

How we drew the pit concept and who would see it

Prepared 13 October 2026 · Supports the campaign page images and figures (about 17.7 ha, up to about 61 m deep)

In short: this is our concept, not the company's design. Fish Creek Quarries has not released a design. Using the preliminary quarry boundary its environmental consultant published in April 2025, and standard assumptions for a benched pit in soft rock, the pit would cover about 17.7 ha and remove about 4.2 million cubic metres, up to about 61 m deep. 26 of 43 nearby homes we tested could see the ridge that would be removed, or the pit.

The footprint

- The pit outline is the **"preliminary boundary of the proposed quarry"** on the map Accent Environmental sent to neighbours on behalf of Fish Creek Quarries (15 April 2025).
- We fitted the map to the official WA008569 boundary printed on it. The fit was very close (about one-tenth of a map pixel), so the map was drawn to the standard grid it states. We then traced the outline.
- The traced outline covers about 17.7 to 17.8 ha, which matches the company's own "around 17 hectares" (Facebook, 12 May 2026). It lies wholly inside WA008569 (about 49.5 ha).
- The map is small-scale, so its line is about 10 m wide on the ground. Distances from it are approximate.

The ground

Geoscience Australia's 5 m elevation model from 2008 LiDAR survey. It shows bare earth: trees and buildings are not in it. Farm dams, which appear as false holes, were filled from the surrounding ground.

Our assumptions

- **Floor:** 125 m above sea level (AHD). The lowest point on the boundary is about 122 m, so the floor would drain west. It is close to the floor of the existing quarry in the 2008 survey.
- **Walls:** 45-degree faces with 10 m wide benches every 10 m of height, giving an overall slope of about 1 in 2 (27 degrees). This follows standard practice for soft rock: Resources Victoria's 2020 geotechnical guideline treats mudstone as soft rock, and road authorities limit shale cuttings to about 1 in 2.
- The cut stays inside the preliminary boundary. No haul ramp, sump, bunds, stockpiles or plant are included.

Results

Design	Area	Rock removed	Deepest point
Benched, about 1 in 2 overall (the figure we quote)	about 17.7 ha	about 4.2 million m ³	about 61 m

How much the wall angle matters: we re-ran the pit with overall walls from 1 in 3 (18 degrees, Resources Victoria's reference slope for soft rock) to 1 in 1 (45 degrees). The rock removed ranged from about 3.9 to 5.2 million m³ and the deepest point from about 56 to 67 m. Every case reached the 125 m floor. Flatter walls mean less rock, not a pit further from homes, because the outline is fixed.

The western edge of the boundary is below the floor level, so there is no wall on that side: the pit opens out at ground level to the west. The deep cut is on the east, where the ridge rises to about 190 m. In effect the top of the ridge is removed.

Who would see it

- **Method:** about 680 points, every 15 m, across the ground the pit would lower by more than 5 m. For each home, we checked whether a straight line from eye height (1.7 m) to each point is blocked by the ground. We tested the ridge as it is today and the excavated pit surface. This used an earlier run of the same benched design.
- **Homes tested:** the 45 confirmed homes within about 1 km of either quarry, less two associated with the quarry operation, leaving 43. We also tested 117 street addresses 1 to 4 km away; dwellings there have not been confirmed.

Area	What we found
Elevated homes to the west and south-west (Wallis Ridge Road, Wirilda Way), 0.5 to 0.9 km	Up to about 80% of the ridge to be removed is in view
Old Fish Creek-Yanakie Road and Cottmans Road, 0.8 to 1.25 km	About 25 to 65% of the ridge in view
Meeniyah-Promontory Road nearest the pit, 0.15 to 0.35 km	About 30 to 50% of the ridge in view, plus parts of the excavation
Samman Road	Most see little or none: the crest hides the pit. Their concern is noise and dust.

Overall: 26 of the 43 homes can see the ridge to be removed or the excavation, and 20 see 10% or more. Of the 117 addresses 1 to 4 km away, 45 have a line of sight.

Screening: a tree screen 10 to 20 m tall would hide the pit floor from low homes to the west, but not from elevated homes such as those on Wallis Ridge Road. No screen can replace the skyline lost when the ridge top is removed.

Limits

- This is a concept on a preliminary boundary. The company's actual design, if one is lodged, may differ.
- Bare-earth ground model: existing trees and buildings are not included, so the view results are upper limits. Trees may hide the pit from some homes.
- The floor and wall assumptions are ours. A geotechnical assessment by a qualified engineer would be required for any wall over 15 m high.
- Addresses and house-by-house results are held back for privacy and are available to the regulator on request.

Sources

- Accent Environmental (for Fish Creek Quarries), letter to local stakeholders and map "Fish Creek Quarry Local context", 15 April 2025.
- Fish Creek Quarries, public Facebook post, 12 May 2026.
- Geoscience Australia, 5 m digital elevation model (LiDAR, 2008).
- Resources Victoria, *Geotechnical guideline for terminal and rehabilitated slopes: extractive industry projects*, September 2020.
- Iowa DOT Design Manual 200F-8; Missouri DOT Engineering Policy Guide 321.1.1.2 (shale cut slopes).
- Prom Coast Guardians GIS and modelling, 4 to 13 October 2026.