

Flyrock TRUE and FALSE

“Flyrock” is literally flying rock, rock fragments propelled through the air beyond the normal blast zone, at ballistic speeds by explosives detonated to fracture the rock in excavations.

Responsible quarry operators acknowledge that the only protection from flyrock is to allow for a safe setback from the location of the blast, or an exclusion zone, in order to ensure that no flyrock damage or injury occurs.

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Greg Sweetnam, vice-president, of James Dick Construction Ltd. has recently made several false statements about the potential risk of flyrock from the Hidden Quarry. Either Greg Sweetnam does not understand JDCL’s proposed operation and its inherent risk of flyrock or is deliberately choosing to misrepresent the facts.

The following true statements are provided to correct three of Greg Sweetnam’s recent false statements to the media in response to the declaration of a ‘Flyrock Danger Zone’ by the Concerned Residents Coalition.

FALSE	TRUE
<p>“All of the blasts are designed so that we do not have flyrock.”</p>	<p>In spite of the best efforts of blasting contractors, unpredictable flyrock occurs as a result of irregularities in the rock geology such as seams, fissures, and voids. The karst geology at the HQ site is characterized by such features.</p> <p>Testimony to MOE regarding two flyrock incidents at the Pakenham Quarry near Arnprior Ontario on July 20 and 23, 2009 demonstrated that even competent, experienced contractors are unable to avoid the possibility of flyrock due to geological irregularities:</p> <ul style="list-style-type: none"> • “Any experienced blaster would have had the same fly rock incident take place.” • “There is no technology available to identify anomalies in rock such as mud seams or voids.” • “90% of fly rock incidents are unexplainable.” <p>Mr. Morin, of JDCL’s blasting consultant Explotech, advised “. . . that the hazard zone be increased to 500 m when firing any future blasts in this quarry.”</p> <p>Numerous jurisdictions such as Nova Scotia, Texas, Australia, and the UN Food and Agriculture Organization set minimum requirements of 400 to 800m or more for setbacks for surface blasting. <u>Ontario has no minimum requirement.</u></p>

“This is a real long shot.”

Sweetnam implies that the risk of a flyrock incident is effectively zero. But data from the international blasting contractor, Dyno Nobel, indicates that the probability of flyrock is about 0.5%, low but not zero.

But **risk is probability x consequences** and the consequences are often catastrophic. Responsible quarry operators acknowledge that the only protection from flyrock is to provide safe setback from the blasting site to ensure that no flyrock damage or injury occurs, and there are at least two methods used internationally to calculate a safe setback.

Risk = probability x consequences

JDCL made a faulty calculation using one of these methods, and defined a setback determined that is **one-quarter of what it should be** if the method had been properly applied.

“Sweetnam argued the extremely low risk of flyrock will be even lower since JDCL intends to blast underwater, at the bottom of a gravel pit.”

‘Underwater blasting’ is a complete misrepresentation of the proposed blasting method.

JDCL is not planning to do underwater blasting “at the bottom of a gravel pit”, rather would blast into a water-filled pit from the excavation face. This doesn’t prevent flyrock due to “cratering” or “rifling” from the explosive-filled boreholes drilled on dry land.

It is not underwater blasting. It is blasting into water—a big difference!