I object because of the following issues – health, traffic congestion, not enough infrastructure, threatened and endangered species of plants and fauna, noise and environmental concerns.

Traffic:

An overloaded road system with an increase in traffic on major roads which will lead to congestion and increase commute times.

Traffic gridlocks and bottlenecks

Road safety

Road maintenance

Noise

Future expansion

Compliance – who will monitor guidelines and controls?

Pollution – Higher levels of pollution.

Diesel Pollution

It is reported that emissions from diesel vehicles are significantly more harmful than those from petrol ones. Diesel exhaust contains toxic air contaminants and is listed as carcinogen for humans by the <u>IARC</u> (part of the <u>World Health Organization</u> of the <u>United Nations</u>) in <u>group 1</u>. Diesel exhaust contains <u>fine particles</u> which are harmful. Diesel <u>exhaust pollution</u> was thought to account for around one quarter of the pollution in the air in previous decades, and a high share of sickness caused by automotive pollution.

Exposure to diesel exhaust and **diesel particulate matter** (DPM) is an occupational hazard to <u>truckers</u>, <u>railroad</u> workers, and <u>miners</u> using diesel-powered equipment in underground mines. Adverse health effects have also been observed in the general population at ambient atmospheric particle concentrations well below the concentrations in occupational settings.

Diesel particulate matter (DPM), sometimes also called **diesel exhaust particles** (DEP), is the <u>particulate</u> component of diesel exhaust, which includes diesel <u>soot</u> and <u>aerosols</u> such as ash particulates, metallic abrasion particles, <u>sulfates</u>, and <u>silicates</u>. When released into the <u>atmosphere</u>, DPM can take the form of individual particles or chain aggregates, with most in the invisible sub-micrometre range of 100 <u>nanometers</u>, also known as <u>ultrafine particles</u> (UFP) or PM0.1.

The main particulate fraction of diesel exhaust consists of <u>fine particles</u>. Because of their small size, inhaled particles may easily penetrate deep into the lungs. The rough surfaces of these particles makes it easy for them to bind with other <u>toxins</u> in the <u>environment</u>, thus increasing the hazards of particle inhalation.

Exposures have been linked with acute short-term symptoms such as headache, dizziness, light-headachess, nausea, coughing, difficult or labored breathing, tightness of chest, and irritation of the eyes and nose and throat. Long-term exposures can lead to chronic, more serious health problems such as cardiopulmonary disease, and lung cancer. Elemental carbon attributable to traffic was significantly associated with wheezing at age 1 and persistent wheezing at age 3 in the Cincinnati Childhood Allergy and Air Pollution Study birth cohort study.

Diesel-powered vehicles and equipment account for nearly half of all nitrogen oxides (NOx) and more than two-thirds of all particulate matter (PM) emissions from transportation sources.

Particulate matter or soot is created during the incomplete combustion of diesel fuel. Its composition often includes hundreds of chemical elements, including sulfates, ammonium, nitrates, elemental carbon, condensed organic compounds, and even carcinogenic compounds and heavy metals such as arsenic, selenium, cadmium and zinc. Though just a fraction of the width of a human hair, particulate matter varies in size from coarse particulates (less than 10 microns in diameter) to fine particulates (less than 2.5 microns) to ultrafine particulates (less than 0.1 microns). Ultrafine particulates, which are small enough to penetrate the cells of the lungs, make up 80-95% of diesel soot pollution.

Diesel emissions of nitrogen oxides contribute to the formation of ground level ozone, which irritates the respiratory system, causing coughing, choking, and reduced lung capacity. Ground level ozone pollution, formed when nitrogen oxides and hydrocarbon emissions combine in the presence of sunlight, presents a hazard for both healthy adults and individuals suffering from respiratory problems.

Chemical components

This is a list of chemical components that have been found in diesel exhaust.

Contaminant	Note	Particulate extract mass concentration
<u>acetaldehyde</u>	IARC Group 2B carcinogens	
<u>acrolein</u>	IARC Group 3 carcinogens	
aniline	IARC Group 3 carcinogens	
antimony compounds	Toxicity similar to arsenic poisoning	
arsenic	IARC Group 1 Carcinogens, endocrine disruptor	
<u>benzene</u>	IARC Group 1 Carcinogens	
beryllium compounds	IARC Group 1 Carcinogens	

biphenyl	It has mild toxicity.	
bis(2-ethylhexyl) phthalate	endocrine disruptor	
1,3-Butadiene	IARC Group 2A	
1,5 Buttatione	carcinogens	
<u>cadmium</u>	IARC Group 1	
	Carcinogens, endocrine	
	<u>disruptor</u>	
<u>chlorine</u>	Byproduct of Urea injection	
chlorobenzene	It has "low to moderate" toxicity.	
<u>chromium</u> compounds	IARC Group 3 carcinogens	
<u>cobalt</u> compounds		
<u>cresol</u> isomers		
cyanide compounds		
dibutyl phthalate	endocrine disruptor	
1,8-dinitropyrene	Carcinogen[citation needed]	
dioxins and dibenzofurans		
<u>ethylbenzene</u>		
<u>formaldehyde</u>	IARC Group 1 Carcinogens	
inorganic <u>lead</u>	endocrine disruptor	
manganese compounds		
mercury compounds	IARC Group 3 carcinogens	
methanol		
methyl ethyl ketone		
	IARC Group 2B	
naphthalene	carcinogens	
nickel	IARC Group 2B	
meret	carcinogens	
3-Nitrobenzanthrone	One of the strongest carcinogens known	0.6 to 6.6 ppm
4-nitrobiphenyl		2.2 ppm
<u>phenol</u>		
<u>phosphorus</u>		
polycyclic organic matter, including		
polycyclic aromatic hydrocarbons		
(PAHs)		2-22-002-
<u>Pyrene</u>		3532–8002 ppm
Benzo(e)pyrene		487–946 ppm
Benzo(a)pyrene	IARC Group 1 carcinogen	208–558 ppm
<u>Fluoranthene</u>		3399–7321 ppm
<u>propionaldehyde</u>		

selenium compounds		
styrene	IARC Group 2B	
	carcinogens	
toluene	IARC Group 3 carcinogens	
xylene isomers and mixtures: o- xylenes, m-xylenes, p-xylenes	IARC Group 3 carcinogens	

I feel the intermodal would be better situated at Badgerys Creek. Build a new rail link between Liverpool and Badgerys Creek now rather than later.