



IBI GROUP
101 – 410 Albert Street
Waterloo ON N2L 3V3 Canada
tel 519 585 2255
ibigroup.com

February 14, 2022

Meagan Ferris, RPP, MCIP
Manager of Planning and Environment
County of Wellington Planning & Development
74 Woolwich Street
Guelph, ON N1H 3T9

Dear Ms. Ferris:

OSPRINGE DEVELOPMENT, NORTHWEST CORNER OF HIGHWAY 124 AND SECOND LINE - TRAFFIC NOISE MITIGATION

This letter provides a review of the impacts of traffic noise from Wellington Road 124 on Lots 1 to 4 of the proposed Opsringe development lands, and provides recommendations for noise mitigation. A copy of the Draft Plan is attached.

1. Noise Policies

The Ministry of Environment, Conservation and Parks (MECP, formerly MOE and MOECC) environmental noise guideline NPC-300 “Stationary and Transportation Sources – Approval and Planning” was used to determine the noise criteria for this development. Table 1 summarizes the criteria and mitigation measures for transportation noise sources.

Table 1 – MECP Transportation Noise Mitigation and Warning Clause Requirements

LOCATION	NOISE LEVELS (DBA)	MITIGATION REQUIREMENT
	ROAD	
Outdoor Living Areas (Daytime- 0700 to 2300)	Less than 55	i) No control required.
	55 to 60	i) Physical control required, OR ii) Type A warning clause required.
	Greater than 60	i) Physical control required (reduce noise to 55dBA), AND ii) Type B warning clause required.
Outside Living Room Window (Daytime- 0700 to 2300)	Less than 55	i) No control required.
	55 to 65	i) Forced air heating with provision of A/C required, AND ii) Type C warning clause required.
	Greater than 65	i) Central air conditioning required, AND ii) Type D warning clause required, AND iii) Special building components potentially required.
Outside Bedroom Window (Night time- 2300 to 0700)	Less than 50	i) No control required.
	50 to 60	i) Forced air heating with provision of A/C required, AND ii) Type C warning clause required.
	Greater than 60	i) Central air conditioning required, AND ii) Type D warning clause required, AND iii) Special building components potentially required.

Meagan Ferris, RPP, MCIP – February 14, 2022

2. Traffic Data

Traffic volumes (Annual Average Daily Traffic – AADT) and other data for Wellington Road 124 were obtained from the Transportation Impact Study - Northwest Corner of Highway 124 and Second Line, Ospringe, Erin, Wellington County (IBI Group, June 29, 2021). The traffic volumes along with other relevant traffic data are summarized in Table 2 and AADT calculations are attached.

Table 2 – Road Traffic Data (2021)

ITEM	WELLINGTON ROAD 124
AADT	6,036 vpd
Years of Growth	11
% Growth	2.0%
% Medium Trucks	12.2%
% Heavy Trucks	0%
Road Grade	3.5%
Speed Limit	60 kph
Day/Night Split	90/10

The MECP requires that all traffic data be projected ten (10) years into the future from the date of construction such that the proposed mitigation will be relevant for future volumes.

The noise levels produced by road traffic along Wellington Road 124 were modelled/predicted utilizing MECP's computer modelling software "STAMSON 5.04".

3. Receiver Locations

To facilitate analysis and description, various sensitive receiver locations were identified. All receivers were located at worst case locations (most exposed) for both daytime and nighttime periods for noise received from traffic sources.

For outdoor daytime noise, the receiver is located 1.5 meters off the ground, and located in the outdoor living area (OLA) at a distance of 3.0 meters from the dwelling façade. Daytime and nighttime receivers are located at the building façade for the first and second floors representing the living room and bedroom windows (1.5m and 4.5m, respectively).

The receivers summarized in Table 3 represent Lots 1 to 4, since each dwelling will be located at a similar distance from the centreline of Wellington Road 124.

Meagan Ferris, RPP, MCIP – February 14, 2022

Table 3 – On-Site Noise Receiver Locations

RECEIVER	LOCATION	FLOORS	DISTANCE TO CL WELLINGTON ROAD 124
A: Lots 1 to 4	OLA Rear Yard – 3m from House	1	37.0m
B: Lots 1 to 4	Proposed Rear House Façade	1 to 2	40.0m

4. Results

The results of the noise modelling for the road noise are summarized in Table 4. Note, the intermediate surface between the noise source and the receivers was modelled as having an absorptive surface.

Table 4 – Predicted Road Noise Levels (dBA)

RECEIVER	DAYTIME	NIGHTTIME	CRITERIA DAY/NIGHT (DBA)
A: Lots 1 to 4 OLA	57	-	55 / -
B: Lots 1 to 4 Rear Façade	56	50	55 / 50

Since the noise levels in Table 4 exceed the minimum MECP values, Warning Clauses will be required.

5. Recommendations

Based on the results of the noise modelling, the following recommendations are provided:

Recommendation #1 (Lots 1 to 4)

Due to the exceedance of the MECP noise criteria for daytime and nighttime traffic noise levels from Wellington Road 124, each dwelling is to be fitted with forced air heating. Further, a Warning Clause Type 'C' shall be placed on title reading:

"This dwelling unit has been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning by the occupant in low and medium density developments will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment."

Meagan Ferris, RPP, MCIP – February 14, 2022

Recommendation #2 (Lots 1 to 4 - Outdoor Amenity Areas)

Due to the exceedance of the MECP noise criteria for the Outdoor Living Areas due to road traffic noise from Wellington Road 124 a Warning Clause Type 'A' shall be placed on title reading:

"Purchasers/tenants are advised that sound levels due to increasing road traffic may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment."

Based on the preceding we conclude that the subject development can be designed appropriately to address noise impacts for Lots 1 to 4.

Yours truly

IBI Group



Andy Kroess, M.Eng., P.Eng.

AK:ms

Attachments:

1. Draft Plan
2. AADT Calculations

Meagan Ferris, RPP, MCIP – February 14, 2022

Attachment 1

Draft Plan

DRAFT PLAN
OF SUBDIVISION

PART OF LOT 13 CONCESSION 3
GEOGRAPHIC TOWNSHIP OF ERIN
TOWN OF ERIN
COUNTY OF WELLINGTON

61T-19

KEY MAP - N.T.S.

BENCHMARK

INFORMATION REQUIRED

UNDER SECTION 51 (17) OF THE PLANNING ACT, R.S.O. 1990, c.P.13 AS AMENDED

- (a) - AS SHOWN
(b) - AS SHOWN
(c) - AS SHOWN
(d) - AS LISTED BELOW
(e) - AS SHOWN
(f) - AS SHOWN
(f.1) - NONE
(g) - AS SHOWN
(h) - PRIVATE
(i) - SAND, SANDY SILT, SANDY SILT TILL
(j) - AS SHOWN
(k) - PRIVATE
(l) - NONE

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE
SUBDIVIDED ON THIS PLAN AND THEIR RELATIONSHIP TO THE
ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

SIGNED
JIM JOHNSON, O.L.S.
WEST - RULSKA LTD., Ontario Land Surveyors

DATE AUGUST 02, 2019

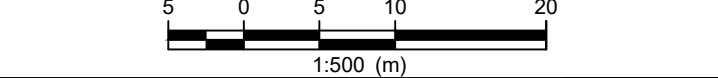
OWNER'S CERTIFICATE

I HEREBY CONSENT TO THE FILING OF THIS PLAN BY IBI GROUP, IN
DRAFT FORM.

SIGNED
TERRELL HEARD, OWNER
DATE OCTOBER 3, 2019

DEVELOPMENT DETAILS		
LOT	DESCRIPTION	AREA
1-13	SINGLE DETACHED RESIDENTIAL	2.704 ha
BLOCK 1	STORMWATER MANAGEMENT/ OPEN SPACE	0.260 ha
BLOCK 2	TBD	0.002 ha
STREET A	R.O.W.	0.631 ha
	SITE AREA	3.597 ha

SCALE



DESIGN BY: SM
DRAWN BY: T. TUCKER
CHECKED BY: O. GOMES
DATE: 2018-09-20

#	DATE	BY	DESCRIPTION
1	2022-01-13	TL	DRAFT PLAN RESUBMISSION
2	2022-05-14	TL	IN REVISION AS PER COMMENTS
3	2022-04-20	TL	IN FIRST SUBMISSION COMMENTS
4	2019-06-27	TL	UPDATED BOUNDARY SURVEY

DRAWING ISSUE RECORD



APPROVALS

IBI GROUP
200 East Wing-360 James Street North
Hamilton ON L8L 1H5 Canada
tel 905 546 1010 fax 905 546 1011
ibigroup.com

FILE NUMBER: 114234 SHEET NUMBER: DP1

Meagan Ferris, RPP, MCIP – February 14, 2022

Attachment 2

AADT Calculations

Ontario Traffic Inc.

Morning Peak Diagram

Specified Period

From: 7:00:00

To: 9:00:00

One Hour Peak

From: 7:15:00

To: 8:15:00

Municipality: Erin

Site #: 1725600001

Intersection: Hwy 124 & Second Line-Hwy 125

TFR File #: 3

Count date: 13-Sep-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Hwy 124 runs W/E

North Leg Total: 149

North Entering: 101

North Peds: 0

Peds Cross: $\times$

Heavys	0	0	0	0
Trucks	3	1	3	7
Cars	22	53	19	94
Totals	25	54	22	



Heavys	0
Trucks	4
Cars	44
Totals	48

East Leg Total: 676

East Entering: 269

East Peds: 0

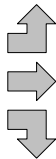
Peds Cross: $\times$

Heavys	Trucks	Cars	Totals
0	37	250	287

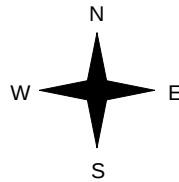


Hwy 124

Heavys	Trucks	Cars	Totals
0	2	19	21
0	31	288	319
0	12	90	102
0	45	397	



Second Line



Cars	Trucks	Heavys	Totals
0	1	0	1
191	21	0	212
46	10	0	56
237	32	0	

Hwy 124



Cars	Trucks	Heavys	Totals
354	53	0	407

Peds Cross: $\times$

West Peds: 0

West Entering: 442

West Leg Total: 729

Cars	189	Cars	37	25	47	109
Trucks	23	Trucks	13	1	19	33
Heavys	0	Heavys	0	0	0	0
Totals	212	Totals	50	26	66	



Peds Cross: $\times$

South Peds: 0

South Entering: 142

South Leg Total: 354

Comments

AM Peak Total = 287 + 397 = 684

Medium Trucks = 11.9%

Ontario Traffic Inc.

Afternoon Peak Diagram

Specified Period

From: 16:00:00

To: 18:00:00

One Hour Peak

From: 16:30:00

To: 17:30:00

Municipality: Erin

Site #: 1725600001

Intersection: Hwy 124 & Second Line-Hwy 125

TFR File #: 3

Count date: 13-Sep-17

Weather conditions:

Person(s) who counted:

**** Signalized Intersection ****

Major Road: Hwy 124 runs W/E

North Leg Total: 194

North Entering: 84

North Peds: 0

Peds Cross: $\times$

Heavys	0	0	0	0
Trucks	3	1	1	5
Cars	32	44	3	79
Totals	35	45	4	



Heavys 0

Trucks 8

Cars 102

Totals 110

East Leg Total: 791

East Entering: 375

East Peds: 0

Peds Cross: $\times$

Heavys	Trucks	Cars	Totals
0	43	371	414

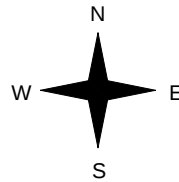


Hwy 124

Heavys	Trucks	Cars	Totals
0	1	40	41
0	16	321	337
0	42	50	92
0	59	411	



Second Line



Cars	Trucks	Heavys	Totals
3	0	0	3
243	33	0	276
78	18	0	96
324	51	0	

Hwy 124



Cars	Trucks	Heavys	Totals
385	31	0	416

Peds Cross: $\times$

West Peds: 0

West Entering: 470

West Leg Total: 884

Cars	172	Cars	96	59	61	216
Trucks	61	Trucks	7	7	14	28
Heavys	0	Heavys	0	0	0	0
Totals	233	Totals	103	66	75	



Hwy 125

Peds Cross: $\times$

South Peds: 0

South Entering: 244

South Leg Total: 477

Comments

PM Peak Total = 414 + 411 = 825

Medium Trucks = 12.3%

AADT = (AM Peak + PM Peak)/4 X 16
= (684 + 825)/4 X 16
= 6036

The Average Hourly Volume for a typical day can be estimated from the Peak Hour Volumes using the following relationships:

$$AHV = \frac{PHV}{2} \text{ or } AHV = \frac{amPHV + pmPHV}{4}$$

Alternately, the Average Hourly Volume for the eight highest hours of an average day can be estimated from Annual Average Daily Traffic (AADT) volume using the following relationship:

$$AHV = \frac{AADT}{16}$$

Where:

AHV = Average hourly volume

AADT = Annual average daily traffic

<https://www.library.mto.gov.on.ca/SydneyPLUS/Sydney/Portal/default.aspx?component=AAAAIY&record=59cabe78-8aaf-4347-95ab-d6c066099015Page 93>

Ontario Ministry of Transportation Library