



THE 200 TONNE CHALLENGE:



The 'challenge' compares the fuel usage for three options for the disposal of a typical, 200 tonne load of construction rubble - brick, concrete and stone - which might arise from the demolition of a domestic property.

The environmental impact of the job is not only dictated by fuel use and the 'carbon footprint', but also by suitable re-use of the waste material.



Skip Lorry: To move the rubble in 6 cu. yd skips - which would take a maximum of 6 tonnes of rubble. An hour round trip at 30mph, is assumed, but urban speeds could significantly increase fuel use.*

Fuel consumption:
 Combined 16mpg*
 200/6 = 33 skips
 33 x ((30/16) x 4.546) = 281 litres



Tipper Lorry: To move the rubble in 8x4 tippers - which will typically take 20 tonnes of 'general' rubble. An hour round trip at 30mph, is assumed, but urban speeds could significantly increase fuel use.*

Fuel consumption:
 Combined 8.5mpg*
 200/20 = 10 tippers
 10 x ((30/8.5) x 4.546) = 160 litres



BAVTRAK 025: Recycle rubble in a mini crusher - which will take 10 tonnes per hour, average. Can run up to 15 tonnes per hour, and at most would use 6 litres of fuel an hour.

Fuel consumption:
 Average 4 litres/hour
 200/10 = 20 hours
 20 x 4 = 80 litres

Conclusion: Whilst there is no allowance to get the mini crusher to site, this could easily be done on the same delivery vehicle as the digger. Even as a separate 7.5 tonne vehicle movement, this is unlikely to use more than 25 litres of fuel based on two, two-hour trips at 20mpg and a 30mph average speed.

It is quite clear that the use of a mini crusher to recycle on site not only saves significant amounts of fuel, but also greatly reduces vehicle movements on and off site and local congestion. It is worthy of note that where gross vehicle weights are considered (or are a restriction) the use of a mini crusher offers further advantages.

Within this comparison we have made absolutely no allowance for the need to import crushed material or aggregate to the site where waste is removed by skip or tipper.