

1246 Ketch Harbour Road Traffic Impact Statement

June 2025

Prepared for

Sightline Planning + Approvals



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1 Introduction

1.1 Background

Sightline Planning + Approvals, on behalf of the owner, are working on a proposal to redevelop a 22.96 acre property located 1246 Ketch Harbour Road in Ketch Harbour, Nova Scotia. Exhibit 1.1 shows the site in red in the context of the surrounding area.

Exhibit 1.1 – 1246 Ketch Harbour Road in Ketch Harbour, Nova Scotia



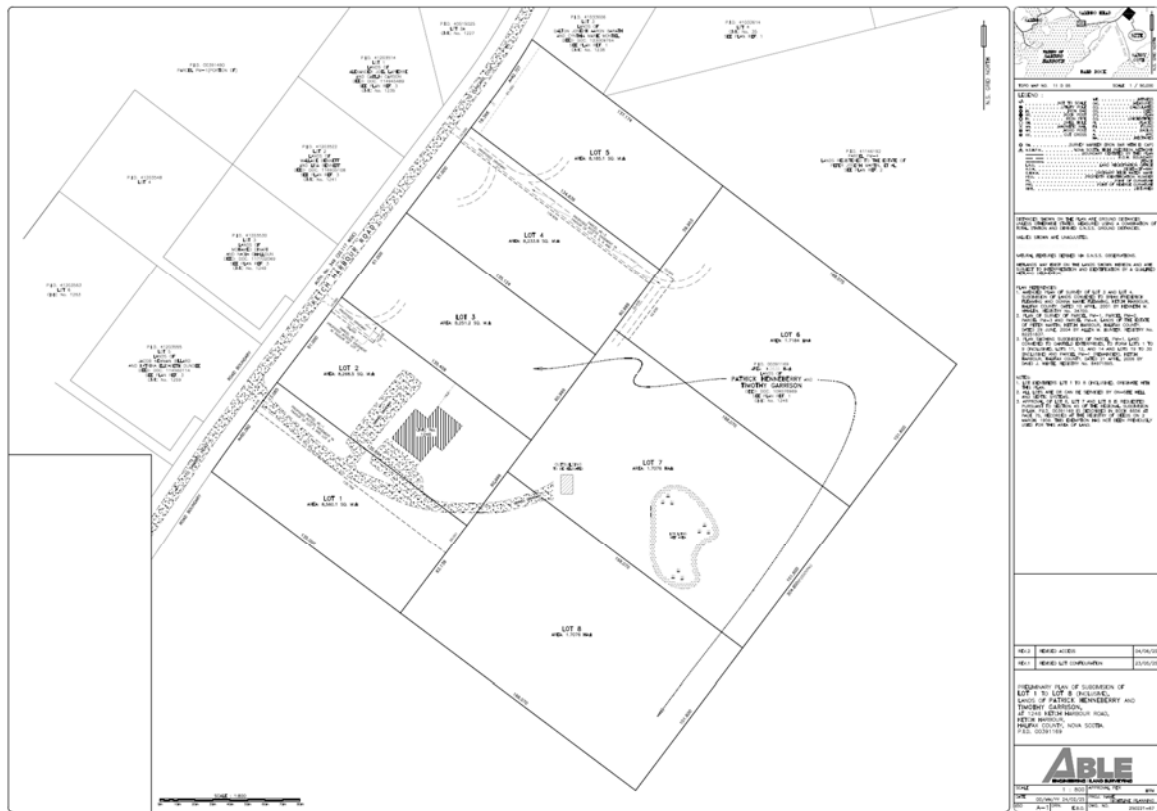
Source: Google Earth

The property currently has an existing vacant 9,000 sqft site building that was originally used by the Federal Government for telecommunications, near Ketch Harbour Road with a single driveway.

The property will be subdivided to create 8 new single family residential lots with 4 residential units each with direct access to Ketch Harbour Road. The existing building will be located on one of the new subdivided lots and it will be transformed to create 4 new residential apartment units and possible up to 1,500 sf of commercial space. Total new residential units will be 32.

Refer to the following Exhibit 1.2 for a proposed site plan for the redevelopment of the property provided by Able Engineering.

Exhibit 1.2 – 1246 Ketch Harbour Road Proposed Site Plan



JRL consulting was retained by Sightline Planning + Approvals to prepare a Traffic Impact Statement (TIS) to assess the potential traffic impacts of the proposed redevelopment at 1246 Ketch Harbour Road in Ketch Harbour, Nova Scotia.

The purpose of a Traffic Impact Statement is to provide a high level overview of a proposed development including estimates of site-generated traffic along with an initial review of existing traffic counts in the general area of the proposed development. This information will form part of the initial application to HRM which will be reviewed by staff and council. We are pleased to submit this report which summarizes our findings and provides the information required by HRM for review.

2 Existing Traffic Conditions

2.1 Description

The principal route affected by this development is Ketch Harbour Road (NS Highway 349)

Exhibit 2.1 summarizes HRM's Characteristics of Street Classes from HRM's Municipal Service Systems Design Guidelines.

Exhibit 2.1 – HRM's Characteristics of Street Classes

Characteristic	Arterial Street	Major Collector	Minor Collector	Local Industrial	Local Street
1. Traffic Service Function	First Consideration	Traffic movement	Traffic movement of equal importance with land access, parking permitted	Traffic movement secondary consideration with land access primary consideration, parking permitted	Traffic movement secondary consideration with land access primary consideration, parking permitted
2. Land Access Function	Limited Access with no parking	primary consideration, land access secondary consideration, some parking			
3. Range of design traffic average daily volume	More than 20,000	12,000 to 20,000 or more	Up to 12,000	Less than 3,000	Less than 3,000
4. Characteristics of traffic flow	Uninterrupted flow except at signals; w/ pedestrian overpass	Uninterrupted flow except at signals and crosswalks	Interrupted flow	Interrupted flow	Interrupted flow
5. Average running speed in off-peak conditions	50-70 km/hr	40-60 km/hr	30-50 km/hr	15-30 km/hr	15-30 km/hr
6. Vehicle types	All types	All types but trucks may be limited	All types with truck limitation	All types	Passenger and service vehicles, transit buses; large vehicles restricted
7. Connects to	Expressways, arterials, major collectors, minor collectors	Expressways, arterials, major collectors, minor collectors, some locals	Arterials, major collectors, minor collectors, locals	Some major collectors, minor collectors, locals	Some major collectors, minor collectors, locals

Ketch Harbour Road (Nova Scotia Highway 349) is a major collector that runs from Sambro to Spry field. It is a key route in the area that provides access to residential developments, schools and commercial land uses. There are no sidewalks in the area of the proposed development but there is a gravelled shoulder. The posted speed limit is 80 km/hr in front of existing driveway at 1246 Ketch Harbour Road and that drops to 50 km/hr at the northern edge of the property which is the start of Ketch Harbour.

Refer to Exhibit 2.2 for photos of the Study Area at 1246 Ketch Harbour Road

Exhibit 2.2 – Study Area Photos



1246 Ketch Harbour Road Existing Driveway



Ketch Harbour Road looking south at existing driveway on left



Ketch Harbour Road looking south at existing driveway on right



1246 Ketch Harbour Road existing driveway looking east



Ketch Harbour Road looking south at northern edge of property on left



Ketch Harbour Road looking north at northern edge of property on right

2.2 Existing Traffic Volumes

Ketch Harbour Road is owned and maintained by Nova Scotia Public Works (NSPW). They completed 24-hour counts in June 2023 on Ketch Harbour Road at a location 0.5 km south of Sandy Cove Road (approximately 1 km south of the proposed development).

These counts provide two-way traffic volumes for each hour over a 24-hour period for a full week. The factored Average Annual Daily Traffic (AADT) volume was 1,020 vehicles.

2.3 Trip Distribution

NSPW counts on Ketch Harbour Road provide an indication of trip distribution in the area and we expect that traffic generated by the proposed development at 1246 Ketch Harbour Road will follow the same patterns.

2.4 Transit and Pedestrians

There is no Halifax Transit service near the proposed development and there are no sidewalks along Ketch Harbour Road in this area. Pedestrians would use the graveled shoulder that is currently installed along Ketch Harbour Road.

2.5 Stopping Site Distance

As per the Transportation of Canada Geometric Design Guide for Canadian Roads, adequate stopping site distance *"is essential for safe operation that the vehicle operator be able to see far enough ahead to stop if necessary. Conditions that would force a vehicle operator to stop are for example, an object on the roadway, a culvert washout or other fault in the roadway."*

Adequate stopping site distance is required throughout the length of the roadway. Minimum stopping site distance is the sum of two distances namely:

- *Brake reaction distance*

The distance travelled during the brake reaction time, that is the time that elapses from the instant an object, for which the driver decides to stop, comes into view to the instant the driver takes remedial action (contacts brake pedal).

- *Braking distance*

The distance travelled from the time that braking begins to the time the vehicle comes to a stop."

For a design speed of 80 km/h, the minimum stopping site distance is 140 m.

We completed a Stopping Sight Distance (SSD) review on February 13, 2025 on Ketch Harbour Road at the existing driveway at 1246 Ketch Harbour Road. Field measurements were recorded using an object height of 0.6 m and a driver eye height of 1.05 m.

Visibility on Ketch Harbour Road exceeds TAC requirements of 140 m and available SSD is greater than 140 m for northbound drivers and southbound drivers. Refer to Exhibit 2.3 for a summary of Stopping Sight Distance on Ketch Harbour Road as well Exhibits 2.4 and 2.5 for photos from our field assessment.

Exhibit 2.3 – Stopping Sight Distance on Ketch Harbour Road at 1246 Ketch Harbour Road

Location	Direction	Minimum SSD	Available SSD
1246 Ketch Harbour Road	Northbound	140 m	> 140 m
	Southbound	140 m	> 140 m

Exhibit 2.4 – Northbound Driver View on Ketch Harbour Road to Existing Driveway at 140 m



Exhibit 2.5 – Southbound Driver View on Ketch Harbour Road to Existing Driveway at 140 m



3 Site Generated Traffic

3.1 Trip Generation

The proposed development will have 8 new single family lots each with 4 residential units with direct access to Ketch Harbour and this includes 4 apartments that will be created within the existing 9,000 sqft building currently located on site. A total of 32 new residential units will be created on the property. There is also a possibility of a small commercial space on 1,500 sf in the existing building on site so we have included that as a worst case scenario to estimate site generated traffic.

This area near 1246 Ketch Harbour Road is rural/suburban with no transit service so we have assessed the apartments as single family housing to estimate site generated traffic.

We completed trip generation estimates using equations provided in Institute for Transportation Engineer's Trip Generation Manual 11th Edition with the following Land Use Codes:

- ITE Land Use 210 Single Family Detached Housing

"Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision." The unit of measurement for average vehicle trip ends is dwelling units.

- ITE Land Use 822 Retail Plaza (<40K)

"A strip retail plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has less than 40,000 square feet of gross leasable area (GLA). No shopping plaza with a supermarket as its anchor is smaller than 40,000 square feet GLA." The unit of measurement for average vehicle trip ends is 1,000 Square Feet Gross Floor Area.

Exhibit 3.1 – Estimated Future Site Generated Traffic Volumes

LAND USE	QUANTITY	AM PEAK			PM PEAK		
		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
Single Family ITE Land Use 210	32	26	25%	75%	34	63%	37%
			7	19		21	13
Commercial ITE Land Use 822	1,500 sf	8	60%	40%	20	50%	50%
			5	3		10	10
TOTAL		34	12	22	54	31	23

We estimate that the proposed development will generate additional net new traffic volumes of up to **34** vehicles in the AM peak hour and **54** vehicles in the PM peak hour.

4 Conclusions and Recommendations

- This Traffic Impact Statement has provided a high level overview of a proposed residential development at 1246 Ketch Harbour Road in Ketch Harbour, Nova Scotia.
- A total of 8 new single family residential lots will be created each with 4 residential units with direct access to Ketch Harbour Road. One of these new lots includes the existing 9,000 sqft building that will be transformed to create 4 new residential apartment units along with a possibility of a small commercial space (1,500 sf). A total of 32 new residential units will be included for this proposed development.
- It includes an estimate of new site generated trips and an analysis of existing traffic volumes in the surrounding area.
- Based on ITE Trip Generation Rates (Single Family Detached Housing) we estimate that the proposed residential development will generate up to **34** new vehicle trips (12 enter, 22 exit) in the AM Peak Hour and **54** new vehicle trips (31 enter, 23 exit) in the PM Peak Hour.
- Stopping Sight Distance at the existing driveway exceeds TAC's minimum requirements of 140 meters. A number of new homes have been built in this area recently with driveways on Ketch Harbour Road and this development will add 4 new driveways Ketch Harbour Road. We recommend that consideration be given to extend the 50 km/hr speed zone that currently begins at the northern edge of this property south to start at Sandy Cove Road (northbound).
- The traffic that will be generated by this proposed development is minimal and so is traffic in the area so we don't expect any significant impacts on the surrounding transportation network in Ketch Harbour.