



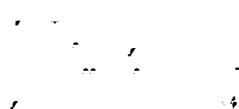
could be baked into mining projects from the outset?

This is the concept of tailings valorisation, and although in its infancy, scientists and engineers have already found numerous processes that go beyond reprocessing tailings to recover more metals. For instance, aggregates, construction materials and industrial minerals, and even lime, gypsum, or organic matter can be recovered and used in soil amendment or land reclamation projects.

One example of how the process can work is a collaboration between engineering group Stantec and Auxilium—a niche technology group that reuses tailings in other industries.

Auxilium's process enables tailings to be "cleaned" and made into a paste or cement. This product not only reduces water and waste, it also can sequester carbon and be reused in the construction industry for building materials.

M., M., and I. discussed the project and wider issues with Stantec's Resa Furey, Mine Decarbonization Lead, and Andrew Watson, Sr Consultant, Mining, Minerals and Metals.



✓ Tailings valorisation refers to reframing mine waste (tailings) as something that has value. It's the ultimate circular economy solution for mine waste!

The idea is we can take advantage of what has traditionally been seen as a liability and turn the tailings into a valuable product like building materials or materials for roads and other civil applications. Valorisation can also include options like converting tailings into a landfill that is designed for a specific use – beneficial reuse of the tailings. Finally, reprocessing the tailings to extract value from the residual metals and minerals is also a form of valorisation.

Tailings valorisation involves looking beyond the mineral of primary interest, and considering what we might do with the other (by) products of our work.

