If beauty is in the eye of the beholder, environmental credentials hit nerves. Combine the two, and major impact is guaranteed. Such was the case when Britain-based Tasmanian designer Brodie Neill unveiled his Gyro table at last month's London Design Biennale. At first view, it’s a rather stoic pedestal topped by a glistening blue terrazzo disc; on approach it becomes evident the material is not the traditional mix of marble and granite chips but a smooth composite inlaid with thousands of tiny bits of recycled detritus. The flotsam of contemporary consumer culture, in fact, the plastic drinking straws and soft drink bottles and universal beer rings that have washed up on otherwise-pristine beaches in Tasmania and around the world.

Wallpaper* called the table “mesmerising,” The New York Times listed it among its top five must-sees out of the more than 30 national installations at the inaugural Design Biennale. BBC World invited Neill on to its noon program along with Erik van Sebille, oceanographer and lecturer at the Grantham Institute and physics department at the Imperial College, London.

“It’s one of those pieces that in conceiving and designing, you know you’re on to something,” says the designer by phone from his east London studio, “but then it just exceeds all expectations.”

The idea for the Gyro table came while Neill was on a four-day cultural boot camp at architect John Wardle’s Bruny Island getaway off the south-eastern tip of Tasmania. It was organised as part of the National Gallery of Victoria’s Parallels symposium in September last year, and Neill was in the company of the curators of the NGV’s department of contemporary design and architecture, Simone LeAmon and Ewan McEoin.

“I’d spent much of my childhood in this area,” says Neill. “I remember it as incredibly pristine, prehistoric. You’re the only ones on a remote beach, there’s no electricity, you’ve had to walk an hour to get there. But still you find McDonald’s plastic straws and Coke bottles, all kinds of junk washed up on this south coast wilderness.”

The designer and the curators got to thinking: What if we looked at this material not as waste but as a resource? That idea segued nicely with the London Design Biennale, part of the year-long celebrations marking the 500th anniversary of the publication of Thomas More’s seminal Latin text, Utopia, in 1516.

If Utopia, according to Thomas More, is an imaginary floating island in the ocean where every aspect of life is perfect, “says Neill, “then we can argue that the reality we face today of living in a toxic plastic soup is by extension dystopia.”

The designer’s “ocean terrazzo” was developed in collaboration with an international network of researchers, engineers and scientists – foremost among them van Sebille, who believes we need to “return plastic to the economy and free it from the environment”.

This idea of hijacking a material, diverting it from one use to another, is an integral part of Neill’s approach to design. His Remix chaise longue of 2008, for instance, is composed of multiple layers of laminated plastic, plywood and chipboard, much of it discarded offcuts from previous production. Compressed into a solid block, the lounge is then carved out in the round using a computer-controlled cutting machine to guarantee a perfectly smooth form. The Remix lounge has been produced in a limited edition of 10. The Gyro is a limited edition of six. Prices on request.

Brodie Neill was born in Tasmania in 1979. Fascinated from an early age with making things with his hands, he developed his craft over the course of a bachelor’s degree in fine art at the University of Tasmania. He then further refined his eye via a master’s degree at the Rhode Island School of Design, near Boston.

“My sculptural approach to design probably stems from the fact that I learnt design at art school,” he says. And it’s true – he appears to think and compose in fluid asymmetries.

The reality we face today is of living in a toxic plastic soup. Brodie Neill

In addition to his top of the line, limited-edition furniture designed and produced under his own name, three years ago Neill launched the Made In Ratio brand under which he manufactures his limitless-edition industrial designs.

His sensually curved Alpha dining chair, and the sinuous bent timber Cowrie chair and rocker, are available through Living Edge showrooms in Melbourne, Brisbane and Sydney.

Increasingly, they’re popping up in commercial projects, such as in the lobby of FJMT architects’ 200 George Street skyscraper for Mirvac in Sydney, or the AT&T headquarters in San Francisco. Like his limited edition pieces, the Made In Ratio catalogue displays a love of continuous lines and an incredible attention to detail. “I don’t see why an industrial product should have any less integrity than a limited-edition piece,” says Neill. “It’s about giving people different entry points to my work.”

Neill launched his new Made In Ratio Elements side table at the week-long Kortrijk Biennale Interior in Belgium, which ends on Sunday.