



Research Centre for Environmental Technology and Management
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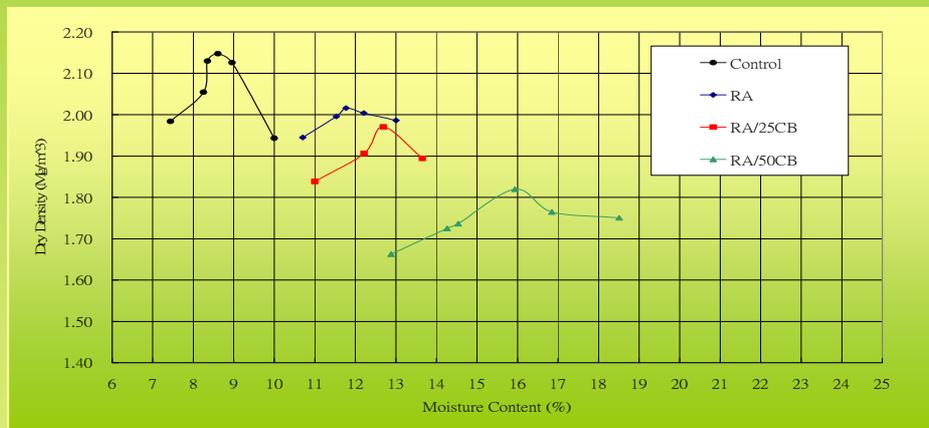
The Use of Recycled Aggregates as Subbase Materials

Objectives

- To determine the possibility of using recycled aggregates as subbase materials
- To investigate the influence of the incorporation of crushed clay brick on the properties of the subbase materials

Test Results

Dry Density and Moisture Content Relationship



Control – natural aggregates; RA – recycled aggregates; RA/25CB – 25 % recycled aggregate was replaced by crushed clay brick in the fraction between 20 and 5 mm; RA/50CB - 50 % recycled aggregate was replaced by crushed clay brick in the fraction between 20 and 5 mm

CBR Test

	CBR (%) (unsoaked)	CBR (%) (4-day soaked)	Swell (%) (4-day soaked)
Control	85	82	0.06
RA	66	66	0.07
RA/25CB	62	62	0.04
RA/50CB	43	46	0.01

Subbase RA/50CB



Conclusions

- Recycled aggregates can be used to produce subbase materials
- The CBR value decreases with increasing crushed clay brick contents
- All subbases attain CBR values greater than 30 % which is a minimum requirement in Hong Kong
- Recycled aggregates contaminated by foreign materials such as clay bricks can be used in sub-base