Cassels

May 31, 2023

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City of Toronto Planning and Housing Committee
10th Floor, West Tower, City Hall
100 Queen Street West
Toronto, ON, M5H 2N2

Attention: Chair of the Planning and Housing Committee, Councillor Bradford

Dear Members of the Planning and Housing Committee:

Re: City of Toronto Proposed OPA 644
Item - 2023.PH4.5 - Our Plan Toronto: Recommendations on Forty-Five Employment Area Conversion Requests - Final Report dated May 17, 2023
Request 056: 4925-5201 Dufferin Street, University of Toronto

We are the lawyers for The Governing Council of the University of Toronto, the owner of an approximately 12.08 hectare site located generally southeast of Steeles Avenue West and Dufferin Street, municipally known as 4925, 4961 and 5201 Dufferin Street and the subject of request for conversion no. 056 (the "Property"). We are writing further to the above-noted report to ask that the University's request for conversion be approved and proposed Official Plan Amendment No. 644 be amended to redesignate the property's northern 2.58 hectares in accordance with Bousfields' August 3, 2021 request (the "Conversion Site") and further correspondence dated May 1, 2023. It appears the May 17, 2023 staff report may not have paid adequate attention to all materials filed in support of the application, and in particular the material filed May 1, 2023, enclosed, which fully addressed the site-specific concern staff had identified, that being land use compatibility with a nearby employment facility.

The Property

The Property is on the periphery of what is currently considered an employment area and contiguous with lands designated mixed use. The conversion would provide an opportunity to increase the number of jobs while introducing residential intensification in an area with two planned higher order transit corridors. Office and institutional are currently permitted and existing on the Property and the Property will not be considered an area of employment under the proposed *Planning Act* amendments or Provincial Planning Statement, 2023, which would permit the introduction of residential uses. It is also important to note that, as these lands are owned and operated by the University of Toronto, they are not being used for any core employment use.

The request for conversion

The University's request for conversion included planning, transportation, servicing, economic, community services and facilities, and land use compatibility studies. The Air Quality and Land Use Compatibility Assessment report, prepared by Gradient Wind was subsequently peer reviewed by R. J. Burnside at the City's request. On May 1, 2023, the University responded to the City's peer review comments, with updated materials from Gradient Wind. In this material, the University's consultant concluded that residential uses are feasible on the Conversion Site, it is expected to be compatible with existing stationary noise sources and air emissions from the Sanofi Pasteur facility, that a development on the Conversion Site meets the minimum setback distance from established industries operating with a valid environmental compliance approval and that air quality impacts from surrounding roadways are expected to be minor. Upgraded building components could be incorporated if determined to be necessary through a noise study and an air quality study.

In our view, the University had demonstrated it is appropriate to redesignate the Conversion Site to Mixed Use Areas. The proposed conversion would be compatible with the surrounding land uses, would not negatively affect the viability of other employment uses in the vicinity and would be consistent with the policy direction set out in the Provincial Policy Statement and A Place to Grow: The Growth Plan for the Greater Golden Horseshoe, as they apply today and is consistent with the proposed new Provincial Planning Statement.

We ask that staff's recommendation with respect to Request 056: 4925-5201 Dufferin Street not be adopted and that a recommendation to approve the University's request be made to Council.

We thank you for the opportunity to provide comments and ask that our office is provided with notice of any decision made respecting this matter

Yours truly,

Cassels Brock & Blackwell LLP

Signe Leisk

SL/AP/jd
Encl.

BOUSFIELDS INC.

May 1, 2023 Project No. 21220

SENT VIA EMAIL: Kyle Fearon (kyle.fearon@toronto.ca)
and Jeffrey Cantos (Jeffrey.cantos@toronto.ca)

City Planning Division
Strategic Initiatives, Policy & Analysis
Metro Hall, 55 John Street, 22nd Floor
Toronto, ON, M5V 3C6

Dear Mr. Fearon and Mr. Cantos:

Re: Response to Peer Review and Update Regarding Request to Convert Employment Areas – 4925, 4961 & 5201 Dufferin Street, Toronto

As you are aware, we are the planning consultants for the University of Toronto (the "University"), the owner of an approximately 12.08 hectare site located generally southeast of Steeles Avenue West and Dufferin Street in the City of Toronto, municipally known as 4925, 4961 and 5201 Dufferin Street (the "subject site").

We submitted a request on behalf of the University for a conversion from *Core Employment* Areas to *Mixed Use* Areas for the northern part of the subject site (the "conversion site"). We understand from an April 2023 report to Planning and Housing Committee (2023.PH3.18) that the City will be bringing the next batch of recommendations regarding conversion requests to Planning and Housing Committee on June 1, 2023, including the recommendation for the subject site.

The initial submission to the City in support of the request included an Air Quality and Land Use Compatibility Assessment report, prepared by Gradient Wind. The Gradient Wind report was subsequently peer reviewed by R. J. Burnside. In this regard, this letter provides a response to the City's peer review comments, with updated materials from Gradient Wind attached. The response from Gradient Wind concludes that residential uses are feasible on the conversion site, it is expected to be compatible with existing stationary noise sources and air emissions from the Sanofi Pasteur facility, that a development on the conversion site meets the minimum setback distance from established industries operating with a valid ECA and that air quality impacts from surrounding roadways are expected to be minor. Upgraded building components could be incorporated if determined to be necessary through a noise study and an air quality study.

Accordingly, the University is continuing to pursue the conversion request. As discussed in detail in the submission materials, the conversion request:

- applies only to part of the site;
- would provide a natural boundary for the employment area, given that it is not part of a large contiguous employment area but rather on the periphery and contiguous with lands designated *Mixed Use Areas;*
- provides an opportunity to increase the number of jobs on the conversion site while introducing residential intensification in an area with two planned higher order transit corridors;
- a *Mixed Use Areas* designation would be consistent with the in-force designation on the adjacent lands to the north, thereby minimizing conflicts with the as-of-right permissions on those lands;
- result in no negative impacts on existing employment uses or land use compatibility concerns, confirmed in the updated Gradient Wind letter; and
- can be serviced, has access to community services and can be accessed appropriately with no impact to goods movement in the Employment Area.

Further, we have considered the request for the conversion in the context of proposed *Planning Act* amendments and the proposed new Provincial Planning Statement. Both proposed to redefine "area of employment" to traditional employment uses and exclude institutional and commercial uses. Further, the draft of the new Provincial Planning Statement, provides that these non-traditional employment areas are intended to provide additional housing, public service facilities and a mix of uses. Further, municipalities are directed to update their official Plans to update employment areas to reflect this change in the definition of areas of employment. Prior to these changes being made to the official plans, the new PPS provides that municipalities would need to make a decision consistent with the new PPS. In this regard, the conversion site, with its institutional uses, would be subject to this new direction in the PPS and the request to redesignate to *Mixed Use Areas* would be consistent with the new PPS.

In conclusion, it is our opinion that it is appropriate to redesignate the conversion site to *Mixed Use* Areas. The proposed conversion would be compatible with the surrounding land uses, would not negatively affect the viability of other employment uses in the vicinity and would be consistent with the policy direction set out in the Provincial Policy Statement and A Place to Grow: The Growth Plan for the Greater Golden Horseshoe, as they apply today and is consistent with the proposed new Provincial Planning Statement.

We look forward to continuing to discuss this matter with staff. If there are any questions with respect to this submission, please do not hesitate to contact the undersigned at 416-947-9744.

Yours truly,
Bousfields Inc.

Emma West, MCIP, RPP

BOUSFIELDS INC.

Attachments:

Gradient Wind: Comment Response Letter & Land Use Compatibility Report

GRADIENTWIND
ENGINEERS & SCIENTISTS

May 1, 2023

Bousfields Inc.
3 Church Street, Suite 200
Toronto, ON M5E 1M2

Re: Air Quality and Land Use Compatibility Comment Response Letter
5201 Dufferin Street, Toronto
Gradient Wind File No.: 21-216 – Comment Response Letter

This letter describes how Gradient Wind addressed a set of peer review comments prepared by R.J. Burnside & Associates Limited and forwarded in November 2022. The comments pertain to Gradient Wind's Air Quality and Land Use Compatibility Assessment performed for 5201 Dufferin Street in Toronto, Ontario (ref. *Gradient Wind report #21-216 – Land Use Compatibility Assessment,* dated July 29, 2021). This letter is supplemental to Gradient Wind's Air Quality and Land Use Compatibility Assessment.

Below is a summary of how the comments relating to the study have been addressed.

1. *Information regarding complaint history, if any, should be included in the Compatibility Assessment.*

GW Response:

Section 1 of the revised report (ref. *Gradient Wind report #21-216 – Land Use Compatibility Assessment,* dated April 20, 2023) contains updated commentary with regard to complaint history in the area.

2. *A summary of the industrial/commercial operations within 300 m of the Site should be included in the report.*

GW Response:

The revised report includes updated information regarding all relevant industries that lie within 300 m of the subject site.

3. *Potential impacts from two Class II industrial facilities within the potential influence area should be discussed and assessed if found to be needed.*

GW Response:

The revised report includes updated information regarding potential impacts from two Class II facilities, Sanofi Pasteur Limited and The University of Toronto Institute of Aerospace Studies research campus.

4. *A preliminary noise impact assessment from operations at 1881 Steeles Avenue West should be included in the report.*

GW Response:

Section 4.1 of the revised report contains updated commentary with regard to noise impacts from the property onto the subject site.

5. *The impact of the proposed land conversion on the surrounding employment areas should be discussed.*

GW Response:

Section 6 of the revised report contains updated commentary with regard to impact of the proposed land conversion on the surrounding employment areas.

This concludes our letter to address peer review comments regarding our Air Quality and Land Use Compatibility Assessment performed for 5201 Dufferin Street in Toronto, Ontario. If you have any questions or wish to discuss our findings, please contact the undersigned.

Sincerely,

Gradient Wind Engineering Inc.

Giuseppe Garro, MASc.
Environmental Scientist

Joshua Foster, P.Eng.
Lead Engineer

Gradient Wind File #21-216

May 1, 2023

Bousfields Inc.
3 Church Street, Suite 200
Toronto, ON M5E 1M2

Re: Air Quality and Land Use Compatibility Assessment
5201 Dufferin Street, Toronto
Gradient Wind File 21-216-Land Use Compatibility

1. INTRODUCTION AND TERMS OF REFERENCE

Gradient Wind Engineering Inc. (Gradient Wind) has been retained by Bousfields Inc. to undertake a land use compatibility study for the proposed residential developments located at 5201 Dufferin Street in Toronto, Ontario. The subject property is outlined on Figure 1 with the surrounding context. The complete scope of work within our mandate includes a preliminary review and a professional opinion in terms of expected air quality and noise impacts on the development, such as the impact of emissions from nearby commercial and industrial sources, as applicable. The study is based on the Ontario Ministry of Environment, Conservation and Parks (MECP) Land Use Compatibility Guidelines (D-Series)[1] and other relevant MECP guidelines; Official Plan Policy 2.2.4(17)[2]; The Provincial Policy statement (PPS 2022)[3]; the City of Toronto Traffic Related Air Pollution (TRAP) report[4], City of Toronto's Official Plan Amendment No. 231[5], as well as digital maps received from the City of Toronto and City of Vaughan.

This report takes into consideration the findings of air quality and noise assessments conducted for nearby residential and industrial properties as shown below:

[1] Ministry of Environment, Conservation and Parks. *Environmental Land Use Planning Guides.* King's Printer for Ontario, October 2022
[2] City of Toronto. *Official Plan and Guidelines: Chapter 2 – Shaping the City*. City of Toronto. October 2022.
[3] Ministry of Municipal Affairs and Housing. *Provincial Policy Statement, 2020.* Queen's Printer for Ontario, May 2020
[4] City of Toronto. *Avoiding the TRAP: Traffic-Related Air Pollution in Toronto and Options for Reducing Exposure*, October 2017
[5] City of Toronto. *Planning and Development: Zoning Conformity for Official Plan Employment Areas*. City of Toronto. October 2022

Documents Publicly Accessible on Access Environment:

- Gradient Wind Report No. 20-105, "*Detailed Air Quality Study*", for 1875 Steeles Avenue West, Toronto dated September 19, 2022;
- Gradient Wind Report No. 20-105, "*Stationary Noise Assessment*", for 1875 Steeles Avenue West, Toronto dated March 19, 2022;
- SLR Consulting (Canada) Ltd. Report No. 241.20024.00000, *"Compatibility & Mitigation Study Air Quality, Dust Odour, Noise & Vibration"*, for 1881 Steeles Avenue West, Toronto dated September 7, 2022;
- Dillon Consulting Limited Report No. 21-1035, *"Noise Impact Study"*, for Building 200 – 1755 Steeles Avenue West, Toronto dated March 2021;

Documents Provided by Bousfields Inc.:

- The University of Toronto Institute of Aerospace Studies and O2E Inc. Environmental Consultants, *"Emission Summary Report"*, for 4925 Dufferin Street, Toronto dated August 31, 2021;
- O2E Inc. Environmental Consultants, *"Primary Noise Screening Method Report"*, for 4925 Dufferin Street, Toronto dated February 2, 2021

The focus of this land use compatibility study is the subject site located at 5201 Dufferin Street in Toronto, Ontario. The subject site located on a 12.08-hectare (ha, 29.85 acres) parcel of land west of Dufferin Street. The land is currently designated as Core Employment Area and houses The University of Toronto Institute of Aerospace Studies research campus. Surrounding roadway's include Finch Avenue West (Major Arterial) at the south, Steeles Avenue West (Major Arterial) at the north, Dufferin Street (Major Arterial), Alness Street (Minor Arterial), Dolomite Drive (Collector), Supertest Road (Collector), and Martin Ross Avenue (Collector) at the west. To the north and west of the site is a mix of residential, commercial and industrial buildings. To the east of the site is Sanofi Pasteur, which is a vaccine manufacturer and health care research campus.

The proposed development will comprise of 3 buildings situated to the northwest, northeast, and south of the site. The building to the northwest will comprise of 12 storeys. The building to the northeast will comprise of 2 towers (28 storeys and 12 storeys) connected by a shared podium rising 6 storeys. The

building to the south will comprise of 2 towers (21 storeys and 10 storeys) connected by a shared podium rising 6 storeys.

The relevant pollution sources surrounding the site include existing nearby industrial and commercial facilities. Other facilities which could produce adverse effects on a neighbouring property include railway transportation corridors and/or associated lands/buildings. The study site is greater than 500 meters (m) from the nearby railway corridors to the north (CN York Subdivision) and west (Metrolinx GO Transit Newmarket Subdivision). Additionally, transportation is not considered within the MECP D-Series guidelines. However, the City of Toronto has created a report detailing the impacts of roadway traffic pollution on sensitive buildings and ways to mitigate such impacts. Therefore, odour and air quality impacts from transportation sources are addressed in Section 5 of this study.

The sources of transportation noise impacting the site include Steeles Avenue West and Dufferin Street. During Rezoning and/or Site Plan Control submission stage, a transportation noise analysis will be required to determine the appropriate noise mitigation measures to ensure indoor noise levels comply with MECP NPC-300 noise guidelines. The current land use compatibility assessment also provides commentary on the potential impact of existing and future nearby stationary sources on the subject sites. As the nearest railway corridor is beyond 75 m of the site's property line, impacts from ground vibrations are considered insignificant.

It should be noted that information regarding complaints and/or concerns with regards to air quality and/or noise are predominantly obtained via a Freedom of Information (FOI) request made to the Ministry of Ontario Freedom of Information Office. Complaint history gathered from this request is typically a useful tool during the preliminary evaluation stage of the nearby facilities. However, taking into account the exceptionally long processing time necessary for each FOI request, in addition to the intrinsic nature of the focus area and its surroundings, Gradient Wind concluded that the information gathered from the FOI request would not be a crucial aspect of the analysis and would likely have a negligible impact on the overall findings.

2. STUDY METHODOLOGY

2.1 Land Use Compatibility in relation to Provincial Policy Statement (PPS)

The Provincial Policy statement (PPS 2022) policy 1.2.6.1 states:

> *Major facilities and sensitive land uses shall be planned and developed to avoid, or if avoidance is not possible, minimize and mitigate any potential adverse effects from odour, noise and other contaminants, minimize risk to public health and safety, and to ensure the long-term operational and economic viability of major facilities in accordance with provincial guidelines, standards and procedures.*

Where *major facilities* is defined as*:*

> *means facilities which may require separation from sensitive land uses, including but not limited to airports, manufacturing uses, transportation infrastructure and corridors, rail facilities, marine facilities, sewage treatment facilities, waste management systems, oil and gas pipelines, industries, energy generation facilities and transmission systems, and resource extraction activities.*

The PPS, policy 1.2.6.1 of the PPS requires separation between *major facilities* and *sensitive land uses*, such as residential, so that among other things, excessive emissions, dust and odour noise do not adversely impact individuals in the *sensitive land uses*.

Based on a review of the surroundings, the only major facilities as defined by the PPS in proximity to the development are arterial roadways and a pharmaceutical manufacturing facility. Although the educational research facility located south of the subject site is not considered a 'major facility', it was included in this assessment for conservatism. The potential influence zone of light, medium and heavy industries is 70 m, 300 m and 1,000 m respectively, as discussed in Section 2.3.

Policy 1.6.9.1 of the PPS states:

> *Planning for land uses in the vicinity of airports, rail facilities and marine facilities shall be undertaken so that:*
>
> *a) their long-term operation and economic role is protected; and*

b) *airports, rail facilities and marine facilities and sensitive land uses are appropriately designed, buffered and/or separated from each other, in accordance with policy 1.2.6*

There are no airports, rail facilities, or marine facilities within the influence zone of the Subject Lands that noise, emission, dust or odour would be of a concern.

The surrounding employment/industrial lands permit a variety of possible future uses, including manufacturing facilities, warehousing, waste processing and automotive repair facilities. These industries may be classified as Class I, II, or III, and would be required to conduct an environmental impact assessment for Environmental Compliance Approval (ECA) to ensure any expansion project would remain compatible with the surrounding land uses, including approved proposed developments.

2.2 Identifying Critical Points of Impingement

The critical points of impingement for this study include fresh-air intakes (condominium blocks), public sidewalks, walkways, building entrances, and green spaces devoted to common amenity areas. Different receiver location types can have varying exposure times and sensitivities to pollutants. For instance, fresh-air intakes continuously provide air to the building's mechanical systems and can affect a large number of the building's occupants, making them the most sensitive. Main entrances operate intermittently, predominantly during daytime hours; therefore, the sensitivity of these locations is lower.

2.3 Identifying Emissions Sources

Following the definition of the critical points of impingement, a review of the study area was conducted to locate sources of airborne pollutants and odours. In general, emission sources that are considered as potentially influential to residential properties include nearby, existing commercial/industrial facilities.

Industrial processes are bound by the requirements of Section 9 of the Environmental Protection Act (EPA) R.S.O 1990 and Ontario Regulation (O. Reg.) 419/05 - Air Pollution and Local Air Quality. Section 9 of the Environmental Protection Act states that "*No person shall, except under and in accordance with an environmental compliance approval, use, operate, construct, alter, extend or replace any plant, structure, equipment, apparatus, mechanism or thing that may discharge or from which may be discharged a contaminant into any part of the natural environment other than water*". Despite compliance to Section

9 of the EPA, a facility may be liable under Section 14 of the EPA if they permit the discharge of a contaminant, including odour, which causes an adverse effect. Under O. Reg 419/05 "*a person shall not discharge a contaminant or cause or permit the discharge of a contaminant into the natural environment, if the discharge causes or may cause an adverse effect*".

In order to obtain and maintain an Environmental Compliance Approval (ECA) (formerly referred to as a Certificate of Approval (CoA)), the emitting source must show compliance with O. Reg. 419/05. Compliance with O. Reg. 419/05 for air emissions is shown through an Emissions Summary and Dispersion Modelling (ESDM) report. An ESDM report quantifies all emissions from a facility and must demonstrate, through air dispersion modelling, that contaminant concentrations are below standards prescribed in O.Reg 419/05 at all points of impingement.

However, some industries may be exempt from Section 9 depending on the type of industry and operation occurring on site but are still required to be considered for planning purposes through other assessments (e.g., stationary noise studies as per NPC-300 guidelines).

To minimize the potential for adverse impacts of industrial activities on sensitive land uses, the MECP has provided guidelines for adequate buffering of incompatible land uses under "Guideline D-6 Compatibility Between Industrial Facilities and Sensitive Land Uses". The minimum separation distances are based on both the size of a facility and the scope of industrial activities within the facility, classified as Class I, II, or III, for light, medium and heavy industrial uses, respectively. Table 1 summarizes the recommended separation distance and potential area of influence for each class (see Figures 1 and 2). A sensitive development may be permitted within an industrial influence zone if appropriate air quality studies are undertaken and potential causes of adverse effects are mitigated.

TABLE 1: D-6 RECOMMENDED SEPARATION & INFLUENCE AREA

Class	Minimum Recommended Separation Distance (m)	Potential Influence Area (m)
I	20	70
II	70	300
III	300	1000

3. AIR QUALITY, NOISE, AND FUGITIVE EMISSIONS ASSESSMENT RESULTS

Based on a review of the surroundings via aerial imagery and a search of the MECP "Access Environment" database of registered ECA and Environmental Activity and Sector Registry (EASR) permit holders, our survey revealed there are one Class I and five Class II industries within the areas of influence. There are no Class III industries within the areas of influence. It should be noted that the surrounding area primarily comprises of small low-rise commercial and retail buildings that produce insignificant air quality, odour and/or noise impacts on the proposed development. All relevant properties within a 300 m radius are described below.

Class I Facilities

51 Gerry Fitzgerald Drive

The property at 51 Gerry Fitzgerald Drive features a commercial retail store operating under the name 'Real Canadian Superstore'. This property is not identified as an industrial facility but was included in this assessment as it has a registered ECA dated January 27, 2017 (ref. ECA# 7274-AHFQTY). The processes and support units at the property include a natural gas-fired reciprocating engine generator used for electricity generation during hours of peak demand (i.e., peak shaving) or for emergency power, having a maximum power rating of 999 kilowatts of electrical output, equipped with a selective catalytic reduction system. The ECA indicates the generator operates in accordance with Ministry air quality and noise guidelines. The building is setback 60 metres from the subject site property line, which is greater than the Minimum Recommended Separation Distance for Class I properties. The property is buffered by Dufferin Street which is a primary source of noise and air emissions compared to 51 Gerry Fitzgerald Drive. With these considerations, any potential air quality, odour and/or noise impacts are considered insignificant. As such, no air quality, odour and/or noise impacts are expected.

Class II Facilities

1755 Steeles Avenue West

The property at 1755 Steeles Avenue West features a human vaccine manufacturing and research facility operating under the name of 'Sanofi Pasteur Limited'. The processes and support units at the facility include process and laboratory fume hoods; cooling towers; process scrubbers; natural gas fired boilers; wastewater treatment plant; and two natural gas fired co-generation units equipped with a steam

injection system consisting of a combustion gas turbine and a heat recovery steam generator. This facility has completed a revised ECA on February 17, 2023 (ref. ECA# 3121-CLFQNF). This complex comprises several buildings with a setback distance of approximately 160 m from the study site property line to the nearest building, which is greater than the minimum recommended separation distance for Class II industries. Furthermore, satellite images reveal that primary sources associated with the complex are setback approximately 250 m from the study site.

As previously mentioned, Gradient Wind has conducted a Detailed Air Quality Study and Stationary Noise Assessment for the nearby property located at 1875 Steeles Avenue West in Toronto. This property is situated approximately 96 m west from the property line to the nearest Sanofi Pasteur building, which is 64 m closer compared to 5201 Dufferin Street. The studies investigated the emission and noise impacts from the Sanofi Pasteur facility onto 1875 Steeles Avenue West.

As 1875 Steeles Avenue West is closer and has a similar relative location to Sanofi Pasteur as 5201 Dufferin Street, the conclusions presented in the publicly accessible documents can provide a general understanding of the expected noise and air quality impacts from Sanofi Pasteur onto 5201 Dufferin Street.

Regarding air quality impacts from the Sanofi Pasteur facility onto 1875 Steeles Avenue West,

> *Results of the modelling indicate that peak concentrations for all relevant gaseous emissions satisfy the MECP O.Reg 419/05 Air Contaminants Benchmarks (ACB) criteria at critical points of impingement over the development, including entrances, outdoor amenities, balconies, operable windows, fresh-air intakes and private terraces.*

Regarding stationary noise impacts from the Sanofi Pasteur facility onto 1875 Steeles Avenue West, the results indicate that noise levels due to steady-state HVAC noise will marginally exceed NPC-300 criteria for Class 1 along the east and south elevations. Background noise levels due to roadway traffic noise are low at these facades, which are nearest and most exposed to the Sanofi Pasteur facility. Noise levels due to steady-state emergency sources will meet the NPC-300 criteria for Class 1.

Based on these results and the larger separation distance between the Sanofi Pasteur facility and 5201 Dufferin Street, noise levels at the proposed development are expected to meet or fall below the Class 1 criteria.

Taking into consideration the findings presented in the publicly accessible documents, the new sensitive development is expected to be compatible with the existing stationary noise sources and air emissions from the Sanofi Pasteur facility. It is advised that a detailed stationary noise and air quality assessment be conducted for the site to satisfy Site Plan Control submission requirements.

4925 Dufferin Street

The property at 4925 Dufferin Street features The University of Toronto Institute of Aerospace Studies research campus and facility. It should be noted that this existing facility is an extension of the current subject lands assessed in this report. The facility has an existing ECA (ECA# 2395-9BAL35) dated August 18, 2014 which outlines the processes and support units at the facility. These include laboratory testing under the laboratory fume hoods, equipment cleaning, combustion test of various materials, and wood cutting by laser.

Gradient Wind was provided with a revised Emission Summary Report prepared by The University of Toronto: Office of Environmental Health and Safety and O2E Inc. Environmental Consultants dated August 31, 2021. The document explains that the facility, at the time of the assessment, does not have any significant sources of contaminants on site but “carries the potential to eventually develop significant sources or activities that generate significant emission rates”. Should the operations change in the future, the significance of any emissions generated will be reassessed. The facility does not utilize any raw materials, nor does it produce/manufacture goods. The operation schedule for the laboratory was considered to be conservatively 8am-8pm, 7 days/week. Ancillary equipment for building operations and heating occurs 24 hours/day, 365 days/year.

Image 1 summarizes all potentially significant and insignificant emission sources at the facility, as per the Emission Summary Report. The primary contaminants are products of combustion for building occupant comfort purposes. It should be noted that the laboratory uses kerosene fuel in a process that involves injection into a closed system which is then heated, but not combusted.

Location/Building	Source ID	Source Description	Expected Contaminants	Significant (y/n)	Rational of Significance
University of Toronto Institute for Aerospace Studies	AE FE 01	Single Fume Hood Exhaust	None	n	Section 4
	AE FE 02	Combustion Lab Exhaust	None	n	Section 4
	AE BL 01	Boiler - 1055060 kJ/hr	Products of Combustion	n	Exempt under O.Reg 524/98
	AE BL 02	Boiler - 3323439 kJ/hr		n	
	AE HW 01	Hot Water Tank - 379821 kJ/hr		n	
	AE HW 02	Hot Water Tank - 195186 kJ/hr		n	
	AE AH 01	Air Handling Unit - 379821 kJ/hr		n	
	AE AH 02	Air Handling Unit - 316518 kJ/hr		n	
	AE AH 03	Air Handling Unit - 158259 kJ/hr		n	
	AE AH 04	Air Handling Unit - 131882 kJ/hr		n	
	AE AH 05	Air Handling Unit - 236333 kJ/hr		n	
	AE EG 01	39 kW Natural Gas Emergency Gen.	Products of Combustion	n	Section 7.2.1, Table B3-B, ESDM Procedure Document

IMAGE 1: Potential sources of contaminants[6].

With respect to noise from the facility onto the surroundings, Gradient Wind was provided with a Primary Noise Screening Method Report prepared by O2E Inc. Environmental Consultants dated February 2, 2021. The report indicates that the facility does not have cooling towers, air cooled chillers, or air compressors that would be considered stationary noise sources. The report indicates that the closest Point of Reception (POR) to the facility is the residential area to the east along Hidden Trail, approximately 395 m. However, should the proposed development be granted approval for residential use, it would be situated approximately 200 m from the facility, which would trigger the need to revise the Primary Noise Screening Method Report accordingly. Based on Gradient Wind's experience, a separation distance of 100 m between a few noise sources (HVAC and/or emergency equipment) and receptor is generally sufficient in ensuring noise levels meet the NPC-300 criteria. As the subject site is 200 m from the facility, stationary noise impacts are not expected.

With consideration of the summarized reports, as well as the setback distance of approximately 200 m (which is greater than the minimum recommended separation distance for Class II industries), any potential air quality, odour and/or noise impacts from the research facility onto the proposed development are considered insignificant. As such, no air quality, odour and/or noise impacts are expected. In addition, the subject site is also favourably upwind of the facility, based on prevailing wind directions, which would direct any potential emissions sources away from the development.

[6] The University of Toronto Institute of Aerospace Studies and O2E Inc. Environmental Consultants. *"Emission Summary Report"*. August 31, 2021. Page 13.

1400 Alness Street

The property at 1400 Alness Street features a furniture manufacturing facility operating under the name of 'Teknion Limited'. The processes and support units at the facility include a natural gas fired bake oven, two natural gas-fired preheat ovens serving the powder application process; a contact cement spray booth for the application of a water-based adhesive; and four baghouse dust collectors serving woodworking activities. This facility has already completed the ECA process (ref. ECA# 5054-A6QRJG). With a setback distance of approximately 955 metres, which is greater than the zone of influence for Class II industries, any potential air quality, odour and/or noise impacts are considered insignificant. As such, no air quality, odour and/or noise impacts are expected.

1900 Steeles Avenue West

The property at 1900 Steeles Avenue West features a building materials supplier operating under the name of 'Central Lumber Limited'. The processes and support units at the facility include dust collector units. This facility has already completed the ECA process (ref. ECA# 6806-APTPHJ). With a setback distance of approximately 995 metres, which is greater than the zone of influence for Class II industries, any potential air quality, odour and/or noise impacts are considered insignificant. As such, no air quality, odour and/or noise impacts are expected.

249 Supertest Road

The property at 249 Supertest Road features a small-scale concrete building materials supplier operating under the name of 'Patterned Concrete Ontario Inc.'. The processes at the facility include the manufacturing and production of concrete blocks. This facility has not completed an ECA assessment as per the MECP "Access Environment" database. However, given that the facility is set back approximately 760 metres, which is greater than the zone of influence for Class II industries, any potential air quality, odour and/or noise impacts are considered insignificant. As such, no air quality, odour and/or noise impacts are expected. The site is also favourably upwind of the facility, based on prevailing wind directions.

3.1 Conditions for Existing Nearby Industrial Facilities

As described in Section 2.2, the subject site is adjacent to nearby existing industrial facilities to the east and south identified as Sanofi Pasteur Limited and the University of Toronto research facility, respectively.

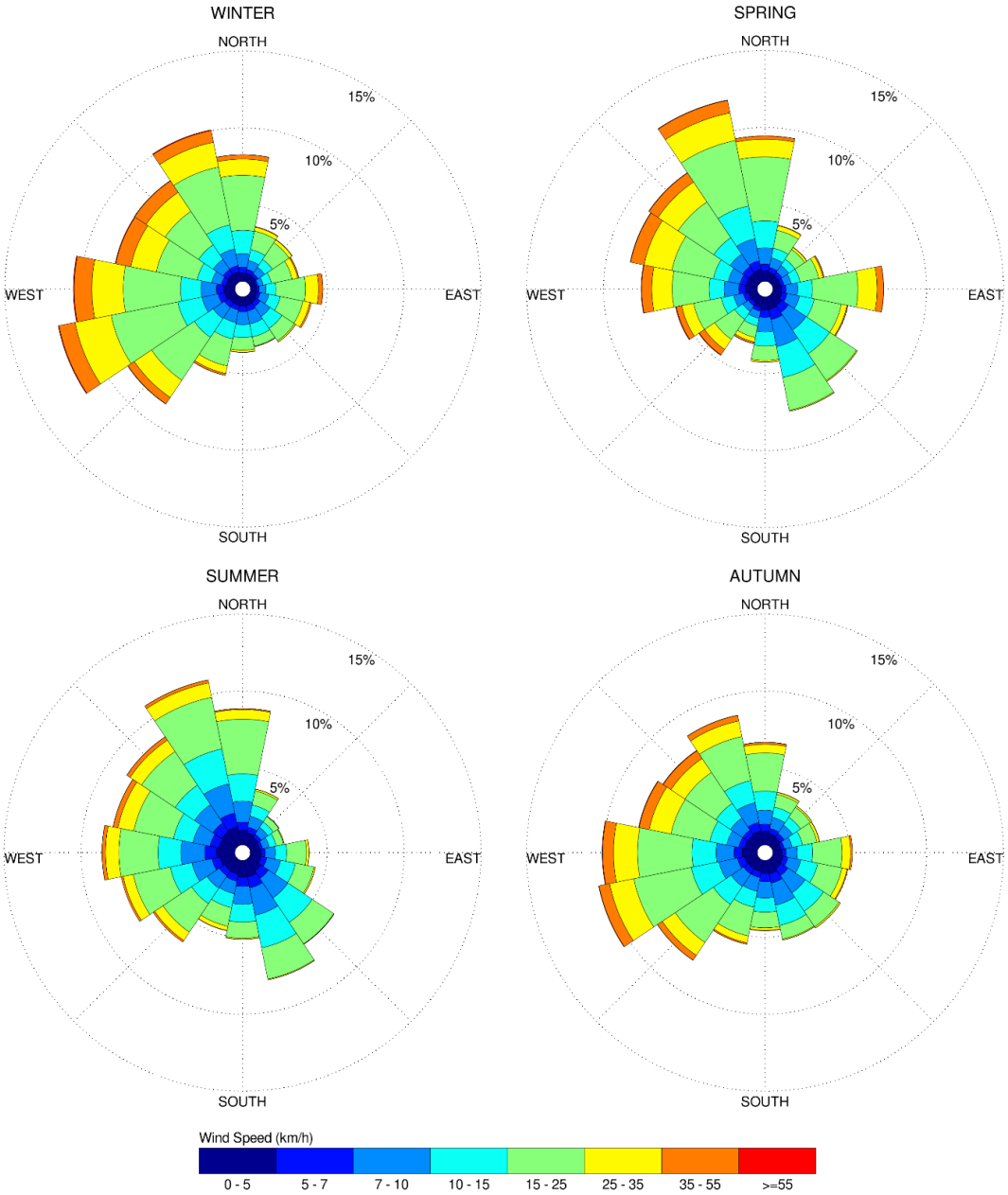
Both properties are identified as Class II industries. Figures 3 and 4 depict a 1000-meter area of influence for each facility. These figures illustrate existing sensitive land uses to the north and east falling within the 1000-meter area of influence. As such, should these industries wish to expand/modify their operations on the property, a land use compatibility study may be necessary, which would consider the existing sensitive land uses to the north and east. This could potentially limit the type of expansion/modifications permitted for the property if the resulting industry classification does not meet the separation distance requirements specified in Table 1.

3.2 Meteorological Data Analysis

A statistical model for winds in Toronto was developed from approximately 40-years of hourly meteorological wind data recorded at Lester B. Pearson International Airport and obtained from Environment and Climate Change Canada. Wind speed and direction data were analyzed for each month of the year in order to determine the statistically prominent wind directions and corresponding speeds, and to characterize similarities between monthly weather patterns. Based on this portion of the analysis, the four seasons are represented by grouping data from consecutive months based on similarity of weather patterns, and not according to the traditional calendar method.

The statistical model of the Toronto area wind climate, which indicates the directional character of local winds on a seasonal basis, is illustrated on the following page. The plots illustrate seasonal distribution of measured wind speeds and directions in kilometers per hour (km/h). Probabilities of occurrence of different wind speeds are represented as stacked polar bars in sixteen azimuth divisions. The radial direction represents the percentage of time for various wind speed ranges per wind direction during the measurement period. The common wind speeds and directions can be identified by the longer length of the bars. For Toronto, the most common winds concerning pedestrian comfort occur from the southwest clockwise to the north, as well as those from the east. The directional preference and relative magnitude of the wind speed varies somewhat from season to season, with the summer months displaying the calmest winds relative to the remaining seasonal periods.

SEASONAL DISTRIBUTION OF WIND
LESTER B. PEARSON INTERNATIONAL AIRPORT, TORONTO, ONTARIO



Notes:

1. Radial distances indicate percentage of time of wind events.
2. Wind speeds are mean hourly in km/h, measured at 10 m above the ground.

4. STATIONARY NOISE IMPACTS

4.1 Existing and Future Buildings Onto 5201 Dufferin Street

Gradient Wind investigated the potential stationary noise impacts from nearby industrial/commercial properties surrounding the study site. As previously mentioned, the site is surrounded by a mix of residential, commercial and industrial buildings to the north and west. To the east and southeast of the site is Sanofi Pasteur and the University of Toronto Research facility, respectively.

The commercial property located at 1881 Steeles Avenue West (Dufferin Corners) to the north was considered to be the property with the largest number of exposed mechanical equipment nearest to the subject site. Based on satellite imagery, the building is serviced by standard HVAC equipment for the building type. As the mechanical equipment is expected to have a low tonnage rating and is positioned on a roof deck approximately 20 meters from the nearest subject site property line, stationary noise impacts from this property are expected to be negligible. In addition, noise levels from existing stationary noise equipment are expected to fall below ambient noise levels produced from Dufferin Street and Steeles Avenue West, which are the dominant sources of noise in the area. The proposed development will likely require upgraded building components to address roadway noise, as discussed in Section 5, which will assist in mitigating noise within noise sensitive areas. Furthermore, Gradient Wind has been advised that the property is in the process of being rezoned to accommodate a mixed-use development, new public road, and parkland. Should this be approved, the existing sources will be removed.

4.2 5201 Dufferin Street onto Existing and Future Buildings

Stationary noise impacts of the subject site onto the surroundings will be determined at a future stage to ensure noise levels at nearby areas meet the NPC-300 criteria. Similarly, off-site noise impacts are not expected to be a concern as the mechanical equipment is expected to be located in an enclosed mechanical level/penthouse. This would limit direct line of sight with nearby existing high-rise and mid-rise noise-sensitive properties. Where necessary, noise impacts can generally be minimized by judicious selection and placement of the proposed equipment.

5. TRANSPORTATION AIR QUALITY AND NOISE IMPACTS

5.1 Noise

The primary sources of transportation noise impacting the site include Dufferin Street and Steeles Avenue West. The subject property is considered compatible with existing transportation noise sources with the inclusion of noise mitigation measures, such as upgraded building components, ventilation requirements, and Warning Clauses. Noise from these sources should be addressed in a separate transportation noise assessment to determine the appropriate noise mitigation measures needed once a concept plan has been created.

5.2 Air Quality

Similarly, the dominant sources of transportation emissions include Dufferin Street and Steeles Avenue West. This is based on their distance relative to the subject site as well as their roadway classifications.

Roadways are not considered within the MECP D-Series guidelines, however the City of Toronto has created a report detailing the impacts of roadway traffic pollution onto sensitive buildings and ways to mitigate such impacts. This report is titled "*Avoiding the TRAP: Traffic-Related Air Pollution in Toronto and Options for Reducing Exposure".* Based on the findings of the report, emission impacts due to Dufferin Street is to have a greater influence compared to emission impacts due to Steeles Avenue West. This is primarily due to the separation distance; closer transportation sources typically have greater emission impacts mostly at the lower floors.

The following is a list of a few suggested mitigation strategies presented in the TRAP report to address air pollution impacts from transportation sources:

- Implementing barriers between sources and sensitive areas (i.e., physical or vegetation).
- Consideration for the location and orientation of individual buildings and outdoor amenity areas (i.e., position sensitive areas as far as possible from roadways and buffered by transitional uses).
- Mechanical building ventilation with Minimum Efficiency Reporting Value (MERV) 8 certification particulate filters.
- Where possible, only opening windows on the side of buildings that face away from TRAP sources.

- Locating ventilation intakes away from transportation sources (i.e., the highest point of the building).

It should be noted that only opening windows on the side of buildings that face away from TRAP sources may not be feasible from a design and administrative perspective. Therefore, it is important to include appropriate ventilation systems in the sensitive spaces such as centralized air conditioning, or similar equipment, to allow residents to keep windows closed and achieve a comfortable indoor environment.

With that notion, the subject property is considered to be compatible with existing TRAP sources with the inclusion of select air quality mitigation measures described above. As these are suggested mitigation strategies, it is advised that a detailed assessment be completed at a future stage to determine the appropriate air quality mitigation specific to the development.

6. IMPACTS ON EMPLOYMENT LANDS

In recent years, the neighbourhood of the proposed study site has not experienced much change from a development perspective. According to the Toronto Official Plan Land Use Plan map[7], the land use designation of the subject site comprises Core Employment Areas, whereas the surrounding areas comprise Core Employment Areas, Mixed Use Areas, General Employment Areas, and Natural Areas. Residential zones lands are primarily towards the east of Sanofi Pasteur.

The City of Toronto's Official Plan Policy 2.2.4(17)[8] and Official Plan Amendment No. 231[9] emphasize the importance of preserving employment lands as much as reasonably possible within the city. Employment Areas provide locations for diverse employment opportunities, keep the production of goods and shipping near populated areas, help maintain and grow the City's economy, and help achieve a balance in the growth of population and employment[10].

[7] City of Toronto. *Official Plan Maps: Land Use – Map 16.* City of Toronto. October 2022.
[8] City of Toronto. *Official Plan and Guidelines: Chapter 2 – Shaping the City*. City of Toronto. October 2022.
[9] City of Toronto. *Planning and Development: Zoning Conformity for Official Plan Employment Areas*. City of Toronto. October 2022.
[10] City of Toronto. *Planning and Development: Zoning Conformity for Official Plan Employment Areas*. City of Toronto. October 2022.

A review of development applications within a 500 m radius of the subject site revealed several requests mixed-use developments located at 1881 Steeles Avenue West and 1875 Steeles Avenue West. As previously mentioned, Gradient Wind concluded that 1875 Steeles Avenue West is expected to be compatible with the existing stationary noise sources and air emissions from the Sanofi Pasteur facility with the inclusion of appropriate mitigation measures. As the subject site is slightly further away from Sanofi Pasteur compared to 1875 Steeles Avenue West, similar results and mitigation measures are expected.

With that notion, should the proposed development at 5201 Dufferin Street be granted approval for sensitive use, it is not expected to have any land compatibility issues or conflicts with the existing or future employment lands.

7. RESULTS AND CONCLUSIONS

In keeping with standard building construction and good engineering practice, as well as City of Toronto and MECP guidelines, the following comments and recommendations are to be incorporated into the design of the building to ensure indoor air quality and noise levels are maintained to acceptable standards for the proposed development:

(i) Based on the findings of this report, Gradient Wind concludes that the residential sensitive land use is feasible. It is expected to be compatible with the existing stationary noise sources and air emissions from the Sanofi Pasteur facility.

(ii) The development meets the minimum setback distance from select established industries operating with a valid ECA.

(iii) Based on Gradient Wind's experience on other projects in the area, air quality impacts from surrounding roadways are expected to be minor with gaseous concentrations of Nitrogen Dioxide (NO_2), Carbon Monoxide (CO), and Particulate Matter (PM) remaining compliant with the MECP's Ambient Air Quality Criteria (AAQC). With improvements to vehicle technology, concentrations are expected to reduce in the future. The development can also incorporate mitigation strategies to address emission impacts from TRAP sources, as outlined in Section 5.2.

(iv) Subject to a noise study, the development can incorporate upgraded building components, ventilation requirements, and warning clauses to address noise from Steeles Avenue West and Dufferin Street.

(v) In line with standard building practices, appropriate provisions include the design, installation, operation, and maintenance of air filtration at the fresh air intakes of the mechanical systems serving all habitable areas, including the addition of air conditioning. The areas that would not require filtered air would be parking garages and utility spaces. Minimum Efficiency Reporting Value (MERV) 8-10 certification filters should be used for this development in all occupied spaces. Details of the air filtration system will be designed by the mechanical engineers during the detailed design phase.

(vi) Under reasonable future growth scenarios for roadway traffic volume, technological improvements and more stringent emission standards will likely result in lower emissions and improved air quality for the site over time.

This concludes our land use compatibility study and report. If you have any questions or wish to discuss our findings, please advise us. In the interim, we thank you for the opportunity to be of service.

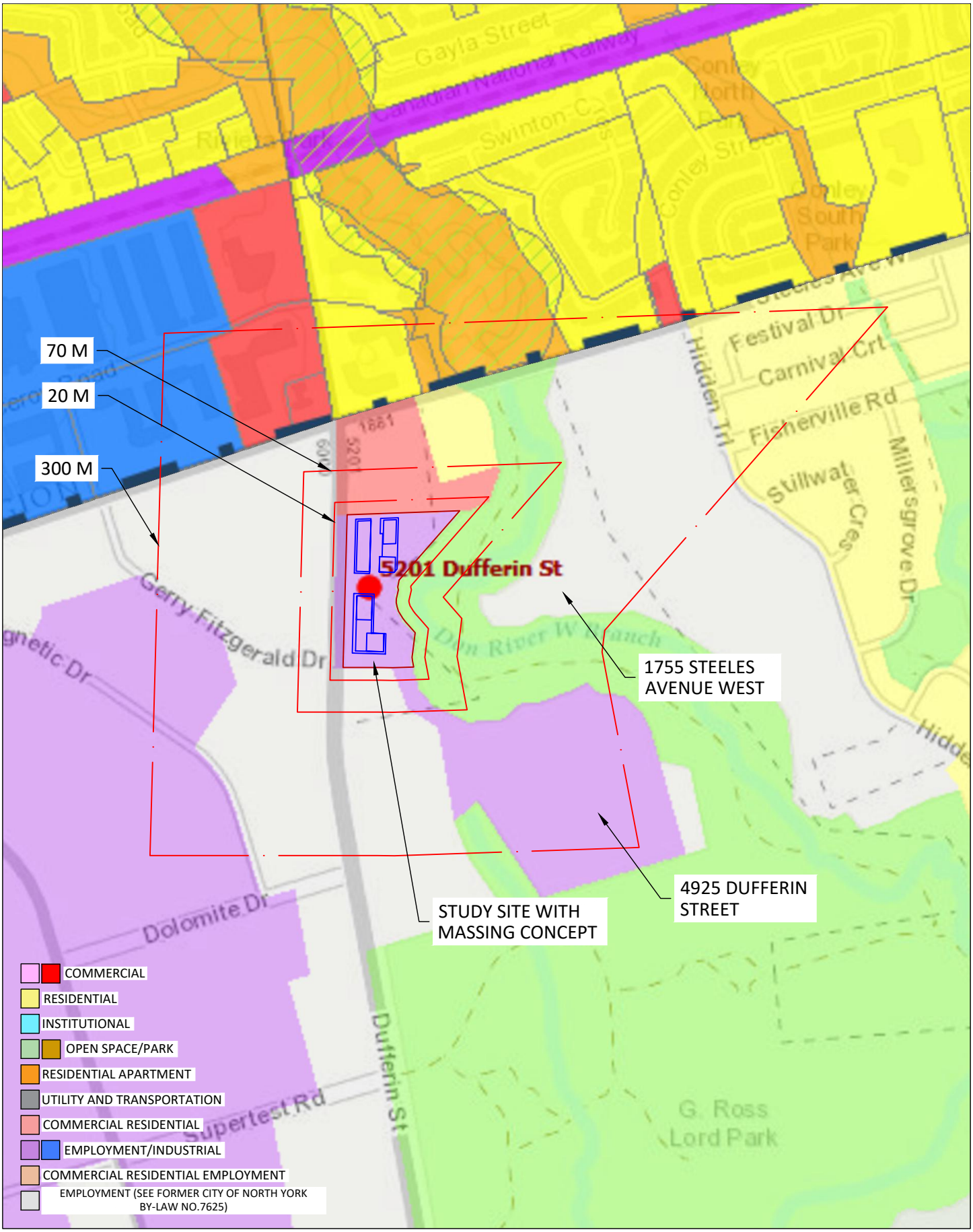
Sincerely,

Gradient Wind Engineering Inc.

Giuseppe Garro, MASc.
Environmental Scientist

Joshua Foster, P.Eng.
Lead Engineer

Gradient Wind File 21-216



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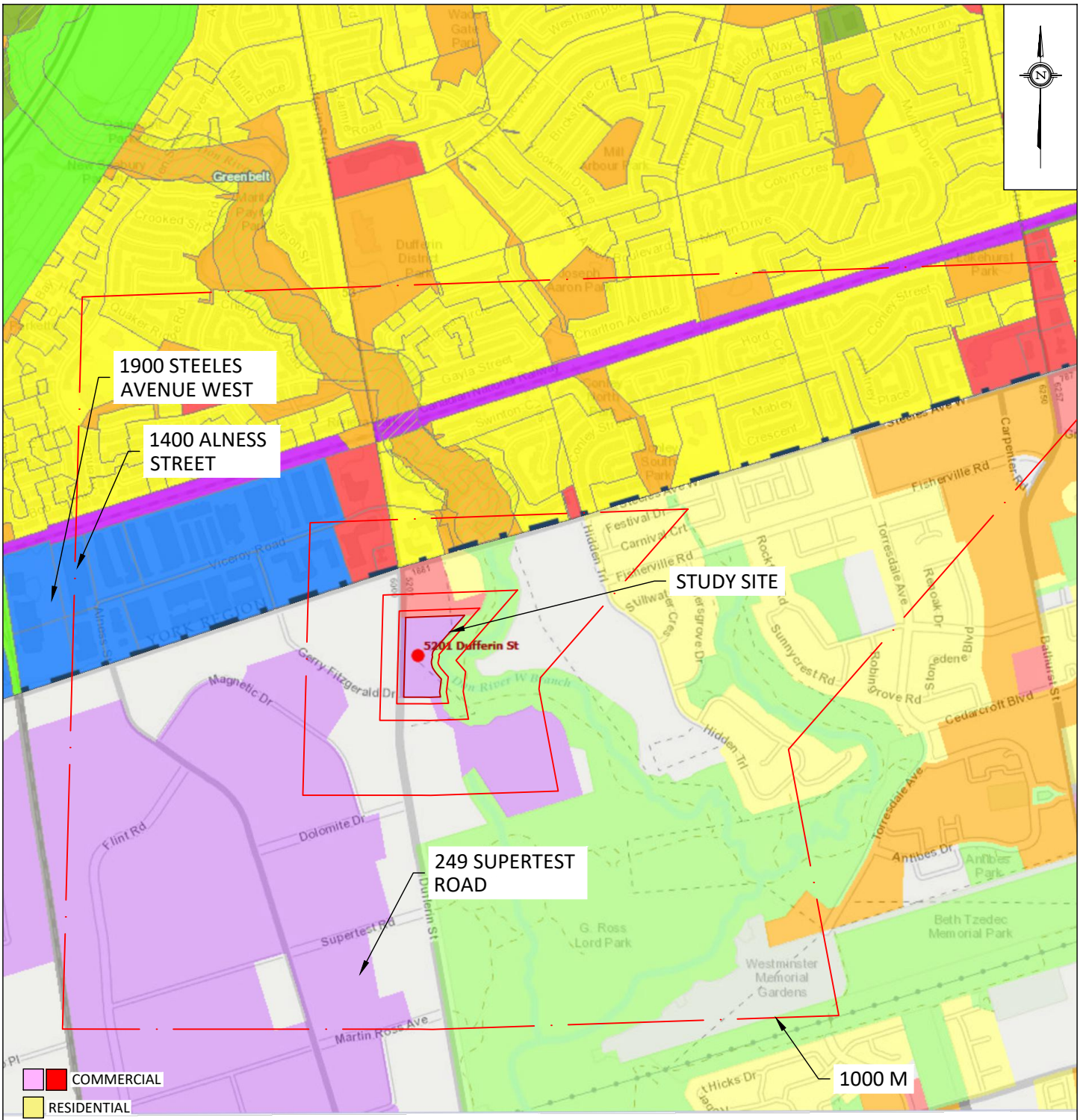
PROJECT	5201 DUFFERIN STREET, TORONTO LAND USE COMPATIBILITY ASSESSMENT
SCALE	1:8000
DRAWING NO.	GW21-216-1
DATE	APRIL 17, 2023
DRAWN BY	G.G.

DESCRIPTION

FIGURE 1:
PROPERTY LINE AND SURROUNDING CONTEXT



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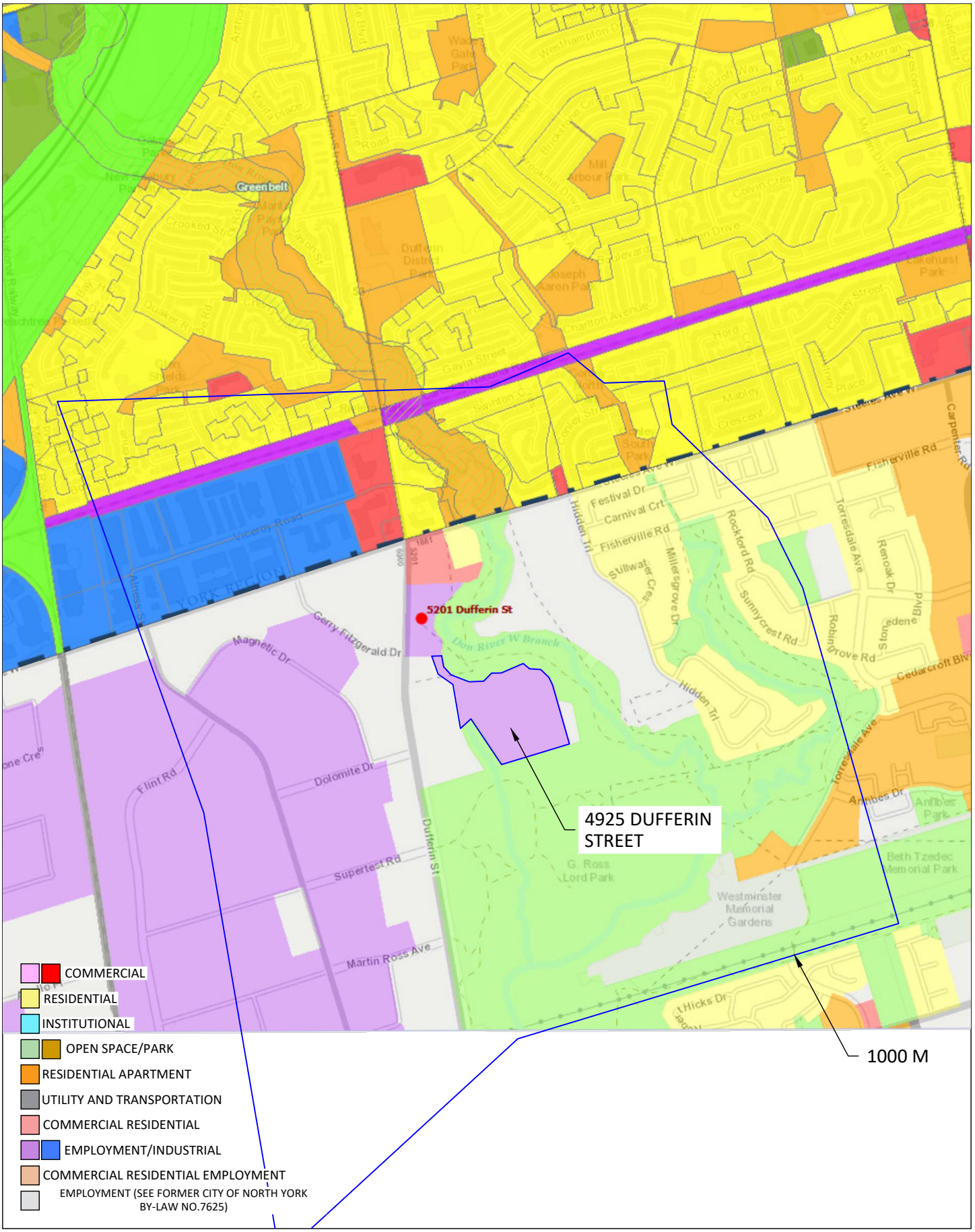
PROJECT	5201 DUFFERIN STREET, TORONTO LAND USE COMPATIBILITY ASSESSMENT
SCALE	1:17000
DRAWING NO.	GW21-216-2
DATE	APRIL 17, 2023
DRAWN BY	G.G.

DESCRIPTION

FIGURE 2:
PROPERTY LINE AND SURROUNDING CONTEXT



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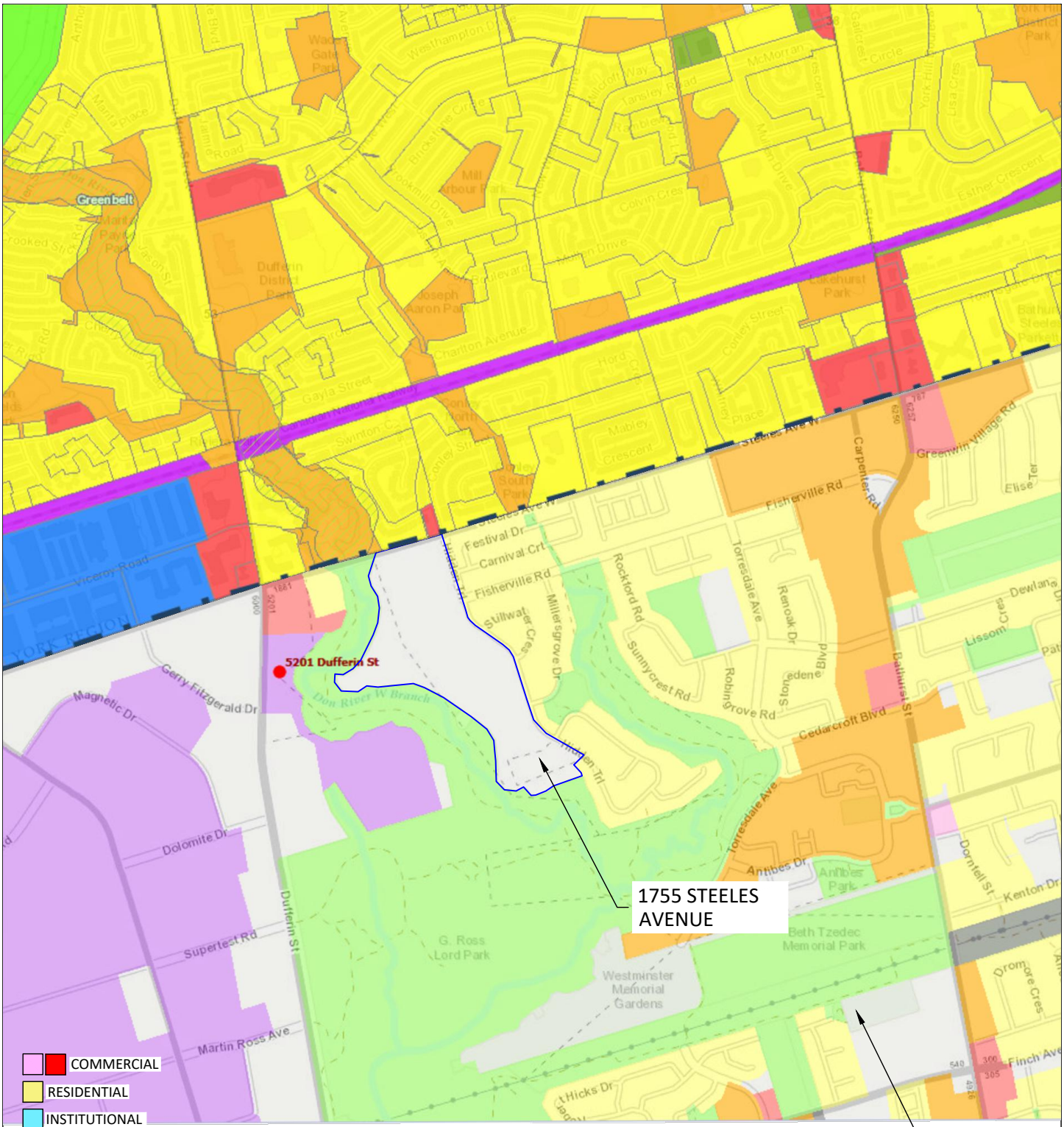
	SCALE: 1:17000	DRAWING NO.: GW21-216-3	FIGURE 3: 4925 DUFFERIN STREET 1000M AREA OF INFLUENCE
	DATE: APRIL 17, 2023	DRAWN BY: G.G.	



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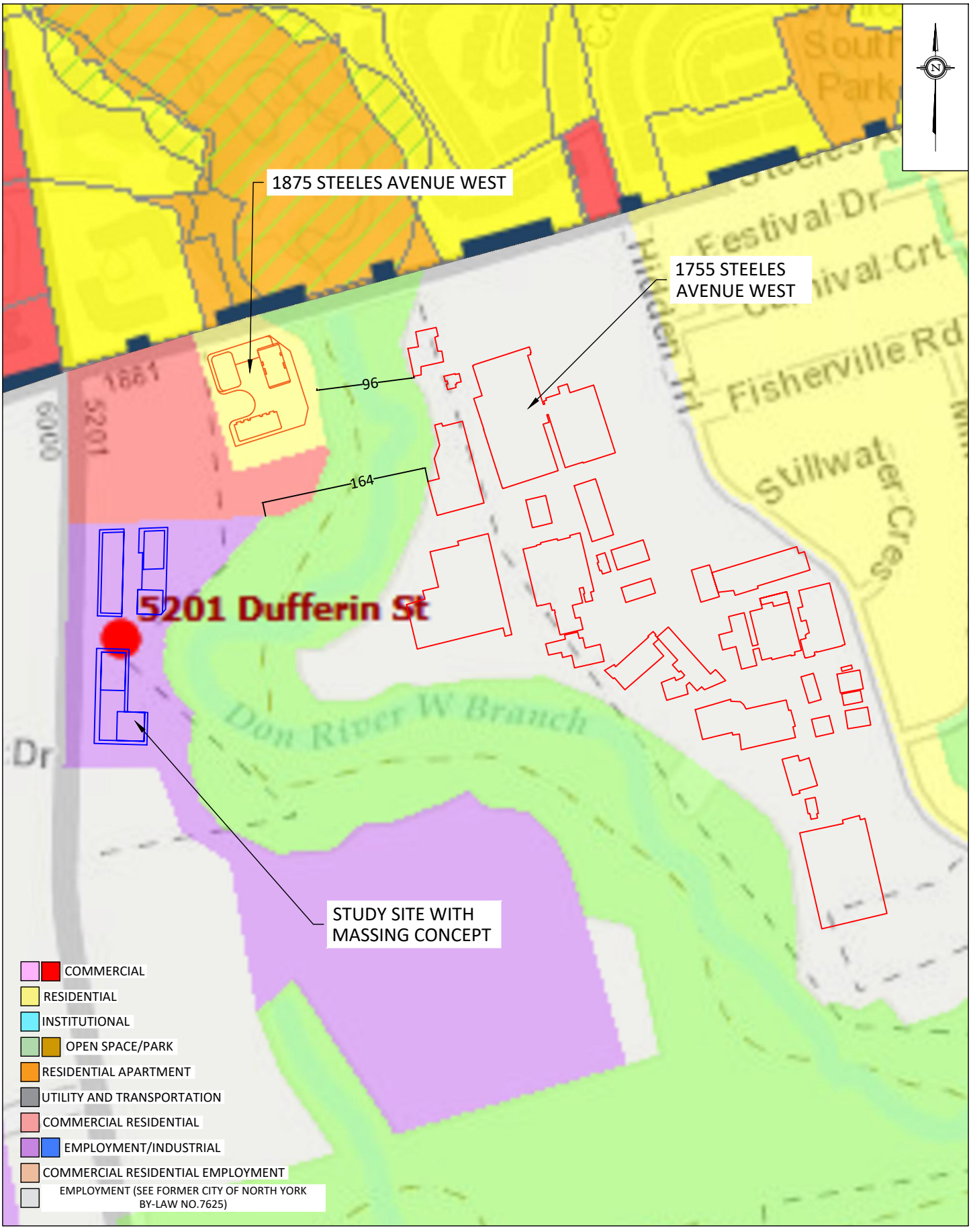
PROJECT	5201 DUFFERIN STREET, TORONTO LAND USE COMPATIBILITY ASSESSMENT
SCALE	1:17000
DRAWING NO.	GW21-216-4
DATE	APRIL 17, 2023
DRAWN BY	G.G.

DESCRIPTION

FIGURE 4:
1755 STEELES AVENUE 1000M AREA OF INFLUENCE



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PROJECT	5201 DUFFERIN STREET, TORONTO LAND USE COMPATIBILITY ASSESSMENT
SCALE	1:5000
DRAWING NO.	GW21-216-5
DATE	APRIL 17, 2023
DRAWN BY	G.G.

DESCRIPTION

FIGURE 5:
RELATIVE DISTANCE FROM THE SANOFI PASTEUR FACILITY