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[Aller au sommaire du numéro](#)

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Designing a Future Otherwise: Optimism for Post-Extractive Site Rehabilitation

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When standing in a decommissioned gravel pit, with exposed aggregate peeking through what scrubby grasses have managed to grow among the rusted industrial remnants that remain scattered in the bottom of the excavation, optimism is not the first emotion likely to wash over you. But this was indeed the site of the University of Guelph's Masters of Landscape Architecture studio that participated in the Land | Terre DRN Studio Problématique. The studio was called "Re-Configuring Aggregate: Critical Optimism for Post-Extractive Futures at the Waynco Pit" and it took as its site a decommissioned gravel pit in the Township of North Dumfries. Students were asked to boldly reimagine the site to better support its local communities, environments, and economies. Only half a kilometre from the banks of the Grand River, just outside of Cambridge, Ontario, the Waynco Pit is on land in the Haldimand Tract, a piece of land that stretches for ten kilometers on either side of the 280 km Grand River, which was granted to the Six Nations of the Grand River in 1784 for their support of the British during the American Revolution. Today, Six Nations only controls five percent of all land in the original Tract and, since 1980, twenty-eight separate land claims have been filed for lands in the Haldimand Tract, which have almost all been stalled in the court system. Amidst actively contested land claims, the studio further sought to engage with the histories of land use and colonization, as well as understand the imperative for site rehabilitation on Indigenous land.

The Waynco Pit had been partially rehabilitated before we began designing for it, which in aggregate site remediation standards essentially means that slopes had been stabilized and there were no remaining exposed cuts. While on our site visit, the class also visited an operational pit across the road owned and operated by the same company. This site was much larger and, from the inside of the pit, all that could be seen was scraped earth and piles of aggregate in different sizes, all set in the context of a deep pit dug into the earth through years of operation. Although aggregate is a ubiquitous material that literally underlays almost every built landscape architectural project, when faced with the extent of this operational site of the extractive industry, optimism felt even further away than it was when we were standing in the Waynco Pit. To encourage critical, optimistic thinking despite the degraded site conditions, students did an in-depth visual analysis of a landscape precedent project with a bold vision for a post-extractive

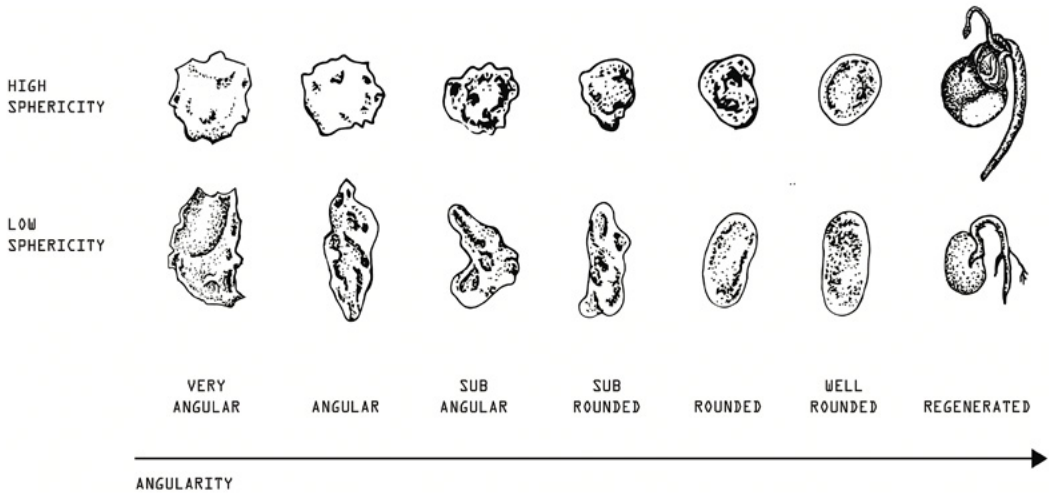


Figure 1: Margot Kopache, 2022. Transformational Diagram for site design that shows the driving concept behind the design for the site, moving from a site of extraction defined by material resources that could be sold to one focused on regeneration, native plantings, and the creation of a new cultural hub within the region.

or post-industrial landscape. The series of drawings for the precedent project were completed alongside analysis of the larger contexts of aggregate extraction in the region, detailed diagrams of site constraints, and visual timelines that engaged with the geologic timescales that produced the material of the site, as well as historical timescales that chronicled the processes of Indigenous land dispossession within the Haldimand Tract.

While the use of precedent projects within design practice and pedagogy is common, in this studio precedent study was intentionally advanced to encourage optimism for possible site futures. By researching and analyzing optimistic and exceptional precedents, students were able to see what was possible on a site like the Waynco Pit. Additionally, as most local precedents for former aggregate sites typically take a minimal approach to design intervention for a series of trails, the precedents demonstrated strong design vision and bold constructed interventions. The precedents that students could choose from ranged from the o2-designed Dale Hodges Park to the famed Buttes Chaumont in Paris, and from Turenscape’s ambitions Minghu Wetland Park to Julie Bargmann’s revered Stearns Quarry Park. Each of the eleven projects that students could select from was thematically linked to our site but pushed well beyond the boundaries of what felt possible on a small, degraded site just outside of Cambridge, Ontario. Through their ambitious designs and successes as built projects, these precedents inspired students to think of the Waynco Pit well beyond current conditions. Students were encouraged to consider what would be possible on the site if budgets and political will aligned, and precedents provided tangible proof of design potential. The strength of each of these precedents and their varied thematic connections to the site were crucial to encouraging projects that pushed for meaningful site rehabilitation and thoughtful approaches for how the site could be used to address social and ecological concerns.

1. “A NATIONAL STUDIO PROJECT | UN PROJET NATIONAL D’ATELIERS 2021-22,” Land | Terre Design Research Network, 2022, <https://www.landterre.com/a-national-studio-project-2021-22>.

From these initial precedent studies and deeper understandings of site through analysis, students developed concepts for truly inspiring design proposals that projected optimistic futures of rehabilitation in the Waynco Pit Site. Each project engaged with possible site futures, showcasing a range of approaches that situated optimism within the complexities of climate change, Land Back, and struggles for environmental justice, more broadly. Although the studio was oriented optimistically towards the future, it was imperative that students deeply engaged with the long and overlapping histories of the site as the ground on which to launch their projective proposals. This balancing of a careful engagement with the past along with a view to optimistic futures was inspired by the original Land | Terre DRN Studio Problématique, which encouraged students to “pay attention to the past and present state of the site, in all respects, to detect clues of its past and project a situation that could reactivate and transform it.”¹ In some projects, students took their research into the Indigenous history of the site as a starting point and sought to remediate the land so that it could be used to grow plants that are significant to the Haudenosaunee people of Six Nations. For other students, the past extractive uses of the site were foundational in reimagining a transformative future that could serve local communities and ecological functions alongside one another.

In a design for a sculpture park at the Waynco Pit, Margot Kopache engaged with the deep geological timeline of the site as well as the extractive history that had caused its current degraded state. In the concept diagram in Figure 1, Kopache draws the proposed evolution from angular aggregate as it smoothed over time to regeneration, represented through the transition from aggregate to sprouting seed. In this drawing, Kopache employs the past use of the site to imagine a re-orientation towards the ecological and cultural value that the space could have. Figure 2 is a collaged rendering of the design that gives a further insight into how some current site conditions, such as the piles of aggregate, are maintained to connect users with the histories of the site. This collaged rendering further uses atmosphere to suggest that, despite the history of extraction, through design intervention, the space can have moments of seclusion and respite. In addition to the sensitivity to aggregate remnants manifested through project forms and materials, Kopache’s project further looked to an optimistic scenario in which new fill and aggregate would not be used on the site. Seeking to balance cut-and-fill operations as a design constraint within a first-year design studio project is impressive, showing a commitment to other nearby extraction sites by reducing the demand for new fill and aggregate to be trucked in to rehabilitate the Waynco Pit. Through deep engagement with the extractive history of the site, its broader geologic context, and the embodied experience of seeing the impact of operational aggregate pits, Kopache recognized the need for design that seriously considers the implications of material specification.

Craig Klomp also engaged with the connected histories of site and context to propose a program and design that brought together public space



Figure 2: Margot Kopache, 2022. Collage Rendering showing the incorporation of existing site forms into the design for a transformed landscape that provides spaces for reflection and seclusion where there was once industrial noise and large-scale earth-moving.



CONVEYING
COLLAGE

Figure 3: Craig Klomp, 2022. Collage Rendering that communicates a key concept and design intention within Klomp's project to incorporate the past uses of the site into designs for the future, through forms as well as the thoughtful incorporation of remaining equipment on site.

for social gathering and recreation as well as ecological functions to support life in the Grand River watershed. After diving into research on the Grand River's ecology and recorded histories of major floodings, Klomp researched climate change scenarios that predict more extreme weather with periods of drought punctuated by torrential rainfall events. Designing for these extreme climate conditions alongside the need for upstream filtration, Klomp's project emphasized water retention and filtration through the expansion of an existing wetland that has been slowly developing since the pit closed operations. Such a project would help the ecological vitality of the site, connecting it back to the Grand River through riparian systems. Like Kopache, Klomp was also inspired by the site's extractive past as a design reference to remember the recent history of use. Figure 3 is a collage that Klomp made early in the design process that brings together some of these goals for the site, including the juxtaposition of existing machinery on the site with proposed programmatic uses. Although this collage somewhat abstractly brings together the design intention, this clarity of concept would become crucial to the refinement of design iterations and eventual plans to incorporate the original weighing station as a bridge feature in an ambitious vision for a public park.

Through these selected images from two studio projects, the ambition from students for bold designs that reimagine an otherwise heavily impacted site are clear. Although the studio focused on optimism—and used the pedagogical precedents and ambitious concept development thinking for what this seriously degraded site could become—both of these examples also show a sensitivity to the complex histories that are entangled on this site. These studio projects demonstrate that optimism within the context of the design studio does not necessarily mean a sanitization of the past with eyes steadfastly trained on the future. Through using the framework of optimism to guide design pedagogy on post-extractive landscapes, thoughtful collaboration with the past—both of the site itself, as well as precedents that have come before—reveals grounded proposals that strive for regenerative landscape futures. ¶