



## UDIA Sustainable Urban Development Matrix

This case study has been prepared for the [UDIA Sustainable Urban Development \(SUD\) Matrix](#). The SUD Matrix aims to promote and facilitate social, economic, and environmentally sustainable urban development initiatives. All cases are reviewed by the [UDIA Sustainability Committee](#) prior to uploading and periodically to ensure the SUD Matrix remains current.

<b>PROJECT NAME:</b>	<b>TPRC “Catalina” estate - Waste management &amp; recycling program – Instant Waste Management</b>
<b>PROJECT OVERVIEW:</b>	<p>The Catalina estate is a 170 hectare residential urban development with educational, retail and light commercial areas incorporated into an area located 35 minutes north of the Perth CBD.</p> <p>A “green-link” of more than four hectares provides Catalina, with cycle-paths, walkways and landscaped parks. Around 20 per cent of the estate is reserved as public open space, including landscaped parks and picnic areas, sporting fields and protected habitat for local birds, plants and animals.</p> <p>Tamala Park Regional Council (TPRC) was gazetted in 2006 (with land part owned by the Towns of Cambridge &amp; Victoria Park; the City of Joondalup; Perth; Stirling; Vincent &amp; Wanneroo). The Catalina estate began development in 2013, managed by the Satterley Property Group &amp; will consist of approximately 2600 homes housing around 8,000 people built over the next ten years. Homebuyers Centre won a recycling excellence award for its work on the estate with a 95% recycling rate.</p> <p>The forward thinking local governments prepared for the development project’s built form impact on its own waste management infrastructure at the local Tamala Park landfill. Internal stakeholders considered the following when tendering the waste &amp; recycling:</p> <ul style="list-style-type: none"> <li>• The close proximity of the new housing estate to the diminishing class 2 cells at Tamala Park landfill could have a significant impact on the projects’ 80% targeted recycling initiatives, as transport is a key cost of waste management &amp; recycling.</li> <li>• The large volumes of construction &amp; demolition (C&amp;D) waste produced during the development of the built form would impact on the Tamala Park landfills’ future capacity to handle the Municipal Solid Waste collected from the new households’ tenants created over the next ten years, (the estate development could have potentially filled up the landfill with C&amp;D waste 5 years before the 2025 expected capping &amp; rehabilitation dates).</li> <li>• In turn this would impact on future domestic waste transportation costs. The estates’ ability to put its population’s MSW (municipal solid waste) into alternative landfill sites without significantly impacting on the rates charged to the local residents by local government.</li> <li>• This could have affected the affordability of the local residents’ waste dispose costs. Leading to increased illegal dumping in the nearby native bushland.</li> <li>• Increase in Landfill Levy budgeted in the May 2014 state budget increasing from \$8 per tonne to \$70 per tonne by 2019.</li> <li>• Given that over half of all waste buried in landfill comes from the C&amp;D waste stream &amp; the EnviroDevelopment waste leaf is considered one of the hardest environmental accreditations to obtain compared to other leaf awards. (<a href="http://www.envirodevelopment.com.au/">http://www.envirodevelopment.com.au/</a>). It was decided to divert waste away from the landfill with a \$900 rebate incentive for the builders who recycled with Instant Waste management’s single commingled bin system.</li> <li>• ACCC third party forcing rules were notified so that some of the building companies entering into contract were required to contract with Instant Waste Management to use its recycling skip bins &amp; Material Recovery Facility.</li> </ul>

<p><b>CASE STUDY'S CORE AREA OF SUSTAINABILITY:</b></p>	<p><i>Waste, Materials &amp; Infrastructure</i></p>
<p><b>OBJECTIVES OF THE PROJECT RELEVANT TO CORE AREA:</b></p>	<p>Achieve large estate scale recycling initiatives that supported the local governments, the land developers' &amp; builders' targets for diversion of waste away from the local Tamala Park landfill.</p> <p>Mitigate the risk of future price increases &amp; industry waste disposal costs associated with an increasing Landfill levy, (which in 2014 was the lowest tax charged in Australia).</p> <p>In January 2015 Landfill tax is expected to rise from \$8 to \$40 (a tax charged on the tonnage of landfilled waste only – not recycled or non-metropolitan waste streams). Future forecasted tax per tonne is budgeted around \$70 per tonne by 2018.</p> <p>This is the first time recycling at this city wide scale has been achieved on a land development where more than one building group of companies were involved in the construction of the built form houses.</p> <p>The increased supply of recycled fill material to market allowed other land developments &amp; civil infrastructure projects like the Gate Way Project to access recycled materials to supplement their significant demand for Basic Raw Materials.</p> <p>It is estimated that around five million more tonnes of fill sand is needed each year to allow for more affordable homes to be built at current housing demand levels.</p> <div style="text-align: center; background-color: #4a7c8c; color: white; padding: 5px; margin: 10px 0;">       CATALINA ESTATE DEVELOPMENT CONCEPT     </div>  <div style="text-align: center; margin: 10px 0;">  </div> <p style="color: green; font-weight: bold; margin-top: 10px;">Image care of CLE Town Planning &amp; Design</p>

**IMPLEMENTATION  
MEASURES/ KEY  
INNOVATIONS:**

*Simple ordering systems were put in place so that the waste & recycling figures were recorded & builders who used the system placed their orders against the correct pricing structure.*

*The key innovation was the alternative tender submitted by Instant Waste Management for all the construction waste to be recycled & separated away from site at their new “state of the art” Material Recovery Facility. Click here to watch 3 minutes of Go-Pro Camera footage of the single skip bin commingled recycling system. [http://www.youtube.com/watch?v=rhq8B\\_VaZAQ](http://www.youtube.com/watch?v=rhq8B_VaZAQ)*



*Since this recycling campaign was introduced prior to the significant forecasted increases in the landfill levy from 2015 to 2018 (from \$8 a tonne to \$70 tonne) it needed an early incentive to help combat the opportunity costs of the nearby landfill site’s disposal costs.*

*The \$900 rebate paid to each house lot helped the builders benefit from the recycling system. Haven’t had to use the ACCC notification to force contractors to use the recycling facility. The perceived cost increases in non-recycled waste streams encouraged the builders to do the right thing.*



<p><b>OUTCOMES/ RESULTS:</b></p>	<p><i>The project met the intended objectives, with the following outcomes:</i></p> <ol style="list-style-type: none"> <li><i>1. The campaign obtained the tender KPI targets, which required an uptake of 75% of the building companies working on the built form construction to use Instant Waste. Including the major project builders in the state &amp; some smaller companies that were happy to change their waste management systems for the better.</i></li> <li><i>2. Those participating in the Waste Sustainability in Action campaign achieved a typical recycling rate around 95% for their construction waste disposal. Many used this to market their environmental points of difference at the more “affordable” end of the market, something that has not been a common marketing strategy apart from on high end homes.</i></li> <li><i>3. Industry recognition for the achievements of the developers were advertised on television and acknowledged by the WA Director of the Housing Industry Association. As well as the WA Master Builders Associations with award entries, finalists and winners in both the HIA &amp; MBA associations’ environmental programmes.</i></li> <li><i>4. More estate waste than ever before has been now recycled using a single commingled skip bin system that well suited the narrow lot design of many of the affordable homes on the estate. Processing the waste “off site” into recycled fill material &amp; recycled road base that is potentially going to be used on the estates temporary car parks &amp; hardstand areas.</i></li> <li><i>5. The procurement professional that worked on the tender and advocated the plan was awarded the Western Australian GreenSmart Professional of the Year award in 2014.</i></li> <li><i>6. The estate was eligible to apply for the “waste” leaf from EnviroDevelopment &amp; the GBCA Communities tool rating scheme (final consideration on application was still pending when this case study was published)</i></li> </ol>
<p><b>LESSONS LEARNED:</b></p>	<p><i>In the past it was difficult to obtain local government planning approval or Dept. of Environment planning approval to place a Material Recovery Facility near the construction of new houses &amp; recycle the waste from the built form.</i></p> <p><i>So a purpose built plant capable of handling 350,000 tonnes of construction waste was built 10km away from the Perth CBD to help service the greater metropolitan Perth area. More of these Material Recovery Facilities have been given Environmental Planning Approval by the state &amp; federal government in Port Headland and in southern metropolitan Perth.</i></p> <p><i>Instant Waste Management’s new commingled recycling skip bin system has now replaced the “source separation” collection works undertaken on the Parkland Height estate waste management case study, which used separate bins for wood, paper &amp; cardboard, metal &amp; tiles. (Sand was still stockpiled &amp; moved by bobcat). The new Material Recovery Facility has now secured most of the major project builder waste in Perth.</i></p> <p><i>Educational programmes that relied on the building contractors &amp; their subcontractors to do the right thing regarding site source separation were not very successful with an estimated 30% commingling rate. (I.E. the wrong waste stream ended up in the wrong bin with additional disposal &amp;/or sorting costs).</i></p> <p><i>Over 1000 industry key stakeholders have attended the Bayswater MRF Tour. Spreading the word about a simple and easy recycling solution that accommodates bad site practice &amp; human nature.</i></p>



<b>WEBSITE:</b>	<a href="http://www.instantwaste.com.au/">http://www.instantwaste.com.au/</a>
<b>AUTHOR &amp; DATE CASE STUDY DRAFTED:</b>	<p><i>Author:</i></p> <p><i>Mr Jake Hickey - State Resource Development Manager at Instant Waste Management. (WA GreenSmart Professional of the year in 2014).</i></p> <p><i>Date: August 2014</i></p> <div style="text-align: center;"> </div> <p><i>Jake Hickey worked on the UDIA's national EnviroDevelopment Task Force review of the Waste leaf <a href="http://www.envirodevelopment.com.au">http://www.envirodevelopment.com.au</a> &amp; Material leaf in 2014.</i></p> <p><i>He is an active member of the Green Building Council of Australia's WA State working group as well as part of the Housing Industry Association's waste sub-committee. A procurement professional that represents industry on WA Regional Committee of the Chartered Institute of Procurement &amp; Supply.</i></p> <p><i>In 2013 Jake was appointed Chairman of the Dob in a Dumper committee which worked with local &amp; state government with representatives from the building &amp; waste industry associations.</i></p> <p><i>A more detailed case study covering illegal dumping, basic raw materials &amp; estate wide recycling is available on request <a href="mailto:Jake@instantwaste.com.au">Jake@instantwaste.com.au</a> or 9379 2111</i></p>
<b>FURTHER CONTACT DETAILS:</b>	<p><b><i>Tamala Park Regional Council:</i></b> <a href="http://www.tamalapark.wa.gov.au">www.tamalapark.wa.gov.au</a></p> <p><b><i>CLE Town Planning + Design:</i></b> <a href="http://cleplan.com.au/tamala-park/">http://cleplan.com.au/tamala-park/</a></p> <p><b><i>Satterley Property Group:</i></b> <a href="http://www.satterley.com.au/catalina/2014/01/22/95-per-cent-materials-recycled-catalina-building-sites/">http://www.satterley.com.au/catalina/2014/01/22/95-per-cent-materials-recycled-catalina-building-sites/</a></p> <p><b><i>Instant Waste Management:</i></b> <a href="http://www.instantwaste.com.au/">http://www.instantwaste.com.au/</a></p> <p><b><i>EnviroDevelopment waste leaf:</i></b> <a href="http://www.envirodevelopment.com.au">http://www.envirodevelopment.com.au</a></p>