

July 22, 2021

Claremont Development Inc.
3190 Steeles Avenue East
Suite 300
Markham, Ontario
L3R 1G9

Attention: Mr. Victor Szeghalmi

VIA E-MAIL
victors@geranium.com

Dear Mr. Szeghalmi:

Re: Updated Preliminary Environmental Noise Report
Proposed Residential Development
5113 Old Brock Road
Hamlet of Claremont
City of Pickering
Our File: 12-050-01

As requested, Jade Acoustics Inc. has updated the Preliminary Environmental Noise Report dated March 16, 2018, prepared by our office. This Updated Preliminary Environmental Noise Report supersedes the Preliminary Environmental Noise Report dated March 16, 2018.

This report reviews the potential impact of noise on the proposed residential development noted above.

The proposed residential development is located north of Lane Street, east of Old Brock Road and west of Brock Road in the Hamlet of Claremont in the City of Pickering. The proposed development consists of 70 new dwellings, park, open space blocks, stormwater management ponds and internal roads. Surrounding land uses include existing residential developments. A Key Plan is attached as Figure 1. The attached Figure 2 shows the proposed development.

The analysis was based on:

- Draft Plan of Subdivision prepared by Malone Given Parsons Ltd. dated January 31, 2018, revised March 1, 2018;





- Road traffic data provided by the Regional Municipality of Durham on June 24, 2021;
- Road traffic data provided by the City of Pickering on June 24, 2021;
- Site visit conducted by Jade Acoustics Inc. staff on October 4, 2017;
- Pickering Airport Draft Plan Report dated November, 2004, prepared by the GTAA;
- Rail traffic data provided by Canadian Pacific (CP) Railway dated October 26, 2017; and
- Proposed zoning setback information and anticipated dwelling locations provided by Claremont Development Inc. on November 2, 2017 and November 6, 2017.

Noise Sources

The primary noise source investigated for potential impact on the proposed development is road traffic on Brock Road, Old Brock Road and Central Street located east, west and south of the proposed development. Road traffic information for Brock Road and Central Street including Annual Average Daily Traffic (AADT) volumes for the ultimate timeframe, percentage of trucks, heavy to medium truck ratio, and posted speed limit were provided by The Regional Municipality of Durham and were used in this analysis.

Road traffic information for Old Brock Road was provided by the City of Pickering. A yearly increase of 2% compounded annually was used to predict the 2033 daily traffic (2033 AADT) which was assumed to represent the Ultimate AADT applicable to Old Brock Road. An AADT of 1,117 vehicles was used in the analysis. The traffic data for Old Brock Road was reduced from that previously provided by the City of Pickering. However, due to the low traffic volume, the road traffic on Old Brock Road is considered acoustically insignificant.

Due to the separation distance and intervening residential dwellings, road traffic on Central Street is considered to be acoustically insignificant.

The proposed development is located over 220 m from the CP Rail Havelock Subdivision to the northwest. Due to the distance separation and screening provided by the existing dwellings and forested lands, the acoustical impact is expected to be insignificant on the proposed residential lots. However, since the development is within 300 m from the rail right-of-way, warning clauses will be required to advise homeowners. See Figure 2 for details.

The proposed development is located outside the NEF/NEP 25 contour line and the interim protected area of the proposed Pickering Airport, based on The Pickering Airport Draft Plan Report prepared by the GTAA in November 2004.

The site is not affected by commercial or industrial facilities.

Noise Impact Assessment

Using the road traffic data provided by the City of Pickering and the Regional Municipality of Durham, the energy equivalent continuous sound levels, in terms of LeqDay (Leq16hour) and LeqNight (Leq8hour), were determined using ORNAMENT, the road traffic noise prediction model of the Ministry of the Environment (MOE).

Table 2 provides a summary of predicted sound levels outdoors due to road traffic at specific locations without any mitigation measures. The predicted sound levels are applicable to all lots backing onto Brock Road.

Based on the analysis, noise mitigation measures are required.

Architectural Component Requirements

As required by the Ministry of the Environment, Conservation and Parks (MOE), indoor sound level criteria of 40 dBA for the bedrooms and 45 dBA for the living/dining rooms were used. The characteristic spectrum for the noise sources has been accounted for in the determination of the architectural components. In determining the architectural requirements for the lots adjacent to the roadway, standard assumptions were made for a corner living/dining room and corner bedroom of a two storey house.

Based on the preliminary analysis, standard window, exterior door and exterior wall configurations would be adequate for all lots in achieving the appropriate indoor sound level criteria.

Ventilation Requirements

If the nighttime (11:00 p.m. to 7:00 a.m.) sound level in terms of Leq at the exterior face of bedroom or living/dining room windows exceeds 60 dBA or if the daytime (7:00 a.m. to 11:00 p.m.) sound level at the exterior face of living/dining room or bedroom windows exceeds 65 dBA, means must be provided so that windows can be kept closed for noise control purposes and central air conditioning is required. No lots require central air conditioning.





For sound levels greater than 50 dBA to less than or equal to 60 dBA on the exterior face of bedroom or living/dining windows (nighttime) or greater than 55 dBA to less than or equal to 65 dBA on the exterior face of living/dining room or bedroom windows (daytime), there need only be the provision for adding central air conditioning by the occupant at a later date. This typically involves a ducted heating system sized to accommodate the addition of central air conditioning by the occupant at a later date. A warning clause advising the occupant of the potential interference with some activities is also required. This is required for all lots adjacent to Brock Road. See Figure 2 for details.

Outdoors

The outdoor amenity area is required to be exposed to sound levels of less than or equal to 55 dBA from road sources during the day. A 5 dBA increase is considered acceptable in certain situations. Typically, if the sound level is above 55 dBA, some form of mitigation is required.

The proposed dwellings reverse fronting onto Brock Road are predicted to have an unmitigated rear yard sound level greater than 60 dBA (LeqDay). Therefore, mitigation measures are required. A 10 m wide noise attenuation buffer block has been provided along the entire length of the site adjacent to Brock Road. This noise attenuation block will be used for the development of a berm/modified grading to achieve a predicted rear yard sound level of less than 60 dBA in the rear yards of the lots adjacent to Brock Road. At the time of preparation of this report, grading information for the subject site was not available. As the topography of Brock Road varies across the site, the proposed mitigation will need to be confirmed once detailed grading plans are available.

A 3.0 m high berm is proposed to achieve less than 60 dBA in the rear yards. One side of the berm with a side slope of 3:1 should be constructed within the noise attenuation buffer block. The other side of the berm will be accommodated within the proposed lots along Brock Road.

Where the topography does not allow for the construction of the berm, an acoustic fence may ultimately be required. Depending on the final grading plan, the acoustic barrier may need to be returned along the north property line of Lot 52 and the south property line of Lot 70.

Conclusions

Based on the preliminary analysis, it is feasible to develop these lands for residential uses, provided the noise mitigation measures as mentioned in this report are installed to achieve the appropriate environmental noise criteria.

A detailed environmental noise report will need to be prepared once detailed grading plans are available to ensure the appropriate noise criteria are achieved.

If there are any questions or additional information is required, please call.

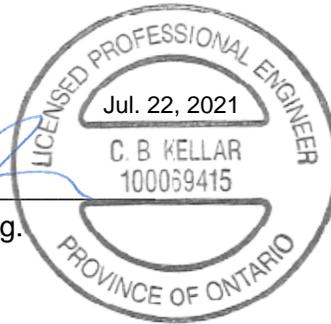
Yours truly,

JADE ACOUSTICS INC.



Per:


Chris B. Kellar, P.Eng.



Per:


Dalila C. Giusti, P.Eng.



Att.

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TABLE 1

PROPOSED RESIDENTIAL DEVELOPMENT

5113 OLD BROCK ROAD

HAMLET OF CLAREMONT

CITY OF PICKERING

SUMMARY OF ROAD TRAFFIC INFORMATION



Road	Old Brock Road	Brock Road
Ultimate AADT**	1117	20,000
No. of Lanes	2	2
Speed (km/hr)	40	80
Trucks (%)	1	15
Medium/Heavy Split (%)	60/40	30/70
Gradient (%)	2***	4***
Day/Night Split (%)	95/5	90/10**

* West of Brock Road.

** Annual Average Daily Traffic.

*** Assumed.

TABLE 2
PROPOSED RESIDENTIAL DEVELOPMENT
5113 OLD BROCK ROAD
HAMLET OF CLAREMONT
CITY OF PICKERING

**SUMMARY OF PREDICTED UNMITIGATED SOUND
LEVELS OUTDOORS DUE TO ROAD TRAFFIC**



Lot	Location*	Source	Distance (m)	Leq (dBA)	
				Day	Night
Lot 55	Rear Yard	Brock Road	74	63	--
	Rear Wall	Brock Road	71	64	57

* Rear yard location taken 3 m from the centre of the rear wall and 1.5 m above grade. Wall location taken at 4.5 m above grade for second floor and 1.5 m for first floor of dwelling.

TABLE 3

PROPOSED RESIDENTIAL DEVELOPMENT

5113 OLD BROCK ROAD

HAMLET OF CLAREMONT

CITY OF PICKERING

SUMMARY OF MINIMUM NOISE ABATEMENT MEASURES



Lots	Air Conditioning⁽¹⁾	Exterior Wall⁽²⁾	Window⁽³⁾	Acoustic Barrier⁽⁴⁾	Warning Clause⁽⁵⁾
Lots 52 to 70	Provision for Adding	N/R	N/R	Yes	A, B, C
Lots 1 to 8	No	N/R	N/R	No	D
All other lots	No Acoustic Requirements				

N/R Denotes exterior wall, window and door construction meeting the minimum structural and safety requirements provided by standard construction practices.

NOTES TO TABLE 3

1. Provision for adding central air conditioning would involve a ducted heated system sized to accommodate the addition of central air conditioning by the occupant at a later date. The air cooled condenser unit AHRI sound rating must not exceed 7.6 bels and should be placed in a noise insensitive location which complies with municipal by-laws.
2. STC – Sound Transmission Class Rating (Reference ASTM-E413). Values shown are based on a wall area of 55% of the associated floor area for the wall facing the noise source and 55% for the wall perpendicular to the noise source.
3. STC – Sound Transmission Class Rating (Reference ASTM-E413). Values shown are based on a glazed area of 25% of the floor area for window facing the noise source and 25% for window perpendicular to noise source. A sliding glass walkout door should be considered as a window and be included in the percentage of glazing.
4. Sound barriers must be of a solid construction with no gaps and have a minimum surface density of 20 kg/m². Earthen berms, solid walls/fences of adequate density or combinations of berms and walls/fences may be used.
5. Suggested warning clauses to be included in the subdivision agreement and to be included in offers of purchase and sale or lease agreements on designated lots:
 - A. "Purchasers/tenants are advised that despite the inclusion of noise control features in this development area and within the dwelling units, noise due to increasing road and rail traffic may continue to be of concern, occasionally interfering with the activities of the occupants as the sound level may exceed the noise criteria of the City and the Ontario Ministry of the Environment, Conservation and Parks. I, the purchaser hereby agree to place this clause in all subsequent offers of purchase and sale when I sell the property."
 - B. "Purchasers/tenants are advised that the dwelling unit can be fitted with central air conditioning system at the owner's option and expense which will enable occupants to keep windows closed if road traffic noise interferes with the indoor activities. If central air conditioning is installed, the air cooled condenser unit shall have an AHRI sound rating not exceeding 7.6 bels and shall be located so as to have least possible noise impact on the outdoor activities of the occupants and their neighbours."

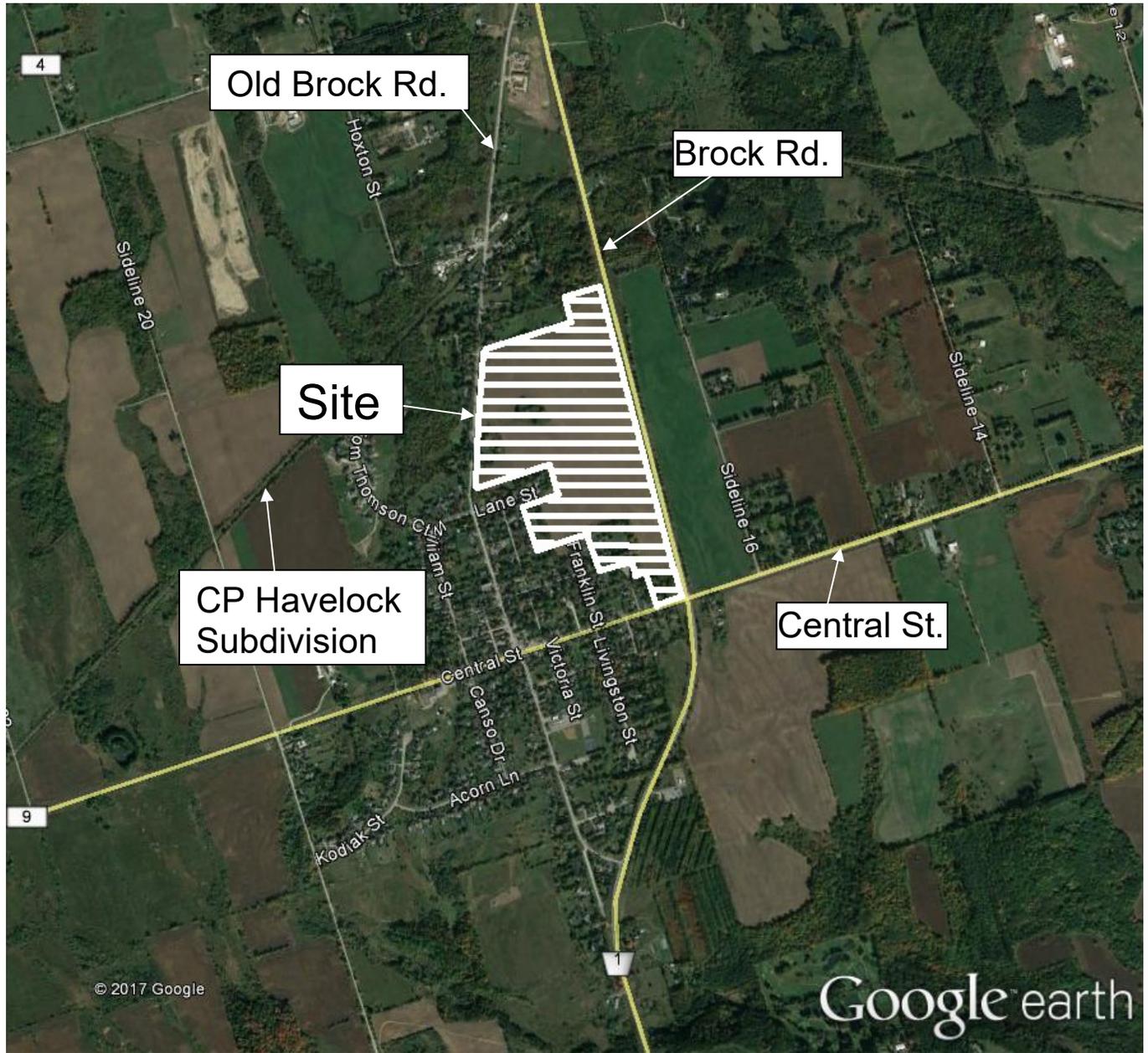




C. “Purchasers/tenants are advised that the acoustical berm and/or barrier as installed shall be maintained, repaired or replaced by the owner. Any maintenance, repair or replacement shall be with the same material, to the same standards, and having the same colour and appearance of the original.”

D. “Warning: Canadian Pacific Railway Company or its assigns or successors in interest has or have a right-of-way within 300 m from the land the subject hereof. There may be alterations to or expansions of the rail facilities on such right-of-way in the future including the possibility that the railway or its assigns or successors as aforesaid may expand its operations, which expansion may affect the living environment of the residents in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual dwelling(s). CP Rail will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid right-of-way.”

6. Conventional ventilated attic roof construction meeting typical construction practices is satisfactory in all cases.



N.T.S

Proposed Residential Development
 5113 Old Brock Road
 Claremont Development Inc.
 Hamlet of Claremont
 City of Pickering

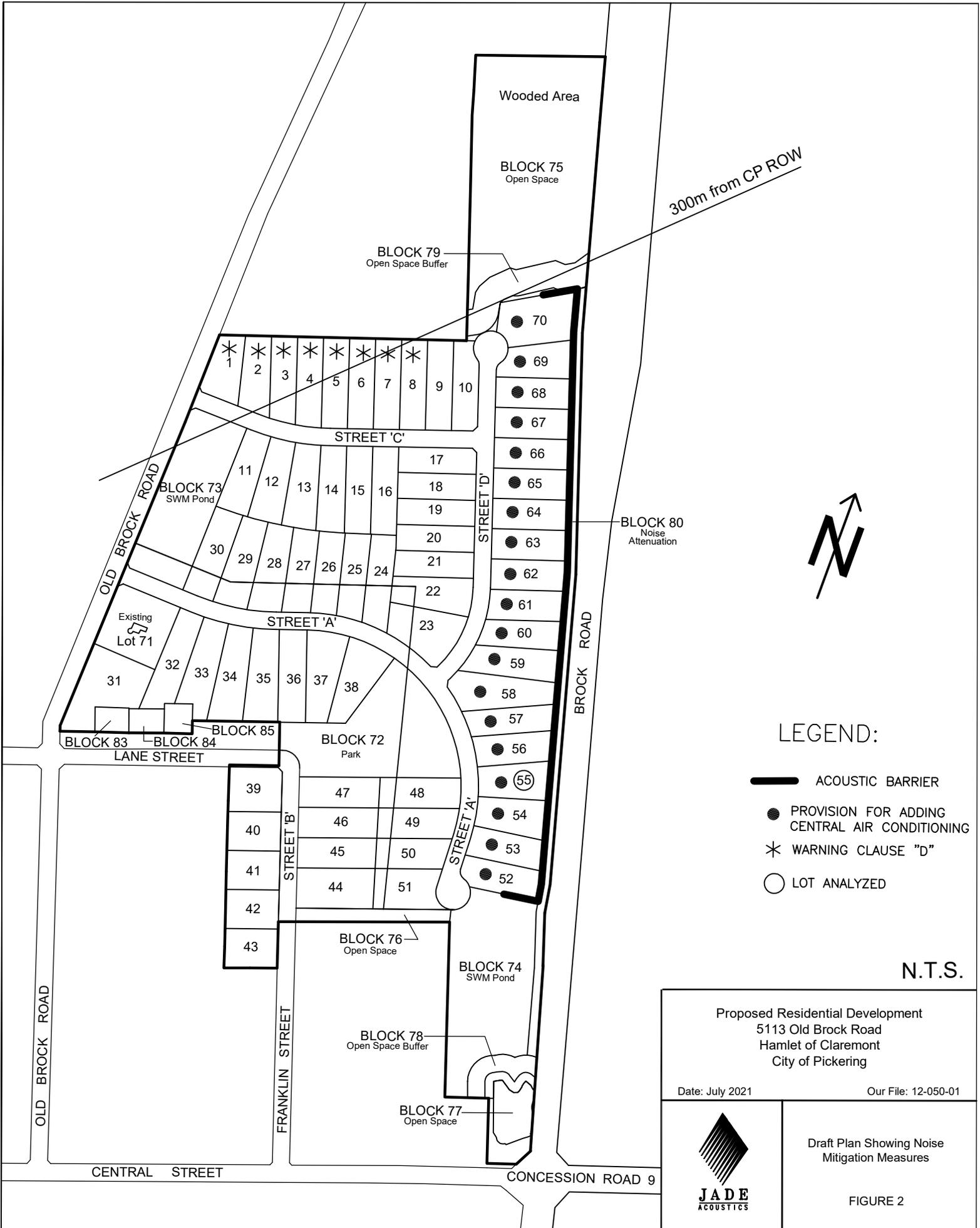
KEY PLAN

FIGURE 1



Date: July 2021

File: 12-050-01



300m from CP ROW



LEGEND:

-  ACOUSTIC BARRIER
-  PROVISION FOR ADDING CENTRAL AIR CONDITIONING
-  WARNING CLAUSE "D"
-  LOT ANALYZED

N.T.S.

<p>Proposed Residential Development 5113 Old Brock Road Hamlet of Claremont City of Pickering</p>	
<p>Date: July 2021</p>	<p>Our File: 12-050-01</p>
 <p>JADE ACOUSTICS</p>	<p>Draft Plan Showing Noise Mitigation Measures</p> <p>FIGURE 2</p>