TURNING A LANDFILL CLOSURE INTO LASTING CIVIC VALUE

Dunedin Waste Futures, which won the 2026 Resource Management Law Association's Project Award in September, connects service reform, infrastructure investment, consenting and environmental restoration within one long-term, landscape-led strategy, writes **Kathleen Kinney** from Boffa Miskell.

The closure of a landfill presents councils with a set of interrelated decisions. Alternative disposal capacity must be secured, collection services may need to change, and new processing infrastructure must be planned, funded and consented. Environmental effects have to be addressed and communities need confidence that the transition is necessary and well managed.

Dunedin City Council (DCC) met this challenge by looking beyond kerbside collection and the landfill boundary. Its Dunedin Waste Futures (DWF) programme encompasses the staged closure of Green Island Landfill, redevelopment of the Green Island Resource Recovery Park (RRP), a four-bin kerbside collection system, planning for a new residual-waste landfill, and community and industry waste-minimisation initiatives.

The programme is reshaping how the city manages waste and plans major infrastructure. Collaboration with iwi Te Rūnanga o Ōtākou, through the Māori-owned organisation Aukaha, and long-term engagement with neighbours, stakeholders and the community have been supported by communication that translates complex technical information into accessible narratives and visual tools.

This whole-of-system, landscape-led approach is an example of how an infrastructure deadline can become a broader civic opportunity.

START WITH THE SYSTEM

DCC began investigating the city's medium- to long-term waste needs in 2018. Led by the Waste and Environmental Solutions team, this early work considered the future waste system, continuing operation at Green Island until an alternative was available and the requirements of any future landfill.

These investigations found a circular economy approach could reduce waste to landfill and carbon emissions. They also highlighted the interdependence of collection services, processing facilities and disposal infrastructure.

Chris Henderson, DCC Group Manager Waste and Environmental Solutions, says the biggest challenge has been managing multiple major changes across the waste system at the same time.

"Because all these elements are connected, decisions in one area affect another."

Changing collections without creating processing capacity would shift the problem; building recovery facilities without the right material streams would limit their effectiveness and closing Green Island without enough diversion and a future disposal option would leave the city exposed.

The Council responded by developing one programme called Dunedin Waste Futures, with the aim of less waste to landfill, lower emissions, stronger local processing capability and a more resilient waste network.

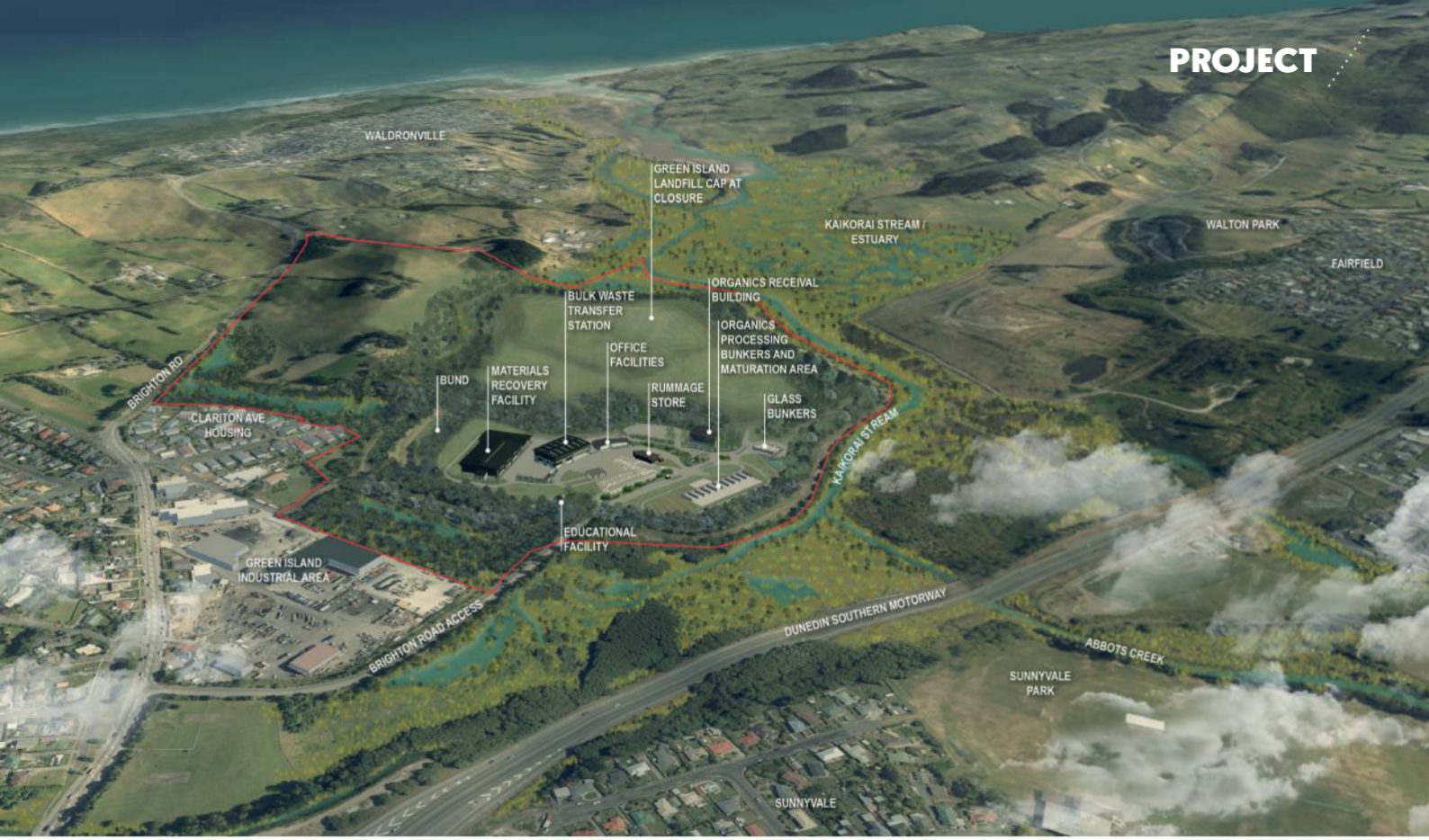
"We've addressed these challenges by taking a whole-of-system approach, bringing together technical experts, mana whenua [local Māori], operational teams and stakeholders to develop an integrated long-term plan," Chris says.

MAKING THE STRATEGY VISIBLE

Following public consultation in 2020, the Council introduced a four-bin system in July 2024. New organics and rubbish bins joined the city's recycling and glass services.

Early results indicate strong public uptake, with food scraps and garden waste collections exceeding forecasts by at least 25 percent, while contamination has stayed at around two to three percent.

"The Dunedin public have really embraced this



service," Chris says. "Community participation in recycling and waste services has increased markedly under the new programme."

But kerbside separation will deliver lasting benefits only if the city can sort, process and recover those materials. The planned Green Island RRP will provide a materials recovery facility, organics processing and composting facilities, upgraded glass sorting and storage, a better bulk waste transfer station, and roads and services.

Public services, including the recycling drop-off area, rummage store and education functions, will remain on site. Consent for the RRP was granted in 2025, following consent for the operation, staged closure and aftercare of Green Island Landfill in 2024.

PLANNING FOR WHAT REMAINS

DWF recognises some waste can't (yet) be reused, recycled or composted. Planning for a future landfill is a resilience measure, ensuring continuity of an essential public service as recovery infrastructure and diversion initiatives develop.

The Council has also supported community resource recovery, education and behaviour-change programmes, and is working with sectors such as construction and demolition to reduce waste at source. These recognise infrastructure alone can't create a circular economy; the choices of households, businesses and industries play a crucial role.

Chris says the Council has also established "a clear, evidence-based pathway" for the future waste system. Over the next five to 10 years, performance will be measured through infrastructure delivery, community participation, recovery rates and emissions. The programme is targeting 45 percent less waste to landfill and the same reduction in biogenic methane emissions from waste.

REFRAMING LANDFILL CLOSURE

The landfill will continue receiving waste while closure and capping proceed in stages. The Council is treating this not just as the final task in its life, but as part of a landscape-led transformation.

Over time, it will combine resource recovery with environmental restoration, integration and expression of cultural values, and possible educational and community uses. To support that, people with specialist planning and design expertise have been involved from the start.

Boffa Miskell has worked with the Council since 2018, leading landscape architecture, environmental planning, consenting and engagement workstreams in a team that includes GHD, Aukaha and Te Rūnanga o Ōtākou.

This has included developing the overarching landscape framework, supporting consenting, preparing landscape, visual and ecological assessments and creating material that explains how the site will change.

"The whole-of-system landscape-led approach plays a central role in aligning a multi-faceted infrastructure project, with parallel consenting pathways into a single, integrated narrative," says project lead Rachael Eaton, from Boffa Miskell.

"Having a clear and credible long-term vision helped build public understanding and acceptance for complex and potentially contentious decisions, increasing Council's social licence and reducing consenting risk.

"It also avoids fragmented outcomes and reflects how communities understand change over time.

Above: The Dunedin Waste Futures programme includes the staged closure of Green Island Landfill, redevelopment of the Green Island Resource Recovery Park, a four-bin kerbside collection system, planning for a new residual-waste landfill, and community and industry waste-minimisation initiatives.



Dunedin Waste Futures sets a precedent for more coherent, place-based approaches to complex infrastructure projects in Aotearoa."

Analysis of landform, the estuarine edge, hydrology, visual catchments and surrounding residential areas determined the final landfill cap; the placement of RRP infrastructure, access and circulation, and the retention of established perimeter vegetation.

These decisions reduce visual and amenity effects while providing a framework for native planting, ecological enhancement and long-term landscape management. This supports ecosystem services and enduring enhancement in a highly modified operational landscape.

WORKING TOGETHER ACROSS DISCIPLINES

The DWF programme has brought together council operations, mana whenua, technical specialists, consultants, contractors and community stakeholders. Chris says there was collaboration from the beginning through transparent information sharing, workshops, engagement and a commitment to considering different perspectives.

"Combining technical, operational, cultural and community knowledge led to solutions that are more balanced, practical and resilient than any one group could have developed on its own," he explains.

This allowed complex decisions to be tested before they became fixed – balancing operational performance and consenting requirements with community and cultural values, environmental effects and neighbours' experience.

BUILDING UNDERSTANDING OVER TIME

Waste infrastructure close to residential areas inevitably raises questions. Throughout DWF, engagement has been treated as ongoing rather than tied to individual consent milestones.

Engagement with Te Rūnanga o Ōtākou influenced the values and narratives taken from early site visits into consent documentation and identity-making (including cultural narratives and naming/branding opportunities), ensuring the outcome is specific to Ōtepoti Dunedin rather than generic.

A comprehensive engagement strategy supported discussions with neighbours, stakeholders and the Green Island community. Feedback helped determine site layout and infrastructure placement, improving the relationship between the RRP and nearby homes.

Technical material was translated into plain-language explanations, staging plans, diagrams, illustrations and visual simulations. Three-dimensional images allowed proposed changes to be considered properly. These tools explained how kerbside separation supports recovery, why closure must be staged, and how present decisions will shape the site over future decades.

"The programme has helped build a greater understanding of the challenges and opportunities facing Dunedin's waste system," Chris says. "That transparency has helped strengthen confidence that Council is taking a long-term, evidence-based approach to waste management."

Above: Resource Management Law Association awarded Dunedin Waste Futures its 2026 Project Award in September, saying it was "an outstanding example of integrated environmental planning and implementation". From left: Stephen Douglass from GHD; Maurice Dale, senior planner at Boffa Miskell and colleague and project manager Rachael Eaton, a landscape architect and urban designer at the company; and Heike Lutz from the RMLA.



EMBEDDING MANA WHENUA VALUES

Working long-term with Te Rūnanga o Ōtākou, through Aukaha, helped create the cultural impact assessment, restoration approaches, consent documentation and long-term aspirations for the site.

The relationship also shifted the project's interaction with the adjoining Kaikorai estuary. Rather than treating it as a peripheral industrial edge, it was recognised as a living system with interconnected ecological and cultural values, which impact consent conditions, management plans and implementation documents, helping them guide delivery, aftercare and long-term stewardship.

LESSONS LEARNED

The project's wider value lies in the model it provides: council-led, collaborative, clearly communicated and planned with the next generation in view.

DWF offers four lessons for elected members and council leaders overseeing complex infrastructure transitions. They are:

1. Determine the long-term outcome before deciding on individual projects. A clear direction for the whole waste system allowed service design, investment, consenting, environmental management and engagement to reinforce one another.
2. Bring the right expertise into the programme early. Integrating planning, landscape architecture, ecology, engineering, cultural knowledge, operations and engagement enabled decisions to be tested from multiple perspectives.
3. Maintain a coherent public narrative. Although landfill closure and the RRP required separate consent processes, the Council presented them as parts of one evolving site and one city-wide strategy.
4. Look beyond minimum compliance. DCC used the closure of Green Island as a catalyst to reform services, invest in recovery, strengthen resilience and establish a more restorative future for the site.

Chris has advice for other councils: "Take a whole-of-system approach and invest in collaboration early. Engage stakeholders from the start, be clear about your long-term vision and remain flexible as circumstances change."

"Complex transitions are never just about infrastructure. They're about people, partnerships and building lasting support for change."

In giving the award, the RMLA thought DWF was "an outstanding example of integrated environmental planning and implementation".

"… the programme takes a whole-of-system approach, bringing together landfill closure, resource recovery, recycling, ecological restoration, hazardous waste management and community outcomes into one coordinated programme."

"Importantly, the approach was considered highly transferable, with potential to influence waste management planning nationally as local authorities face increasing pressure to reduce waste, improve resource recovery and transition towards more sustainable waste systems." **LG**

Above: The Dunedin City Council called the programme "Dunedin Waste Futures" and sequenced investment around less waste to landfill, lower emissions, stronger local processing capability and a more resilient waste network.

