

Lancaster University measures whole-of-life cost savings for composite pit lids.

A recent study carried out by the Lancaster University MBA Department identified that advanced composite-fibreglass pit covers will offer end users substantial cost savings when compared to manhole covers made from ductile iron. The following case study explains how a council which has 15,000 pits lids in its area of operation can save in excess of £12.45 million over a period of 15 years.

They took the following elements as key factors for the study:

- Durability
- Strength
- Anti-corrosion qualities
- Permanent anti-slip and skid qualities
- Weight of covers
- Useful life of covers
- Carbon footprint
- Cost of acquisition, installation and maintenance

Assumptions for the study included: Class D400 cover and frame, conforming to EN124:1994 Lids are installed in a busy carriage way

- Ductile iron 600x600 lid costs £110, with a useful life of five years
- Composite cover 600x600 lid costs £400, with useful life of 15 years
- Installation cost of £450 for both ductile and composite covers and frame

In the case of the ductile iron covers, lids will need to be replaced every five years. Therefore, 45,000 installations x (110 + 450) = £25.20 million over 15 years.

In the case of the composite covers, they have a life expectancy of 15 years. Therefore, 15,000 installations x (400 + 450) = £12.75 million over 15 years.

This results in a saving of £12.45 million, which is over AUD\$19 million in today's terms!

There very well may be other costs to consider – interest, ongoing maintenance, theft of resalable ductile iron, OHS etc – but this only improves the case for composite fibreglass!

Therefore, the study from Lancaster University should encourage more councils to consider not only the cost to purchase a manhole cover, but the whole-of-life cost once lids are installed.