. One new subdivision, Clearview Estates, is being developed on land recently opened up by the completion of the new collector road, Shoal Harbour Drive.

The capacity to develop new subdivisions in older areas of Clarenville and Shoal Harbour is reaching its limit. Increasingly developers are resorting to excavating hillsides and filling in low-lying areas to make land for development. Residents have voiced concerns that this is resulting in unacceptable environmental and aesthetic impacts.

4.5.1 Development Between Shoal Harbour Drive and Trans Canada Highway

The most suitable land for long-term residential expansion has been identified as the area between Shoal Harbour Drive and the Trans Canada Highway. The topography of area is fairly gentle. Directly west of Walmart, the land is generally flat to the Trans Canada Highway. From there it slopes gently in the direction of the Shoal Harbour River with most slopes ranging between

8 and 10 percent. There are a few areas where the slopes rise as high as 20 percent and others where it flattens out to less than 5 percent.

This area is highly suitable for new subdivision developments. In addition, water and sanitary sewer servicing are available on Shoal Harbour Drive in the vicinity of the two recent residential developments and could be extended to service this area. Development must be directed to areas outside of the Water Supply Protection Zone. Storm water management should be implemented to ensure there are no negative impacts (such as pollution by sediment laden runoff, etc.) on the Water Supply Project Zone. Shoal Harbour Drive is a collector road and provides a connection to commercial areas as well as the Trans-Canada Highway via Manitoba Drive. The area between Memorial Drive and Thompson Street is currently undeveloped but the topography is too steep.

There is another vacant area between the Trans-Canada Highway and Moore's Road Extension/Tilley's Road/Terra Nova Road. However, there is a watercourse and "wet" area running through the area. Once the buffer zones for these are taken into consideration, along with one section which appears to be relatively steep, the developable land will be greatly reduced. This area also backs onto the Trans-Canada Highway so it would be ideal to provide a buffer between the highway and any residential development. Access to this area would be through existing local roads such as Moore's Road or perhaps Tilley's Road which may require upgrades to accommodate increased traffic.

4.6 Recreation and Open Space Uses

Clarenceville has an abundance and excellent mix of recreation facilities that includes both structures and open space amenities. Among these are community parks and a community garden, playgrounds, sports fields, a basketball court and skateboard park, hiking trails and ski trails, and lookout sites. Informal snowmobiling trails and swimming holes are also available but are not counted as part of the municipal recreational system.

Notable amenities include the T'Railway Provincial Park, the Rotary Marina, White Hills ski resort, Elizabeth Swann Park, and the Eastlink Centre which provides a hockey rink, indoor walking track, and is the towns arts centre for entertainment.

Trails are extremely important to Clarenceville residents. In addition to the T'Railway, the town has three trails under its jurisdiction: Rotary Trail, Bare Mountain Trail, and the Shoal Harbour Trail. These 3 trails constitute approximately 90 km of trail. Recent efforts by town staff and the Trail Development Advisory Committee have resulted in and maintenance and extensive upgrades to the Rotary Trail and the Bare Mountain Trail. The Shoal Harbour Trail has closed due to required maintenance of boardwalks and stairs especially where washouts have created problems. There are plans to restore this trail as soon as possible.

However, conflicts and challenges have arisen. Some relate to the monumental task of upkeep of 90 km of trail. While others relate to land ownership conflicts. For example, the Rotary Trail is adjacent to privately owned land in some areas expansion of the trail may not be possible. Concern has been expressed that some existing trails are being threatened by encroaching development.

Staff report that trail usage has increased in recent years and demand grows for additional trails. Stakeholders interviewed and 52.44% of Survey Monkey respondents identified a need for *more multi-use paths and trails*. Clarenceville's 2017 Recreation Master Plan suggests that the municipality should consider the Lands for Public Purposes dedication in new residential

subdivisions for trail use. The benefits are creating connectivity among residential areas, linking these to commercial and institutional uses, and linking to other trail systems thus interconnecting the trails. These trail green spaces would also act as buffers between residential areas and other land uses and provide environmental benefits such as reducing runoff and the stormwater impacts of new development.

It is possible to incorporate into the new Municipal Plan policies and standards that require subdivision designs to incorporate more green spaces and trail corridors using the Lands for Public Purposes dedication.

4.7 Road Network

Clarenceville's transportation system includes a hierarchy of roads and streets, including one major arterial road, the Trans Canada Highway, major and minor collector roads, and local streets. Collector roads are used to collect and carry traffic between major points and local streets. Major collectors connect large traffic generators such shopping centres and the Trans Canada Highway, while minor collectors primarily provide access to lower traffic residential areas.

Clarenceville has four major collector routes:

- Memorial Drive from the Trans Canada Highway to the Shoal Harbour Causeway (4.5 kilometres)
- Manitoba Drive from the Trans Canada Highway to Memorial Drive (2.0 kilometres)
- Shoal Harbour Drive and Harbour Drive from Manitoba Drive to the Shoal Harbour Causeway (3.5 kilometres)
- Balbo Drive from Shoal Harbour Causeway to Random Island Causeway (3.0 kilometres).

Over the last decade or more, councils have considered the development of a third access to the TCH west of the Manitoba Drive intersection. This third access has merit as it would provide a connection and enable future development on lands west and south of Shoal Harbour Drive. It would provide a more direct route for traffic conveyance on a future collector road off Shoal Harbour Drive.

Development of this area would result in a significant increase in vehicular traffic and a new TCH connection would prevent traffic congestion along Shoal Harbour Drive and at the Manitoba Drive Intersection. Prior to approving any major land developments, the Town should request that developers submit a Traffic Impact Study to determine what impacts and improvements are required on the adjoining streets to ensure the connecting streets are of sufficient capacity. If improvements are required, the Town should require the developer to complete them at their own expense. The Town may also want to engage a consultant to conduct a Town-wide traffic study to identify any short-term, medium-term and long-term improvements, such as the new connection to the TCH.

4.8 Sidewalks

Appropriate design and location of sidewalks benefits pedestrian circulation, enhances safety and augments general community health. Responses to the Survey Monkey questionnaire, indicate that 82.32% respondents support retaining and enhancing community appearance through landscaping, signage, lighting and sidewalks, while an additional 39.63% supported barrier free sidewalk design. Currently sidewalks are typically installed only on one side of the street. Stakeholders suggested in certain places they should be on both sides. It was also stated that sidewalks need to be accessible with proper curb cuts for barrier free access.

Areas of greatest need for sidewalks tend to be on collector streets where vehicle traffic is high. Pedestrians use these roads to get to public gathering areas such as shopping malls and

recreation sites as well as between local areas. Pedestrian needs and safety concerns are much higher in these areas than on low-traffic local streets.

The town should prioritize streets for the provision of high quality sidewalks, sidewalks on both sides of the street, and crosswalks. Highest priority should be considered for Memorial Drive, Manitoba Drive, Balbo Drive, and, as it becomes more developed, Shoal Harbour Drive.

The Town may wish to engage a traffic consultant to provide recommendations regarding pedestrian or active-transportation as well as traffic calming in areas of high vehicular traffic that also experience high pedestrian traffic. [A Traffic Calming Policy is currently being developed by Harbourside Transportation consultants and will be shared with the consultants when complete.]

Emerging Environmental Issues

Environmental concerns related to land development dominated the discussions in the community consultation sessions. Participants overwhelmingly advocated the need for higher environmental and aesthetic standards, more green space, provision of trails and sidewalks, better runoff controls, and protection of environmentally sensitive areas. The recommendations of the ILUC Report have been incorporated into the discussions below.

4.9 Stormwater Management

As Clarendville has grown development has expanded into the higher hillsides behind Clarendville and Shoal Harbour. The topography of these areas varies between moderate to steep slopes with relatively few flat areas. Under undisturbed conditions, the runoff effect of the sloping terrain is moderated by porous soils and continuous forest cover, which promote good infiltration of rainwater and snowmelt.

As the hillsides are cleared of trees and the soils are covered by housing and pavement, the landscape loses its natural infiltration capacity. Increased overland flows of stormwater are directly proportional to reduced infiltration caused by impervious groundcover. Effects include higher erosion, sediment loads, and stormwater discharges that can overwhelm the natural carrying capacity of streams. Rapid increases in water volume and flow velocity can have a dramatic erosive effect on stream beds and banks, eliminating depressions and eddies that provide refuge and habitat for aquatic species.

Excessive stormwater discharges into watercourses can significantly reduce fish populations and species diversity. Suspended sediments increase turbidity, scour streams of vegetation, raise summer temperatures, increase nutrient and metal contamination, and damage fish gills. Physical and hydrological changes during early stages of urban development usually have the most severe impacts on stream biodiversity. Incremental change after this point is less pronounced essentially because most of the potential damage has already occurred.

Lower infiltration caused by impervious ground cover also reduces groundwater storage needed to maintain stream flows in dry periods. This in turn reduces habitat quality and the ability of streams to flush pollutants from urban runoff.

Conventional stormwater management removes runoff from developed areas as quickly as possible. Storm sewer systems and landscaping are designed to drain the site, collect the water together, and drain it to a nearby watercourse. Pollutants that accumulate on streets, lawns and parking lots include sand and gravel sediments, oil, heavy metals, road salt, fertilizers, pesticides, and bacteria from garbage and pet excrement. Conventional stormwater practices facilitate the entry of these pollutants into natural waterways.

Discussions with stakeholders and staff have revealed that stormwater problems have increased in frequency and severity in recent years. Mud plumes seen in streams and Smith Sound are not uncommon. While the problem may be attributed in part to inadequate drainage controls around construction projects, general urban runoff and major impacts of climate change.

Various innovations in stormwater management derive from the idea that runoff should be managed as close as possible to its source. A new approach referred to as Low Impact Design (LID) aims to replicate how nature manages rainfall and snowmelt. The ultimate objective of LID is to maintain site runoff at levels that existed before the site was cleared of vegetation. While LID practices are sound, these techniques are generally not being used in Newfoundland. These practices should be considered in Clarenville where possible and where it makes sense, during design and construction. Onsite water detention as well as controlled release rates need to be examined on a case-by-case basis.

The Town's engineering consultant, Meridian has compiled a stormwater drawing that is limited to small areas of the Town. They also completed an analysis of "***the existing storm sewer system contributing to the culvert crossing Blackmore Avenue***" in 2018.

In this report they identified a number of culverts that are under capacity and should be replaced on and/or near Blackmore Avenue which is just South of Manitoba Drive. They also recommended that to accommodate any future development behind the Random Square Mall and GB Cross Hospital, the storm sewer system in this area must also be upgraded and/or on-site storm water retention must be implemented. Finally, they identified storm mains that were near capacity for Thompson Street to Thorburn Road catchment area. This last area was analyzed using current development only and does not include any contributions from future development.

Furthermore, the analysis was completed using rainfall data from 2014 and not the most up-to-date climate change rainfall data (2017). It is likely that if the analysis repeated using the most up-to-date rainfall data, the results would actually be worse. It would be accurate to assume that most, if not all, of the existing infrastructure installed in the Town prior to 2017 was designed using previous rainfall data which has been recently updated to consider climate change data (2017), which is available from the Department of Environment, Climate Change and Municipalities. This could also mean that areas that have not yet been identified as being under capacity could, in fact, be under capacity using this latest design standard.

4.9.1 Stormwater Master Plan

The Town should engage a consultant to prepare a storm water master plan that includes all existing stormwater infrastructure as well as bridges, etc. Areas where there are known issues should be identified along with areas where the system is close to capacity. Based on previous analyses completed by Meridian, there are a number of areas, particularly in the commercial area near Manitoba Drive that already have undersized stormwater infrastructure. Both current and future development conditions must be considered.

The stormwater master plan would be used to develop stormwater management guidelines for the Town. The Town may want to consider implementing a Zero Net Runoff Policy for new developments to reduce the strain on the existing system and to be more environmentally responsible. For example, rather than upgrading many metres of existing underground storm infrastructure, the Town could require developers to ensure there is zero net runoff from their sites. The guidelines should provide recommendations on techniques to best achieve zero net runoff.

It is also important to incorporate any findings from recommended Flood Plain Analyses studies into the guidelines. For instance, it may make sense to reduce additional storm water contributions from new developments into areas that are already prone to flooding.

4.10 Sanitary Sewers

According to Meridian, there are no current capacity issues relating to the existing sanitary sewer system. It is unclear what, if any, additional capacity is available to support future expansion within the Town though. This must be confirmed prior to approvals for new developments.

The Town has 18+2 sewage pump stations, several of which need to be upgraded, as well as 8 ocean outfalls. Meridian also reported that the Town is experiencing issues related to infiltration into the sanitary sewer system, particularly during rainfall events.

In 2019 Meridian completed a Wastewater Feasibility Study that provided options for infrastructure upgrades and wastewater treatment to allow the Town to meet the new federal government's Wastewater System Effluent Regulations (WSER). The proposed works, regardless of the preferred option, must be completed in phases and will cost \$18-\$20M. The proposed wastewater treatment options must be designed to include full build-out of the Town, including future expansion.

Meridian recommended that the Town conduct a storm water infiltration study to identify and address major sources of infiltration before proceeding with the design and construction of the WWTP. [Council has not yet made any commitments to the design and construction of the WWTP, and it has to be confirmed whether water infiltrations studies have been carried out.]

4.11 Water Supply Protection Zone

The water source protection area for the Shoal Harbour watershed covers an area well over 100 square kilometres, most of which is within the Clarendville Municipal Planning Area. The existing Municipal Plan provides for two zones that provide different levels of source protection for the water supply area. The highest level of protection is in the *Water Supply Protection Zone*, which provides a buffer ranging from 1-1.5 kilometres wide on each side of the Shoal Harbour River for a distance of about 8 kilometres upstream from the water intake. Conservation is the only permitted use in this zone. Passive recreation may be permitted at the discretion of Council.

The higher portion of the water supply area is zoned *Watershed*. Permitted uses include conservation and recreational open space. Uses permitted at Council's discretion include agriculture, forestry, mineral working, and antenna. Besides Town approval, new developments must meet the approval and conditions of the Minister of Environment, Climate Change and Municipalities.

No changes are recommended with respect to levels of source water protection provided by these two zones. Of potential concern is that the Water Supply Protection zone does not extend downriver from the water supply intake. Steep contours in this vicinity indicate that there may be potential for runoff originating on slopes downstream from the intake to enter the river above the intake. Council may consider adjusting the zone boundary further downstream at this location as an additional precautionary measure. This must be reviewed in greater detail and the Water Supply Protection Zone adjusted where required to ensure the water supply is fully protected.

4.12 Drinking Water Supply

Clarenville formerly had two protected drinking water supply areas, Shoal Harbour River and Lower Shoal Harbour River. With the completion of its new water treatment plant, the Shoal Harbour River is now its sole drinking water source. The quality of the Town's drinking water has improved enormously as a result of the treatment plant.

According to Meridian Engineering, who completed the design of the new water treatment plant, the water supply has ample yield to supply both existing and future demands. Currently the plant supplies 800-900 GPM but was designed to allow future upgrades to increase the supply to up to 3000 GPM. Other upgrades may be required elsewhere in the water distribution system such as booster pumps or pressure reducing valves. As development and expansion continues, and the demand increases, upgrades will eventually be required. Applications for new subdivision developments that are greater than 10 lots, will provide a Functional Servicing Report (FSR) as a component of the approval process. This should be reviewed prior to approval of new developments.

4.13 Watercourses and Wetlands

Most watercourses and wetlands in the Clarenville municipal area are contained in the watersheds of three rivers– Shoal Harbour River, Lower Shoal Harbour River, and Dark Hole Brook. The upper watersheds of each of these systems are characterized many wetlands and some larger ponds and lakes. The outlets of all three rivers empty into Smith Sound within the built-up area of the town. Because of the town's hilly topography, there are numerous continuous and intermittent small streams that carry rainfall and snowmelt to one of these rivers or directly to saltwater.

The provincially legislated watercourse buffer currently is 15 metres. Considering climate change, and more severe weather occurrences causing more severe flooding, the ILUC report recommends that 30 metres buffer be adopted as the standard buffer width for watercourse and wetland protection. In areas of existing development, Council may wish to allow narrower buffers at the minimum 15 metres, to accommodate existing and approved developments. New streets and subdivision lots would not be located within such buffers. Certain low-impact land uses such as trails and minor accessory buildings could be permitted at Council's discretion.

4.13.1 Flood Plain Analyses

The Town should consider engaging a consultant to complete Flood Plain Analyses, similar to the "*Elizabeth Swan Park Flood Risk Study*" (2019) completed by Meridian for major rivers and streams such as Dark Hole Brook, Shoal Harbour River, Lower Shoal Harbour River and any associated tributaries.

Ice build-up should also be reviewed as it sometimes causes flooding in the spring. *A 30m buffer may be sufficient but it would be safer to implement a 15m buffer from the limits of the flood plain (for a 100 year storm based on climate change data) as determined from the flood plain analyses.* Land use zones should take into account areas that are in close proximity to existing developed areas and infrastructure as well as future development areas. They should also include areas that are prone to flooding and/or are low-lying in relation to the watercourse.

The Town should not permit development within the flood plain or buffer, other than low-impact land uses such as trails, minor accessory buildings, etc. at Council's discretion. The flooding that is currently being experienced in Elizabeth Swan Park, as discussed in Meridian Engineering's 2019 report, supports this recommendation.

4.14 Coastal Areas

Development close to the shoreline is extensive in the Clarenville portion of the town. Land uses include shorefront residential properties, industrial uses in the vicinity of the Clarenville Shipyard and Newfoundland Hardwoods, and the road adjacent the shore to Shoal Harbour. The outlet of Shoal Harbour River and its estuary also have significant waterfront development. North of Shoal Harbour, the coastal zone is mostly cushioned from development by the old railway corridor, which is now used as a recreational trail.

Although coastal land can be very sensitive to the impacts of development and human activity, the potential for significant subdivision development close to Clarenville's shoreline is limited by the shortage of remaining developable land. A coastal protection zone would further help deter any infill development from encroaching too close to the shoreline.

The ILUC report through the Geological Survey of Newfoundland and Labrador has determined on the basis of the surficial geology, exposure and other geographic characteristics that the coastal areas around Clarenville have a relatively low rate of erosion from 0 – 15cm per year.

This has been corroborated by Meridian Engineering. According to Meridian, there are no known coastal erosion or storm surge issues or reported damages to infrastructure at this time. However, one area of note is Shoal Harbour where high tide occurs. The Town has noted that they have been experiencing more intense storms that are occurring more often. This was evidenced in December 2020, where flooding in areas on Percy Drive, Wisemans Road and Palmers Lane caused serious damaged because of rain/runoff.

Furthermore, the ILUC report recommends municipal planning and development should consider rates of erosion and coastal setback limits that aim for a 100-year planning timeframe. In this case, the average rate of erosion is 15 cm per year and should be used for Clarenville. Thus, the ILUC report recommends a setback or buffer, of least 30 metres from the cliff/coastal edge.

Greater setback limits should be considered in areas with greater erosion rates or high-risk areas. There may be areas where no development is permitted while there are other areas where development must be designed or adapted to withstand the effects of climate change. As for existing development, areas that experience damages should be upgraded if they are to be permitted to resume activities once repaired.

The Town may want to engage a consultant to conduct a study of the potential impact of climate change on coastal areas, provide recommendations on areas which should and should not be developed, provide comment on existing areas that are now at risk, and recommendations for upgrades and possible solutions.

The Town may consider requiring that developers or property owners engage a qualified consultant to conduct such a study as part of their approval process for new developments or upgrades to existing properties.

4.15 Forestry Activities

Commercial and domestic logging are common throughout the municipal area. For the most part, this does not conflict with other land uses. Some concern has been expressed about domestic cutting that takes place within and close to the town's built-up area. Mainly this concern is with the impact of clearcutting on viewsapes within the town, particularly in areas that are valued for hiking and other recreational activities. Block 7, a block of crown land on

the outskirts of the town is designated for domestic cutting. It is used by residents to acquire firewood and sawlogs for personal consumption.

One portion of Block 7 is located in the vicinity of a favourite hiking trail and lookout site that winds along the crest of Bare Mountain. Another portion is located between Shoal Harbour Drive and the Trans Canada Highway, an area identified for future subdivision development. Other cutting areas are located south and north of Shoal Harbour River.

No large scale clearcutting occurs in these areas. Harvesting takes place in relatively small spread-out patches. Because wood is removed by snowmobiles and ATVs, ground disturbance is minimal. These areas have a high incidence of overmature trees, which if not harvested will eventually become deadfall.

Forest stands close to recreational areas and within valued urban viewsapes should be harvested more selectively. This would provide the ability to retain and preserve forested buffers and sites in and around future residential development, preserve viewsapes and provide buffering between potentially incompatible land uses.

Domestic harvesting is not monitored on a provincial level. To require selective harvesting in these areas, a community forestry approach to harvest management would be desirable. This would involve the marking of trees to be preserved, and closely monitoring harvesting to ensure this happens. Another option for the Town is to not permit harvesting in areas it wants to preserve. This could be accomplished through policies and zoning restrictions in the municipal plan.

4.16 Quarries and Aggregate Activities

There is a history of mineral exploration within Clarendville's Municipal Planning Area (MPA) especially in the western and southern parts of the planning area and also a number of findings of gold bordering the MPA.

Currently, large mineral licenses are in effect along the western border of the planning area, due south of Thorburn Lake, and several smaller mineral licenses within the central and southern part of the planning area. The larger mineral licenses along the western border correspond to an extensive areas that has been subject to mineral exploration activities over the past decade and is referred to as the Big Easy gold-silver project. Further mineral exploration will likely occur in other areas of the MPA revealing new mineral discoveries of potential economic significance.

The Clarendville's Municipal Planning Area also contains a number of areas covered by a quarry permit. Several areas of recognized aggregate potential containing sand and gravel deposits of sufficient size and quality to warrant quarrying. Currently, no serious land use conflicts exist with quarries located outside the built-up areas of town.

However, residents have expressed concerns about gravel operations within the town's developed area. The three most controversial sites include land east of Shoal Harbour Drive, near the Lori Ann subdivision on Balbo Drive, and north of Huntley Drive in Shoal Harbour. All three sites are being developed as residential or commercial land. The rationale for the gravel removal is that it was necessary to properly level and grade the sites for development. The result of the removal of substantial quantities of gravel have been described as eyesores and moonscapes that undermine the integrity and beauty of the natural environment and thus of

the town.

Stronger policies and procedures to reduce the environmental and aesthetic impacts of development are warranted in the Municipal Plan and Development Regulations. Greater jurisdiction over grading and gravel removal from sites being prepared for development is warranted.

A prerequisite of a subdivision application by a developer should be the submission of stamped engineering drawings that include the vertical and horizontal alignment of the proposed streets as well as detailed site grading plans. If the topography of the site warrants, Council should also request detailed site sections that indicate the existing undisturbed grades along with proposed grades and cut and fill calculations. Prior to approving developments that will involve substantial gravel removal or infilling, Council should consider whether this is necessary to appropriately develop the site and consider the environmental and aesthetic effects of such action. As much as possible Council should avoid permitting excessive cut and fill on sites.

The developer should be required to reinstate all disturbed areas to the satisfaction of Council and to ensure that all slopes are stabilized naturally wherever possible (e.g., 2H:1V sloping and landscaping). Council should also approve developments in phases to limit the amount of vegetation removal and excavation at any one time.

Clear cutting an area and leaving it as a gravel pit for longer than one or two construction seasons should no longer be allowed. To protect against developers who do not have the financial resources to complete reinstatement, Council should impose a reinstatement fee or similar levy to cover the cost of re-grading and reinstating disturbed areas in the event the developer fails to do so in a timely manner. It would be returned to the developer when they complete their development and required reinstatement.

Currently, the Town requires a security deposit as part of the subdivision agreement process. Perhaps, this should be re-evaluated to also include a reinstatement fee or similar levy as mentioned above. Development agreements for new subdivisions should specify these details and be strictly enforced.

4.17 Steep Slopes

Slopes ranging from 15 to 25 percent present considerable development limitations that are difficult and expensive to overcome. Typical problems encountered include tree cutting, increased need for cut-and-fill operations, changes to surface and subsurface water flows, significant soil erosion, and loss of scenic quality. Slopes greater than 25 percent are vulnerable to any type of development. Environmental impacts are extremely difficult to avert or mitigate no matter how elaborate proposed engineering or construction.

Given Clarendville's steep terrain, the Town would benefit from precautions to reduce the risk of environmental and scenic impacts, damage to properties, and costly maintenance and remediation measures. It is recommended that slopes greater than 25 percent be excluded from all forms of development. For slopes in the 15-25 percent range, it is recommended that proposed developments be subject to appropriate guidelines and approvals aimed at minimizing environmental impacts and maintaining natural scenery.

5.0 Summary

Newfoundland and Labrador – Population Projections

Early in 2021, the provincial Department of Finance updated its provincial population projections determined in 2019, based on long range economic and demographic forecasts to 2040. The Department prepared 3 scenarios for population change describing high, medium, and low growth. The medium scenario is considered to be the “most likely” scenario and is integrated with government’s economic forecast. This scenario is the one used by the provincial government for planning purposes and is thus relevant to municipal council’s in their financial and governance considerations.

Over the last number of decades Newfoundland and Labrador has experienced significant fluctuations of its population. The onset of oil production in 1997 marked a period of improvement in economic conditions in Newfoundland and Labrador. Between 2008 and 2016, the province experienced net in-migration as a result of increased labour demand for various major projects. Net in-migration averaged approximately 2,300 per year during this period. Net migration became negative over the 2017 to 2019 period before becoming positive again in 2020. Going forward, net migration is expected to remain positive and in the longer term, labour shortages due to population aging is expected to result in increasing in-migration.

Since 2012, the province has recorded more deaths than births. This pattern, while more pronounced in Newfoundland and Labrador, is occurring throughout Atlantic Canada. In 2020, all of the Atlantic Provinces recorded negative natural population change. Deaths are expected to continue to exceed births in Newfoundland and Labrador in the future and this negative natural population change is expected to become progressively larger until 2040.

Population losses in rural areas of the province have resulted in an increased concentration of the population in urban areas. The continued rural out-migration of youth, and seniors seeking the comforts and services of regional centres, will result in further shifts in regional distribution of the province’s population.

The medium population scenario indicates the population of Newfoundland and Labrador is expected to increase by 1.1% by 2040. Most regions of the province, especially rural areas, will continue to record significant population decline while a few others will experience population growth. For instance, of the population of the St. John’s area is project to increase by 13.4% of the total provincial increase, to 2040. Regional centres, especially those located along the Trans Canada Highway should also continue to experience growth but at a slower pace than St. John’s and area.

Implications for Clarenville - Moving Forward

The most significant planning issue facing Clarenville in the future will be retaining its population and attracting new residents and younger residents to the town. Since 1981 Clarenville has experienced consistent population increase with an average growth rate of 4.8% over 7 census periods. Since the 1970s public sector growth and construction has resulted in a greater demand for personal services. This growth, good transportation networks and its position in the region have ensured Clarenville’s position as a regional service centre for a rural population of approximately 96,000 people living within a 100km radius of the town, thus securing its economic viability. Clarenville is well positioned to continue to experience population growth to 2040 but likely at a slower pace.

As a regional service centre, the town has the opportunity to become the advocate regarding larger economic issues affecting the province as well as municipalities within the region. Strategies to attract and retain new populations may be more successful on a regional level. A marketing campaign extolling the advantages and amenities of Clarendville as well as the Clarendville-Bonavista Region, as a vibrant and safe place to live and work, especially during the uncertainties and pressures of the covid-19 pandemic, may entice people to relocate permanently.

Clarendville will continue to see population growth in the 55+ age groups, as its location and services attract retirees from rural areas, seeking medical and professional services and the amenities of a larger centre. In the short term, the in-migration of seniors will result in housing demand, especially for small 1-storey affordable units and more congregate and assisted living options.

Opportunities in the labour market will emerge in the short term associated with the aging population. As the 55+ groups retire, labour market shortages will emerge. In addition, an aging population will require more health care and specialized care services creating additional jobs in the medical field.

With the prospect of labour shortages, Clarendville has the opportunity to retain its young people and to attract new young families. Working with local employment agencies to determine specific job categories, the town can help promote these prospects. And consulting with the College of the North Atlantic, the town can ensure the appropriate training and courses are available for the benefit of local young people. Such an investment in its young people will signify the town's commitment to retain them.

Other factors that retain and attract residents are good quality affordable housing, a good variety of services and amenities, especially good recreational facilities and programs that combined promote high levels of satisfaction in terms of quality of life. Clarendville is in an enviable position as it possesses those favourable quality of life indicators that newcomers seek.

In regard to land use planning, Clarendville has the opportunity to amend and prepare updated planning documents that will enable the community to respond and support future changes in population growth.

An updated Municipal Plan and Development Regulations will help council determine and manage appropriate land uses and activities that support economic growth. The strategy for the Town of Clarendville, Municipal Plan 2021-2031 is to reinforce and strengthen the patterns of development that have benefitted the community in terms of location, transportation network, municipal servicing, and mitigation of environmental impacts. The emphasis will be on retaining and strengthening current land use patterns that minimize the inefficient use of land and services.

The continued provision of land for residential and commercial purposes, the enhancement of cultural, recreation and open space opportunities and the protection of significant environmental features and lands will be emphasized in this plan.

Appendix A:

1. Interdepartmental Land Use Committee Report

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