

25 October 2021



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RE: 1041 Centre Road, Oakleigh South

The site is proposed to be developed into a nine-storey light commercial building with a basement. City of Monash have requested further information regarding Planning Permit Application TPA/53095 requiring:

A Preliminary Environmental Assessment having regards to the historic use of the land being a quarry and potential contamination issues and relevant requirements for the proposed residential use

A detailed review of relevant site information was carried out by Lotsearch. A copy of the report titled "Lotsearch Enviro Professional – 1041 Centre Road, Oakleigh South VIC 3167" (LS025128 EP) dated 12 October 2021 can be opened here.

A summary of potential key contaminant identifiers is presented in the following sections.

1.1 Review of Historical Aerial Photographs

A review of available historical aerial photographs presented in the Lotsearch report taken between the period 1931 - October 2021 identified the following information:

- 1931 vacant open land with a central track. Quarrying taking place to the north west.
- 1945 building present in the south western corner. Disturbed soils (possibly some quarrying) occurring on site.
- 1951: Additional soil disturbance.
- 1963 1968: Quarry works on site. Additional buildings and infrastructure present at the southern portion of the site. Commercial / industrial buildings located to the west of the site (i.e. service station).
- 1975: Quarry appears to have been partially backfilled. Some buildings remain at the south end of the site.
- 1978 1984 quarry works continue at the site.
- 1991: Quarry is backfilled at ad adjacent to the subject site. A building remains in the south western corner.
- 2001: Quarry remains backfilled. Some stockpiling and soil disturbance is evident.
- 2009: Large commercial warehouse type building constructed at the site. The former quarry site to the north remains backfilled and open.
- 2016 2021: Large commercial building to the north has been constructed along with a large car park.



1.2 Review of Historical Maps

- 1916 1978 no distinguishing features or uses identified at the subject site.
- 1982 site part of a larger quarry.
- 1986 1998 no distinguishing features or uses identified at the subject site.
- 2009 no distinguishing features or uses identified at the subject site. Adjacent site uses include Ventura Bus Lines to the west, South Eastern BMX Track to the east.

1.3 Review of EPA Priority Sites Pollution Notices & EPA Licenced Activities

The closest site on the Priority Sites Register is a former landfill located 580 metres to the south east. The most recent notice issued for the site was dated 27/11/2018 and then a request to assess and/or clean up the site.

1.4 Review of Waste Management Facilities & Landfills

The closest site licenced to treat dispose and transport waste is the abovementioned Clarinda Landfill, located 580 metres to the south east. The site is listed as operational, licenced to receive municipal waste (including shredded tyres and solid inert waste).

The subject site is listed as part of the greater site located at the Corner of Warrigal Road and Centre Road, Oakleigh. The prior use was listed as a sand pit. The disused sandpit received wastes from 1955 and was noted to be an unregistered tip, privately owned with large scrap metal. No end date is listed.

One other former waste disposal site is located on Carroll Road, Oakleigh, approximately 917 metres to the south. Listed as an old quarry owned by Pioneer Concrete with a start year of 1973, ceasing operation in 1975.

1.5 Former Gasworks, Liquid Fuel Facilities/Motor Garage & Dry Cleaners

- One operational service 7-Eleven station is listed at 699-701 Warrigal Road, Oakleigh South, located approximately 550 metres to the north of the site.
- Ventura bus lines had resided adjacent to the site to the west (17 Centre Rd, Oakleigh) from 1965 – 1980.
- Golden Fleece and then BP Service Station was located only 24 metres to the west from 1965

 1992.
- Golf Links Service Station was listed 124 metres to the west of the site from 1948 1961.
- Knight K. R. Motor, located at 678 Warrigal Rd, Oakleigh (166 meters to the south west) operated from 1952 – 1976.

1.6 Review of Historical Business Directory Records

Subject Site:

During the period 1965 – 1974, the subject site was listed as Coastal Moulding Sand Pty Ltd – 21 Centre Road, South Oakleigh.

Adjacent Sites:

- West: Ventura Bus lines (1965 1991), Golden Fleece & BP service stations (1965 1991).
- South west: Hilcrest Hiring Services (1977 1991).

1.7 Review of PFAS Investigation & Management Programs

The Lotsearch review included a review of PFAS investigations and management programs in the area, which did not identify any records in the buffer zone.

1.8 Review of EPA Audits

The aforementioned Carrol Road Landfill, located 580 metres to the south east, has undergone several Section 53V Environmental Audits to address the various notices issued for the site.

The site is a former landfill which no longer receives waste. During 2001 – 2015 the site operated under Environmental Licence No. 12412. During the late 1980s, Pioneer filled the area under the current transfer station with putrescible waste.

Numerous groundwater, leachate and landfill gas bores have been installed at and adjacent to the site, which are to be monitored for on-going landfill aftercare.

Groundwater depths ranged between 4.0 - 13.0 metres below ground level and flows in a south westerly direction towards Port Phillip Bay, located approximately 8.0 to the west.

1.9 Review of EPA Groundwater Quality Restricted Use Zones (GQRUZs)

No Groundwater Quality Restricted Use Zones were listed in the dataset buffer.

1.10 Acid Sulphate Soil

Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.

1.11 Potential Contamination Issues

Based on the background information compiled to date, a summary of potential site contamination is provided below:

Table 1 – Potential Site Contamination Review

Potential Source	Potential Contaminants		
On-Site:			
Landfilling operations	Alkanes and ammonia, sulfides, heavy metals, organic acids, nitrate		
Imported fill:	Metals, petroleum hydrocarbons, solvents, polycyclic aromatic hydrocarbons, pH.		
Building materials:	Former asbestos containing materials (i.e. cement sheet).		
Off-Site:			
Landfilling operations	Alkanes and ammonia, sulfides, heavy metals, organic acids, nitrate		
Service station and automotive agents:	Aliphatic hydrocarbons, BTEX (i.e., benzene, toluene, ethylbenzene, xylene) PAH, Phenols, Lead, MTBE		
Ventura Bus Lines Depot:	Aliphatic hydrocarbons, BTEX (i.e., benzene, toluene, ethylbenzene, xylene) PAH, Phenols, Lead, MTBE		

Environmental Assessment Services Pty Ltd

Based on a review of information collated to date, the following preliminary conceptual model has been devised.

Table 2 - Conceptual Site Model

	Primary & Secondary Sources	Transport Mechanism	Exposure Pathways	Potential Ecological & Human Receptors
	On-site	Direct contact		
3	Landfill operations	Wind		Proposed use - nine-storey light commercial building
	Importation of soil	Atmospheric dispersion		with a basement
3	Building materials and demolition waste	Vertical migration	Dermal contact / absorption	Construction workers
		through sub-surface	Oral / ingestion	Maintenance personnel
	Off-site	Migration of soil vapour	• Oral / Ingestion	
	Former landfills	·	Inhalation of vapour	Abstraction of groundwater
		Surface flow / drainage		Sensitive ecosystem – Port
	Service station	Migration of dissolved		Philip Bay
3	Bus depot	phase contaminated groundwater		

Requirements for Proposed Residential Use 1.12

To address potential risks to human health and the environment, it will be necessary to assess the contamination status of the site. This may involve some preliminary intrusive soil, groundwater and landfill gas assessment works to assess the need (or otherwise) for additional works to allow for the proposed use.

Please do not hesitate to contact me should you have any queries regarding the information presented in this correspondence.

Yours faithfully



Environmental Consultant