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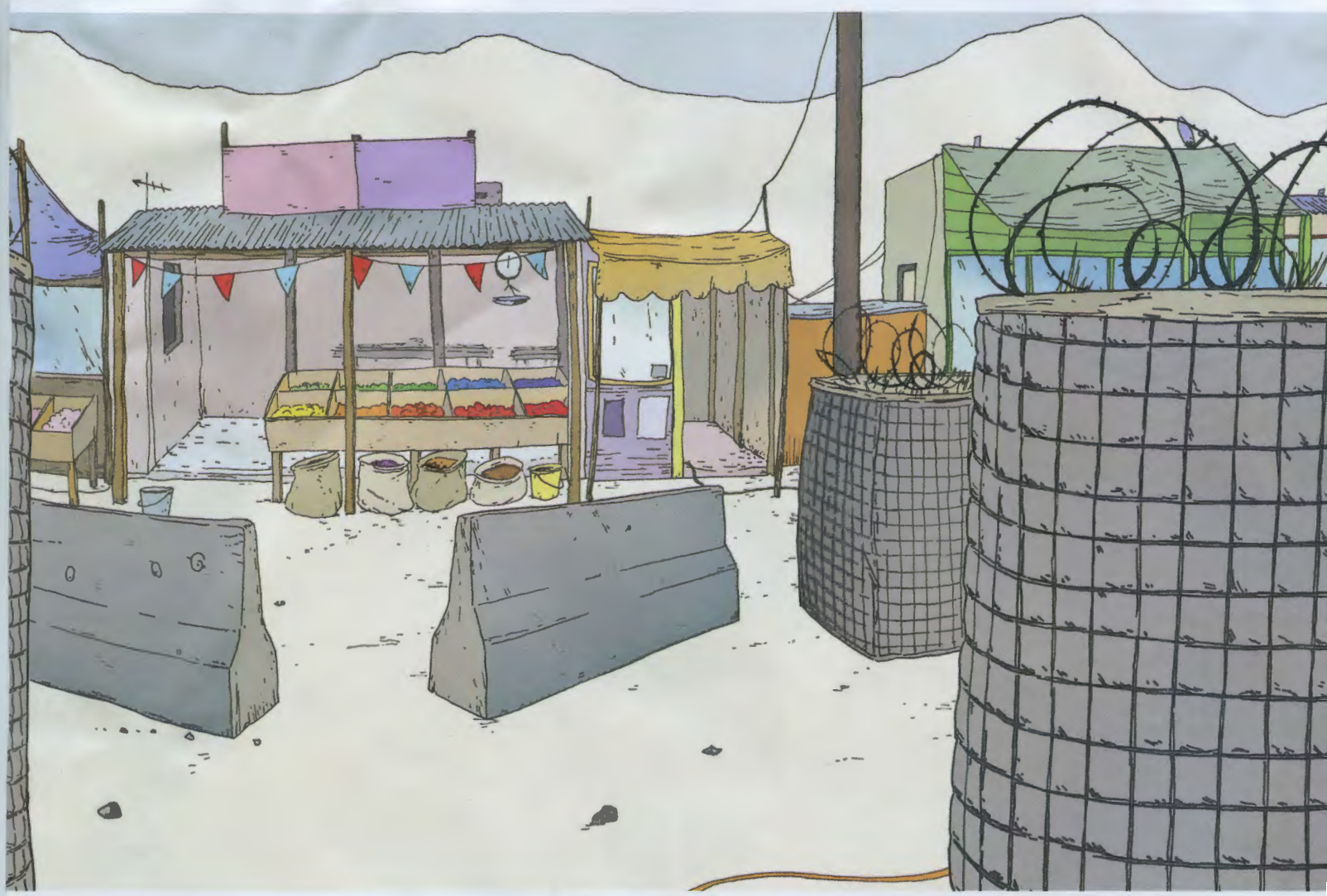

The Good Earth

As the war-torn city of Kabul, Afghanistan, is transformed into a maze of blast walls, military checkpoints, and foreign bases, how might security architecture be changed to foster psychological stability?

Bartholomew Digby runs his calloused hands along the walls as he scrambles around the Parwan Fort. He'll casually draw a finger down a mud-brick surface sill as he passes. Sometimes he caresses the *paksa*, or mud mortar, with what seems to be genuine affection. Like many occupants of this reconstructed 18th-century fort, the 25-year-old Brit was drawn to Kabul by a fascination with traditional building methods and a faith in their powers to heal a city wounded by decades of war.

The fort is the base for Turquoise Mountain, a foundation established to rebuild Kabul's historic neighborhoods. Since Kabul was once a city of mud brick, Digby and his colleagues have transformed the fort's garden into a laboratory for earth architecture. Each structure is an experiment: Here, a wall made from brush matting and mud; there, an arch-roofed home for refugees. ▸

Story by Charles Montgomery
Illustrations by Amze Emmons

Digby, a project manager, pauses in the shade of a single-story wall quite unlike the others. This one is striated with dozens of brick-thick layers of rammed earth. He pops a crumpled cigarette between his lips and smacks the rough surface. "Strong *stoof*," he says in his Bristolian burr. "The guys joke that you could fire anything at this wall and it would hold up. Okay—it might disintegrate in a big explosion, but it would break into dust, not into flying blocks of concrete or steel."

This is how architectural discussions digress in Afghanistan: Nice wall—but will it stand up to a car bomb? As insurgency rages in the south of the country and explosions periodically rock Kabul, every decision, every structure, every investment in urban development is scrutinized through the lens of security. Which is how a crew of earth-architecture idealists found themselves designing what may be Kabul's first green blast barrier.

Kabul has always been a city of walls. Built most commonly with mud brick, walls surround nearly every home, even the humblest hillside hut. In a country with strict gender and social codes, walls allow for privacy as much as for security. But the foreigners who arrived after the ouster of the Taliban in 2001 have taken walls to new extremes.

International guesthouses, embassies, offices, and even restaurants have adopted military-style fortifications. House-high concrete walls have been beefed up to blast-readiness with stacks of HESCO—blast barriers made from refrigerator-size wire cages and bags filled with dirt. Despite orders from President Hamid Karzai to clear them, sidewalks remain blocked by sandbagged bunkers, guardhouses, and spools of razor wire that twist down the street edges like oversize Slinkies.

Wazir Akbar Khan, Kabul's embassy quarter, is gradually assuming the forms of Baghdad's Green Zone. Steel pole gates cross most of the neighborhood's edges. The main road from the airport through the heart of the city passes the U.S. Embassy, so it has been blocked by chest-high cement blocks and by a labyrinth of HESCO walls and sniper nests. Whole streets have been transformed by concrete T-barriers into canyons of deserted asphalt.

After suicide bombers stormed the Serena Hotel in January 2008, local architects involved in Kabul's reconstruction wondered if all these fortifications might be backfiring. Ajmal Maiwandi, who oversaw the rebuilding of Kabul's 16th-century Babur Garden, tied the growing insurgency to the failures of reconstruction. "People feel anger when they cannot walk on the sidewalks of their own city because of heavily fortified buildings, with menacing armed guards, encroaching onto public space," he told me. Kabul's suicide bombers are believed to come from outside the city, but Maiwandi points out that they can't succeed without the support of local people willing to feed and hide them.

In my own wanderings around the city, Kabulis complained that aid dollars were being spent on security for foreigners. "Your money is not helping us!" a teacher at Ariana High School barked at me. Stranded between the HESCO canyons of American compounds, Ariana's students are frequently barred from walking to school.

But do aggressive urban forms actually produce aggressive citizens? Given the hostility of Kabul's fortifications, it's a tempting thesis.

In peacetime, "hard" architectures—high, bare, concrete walls—attract vandalism and graffiti, points out Robert Gifford, a University of Victoria environmental psychologist. In conflict zones, the reaction may be incrementally aggressive. "When you challenge people with barbed wire and concrete," Gifford says, "at some low level of consciousness, it could create support and sympathy for those who want to fight against it. They might be more likely to support insurgency when they see such a hard face of foreign involvement." In other words, fortification might create an "us versus them" dynamic, whether its designers intended it or not.

New insights into the so-called science of happiness have been used to argue that urban design does change the psychology of a city's inhabitants. Landscapes that maximize feelings of safety, equity, and trust can actually produce happier, more engaged citizens. This theory was tested nearly a decade ago when then-mayor Enrique Peñalosa decided to turn troubled Bogotá, Colombia, into a laboratory for happiness theory. In order to make Bogotá feel more open and equitable, Peñalosa tore down fences around public parks and forced parked cars off sidewalks. Surveys found that feelings of optimism shot up during his term. Despite an ongoing civil war, the violent crime rate plummeted.

Nobody has the audacity to imagine Kabul as an oasis of happiness. But amid the mud-brick walls of the Parwan Fort are signs that architecture—and walls themselves—can function as a kind of social therapy.

The fort not only houses international staff like Digby, but it is also the daily workplace for dozens of local masons, carpenters, craftspeople, and teachers. Unlike many foreigners I met in Kabul, Digby was not afraid of the city—partly, I suppose, because it had found a way into his home. The easy mixing of foreign and Afghan staff bumps the fort right off the United Nations' list of safe destinations, but it has won the support and affection of Afghans. This reaching out, one security consultant told me, is a remarkably effective strategy.

It is the walls themselves that most strike a visitor to the Parwan Fort. There is a softness to them, a warmth in the blond grit and straw peppering the paksa masonry that speaks of the earth beneath your feet and the methods that have served Afghans for centuries.

Which brings us back to that rammed-earth blast wall. One day last year, Douglas Hageman, an operations manager for the United Nations Development Programme, showed up at the Parwan Fort looking to get his hands dirty. He played around in the mud with Digby and Grahame Hunter, Turquoise Mountain's earth architect. They talked about the wonders of dirt—how Afghans could build, say, a mud-brick school using little more than straw and the earth around them, rather than waiting for foreign contractors to spend tens of thousands of dollars on imported concrete. The school would be warmer in winter and cooler in summer than its concrete counterpart. With almost no shipped material, construction would be close to carbon neutral. Built by Afghans, it would also be less likely to face insurgent attacks than a school built by foreigners.

Until now, the UN has encircled its properties in HESCO Concertainer blocks. HESCO is a handy innovation: The wire-mesh blocks come lined with polypropylene bags, so four soldiers and a backhoe can assemble and fill a ten-meter-long blast barrier in a matter of hours. But the blocks, manufactured in the United Kingdom, are expensive, not to mention crudely hostile to the street. "It's right in your face," Jake McQueen, HESCO product manager, admitted when I called him. "You wouldn't really want to use it in downtown New York or London."

What if rammed earth were to stand in for HESCO? A meter-thick earth wall would have the density to protect against blasts while offering a more traditional, less military aesthetic, thought Hageman. Moreover, rammed-earth wall projects would put cash into the hands of Afghan workers, rather than foreign suppliers. If school architecture could be guided by social development goals, then why not fortification? "Just doing the wall at our guest house would employ 100 people for two months," Hageman enthused.

But the debate over urban fortification has barely begun. The earth wall is a reminder that the life and power of a built form extends beyond its everyday function; it can be a symbol of community and tradition as surely as a concrete T-barrier can embody fear and alienation. Afghanistan's Ministry of Education has now enlisted Turquoise Mountain's help building a rural school prototype. The first task, of course, will be to build an earthen wall around the school site.

There is a kind of wisdom in dirt, Digby insists as he gives the striated wall one last smack. It is, indeed, strong stuff.