

MEMORY WITHOUT MONUMENTS
Lockerbie and the Apparatus of Remembrance

A Thesis Submitted in Partial Fulfillment of the
Requirements of the Renée Crown University Honors Program at
Syracuse University

Yida Rick Li

Candidate for Bachelor of Architecture
and Renée Crown University Honors Program
April 2026

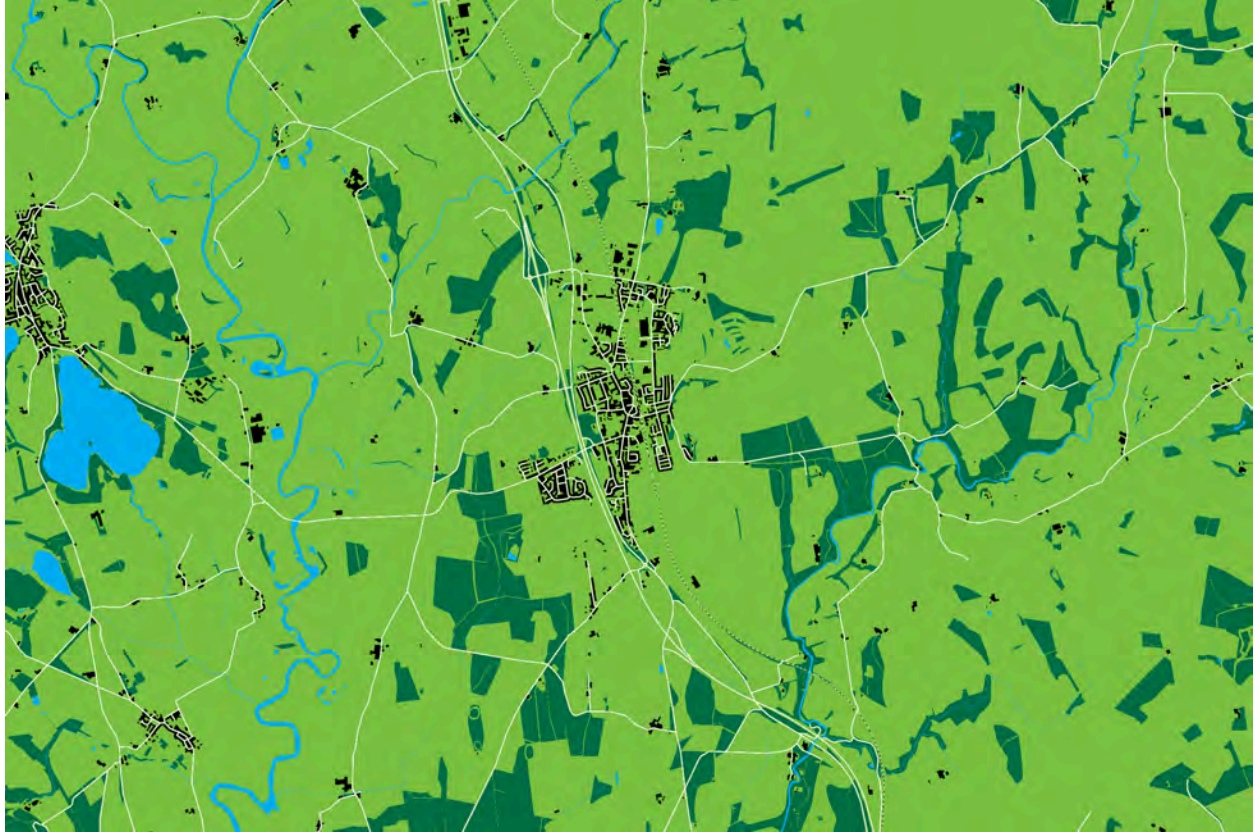
Honors Thesis Faculty Advisor: Britt Eversole

Honors Thesis Reader: Becca Farnum, LL.M., PhD

© Yida Rick Li 2026



Figure 1. Landscape upon which the debris of Pan Am 103 landed. View from the top of Tundergarth Kirk. Lockerbie, Scotland. 2024.



*Figure 2. Lockerbie, Dumfriesshire, Scotland. GIS map of the town and surrounding landscape.
Author's own cartographic work, 2025.*

Abstract

This thesis argues that traditional memorial architecture, by attempting to contain memory within a singular, formal object, is structurally inadequate to the conditions it seeks to serve. The bombing of Pan Am Flight 103 over Lockerbie, Scotland on December 21, 1988, killed 270 people — including 35 Syracuse University students — and left a community navigating a memory that belongs to the world but was never theirs to choose. Thirty-seven years later, the problem Lockerbie faces is not informational but one of transmission: how does memory survive the passing of those who witnessed it, and transfer across generations without re-imposing trauma?

Drawing on primary fieldwork conducted in my capacity as an intern for the Tundergarth Kirk Trust in March 2026 — including conversations with first responder Colin Dorrance MBE, former district councillor and Dryfesdale Lodge trustee David Wilson, historian Timothy McCracken, David Mundell MP, Oliver Mundell MSP, past and present Lockerbie-Syracuse Scholars — as well as a community survey, meeting records, and creative workshops with a local youth organization and Lockerbie Academy, the paper develops a critique of memorial objecthood through Ricoeur, Foucault, Agamben, Derrida, Blanchot, Virilio, and Woods. It examines how Maya Lin's Vietnam Veterans Memorial and Peter Eisenman's Memorial to the Murdered Jews of Europe anticipate but cannot resolve the problem Lockerbie makes visible.

The thesis proposes instead that architecture be understood as an apparatus — not a container but a mechanism for transmission. Lockerbie already operates as such a network of spatial, institutional, oral, and ritual practices. What it requires is not a monument but the sustained infrastructure of conditions under which memory may continue to be encountered, partially and incompletely, by those who were not there.

The concluding proposal gives this argument architectural form: a tethered balloon gondola, deployed across the debris field's confirmed sites over a twenty-one-year operational life, that records ambient sound, broadcasts oral histories within close proximity, and accumulates objects left by those who come to it — an apparatus of event rather than place, built in the image of memory itself: partial, mobile, and incapable of permanence.

Executive Summary

This project investigates how a community remembers a catastrophic event across generations — and what architecture can contribute to that process when a traditional monument is neither present nor sufficient. It takes as its subject the town of Lockerbie, Scotland, where on December 21, 1988, the wreckage of Pan Am Flight 103 fell after a bomb destroyed the aircraft at 31,000 feet. All 259 people aboard were killed, as were 11 residents of the town. The total death toll was 270, among them 35 students from Syracuse University returning home for the holidays. The disaster did not originate in Lockerbie, was not caused by anyone there, and was not directed at the town. Those on the ground were, as one first responder put it, innocent bystanders caught in the collateral crossfire of a geopolitical act they had no part in. And yet they became, over the following thirty-seven years, the custodians of a memory that belongs to the world.

The central question this thesis asks is not how to design a memorial, but whether the architectural act itself is the right question: what does memory actually need in order to survive the passing of those who witnessed an event? How does it transfer to people who were not there, without simply re-inflicting the original wound? And what role, if any, can architecture play in sustaining that transfer across time? These questions matter because the standard answer — build a monument, fix the memory in stone — turns out, on close examination, to be inadequate. A monument asserts. It declares something permanent and asks its viewer only to acknowledge it. What Lockerbie

requires is something different: not declaration but transmission, not permanence but a fragile and actively maintained continuity.

The research for this project was conducted primarily through direct fieldwork in Scotland and London in March 2026. The fieldwork for this project was conducted in part in my capacity as an intern for the Tundergarth Kirk Trust, a role that granted me access to the community, its institutions, and its people in ways that would not otherwise have been available to a visiting researcher, and that gave the conversations and workshops I conducted an institutional grounding within the remembrance apparatus this thesis describes. This included extended conversations with people who hold the community's memory in very different ways: Colin Dorrance MBE, a police officer who was eighteen years old and one week into his career when he responded to the disaster on the night it happened, and who has since become an informal guide and oral historian for visiting families; David Wilson, a former district councilor who opened the town hall as a makeshift mortuary within hours of the crash and has stewarded the community's remembrance infrastructure for nearly four decades; Timothy McCracken, a local historian and Dryfesdale Lodge trustee whose work on the community's documentary record has accelerated only in recent years, as the community has slowly moved from protective silence toward more formalized narration; David Mundell MP, who represents the constituency at Westminster and described the event as one not directly connected to the community in which it happened; and Oliver Mundell MSP, who grew up in the town and offered the

observation that if you stood in the high street today without knowing what to look for, you would never know. The research also included conversations with past and present Lockerbie-Syracuse Scholars — students whose year-long immersion at Syracuse University embedded them in an ongoing culture of commemoration — and drew on a community survey administered at the annual commemoration service at Tundergarth Kirk in December 2025, on meeting records from the Lockerbie remembrance community, and on creative workshops conducted with a local youth organization and students at Lockerbie Academy. These workshops were particularly revealing: young people born a decade or more after the disaster carry the event through family stories, farm fields where recovery work happened, artistic practice, and inherited civic obligation, and their engagement with it is active, varied, and often unspoken until given a form through which to be expressed.

The method of the project is critical and analytical rather than design-led. It reads this primary evidence alongside a body of theoretical writing on how memory functions, how disasters are documented, and what architecture can and cannot do in the face of grief. Paul Ricoeur, a philosopher of history and narrative, argues that memory is never a simple recording of the past but always a construction: a selection, an ordering, an inevitable omission. To remember is to narrate, and every narration leaves things out. This has a direct consequence for memorial design: any architecture that claims to hold memory completely is making a false promise. Michel Foucault and Giorgio Agamben offer the concept of the apparatus — not a single object or institution but a

network of discourses, spaces, practices, and relationships that together shape how people understand their own experience. This concept reframes what a memorial can be: not a fixed object but a living mechanism, one that sustains transmission rather than simply declaring the past. The project also draws on architectural theorist Lebbeus Woods, who argued that buildings engaging with violence and loss should carry the mark of what happened while still permitting life to continue — neither erasing the past nor being paralyzed by it.

Two major memorial buildings are examined as precedents and as limits. Maya Lin's Vietnam Veterans Memorial in Washington, D.C., completed in 1982, inscribes 58,318 names in black granite, arranged by date of death. Its power lies in its refusal to resolve those names into a single meaning: the weight accumulates without resolution. Peter Eisenman's Memorial to the Murdered Jews of Europe in Berlin, completed in 2005, takes a different approach: 2,711 concrete slabs arranged without narrative or explanation, refusing coherence and closure in acknowledgment that no architectural form is adequate to the Holocaust. Both buildings are inseparable from the apparatus of guides, rituals, and circulating narratives that give them meaning in practice. But neither addresses the specific condition Lockerbie presents: a community that already has an apparatus of remembrance — a lodge, a remembrance room, an annual service, an oral history carried by people — and no singular object at its center.

The significance of this project operates on two levels. At the level of the specific, it offers the first architecturally-framed analysis of Lockerbie's remembrance

infrastructure at a moment of genuine transition: the first generation of witnesses is aging out, the Lockerbie-Syracuse Scholars program has been substantially restructured, and the community faces the question of how memory survives when the people who hold it in their bodies are no longer there to pass it on. At the level of the general, it proposes a reconception of what memorial architecture is for. Rather than asking how to design an object adequate to a tragedy, it asks how to sustain the conditions — spatial, institutional, educational, ritual — under which remembrance can be freely given, freely handed on, and, when necessary, freely laid down. The apparatus, not the monument, is the argument. The apparatus, not the monument, is the argument. And the apparatus, this thesis contends, is already there. The work of architecture is to understand it, strengthen it, and resist the temptation to replace it with stone.

The thesis concludes with a proposal that gives this argument architectural form. Chapter XV introduces a tethered balloon gondola: a large, translucent, bulbous form, eighteen feet across and nearly thirty feet tall, visible from well over a mile across open moorland. The device carries a six-channel microphone array recording the ambient sound field continuously, a full-range omnidirectional speaker system broadcasting oral histories gathered during its operation, and a solid-state archive deposited on a three-year cycle with Dryfesdale Lodge and the Syracuse University Archives. Flexible photovoltaic cells make it self-sufficient; a flywheel momentum system allows the gondola to rotate freely with the wind. It has no inscription. It names nothing. Over its

operational life it moves between each confirmed debris location in the AAIB report — sites distributed across two corridors of approximately 130 kilometers — gathering what no archive was designed to hold and distributing it across a landscape that long ago recovered its ordinary surface. The affect it reaches for is not melancholy but the uncanny: the sensation of the familiar stripped of its reassurance, the pressure that an ordinary landscape conceals. The apparatus makes no claim to permanence.

It is, in this sense, an image of memory's own condition. It is never fully present: audible only within close proximity, visible from a distance but offering no stable vantage point, rotating slowly on an axis determined not by intention but by wind. It records without guarantee of retrieval. It broadcasts without guarantee of reception. It moves before anyone has finished with it. It accumulates around itself a voluntary and ungovernable gathering — objects left at the tether point, voices deposited and redistributed, encounters that no one planned and no one can repeat — and then carries none of it intact. What remains at each site after the apparatus moves on is not a record but a residue: the trace of an encounter with something that was already incomplete. This is not a failure of the device. It is its argument. Memory is not lost when the apparatus moves on. It was never total to begin with. The device does not compensate for this condition or mourn it. It is built in its image — indefinite, partial, dependent on those willing to come to it, and structurally incapable of the permanence that monuments promise and cannot keep.

Preface

This project began not in a library but in a churchyard.

In the spring of 2024, I traveled to Lockerbie as part of a Syracuse University London Center delegation, joining a group of students and faculty — Dr. Becca Farnum. I did not know what to expect. What I found was extraordinary hospitality from people who had been receiving visitors from Syracuse for over three decades and had never once made that generosity feel routine. The town opened itself to us with a warmth that I have thought about many times since.

During that visit, I met Ian McLatchie, one of the trustees of Tundergarth Kirk — the small church that sits above the field where the nose section of Pan Am 103 came to rest, and that has served as a site of quiet pilgrimage for bereaved families ever since. When he learned that I was an architecture student, he offered to take me on a tour of the church and its surrounding yard, which was under active restoration construction at the time, and he spoke with real enthusiasm about a projected museum that the trust hoped to develop in the grounds. By the end of the afternoon, he had invited me to be part of the architectural team envisioning it.

I left Lockerbie that spring with a sense of purpose I had not anticipated. The invitation felt significant because of what it revealed about the place itself. Here was a community that had been holding an enormous weight for thirty-six years, doing so with almost no formal architectural infrastructure to support it, and that was only now beginning to imagine what a more permanent structure might look like and mean. The question of how to design for that — how to serve a memory this old, this complex, this owned by so many different people in so many different ways — stayed with me.

As I followed the project from a distance over the following year, continuing my studies and returning periodically to the conversations and relationships that had begun on

that first visit, I found that my understanding of what the remembrance project actually was kept expanding. What had first appeared as an architectural commission — a museum in a churchyard, a building to be designed — gradually revealed itself as something much larger and more difficult. The apparatus of remembrance at Lockerbie is not a building waiting to be built. It is a living network of people, institutions, landscapes, annual rituals, and oral histories that has been functioning, imperfectly and heroically, for nearly four decades. The architectural question was never simply what to build. It was whether building was even the right answer, and if so, what kind of building could possibly be adequate to what was already there.

That realization is what turned a project into a thesis. I am not a Lockerbie native. I have no personal loss connected to Pan Am 103. What I have is an education that taught me to inquire, a set of relationships formed through genuine welcome, and a growing conviction that the discipline I am training in has not yet asked the right questions of itself when it comes to places like this one. This thesis is an attempt to ask them — honestly, carefully, and with full awareness that the answers I have arrived at are preliminary, and that the community whose story I am engaging with deserves far more than any single piece of academic work can give.

I am grateful to Ian for a tour of a churchyard that turned out to be the beginning of something much larger than either of us knew.

Acknowledgements

To my friend, professor, and thesis reader, **Dr. Becca Farnum** — this thesis would not have been possible without her. Becca is, in the most literal sense, the connective tissue of this project: nearly every conversation that forms its primary evidence exists because she opened a door, made an introduction, or brought me into a room I would not otherwise have entered. Her own commitment to the Lockerbie remembrance community long predates this thesis and runs far deeper than any academic project could, and it is because of that commitment — and her generosity in sharing it — that this work was possible at all. Thank you for bringing that knowledge into the room, for holding me to a standard of care commensurate with the subject, and for being, at every stage, both a rigorous reader and a genuine friend. Becca's mentorship and unwavering support have spanned years and continents, from Finnish Lapland to Scotland to the United States, and have meant more than I know how to say.

I am deeply grateful to my thesis advisor, **Britt Eversole**, whose intellectual rigor and patience guided this project from its earliest and most confused iterations to what it has become. Over five years Britt taught me to think critically about everything — the discipline itself, its assumptions, its pedagogies, its inherited habits of thought; to ask harder questions of the built environment; and to take seriously the idea that architecture is always an ethical act. He brought to every conversation a refusal to accept received ideas at face value: a determination to interrogate the terms of a question before attempting to answer it, to push past comfortable conclusions, and to demand that a position be earned rather than assumed. Britt's willingness to follow an argument wherever it needed to go, and to push back firmly when it went somewhere it should not, made this a better and more honest piece of work.

This thesis would also not exist without the generosity of the people of Lockerbie, who have been receiving Syracuse University students for thirty-seven years and have never once made that welcome feel like an obligation. I am grateful to every person who gave me their time, their trust, and their honesty during the research for this project.

To **Colin Dorrance MBE**, who walked me through a landscape he has walked hundreds of times before, and made it feel entirely new. His willingness to speak with precision and candor about experiences he kept sealed for decades is the ethical backbone of this thesis.

To **David Wilson** and **Timothy McCracken**, who welcomed me at Dryfesdale Lodge. David brought the same quiet civic generosity he has extended to visitors for four decades, and his formulations appear throughout this work because no paraphrase of them would be adequate. Tim brought a historian's care to conversations that helped me understand what the documentary record of Lockerbie does and does not contain.

To **David Mundell MP** and **Oliver Mundell MSP**, who gave generously of their time at Westminster and Edinburgh respectively, and their willingness to speak candidly about the politics of remembrance sharpened arguments I might otherwise have softened.

To **Ian McLatchie**, whose tour of Tundergarth Kirk on a cold afternoon in 2024 started all of this — thank you for seeing something worth inviting, and for the warmth and care with which you hosted my visit. And to Freya — thank you for letting me sleep in your room.

To **Kirsty Boardman**, whose deep involvement in the work of remembrance and whose generous engagement with this thesis shaped it in ways I am still discovering — thank you for every conversation, every insight, and every moment of guidance offered without hesitation. To **Isla Boardman**, for your kindness, your sparkle, and your joy. And to **Ruaridh Alexander Boardman**, whom I cannot wait to meet.

To **Angie** and **Graham Anderson**, whose hospitality during my visit was extraordinary — thank you for the food, the conversations, and for teaching me how to feed sheep. Graham's 60 will forever be an inspiration.

To **Robert Humes** and the **RH Youth Organisation** — thank you for opening your doors and allowing me to engage with your activities. The creative workshop with local children that Robert and his team made possible gave this thesis some of its most honest and unexpected insights. The charitable organization founded by Robert and Rebecca provides every child in the Lockerbie community with a safe, nurturing, and accessible environment in which to build confidence and independence. Robert's relentless commitment to it will always be an inspiration to me.

To the past and present Lockerbie-Syracuse Scholars, **Mary Ann McVey** and **Charlie Dorrance**, and to the 2025 Syracuse Scholars at Lockerbie Academy: **Lilian, Iona, James, Ella, Grace, Ailay, Yvie, Amelia, Jonathan, and Ravi**. The ways you carry this history, through family memory, artistic practice, professional aspiration, and inherited obligation, demonstrated more clearly than any theory could that memory lives in people, not in stone. Mary Ann and Charlie — thank you for welcoming me in Glasgow, and Mary Ann for a perfect tour of the beautiful Glasgow University.

To my friend **Emma McDevitt**, for asking the hard questions, for relentlessly pushing me to be better, and for always being an inspiration.

To my friend **Kelly Xintong Zhao**, for generously hosting me in London and for making a foreign city feel like home.

To my friend **Max Walewski**, for being a constant presence throughout my entire university career — through the difficult semesters and the good ones — and for being, always, an inspiration in both the work and the life around it.

Finally, to my family, whose support has always been unwavering even when the work was difficult to explain and the hours were impossible to justify — thank you.

This is for you.

Financial support for this thesis was provided by the Renée Crown University Honors Program at Syracuse University through the Crown Thesis Award.

Table of Contents

Abstract.....	5
Executive Summary.....	6
Preface.....	12
Acknowledgements.....	14
Table of Contents.....	18
I. Introduction.....	1
II. What Happened, and What Followed.....	3
III. Memory Is Selection.....	9
IV. Memorial as Apparatus: From Object to Mechanism.....	13
V. The Grid After Disaster.....	16
VI. Lin and Eisenman: The Limits of Memorial Form.....	19
VII. Trauma and Ethical Forgetting.....	24
VIII. Institutional Forgetting and the Apparatus Under Pressure.....	27
IX. Four Voices in Dialogue.....	32
X. The Next Generation.....	39
XI. What the Community Says.....	42
XII. Event vs. Place.....	44
XIII. Invisibility as Condition.....	48
XIV. When Architecture Refuses to Console.....	51
XV. Between Ground and Sky.....	55
Bibliography.....	64
Appendices.....	69
Appendix A.....	69
Appendix B.....	78
Appendix C.....	93
List of Images.....	107

I. Introduction

The wreckage was mapped to extraordinary precision. Bodies were recovered, identified, catalogued. The Air Accidents Investigation Branch documented the disintegration of Boeing 747-121, registration N739PA, to a level of forensic granularity rarely achieved in disaster investigation. The aircraft's debris field extended across two trails, the longest reaching approximately 130 kilometers to the east coast of England. The detonation of an improvised explosive device was confirmed within days. Names were recorded. Coordinates were fixed. The event, in the official sense, was known.

With regard to the remembrance of bombing of Pan Am 103 and the aircraft's impact in the landscape around Lockerbie, Scotland, there is no information problem. One could argue that there is almost an excess of information, from the results of the investigation to the stories of those killed told by their families to the testimonies of residents on the ground. Rather, the ongoing remembrance today of those who experienced or died in the tragedy—including 35 Syracuse University students—faces a problem of transmission.

This distinction between what is recorded and what is lived, between the forensic and the felt, is the founding premise of this thesis. Memory does not reside in data. It lives in bodies, in relationships, in institutions that must be tended, and in the willingness of

one generation to receive what the previous generation, imperfectly and selectively, offers to pass on. The avoidance of re-traumatization is not merely a therapeutic preference but a structural necessity: trauma, by its nature, resists the kind of coherent transmission that sustains collective memory across time. As Geoffrey Hartman has argued, the extremity of traumatic experience exceeds what empirical or documentary language can adequately carry — it is precisely this insufficiency of the factual record that turns us toward literature, art, and other oblique forms of expression as more honest vessels of what was endured.¹ To transmit memory by re-imposing its original wound is therefore not fidelity to the past but a category error — it conflates the event with its meaning, and forecloses the interpretive work that each generation must do for itself.² What I encountered across months of research — in archives, in meeting rooms, in schools, in the landscape itself, and in long conversations with people who hold this community's memory in very different ways — was a town navigating a genuinely difficult question: how does memory survive the passing of those who witnessed it? How does it transfer across generations without imposing trauma? How does it evolve without dissolving?

These are not questions that architects have traditionally asked of their discipline.

Memorial architecture has generally been commissioned and received with a single

¹ Geoffrey Hartman, "Reading, Trauma, Pedagogy," in *The Geoffrey Hartman Reader*, ed. Geoffrey Hartman and Daniel T. O'Hara (Edinburgh: Edinburgh University Press, 2004), 295–296.

² Lebbeus Woods, *War and Architecture / Rat und Architektur* (Princeton: Princeton Architectural Press, 1993).

expectation: that it will hold memory — anchoring it in stone, fixing it in space, declaring it permanent. Implicit in this expectation is a conflation that deserves scrutiny: the monument and the memorial are not the same thing. A monument asserts; it commemorates victory, power, or civic identity, and asks nothing of its viewer beyond acknowledgment. A memorial, by contrast, is oriented toward loss — it addresses grief, absence, and the ongoing labor of remembrance. To treat them as interchangeable is to import the monument's logic of permanence and authority into a context that demands something more provisional and more honest. The contention of this thesis is that this tradition is structurally inadequate to Lockerbie's condition and to the human condition it makes visible. It proposes instead that architecture be understood as an *apparatus* — not a container but a mechanism, not an object but a process, not permanence but a fragile continuity.

II. What Happened, and What Followed

Pan Am Flight 103 departed London Heathrow at 18:25 UTC on December 21, 1988, bound for New York's John F. Kennedy International Airport. The aircraft, a Boeing 747-121, carried 243 passengers and 16 crew. At 19:02:50 UTC, while cruising at flight level 310 (31,000 feet) over the Scottish borders, the aircraft disappeared from radar. The Air Accidents Investigation Branch report records that "the radar then showed

multiple primary returns fanning out downwind."³ Major portions of the wreckage fell on the town of Lockerbie. Lighter debris was strewn along two trails, the longest extending approximately 130 kilometres to the east coast of England.

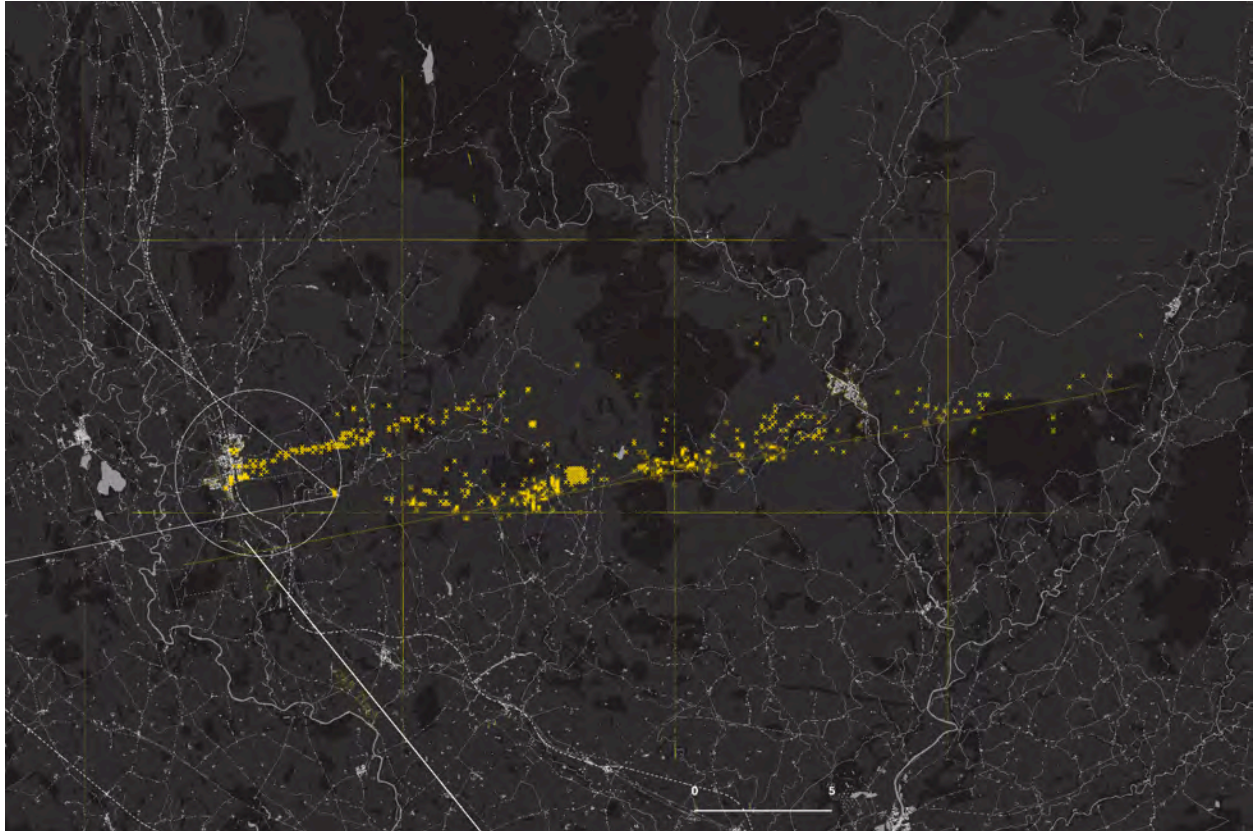


Figure 3. Debris field of Pan Am Flight 103, Lockerbie, Scotland, December 21, 1988. GIS map with superimposed Air Accidents Investigation Branch survey of wreckage distribution and confirmed flight path of N739PA. The two debris trails extend approximately 130 kilometres east to the English coast. Source: AAIB Aircraft Accident Report No. 2/90; author's own cartographic work, 2026.

³ Air Accidents Investigation Branch, *Aircraft Accident Report No. 2/90 (EW/C1094): Report on the accident to Boeing 747-121, N739PA at Lockerbie, Dumfriesshire, Scotland on 21 December 1988* (London: HMSO, 1990).

The detonation had originated in the forward cargo hold, within a luggage container designated AVE4041. An improvised Semtex-based explosive device, concealed within a Toshiba radio cassette player, had been packed inside a brown Samsonite suitcase loaded at Frankfurt airport. All 259 persons aboard were killed, as were 11 residents of Lockerbie — the majority on Sherwood Crescent, where the nose section and fuel-loaded wings fell directly onto the street. The total death toll was 270. From detonation to the wings striking the ground took forty-five seconds.⁴

What no report records is the texture of what followed. The official record of the Lockerbie disaster is, by any measure, extraordinary in its completeness. Yet completeness of record is not the same as fullness of understanding. Eyewitness testimony — particularly in the context of sudden, violent, and catastrophic events — occupies a different register entirely. It is not more or less accurate than the written record, but is structured differently, organized around sensation, sequence, and bodily experience rather than verified fact. Trauma theorists have long noted that witnesses to violent events often cannot, in the immediate aftermath, produce a coherent account of what they saw: the event exceeds the narrative frameworks available to them. What emerges instead is fragmentary — sensory impressions, false inferences, the strange adjacency of the ordinary and the catastrophic.

What this means for any attempt at commemoration is that no single mode of representation can bear the full weight of an event like Lockerbie. The official

⁴ *Ibid.*

document, the forensic map, the architectural reconstruction, the photograph, the spoken account — each captures something the others cannot, and each distorts in ways the others partially correct. Yet even in their totality they do not add up to a complete picture, because completeness is not available. The tension between modes of knowing is where meaning lives — not in any one account, but in the gaps between them. This thesis is attentive to the irreducible, irresolvable slippage between the archive and the body.

Colin Dorrance was eighteen years old in his first week as a police officer when he saw an explosion erupt above the tree line ahead of him on the A74, as he headed to a Christmas party he did not want to attend, "like some kind of nuclear weapon going off." His initial assumption was that a truck had crashed on the road. It took nearly an hour for those on the ground to establish what they were actually dealing with.⁵ David Wilson, then a Lockerbie district councillor, walked from his house toward Sherwood Crescent that same evening, stopping first to speak to the Edwards and Gardner families who had just been burned out of their homes. He found the town hall already opened by a council employee who had anticipated it would be needed — a small act of civic instinct in a town where such instinct ran deep. He and a colleague from technical services walked the debris field, surveyed the aircraft engine embedded in

⁵ Colin Dorrance MBE, interview and guided tour conducted by Yida Li, Lockerbie, Scotland, March 2026. Transcript on file with the author.

Alexander Drive (which had missed a row of houses by about fifteen feet), and arrived at a rapid conclusion: what had happened here was beyond any local authority.⁶

Both accounts illuminate a founding condition of Lockerbie's memory problem. The gap between the event's forensic precision and the experiential confusion of those present continues to widen as the witnesses age and the records remain, in many cases, uncollected. This widening is not, however, a crisis to be resolved but the entry point for this project. To acknowledge that the gap is irreducible is to acknowledge that no archive, no monument, and no act of institutional memory can close it. The work of commemoration must therefore begin not from the ambition of closure but from an honest reckoning with permanent incompleteness. Oliver Mundell, the Member of the Scottish Parliament for Dumfriesshire, captured the spatial dimension of this with a formulation that recurred across my research: "If you're standing in the high street now, and you weren't looking for it, you'd never know."⁷ His father, David Mundell MP, described the event from Westminster as one "not in itself directly connected to the community in which it happened."⁸ Dorrance put it most plainly: "We were just the innocent bystanders who got injured in the collateral crossfire." And Wilson, reflecting on nearly four decades of civic stewardship, offered the most charged formulation:

⁶ David Wilson, interview conducted by Yida Li, Dryfesdale Lodge, Lockerbie, Scotland, March 2026. Transcript on file with the author.

⁷ Oliver Mundell MSP, interview conducted by Yida Li, Edinburgh, Scotland, March 2026. Transcript on file with the author.

⁸ David Mundell MP, interview conducted by Yida Li and Dr. Becca Farnum, Westminster, London, March 2026. Transcript on file with the author.

"Nothing anybody in the plane could have done about it. No escape — just snatched away at somebody's whim."⁹

And yet these same bystanders became, over thirty-seven years, the custodians of a memory that belonged to the world. The utter arbitrariness of the event for both those in the air and those on the ground is the ethical foundation on which Lockerbie's apparatus of remembrance rests, and the reason its weight cannot be discharged by any single act of commemoration. Those aboard Pan Am 103 had no relationship to the town beneath them; those on the ground had no relationship to the flight passing overhead. What connects them is not shared experience but shared proximity to the same catastrophic instant — and yet each indexes that instant differently. The families of the dead carry grief oriented toward persons: toward naming, accountability, the pursuit of justice. The community on the ground carries something more ambiguous — the memory of an event that was simultaneously theirs and not theirs, a history they did not choose and cannot set down. No act of commemoration that addresses only one of these registers will be adequate to either.

⁹ Dorrance interview.

III. Memory Is Selection

Any serious architectural engagement with collective memory must begin with a philosophical reckoning: memory is not a recording. It does not accumulate passively in monuments any more than it accumulates passively in the brain.

Paul Ricoeur's account of memory, developed across his three-volume *Time and Narrative* (1984–88) and the later *Memory, History, Forgetting* (2004), is foundational. For Ricoeur, memory is always already a narrative practice. To remember is not to retrieve a stored fact but to *construct* — to select, order, translate, and inevitably omit.¹⁰ Memory reaches toward something, presents itself as reliable, but is always mediated by language, community, and the forms in which it is expressed. Critically, memory is *dependent on forgetting*. Without forgetting, Ricoeur argues, memory would become paralyzing — every detail equally present, every event equally demanding, rendering present action impossible.¹¹

The consequences for memorial design are significant. If memory depends on forgetting, then any architecture that attempts total remembrance is, in Ricoeur's terms, structurally false. Built form cannot hold memory, it can only stage its narration. And every narration is a selection: every memorial, therefore, lies. The question is not *whether* a memorial will distort the past, but *how honestly it will distort it*.

¹⁰ Paul Ricoeur, *Time and Narrative*, 3 vols., trans. Kathleen McLaughlin and David Pellauer (Chicago: University of Chicago Press, 1984–1988); Paul Ricoeur, *Memory, History, Forgetting*, trans. Kathleen Blamey and David Pellauer (Chicago: University of Chicago Press, 2004).

¹¹ *Ibid.*

This philosophical claim finds immediate empirical confirmation in the field. Colin Dorrance described the psychological mechanism that allowed him to survive his month of night shifts in December 1988 and January 1989: a deliberate practice of non-humanization. "This to me as an 18-year-old was lifting and carrying heavy dead objects. Don't give them a name, don't humanize them. Just do the lifting and carrying and put to the back of your mind all the sights and sounds and smells."¹² This is not forgetting in Ricoeur's passive sense of slow generational erosion. It is active, willed suppression in the service of psychological survival. The seal broke on Christmas Eve when he was handed a diary belonging to a young woman named Claire, open to December 24 — the day she had planned to be in New York. "Suddenly that dead body was Claire with a plan, with a diary, and I was reading it on the day that she didn't see."¹³ He shut the book, made a pact with himself not to touch the subject again, and kept it until 2012.

David Wilson's account of the naming process for the Garden of Remembrance memorial adds a complementary dimension — memory work of a different kind, equally invisible. Weeks and months were spent verifying the spelling of every name engraved in stone: tracing families where a Polish surname had been anglicized by a registrar decades earlier, arbitrating between estranged relatives over which name should appear, discovering that one certificate had been changed seven times. "When

¹² Dorrance interview.

¹³ Dorrance interview.

it came to engraving the names on that memorial, they had to be right. You cannot have people coming from New Zealand to discover that their family's name has not been spelled properly."¹⁴ This meticulous labor was itself a form of remembrance: a collective insistence on the particularity of each person lost. And yet the very extremity of that insistence points to something Maurice Blanchot identifies in *The Writing of the Disaster* — that inscription is not the opposite of loss but its continuation by other means.¹⁵ To write the name is to acknowledge that the person can no longer be reached by any other method; the engraved letter is not a preservation of presence but a monument to its irreversibility. The care taken over each spelling was not a solution to the problem of absence. It was an encounter with it.

Ricoeur distinguishes between passive forgetting — the slow erosion of memory through generational distance — and active forgetting, the deliberate suppression of memory for political or personal ends. Lockerbie in 2025 exhibits both simultaneously. David Mundell MP identified a third variant: the fracturing of collective memory by the spatial and social divisions of the disaster night itself. The cordoning of the disaster zone, the suppression of imagery under prosecutorial control, the absence of anything resembling social media — all of these meant that many residents of the town, even those present on the night, never formed a common visual or experiential record of what had happened. "There isn't a Lockerbie institutional memory of this where

¹⁴ Wilson interview.

¹⁵ Maurice Blanchot, *The Writing of the Disaster*, trans. Ann Smock (Lincoln: University of Nebraska Press, 1986).

everybody has the same memory," he observed. David Wilson corroborated this with an observation that carries particular weight from someone who has watched the community for nearly sixty years: between two district council elections, roughly a quarter of the electoral roll changes. "Half the people who lived here for one election have come and gone."¹⁶ The place, then, persists with its streets, its gardens, its engraved names while the population that carries embodied memory of the event continuously turns over. This is the condition Jacques Derrida names hauntology: the way a past event continues to exert pressure on a place and a community that can no longer fully account for its presence, felt as an obligation without a clear origin, a weight whose source recedes even as the weight remains.¹⁷ Lockerbie is haunted not because its trauma is visible in the landscape — Wilson and Mundell both noted how thoroughly the physical evidence has been absorbed — but because the event has structured the town's relationship to itself in ways that newer residents inherit without having chosen. The ghost is not in the architecture. It is in the silence that surrounds certain streets, in the institutional reflexes of people who were formed by an emergency, in the annual rituals whose full meaning is held by a shrinking number of those who perform them. Memory does not accumulate in place. It must be actively reconstructed, in each generation, from materials that are always incomplete — and from an inheritance that arrives, for most who receive it, without explanation.

¹⁶ Wilson interview.

¹⁷ Jacques Derrida, *Spectres of Marx: The State of the Debt, the Work of Mourning and the New International*, trans. Peggy Kamuf (New York: Routledge, 1994). The concept of hauntology — the way a past event exerts pressure on a present that can no longer fully account for its source — is introduced and developed throughout this text, particularly in the opening chapters.

IV. Memorial as Apparatus: From Object to Mechanism

The concept of the *apparatus* — the French *dispositif* — is the theoretical cornerstone of this paper's argument. Developed most fully by Michel Foucault and subsequently elaborated by Giorgio Agamben, the apparatus is not a single object or institution but a network: what Foucault described as a "heterogeneous ensemble of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions."¹⁸ An apparatus is defined not by what it *is* but by what it *does* — the relations it establishes, the subject positions it produces, the effects it channels.

Agamben, in *What Is an Apparatus?* (2009), distills this into a definition that is both precise and expansive: an apparatus is "literally anything that has in some way the capacity to capture, orient, determine, intercept, model, control, or secure the gestures, behaviors, opinions, or discourses of living beings."¹⁹ An apparatus is always relational and productive.

Applied to memorial architecture, this framework transforms the terms of analysis entirely. A memorial understood as apparatus is not a monument that stores grief at a fixed location. It is a cultural machine that produces subject positions — visitor,

¹⁸ Michel Foucault, "The Confession of the Flesh," in *Power/Knowledge: Selected Interviews and Other Writings, 1972–1977*, ed. Colin Gordon (New York: Pantheon, 1980), 194–228.

¹⁹ Giorgio Agamben, *What Is an Apparatus? And Other Essays*, trans. David Kishik and Stefan Pedatella (Stanford: Stanford University Press, 2009), 14.

mourner, local, outsider — stabilises narratives, organises emotion, and channels interpretation. It is active and productive, even when it appears still.

More importantly, Lockerbie already operates as a memorial apparatus. That apparatus includes Dryfesdale Lodge and its trusteeship; Tundergarth Kirk and its Remembrance Room; the annual December commemoration; visits from bereaved American families; the Lockerbie-Syracuse Remembrance Scholars programme; media archives, legal proceedings, and policy frameworks; and the landscape of the town itself, which carries the invisible geography of the disaster in its sheep fields, street pavements, and residents' silences. David Wilson's stewardship of the Lodge exemplifies what this means in practice. The trust's decision not to charge for entry, not to sell keyrings or merchandise, not to commercialise the memory in any form — "the whole episode is far too big for that; it would just not be right if people travel three thousand miles across the Atlantic and have to fumble for British money at the door" — is a declaration of the apparatus's values, embedded in the physical and institutional character of the space itself.²⁰

The Eagle's Wings commemorative book — produced by the Victims of Pan Am 103 association, with copies held in the Remembrance Room at Tundergarth Kirk and by the Syracuse University Archives — held at the Lodge, makes this visible in miniature. Its first edition contained only a name, a seat number, and a nationality. It has evolved

²⁰ Wilson interview.

through multiple editions, as families — once "the emotional dust has settled" — chose to add photographs and inscriptions.²¹ The Lodge holds a small, poorly-lit cupboard containing a memorial plate and a soft toy brought by a first-time visitor after thirty-seven years, placed where she wanted them because that was what she needed. The apparatus accommodates grief in forms it cannot predict, and it is better for doing so.

Colin Dorrance is himself a node in this apparatus: an informal tour guide, oral historian, and mediator between the town and its global community of mourners, operating without institutional support, without remuneration, and without any formal mechanism to ensure the continuation of what he does. He and Wilson occupy very different positions within the apparatus — the personal and the civic, the embodied and the institutional — but together they reveal the full range of what such a network must contain.²²

Architecture is only one component of this larger apparatus. The question this paper addresses is therefore not "what building should be built?" but "what must be *sustained* — institutionally, spatially, educationally — for the apparatus of remembrance to continue to function across generations?"

²¹ *Ibid.*

²² Dorrance interview.

V. The Grid After Disaster

The forensic response to Lockerbie produced one of the most extensively documented disaster scenes in aviation history. Debris was mapped across a field extending roughly 130 kilometres; body parts were located, tagged, and recorded by grid coordinate; the aircraft's structural disintegration was reconstructed in meticulous diagram. The AAIB report converts catastrophe into data: trajectories, pressures, material properties, fragmentation patterns.

Paul Virilio's analysis of the accident — developed across works including *The Original Accident* (2007) — is illuminating here. For Virilio, every technological system necessarily invents its own accident: "the invention of the ship was the invention of the shipwreck."²³ The airplane invents the crash. But the accident, in this reading, is not only the event itself — it is the first inscription on the ground, the moment at which a place is marked, involuntarily and permanently, by what fell into it. What followed in Lockerbie was a succession of further inscriptions, each attempting to master the one before. The debris field was gridded and mapped; wreckage was catalogued, tagged, and removed; the landscape was reconstructed and returned, as far as possible, to legibility. Each of these acts was forensically precise in its method and structurally insufficient in its ambition. The grid does not record the event — it replaces it with abstraction, imposing order on what was, at its moment of occurrence, irreducibly chaotic. Mapping is control after catastrophe, and each subsequent act of

²³ Paul Virilio, *The Original Accident*, trans. Julie Rose (Cambridge: Polity Press, 2007), 10.

documentation — the survey, the inquiry transcript, the architectural reconstruction, the memorial inscription — repeats this gesture at one further remove from the original. The risk Virilio's framework exposes is not that the record is inaccurate. It is that precision itself becomes a second disaster: a methodical overwriting of the event's essential resistance to method, in which analytical clarity does not illuminate trauma so much as neutralize it.

Colin Dorrance's practice offers a counter-model. He had initially delivered a purely forensic account to the visitors who began arriving after his daughter returned from Syracuse in 2012. But over time, as bereaved family members came with their own testimonies, he recognized that facts alone were insufficient — and that facts, placed in the right narrative context, could do something monuments could not. He described providing Renee Boulanger — the sister of Nicole, a Syracuse student killed on the plane — with the AAIB report's account of the aircraft's disintegration, complete in three seconds, loss of consciousness effectively instantaneous. "That set of facts caused Renee to completely change her perspective on what happened. She thought, well, her sister was at peace, she would know nothing."²⁴ What this account describes is not, strictly speaking, the communication of truth. The AAIB report establishes a probable sequence of physical events; it cannot confirm the interior experience of those aboard. What Renee Boulanger received was something more precisely described as a persuasive possibility — one grounded in evidence, structurally

²⁴ Dorrance interview.

coherent, and emotionally habitable. She did not learn what happened to her sister so much as given a framework within which she could choose to believe something bearable about it. This is not a lesser form of knowledge, nor a failure of forensic honesty. It may be the only form of knowledge available to the bereaved in the aftermath of catastrophic and sudden loss — and it points to something that memorialization rarely acknowledges: that remembrance is not the recovery of what happened but the construction of a relationship to it that allows the living to continue. The forensic grid, placed in the service of personal grief rather than administrative documentation, becomes not a record but a permission to displace the imagined horror that has kept the living frozen in time with something the evidence does not contradict, and the heart can accept.

David Wilson raised the complementary problem from an institutional vantage: "You may think that people are not watching or listening because they never say much, but they are."²⁵ His account of the Czech television crew who turned up at Lockerbie Academy asking teachers how they felt about Czechoslovakia-manufactured Semtex — "that's how desperate some of them were for a different angle" — illustrates how thoroughly the forensic record of the event was colonized by external narratives.²⁶ The grid was claimed by those with no stake in the community's own experience, leaving that experience largely unpublished and unrecorded. The apparatus of remembrance

²⁵ Wilson interview.

²⁶ *Ibid.*

has not successfully transmitted even the basic factual record, let alone the experiential one, beyond the circle of those with close personal connections to the event. The grid, for all its precision, remains functionally inaccessible.

VI. Lin and Eisenman: The Limits of Memorial Form

Before turning to the precedents, a distinction is worth making — a monument and a memorial are not the same thing. As Alois Riegl argued in his 1903 essay "The Modern Cult of Monuments" — discussed at length by Kurt Forster in *Oppositions 25* — a monument in the strict sense is *intentional*: it is built to commemorate from the outset, designed to fix a person or event in collective memory. A memorial, however, often operates differently. It may be unintentional, emergent, or contested. What makes something a memorial is not its original purpose but its subsequent reception — the way a community, over time, invests a site or object with the weight of grief. Forster, reading Riegl, notes that this status is always precarious: what is memorialized at one moment may be neglected or even condemned at another, as tastes and political conditions shift. The memorial is never stable. It is always being renegotiated.²⁷

²⁷ Kurt Forster, "Monument/Memory and the Mortality of Architecture," in *Oppositions 25*, ed. Peter Eisenman (New York: Institute for Architecture and Urban Studies, 1982), 2–19; drawing on Alois Riegl, "The Modern Cult of Monuments: Its Character and Its Origin" (1903), trans. Kurt W. Forster and Diane Ghirardo, *Oppositions 25* (1982): 21–51.

This distinction matters for Lockerbie, where no single authoritative memorial object exists — only a dispersed set of sites, gardens, and landscapes that have accumulated memorial meaning unevenly. It also matters for the two precedents that follow.

Two of the most discussed memorial designs of the late twentieth century offer instructive precedents and limits for thinking about Lockerbie. Maya Lin's Vietnam Veterans Memorial (Washington D.C., 1982) operates through indexical accumulation: 58,318 names, inscribed in granite, arranged chronologically by date of death.²⁸ The memorial refuses to resolve its names into meaning; they accumulate into weight. Its power lies in this refusal. And yet the wall's apparent democratic completeness conceals a more uncomfortable problem. The memorial is titled the *Vietnam Veterans Memorial* — meaning, in principle, it memorializes all who served, not only those who died. The dead, however, are easier to name than the living. Death in combat functions as a kind of moral leveling: whatever a soldier did or failed to do, dying in the field seems to supersede it. To extend the memorial's logic to living veterans — to deserters, to those court-martialed, to those who committed documented atrocities — would immediately require a process of adjudication, of deciding whose service counts and whose is disqualifying. The wall sidesteps this by restricting itself to the dead, and the dead cannot object to standing beside one another. Shared death renders everyone, at least on the granite surface, equal. This is not necessarily a flaw Lin

²⁸ Maya Lin, *Boundaries* (New York: Simon & Schuster, 2000). The Vietnam Veterans Memorial was dedicated on November 13, 1982, in Washington, D.C.

overlooked — it may be the only position available to a memorial operating at this scale. But the wall risks making loss legible at the cost of making it feel complete.

Peter Eisenman's Memorial to the Murdered Jews of Europe (Berlin, 2005) takes a different approach: 2,711 concrete stelae arranged without narrative declaration. The form refuses coherence, closure, or resolution. Eisenman's refusal to fix meaning is not an aesthetic choice but a theological one — his position is that no architectural form is adequate to the Holocaust, that the scale and nature of that murder exceeds anything a building or field of objects can communicate. The memorial therefore does not attempt to represent loss. It represents the failure of representation. Its blankness is a confession.²⁹ And yet as Irit Dekel has documented in ethnographic fieldwork at the site, visitors actively construct meaning regardless. Guides conduct tours that impose narrative frameworks; the apparatus around the memorial produces what the memorial itself refuses to produce. The dispositif reasserts itself over the object.³⁰ The community of interpretation cannot be suppressed by architectural intention — which suggests that Eisenman's honest admission of failure is itself recuperated, absorbed back into the meaning-making machine that surrounds any sufficiently prominent site. The memorial fails, and then the failure is explained, curated, and consumed. Whether

²⁹ Peter Eisenman, project statement for the Memorial to the Murdered Jews of Europe, Berlin, 2005. See also Stefano Corbo, *From Formalism to Weak Form: The Architecture and Philosophy of Peter Eisenman* (Farnham: Ashgate / Routledge, 2014).

³⁰ Irit Dekel, "Jews and Other Others at the Holocaust Memorial in Berlin," *Anthropological Journal of European Cultures* 23, no. 2 (2014): 71–84.

that second failure belongs to Eisenman or to public memory itself is a question this thesis cannot resolve — but it is the right question to bring to Lockerbie.

Lin and Eisenman anticipated the apparatus around their work, that the building would be inseparable from the experience surrounding it. Lin conceived a ritual of descent: the visitor moving slowly downward alongside the wall, their own reflection and the monuments of Washington appearing between the names cut into the polished black stone. The mirror surface was the mechanism by which the living were drawn into proximity with the dead. Eisenman endured years of institutional and public opposition, press hostility, and government intervention — all of which he understood as part of the process of realizing a memorial at that scale. There is always an apparatus. The question what happens when the apparatus becomes the memorial — when the living network of guides, rituals, annual services, and circulating narratives is not the frame around an object but the thing itself. At Lockerbie, there is no singular object that absorbs and focuses the surrounding field of grief, misunderstanding, aesthetic criticism, and collective catharsis. What exists instead is the apparatus without the object. Whether that is a deficiency to be corrected or a condition to be worked with is the central design problem this thesis addresses.

David Wilson made this case from within, drawing on his friendship with Glasgow academics Professor Malcolm Foley and John Lennon, founding scholars of dark tourism theory in their foundational book *Dark Tourism: The Attraction of Death and Disaster* (2000). He observed that the balance at Lockerbie is slowly shifting, as it does

with all disaster sites over time, from mourners with personal connections to the event, toward visitors drawn by its historical and cultural significance. "We die, every day, every week, every month that goes past."³¹ He raised the visiting of World War I battlefields as a frame: horrifying to visit but experienced differently by a grandchild who lost someone there and a historian who did not. Both are legitimate presences. Both require different things from the same space. The apparatus must hold both simultaneously.

Lin's anti-form and Eisenman's weak form drawn from Vattimo³² are precisely attempts to hold multiple communities of readers simultaneously, suppressing the strong narrative form that would otherwise dominate, exclude, and produce a memorial dishonest about its own commemorative failure. The ambiguity becomes the mechanism.

But Lockerbie is not asking the same question. The problem here is not how to design an object open enough to receive many kinds of grief. It is that the apparatus itself —

³¹ John Lennon and Malcolm Foley, *Dark Tourism: The Attraction of Death and Disaster* (London: Continuum, 2000). The quotation is from Wilson interview, in which Wilson referenced Foley and Lennon's framework directly.

³² Corbo, S. (2014). *From Formalism to Weak Form: The Architecture and Philosophy of Peter Eisenman* (1st ed.). Routledge. Drawing on Gianni Vattimo's concept of weak thought (*pensiero debole*) and its application to Eisenman's anti-monumental strategy. For Vattimo, "weak" does not mean feeble or inferior. Rather, it means a relinquishing of strong claims to Truth, an embrace of plurality and interpretation, and a move away from "violent" metaphysics. Both Vattimo and Eisenman are responding to the same broader cultural critique: the idea that strong, totalizing systems (whether philosophical or architectural) do violence by foreclosing meaning, imposing closure, and denying the complexity of experience. Weak form is an ethical and aesthetic strategy of resistance, a deliberate loosening of control over interpretation, inviting the reader/inhabitant to participate in the production of meaning rather than simply receiving it.

the trustees, the annual service, the tours, the landscape — is already doing that work, and has been doing it for decades without a singular object at its center. What this thesis is after is not a memorial that sits within a commemorative apparatus. It is a proposal that takes the apparatus as its primary material — that asks what architectural thinking looks like when the network of living practice is not the frame around the intervention but the intervention itself.

VII. Trauma and Ethical Forgetting

One of the most dangerous assumptions embedded in memorial culture is that remembrance is always good — that more memory is better than less, that forgetting is a moral failing, and that the duty of architecture is to prevent forgetting at all costs.

Lebbeus Woods, architect and theorist whose work engaged consistently with war and disaster, challenged this assumption. For Woods, the impulse to preserve damage permanently — to leave ruins as wounds — risks endless re-traumatization of those who must inhabit the aftermath. Woods argued for a third position: buildings and cities might acknowledge damage without being defined by it, carrying the mark of what happened while also permitting life to continue.³³

³³ Woods, *War and Architecture*.

The evidence from Lockerbie is, across all four interviews, a remarkably consistent endorsement of this position — arrived at through very different paths. Oliver Mundell gave it the clearest political articulation: "I think people now feel it's a real strength that life's gone back to normal. And in fact, they feel that's not ignoring what's happened — that's part of defeating terrorism. Showing that people's lives weren't lost for nothing."³⁴ David Wilson, who had watched the community navigate this balance across nearly four decades, described the early response to the question "when will Lockerbie be back to normal?" with a phrase that captures the whole argument: "Every day, there's a new normal Lockerbie."³⁵ He refused the very premise. You cannot return to what was before, he was saying. You can only keep going forward from what you now are.

David Mundell traced this stoicism to the agricultural character of the pre-disaster community — to people who had lived through the war, whose mindset was simply to carry on. He recalled his mother and aunt going for their hair appointments in Lockerbie the morning after the disaster: a fact that shocked him at the time but which he came to understand as an expression of the same ethics. The town hall was being used as a mortuary, and they were carrying on. Not because they did not care, but because carrying on was what care looked like in this community, in this culture, at this moment.³⁶

³⁴ Oliver Mundell interview.

³⁵ Wilson interview.

³⁶ David Mundell interview.

Colin Dorrance introduced a crucial refinement. The suppression of grief was not only an ethic of resilience. It was also a learned response to media intrusion.³⁷ In the early years after the disaster, journalists knocked on doors unannounced, asking residents their opinions on Gaddafi, on Libyan sanctions, on geopolitical questions that had nothing to do with their experience. "Their view was no more or less than somebody living in Manchester or Paris in terms of managing the relations of Libya," he observed.³⁸ The community closed ranks. But the closing of ranks, over time, became something harder: not just "don't talk to the press," but "don't talk." A protective instinct hardened into a cultural suppression — one that blended with the pre-existing emotional reticence of southern Scottish rural life.³⁹

David Wilson gave this the most intimate illustration. A woman who had stewarded the Lodge for many years — who had lived in Rosebank Crescent and seen things she never spoke of publicly — arrived one day and said: "I have to stop. I can't talk about it anymore." And Wilson's response was simply to accept this, without question or pressure. "You have to be able to say, you don't have to stand here."⁴⁰ The architecture of remembrance must include this permission — the permission to stop, to hand on, to step back from the threshold of one's own endurance.

³⁷ Dorrance interview.

³⁸ *Ibid.*

³⁹ *Ibid.*

⁴⁰ Wilson interview.

What might happen if we were to reconceive memorial architecture as an apparatus of care rather than an apparatus of extraction — one that promises those who want remembrance to continue that memory will continue by any means necessary, and over the preferences, objections, differing memories, and exhaustion of others? This is the hypothesis this thesis wants to hold open. Not a moral judgment on what existing memorials demand, but a design question: what does an architecture look like that does not impose the obligation to remember, but instead holds open the conditions under which remembrance can be freely given, freely handed on, and freely, when necessary, laid down?

VIII. Institutional Forgetting and the Apparatus Under Pressure

The February 2026 meeting of the Lockerbie remembrance community — attended by local historian and Dryfesdale Lodge trustee Timothy McCracken, Tundergarth Kirk Trustee and geography teacher Kirsty Boardman, local stakeholder and representative of local youth Isla Boardman, trustee and programme coordinator Dr. Becca Farnum, and myself — surfaced a set of structural pressures that illustrate the thesis's central argument in concrete terms. They are worth naming precisely, because they are not unique to Lockerbie. They are the conditions under which every apparatus of intergenerational memory operates.

Succession. Dr. Farnum was direct: "We do have a couple of people potentially cycling off, as is also the case with Tundergarth, just given ages of first responders and folks who've been involved for a really long time."⁴¹ Timothy drew the historical analogy: "It's a bit like veterans memorials from World War I and World War II — started in the 1960s and 70s, but as the veterans have passed away, what happens?"⁴² David Wilson, at eighty-three, is himself inside this transition. He was one of the original signatories of the agreement between Lockerbie and Syracuse University — a partnership forged in the immediate aftermath of the disaster, in which the town and the university, both devastated by the bombing that killed 270 people including 35 Syracuse students studying abroad, formalized a bond of shared remembrance. Beginning in 1990, 2 Lockerbie Academy students were selected each year to study at Syracuse University as Lockerbie Scholars, living within the university's ongoing culture of commemoration — its Remembrance Scholars, its annual rose-laying ceremony, its Week of Remembrance — while representing the eleven Lockerbie residents killed when wreckage fell on the town. Wilson signed that agreement as a district councillor, and he recalls pushing, unsuccessfully, for the scholarship to remain open beyond school-age pupils — to anyone from the community who might benefit from the connection. Over time, the scheme narrowed. His recounting of that night — walking toward Sherwood

⁴¹ Dr. Becca Farnum, in Lockerbie Remembrance Community, "February 11, 2026 Meeting Minutes," unpublished transcription. Participants: Dr. Becca Farnum, Timothy McCracken, Yida Li, Kirsty Boardman, Isla Boardman. February 11, 2026.

⁴² Timothy McCracken, in *ibid.*

Crescent, speaking to burned-out families, opening the town hall — exists in no archive. It lives in him, and in conversations such as this one.⁴³

Unrecorded testimony. Wilson described knowing of local witnesses who have never spoken publicly and never will: a fellow councillor who became close with the Manetti family but never appeared in the media; a teacher, born in Syracuse, who taught at Lockerbie Academy for years without the press ever finding out, protected by his colleagues. "Some people have never talked about it and never will." These silences are not failures of the apparatus. They are ethical choices that the apparatus must respect. But it is worth asking what their permanent protection costs, and for whom. It is not a loss the archive was ever entitled to recover — no testimony is owed. It is perhaps a loss for those who come after, who will inherit a memory that has already decided, on their behalf, what may be known. And yet to frame it as a loss at all risks importing the assumption this thesis wants to resist: that remembrance belongs to its future inheritors as much as to those who lived it. The silence may be the most honest thing the apparatus produces.

The gradual opening of institutional memory. McCracken noted that formal documentation within the Lodge itself has only begun in earnest in the last three or four years. Before that, there was "quite a lot of community concern that there wouldn't be too much formally written in the lodge about the disaster."⁴⁴ This slow opening — the

⁴³ Wilson interview.

⁴⁴ McCracken, in February 11, 2026 Meeting Minutes.

community moving, at its own pace, from protective silence toward more formalized narration — is exactly what Ricoeur describes: memory finding its forms belatedly, once the raw encounter with trauma has settled enough to permit reflection.⁴⁵

Digital capture. Dr. Farnum identified a practical and urgent symptom: the Sherwood Crescent memorial garden is currently tagged on Google as the Lockerbie Memorial, with photographs of Dryfesdale Lodge wrongly attributed to it.⁴⁶ Colin Dorrance had encountered the same problem on the ground.⁴⁷ When the apparatus of remembrance is not actively maintained, external forces — tourist traffic, media representations, platform algorithms — impose their own geographies. The apparatus does not remain neutral when its stewards step back, but becomes occupied.

The politics of critical voices. David Mundell MP described, from Westminster, a "small group of people who are just incredibly negative" — residents who want to "wish it away," whose opposition created a vacuum subsequently filled by a more assertive and contested memorial presence.⁴⁸ David Wilson corroborated this with a different kind of anxiety: he worried that the Lodge itself could suffer the fate of the original church on the site, which was closed and sold "because not enough of us went."⁴⁹ The

⁴⁵ Ricoeur, *Memory, History, Forgetting*, Part I.

⁴⁶ Dr. Becca Farnum, in February 11, 2026 Meeting Minutes.

⁴⁷ Dorrance interview.

⁴⁸ David Mundell interview.

⁴⁹ Wilson interview.

threat to the apparatus is not only from those who want to capture it. It is also from the ordinary drift of visitor numbers and institutional energy that, without active stewardship, simply runs down.

The institutional disconnection. Wilson raised a concern that no other interviewee had voiced so directly: the number of Lockerbie Academy students applying for the Syracuse scholarship without having ever visited the Lodge.

The original agreement, which Wilson signed as a district councillor in the immediate aftermath of the disaster, was funded by Lockerbie District Council and structured around a genuine year-long immersion: two students from Lockerbie Academy living at Syracuse University, embedded in its Remembrance culture, building relationships with Remembrance Scholars that both communities described as transformative. That program ran for over three decades. In 2024, Syracuse University unilaterally restructured it. The year-long scholarship was discontinued. In its place: a week-long visit to campus for a group of ten to twelve students, preceded by a year-long preparatory program at Lockerbie Academy. The Lockerbie District Council had been willing to continue funding the original program. The decision to end it was Syracuse's. An open letter signed by 427 former Remembrance and Lockerbie Scholars, alumni, and community members expressed their dismay, arguing that the changes significantly diminished a living memorial that had lasted thirty-five years. Syracuse's response acknowledged the program's impact while defending the restructuring on academic grounds — Lockerbie Scholars, as non-matriculating students, could not

transfer credits, and the university determined they were engaging more socially than academically. The letter writers regarded this as a misunderstanding of what the program was for.⁵⁰

It is in this context that Wilson's concern about the Lodge takes on its full weight. The pipeline running between Lockerbie Academy and Syracuse University had already narrowed dramatically. That it also bypassed the community's own memorial infrastructure — that students could be selected, prepared, and sent to represent Lockerbie without ever having crossed the threshold of the Lodge — was a symptom of a deeper disconnection between the formal apparatus of remembrance and the living tissue of memory it was built to carry. This thesis is in part a response to that disconnection, and to the urgency of the present moment in which it has become visible.

IX. Four Voices in Dialogue

The most substantial primary evidence in this paper comes from four extended conversations conducted in March 2026: with David Mundell MP at Westminster; with Colin Dorrance MBE on a guided tour of the disaster landscape; with Oliver Mundell MSP in Edinburgh; and with David Wilson at Dryfesdale Lodge itself. These are not

⁵⁰ Kate Jackson, "SU Responds to Open Letter about Lockerbie Scholarship Program Change," *The Daily Orange*, October 23, 2024, <https://dailyorange.com/2024/10/syracuse-university-responds-lockerbie-open-letter/>.

treated as separate case studies for sequential analysis. They are read together as a chorus of sometimes harmonious, sometimes discordant voices speaking to the same underlying questions about how memory survives, who controls it, and what an apparatus of remembrance must do to sustain it.

On the absence of shared community memory. The most structurally significant convergence across all four interviews regards the absence of a unified community account. David Mundell was the most direct: "I don't think there is a Lockerbie institutional memory of this where everybody has the same memory."⁵¹ He traced this to the immediate aftermath — the spatial cordon that divided those inside the disaster zone from those who experienced the night from a distance, the prosecutorial control of imagery, the compensation settlements that drew arbitrary lines between neighbors. Colin Dorrance offered a parallel taxonomy of positions within the community: those who want to forget; those traumatized and wanting to talk; those who know nothing and want to know; those whose experience of Lockerbie is mediated entirely by television. He added the contested terminology of the event as evidence of fracture at its most basic: "Was this the Lockerbie air disaster or was it the Lockerbie bombing? A disaster implies it was somehow inevitable or some freak occurrence of nature, whereas a bombing is exactly what it was — a premeditated murder."⁵² The term "air disaster" was coined by journalists within hours of the event, before anyone knew it

⁵¹ David Mundell interview.

⁵² Dorrance interview.

was murder, and it simply stuck — an early capture of the apparatus's narrative by conventions of journalistic language, before the community had any opportunity to shape its own account.

David Wilson gave the fracture its longest historical arc. The compensation settlements, he observed, created resentments that have persisted for decades: some households received money because debris landed on their roofs, others directly next door received nothing. The community-binding he remembered from the years before the disaster — when virtually every schoolteacher lived in the town and their children played on the same football teams as the children of the unemployed — had been eroding since long before 1988, accelerated by the Thatcherite right-to-buy policy that gutted social housing stock and changed the texture of the town.⁵³ ⁵⁴ The disaster did not create Lockerbie's divisions. It landed in a community already in the process of change, and deepened fractures that were already forming.

⁵³ The housing context of Lockerbie's memorial landscape cannot be separated from the political conditions that shaped it. Margaret Thatcher's *Right to Buy* scheme, introduced through the Housing Act 1980, allowed council tenants to purchase their homes at heavily discounted rates. While presented as a democratization of home ownership, the policy had a devastating long-term effect on the social housing stock across Britain: properties sold were rarely replaced, and local authorities were prohibited from using the proceeds to build new ones. In a town the size of Lockerbie, where Sherwood Crescent and Rosebank Crescent were council-built streets, this had direct consequences for the texture of the community. The residents who lived in those houses at the time of the disaster — many of whom became the first stewards of the memorial sites that grew up around them — were part of a specific social fabric produced by public housing. As that fabric was progressively dismantled through purchase, resale, and the arrival of new owners with no connection to December 1988, the memorial sites embedded within it became increasingly anomalous: fixed points of grief in streets whose populations had turned over entirely. The community member who contacted the Dryfesdale trustees in alarm at the volume of visitors to Sherwood Crescent — having moved in recently and not realized what living beside the memorial would mean — is in part a product of this history.

⁵⁴ Wilson interview.

On restraint, dignity, and the ethics of the apparatus. David Wilson's most distinctive contribution to the argument concerns the ethics of how the apparatus presents itself. The Lodge's commitment to free entry and the absence of merchandise is not administrative policy — it is, in his account, a foundational statement about what kind of relationship the apparatus holds with its visitors. He observed that none of Lockerbie's local businesses sell mementos or trinkets associated with the disaster: "I would feel very uncomfortable flogging stuff. It's just not appropriate for the gravity of the events."⁵⁵ This ethic of restraint extends to the landscape. Wilson was explicit that he did not want a "visitor trail becoming a tourist trail."⁵⁶ Too many formal markers would dilute the impact of those already existing, and would destroy the particular quality that gives the existing landscape its power — the sense of an ordinary town in which something extraordinary is available to those who know where to look, without being forced upon those who do not. "If you come into Lockerbie, even as an incomer as I am, you're not noticing that these memorials are there unless you're inspired to ask about them."⁵⁷ The most effective memorial is not the most insistent.

On the politics of negative voices and the capture of the apparatus. All four interviewees addressed the problem of who controls how Lockerbie is remembered, from different positions in the apparatus. Oliver Mundell described from direct

⁵⁵ *Ibid.*

⁵⁶ *Ibid.*

⁵⁷ *Ibid.*

experience the failure of a community park memorial — "an additional remembrance feature that did not go down well with everybody" — and drew the conclusion that remembrance "is best done and led by communities. As soon as you try and superimpose things, or drop them from above, I don't feel that serves a purpose."⁵⁸

David Mundell named the small group of persistently negative voices whose opposition blocked the cairn proposal and left a vacuum that a more assertive and contested figure filled.⁵⁹ David Wilson's anxiety was of a different kind: not the aggressive capture of the apparatus, but its quiet running-down from disuse. He knew, from the example of the original church, that neglect could close a place as surely as opposition.

On the humanizing function of testimony. Colin Dorrance's account of Renee Boulanger's visit — the woman who had never flown, who arrived at Edinburgh Airport with "the body of a fifty-year-old but the mind of a teenager," and who departed four days later with a fundamentally changed relationship to the disaster and the place — illustrates in human scale what the apparatus of remembrance is ultimately for.⁶⁰ Not the production of grief, and not the promise of healing, which architecture cannot make and care does not offer. What Dorrance describes is something more durational and less resolved: the possibility of a different relationship to an experience that will never be finished. "The trees are green and the fields are... it seems to overwrite that negative

⁵⁸ Oliver Mundell interview.

⁵⁹ David Mundell interview.

⁶⁰ Dorrance interview.

instant trigger reaction they would have." People came away with a different understanding of the story, "not through anything I've actually said, but just by engaging with the town."⁶¹ This is not catharsis in the classical sense as a purging that ends the process. It is catharsis as iteration: a process that may be returned to, that does not resolve, but that makes continued living alongside the disaster possible. That is what an apparatus of care can offer. It cannot promise more than that, and it should not try.

David Wilson's account of driving his younger son to find his friend from the Edwards family, the morning after the disaster, resonates at a different register. These two boys in primary school needed to see each other and confirm that the fabric of ordinary relationship had survived. "He had to see him."⁶² The need to establish physical, embodied contact with the living — to confirm that normality remained possible — is the deepest argument for the kind of apparatus this paper proposes. It is an argument for conditions of encounter: spaces and structures and programs in which people who need to find each other can do so.

On institutionalization and the fragility of individual-dependent memory. David Mundell raised that memory requires active cultivation by individuals as well as institutional structures that can outlive them. Colin Dorrance was candid about his own ambivalence: "I don't know if the story's finished yet. In the world of beginnings and

⁶¹ *Ibid.*

⁶² Wilson interview.

endings, where are the bookends?"⁶³ He had received an MBE for work he described as simply saying yes whenever someone reached out. The apparatus of which he is a node exists entirely on the basis of his willingness to continue. That is simultaneously its greatest strength and its structural fragility. David Wilson, at eighty-three, with his children in Edinburgh and Glasgow, was candid about time: "The opportunities for us all to be together ever again are very limited."⁶⁴ His account of the disaster night, of the months of civic management that followed, of the decades of stewardship at the Lodge — none of it exists in any archive. It exists in him, and in the conversation in which it was shared.

⁶³ Dorrance interview.

⁶⁴ Wilson interview.

X. The Next Generation

One of the most powerful pieces of evidence for this paper's central argument comes not from theory but from the Lockerbie Academy students selected for the 2025 Lockerbie-Syracuse Remembrance Scholars programme — young people born a decade and more after the disaster, who carry the event in ways that are striking in their depth and variety.

James Johnson, sixteen, carries the disaster through the most immediate inherited connection: his grandfather helped recover bodies from the wreckage; his grandmother assisted with autopsies. The disaster arrived in his family not as narrative but as physical, embodied labor — the kind of traumatic work that leaves marks across generations whether or not it is spoken of.⁶⁵

Lilian Ong, seventeen, studies Advanced Higher Art at Lockerbie Academy and has her sights set on Duncan of Jordanstone College of Art. Where other scholars bring their connection to the disaster through family memory, Lilian brings it through creativity. She volunteers with neurodiverse youth, rescues animals, and finds her emotional register in painting.⁶⁶

⁶⁵ James Johnson, in "Lockerbie-Syracuse Scholars: Participant Profiles," internal document prepared for the Remembrance Scholars Program, Lockerbie Academy, 2025.

⁶⁶ Lilian Ong, in *ibid.*

Yvie Stewart, sixteen, grew up on a farm outside Lockerbie where her father helped in the recovery efforts. For Yvie, the disaster is not something she read about; it happened in her family's fields.⁶⁷

Ailay Carruthers, seventeen, carries it through her great-grandmother who lived opposite the crash site; she plans to join Police Scotland and progress to scenes-of-crime work.⁶⁸

Jonathan Brandt, seventeen, carries it through an institutional chain stretching across the Atlantic with his family connections with scholars from the original cohort.⁶⁹

Amelia Cameron, School Captain, describes the Syracuse trip as "a personal honour" — a civic obligation she has chosen to accept.⁷⁰

Grace Key, from Hightae, volunteers with the PanAm103 Lockerbie Legacy Foundation; she is an aspiring author, someone for whom words and stories are already the medium through which the world is made sense of.⁷¹

⁶⁷ Yvie Stewart, in *ibid.*

⁶⁸ Ailay Carruthers, in *ibid.*

⁶⁹ Jonathan Brandt, in *ibid.*

⁷⁰ Amelia Cameron, in *ibid.*

⁷¹ Grace Key, in *ibid.*

Iona Yule, from Lochmaben, has articulated a clear sense of her role as transmission: she goes to learn, and then she brings what she has learned back to educate her peers.⁷²

These profiles map the full range of ways in which intergenerational memory transmission actually operates: not through fixed monuments but through family stories, civic obligations, professional aspirations, creative practices, and the particular gravity of growing up in a landscape that holds a history, even when that history is no longer visible on its surface.

Colin Dorrance's account of his daughter Claire's participation illuminates the mechanism from the parental side. He had not intended to open his suppressed account of 1988. But when Claire applied for the scholarship, "something in me said I needed to tell her what happened."⁷³ That conversation — father to daughter, the eighteen-year-old of 1988 speaking to the soon-to-be eighteen-year-old of 2012 — became the hinge between his decades of silence and his decade of testimony. The Scholars program is not only a vehicle for transmitting memory to a new generation. It is a mechanism through which the first generation finally finds occasion to speak.

⁷² Iona Yule, in *ibid.*

⁷³ Dorrance interview.

XI. What the Community Says

In December 2025, I administered a survey titled "Reflections on Remembrance" to community members in and around Lockerbie. The survey was introduced alongside a presentation of this project at the December 21st remembrance service at Tundergarth Kirk — the annual gathering held on the anniversary of the disaster, attended by local residents, trustees, first responders, and visiting families. This context matters for how the results should be read. The respondent pool is not a statistically representative sample of Lockerbie as a whole; it is drawn from those who chose to attend that service, and who therefore already occupy a particular relationship to the remembrance apparatus — present, invested, and gathered on the most significant date in the community's calendar. The survey should be understood not as data in the social-scientific sense but as a structured record of expressed preference among those most directly implicated in the question this thesis addresses. Its value lies not in its coverage but in what it surfaces: a community with genuinely plural and sometimes contradictory needs that cannot be served by any single memorial object, however well designed.

When asked what remembrance most strongly represents, respondents cited a range without any single answer predominating: honoring those lost, collective reflection, community resilience, education, personal memory, healing. One respondent described remembrance as meaning "to never forget the devastating and global impact of a single act of terrorism, and the strength of the local and global community to

respond with resilience and kindness" — a formulation consistent with Oliver Mundell's insistence that the community's recovery is itself the achievement, and with David Wilson's observation that every day brings a new normal rather than a return to an old one.⁷⁴

The question of whether memorial spaces should remain fixed or change over time generated the sharpest divergence. A significant number called for spaces "interactively designed to incorporate ongoing participation and evolution." Others wanted spaces to "remain fixed and permanent." This tension between permanence and process represents a plurality of need, and any apparatus that attempts to serve the whole community must hold this tension rather than resolving it.

One respondent called for the Tundergarth Remembrance Room to "pay tribute to the local people from surrounding cottages and farms who were the very first responders." Another noted: "It would be lovely to see an educational space where people could come and learn about the disaster but also Lockerbie's wider history and heritage."⁷⁵

This last observation resonates across the interviews: the desire for context, for a fuller narrative that situates the disaster within the history of the region rather than treating it as the only event that matters, is expressed by community members and political representatives alike.

⁷⁴ "Reflections on Remembrance: December 2025 Survey Responses," survey administered at the Lockerbie Annual Commemoration Service, December 2025, unpublished dataset.

⁷⁵ *Ibid.*

Community members consistently favoured memorial qualities that included "quiet and contemplative," "open and accessible," "connected to the landscape," and "integrated into everyday life" — preferences that sit in structural tension with the typical memorial typology of enclosed, solemn, dedicated space.⁷⁶ What the community seems to want, the survey suggests, and the interviews confirm, is something present within ordinary life rather than a monolith that demands acknowledgement.

XII. Event vs. Place

One of the most generative questions to emerge from this research is whether memory can exist as an *event* rather than a *place*.

Memorial culture almost universally anchors memory spatially. The monument, the garden, the museum — all are fixed spatial objects, rooted to a particular coordinate. But events are temporal. They occur in duration, are transmitted through occasion and ritual, and leave traces in people rather than in stone. The annual December service at Lockerbie is, in this sense, a more powerful act of memory-making than any physical monument: it gathers the community, creates conditions for shared recollection, and renews the links between the living and the dead on terms that each generation can renegotiate for itself.

⁷⁶ *Ibid.*

Timothy's description of how the December service has evolved — "it used to be very, very formal. It's now become more of an informal approach" — captures something important: the apparatus adapts.⁷⁷ The Syracuse London Centre students who return annually with their special wreath, the international community of interest that has formed around the event and "maintained over all this time" — these are evidence of an apparatus that is alive precisely because it is not fixed.⁷⁸

Oliver Mundell arrived at the same conclusion from a political direction: "I think it's about having living events. Having these as spaces should not be the focus. I think having a network of people who are interested, having a series of organised events that allow people to come together — that in a sensitive way, continue over time to collect information and connect people — I'd prefer to see that as the focus."⁷⁹ David Mundell added the desire for a second annual gathering at Tundergarth, separate from December, accessible to families for whom four days before Christmas is practically impossible — an ambition he had pursued for nearly a decade, coming close before a contested intervention derailed it.

Colin Dorrance extended the logic further still: memory can exist as a *tour* — a route through a landscape narrated by someone who holds the event in their mind. His hand-annotated debris map, archive of photographs, the pausing at the spot on the

⁷⁷ Timothy McCracken, in February 11, 2026 Meeting Minutes.

⁷⁸ *Ibid.*

⁷⁹ Oliver Mundell interview.

A74 where he stopped his car on the night are all spatial events, but they are events hosted by a person, not a structure. The car is the viewing platform. The guide is the visible node of an apparatus. And the conversation that takes place in that car — in which, as Dorrance put it, "it's not me telling them what happened, they tell me their story about what happened to them and their family" — is the form of memory transmission that no monument can replicate.⁸⁰

David Wilson offered the institutional counterpart. His decades of involvement with the Lodge were driven by a civic reflex — an obligation arising not from personal loss but from the fact of being the town around which this happened. "We have a responsibility as the town around which this happened not to let the memory of these folks down."⁸¹ This is not the language of traumatic witness but of civic inheritance: a description of what it means to belong to a community that did not choose its history but has chosen, consciously and repeatedly, to honor it.

What connects all of these accounts is not a shared answer to the question of what form remembrance should take, but a shared understanding of what makes it endure. It endures not because it is fixed in stone but because it is renewed in time — through the annual return, the guided route, the conversation in a car, the service that has loosened its formality without losing its purpose. In *The Writing of the Disaster*, Blanchot argues that disaster is constitutively ungraspable — neither absent nor

⁸⁰ Dorrance interview.

⁸¹ Wilson interview.

present, impossible to experience fully in the moment of its occurrence, and impossible to recover fully afterward.⁸² The acts of inscription that surround it — the records, the maps, the testimonies — are not neutral documents standing outside the disaster. They are part of it. What follows for memory is that the event of the disaster is never completed. It recurs.⁸³ The annual December service at Lockerbie, understood in these terms, is not a commemoration of something finished and past. It is a renewed encounter with something that was never fully present to begin with — which is precisely why it must keep happening, and why no fixed object can substitute for it. Memory can exist as an event rather than a place, and at Lockerbie it already does. The question this thesis brings to design is not how to build a monument adequate to that memory, but how to build conditions — spatial, organizational, temporal — in which the event can keep happening, and in which those who hold it can hand it on without being consumed by it.

⁸² Blanchot, *The Writing of the Disaster*.

⁸³ *Ibid.*

XIII. Invisibility as Condition

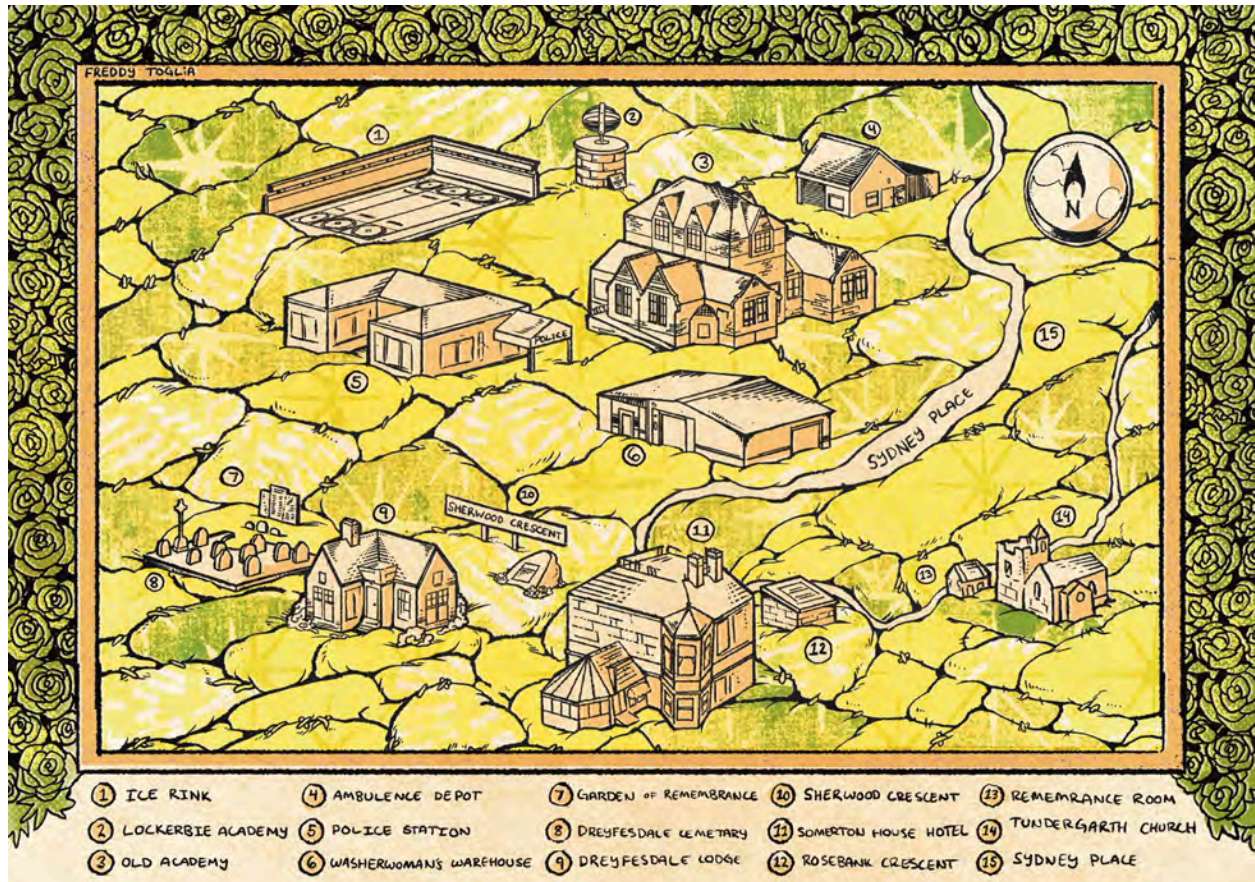


Figure 4. Illustrated map of Lockerbie, Scotland, featuring key sites of remembrance including Sherwood Crescent, Tundergarth Kirk, and Dryfesdale Lodge. Illustration by Freddy Toglia '26; cartographic research and concept by Yida Li, 2026.

Lockerbie presents a particular spatial challenge that distinguishes it from most other disaster sites. The landscape, thirty-seven years after the event, no longer visibly carries what happened. Sherwood Crescent was rebuilt. The fields where debris fell are now ordinary fields grazed by sheep. The road surfaces have been repaired. And as

Oliver Mundell put it: "If you're standing in the high street now, and you weren't looking for it, you'd never know."⁸⁴

This invisibility might be understood as forgetting-in-advance. This thesis proposes to understand it differently: as a condition that reflects the legitimate needs of the living — the residents who rebuilt their street, the farmers who returned to their fields, the community that chose, without fanfare, to go on — and as an achievement that requires active, ongoing effort to sustain. Ricoeur's as well as Woods' warning against the abuse of memory is relevant here: to insist that the landscape declare its trauma, to demand that the town remain visibly marked, would be to subordinate the needs of those who live there to the commemorative demands of those who do not.^{85 86} The absence of visible marks is not a failure of memory. It may be its most ethical form.

David Wilson's perspective is the most considered among the four voices. His concern about the "visitor trail becoming a tourist trail" is not a conservative instinct but a carefully reasoned position: too many formal markers would dilute the weight of those already existing, would transform the character of the landscape from one of discovery to one of instruction, and would fail to honour the particular ethics of a community that healed, in public, by choosing not to display its wounds. "I would fear that." He saw the

⁸⁴ Oliver Mundell interview.

⁸⁵ Ricoeur, *Memory, History, Forgetting*, Part III ("The Historical Condition"), esp. the discussion of the "duty of memory" and its potential abuses.

⁸⁶ Woods, *War and Architecture*.

scatteredness of the existing informal memorial landscape as ethically appropriate: it allows those who prefer not to encounter the memory unbidden to go about their lives, while offering those who seek it a network of traces. "The balance has fallen just about the way it is."⁸⁷

Colin Dorrance's counter-observation is important here. Pointing out a faint patch in the road surface — a repair where an engine had embedded itself in 1988, nearly erased by subsequent resurfacing — he noted that no one had consciously decided to cover it. "It just so happened. Someone decided years later the thing needs to be done. Like any historical artefact, things just get forgotten about and covered over in time."⁸⁸ He still saw it. Showing it to a visitor — making it briefly visible, allowing its near-invisibility to speak — was an act of transmission that no permanent marker could replicate.

The tension between Wilson's "balance has fallen just about right" and Dorrance's "things just get covered over" is of the same condition from two sides. The landscape has already done what landscapes do. The question is not how to arrest the inevitable process but whether the apparatus of remembrance can create conditions under which the traces that remain might still be read, by those who come looking, without forcing their reading on those who would rather not. This is a wager, not a promise. Design for memory cannot guarantee transmission. It can only create conditions of transmission,

⁸⁷ Wilson interview.

⁸⁸ Dorrance interview.

and then depend on the willingness of people — guides, trustees, returning families, future scholars — to take it up.

This connects to Lebbeus Woods's architectural ethics: architecture that carry the mark of what happened while permitting life to continue.⁸⁹ At Lockerbie, the mark is not physical. It is social, institutional, and relational. It lives in the annual service, in the oral histories not yet collected, in the farmers' fields where recovery work happened, in the families of the flight crew who return each December, in the visiting book at the Lodge whose pages grow slowly richer as the emotional dust settles generation by generation. Architecture that works with these invisible marks — that creates conditions for their transmission rather than replacing them with new monuments — is a wager on the possibility that the traces will find their readers. It cannot be more than that. But at Lockerbie, it may be enough.

XIV. When Architecture Refuses to Console

The tradition of memorial architecture offers buildings as consolation.⁹⁰ Spaces in which a community gathers to perform mourning in a spatial container that seems to hold it. This paper has argued that this tradition is inadequate to Lockerbie's condition.

⁸⁹ Woods, *War and Architecture*.

⁹⁰ Kurt Forster, "Monument/Memory and the Mortality of Architecture," in *Oppositions* 25, ed. Peter Eisenman (New York: Institute for Architecture and Urban Studies, 1982), 2–19.

Not because Lockerbie's losses are less deserving of architectural attention but because the specific situation of this community requires something the consoling object cannot provide.

Lebbeus Woods understood architecture's relationship to violence differently from the memorial tradition. For Woods, crisis exposes architecture as always already political — both target and agent, both victim and instrument.⁹¹ His response was not the consoling monument but what might be called a precarious monumentality: incomplete, aggressive, painted and rusted and shedding material, carrying within its form the anticipation of its own ruin.⁹² This is not nostalgia but the refusal of nostalgia's aesthetic — the refusal of the stable, legible object that claims to persist. Woods's buildings are icons that are fleeting and unstable, monumental but making no claims to permanence. Their legibility is the legibility of things that know they will not last. Visualization, for Woods, is political resistance precisely because it refuses the false permanence that power always tries to claim for its monuments.

This is one answer to Lockerbie's condition. But Woods's framework addresses architecture under active conflict — buildings that carry the mark of violence in their material instability.⁹³ Lockerbie's situation is different: the violence is finished, the landscape has recovered, and what remains is not material damage but a

⁹¹ Woods, *War and Architecture*.

⁹² *Ibid.*

⁹³ *Ibid.*

generation-long event, still accumulating, that no single person can fully experience or comprehend. The disaster of 1988 is not a completed past. It is, in Blanchot's terms, still occurring — accreting through every December service, every returning family, every new trustee who crosses the threshold of the Lodge for the first time.⁹⁴ It is an event constituted by an accumulation of extremely small context points, each insignificant and incomplete in itself, none of them adding up to a totality that could be housed in any single spatial object.

Foucault's concept of the apparatus is useful here, but it requires careful handling. The apparatus — *dispositif* — is not merely a network of institutions. It is a subjectifying system: the mechanism through which individuals come to understand their own identity in relation to things external to them.⁹⁵ Subjecthood, in Foucault's framework, is best described as the ongoing negotiation between acquiescence and resistance to institutional structures.⁹⁶ The Lockerbie remembrance apparatus is precisely this: it produces subject positions — mourner, local, visitor, trustee, scholar, witness — and in doing so shapes how those who pass through it understand their relationship to the event. This is neither neutral nor innocent. The apparatus makes claims on people. The question this thesis has been pursuing is what kind of claims it should make, and on whose terms.

⁹⁴ Blanchot, *The Writing of the Disaster*.

⁹⁵ Foucault, "The Confession of the Flesh," 194–228.

⁹⁶ *Ibid.*

What this community requires is therefore not a consoling object but a virtual apparatus: a network of spatial conditions, oral practices, educational programs, digital records, and annual events that together constitute the ongoing infrastructure of remembrance — designed not for the event as it was, but for the construction of potential events yet to come. Each of these events will be insignificant and incomplete. No one will experience the whole.

Oliver Mundell offered one formulation of this task: "I think having a network of people who are interested, having a series of organized events that allow people to kind of come together — that in a sensitive way, continue over time to collect information and connect people — I'd prefer to see that as the focus."⁹⁷ David Mundell offered a harder-edged version: an apparatus institutionally embedded rather than personality-dependent, clear-eyed about the fractures that a consoling monument would paper over without resolving.⁹⁸ Colin Dorrance offered the most embodied version: an apparatus made of conversations, of relationships, of the specific gravity of walking a landscape with someone who knows what it holds — of the moment when a woman who has not flown in thirty years arrives at Edinburgh Airport and the town she has feared all her life turns out to be a place where the trees are green and the sheep are in the fields and someone is waiting to tell her that her sister knew nothing.⁹⁹

⁹⁷ Oliver Mundell interview.

⁹⁸ David Mundell interview.

⁹⁹ Dorrance interview.

Ricoeur writes that narrative makes events intelligible at the cost of fidelity.¹⁰⁰ Every memorial lies. The architecture this thesis proposes lies differently — not by claiming to hold the past, but by creating conditions under which the past might continue to be encountered, partially and incompletely, by people who were not there. The apparatus, strengthened and extended and kept honest about its own fragility, will hope to find enough people willing to take it up — across enough generations, in enough small and insignificant moments — to justify having built it at all.

XV. Between Ground and Sky

It arrives for the first time on the twenty-first of May — half a year after the anniversary, in the full light of the Scottish spring. The balloon envelope is inflated over the course of an hour. By mid-morning it is airborne: a large, translucent, bulbous form against a grey-white sky, visible from the road, from the churchyard wall, from the hillside above. The gondola rotates slowly in the wind. The microphone array begins its continuous recording. The apparatus is operational.

Nobody has told it why it is there.

¹⁰⁰ Ricoeur, *Time and Narrative*, vol. 1, trans. Kathleen McLaughlin and David Pellauer (Chicago: University of Chicago Press, 1984).

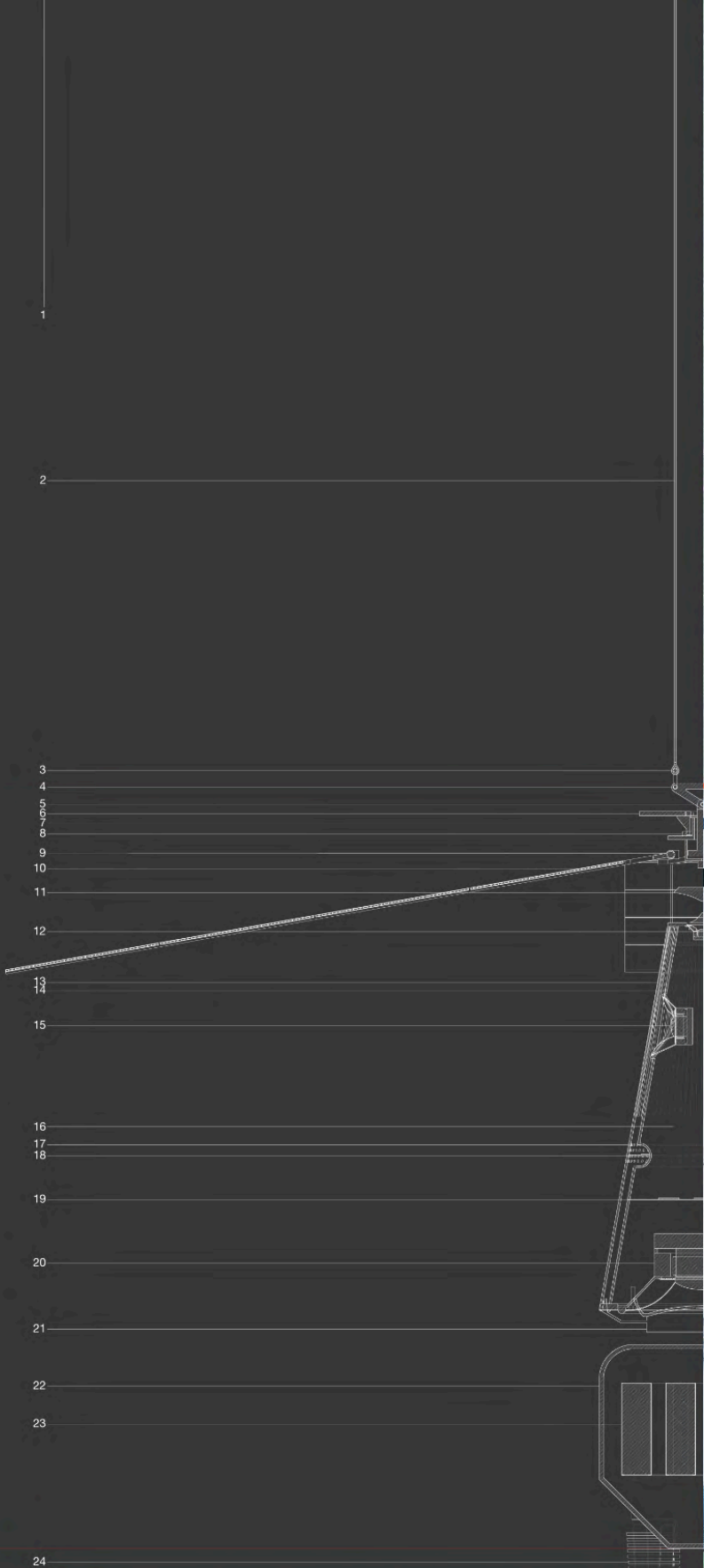


collage by the author, 2026.

Lebbeus Woods understood architecture's relationship to violence as revealing what architecture always already was: target and agent of political force simultaneously.¹⁰¹ His response was a precarious monumentality — incomplete, aggressive, material shedding from its surfaces, carrying within its form the anticipation of its own ruin. An icon that is fleeting and unstable, monumental in ambition but making no claims to persistence. His visions stand against nostalgia's aestheticization of loss. They remain in the condition of violence, the claim to permanence confessed, from the first, as false.

The condition Lockerbie presents to this framework is that the violence is finished. The landscape has recovered. What remains is not structural instability but a generational one: a memory held by a diminishing number of people in whom it lives, tended by an apparatus whose stewards are aging. The device proposed here translates this precariousness into form — not by mimicking structural damage but by being, genuinely and programmatically, an object that may or may not be present, that depends on active deployment, that moves across the landscape, that floats subject to wind and weather, that has no inscription declaring its permanence because it has none.

¹⁰¹ Woods, *War and Architecture*.



- 1 Balloon envelope, reinforced transparent latex or polyethylene film skin
- 2 Suspension tether, braided nylon cordage, primary load-bearing
- 3 Gondola suspension point
- 4 Roping yoke, aluminum triangular cracket, three-point load distribution
- 5 Free rotating gondola support shaft
- 6 Azimuth flywheel, momentum dump motor
- 7 Azimuth flywheel support hub
- 8 Azimuth torque motor
- 9 Photovoltaic array hinge pivot
- 10 Photovoltaic array, flexible monocrystalline cells, ETFE encapsulant film, UV-stable outer surface, port side and starboard NAV lights
- 11 Reflector cap, conical horn, high-frequency omnidirectional dispersion
- 12 Tweeter driver, 3" dome transducer, 15 W class D amplified channel
- 13 Cone outer shell, translucent PETG composite skin
- 14 Cone inner shell, translucent PETG composite skin
- 15 Mid-range driver pair, 2" full-range transducers, 180° opposed mounting
- 16 Sealed mid-chamber enclosure, acoustic sub-volume, 1.09 L internal capacity

- 17 Microphone aperture slot cluster
- 18 Microphone PCB ring, 6-channel omnidirectional array
- 19 Mid-chamber insulated enclosure
- 20 Woofer driver, 5 1/2" transducer, 60 W class D, downward-firing
- 21 Passive radiator, compliance-tuned mass-loaded plate, omnidirectional bass output
- 22 Avionics bay
Bluetooth/WiFi module, A2DP, aptX HD, dual-band wireless audio
GPS module, autopilot navigation and solar tracking
Compute module, single-board processor, autopilot and differential thrust control
Solid state drive, M.2 2280 form factor, continuous ambient audio recording
- 23 Li-Ion battery pack, 4S1P configuration, 175 Wh, 14.4 V nominal
Battery management board, cell balancing, over-voltage and short-circuit protection
DC-DC boost converter
- 24 Omnidirectional LIDAR module

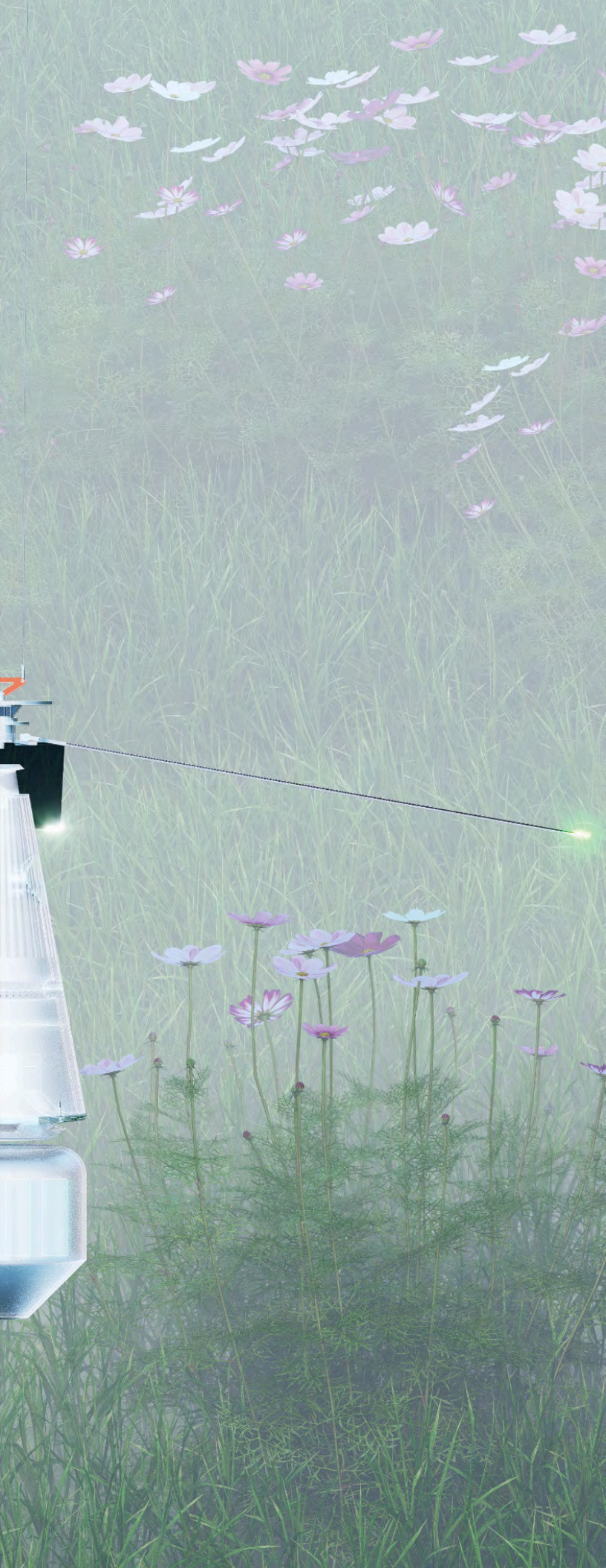


Figure 6. Apparatus: sectional drawing x enclosure visualization. Author's own drawing, 2026.

The apparatus is a tethered balloon gondola. Its envelope is large enough to serve as a wayfinding device visible across moorland — a marker in a landscape that gives nothing away to those who do not know where to look. The gondola carries a full-range omnidirectional speaker system, a six-channel microphone array recording the ambient sound field continuously, GPS and solar tracking, and a solid-state drive archiving everything the device hears. Flexible photovoltaic cells enable self-sufficiency. At its base, an omnidirectional LiDAR module reads the surrounding terrain. The gondola rotates freely, its orientation determined by a flywheel momentum system negotiating between the device's own tendency and the pressure of the air.

The balloon: 219 x 219 x 354 inches — eighteen feet across, nearly thirty feet tall.

Visible from well over a mile across open moorland, it reorganizes the spatial experience of the landscape before any question of what it is can be asked. The scale is the apparatus's first act of transmission. The device does not name what it marks. It marks without naming.

This project has been, throughout, a project about the ground — the debris field mapped to extraordinary precision, the fields of Tundergarth, the road surface where an engine embedded itself. Everything that happened on the ground was the result of something that happened in the air. The apparatus rises into the vertical dimension the disaster traversed and becomes its own index of the problematic air of Lockerbie —

not a representation of the aircraft, not a mimicry of its fall, but an object that occupies what no ground-level memorial can address. Its only connection to the ground is the one made by those who seek it out.

Robert McCarter's *Pamphlet Architecture No. 12: Building Machines* argues that the machine constitutes a second nature — an enhanced vernacular that gives form to the human understanding of natural forces, transparent to the person whose intentions it manifests.¹⁰² The natural force this machine gives form to is not wind or gravity but the condition of human memory itself: partial, losing ground, dependent on those willing to carry it forward, and structurally incapable of totality. The device does not resist this condition or compensate for it. It is built in its image — a machine that records without guarantee of retrieval, that broadcasts without guarantee of reception, that moves across a landscape accumulating what no one can fully witness or comprehend.

The apparatus is not of place but of event. An event constituted by an accumulation of extremely small context points — a sound carried downwind, a voice heard from an unexpected source, a family arriving at the docking point on a misty morning — each insignificant and incomplete in itself, none adding up to a totality that anyone can fully experience. This is the condition Lockerbie has always already been in. The apparatus does not resolve it. It names it and works with it.

¹⁰² Robert McCarter, ed., *Pamphlet Architecture No. 12: Building Machines* (New York: Princeton Architectural Press, 1987).

The Foucauldian apparatus is a subjectifying system: the mechanism through which individuals come to understand their own identity in relation to things external to them, subjecthood produced through acquiescence and resistance to institutional structures.¹⁰³ The gondola produces subject positions through its specific formal and programmatic decisions. The sound radius — audible only within close proximity — means you have to come to it; you have to choose to listen. The altitude and absence of inscription leave the encounter open. The apparatus offers the condition; it does not specify the content. This is what it means to say the apparatus makes no guarantee to total remembering. It allows forgetting. It allows approach and withdrawal. It does not reach out.

The device does not stay in one place. Over its operational life it will be deployed at each confirmed debris location in the AAIB report — sites distributed across two corridors of approximately 130 kilometers. At each location it gathers ambient sound and makes its presence known. People who come to the tether point may leave objects. When the apparatus moves, some of these will remain. The field carries the trace of the encounter without carrying the apparatus itself. This is the mobile reliquary: an object that accumulates around itself a voluntary gathering of artifacts, distributing them across the debris field in a trail that no archive was designed to hold. The Lodge and the Remembrance Room hold objects in rooms. The device distributes its across

¹⁰³ Foucault, "The Confession of the Flesh," 194–228.

the landscape. Neither archive is complete. Together they constitute something closer to the actual shape of memory than either achieves alone.

What the device broadcasts is drawn from its continuous recording: oral histories gathered across the months of its operation, voices not necessarily connected to the disaster or to each other, environmental sounds from the landscape at different seasons. The sound is only legible within close proximity. This acoustic radius is the device's ethical position — honoring the community's ethic of restraint, its protection of those who would rather not encounter the memory unbidden.

The affect this project reaches for is not melancholy but the uncanny. Nostalgia stabilizes grief by aestheticizing it — the tonality of historical documentation, the visual language of memory and loss, the pleasurable sadness of contemplating the past. This is precisely the register the device refuses. The uncanny is the underside of the familiar: the unsettling sensation of the recognizable stripped of its reassurance. At Lockerbie, this distinction matters. The landscape is ordinary. The high street looks like a high street. The fields look like fields. What the uncanny names is the pressure that this ordinary surface conceals — the event that continues to accumulate around daily life without being visibly marked.

The device in the landscape does not grieve. A large pale form above moorland, rotating slowly on its axis with winds, audible only on approach — it appears as something that does not quite belong: not natural, not conventionally architectural, not

a recognizable category of memorial object. Its presence offers no stable vantage point, no declared meaning, no instruction about how to feel. This indeterminacy is the apparatus's honest acknowledgment that memory is always received from a position that was not the original. The apparatus offers not the original view but an encounter that acknowledges this impossibility without pretending to resolve it.

The apparatus carries within its operational logic the anticipation of its own retirement.

The apparatus was first deployed in the spring of 2026. It operated for twenty-one and a half years, following the AAIB report's inventory of debris locations. Its photovoltaic skin remained functional throughout; several cells were replaced after weather damage.

The gondola's PETG cone housing weathered with UV exposure — a quality noticed and accepted without correction. The solid-state drive was replaced and archived on a three-year cycle, deposits made with Dryfesdale Lodge and the Syracuse University Archives.

In December 2047, at the fifty-ninth anniversary service, the apparatus was present above the field for the last time. It was not formally retired.

The apparatus made no claims to permanence, and it kept none.

Bibliography

Agamben, Giorgio. *What Is an Apparatus? And Other Essays*. Translated by David Kishik and Stefan Pedatella. Stanford: Stanford University Press, 2009.

Air Accidents Investigation Branch. *Aircraft Accident Report No. 2/90 (EW/C1094): Report on the accident to Boeing 747-121, N739PA at Lockerbie, Dumfriesshire, Scotland on 21 December 1988*. London: HMSO, 1990.

Blanchot, Maurice. *The Writing of the Disaster*. Translated by Ann Smock. Lincoln: University of Nebraska Press, 1986.

Corbo, Stefano. *From Formalism to Weak Form: The Architecture and Philosophy of Peter Eisenman*. Farnham: Ashgate / Routledge, 2014.

Dekel, Irit. "Jews and Other Others at the Holocaust Memorial in Berlin." *Anthropological Journal of European Cultures* 23, no. 2 (2014): 71–84.
<http://www.jstor.org/stable/43234610>.

Derrida, Jacques. *Spectres of Marx: The State of the Debt, the Work of Mourning and the New International*. Translated by Peggy Kamuf. New York: Routledge, 1994.

Dorrance, Colin MBE. Interview and guided tour conducted by Yida Li. Lockerbie, Scotland, March 2026. Transcript on file with the author.

Eisenman, Peter. Project statement for the Memorial to the Murdered Jews of Europe. Berlin, 2005. See also Corbo, Stefano. *From Formalism to Weak Form: The Architecture and Philosophy of Peter Eisenman*. Farnham: Ashgate / Routledge, 2014.

Farnum, Becca, Timothy McCracken, Yida Li, Kirsty Boardman, and Isla Boardman. "February 11, 2026 Meeting Minutes." Unpublished transcription. February 11, 2026.

Forster, Kurt. "Monument/Memory and the Mortality of Architecture." In *Oppositions 25*, edited by Peter Eisenman, 2–19. New York: Institute for Architecture and Urban Studies, 1982.

Foucault, Michel. "The Confession of the Flesh." In *Power/Knowledge: Selected Interviews and Other Writings, 1972–1977*, edited by Colin Gordon, 194–228. New York: Pantheon, 1980.

Hartman, Geoffrey. "Reading, Trauma, Pedagogy." In *The Geoffrey Hartman Reader*, edited by Geoffrey Hartman and Daniel T. O'Hara, 295–296. Edinburgh: Edinburgh University Press, 2004.

Jackson, Kate. "SU Responds to Open Letter about Lockerbie Scholarship Program Change." *The Daily Orange*, October 23, 2024.
<https://dailyorange.com/2024/10/syracuse-university-responds-lockerbie-open-letter/>.

Lennon, John, and Malcolm Foley. *Dark Tourism: The Attraction of Death and Disaster*. London: Continuum, 2000.

Li, Yida. *Debris Field of Pan Am Flight 103, Lockerbie, Scotland*. GIS map with superimposed AAIB survey data and flight path of N739PA. Author's own cartographic work, 2026.

Li, Yida. *Map of Lockerbie, Dumfriesshire, Scotland*. GIS map. Author's own cartographic work, 2025.

Lin, Maya. *Boundaries*. New York: Simon & Schuster, 2000.

“Lockerbie-Syracuse Scholars: Participant Profiles.” Internal document prepared for the Remembrance Scholars Program. Lockerbie Academy, 2025.

Maddrell, Avril, and James D. Sidaway, eds. *Deathscapes: Spaces for Death, Dying, Mourning and Remembrance*. Farnham: Ashgate, 2010.

McCarter, Robert, ed. *Pamphlet Architecture No. 12: Building Machines*. New York: Princeton Architectural Press, 1987.

Mundell, David MP. Interview conducted by Yida Li and Dr. Becca Farnum. Westminster, London, March 2026. Transcript on file with the author.

Mundell, Oliver MSP. Interview conducted by Yida Li. Edinburgh, Scotland, March 2026. Transcript on file with the author.

- “Reflections on Remembrance: December 2025 Survey Responses.” Survey administered at the Lockerbie Annual Commemoration Service, December 2025. Unpublished dataset.
- Riegl, Alois. “The Modern Cult of Monuments: Its Character and Its Origin” (1903). Translated by Kurt W. Forster and Diane Ghirardo. *Oppositions* 25 (1982): 21–51.
- Ricoeur, Paul. *Memory, History, Forgetting*. Translated by Kathleen Blamey and David Pellauer. Chicago: University of Chicago Press, 2004.
- Ricoeur, Paul. *Time and Narrative*. 3 vols. Translated by Kathleen McLaughlin and David Pellauer. Chicago: University of Chicago Press, 1984–1988.
- Russell, D. E. *Oral History Workshop*. Santa Barbara: University of California Santa Barbara, Department of History, 1990s.
- Toglia, Freddy, and Yida Li. *Illustrated Map of Lockerbie, Scotland, Featuring Sites of Remembrance*. Collaborative illustration and cartographic research, 2026.
- Virilio, Paul. *The Original Accident*. Translated by Julie Rose. Cambridge: Polity Press, 2007.
- Wilson, David. Interview conducted by Yida Li. Dryfesdale Lodge, Lockerbie, Scotland, March 2026. Transcript on file with the author.
- Woods, Lebbeus. *War and Architecture / Rat und Architektur*. Princeton: Princeton Architectural Press, 1993.

All interview quotations from Colin Dorrance are drawn from a recorded guided tour and extended conversation conducted in Lockerbie, March 2026. All interview quotations from David Mundell are drawn from a recorded interview conducted at Westminster, March 2026. All interview quotations from Oliver Mundell are drawn from a recorded interview conducted in Edinburgh at the Scottish Parliament, March 2026. All interview quotations from David Wilson are drawn from a recorded interview conducted at Dryfesdale Lodge, Lockerbie, March 2026. Quotations from all four interviews have been lightly edited for clarity while preserving the speaker's meaning and voice. All other interview quotations are drawn from the February 11, 2026 meeting transcription. Direct quotations from community members are preserved in their spoken form.

Appendices

Appendix A

Lockerbie: *Unfold, Extend, Shear, Store* A Four-Book Research Publication Series

This appendix presents *Lockerbie: Unfold, Extend, Shear, Store*, a four-book publication series produced in conjunction with this thesis as a primary research instrument. The series was developed in collaboration with primapress, an independent architectural publishing house based in Santiago, Chile, founded by architects Catalina Briones and Pablo Rojas Böttner. Primapress is an editorial project dedicated to expanding the contents, formats, and modes of circulation of contemporary architecture through a curatorial and critical approach. The collaboration was developed in connection with Assistant Professor Edgar Rodríguez of the Syracuse University School of Architecture — a Mexican architect and educator whose practice, operadora, spans built works, writing, photography, and curatorial projects across diverse media and scales, and whose research engages the cultural and semiotic dimensions of architecture through sustained attention to the contemporary, the vernacular, and the ordinary.

The series does not constitute a supplementary illustration of arguments made elsewhere in this work; rather, it functions as an analytical device from which the thesis's theoretical and architectural propositions emerge. The books are reproduced here in full, preceded by this critical introduction that situates their formal strategies within the broader argument.

Structure

1. *Unfold* operates at the scale of the aircraft and the body. It assembles technical diagrams of the Pan Am 103 airframe alongside aerial photography of the Scottish landscape into which the debris fell. Laid across an 8x8 grid of panels, each section holds equal weight regardless of whether it contains a structural drawing or an image of moorland. The grid denies hierarchy: wreckage diagrams and pastoral photographs inhabit identical frames, generating an oscillation between forensic precision and the indifferent continuity of landscape. To unfold the book is to perform a spatial act — the grid is a map, but also a body, and also a field.

2. *Extend* moves to the territorial scale, centering on Figure B-4 from the official AAIB accident report: the plot of wreckage trails across a twelve-kilometre corridor of southern Scotland. The volume places this forensic map in direct adjacency with photographs of the ground it describes — grass, rock, sheep, sky. The result is a collision between the register of official knowledge and the irreducible texture of place. Extending is a critical act: it asks what the map omits, what the grid cannot hold, and what persists beneath the coordinate system.

3. *Shear* introduces temporal and material rupture. Physical models of the aircraft mid-disintegration are juxtaposed with technical reconstructions of the failure sequence from the accident investigation, and with photographs of lambing season in the fields surrounding Lockerbie. The word shear names both a structural failure mode and an agricultural practice. The volume exploits this doubleness — disaster and renewal, rupture and continuity — occupying the same grid without resolution. Shear refuses to separate tragedy from the life that surrounds and absorbs it.

4. *Store* shifts to the interior — to Tundergarth Kirk, which holds memorial objects, archival material, and the ongoing stewardship of the disaster's memory. Photographs of timber roofs, stained glass, and storage structures are juxtaposed with their own kaleidoscopic reflections, produced by the 8×8 grid folded back on itself. Storage is not passive accumulation; it is a form of archival attention. The volume asks what it means to hold memory, and what architectural space makes possible the act of keeping.

Formal Logic: The Grid

All four volumes share a common formal device: an 8×8 sectional grid applied consistently across the printed spread. Each section — labelled A through H on both axes — produces 64 equal panels per spread, and the grid is printed on both sides so that the book, when fully unfolded, becomes a single large-format sheet. This is not a neutral organizational choice.

In the Lockerbie disaster, the first act of recovery was the grid: AAIB investigators imposed a coordinate system on the debris field, assigning each fragment a location, a category, a number. The grid was the mechanism by which catastrophe was made legible — and in being made legible, made controllable. The books inherit and estrange this logic. The grid is present in every volume, but it generates dissonance rather than

order: the sections never resolve into a unified image, the coordinate labels designate panels without stable territories, and the act of unfolding the book into its full sheet disperses the reader across a space too large to perceive at once.

This is the books' central formal proposition: that memory, like the debris field, cannot be gathered into a single frame. It must be approached obliquely, sectionally, through partial views that resist totalization.

Position Within the Thesis

The series functions as a research instrument rather than a research output. It does not illustrate the argument; it produces the conditions under which the argument becomes possible. This distinction matters because the thesis insists that memorial architecture cannot operate as a container — that memory is assembled through engagement rather than delivered through form. The books enact this insistence. They require physical handling, sequential and non-sequential reading, partial vision, and active assembly.

In Chapter Four, the series is analyzed as an operational framework — a demonstration of how architectural thinking can process memory without fixing it into static form. Positioned between the forensic and the experiential, between the archival and the atmospheric, the books make visible the space that conventional memorial objects close off. Where a monument resolves grief into form, the series keeps that resolution perpetually deferred.

Read alongside Chapter Two's critique of abstraction in memorial design, Chapter Three's analysis of Lockerbie's existing apparatus of remembrance, and the survey data gathered from community members in December 2025, the publication series constitutes the practical core of the argument: that architecture's role in relation to memory is not to represent loss but to create conditions in which loss remains generative — open to reinterpretation, participation, and continuation across time.

The four titles name both formal operations and epistemic stances. To unfold is to expose hidden structure. To extend is to follow what spills beyond the frame. To shear is to acknowledge rupture without aestheticizing it. To store is to accept the responsibility of keeping without the fantasy of complete preservation. Together they constitute a practice of architectural remembrance that this thesis proposes as an

alternative to the memorial object.



Figure 7. The Lockerbie publication series displayed at book scale, 45.17" x 60.17", 75 micron acetate paper. Marble Room, Slocum Hall, Syracuse University, 2026.

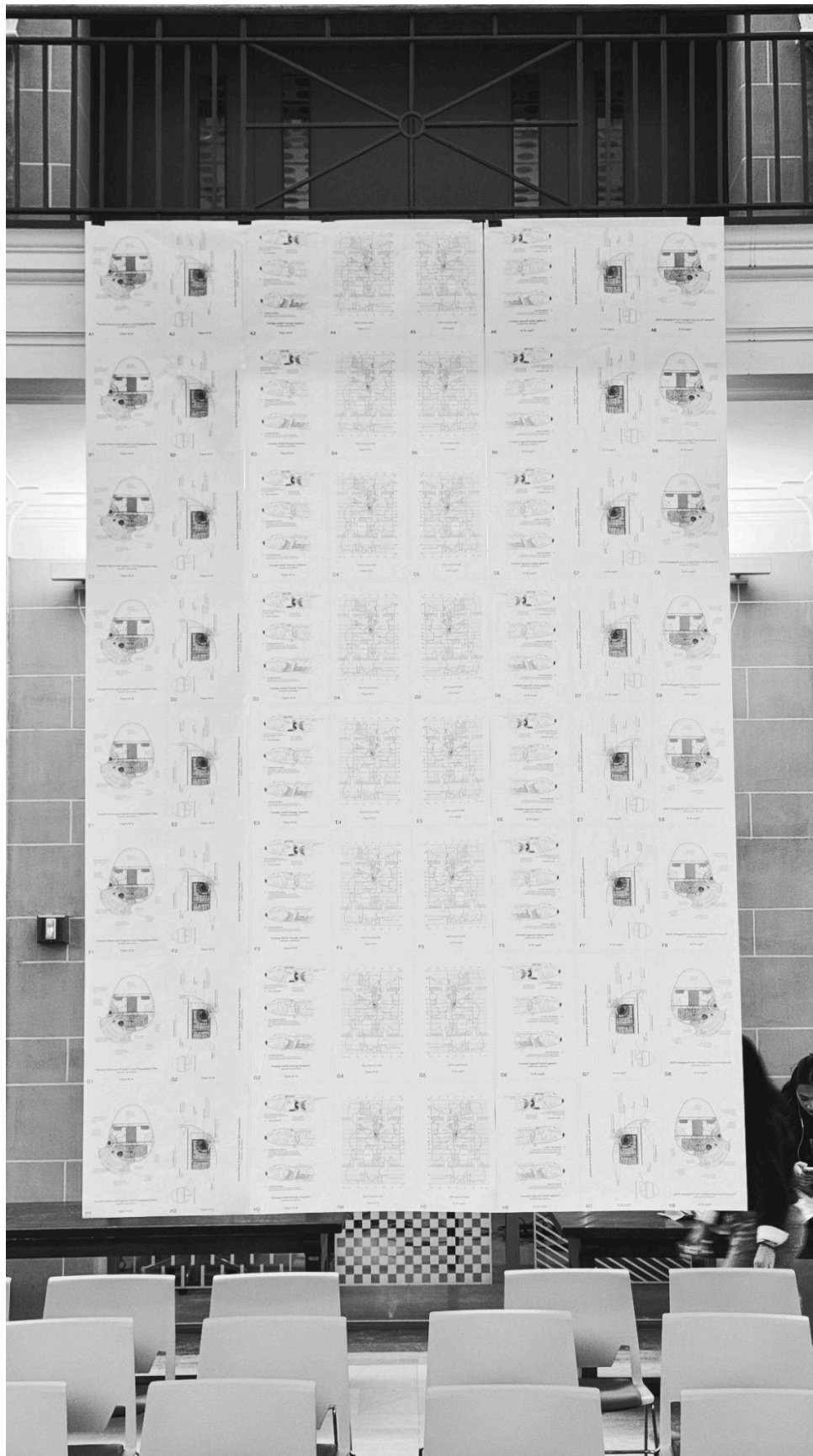
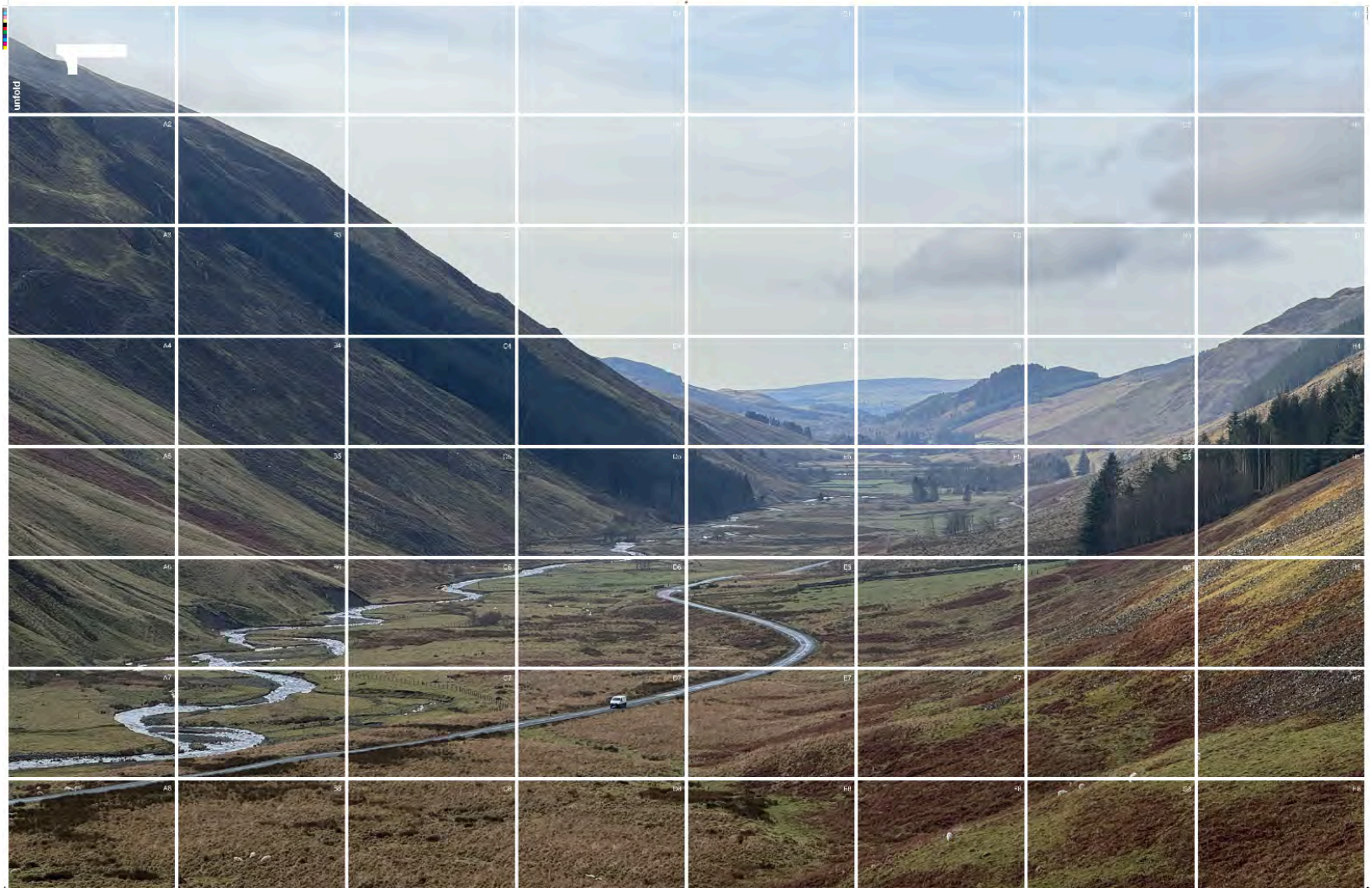


Figure 8. Volume 1: Unfold, displayed at exhibition scale, Slocum Hall Atrium, Syracuse University, 2026.



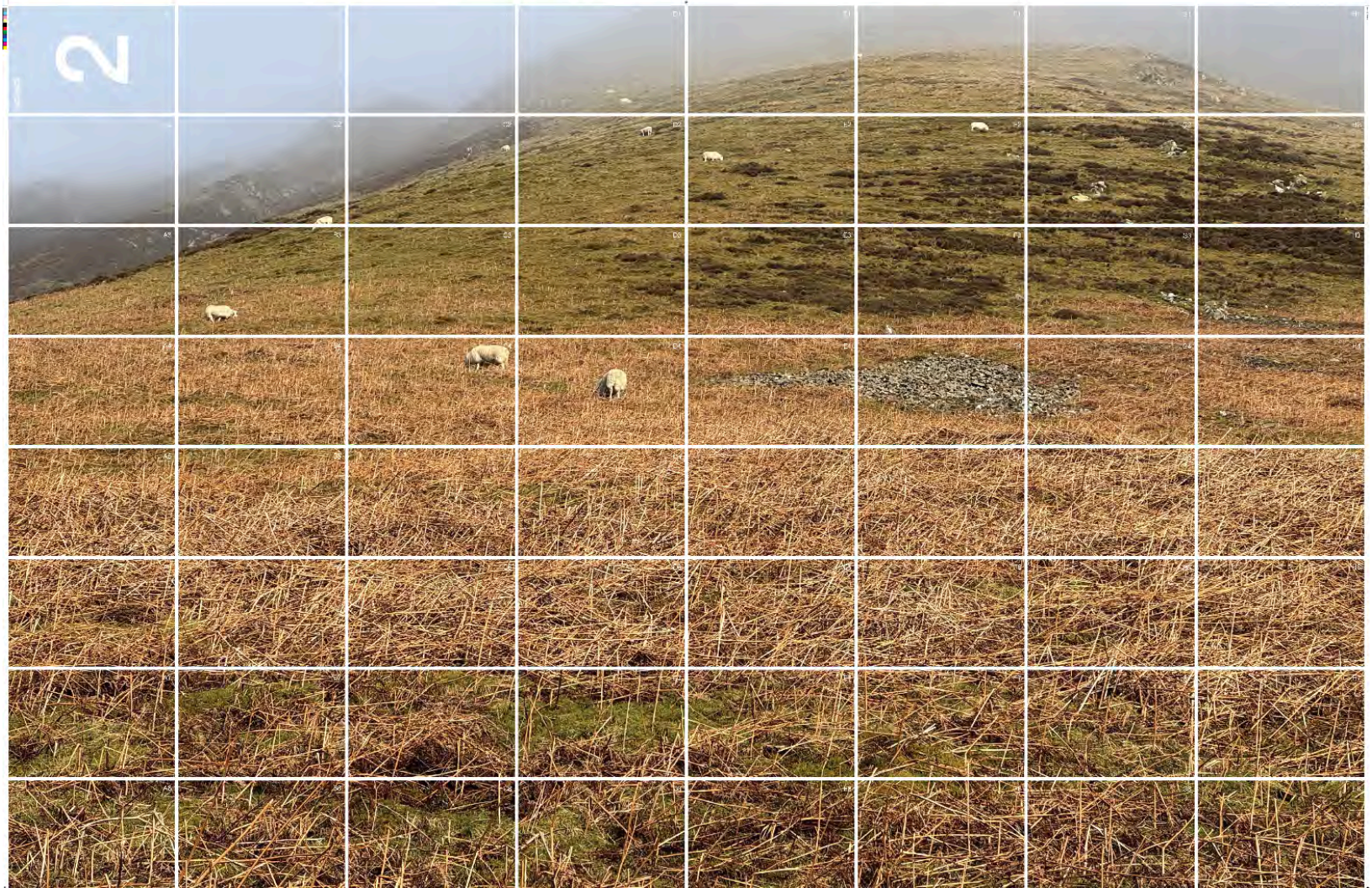
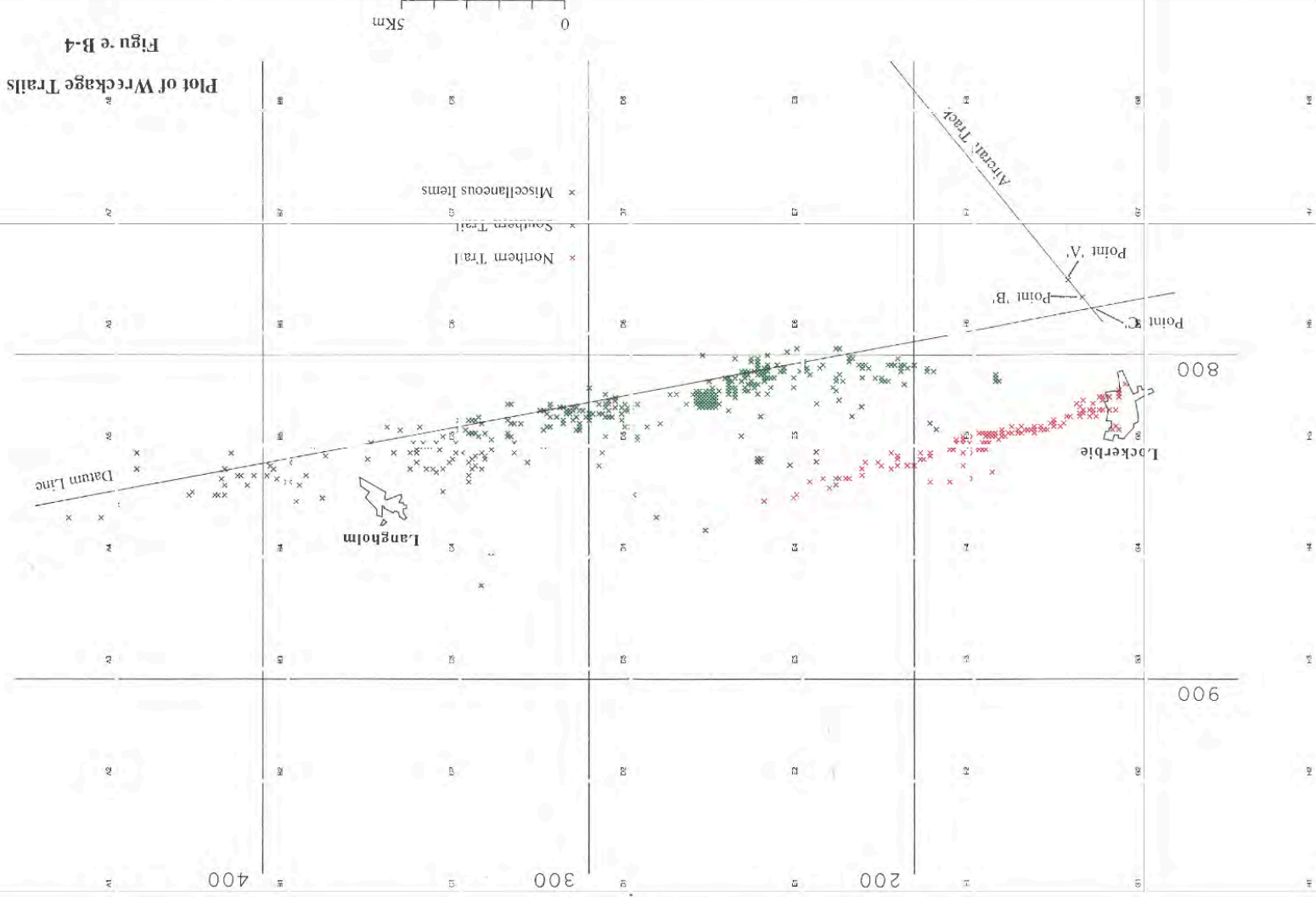
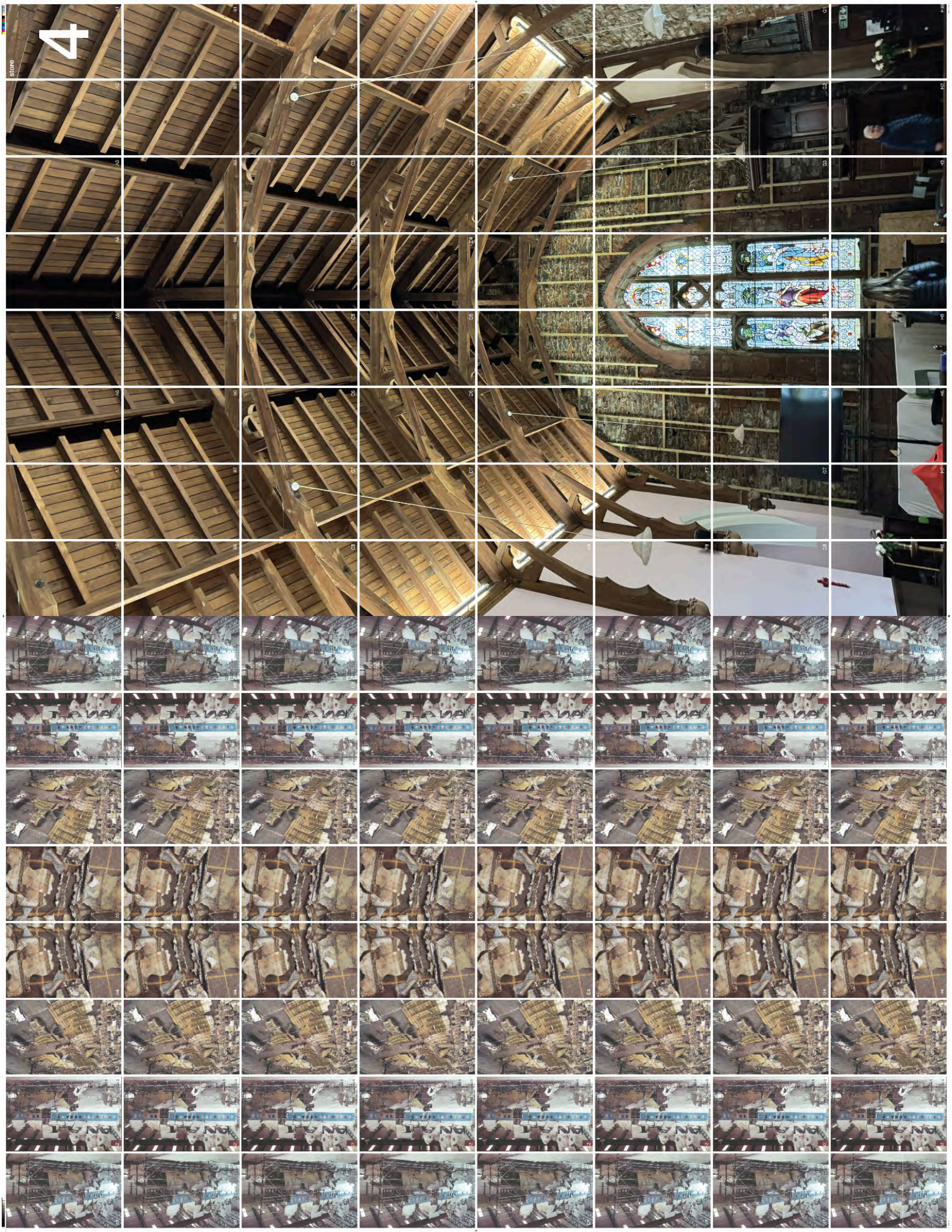


Figure B-4
Plot of Wreckage Trails







Figures 9–12. Lockerbie: Unfold, Extend, Shear, Store. Volumes 1–4 of the publication series in digital format, 2026.

Appendix B

What Is Your Most Powerful Memory? Drawing Workshop

As part of the primary fieldwork conducted in Lockerbie in March 2026, I ran creative drawing workshops with children in the community, posing a single question: *What is your most powerful memory?*

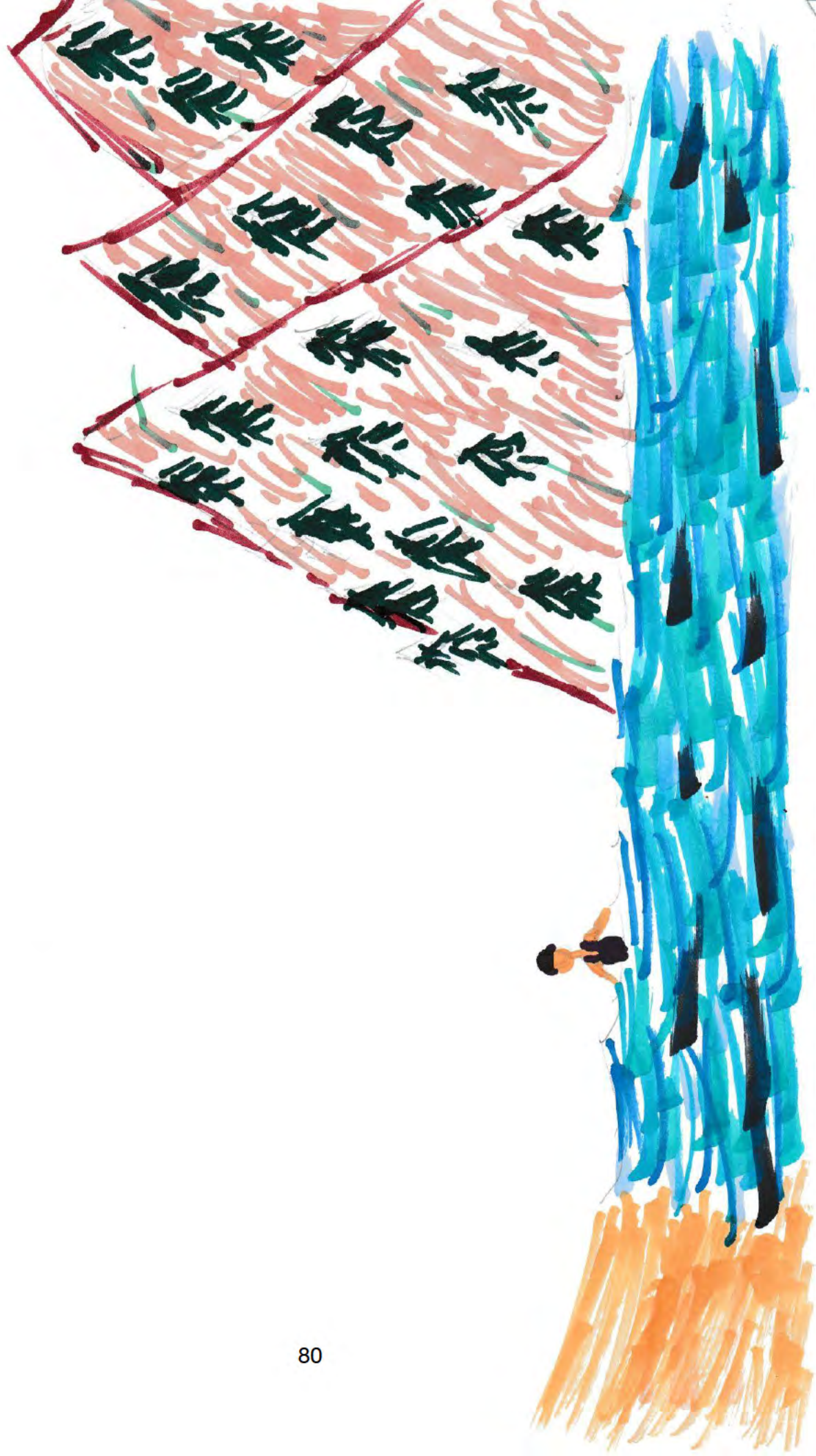
The results did not mention the disaster. They drew FaceTime calls with friends who had moved away. Riding to Tundergarth on horseback. Harry Potter. A theatre production. A camping trip. A visit to the hospital. Ordinary life, in its full texture — the kind of memory that does not make it into archives, that no monument addresses, and that the children of Lockerbie carry in exactly the same proportions as children anywhere.

This mattered more to the argument than almost anything else I gathered. Because the thesis is not only about how Lockerbie remembers Pan Am 103. It is about what memory is — how it actually works in the bodies and minds of people who live inside a landscape that the world has decided is historic. These children are growing up in that landscape. Their most powerful memories are a phone screen, a horse, a stage. The apparatus of remembrance this thesis proposes has to be worthy of that fact — has to hold open a relationship to the disaster that does not demand to displace everything else.

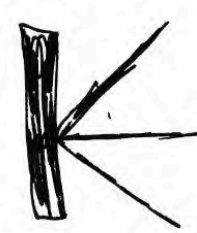
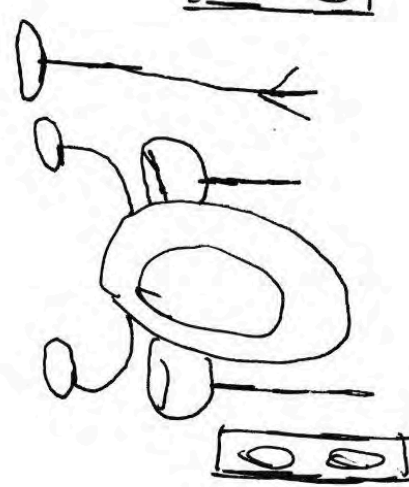
Isla 4



Becca

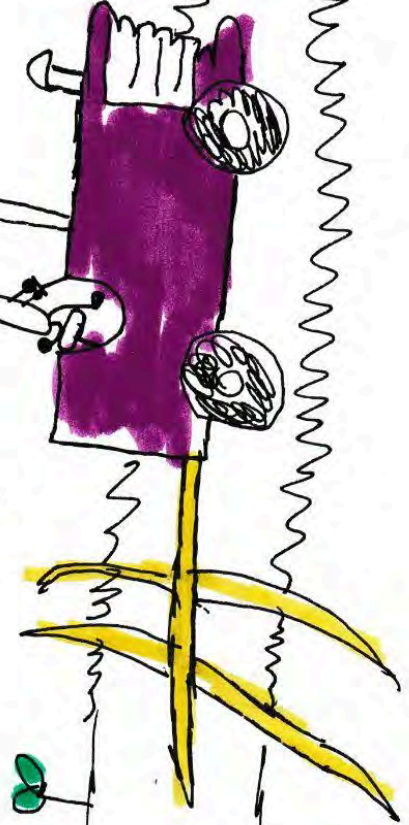
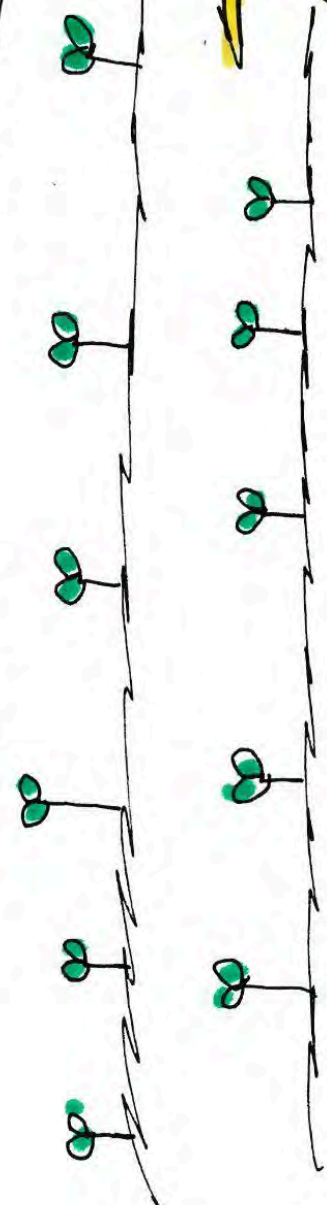
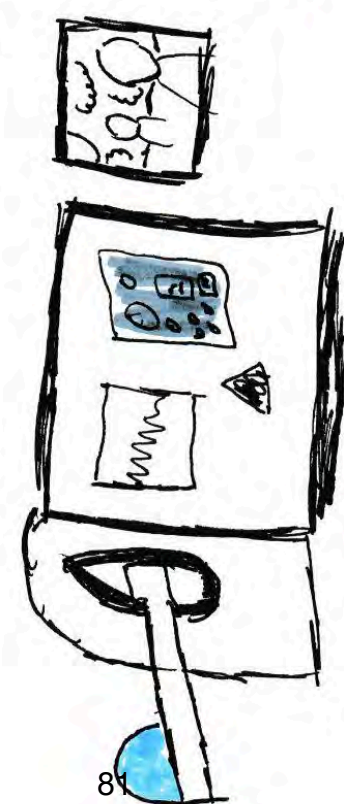
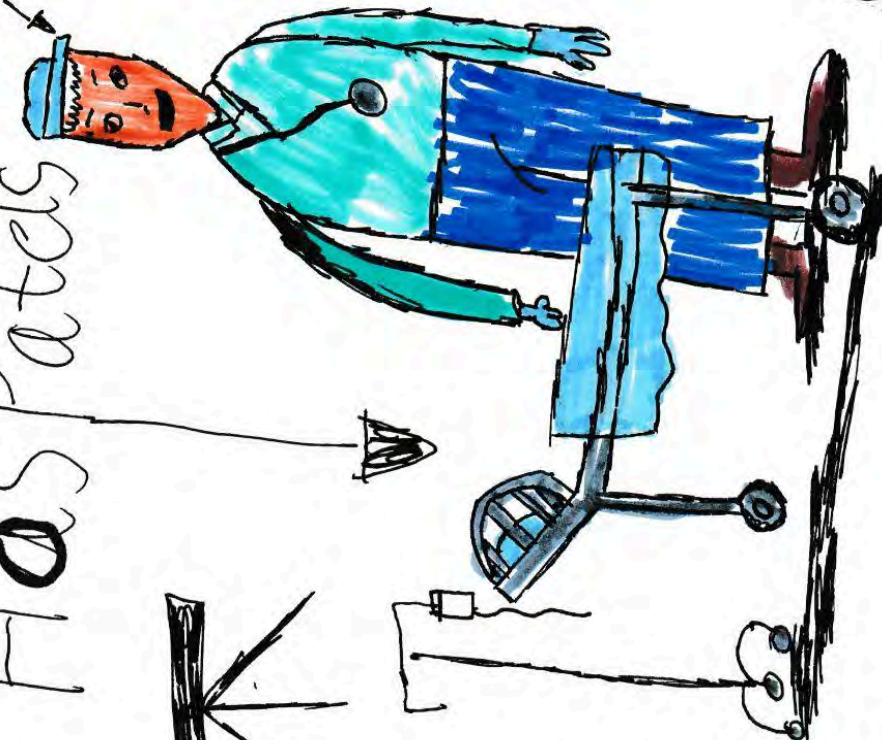


band

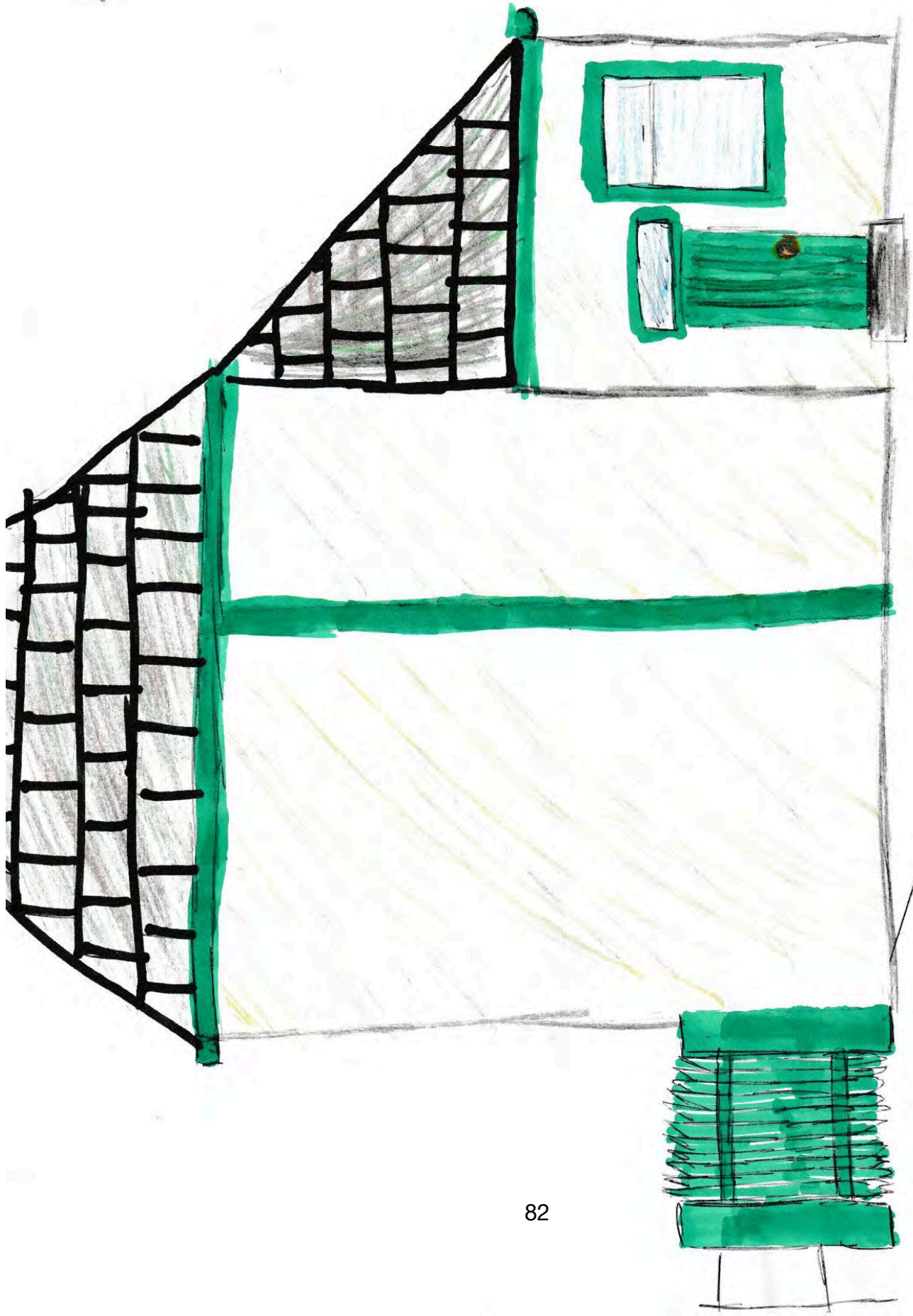


HOSPITALS

~~nickel~~ Micheal



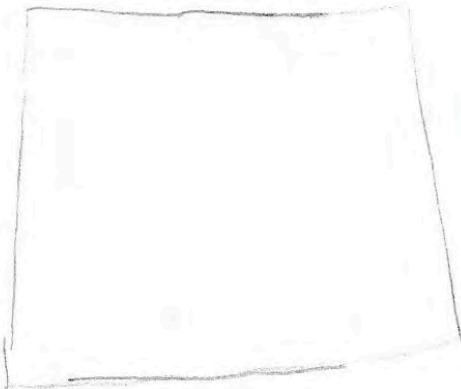
Lachlan II



Rachael Richardson 16
Rachael Richardson



Neil
10



July 16

DGC College



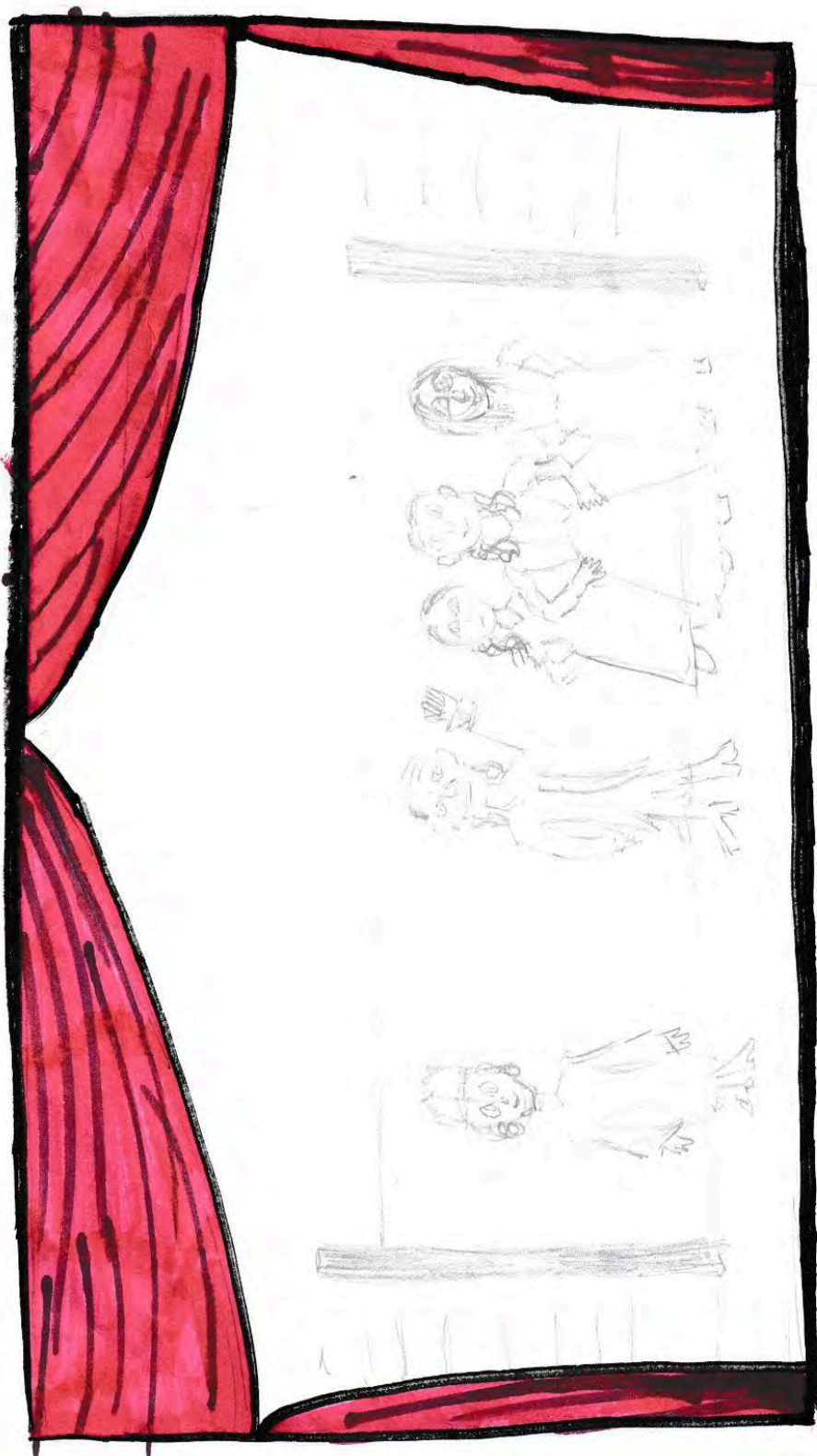
HARRY POTTER + the Chamber of Secrets

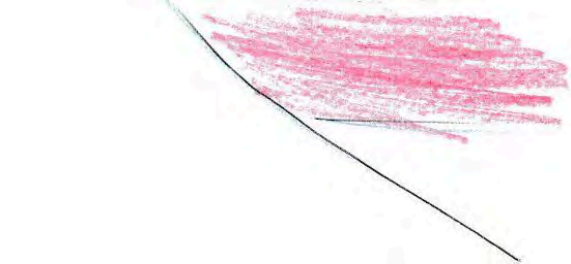


Gry
Findor



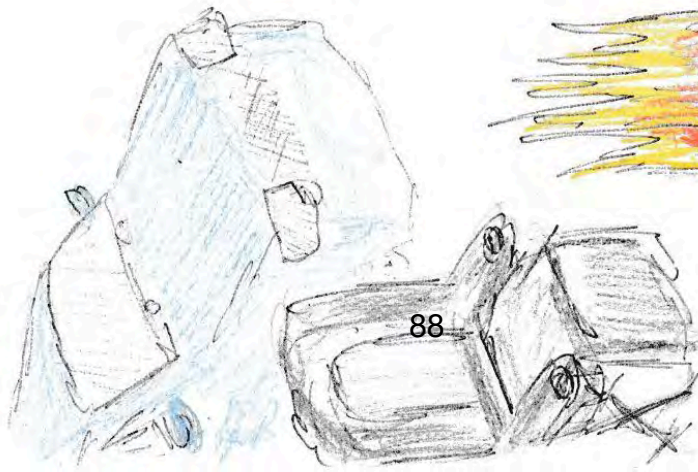
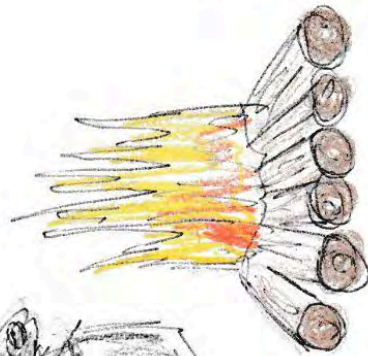
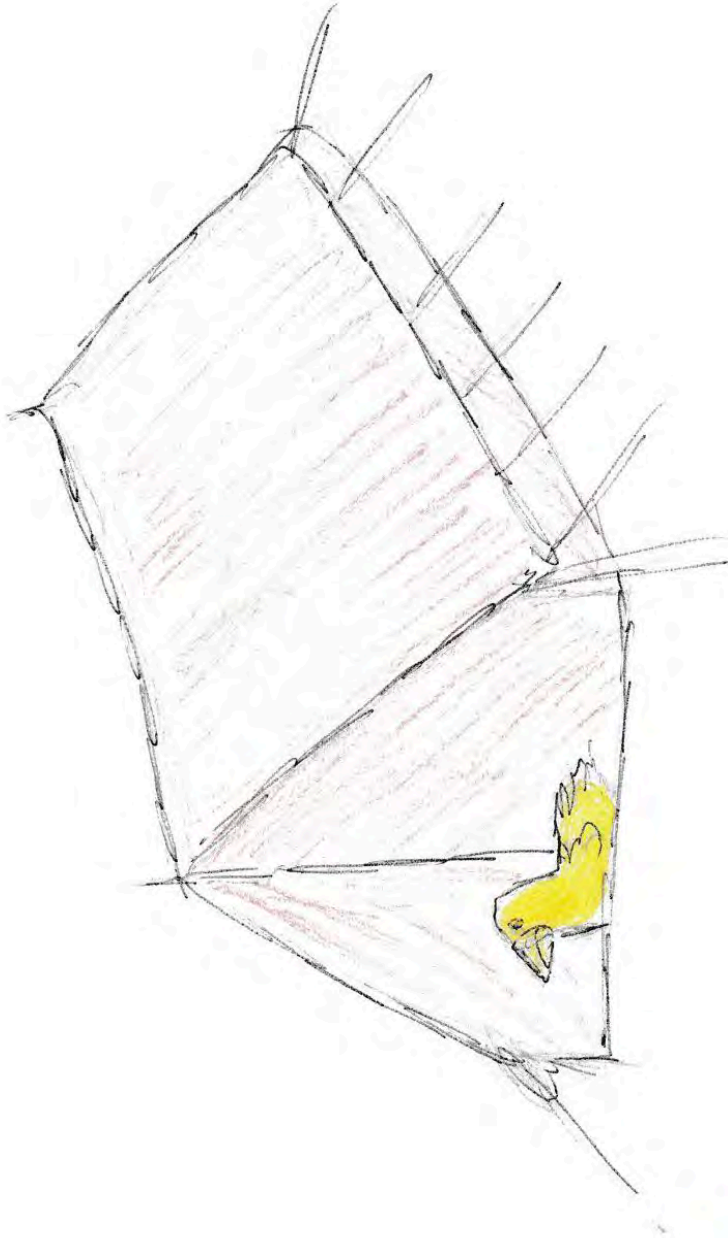
Ellie 16 y.o.





CALLUS, 6

Robert 34



This is My best friend from Italy that I have not seen in person for 3 and a half years. So 2 weeks ago I got to facetime him and I was so happy.

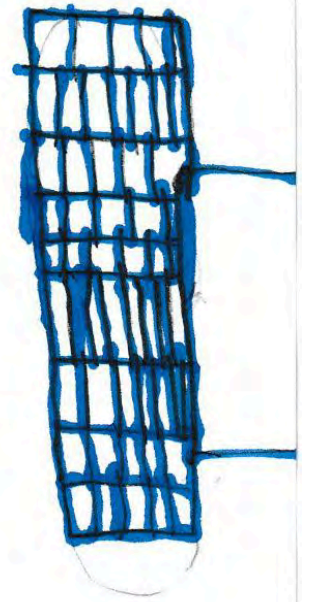
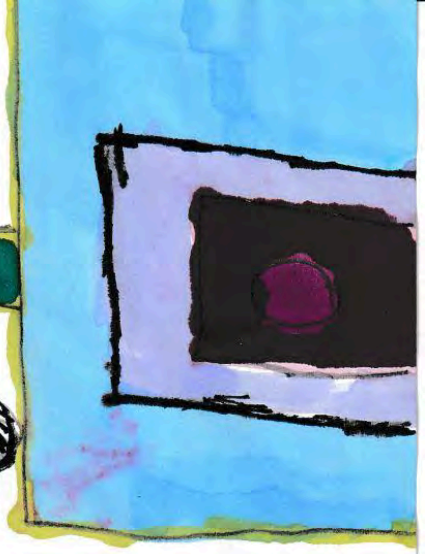


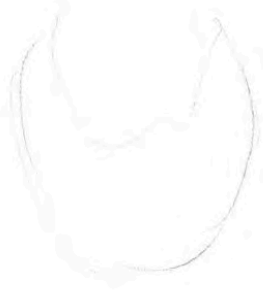
Deacon Wallace ⁸⁹ P7 II

maxi's

10

trampoline park

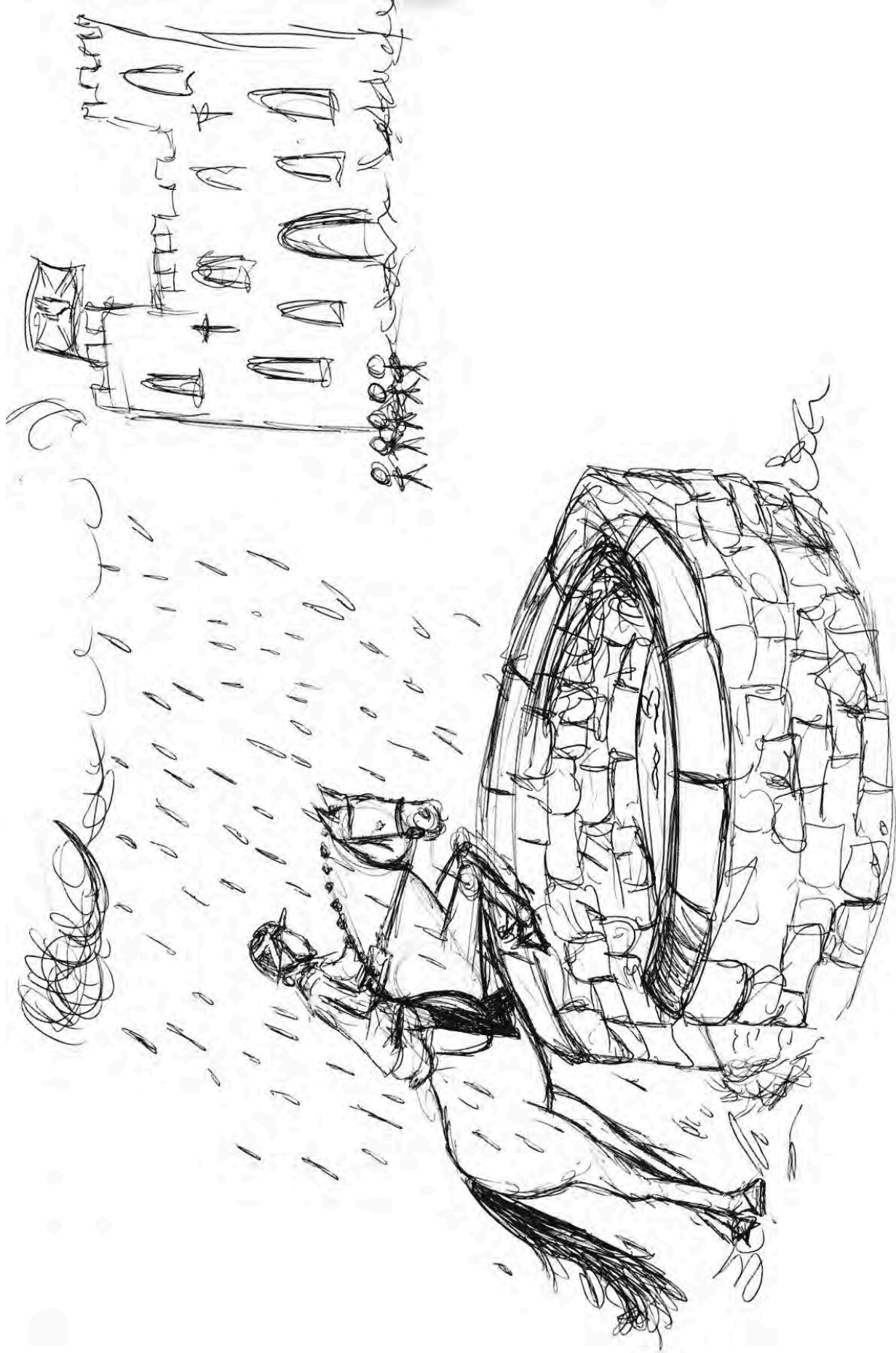




A



Sarah 16



Figures 13–26. "What Is Your Most Powerful Memory?". Drawing Workshop, RH Youth Organisation. Multimedia on Paper. Lockerbie, March 2026.

Appendix C

Final Review Exhibition, Syracuse University School of Architecture, April 2026

The thesis final review took the form of a multisensory exhibition installed at the Syracuse University School of Architecture. Rather than presenting the argument through drawings and models alone, the exhibition was designed as a partial enactment of the apparatus the thesis describes — a space in which memory could be encountered obliquely, incompletely, and through multiple registers simultaneously.

The exhibition comprised four elements:

Large-format drawings. Architectural drawings and cartographic work produced over the course of the research, including GIS cartography of the debris field, cartography of the remembrance apparatus, design development drawings for the balloon gondola proposal, and visualizations of scenes of encounter through photocollages employing photographs taken by the author in Lockerbie and surrounding landscape.

Audio collage. A sound composition assembling collaged narratives recorded with local residents of Lockerbie across a range of ages. The collage was played continuously throughout the exhibition, audible within a close range in the exhibition space and never foregrounded. Visitors encountered it the way one encounters ambient sound in a landscape: partially, voluntarily, and without a fixed beginning or end.

Lockerbie: *Unfold, Extend, Shear, Store.* A series of four books produced as part of the research as described in Appendix A. The books were available to be handled and read by visitors.

Children's drawings. The drawings produced during the workshop described in Appendix B were displayed within the exhibition unframed, uninterpreted, and presented at the scale at which they were made.













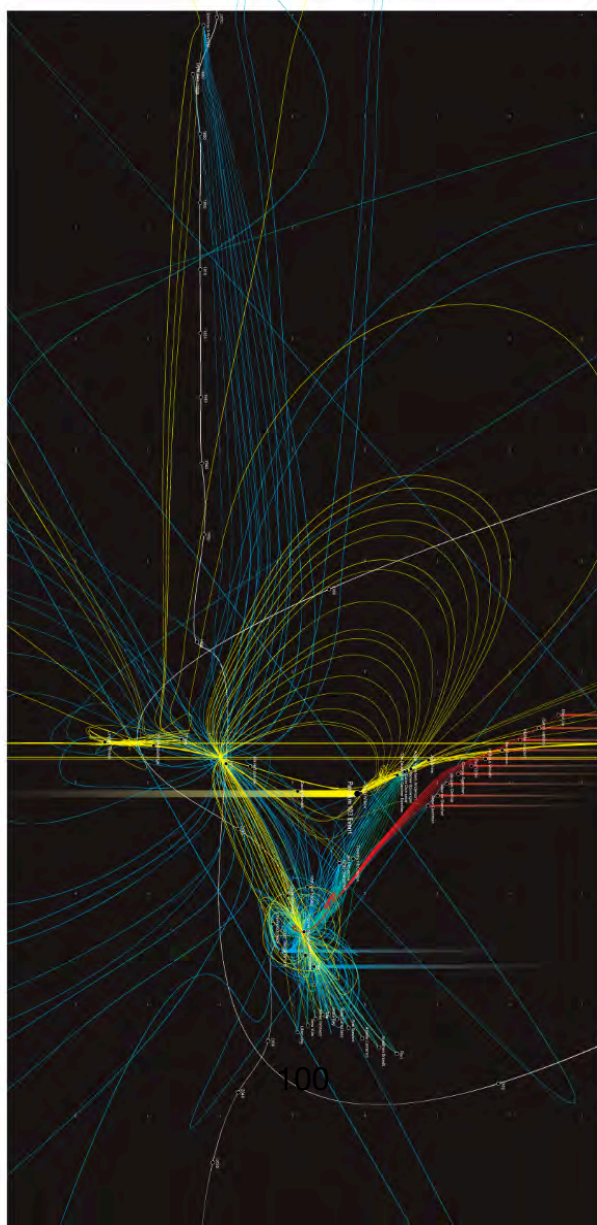
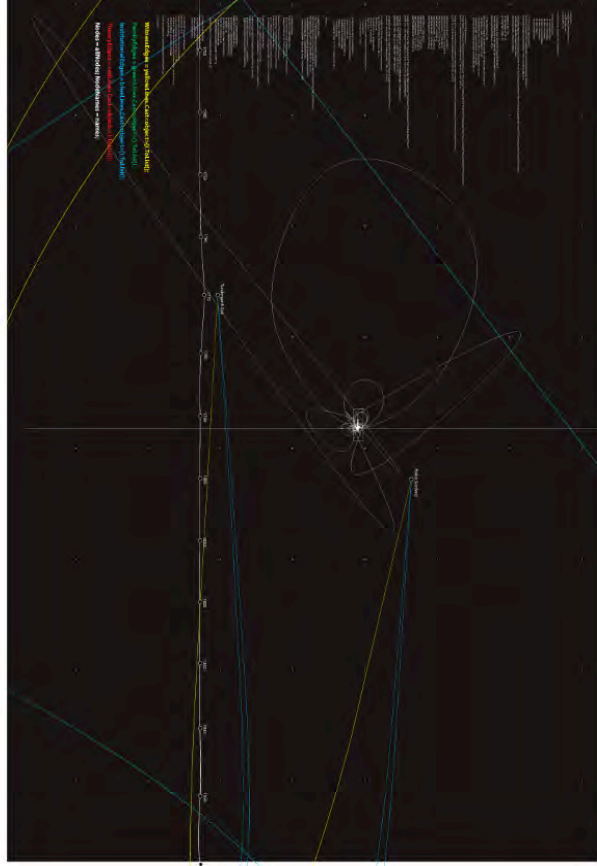


Figure 27. Condition of Encounter. Site of unknown debris. Grey Mare's Tail Nature Reserve, Moffat. 55°25'29.4"N 3°17'51.4"W. Digital collage.

Figure 28. Condition of Encounter. Site of unknown debris. Grey Mare's Tail Nature Reserve, Moffat. 55°25'11.5"N 3°17'11.1"W. Digital collage.

Figure 29. Condition of Encounter. Site of unknown debris. Loch Skeen, Grey Mare's Tail Nature Reserve, Moffat. 55°25'48.1"N 3°18'21.8"W. Digital collage.

Figure 30. Condition of Encounter. Site of debris of passenger seat, body, and luggage. 40 Carlisle Road, Lockerbie. 55°06'44.8"N 3°21'16.6"W. Digital collage.

Figure 31. Condition of Encounter. Site of debris of passenger seat, body, and luggage. 40 Carlisle Road, Lockerbie. 55°06'44.8"N 3°21'16.6"W. Digital collage.

Figure 32. Condition of Encounter. Site of debris of fuselage and aft cargo door. Rosebank Crescent, Lockerbie. 55°07'05.6"N 3°20'59.9"W. Digital Collage.

Figure 33. Cartography of Lockerbie's infrastructure of memory, with this thesis positioned as part of that infrastructure. Data Visualization.



Figure 34. Final Exhibition. Room 307, Slocum Hall.



Figure 35. Final Exhibition. Room 307, Slocum Hall.



Figure 36. Final Exhibition Detail. Room 307, Slocum Hall.



Figure 37. Final Exhibition with Audio Installation. Room 307, Slocum Hall.



Figure 38. Final Review with Critics and Peers. Room 307, Slocum Hall. April 28, 2026.

List of Images

Figure 1. Landscape upon which the debris of Pan Am 103 landed. View from the top of Tundergarth Kirk. Lockerbie, Scotland. 2024.

Figure 2. Lockerbie, Dumfriesshire, Scotland. GIS map of the town and surrounding landscape. Author's own cartographic work, 2025.

Figure 3. Debris field of Pan Am Flight 103, Lockerbie, Scotland, December 21, 1988. GIS map with superimposed Air Accidents Investigation Branch survey of wreckage distribution and confirmed flight path of N739PA. The two debris trails extend approximately 130 kilometers east to the English coast. Source: AAIB Aircraft Accident Report No. 2/90; author's own cartographic work, 2026.

Figure 4. Illustrated map of Lockerbie, Scotland, featuring key sites of remembrance including Sherwood Crescent, Tundergarth Kirk, and Dryfesdale Lodge. Illustration by Freddy Toglia '26; cartographic research and concept by Yida Li, 2026.

Figure 5. Condition of encounter: the apparatus above landscape at Grey Mare's Trail. Photo collage by the author, 2026.

Figure 6. Apparatus: sectional drawing × enclosure visualization. Author's own drawing, 2026.

Figure 7. The Lockerbie publication series displayed at book scale, Marble Room, Slocum Hall, Syracuse University, 2026.

Figure 8. Volume 1: Unfold, displayed at exhibition scale, Slocum Hall Atrium, Syracuse University, 2026.

Figures 9–12. *Lockerbie: Unfold, Extend, Shear, Store*. Volumes 1–4 of the publication series in digital format, 2026.

Figures 13–26. "*What Is Your Most Powerful Memory?*". Drawing Workshop, RH Youth Organisation. Multimedia on Paper. Lockerbie, March 2026.

Figure 27. Condition of Encounter. Site of unknown debris. Grey Mare's Tail Nature Reserve, Moffat. 55°25'29.4"N 3°17'51.4"W. Digital collage.

Figure 28. Condition of Encounter. Site of unknown debris. Grey Mare's Tail Nature Reserve, Moffat. 55°25'11.5"N 3°17'11.1"W. Digital collage.

Figure 29. Condition of Encounter. Site of unknown debris. Loch Skeen, Grey Mare's Tail Nature Reserve, Moffat. 55°25'48.1"N 3°18'21.8"W. Digital collage.

Figure 30. Condition of Encounter. Site of debris of passenger seat, body, and luggage. 40 Carlisle Road, Lockerbie. 55°06'44.8"N 3°21'16.6"W. Digital collage.

Figure 31. Condition of Encounter. Site of debris of passenger seat, body, and luggage. 40 Carlisle Road, Lockerbie. 55°06'44.8"N 3°21'16.6"W. Digital collage.

Figure 32. Condition of Encounter. Site of debris of fuselage and aft cargo door. Rosebank Crescent, Lockerbie. 55°07'05.6"N 3°20'59.9"W. Digital collage.

Figure 33. Cartography of Lockerbie's infrastructure of memory, with this thesis positioned as part of that infrastructure. Data visualization.

Figure 34. Final Exhibition. Room 307, Slocum Hall.

Figure 35. Final Exhibition. Room 307, Slocum Hall.

Figure 36. Final Exhibition Detail. Room 307, Slocum Hall.

Figure 37. Final Exhibition with Audio Installation. Room 307, Slocum Hall.

Figure 38. Final Review with Critics and Peers. Room 307, Slocum Hall. April 28, 2026.