

UNGROUNDING

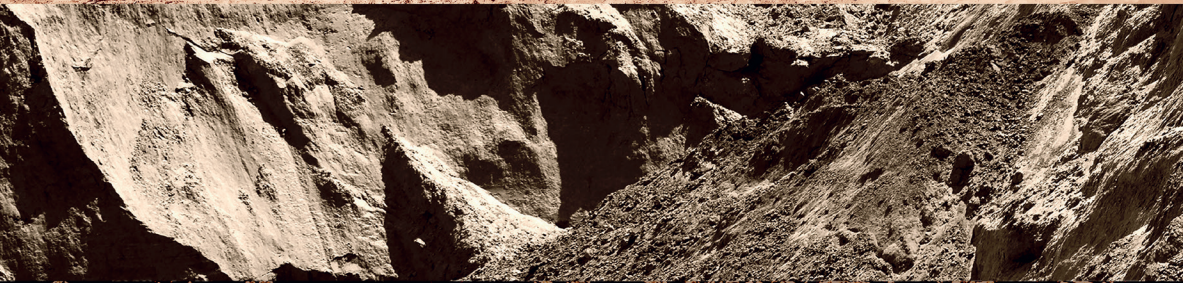
The Architecture of Genocide

'Urgent and essential'

DAVID WENGROW

'Extraordinary'

ILAN PAPPÉ



EYAL WEIZMAN

UNGROUNDING

ALSO BY EYAL WEIZMAN

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UNGROUNDING

The Architecture of Genocide

EYAL WEIZMAN



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Architecture is politics slowing into form.

An incident is architecture erupting into politics.

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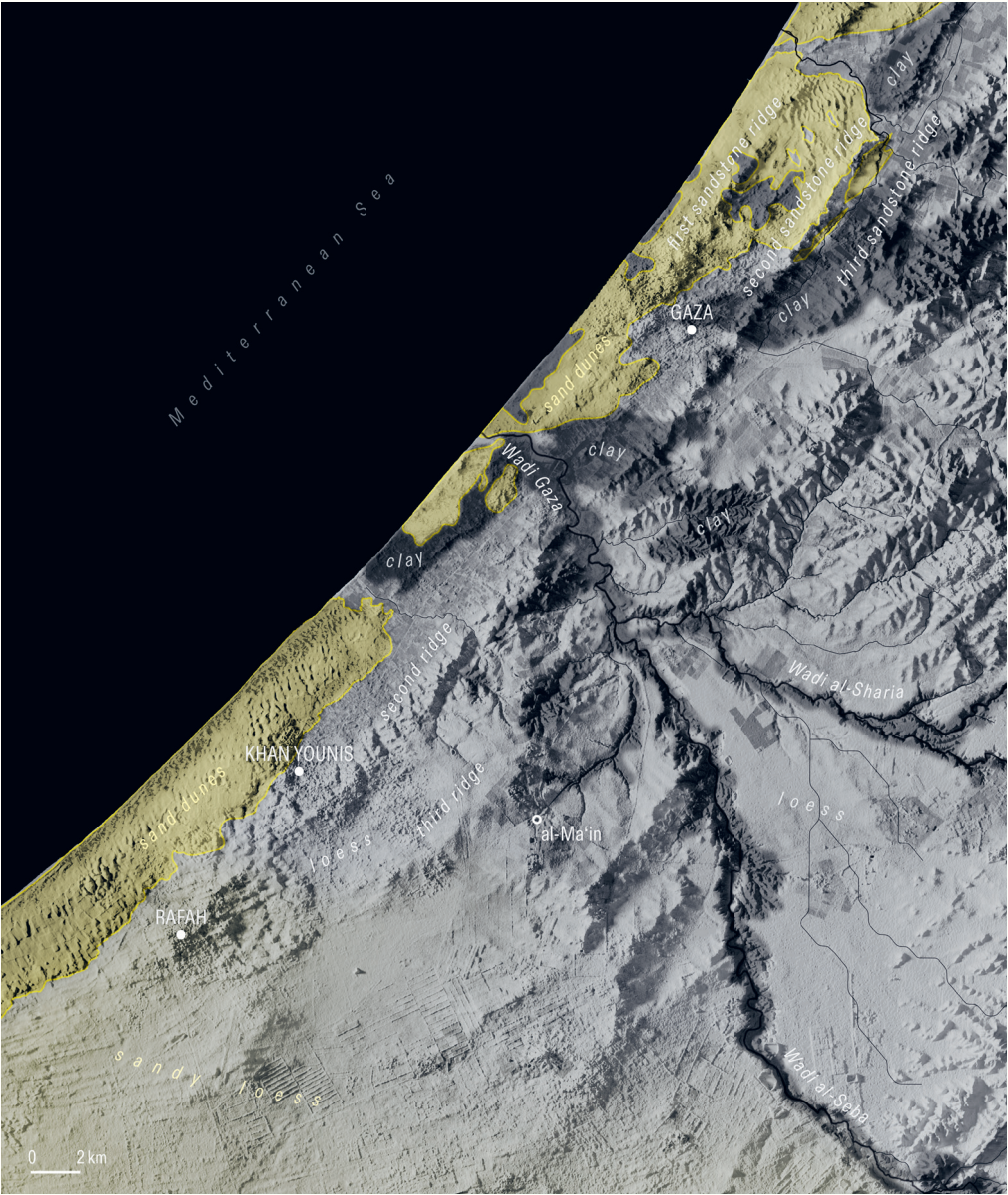
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An elevation and soil map of the south-western coast of Palestine without borders. Three shallow ridges – ancient fossilised sand dunes – rise parallel to the coastline. The ‘first’ or ‘coastal ridge’ is covered by loose sand (yellow). The ‘second’ or ‘Ali Muntar ridge’ and the ‘third’ or ‘Beit Hanoun ridge’ have fertile loess soil. The shallow ridges are broken by Wadi Gaza and its tributaries, which drain large quantities of fertile alluvials and clay from the Hebron Mountains. The area was largely cultivated with wheat and barley and was Palestine’s breadbasket.





The ploughing of a temporary separation line, around the area that came to be known as the Gaza Strip. The provisionary boundary became the permanent border of the Strip.

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INTRODUCTION

THE EARTH-STORM

The Caterpillars have been here for a long time. In August 1950 the area that came to be known as the Gaza Strip was cut off from the rest of Palestine by a ditch carved into the soil by a single-blade plough pulled by a tractor. An archival photograph depicting the scene shows the tractor to be a Second World War-era Caterpillar, model D6.¹ It was part of a convoy of military vehicles. Behind it drove Israeli and Egyptian troops and United Nations truce observers. An Israeli soldier named Amnon Degieli described the scene. 'A jeep with the two sector commanders, the Israeli and the Egyptian, led a convoy of vehicles. The officers held a map at a scale of 1:100,000 on which the border was sketched with a thick pencil line. On the ground the width of the pencil line was one hundred metres.'² Entire homesteads and farms fell within it. Mordechai Galili, another soldier who, like Degieli, was a settler from a nearby kibbutz named Nirim, described the process for the settlement's bulletin. He said Israeli and Egyptian troops 'argued over every millimetre . . . the bargaining was like in a fish market. There were arguments over every tree.'³ In the scorching August heat, the 'American major' – presumably one of the Colombian UN officers posted to the frontier – 'took off his shirt to sunbathe'. The photograph shows several of the troops lounging in what looks like an abandoned field, while the labour of partitioning Palestine was performed. The 'American' had the last word. 'A signal was given, and the tractor ploughs a straight line right through orchards, vineyards

and wadis.⁴ The ploughing continued segment after segment. In one location, Galili writes, ‘the tractor climbs over a cactus fence and parts it with pleasure.’ Elsewhere alarmed Palestinian farmers – witnessing the growing trench tearing them away from their lands – surround the vehicles. The Israelis taunt them: ‘Take a photograph of this place because you will not see it again.’ A Palestinian man shouts that they will soon have their land back and tells the settlers to return where they came from. A desperate farmer pleads with the Egyptian officers to move the line beyond his field. The Egyptians impatiently brush him away. Along another segment, ‘an orchard of plum and apricot trees ended up on our side. The owners are on the other side of the line. In front of their eyes we fill our stomachs and pockets, and throw the fruit stone at them, “Eat some!”’ The ploughing progressed from north to south. The landscape was rich with fields and orchards. At yet another location, Palestinian farmers realised that the plough was about to cut between two contiguous villages. ‘The people in the villages of Abasan and Khiza’a came out in force, screaming, shouting, and yelling.’ Women and children gathered around the convoy. The demarcation process was stopped, and the Egyptian army led the convoy away.⁵ On this occasion, the Palestinian farmers succeeded in shifting the line. This rare moment of success was recorded years later by Salman Abu Sitta, who on 14 May 1948 – the day the state of Israel was declared, when he was ten years old – had been expelled with his family from their agricultural village of Ma’in Abu Sitta (al-Ma’in) located on a sandstone hill, some three kilometres on the Israeli-controlled side of the plough line and overlooking the towns of Khan Yunis, the coast-line, and beyond the horizon the Egyptian Sinai Desert. Abu Sitta has become one of the most prolific chroniclers of the ongoing Palestinian Nakba and one of the most forceful advocates for Palestinian return. In February 2025 Salman came to the offices of Forensic Architecture, the London-based research agency I run. Together we worked on a careful digital reconstruction of al-Ma’in – a village whose architecture, agriculture and history are central to this book.

The plough line was not an internationally recognised border but it gave rise to two new and complementary territorial units: the Gaza

Strip and the Gaza Envelope. The former was a concentration area for 200,000 refugees expelled from 247 localities, villages and towns and the area's original 80,000 inhabitants; and the latter a frontier zone designed to incarcerate them. The difference between the two sides of the plough line was stark, writes Galili. 'The Egyptian side is dark with Arabs and their herds while the Israeli side is empty.'⁶ The administrative region of the 'Envelope' was officially declared only in the early 2000s, as a means of providing the area with Israeli state subsidies, but the term is an apt description of this frontier zone of civilian and military installations that started to be assembled at the same time as the Gaza Strip was formed and designed to enclose it and put it under permanent siege.⁷

Nirim, the kibbutz settlement from which the Israeli soldiers who ploughed the border line arrived, was built on the ruins of al-Ma'in. They fortified behind an enclosure of fences and trenches shaped like a pentagon – a five-centuries-old typology of military fortifications. The settlers dismantled the ruins, and over the years erased most of the remaining traces of al-Ma'in – save for one concrete building and a deep well which they used. The means of erasure was cultivation. The settlers ploughed over all surface elements – buildings, the stone walls between the plots of wheat and barley, the vegetable gardens, the pedestrian routes, the vehicle roads, the agricultural storage facilities, the two buildings that provided the first regional school in the area, and several burial grounds. Ploughing was an act of double erasure, both of what existed and of the traces that any erasure had at all taken place. Soon the fields covered the remnants of al-Ma'in with a dense plume of fresh vegetation. This erasure was meant to transform the land beyond recognition and leave the Palestinian villagers pushed into the coastal area with nothing to return to. The task of Nirim, like other settlements and military bases entrenched around the newly formed Gaza Strip, was to guard the frontier against Palestinian refugees, like members of the Abu Sitta family, who were trying to return to their lands to salvage possessions, harvest crops or fight the occupiers. The settlers were ordered to shoot-to-kill at anyone – armed or unarmed, man or woman – who crossed the

plough line. Nirim, along with the kibbutz settlements of Nir Oz, Magen and Ein HaShlosa, also built on Abu Sitta's land, would be amongst the hardest hit on 7 October 2023.

*

'The Occupation [Army] has changed the Strip's topography beyond recognition,' wrote Palestinian poet Omar Moussa at the end of November 2023.⁸ By that time thousands of ground-penetrating bombs had ripped through the subsoil with the seismic force of small earthquakes. They created craters deep enough to swallow entire buildings. Giant armoured bulldozers – now Caterpillar model D9 – stabbed their front blades into the ground and drove forward, flipping fields and shaving off orchards. A Palestinian farmer sent Forensic Architecture a voice memo describing the family farm, which had a vegetable garden and one of the last olive, pomegranate and citrus orchards in the area: 'It is now the same as it was before, desert. I wouldn't be able to recognise it.'⁹ After the farms came the outer neighbourhoods of villages, cities and refugee camps. Videos posted by soldiers showed bulldozers felling line after line of homes, tearing through the asphalt of roads and letting raw sewage bleed out of the broken pipes onto the exposed soil. The bulldozers proceeded to turn Gaza's Coca-Cola factory into a landscape of glittering glass.¹⁰ They stopped at nothing, scraping through archaeological sites and cemeteries.¹¹ 'Our job is to flatten Gaza,' one of the units operating the bulldozers posted on social media.¹² 'Palestinians will have nowhere to return to,' said another Israeli officer, 'all they will find is scorched earth. No houses, no agriculture, no nothing.'¹³ Further west towards the coast another soldier marvelled at the vista they opened, 'a momentary view, pure and profound, of clean nature.'¹⁴ 'If we survive this war,' Omar Moussa quoted a friend asking, 'what would be our meeting point?'¹⁵

Ungrounding is unlike other kinds of destruction in which the surface markings of inhabited areas – plot lines, roads, fields, gardens, walking paths – remain identifiable. In all other wartime

destruction that I have studied, even when buildings collapse, one can still tell where they once stood, and understand something of the social reality that the urban surface held together. After a conflict ends, buildings and neighbourhoods can be extruded from their footprints. Ungrounding, on the other hand, aims to remove a society from its place and erase all traces to its previous existence. It extends from buildings down to the soil beneath them. It is a type of violence that is earth-shaping, terra-forming. Ungrounding is not a by-product of military confrontation but rather its aim. It destroys all conditions that sustain life and produces an empty slate, a *tabula rasa*. The monochrome desert of upturned soil is the material signature of Israel's genocide.¹⁶

Soil is a composition of multiple elements. Grains of sand have each a different origin – seashells, coral, rocks and minerals – likewise the ungrounded soil of Gaza after October 2023 became a mixture of fragments of all elements that had previously composed urban life – crushed concrete, plaster, plastic, glass, dead plants, sand. Since October 2023, Gaza was not only turned into a demolition zone but also into a construction site. The bulldozers carved a new militarised master plan through the pulverised rubble, like a finger sketch on a dusty windscreen. In this design, rubble mounds became the basic architectural unit, the walls with which every type of structure was made. Bulldozers shuffled right through the rubble to make roads that cut Gaza into separate sections. Along these routes, the bulldozers piled up mounds to enclose fortified compounds, military outposts and detention facilities where Palestinians were interrogated and tortured. The relatively flat topography of the Gaza Strip was gradually transformed into a stormy landscape of artificial dunes that drifted along with the movement of the army. The army turned the surface of the earth into a gelatinous and fluid medium. Earth-waves rose, receded and settled when the army's priorities changed. The earth storm swallowed people inside. There are estimated to be 11,000 Palestinians missing, many of them in deep craters or under tall mounds of rubble, drowned in earth without a proper burial.¹⁷ Even the markers placed over these grave sites have been swept



An artificial hill raised close to the Gaza Strip perimeter fence provides the Israeli army with topographical control within this otherwise flat area. An infantry unit can be seen at the crest of the hill. Ammar Awad, 2024.

INTRODUCTION

away in the earth storm. Often, at Forensic Architecture, we seek to identify the location of videos by visible urban markers, but as the genocide proceeded, available markers disappeared and the setting of the videos was nothing but the indistinct and shifting landscape of rubble dunes, making many difficult to locate.

Much of the ungrounding occurs in areas that the army refers to as a 'buffer zone' all along Gaza's fences. Throughout the past two years the buffer zone expanded until it covered almost all of the territory of the Strip. This ungrounded area is forbidden for Palestinians to return to. The army regarded it as *shetah hashmada* – an 'annihilation zone' where every Palestinian present could be shot on sight. In the buffer zone no plant or structure remained. This aims to remove any hiding place and expose Palestinians to fire from military snipers or from armed quadcopter drones that patrol the dune landscape.¹⁸ The ever-growing tide of destruction pushed Palestinians into dense and crowded pockets of land on the coastal sand dunes. The army called these areas 'humanitarian zones', though they are anything but humanitarian, and are better described as 'concentration areas' or concentration camps. Tents were erected on the dunes and on the seashore. When displaced Palestinians ran out of sand, tents were erected among the ruins, on piers extending into the sea, on roads and near garbage dumps. Scattered on the dunes, the surviving population of Gaza was reduced to bare existence, subject to unrelenting hunger and thirst under the ever-present hum of killer drones and bomber jets. Israel wanted Palestinians trapped in these islands either to leave or die, and the exit points were closed. This book was sealed shortly after a ceasefire was declared in October 2025. The ceasefire did not bring an end to Israeli attacks but it froze the situation on the ground, leaving Israel in control of an ungrounded buffer zone extending over 58 per cent of the Strip with Palestinians crowded within the broken cities and tent camps along the coast.

*

An important framework for this book is the region's unique environment and geology. Palestine's southern Mediterranean coast, where Gaza is located, is the meeting point between different types of soil. Sand washes in from the sea and piles into dunes that drift eastwards with the winds. Clay drains from the West Bank mountains in the opposite direction with the winter floods. The barren sand meets the fertile soils a few kilometres from the coast. The area's main traffic artery, Salah al-Din Road, one of the region's oldest routes, is stretched along the seam between sand and soil like a giant dam. Sand and clay also interlace below the surface in alternating layers. Though Gaza's surface is relatively flat, under the surface and soil layers are folded into a sharper topography of ridges and valleys. The landscape includes underground 'lakes', where water accumulates in the form of aquifers, and a 'seashore' at the salt water level. The subsoil also includes manmade structures such as archaeological sites, pipework, rubble infill (from Gaza's multiple episodes of destruction), underground barriers and unexploded munitions. The slope of the subterranean ridges might be steep at places, but the landscape is invisible. Upper layers fill the depressions in lower ones, and there is no skyline to reveal the topography's sharp silhouette. The only way to experience the contours of this landscape is in a tactile way, with the tips of one's fingers. Experienced well and tunnel diggers know how to differentiate between types of soil by their texture, viscosity, moisture and density.

Soil is not only shuffled by the colonisers. The architecture of the tunnels responds to the buried landscape, just like buildings respond to surface topography.¹⁹ Tunnel diggers often move up and down within the sloped clay ridges which offer stability. Boring tunnels through the subsoil, Palestinians followed traditional techniques of excavation that are grounded in well building, and that were further honed after 1967 when resistance to the occupation withdrew to the subsoil as the only part of Palestine left unoccupied. In the decades since, tunnels provided a lifeline to relieve the blockade imposed on the Strip and facilitate the operations of the armed resistance. Tunnels continued to be dug and repaired even after October 2023,

the excess soil from newly dug shafts easily blended into the sea of rubble.

Videos posted by the Izz al-Din al-Qassam Brigades, Hamas's military force, show barefoot fighters – no one wears shoes in the humid recesses of the earth – emerging by the army's outposts, firing rockets or guns at Israeli soldiers or attaching explosive charges to armoured vehicles.²⁰

The architecture of the tunnels – as Part II will tell – continuously confounded the Israeli army.²¹ One of the unintended consequences of Israel's ongoing ungrounding is that building rubble is spread everywhere across the surface. Knots of twisted iron bars distort the electromagnetic signals of Israel's ground-penetrating radar. While about 80 per cent of the buildings above ground were destroyed or damaged, in the subsoil the proportion seems to be inverted: after close to two years of occupation, almost total destruction and subterranean explosions, Israeli officials claimed that it had been able to destroy only some 20–40 per cent of the tunnels.²² Though *Ungrounding* is among other things a history of the tunnels, its task is not to map their layout.

Whatever information about tunnels is made public is most often disinformation, exaggerations, underestimations, bravado, psychological warfare, attempts to justify the indiscriminate wanton destruction of the surface, or to explain why after two years of destruction of nearly everything overground much of Hamas's fighting force was still intact. Israeli spokespersons described the tunnels under Gaza as a metro – conjuring an image of an integrated network hundreds of kilometres long extending everywhere under the surface and connecting every tunnel shaft to another.²³ Part II will show that nothing like a metro ever existed. If it did, the entire system would have been exposed with the first discovered shaft. Rather than a single complex structure with a distinct architectural shape the tunneling is an operative principle that allows for concealed navigation between surface and depth. Tunnels bypass and short-circuit the visible logic of the surface but are not a separate domain from it. There is a wide multiplicity of tunnels dug and operated by different organisations and large families. Each has a different task – trade, rocket launch, shelter, attack, concealed

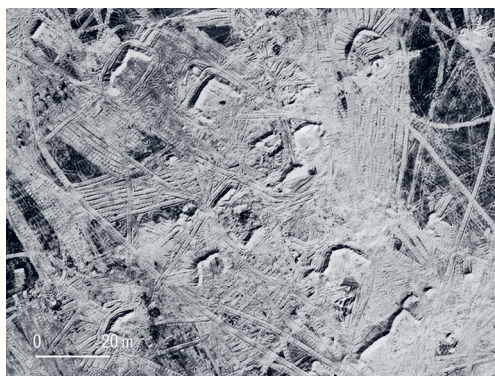
manufacture or storage. The image of a metro was meant to justify the total ungrounding of Gaza's lived surface, which was described by this metaphor, as a massive, horizontal human shield.

*

Looking closely at soil and the various agricultural or military practices related to it – its cultivation, fertilisation, care, contamination, excavation, and piling into artificial landscape – *Ungrounding* offers a longer environmental history of this coastal sliver of Palestine. It seeks to understand the Nakba – a process that started in 1947–8 with the forced expulsion of 750,000 Palestinians by Zionist militias and the Israeli army – not only as an eight-decades long history of displacement and segregation, but also as an ongoing process of land transformation.

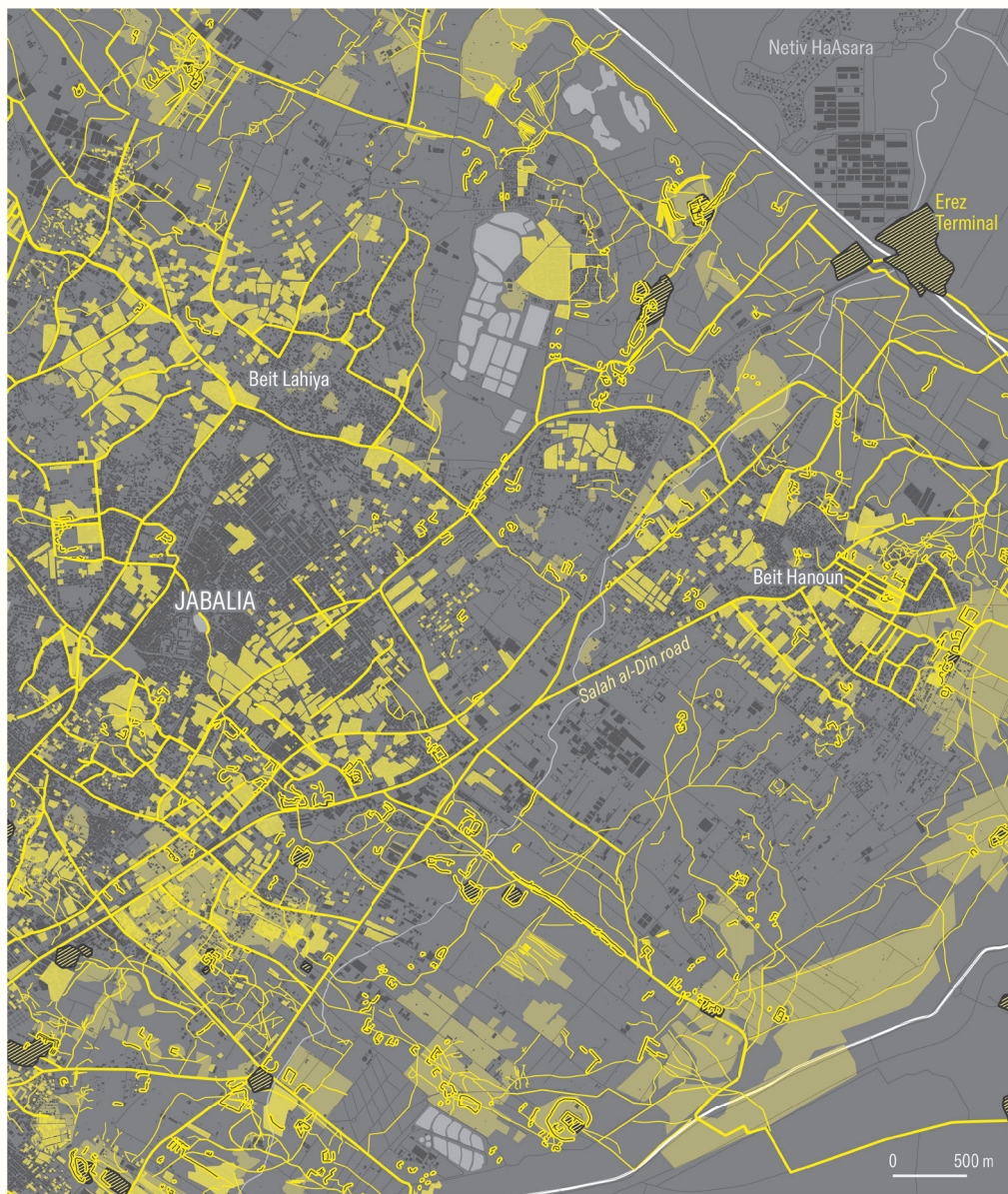
Even before 7 October 2023, it would have been hard to imagine the Gaza Strip, with its dense camps and cities, as a natural environment. But the history of the region has always unfolded in relation to its unique and fragile climate, at the threshold of the desert. Gaza is a transition zone between the fertile fields of southern Palestine and Egyptian Sinai. Ever since the beginning of the Nakba, and increasingly since October 2023, Israeli politicians looked to the Sinai Desert as the destination for the expulsion of Palestinians. An environmental marker, the threshold of the desert, has thus turned into an ever-present threat looming on the horizon.

Since October 2023 the one strategic aim of Israel's campaign was the expulsion of Palestinians beyond the desert's threshold to Egypt, but it also tried to move the desert line itself. Ungrounding, as a military form of desertification, unrolled from the Gaza perimeter fences inwards, destroying all conditions that support life wherever the army progressed. Ungrounding primed the territory for development. Different plans for the future of Gaza were all drafted while destruction was still ongoing and by others than Palestinians. Jewish settlers renewed their colonisation plans, the



The soil and rubble of the destroyed neighbourhoods of Gaza were piled by Israeli bulldozers into an artificial landscape, used to form all sorts of military installations including outposts, lines of fortifications, checkpoints, detention areas and tank emplacements. Esri World Imagery, 2024–25.

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A new militarised earthwork architecture in northern Gaza. Military routes and tank tracks (thick and thin yellow lines), earth berm outposts (black lines within yellow), military bases (yellow/black hatch) and ungrounded areas (yellow surfaces) were carved through and gradually replaced Palestinian-built fabric (dark grey). Forensic Architecture, 2025.

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US administration hallucinated Gulf-style beachfront development, and a coalition of Arab states imagined mass housing projects on the *tabula rasa* of Gaza's ungrounded surface. These proposals, each in its own way, threatened to complete the genocide by architectural means.

The book is divided into three parts: 'Soil', 'Subsoil' and 'Ungrounding'. Part I, 'Soil', begins in the period of the British Mandate and extends to the late 1950s. With Ma'in Abu Sitta and Nirim as its focus, it describes the process by which the area from which Palestinians were expelled turned from Palestine's breadbasket into Israel's main agricultural zone. It tracks the process by which the Gaza Envelope was gradually formed as a territorial enclosure starting with a 'living wall' of agrarian kibbutz settlements. Part II, 'Subsoil', opens with the occupation of 1967 and extends to October 2023. It tracks the history of the tunnels as the shadow of the political history on the surface. Part II adopts the situated experience of users to narrate the history of the area 'from the bottom up'. Part III, 'Ungrounding', describes the gradual formation, since 2023, of the 'architecture of genocide' and shows how the environment became an essential factor in it. From the beginning of the invasion, Israel attempted to expel Palestinians from the rain-rich north part of the Strip – across Wadi Gaza – to the more barren south, and from the fertile soils in the east to the coastal dunes in the west, next to the border with Egypt, where with another push, when opportunity allowed, Israel sought to force them out of Palestine.

*

Ungrounding's chief perspective is architectural. I studied architecture in the 1990s in London, where I still live. Although architectural education usually focuses on design and buildings, I've found myself driven to examine what's been *unbuilt*, what pre-existing life-worlds have been destroyed and erased by architects' impositions.

As an Israeli-born Jewish person, I saw this calculated destruction of life-worlds practised with a particular spatial type of violence all around me as I grew up. Though I have left – unwilling to build my life under a regime of Jewish supremacy – I have frequently travelled back to investigate and confront Israel's architecture of settler colonialism. I used my architectural knowledge to document the matrix of settlements, military bases, roads, prisons, checkpoints, buffer zones, fences and walls that added up to a deadly mechanism of spatial separation or apartheid. It was on the architects' drawing boards that the crimes of colonisation were being committed.

The environment was reconfigured not only by acts of construction, but equally by the designed destruction of Palestinian cities and villages. If the crimes were conceived on the drawing board, architecture was also the means to expose them. In 2010 I set up Forensic Architecture at Goldsmiths, University of London, as an investigative agency that mobilises architectural knowledge and technologies to investigate state violence. The group grew and became international and multidisciplinary and includes now besides architects also software developers, filmmakers, journalists and lawyers, all committed to human rights, spatial justice and decolonisation. Our investigations quickly became much in demand by individuals and communities experiencing state violence around the world.

The 2010s when we began was a time of technological leap. Urban spaces – the most common sites of war – were saturated with cameras and smartphones. Incidents were recorded by all people caught within the web of war, but often at great personal risk. Armies, like Israel's, target journalists and often shoot people pointing their cameras at them. People still took the risk to record and upload videos online, like messages in a bottle, in the hope somebody would look. Often, this was too hopeful. Examining these videos with the utmost attention is Forensic Architecture's way of honouring the risks taken.

Incidents are often recorded by multiple videos. Each offers a unique perspective of what happened but rarely shows events in full. Digital models of buildings or of urban areas provide the means to precisely locate videos in relation to others. The virtual model helps

us understand the relation between videos, makes clear what falls inside and outside the frame and how to fill the gap in between. Reconstructions often demand bringing together a multiplicity of video perspectives, together with testimonial accounts and material evidence. The more evidence the model brings together, the stronger the weave of reconstruction.

Videos contain both evidence and testimony. They record not only what takes place in front of the camera, but the videographer's own experiences while recording the event. In almost every video, we hear those filming also speaking, narrating what they see, shouting at the perpetrators, whispering to people close by, crying, praying or cursing. Sometimes, as we shall see in Part III, the videographer, expecting imminent death, leaves messages to be listened to posthumously. We use testimonies in other ways too. Digital models can also function as memory devices to allow witnesses to recall lost memories and precisely describe their experience while navigating through or building three-dimensional models. 'Situated testimony', a technique developed by Forensic Architecture that I will describe at some length, has been useful in understanding aspects of incidents where no videos exist and in allowing witnesses to have access to memories otherwise obscured by trauma. 'Situated testimony' also allows us to access events that are much farther in the past. We used this technique to reconstruct lost Palestinian villages with survivors of the Nakba in 1948 (as unpacked in Part I) just as we worked with descendants of the genocide survivors of the Nama and Ovaherero people in German South West Africa (today's Namibia, as described in Part III) as well as with survivors of attacks on medical facilities and staff during the Gaza genocide.

The incidents described in *Ungrounding* are not based on a personal experience of the Israeli atrocities afflicted on Gaza these days – for this purpose the reader is better served by the many accounts that Palestinians from Gaza have made available in voice, film and writing, and of all those that will surely be collected over the following years and decades.²⁴ The accounts of the genocide provided here are rather based on work conducted by Forensic Architecture, whose methods of carefully attending to testimonies

and videos allowed my team and me to follow events from London in close to real time.

Some of the work discussed in this book was prepared for courts, particularly for the International Court of Justice (ICJ) in the case of *South Africa v. Israel*, still unfolding in The Hague. We consider this case to be one of the most important in living memory. However, we are not naive about the relation between law and power and have witnessed the multiple ways in which Israel and the US attempted to undermine not only this case but the entire international legal system for the sake of allowing the genocide to continue. We produced over a thousand pages of reports to the ICJ but record and document atrocities even when there is no court available to achieve justice. Because we cannot rely on the established institutions of justice to act on such evidence, we also present it in different alternative forums. These have included the Gaza Tribunal, cases calling for arms embargo, for the arrest of Israeli soldiers, UN forums, reports, mainstream and alternative media, activist forums, lectures, exhibitions and screenings. Each of these modes and forums enabled my team and me to highlight different dimensions of the same unfolding event. The incidents we investigate might occur at the molecular level of history, but we always treat them as doorways to investigate the wider circumstances, and pull their causal threads into larger historical, territorial and political context. We call this approach ‘the long duration of a split second’.

Forensic Architecture’s investigative work is not taken from a position of neutrality. Our principle of ‘engaged objectivity’ makes us take sides, never with the state, and always with those exposed to state violence. We work in collaboration with the individuals and communities at the forefront of the struggle for liberation and seek to present incidents in a way that is led by the experience and knowledge of those individuals and communities.

Rather than being understood as a reflection of the basic principles of human dignity and international law, our commitment to liberation, return and equality for all in Palestine exposes the Forensic Architecture team, me personally, and certainly the evidence that we produce, to accusations of bias. Such accusations are often made by

agents and supporters of a state committing grave intergenerational crimes. The debate and struggle around evidence demands however that our research is prepared and presented in as meticulous a way as possible, following a clearly presented methodology and in a way that we can demonstrate, step by step, how we know what we know and why we say what we say. Having an axe to grind sharpens the quality of our research.

In recent years, Forensic Architecture has evolved into something we call the ‘Investigative Commons’, with offices run by former members, students and close collaborators in more than a dozen places worldwide including in Colombia, where we worked for the National Truth Commission documenting nearly six decades of internal armed conflict; in Mexico where we worked on the forced disappearances of the forty-three students from Ayotzinapa; in Turkey where we currently work on the killing of journalists and human rights defenders; in Greece where we presented evidence in a trial of the neo-Nazi Golden Dawn which helped get the party banned; in Brazil where we work on cases of racially motivated killings by the state militarised police; and in Ukraine and elsewhere.²⁵

Among the earliest of the groups practising forensic architecture (the use of lower case denotes the larger field rather than the name of the agency) outside of London was Al-Haq, the first and largest human rights organisation in Palestine, operating from Ramallah. In 2020, we helped found the Al-Haq Forensic Architecture Unit which has been effective in investigating the crimes of the Israeli occupation. Investigating under occupation is not without consequences. On 22 October 2021 the Israeli Ministry of Defense designated Al-Haq, without evidence, as a terrorist organisation – a designation no other government has accepted.²⁶ In September 2025, Al-Haq was put under sanctions by the Trump administration for assisting cases against Israel in the International Court of Justice in The Hague. If the committed researchers of Al-Haq are terrorists, then it must be the truth itself that terrorises the oppressor.

Al-Haq has been the target of digital and physical attacks, with its staff under constant risk of arrests and reprisals. Funders, especially

in Europe, withheld funding. As a result, anyone working for, collaborating with, or providing services to Al-Haq, including members of the Forensic Architecture team, has also been subject to potential arrest by the Israeli army or police on charges of terrorism, with little potential remedy.

Less than a year after their designation as terrorists, in the early hours of 18 August 2022, Israeli troops raided the Al-Haq offices as well as those of five other Palestinian civil society organisations that were similarly designated.²⁷ CCTV footage of the raid showed balaclava-wearing commandos, guns drawn, blowing up the office's front door and rummaging through files and the computer system. The last scene visible in the video is of an officer leaning over to cut the electricity cable.²⁸ It was the first time we investigated violence perpetrated against our own team but it will not be the last.

When Al-Haq's staff arrived the next morning, they found a metal sheet welded over the door frame, with a sign saying the office was a closed military zone.²⁹ They prised the welded sheet open, and though their computers had been stolen, the organisation's staff, with the Forensic Architecture unit amongst them, were soon back at work, investigating the targeted killing of Al Jazeera journalist Shireen Abu Akleh at the request of her family. There is a connection between the designation of Al-Haq as a terrorist group and the assassination of Shireen and other journalists and human rights defenders in Palestine. Journalists and human rights defenders are often first to arrive at the sites of atrocities, reaching victims and witnesses and mapping out attacks. This violence against those who investigate Israeli atrocities is part of the regime's attempt to control both facts and their interpretation. There is a direct line between the discrediting of Palestinian testimonies, the destruction of evidence and the intimidation, arrest or killing of witnesses, journalists and human rights activists. These acts make clear that negation is not merely rhetorical, a game of language, statement and counter statement, but a violent physical practice that unfolds in the material world, similar to the way that ungrounding is an act of denial directed against the landscape, a claim that nothing had previously existed.

INTRODUCTION

Philosopher Jean-François Lyotard referred to genocide denial as an earthquake so strong that it destroys not only the environment but also the instruments designed to record its magnitude.³⁰ However, as this book will show, Israel's rhetoric after 7 October has included not only acts of denial but also a joyful flaunting of annihilatory violence. Such negation lies at the foundation of the Israeli state. While on the one hand, Israel's official state-sanctioned negation of the Nakba is the foundation for the daily negations of present atrocities, on the other, Israeli spokespersons continuously used the Nakba as a threat.³¹

*

Since 2023, I have felt a cruelly persistent, visceral reaction to the scenes of unimaginable brutality that Forensic Architecture was documenting, even as I've tried to hold things together and keep doing our painstaking work of piecing together accounts of these atrocities. The first weeks of the Gaza genocide pushed our team to its limit. We watched in horror as colleagues we had worked with for years, as friends and family of team members were killed in Gaza. The experience was hardest on Nour Abuzaid, one of my closest colleagues in Forensic Architecture. Nour's family was expelled in 1948 from Ramle and al-Lydd and she was born in al-Bureij Refugee Camp in central Gaza, and made it to London via Sudan, Syria and Turkey.

Early mornings brought bad news. Already in October, an Israeli airstrike killed Nour's close cousin, along with her husband, children and grandchildren. Any little remaining sense of safety Nour still had in the world was shattered, and the fear that death would strike closer to home and claim more of her loved ones was constant. That fear kept being actualised, time and again, as it did for nearly every Gazan we knew.

I witnessed Nour's pain, and that of others. The days after 7 October have been heavy also because people connected to my family were killed in the attack on the Envelope. I had to make

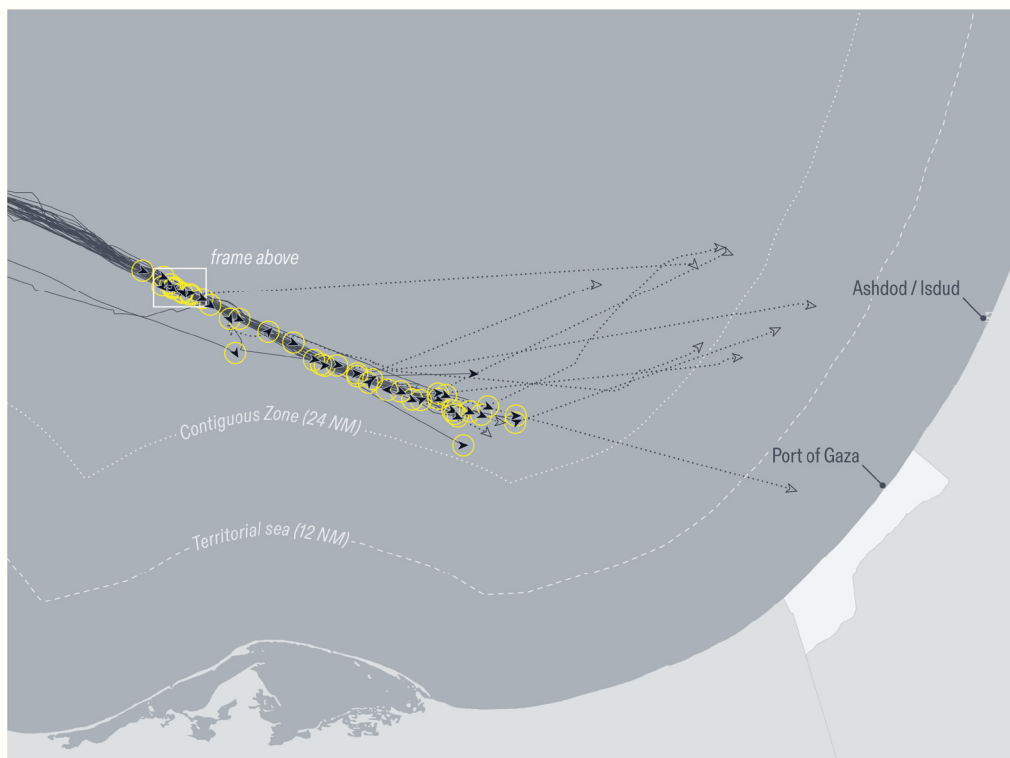
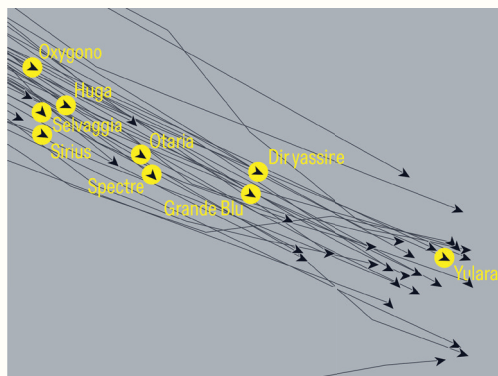
room for a tangled emotional terrain of personal grief and political commitment. I shared in the shock of those close to me, without losing sight of the fact that these feelings were more readily welcomed in a world that seemed then only able to mourn for Israeli civilians while making itself willingly blind to the ever-present Palestinian tragedy. Friends who were most supportive through these days, such as artist Emily Jacir, were Palestinians who had been crassly vilified on social media, harassed, smeared, cancelled and deplatformed (one was arrested and deported from Germany). Emily said it was part of a campaign to erase Palestinians everywhere.³²

Shortly after 7 October, Rushdi al-Sarraj, a journalist-filmmaker who was the director of Ain Media, Forensic Architecture's close partner organisation in Gaza, reached out to Shourideh Molavi of Forensic Architecture to see if we could help establish what had happened to three other members of Ain Media who had disappeared on 7 October while documenting events as journalists. Our first investigation of the genocide was thus focused on finding our colleagues, who we searched for remotely amongst the flood of videos posted that day.³³ Two weeks later Israel targeted and killed Rushdi in an air strike.³⁴ A year and a half later, Rushdi's brother, Mahmoud al-Sarraj, who was also working with us until he died, was assassinated along with other colleagues.³⁵ On 16 April 2025 Fatma Hassona, a twenty-five-year-old Palestinian photojournalist, her pregnant sister and several other relatives were targeted and killed in a strike over their home. Iranian film director Sepideh Farsi, who had just completed a film on Hassona, asked us to study the targeting of her friend. It felt to us like Israel was murdering our own.

Requests for our work came from multiple directions. We worked with the Gaza-based medics of the Palestine Red Crescent Society to investigate incidents in which their members were assassinated. We worked on legal cases against arms exports to Israel from Germany and the UK.³⁶ Our work was used in cases brought up by the Hind Rajab Foundation attempting to bring the arrest of Israeli soldiers. We provided evidence in cases where solidarity activists were

criminalised, we collaborated with the organisers of the Freedom Flotilla as the humanitarian missions they launched were intercepted by Israel. We worked with medical professionals from different international and local organisations who, after Israel banned the entry of journalists and human rights defenders, were amongst the only ones to report on the atrocities.³⁷ Throughout these months a community of solidarity was being formed. We were releasing reports at a break-neck speed, trying desperately to throw whatever little sand we had in the gears of Israel's genocidal machine.

We regularly investigate individual incidents and take the time necessary to provide meticulous reconstructions, but since October 2023 the scale of atrocities has been too large. It's been hard not to question the value of our work. What was the point of documenting atrocities when Israel enjoys impunity, when nobody in power seems to care, when the situation on the ground has deteriorated so fast with no relief in sight, when international law and human rights seem to matter so little to the governments of the global north that have kept supplying Israel's army and suppressing demonstrations and activism designed to stop the atrocities? Israel was doing two seemingly contradictory things. It claimed at the same time that its actions were justified and made no efforts to hide its crimes – on the contrary, it openly announced its commitment to the destruction of Gaza and the annihilation of Palestinians, seemingly taking pleasure in its power to transgress every international law, societal convention and moral norm. No reporting, civil protest, or legal process seemed able to slow Israel down. Nour gave me an explanation for why we must continue our work. 'We must watch every video that comes out of Gaza, because others might grow tired or look away. No loss should go undocumented.' We were miles away, safe in London, helpless in the face of the atrocities we were witnessing. Nour said working through videos was her way to stay close to her family in Gaza, where, more than anywhere else, she longed to be, and so that she could, even from afar, begin to understand what they were going through. We were not only watching videos of atrocities but of Palestinians recording their resistance and perseverance, their daily



Throughout the genocide Israel illegally intercepted boats belonging to the Freedom Flotilla in international waters (yellow circles show the boats' last known positions). *Bottom:* The interception of the forty-two boats in the Global Sumud Flotilla between 1–3 October 2025 when 462 crew members were abducted. *Top left:* Close up on interceptions on 1–2 October 2025. *Top right:* Image from *Oxygono*, a vessel in the Global Sumud Flotilla, from 2 October 2025.

life under genocide: cooking foraged food over a communal fire fuelled by recycled plastics, or using traditional techniques to dig a new well when water and desalination plants had been destroyed, running schools under the open skies or by the beach, or completing and submitting academic theses to universities whose buildings were already long destroyed – these declarations of life became acts of resistance against a power bent on their total annihilation.

Activists and protesters rose up everywhere in the world. Particularly moving to me was seeing a younger generation of Jewish activists committed to Palestine's liberation form an unprecedented solidarity with Palestinians in London, Berlin, New York City and elsewhere. Everywhere the state-sponsored anti-immigration sentiment and openly Islamophobic persecution of activists, artists and intellectuals and rampant anti-Arab and anti-Palestinian racism was justified under the guise of fighting antisemitism. This happened while real antisemites were elected to high office, and in an act of stunning historical inversion, aligning behind Israel's racist policies.³⁸ Forensic Architecture, and in particular its Berlin-based sister agency Forensis, started to experience cancellations and deplatforming, frequently coming under attack from Israel's supporters.³⁹ Both organisations experienced bogus accusations of antisemitism. Our websites have been hacked. Some funders walked away. The Berlin office radically downscaled. A lecture I was scheduled to deliver in the Free University in Berlin in February 2025, together with my friend, UN special rapporteur Francesca Albanese, was cancelled after the Israeli embassy contacted the Berlin mayor who successfully pressured the university to disinvite us.⁴⁰ We gave the lecture in an alternative venue surrounded by dozens of police officers, with detention vans parked and waiting outside. Shortly afterwards – perhaps because of this, perhaps for other reasons, the German police won't tell – I was designated a 'person of danger' and am stopped for interrogation every time I enter or exit Germany.

As mentioned above, our largest engagement throughout the genocide has been with South Africa's legal team, producing evidence for the landmark case they brought against Israel in the International

Court of Justice in The Hague.⁴¹ In January 2024, the case swept to court on the back of millions of citizens worldwide protesting the genocide. It was empowering to see representatives of the former colonial state that invented the form of racial dispossession known as apartheid standing before judges accusing Israel of genocide and denouncing the entire global north for its military and diplomatic collusion. The court failed to deliver a stop to the genocide, but it amplified the voice of the movement that opposed it and gave credence to the description of the atrocities committed by Israel as ‘genocide’. South Africa was threatened with economic consequences, demonstrating the fact that international law is perceived as a threat to the global hegemony of the US and to Israel’s ongoing colonial endeavour. It seemed that as well as its campaign to erase Palestine, Israel’s task was also to destroy the legal instruments able to render judgement on its Israeli actions.

This book has been written in snatched moments between meetings, in evenings and at weekends, during short and long commutes when the working days were dedicated to Forensic Architecture’s ongoing investigations in Gaza and elsewhere in the world. Writing a longer history attuned to the environment and soil was a way of dealing with the emotional toll that this work exacts. Arranging events in space and along a historical timeline helped me to integrate otherwise disassociated fragments of violent reality that my working days were fully exposed to, and that invasively returned to haunt my nights, into the continuous flow of time.

The book includes investigations of violence and displacement from 1948 through to the Gaza genocide. From each of those incidents it pulls out threads that connect to the longer history of the ongoing Nakba. *Ungrounding* thus moves between different scales and durations. It sometimes zooms into specific locations, the people who inhabit them, offering minute description of incidents that erupt in split seconds, and at other times it zooms out to describe accretional processes of environmental and territorial transformations that are so slow as to be almost invisible. These different scales and speeds are continuous and interrelated: incremental processes of

environmental destruction can suddenly erupt with the kinetic force of a blast. The accounts are equally based on an analysis of spoken and written testimonies, online videos and old archival documents, on geological studies and soil samples, on Ottoman or European colonial maps, on Second World War-era British aerial images and on contemporary satellite images, on poetry, oral history, on a close analysis of material traces, of soil and vegetation, but everywhere the attempt is to tune in to the experiences of those who struggle for liberation and are most exposed to Israel's violence.

The medium of soil brings together these different scales and durations. The reservoir of cultural and biological life it holds, millennia in formation, can be destroyed in an instant.⁴² Throughout the genocide, Israel's acts of ungrounding extended from surface to depth, from the broken cities and camps to the subsoil underneath. The near subsoil contains life-sustaining infrastructure like water, gas and sewage systems. Ungrounding cuts through infrastructural pipework, scrapes through grave sites and archaeological remnants dating back thousands of years. The subsoil is also a vibrant biosphere – containing an ecosystem of bacteria, earthworms, fungi and decayed organic matter which generates nutrients crucial to sustaining plant life on the surface. When they explode in the depths, craters destroy this biomass and reshuffle soil strata. Bombs discharge into the ground explosive residues and heavy metals such as lead, copper, zinc and barium. Bombed out and pulverised buildings release chemicals, fire contaminants and asbestos (which still existed in older buildings in Gaza). The rain carries these substances, with sewage from bombed-out wastewater facilities and oil spilling from hundreds of military vehicles, deeper into the subsoil.⁴³ Thousands of unexploded ordnance add further hazards beneath the surface.⁴⁴ Many of these substances will take centuries to decay, and affect the physical, chemical and biological composition of the ground. Ruptured, upturned and toxified, the soil produced by the process of ungrounding has turned a lived-in landscape into what a former Israeli officer describes as a place 'where no human being can exist'.⁴⁵



Copyrighted Material

PART I

SOIL

Previous illustration: Leaflets with orders to evacuate Gaza City and its surrounding areas filled the sky on 13 October 2023. They are amongst the most lethal things dropped by Israel from the sky, triggering the displacement of most of Gaza's population. Mohammed Talatene, 2023.

Copyrighted Material

Expulsion

On Friday morning, 13 October 2023, there was a brief lull in aerial bombing.¹ During this short and unexpected silence, only leaflets were dropped on Gaza. Videos from the ground recorded clear skies through which thousands of papers fluttered and swirled in close formation like grains of sand in turbulence. Then they spread to fill the sky more evenly as they slowly fell to the ground. Alia Kassab from Gaza City described such a vision in an interview with Middle East Eye. ‘My little brothers were happy to see coloured papers falling from the sky. They thought it was a new, interesting activity.’ The leaflets fell so slowly that one could pluck them from the air. ‘The rest of us were terrified,’² knowing these were warnings, acts of psychological warfare or propaganda. Some chose not to pick up and read these leaflets, letting them remain scattered on the devastated ground. Others collected them to light a fire, or to be used as wrapping or toilet paper. These leaflets, containing nothing but words and maps, were some of the most lethal things to have fallen onto Gaza. The message read: ‘Urgent statement! To the residents of Gaza City. Terrorist organisations have started a war against the state of Israel, Gaza City is now a battlefield. For your safety and the safety of your families you must evacuate your homes immediately and head to the areas south of Wadi Gaza.’³ The army elsewhere announced that people had twenty-four hours to do so. Panic ensued. A day was not long enough to evacuate a city of more than a million people. There were not enough vehicles. There was not enough fuel in those that were available. Many of the roads were blocked with the rubble of bombed-out buildings. People refused to leave family members trapped in the rubble behind, shouting into the ruins in the desperate hope that loved ones had survived and could hear. When hope died,

some spray-painted the names of their missing children on the broken concrete slabs that were their homes – ‘Omar and Usama under the rubble’ – and attempted to make their way south of the wadi.⁴

Israeli officials promised Nakba 2.0 and the leaflets produced scenes reminiscent of the mass expulsions that occurred throughout Palestine in 1948.⁵ Images of displacement erupted like traumatic flashbacks of a history never fully repressed. Hundreds of thousands made their way on foot, holding on to their children and some essentials, pushing wheelchairs with the elderly and infirm, the wounded and the martyred. In the night the sky was lit with the glow of white phosphorus bursts. Displaced Palestinians crossed the bridges over Wadi Gaza, along the routes that the leaflets said were ‘safe’ for evacuation. These routes were not safe. Israeli drones turned the long journey into a death march.⁶ After a day of walking, many arrived in ramshackle cities of improvised tents and huts along Gaza’s southern border with Egypt.

The leaflets dropped that morning had only one geographic element drawn on a map of the Gaza Strip: a curly line labelled Wadi Gaza and two graphic ones: arrows pointing south. *Wadi* is an Arabic word for a valley or a ravine, and Wadi Gaza is a seasonal stream that meanders through the southern agricultural fringes of Gaza City. Horror, chaos and confusion amplified panic and doubt. ‘Where do they want us to go?’ That the residents of Gaza were ordered to cross a natural feature, not a major road, a town, a village or a neighbourhood, not anything that was man-made, was ominous. Israel’s ungrounding would leave little except the natural environment to orient oneself by.

At the end of October, Israeli forces rolled in across the fences they’d erected to put Gaza under a decades-long siege and moved along the northern bank of the wadi. This otherwise dry stream bed provided the organisational logic of the genocide, in which environmental and climatic elements played a role. The stream cut the Strip in two, a slightly smaller ‘north’, and ‘south’. Israel warned that any Palestinian found within the north would be ‘identified as a member of a terrorist group’ and killed. The south became an area into which