



The passing of the past

Temporary urban extension in a former landfill

Maribor, Slovenia

Regional competition Holcim Awards Silver 2008 Europe; jury appraisal page 51

With more waste than ever heading toward the incinerator, opportunities arise for former landfills to be put to new use. A team of Spanish architects and urban planners designed an innovative project in Maribor, Slovenia, to renaturalize an area once recognized only by its mounds of garbage.



Since the beginning of industrialization and the time of mass production, we have lived in the Age of Waste. Each day, every day 130 million tonnes of trash is thrown away. In a lifetime, the average American builds a mountain of garbage the size of an Egyptian pyramid. Despite various measures over recent years, the waste problem worldwide is not becoming any smaller. On the contrary, consumerism seems to be providing us with more opportunities to accumulate waste than ever before.

Natural paradise instead of garbage mountain

Nevertheless, the waste itself seems to disappear from our sight. Where there were once landfills, in many developed countries different disposal options are now becoming more accepted. Unfortunately recycling is still in its infancy – only around 6% of waste generated worldwide is reused.

A lot is incinerated. This opens up opportunities for former dumps to be reused. Often the plan is simply for rehabilitation of the contaminated areas and renaturalization with appropriate flora species. Yet, as settlements encroach on these once far-removed locations, innovative projects are being developed to reintegrate these spaces back into the cities they served.

One such example is Cairo. On the site of the 500 year-old, 40 meter high garbage mountain Dharassa now stands Al-Azhar Park, a 30 hectare green lung for the over-populated and polluted Egyptian capital. Six hundred thousand plants transformed the former landfill site into a natural paradise. A similar project is being undertaken on New York’s Staten Island where, for over 50 years, garbage was piled up into mounds simply named North, South, East and West. With mound “peaks” topping the Statue of

Liberty by 25 meters, over the next 30 years, the Fresh Kills landfill – at 2200 hectares arguably the largest landfill in human history – will be transformed into its own green lung of reclaimed wetlands and landscaped parklands.

Spanish ideas for a Slovenian dump

On a significantly more modest scale, but extremely impressive in its conception, is the project planned for the former landfill



The Al-Azhar Park, a 30 hectare green lung for Cairo.



“For us, sustainability also means leaving doors open for new opportunities.” Belinda Tato

site at Pobrežje, just a few minutes drive from the Slovenian city of Maribor. Disused for years, city planners were searching for innovative ideas to transform the site. They used the opportunity of the European young architecture and urban design competition to call for expressions of interest.

The Maribor project proved intriguing for a studio in Spain – *ecosistema urbano* in

Madrid. The eight-person team led by Belinda Tato and José Luis Vallejo, specialize, as their name suggests, in sustainable urban design. Twice previously they had taken part in European sessions and won awards for their work.

Temporary is sustainable

Important for the project is the dimension of time. For Belinda Tato, it is a design parameter the equal of any other architectural or landscape element. “We understand architecture as a reversible



Belinda Tato and José Luis Vallejo jointly lead the team at *ecosistema urbano*, which specializes in sustainable building projects.



The sustainable buildings designed by *ecosistema urbano* are a series of 3D components.



process that, due to its slow passage through time, requires a capacity to anticipate and think strategically,” she explains. “For us, sustainability also means leaving doors open for new opportunities. We were intrigued by the 25-year “life” specified for the site’s use. We could be creative, and flexible.”

The 25-year time horizon is to take account of the current phase of ecological rehabilitation. Longer-term, the plan is to accommodate student housing for the University of Maribor on the site.

“These parameters suggested to us a low-density option for the site. Our aim is to create a new topography – a temporary landscape on which it is possible to build temporary structures. Our philosophy is to manage a built object’s life – not only its construction, but its use and eventual

“If there is nothing attractive about a suburb, then people will not be motivated to developing a community spirit there.” **Belinda Tato**

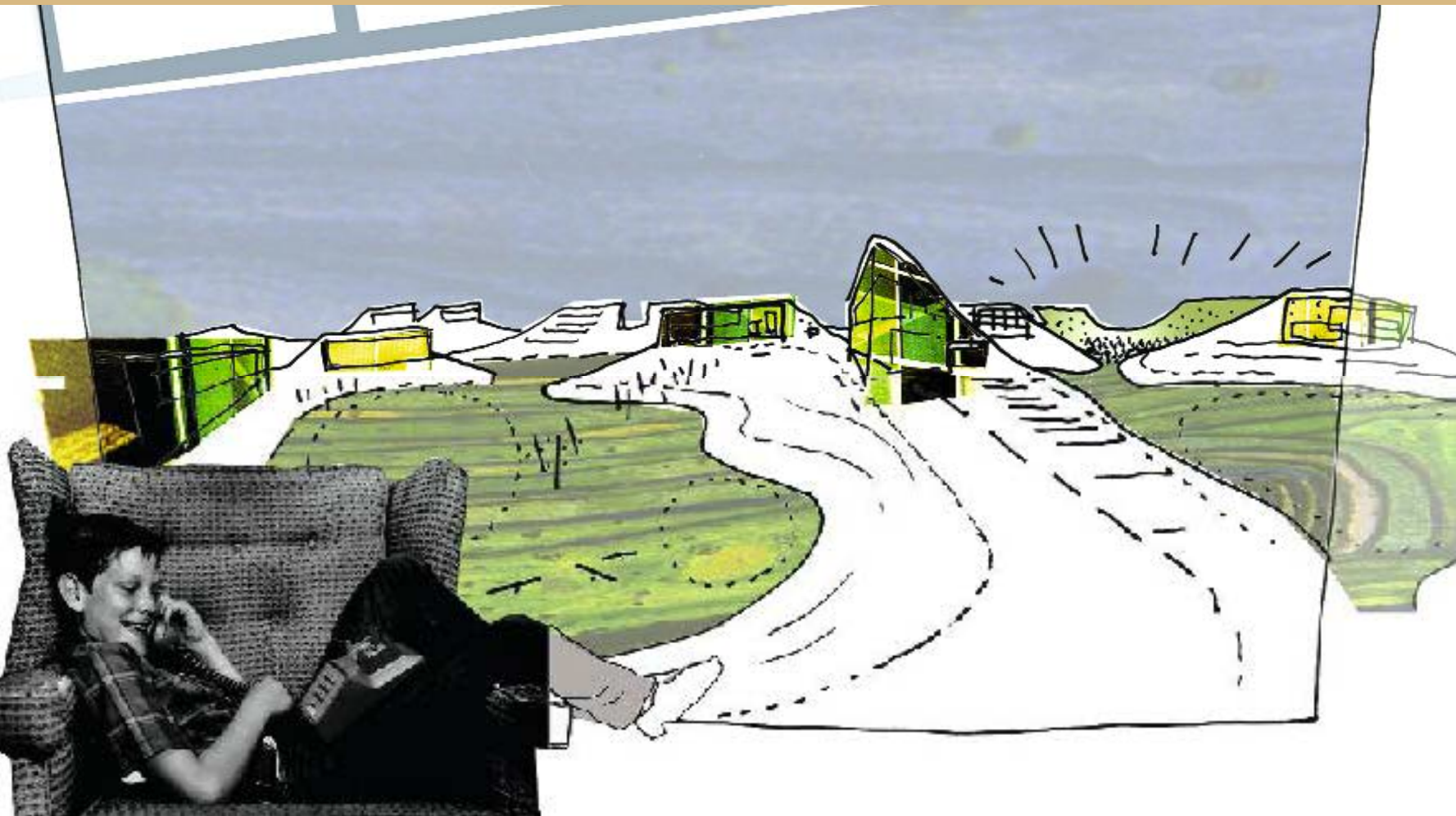
dismantling, relocation or reuse in another context.”

Life in every suburb

In developing their concept, these young designers from Madrid wanted to ensure that the site did not become a lifeless suburb on the city outskirts, even if only temporarily. That they specifically considered this aspect says much about their experiences to date. “We see building sins committed each day in Madrid,” Belinda Tato says. “Urban design needs to be well-planned. There is no point constructing

residential blocks which have no soul. If there is nothing attractive about a suburb, then people will not be motivated to developing a community spirit there.”

A local project on which the team from *ecosistema urbano* worked, in order to engage people in such residential developments, involved the siting of “air trees” along a central boulevard. The enormous hollow cylinders function as public spaces and can be used for various community activities. Self-sufficient, the clean energy generated is sold back into



the grid. The innovative design was commended in the first Holcim Awards competition with an Acknowledgement Prize in 2005.

Starting from zero

Integrating the Maribor development into the life of the city is therefore important for the designers. “It needs to offer something more, so that people will be attracted to visit,” Belinda Tato explains. “It should remain

Children can play safely in the car-free areas of the quarter – that strengthens neighborhood spirit.

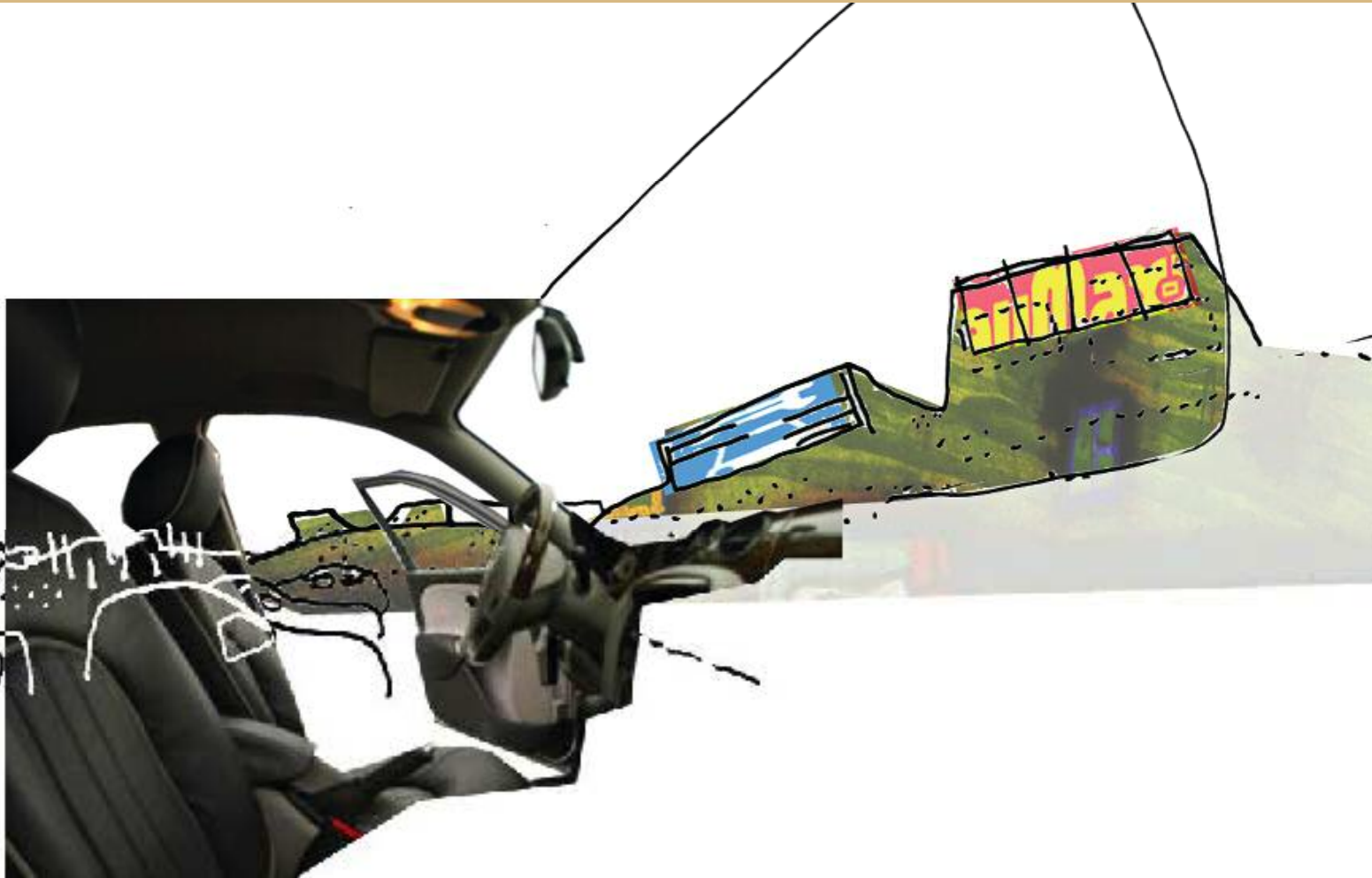
open around the clock, and address various needs. We are starting from zero – there is nothing interesting here, no lake, no vegetation, no old houses. Just a disused landfill!” With such unlimited potential, the result is unique – innovative and visionary. The new topography has been conceived as different-sized enclosures, the elevated landscape shaped into large circles which can host

various sport, recreation or cultural facilities. Planned housing units are built into the perimeters, as earth shelters. “The rings are open air green spaces, communal for residential areas, or multi-purpose for public areas – a football field, for example, or a concert arena.” Important, however, is that nothing is “set in concrete”. The philosophy of the studio is that aspects of the design are left open for locals to decide. “We are serious about people using this space, and making it their own.”



Motorway as communication channel

An important target group for the Maribor project are motorway users. The former landfill is close to a major arterial – the planned Pan-European motorway from Barcelona to Kiev. “This is a big advantage,” Belinda Tato says. “Our aim is for Maribor to be an attractive location for a pit-stop – travelers will find anything from



accommodation to open-air concerts here.” The road infrastructure will be a prime communication channel, with signage pitching the site as a Five-Star service area.

“Our plan is for the new city quarter to offer something new and genuinely different.” Belinda Tato

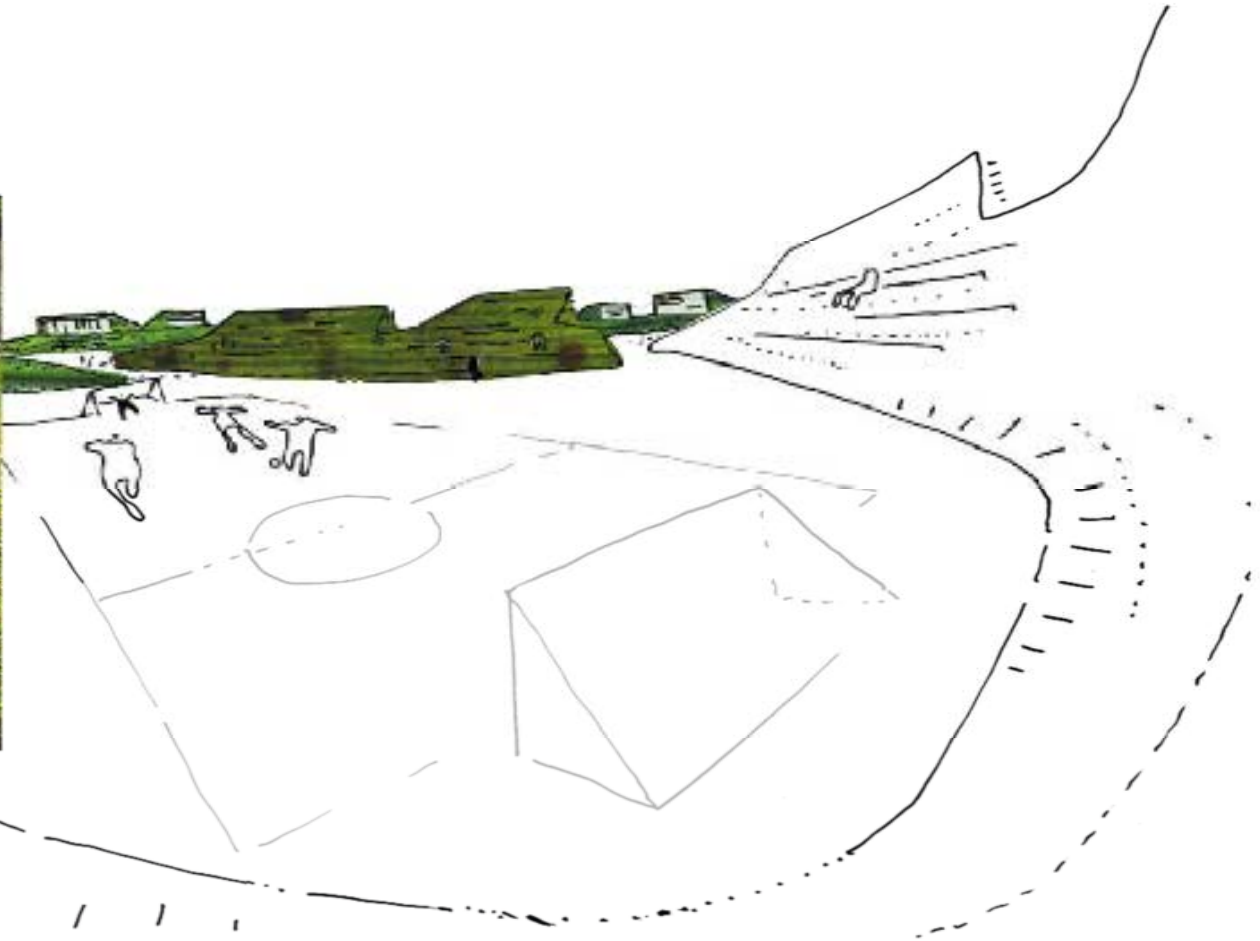
Stimulating change

The most important group, of course, who must feel at home in the revitalized setting of an old dump are the residents. “Our plan is for the new city quarter to offer something new and genuinely different.” The entire space is planned to be car-free. Pedestrians have priority at all times. A single bus line is foreseen. “Children will be able to play directly in front on their homes, without danger,” Belinda Tato explains. “That strengthens neighborhood spirit.”

The earth shelters have been designed as multiuse spaces – flexible, affordable and energy-efficient. They follow the concept of a greenhouse, and are enclosed by



The motorway as communication channel? Even travelers are integrated into the Maribor project’s planning.



glazed surfaces – this enables passive solar heating, while cooling needs in summer are met by subterranean air pipes. Blending the housing units into the landscape, blurring the lines between natural and artificial, is not just an aesthetic principle. The thermal energy embodied in the earth shelters radiates out and will encourage nearby plants to regenerate more quickly.

The housing units are designed as a selection of prefabricated cubes, 3D components comprising kitchen, bathroom, living area and so on, which are owner-

specified. “Today the market still thinks in square meters; it is too conservative. But if we think in cubic meters, we can make better use of all available space – people are often more flexible than the market thinks.”

Sand in the gears

Whether the project is given the green light is still unclear. Government authorities were thrilled with the designers’ concept; they won the European competition. But with an election in the interim and new members of government appointed, the fate of the project remains in the balance. “We have

The large public spaces are open to many uses – football field, concert arena, landscaped parkland.

sand in the gears,” Belinda Tato explains. The hope is that the Holcim Awards win will bring new impetus to the government to proceed with the project. The ring-concept is a distinct advantage in this context. It allows for gradual development with a lower investment risk. Step by step. Or, in this case, ring by ring.

The architect remains optimistic. “We have already transformed thinking with our designs,” she says. “And there are many former landfill sites on the outskirts of cities where our project could be realized, if not here.” She is also pleased that a “win” for sustainable construction has been registered. “Sustainability means nothing else that designing the best building for a certain location using the least resources possible. It is a criteria for success!”

“Sustainability means nothing else that designing the best building for a certain location using the least resources possible.” **Belinda Tato**



The statistics of a “throw-away society”

The European Union unites almost 500 million people. As prosperity rises, so too does waste. Per capita, each EU citizen is responsible for the production of some four tons of waste per annum. According to EU Environment Agency guidelines, an emphasis on waste management, rather than disposal, is key. The aim is to minimize impacts on both health and the environment, including emissions to air, surface water and groundwater, whilst supporting conservation of natural resources. The strategy is integrated, and implemented according to sustainable production and consumption goals.

Most EU municipal waste is sent to landfill (45%). However, more and more municipal waste is recycled or composted (37%), or incinerated with energy recovery (18%). As these latter percentages increase, landfills will be scaled down.

“Things are not yet as good as they could or should be.” Belinda Tato (pictured above)

“Sustainability must be natural!”

“Sustainability must be seen in the future to be as necessary to a building as its foundations. It must be a perfectly natural part of our life, not an add-on or something special,” Belinda Tato believes. “Then we would have no need for conferences or competitions in sustainable construction. All construction would be sustainable, as a matter of course.

“It is nothing new,” she adds. “This knowledge has been around for a long time.” But she is practical – “things are often not as good as they could or should be.” Yet with energy and commitment, studios such as *ecosistema urbano* are well on their way to helping build this ideal world.



The project can be carried out step-by-step, or ring-by-ring.