

FENCES

USE
Dust
Noise
Risk Management
Visual

What

➤ A man-made or natural barrier.

Purpose

- Can reduce the amount of noise and dust leaving the site, create a visual barrier, and prevent trespassing.
- To protect trespassers or livestock from potential hazards within an aggregate site by physically preventing or hindering entry.
- To minimize liability in the event of injury or death as a result of unauthorized entry.



Where

YES: Around the perimeter of the aggregate operation (for security), at any point on the perimeter (to prevent dust or noise from reaching off-site receptors), at any sight line between the mine and off-site receptors (as a visual barrier), between any loud mining activity (i.e., crushing) and any possible receptor, or beside or around a dust-generating activity.

NO: There may be some limitation to the use of fences as a means of preventing trespass in areas with heavy snowfall.

Materials Equipment & Costs

🚛 18 gauge steel, chain link, barbed wire, pre-cast concrete, rock, hedges, fence stakes or posts, staples, nails or wire, etc.

✂️ Dependent on type and function of the fence.

💰 Low to high depending on height, materials and design.

Plans & Spec's

Noise

- There are many fencing options available to block or minimize noise (e.g., chain link, 18 gauge steel, barbed wire, pre-cast concrete, rock).
- To be effective, the fence needs to be high enough to block the noise generating activity from the line of sight of any receptor, and long enough to prevent noise from "leaking" around the ends.
- Used conveyor belts hung on a sturdy frame have long been used as a very effective noise barrier/fence.
- Fencing materials should be either flexible enough to absorb noise, or rigid enough to reflect it.

Dust

- Solid fences and vegetative screens have both been found to be effective.
- A vegetative screen has the advantages of enhancing the appearance of the mine, and requiring no maintenance once established.
- Existing vegetation can be used as a screen by locating dust generating activities, such as a haul road, on the down wind side of the vegetation.

Risk Management

- Barbed wire is the most cost effective fencing for deterring unauthorized entry.
- Construct the fence high enough that it cannot be easily scaled, and string the wire in loose double loops for entanglement.
- Post signs every 15 to 30 metres, and ensure that at least one sign is visible from any position at the fence. See also Signage BMP.

Visual

- A thick screen of trees and native vegetation is a visually appealing fence and has the added ability to screen noise and dust.
- Position the screen or fence between on-site features such as workings, equipment, buildings or the excavation face, and any off-site receptors.

Options

- Maintenance**
- Regular inspections should be conducted, particularly before and after hunting seasons. Repair or replace damaged or missing signs.
 - Dependent on the type of fence. Solid wood fences may require powerwashing on a regular basis as dust or dirt accumulates.

Sources

Mah, K.L. (1987): **Security and Safety of Aggregate Pits**; *Alberta Transportation, Aggregate Services, Materials Engineering Branch, Aggregates Bulletin #6.*