

Project proposal template

Graduate School studentships

March 2015

<i>Project title</i>	The use of recycled aggregate concrete of equal compressive strength in reinforced concrete structural elements	
<i>First Supervisor</i>	Dr <input type="text" value=""/>	<input type="text" value="Hsein Kew"/>
<i>Second Supervisor</i>	<input type="text" value="Professor Mukesh Limbachiya"/>	
<i>School</i>	<input type="text" value="Civil Engineering and Construction"/>	
<i>Other member of supervisory team (no more than three KU supervisors in total)</i>	<input type="text" value="Dr Anna Cheah"/>	
<i>Specific requirements beyond 2:1 degree</i>	<input type="text" value="a 2:1 degree in Civil Engineering"/>	
Project summary (max 4,000 characters)		
<p>One area for sustainable engineering is the efficient use of recycled aggregates obtained from Construction and Demolition Waste (CDM) and also as by-products derived from industrial waste that optimises economic and environmental benefits. There were many studies being conducted on the effect of coarse recycled concrete aggregates (RCA) and recycled aggregate (RA) on the properties of concrete. However, there were limited studies on the use of recycled aggregate for structural applications.</p> <p>This study involves extensive experimental work with the main aim is to determine and compare the structural properties of concrete made with natural aggregate and concrete made with recycled aggregate of equal compressive strength by using different percentage of coarse recycled aggregate, so it can suitably used in steel reinforced concrete elements such as columns and slabs.</p> <p>This study will be carried out in three phases. Phase 1 will involves the characterisation of the aggregate through a testing regime which includes physical and mechanical assessments to study their possible application in concrete production.</p> <p>Phase 2 involves investigation of the effect of using coarse recycled aggregate on the main engineering properties of concrete.</p> <p>Phase 3 involves investigation of the effect of coarse recycled aggregate of equal compressive strength on structural elements such as columns and slabs.</p> <p>The outcome of this study is to provide a better understanding of the structural performance of recycled aggregate and to promote the use of recycled aggregate in Civil Engineering structural applications.</p>		

