



August 21, 2019

Ms. Melissa Cameron  
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**Re: Air Quality Study, Land Use Compatibility - 2250 Speers Road  
Peer Review Responses  
Novus File No. 18-0395**

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Dear Melissa,

Novus Environmental Inc. (“Novus”, now part of SLR Consulting (Canada) Ltd.) was retained by PGL Environmental Consultants on behalf of Acclaim Health to complete an air quality land use compatibility study for the proposed 2250 Speers Road dementia care centre in Oakville, Ontario (“the Site”). The results of our study were documented in:

- Novus Report 18-0395, “2250 Speers Road, Air Quality Study – Land Use Compatibility, Oakville, ON”, dated February 12, 2019 (“the Novus Report”).

Halton Region retained Dillon Consulting Ltd. (“Dillon”) to conduct a peer review of the Novus Report. Their comments were provided in the following memorandum:

- Dillon Memorandum from Mr. Hamish Corbett-Hains (Dillon) to Ms. Laurielle Natywary (Halton Region), entitled “2250 Speers Road Air Quality Study Peer Review”, dated June 20, 2019.

This memorandum provides our responses to Dillon’s comments, including our conclusion that there are no anticipated land use compatibility concerns arising from the proposal. For clarity, excerpts from Dillon’s comments are provided in *italics*, with the response immediately following.

## Dillion Comment 1

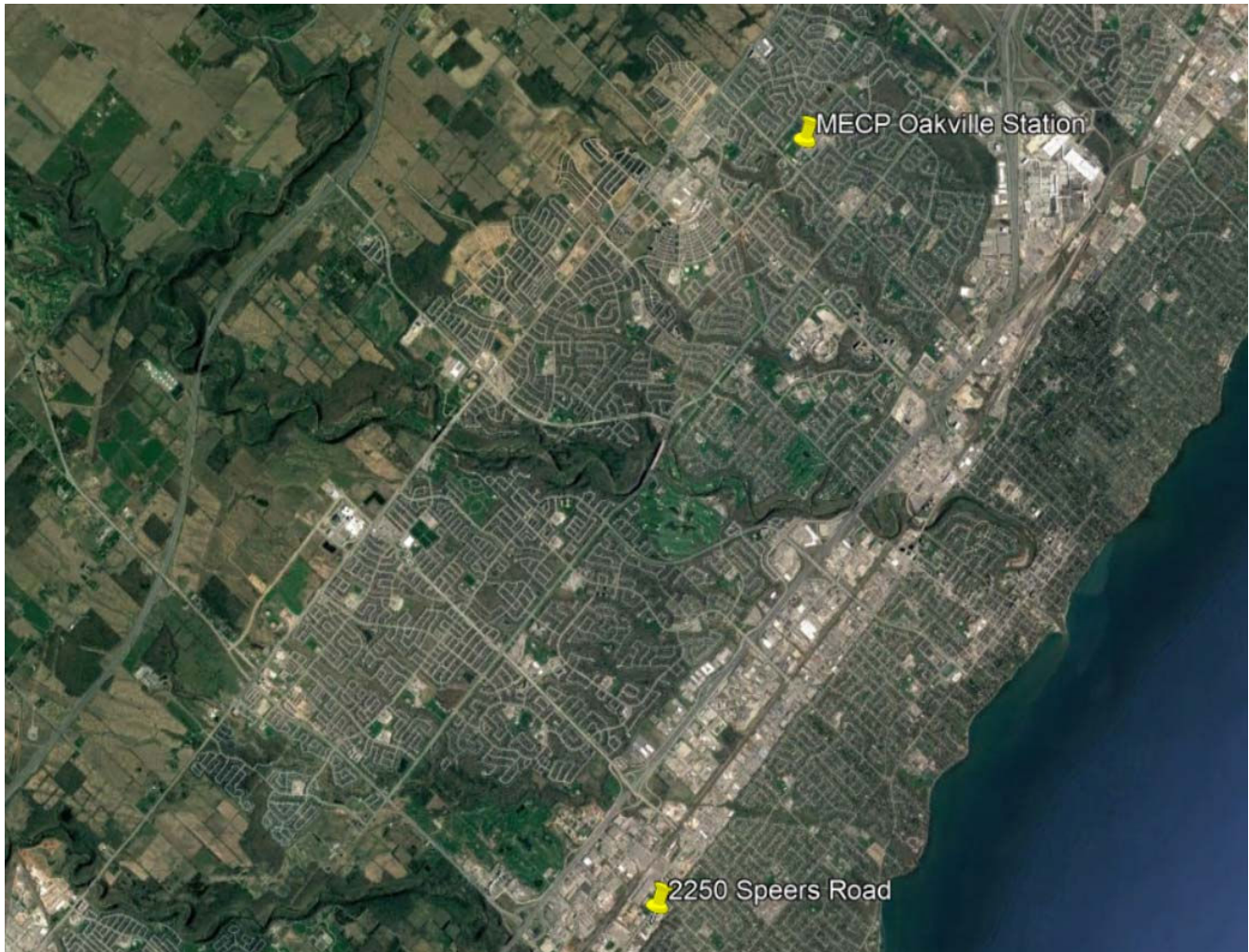
*In general, the Report assesses compliance on the basis of Guideline D-6 and Ontario Regulation 419/05 ... This approach does not address the relevant sections of the Provincial Policy Statement...In light of the above, best practice would include consideration of the air quality at the proposed lands including the ambient concentration of selected contaminants in addition to the potential impacts from surrounding industry. At a minimum the Report should comment on the overall air quality- including existing ambient conditions - at the proposed development with respect to Ontario's Ambient Air Quality Criteria.*

In the Ontario planning regime, the requirements flow from generic to specific:

- The Provincial Policy Statement (“the PPS”) sets out goals – making sure adjacent land uses are compatible from a health and safety perspective and are appropriately buffered; then
- The Ministry of the Environment, Conservation & Parks (“MECP”) D-series of guidelines, including Guideline D-6 then sets out methods to determine if assessments are required (areas of influence, recommended separation distances, and the need for additional studies); then
- MECP regulations, policies, standards and guidelines then set out the requirements to ensure that adverse effects do not occur.

Thus, the requirements of the PPS are met if the requirements of Guideline D-6 are met; the requirements of Guideline D-6 are met if the applicable MECP regulations and policies are met. As shown in the Novus Report and in the additional information provided in this response, this is the case. Further, the addendum planning letter, prepared by Bousfields, August 2019, also responds to the PPS policies.

The applicable MECP regulations and policies for industrial uses do not require an assessment of cumulative impacts or an assessment of existing ambient background conditions. The inclusion of such information would not change the assessment results. Therefore, a discussion of overall air quality with respect to Ontario’s Ambient Air Quality Criteria, is irrelevant. Regardless, information for the closest, most relevant MECP monitoring station is provided below. The MECP Oakville monitoring station is approximately 8.5 km from the Site. See **Figure 1**.



**Figure 1: MECP Oakville Ambient Air Quality Monitoring Station and Site**

Ambient air quality measurement results are summarized in **Table 1** below, for the contaminants measured at the MECP station (nitrogen dioxide, ozone, and fine particulate matter). As can be seen from the table, the Ambient Air Quality Criteria for these contaminants are met.

**Table 1: Measured Ambient Background Concentrations - Oakville**

Contaminant	Factor	Measurement Year		
		2015	2016	2017
Nitrogen dioxide NO <sub>2</sub> - 1hr Avg	AAQC [1]	400.0	400.0	400.0
	Maximum	52.0	50.0	56.0
	Average	7.5	8.3	8.2
	Minimum	0.0	0.0	1.0
Nitrogen dioxide NO <sub>2</sub> - 24h Avg	AAQC [1]	200.0	200.0	200.0
	Maximum	32.7	28.3	38.0
	Average	7.5	8.3	8.2
	Minimum	0.3	0.5	1.1
Ozone O <sub>3</sub> - 1hr Avg	AAQC [1]	168.0	168.0	168.0
	Maximum	80.0	74.0	84.0
	Average	27.4	27.1	27.4
	Minimum	0.0	0.0	0.0
Fine Particulate Matter PM <sub>2.5</sub> - 24 hr Avg	CWS [2]	30.0	30.0	30.0
	Maximum	38.0	24.4	24.0
	Average	8.4	7.0	6.9
	Minimum	0.8	0.1	0.8
	98 <sup>th</sup> percentile	22.9	17.1	17.4
	3-year 98 <sup>th</sup> percentile		19.8	

Notes:

AAQC - Ambient Air Quality Criteria

CWS – Canada Wide Standard. For fine particulate, the standard is assessed against the 98<sup>th</sup> percentile concentration measured over a 3 year period.

In this regard, there are no concerns with respect to land use compatibility, compliance with provincial policies, guidelines and regulations.

## Dillon Comment 2

*The Report does not consider transportation sources associated with any of the industries surrounding the proposed development. Guideline D-6 states that when industries and sensitive land uses are proposed with less than the recommended minimum separation distance, an assessment should be performed which considers "the types and levels of contaminant discharges being generated by current industrial facilities, including those associated with transportation facilities which serve the industries."*

In MECP Guideline D-6, it is understood that “contaminant discharges associated with transportation facilities which serve the industries” means those that are generated by vehicle traffic on-site (e.g., shipping and receiving traffic, truck or forklift movements, etc.) The impacts of these sources were considered in our assessment.

MECP Guideline D-6 does not, nor do any of the D-series of guidelines, apply to vehicles operating on publicly owned roadways. The Site is not located within 30 m of a major arterial roadway or 150 m of a Provincial freeway. Therefore, under the Halton Region Air Quality Guidelines an assessment of



transportation air quality impacts is not required.

Therefore, transportation sources, based on the applicable requirements, were in fact considered, and the analysis indicates that transportation sources associated with the current industrial facilities would not impact the proposed use of the site.

### **Dillon Comment 3**

*Many of the findings in the Report are based on a comparative assessment of odours, which relies on an absence of odour complaints at existing receptors. It is unclear if Novus submitted Freedom of Information (FOI) requests to support the claim that there are not currently issues with respect to odours from the industries assessed.*

An FOI request was not filed because there were no identified concerns from an odour perspective based on Novus' reviews. Acclaim Health currently operates an office and medical nursing clinic at 2370 Speers Road, which is 350 m away from the Site. There have been no air quality, odour, dust or noise complaints from staff or patrons at this location. Novus had contacted Mr. Trevor Machmar, the local MECP District Officer responsible for the area in questions. He indicated that there have been no complaints in the area related to air quality, dust, odour or noise received in the last 3 years.

A site visit was conducted on August 8, 2019 by two Novus personnel to identify the presence of odors and to measure odour intensities. Weather conditions during the visit (10:00am to 12:00pm) were:

- Sunny with a temperature of 23°C and
- 20 km/hr westerly winds with gusts up to 30 km/hr.

A “Nasal Ranger” olfactometry measurement device was used to measure odour intensity if consistent odours were detected. Novus personnel walked from the corner of Speers Road and Bronte Road eastward to 2180 Speers Road and back. The dry weather conditions and strong winds that day would be indicative of worst-case potential impacts for fugitive dust. At no point was there any visible airborne dust nor any evidence of dust debris on the roadways from vehicle track movements or on the ground surrounding the Site, confirming that dust impacts are not an issue.

During the visit, odours were detected from Fruition Manufacturing facility (“Fruition”) located at 2379 Speers Road. Fruition makes custom fruit-based fillings and toppings. Odours were noted to originate from the rooftop exhaust sources, and detection was highly dependant on the wind. Odours were only detected immediately adjacent and downwind of the plant (up to approximately 150 m away). It should be noted that the Site is located more than 400m from the Fruition plant, and no odours were detected near or on the Site.

Due to the infrequency of detection, a 10-second or longer odour measurement on the Nasal Ranger was unable to be recorded. The odour was also noted to be pleasant and sweet smelling like baked

goods/brownies.

At no point during the remaining time spent along Speers Road were any other odours detected. There were no odours from Monarch Plastics (2335 Speers Road), or M&G Steel (2285 Speers Road) even though regular daily operations/ activities were apparent.

Novus personnel also walked along Wyandotte Drive south/east of Speers Road to determine whether any odours or visible dust would be detected from the industries east of the Site (to account for the westerly wind direction during measurements). No odours or visible dust were detected at any time in this area.

In conclusion, the MECP has indicated that there had been no air quality, dust, odour or noise complaints received in the last 3 years. An FOI request is not required. Novus has completed additional field studies in August 2019 on a day that would have been considered to be indicative of worst-case potential impacts. The results of this additional study indicated that there would be no concerns with respect to odours that should restrict the use of the site as proposed. In this regard, there are no land use compatibility issues anticipated.

#### **Dillon Comment 4**

*The International Union of Operating Engineers facility located directly across from the proposed development has been identified in the Report as within the Potential Area of Influence as defined by Guideline D-6. The Report does not provide an assessment of the industry to evaluate potential compliance issues. The industry is a training yard for heavy industrial crane operators and is largely unpaved which may result in significant levels of dust. Considering the separation distance and nature of the industry, the potential for fugitive dust impacts from the industry should be considered.*

The International Union of Operating Engineers facility is a training facility (an institutional use) rather than a heavy industry or commercial facility. Thus, there are not significant amounts of traffic to and from the site which would generate dust. The facility is also well outside the minimum separation distance recommended for these types of operations.

A review of historical aerial photographs of the area shows negligible “track-out” of dust / mud from the unpaved area onto the paved section of the site, which is indicative of low dust generation. During our site visits to the area, no visible airborne dust was noted nor was there any evidence of dust from vehicle track movement at the entrance to the facility.

Considering the above, dust impacts from the International Union of Operating Engineers are not anticipated and should not be considered to be a concern with respect to land use compatibility.

#### **Dillon Comment 5**

*With respect to Class 1 facilities and the proposed development, Section 6.1 of the Report states “If there are currently no compatibility issues from an air quality or odour perspective to the existing*

*residences, then the 2250 Speers site should also be compatible." The following discussions of odours illustrates that this is an inappropriate conclusion without a detailed assessment to support the finding.*

*Odour is a nuisance contaminant which the Ministry of the Environment, Conservation and Parks (MECP) only regulates at locations where human activities are likely to occur, excluding commercial and industrial lands.*

This is incorrect. The MECP released a Technical Bulletin on odour modeling, entitled *Methodology For Modelling Assessments Of Contaminants With 10-Minute Average Standards And Guidelines Under O. Reg. 419/05* (2008). Odour sensitive receptors are identified as including commercial or institutional facilities.

#### **Proposed Clarification of Human Receptors (MECP Technical Bulletin on Odour, 2008)**

Receptor Category	Examples	Exposure Type	Type of Assessment
Permanent potential 24 hour sensitivity	Anywhere someone could sleep including any resident or house, motels, hospitals, senior citizen homes, camp grounds, farmhouse, etc.	Individual likely to receive multiple exposures	Considered sensitive 24 hours per day
Permanent daily hours but with definite periods of shutdown/closure	Schools, daycares, community centres, soccer fields, farmland, churches, bicycle paths, hiking areas, lakes, <b>commercial or institutional facilities</b> (with consideration of hours of operation such as night clubs, restaurants, etc.)	Individual could receive multiple exposures	Night time or daytime exclusion only (consider all other hours)
Seasonal variations with clear restrictions on accessibility during the off season	Golf courses, amusement parks, ski hills, other clearly seasonal private property	Short term potential for exposure	Exclusions allowed for non-seasonal use
Transient	Open fields, roadways, easements, driveways, parking lots, pump houses	Very short term potential for exposure, may not be a single resident exposed to multiple events	Generally would not be included as human receptors unless otherwise specified.

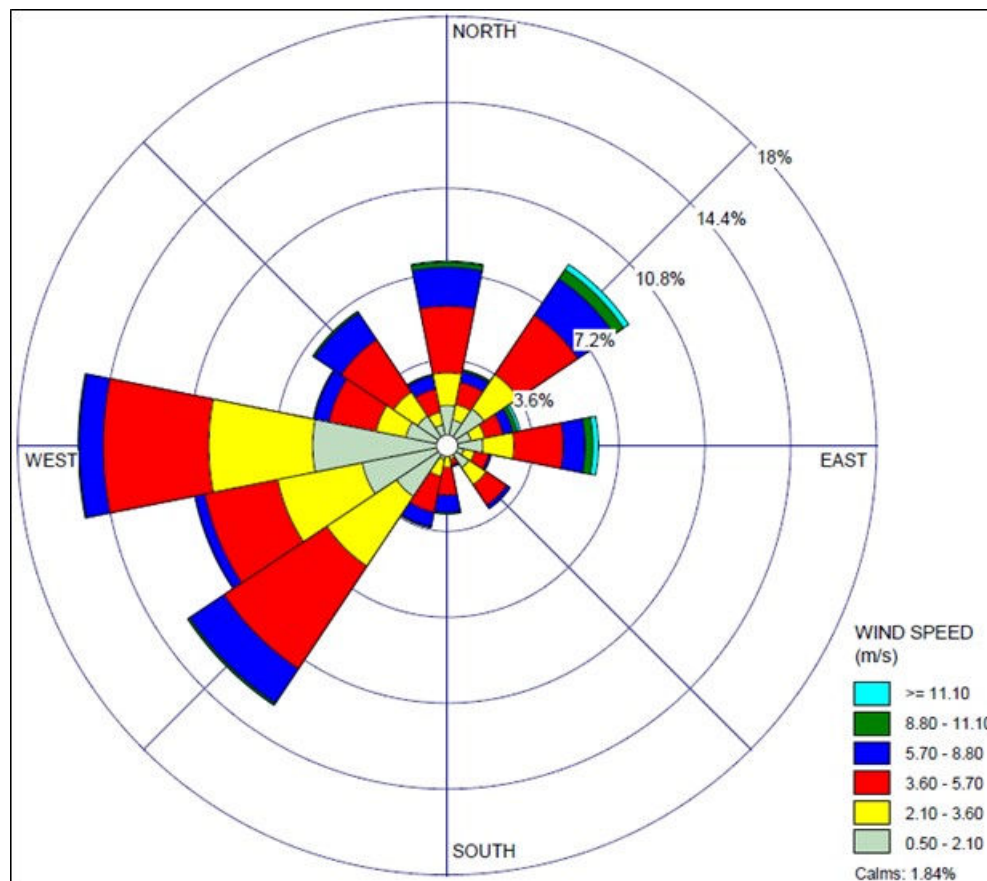
Existing odour-sensitive commercial and institutional uses in the area (Row 3 of the table) include:

- Live to Dance Academy (2210 Speers Road);
- OE Banquet and Conference Centre (2245 Speers Road);
- The Dugout (2270 Speers Road); and
- Acclaim Health Office and Medical Nursing Clinic (2370 Speers Road).

*The dispersion of contaminants emitted from an industry- including odour- is dependent on a number of atmospheric and physical factors including: wind speed, wind direction, physical blockages (e.g. buildings), and ground cover. Odours are typically assessed based on frequency and intensity which can be predictive of complaints. Comparing two receptors based on proximity to an odour source does not provide a complete analysis of the potential for odours.*

*This approach is only valid when the receptors are located in the same downwind direction from a source, in which case the closer receptor would in most cases be expected to experience more frequent and intense odours. In the case of two receptors in different downwind directions from a source, dispersion modelling should be performed to evaluate the frequency and intensity of odours at each receptor.*

**Figure 2** is a wind frequency distribution diagram ('wind rose') for the area. Dominant winds are from the west through southwest.



**Figure 2: Burlington Piers Wind Rose; 1991-2011**

The effect of wind frequencies on potential impacts from industries flagged by Dillon as being of concern are discussed in detail below.

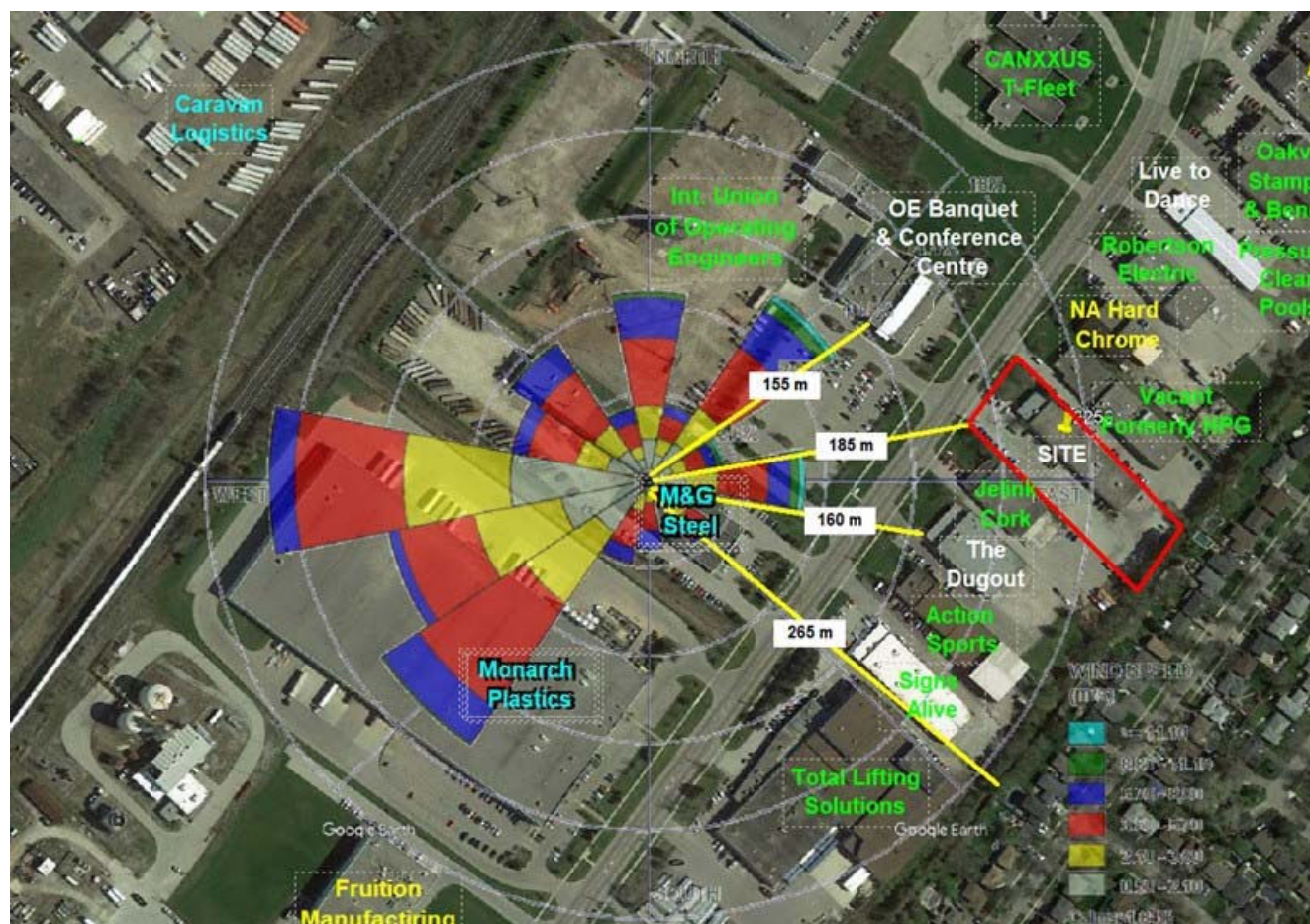
## Dillon Comment 6

*The Report states that M&G Steel Holdings is in a similar proximity to existing residences as the proposed land use, and as such odour issues are not expected. The proposed development is approximately 200 m from the industry, while the nearest residences in a similar downwind direction are 285 m or further. In addition, the proposed development has a line-of-sight view of the industry while the comparable residences do not. An unobstructed view of the industry can indicate that*



*dispersion of odours and contaminants may be limited. A technical assessment should be performed to determine the potential for impacts at the proposed development.*

M&G Steel currently operates under an MECP approved Environmental Compliance Approval (ECA) (Number 7691-A6BN7R), and as such are required to meet respective contaminant standards at their property line and beyond, including the Site. The proposed redevelopment of the Site does not change the physical structure of the building (e.g., additional storey are not being added), and therefore the redevelopment will not affect compliance with the ECA.



Odours from M&G Steel operations have not been detected during any site visits. There is no history of odour complaints. In conclusion, considering the above, odour impacts from M&G Steel are not anticipated, and a more detailed assessment (i.e., dispersion modelling) is not warranted.

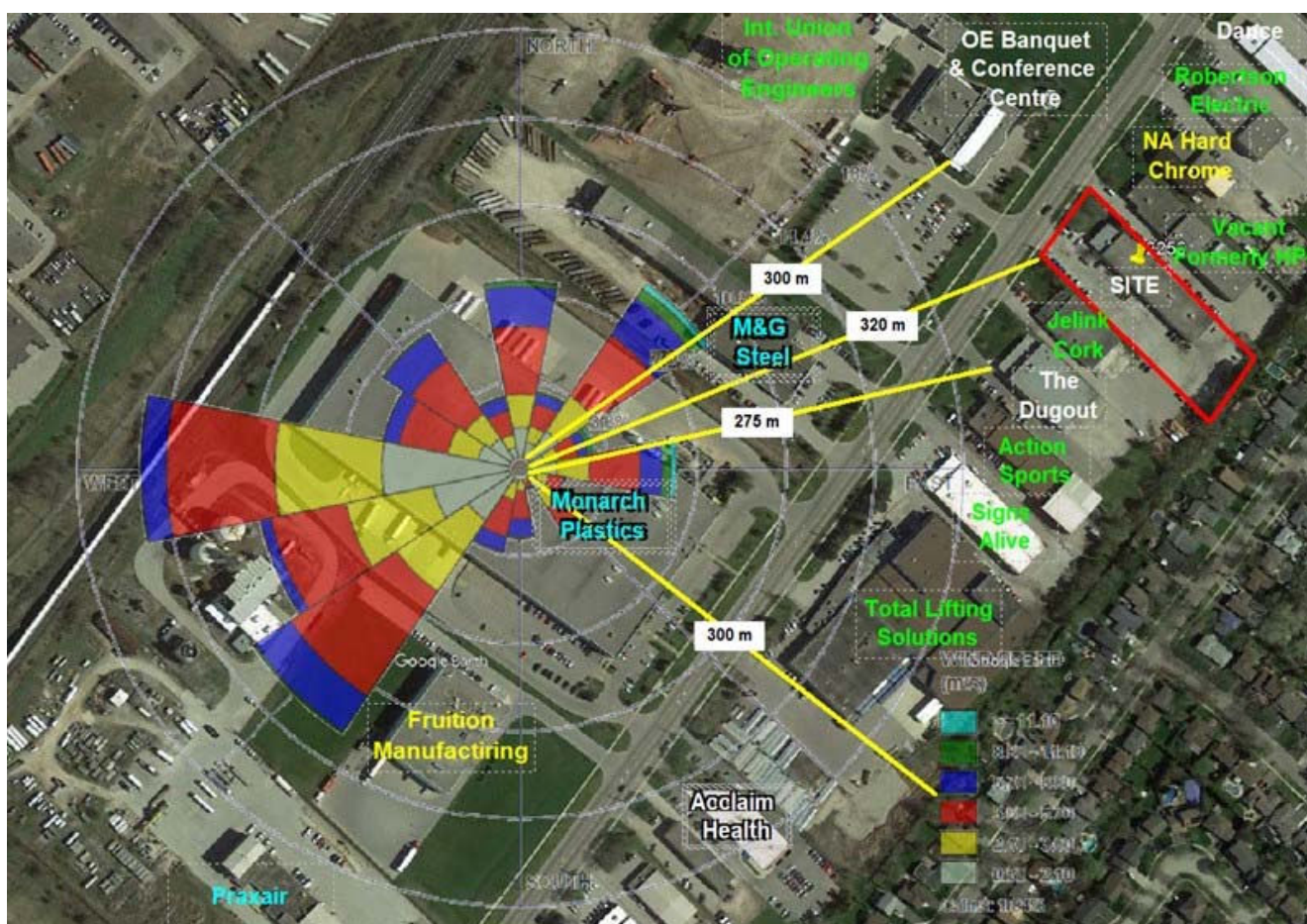
## Dillon Comment 7

*The Report states that Monarch Plastics Ltd. is required to operate under an odour management procedure, meaning that odours may occasionally be released from the industry. The Report concludes that there are existing residences at a similar distance from the industry. These receptors are located southeast of the facility while the proposed development is northeast from the facility. As discussed in (S), proximity cannot be used to compare receptors which are located in different directions from an industry. A technical assessment should be performed to determine the potential for impacts at the proposed development.*

The terminology in Monarch Plastics' approved ECA (Number 5805-AHXPHN) outlines a number of operating procedures and maintenance programs required by the industry which are standard requirements for approvals for industries with limited operational flexibility. These generic requirement for the industry to prevent and/or minimize odorous emissions does not necessarily mean that the industry currently emits odours. It simply sets out a framework requiring the industry to control odour emissions if they occur in the future.

**Figure 4** (next page) shows that there are existing sensitive land uses (the OE Banquet Centre and the Dugout) that are in similar downwind directions and are in fact closer than the Site, as well as the existing residential land uses in the area, and which are compatible with the industry. The Site is screened from Monarch Plastics sources by existing intervening buildings. Odours from Monarch Plastics operations have not been detected during any site visits. There is no history of odour complaints. In conclusion, considering the above, odour impacts from Monarch Plastics are not anticipated, and a more detailed assessment (i.e., dispersion modelling) is not warranted.





**Figure 4: Wind Rose Superimposed on Monarch Plastics, and Distances to Sensitive Receptors**

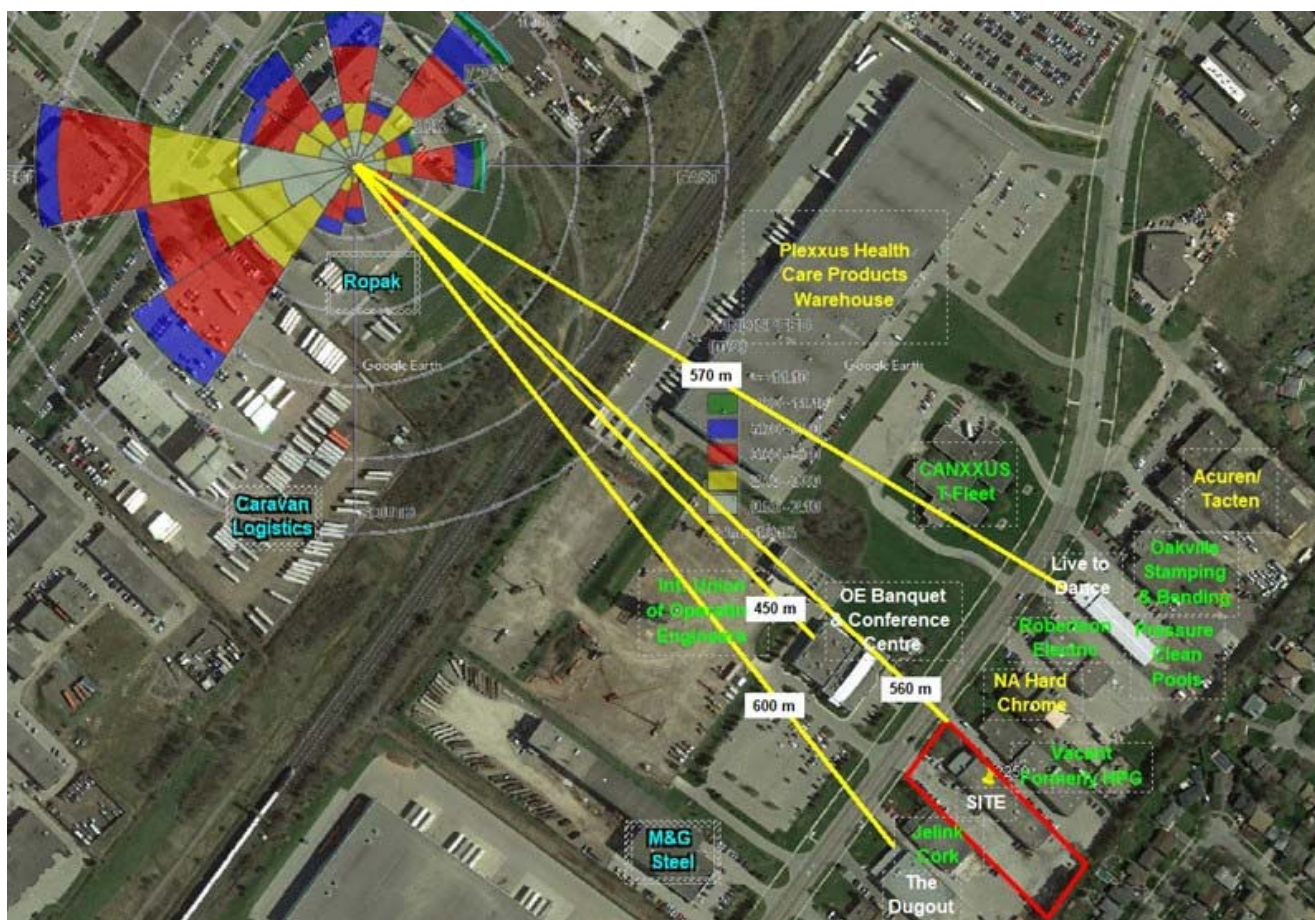
## Dillon Comment 8

*The Report states that Ropak Canada operates under an odour management procedure, meaning that odours may occasionally be released from the industry. The Report concludes that based on the distance between the industry and the proposed development odours are unlikely to pose a compatibility concern. While the separation distance between the Industry and the proposed development may be sufficient to promote adequate dispersion of odours, the proposed development would represent the nearest sensitive receptor to the industry with respect to wind direction. As such, a technical assessment should be performed to determine the potential for impacts at the proposed development.*

Ropak Canada is a plastic packaging facility. The industry currently operates under an MECP ECA (Number 8771-A9DJDC) which lists the main sources of emissions from plastic injection moulds, UV printing, as well as from general exhaust and welding. None of the above sources typically generate significant amounts of odour. Again, as with the case of Monarch Plastics, the terminology included of Ropak Canada's ECA (Number 8771-A9DJDC) are standard operating procedures and maintenance programs required by the MECP and are not proof that odour emissions exist.



**Figure 5** shows that there are existing sensitive land uses (the OE Banquet Centre) that are in similar downwind directions and are in fact closer than the Site, and which are compatible with the industry. The Site is screened from Ropak sources by existing intervening buildings.



**Figure 5: Wind Rose Superimposed on Ropak Canada, and Distances to Sensitive Receptors**

Odours from Ropak operations have not been detected during any site visits nor are they likely to occur given the great separation distance (> 500m). There is no history of odour complaints. In conclusion, considering the above, odour impacts from Ropak are not anticipated, and a more detailed assessment (i.e., dispersion modelling) is not warranted.

## Dillon Comment 9

*The Report states that Caravan Logistics Inc. currently operates without approval from the MECP. The Report lists an air stripper for the removal of VOCs from wastewater as the primary source of emissions. The Report concludes that the industry's awareness of Ontario Regulations (as demonstrated by their Waste Management System Certificate of Approval) is sufficient to demonstrate compliance between the industry and the proposed development. As a technical assessment has not been performed for the industry, either for this assessment or in support of an Environmental Compliance Approval, it*

*is inappropriate to suggest that the Industry is compatible with the proposed development. The types of contaminants which may be emitted from the facility, and the dispersion of these contaminants with respect to the proposed development should be considered in formulating conclusions.*

Caravan Logistics is a transportation company located at 2284 Wyecroft Road. The facility is a storage and maintenance yard for the transport vehicles and shipping containers.

Dillon has misunderstood the Novus Report. Trimac Transportation no longer located on the site. The VOC air stripper and vacuum extractor system listed in the Trimac ECA for the site are no longer in use. The Trimac ECA was mentioned simply because it shows up on the MECP *Access Environment* website as being linked to the property.

The nature of Caravan Logistics' operations (freight movements using vans and flat beds) is different from Trimac (bulk powder and liquid tankers), and such a system is not required. There are no significant air quality emissions associated with this type of facility. The only emission sources would in general be emissions from HVAC systems, and emissions from idling and moving trucks while onsite. Under Ontario regulations, emissions from these types of sources are exempt from MECP ECA and EASR requirements, due to the low potential for impacts. We note that Caravan Logistics is registered with the MECP with a Waste Management System Certificate of Approval and is, therefore, aware of MECP permitting requirements. The fact that they do not have an ECA or EASR for air emissions is likely due to the fact they are exempt.

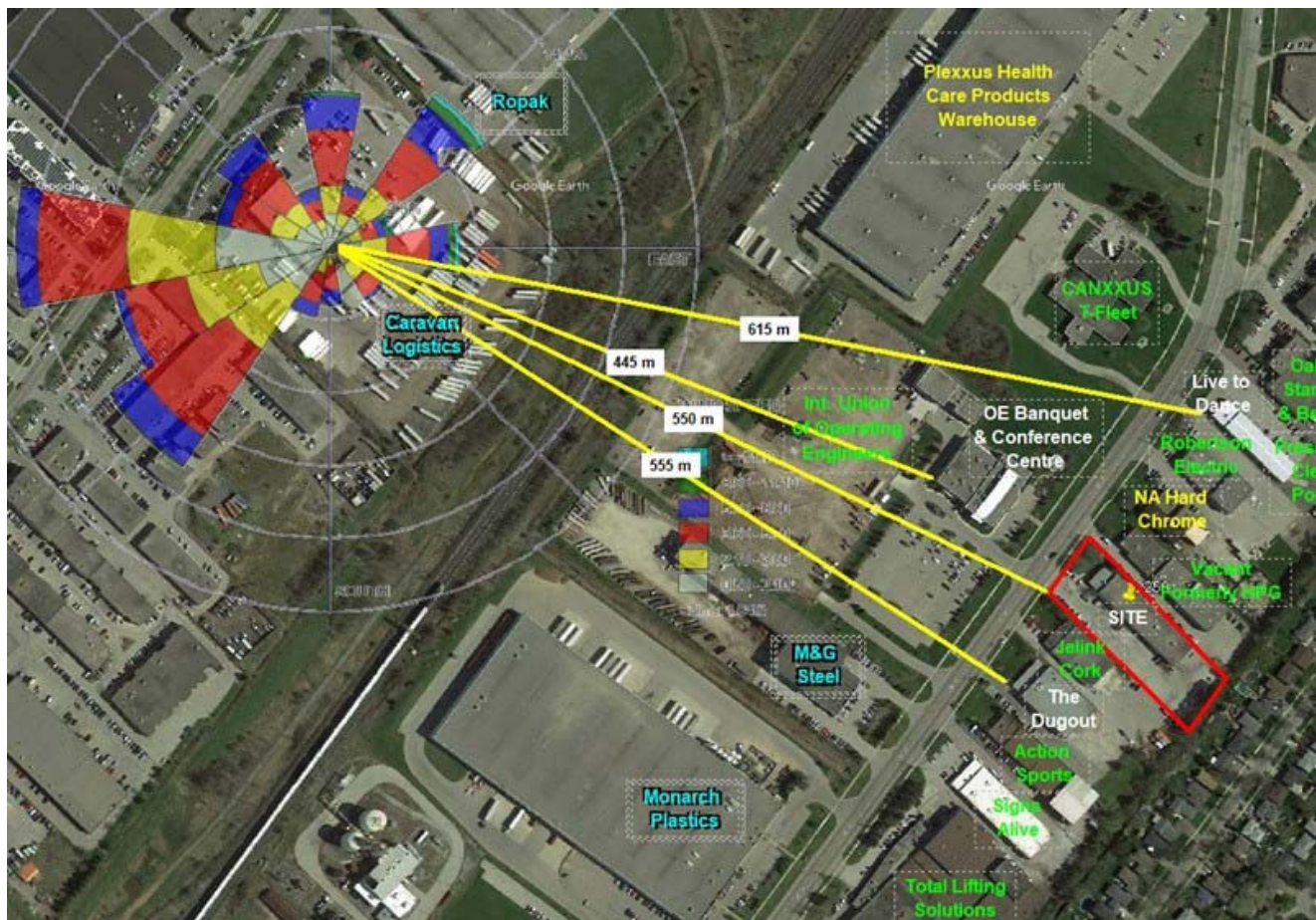
Regardless of the site not having a registered ECA or EASR, Caravan Logistics are still obligated to meet the air quality standards at their property line and beyond.

**Figure 6** shows that there are existing sensitive land uses (e.g., the OE Banquet Centre) that are in similar downwind directions and are in fact closer than the Site, and which are compatible with the industry. Odours from Caravan Logistics operations:

- Have not been detected during any site visits;
- Are not anticipated based on the nature of the operation;
- are not likely to occur given the great separation distance (> 500m).

There is no history of odour complaints. In conclusion, considering the above, odour impacts from Caravan Logistics are not anticipated, and a more detailed assessment (i.e., dispersion modelling) is not warranted.





**Figure 6: Wind Rose Superimposed on Caravan Logistics, and Distances to Sensitive Receptors**

## Closing

We trust that the above responses will address Dillon and the Region's comments and demonstrate that there are no concerns with the proposal, including the proposed mitigation measures, with respect to land use compatibility. In summary:

- There is no history of odour or dust issues or complaints in the area;
- The local industries in the area are compatible with the existing sensitive land uses in the area, including existing residences, and existing commercial and institutional uses. Several of these existing odour sensitive land uses closer to the industries than the proposed Site;
- The addition of the dementia care use at the Site will not result in more onerous MECP approval or mitigation requirements for general air contaminants, as the industries are already obligated to meet these standards at the Site;
- No odorous emissions have been detected from any of the surrounding industries with the exception of Fruition Manufacturing, which is 400 m away from the Site, and does not affect the Site; and

- Odours or dust from surrounding industries have not been detected at the Site during any site visit.

Based on the above, adverse air quality impacts are not anticipated at the proposed development; nor are impacts on the ability of surrounding industries to obtain/ maintain their required MECP approvals likely to occur. From an air quality perspective, there is no reason why the development should not proceed.

Regardless, based on discussions with Acclaim Health, some additional controls could be added to the facility design to further reduce potential impacts:

- The windows of the development will be sealed (inoperable).
- The HVAC system for the building should be designed to include space for the future installation of dust filter and carbon filters for odour control, should dust and odour be encountered in the future. The filters would be installed at the discretion of Acclaim Health, and only if complaints from staff and patrons occur.
- HVAC equipment air intakes on the units should face easterly, away from Speers Road.

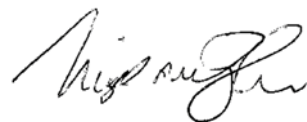
Should you have any questions or concerns, please do not hesitate to contact us.

Sincerely,

**Novus Environmental Inc.**



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