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Anna Braxton March 06, 2019

The London Council Flat Through Triumph and Tragedy

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Abstract

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The recent tragedy at Grenfell Tower launched an international debate around public housing architecture, one that is steeped in a rich history of social, political, and architectural precedent. This thesis analyzes the architectural history of London council flat architecture through the three examples of Boundary Street Estate, Robin Hood Gardens, and Grenfell Tower to uncover how we got to this point in design. Each of the three examples serves as a pivotal point in the trajectory of council flat design. Boundary Street Estate serves as the first iteration of the council flat estate, one that is integrated within the fabric of the city through communication with the street. Robin Hood Gardens, designed by Alison and Peter Smithson, marks a turning point in which council flats move away from the street and toward a streets-in-the-sky program. Grenfell Tower represents the tower block design widely used today in council flat architecture and provides a tragic cautionary tale in which to reflect on the built realities of these designs. Together, these examples provide a basis to analyze council flats through architecture and built context within the city of London. This thesis explores these designs through plans, maps, and written architectural theories surrounding the buildings. The primary goal is to answer the questions: how did we get here and where do we go from here?

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The London Council Flat Through Triumph and Tragedy

On June 14, 2017, a fire broke out at Grenfell Tower, a high-rise public housing building in the London neighborhood of Kensington and Chelsea with nearly 350 residents.[1] The blaze roared on for hours, eventually engulfing the majority of the 24-story building. As the light of day broke through the clouds of billowing smoke, the full gravity of the situation began to unfold. The fire had grown from a small blaze on the fourth floor to an inferno, trapping residents inside and resulting in 72 deaths.[2]

The Grenfell Tower fire launched an international debate around public housing architecture. Are the government and poor housing policies solely to blame or was the architecture of the tower block also at fault? If so, what precedents in council flat design led to this result?

Through the examples of Boundary Street Estate, Robin Hood Gardens, and Grenfell Tower, I trace the trajectory of London public housing—known in the United Kingdom as "council" flats and estates—from multi-story brick buildings to the tower block. In the span of one century, the city fabric of London changed from the modest to the monumental as council flats moved upward, away from the streets, and residents became further isolated from the outside world in the name of safety. This shift can be traced to the emergence of modernist architectural thought, specifically the influence of Alison and Peter Smithson, who altered London public housing typologies with their designs of a "socialist dream" through New Brutalism at Robin Hood Gardens.

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[1] "How the Tragedy Unfolded at Grenfell Tower," *BBC News*, May 18, 2018, accessed January 20, 2019, https://www.bbc.com/news/uk-england-london-40272168.
[2] David D. Kirkpatrick, Danny Hakim, and James Glanz, "Why Grenfell Tower Burned: Regulators Put Cost Before Safety," *The New York Times*, June 24, 2017, accessed October 12, 2018, https://www.nytimes.com/2017/06/24/world/europe/grenfell-tower-london-fire.html.

To understand how public housing architecture in London arrived at the tower block typology—700 of which dot the city skyline today[3]—it is important to uncover the historical context of the pre-existing cityscape, public housing politics, and emerging design theories. Boundary Street Estate (1900) represents the first iteration of the council estate scheme. As the first council-owned housing estate in London, it was without precedent. Robin Hood Gardens (1972) marks a transition point when internationally acclaimed leading modernist architects, like the Smithsons, were employed by the London City Council to solve the post-war housing crisis. From the monumental form of the slab, tested at Robin Hood Gardens, housing continued to rise and give form to what remains today: the tower block, exemplified by Grenfell.

Following the tragedy at Grenfell Tower, there has been an increase of research and literature surrounding the topic of London council flat history, politics, and design. Historian John Boughton released the book *Municipal Dreams: The Rise and Fall of Council Housing* in May 2018 detailing the history of London council flat housing from its onset at the Boundary Street Estate to the programs of today, all within the aftermath of the tragedy at Grenfell Tower. Boughton writes about the historical, political, social, and architectural aspects that have shaped council housing. While there is much to be said about the historical, social, and political factors and the way they have shaped public housing, which Boughton accomplishes in a very thoughtful manner, I focus my research specifically on the architecture and spatial context of the built forms within the city fabric. I also work to establish the Smithsons as key figures in the monumental move away from the street and into the sky with their writings around and designs for public housing.

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[3] Bethan Bell, "London Fire: A Tale of Two Tower Blocks," *BBC News*, June 16, 2017, accessed January 20, 2019, https://www.bbc.com/news/uk-england-40290158.

My research follows the architectural history of London public housing through a series of primary and secondary sources. Maps, site plans, and newspaper articles serve as primary source evidence when looking at the Boundary Street Estate and Grenfell Tower. Little information exists on the architects of these two sites, but council regulations, codes, and standards provide evidence into the context of the built forms.

The prolific writing from and on Alison and Peter Smithson allows for a much more thorough analysis of Robin Hood Gardens. The Smithsons rose to international fame within the architecture community not necessarily through the built work of their designs, but through their architectural theories that helped define post-war British architecture. The Alison and Peter Smithson archive at the Harvard Graduate School of Design provided primary source materials such as hand-drawn maps and site plans, detailed site history, collages produced by Peter Smithson, letters of correspondence between Alison and Peter Smithson, and articles written by the architects.

This paper asserts that the movement from the multi-story buildings that mark the beginnings of London council flat housing to the rise of the tower block can be traced through the work of Alison and Peter Smithson at Robin Hood Gardens. Through their written and built works, the Smithsons serve as pivotal figures in not only the international world of architecture, but also in the history of the design of public housing. Their concepts of the Urban Re-Identification Grid, scales of association, and New Brutalism all work to establish a new scale of London, one that moves the council flat away from the ground and the pre-existing urban fabric through monumentality. The history of the London council flat begins in the East End at Boundary Street Estate and continues through today, as architects and city planners work to find new solutions to the age-old issue of housing.

1900: From the Slums of Bethnal Green to the Prince as a Landlord

On March 03, 1900, Queen Victoria's son, Albert Edward, the Prince of Wales (later Edward VII), visited the East London neighborhood of Bethnal Green to speak at the opening ceremony of the Boundary Street Estate. The Prince began by saying, "There is no question at the present time of greater social importance than the housing of the working classes." He called for the clearance of slums and erection of "good and wholesome dwellings" such as the Boundary Street Estate.[4]

This event was met with great ceremony because of its historical significance. The Boundary Street Estate was London's first council estate, constructed under the London County Council (LCC) beginning in 1893.[5] The scheme was part of a slum clearance project in London's East End, designed to tackle issues of housing the working class. The LCC had only been formed four years earlier in 1889, but it had already established a Works Department. This provided the LCC with its own architects and construction team. In addition, its Housing of the Working Classes Branch highlighted the main goals of the group: to focus primarily on the working class.[6]

The Boundary Street Estate scheme was established to replace the notorious neighborhood of Old Nichol. The pre-twentieth century site of Old Nichol Street was filled with tightly condensed housing. Two- and three-story brick structures sat back-to-back and housed

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[4] "Shoreditch Slums Give Way to Country's First Social Housing: Archive, 5 March 1900," *The Guardian*, March 05, 2016, accessed October 12, 2018, https://www.theguardian.com/society/2016/mar/05/social-housing-working-class-london-shoreditch-slums-1900.

[5] "Boundary-Street Scheme," *The Times*, February 05, 1900, accessed January 30, 2019, http://tinyurl.galegroup.com/tinyurl/8xiJq7, 11.

[6] Elain Harwood and Andrew Saint, *London*, Exploring England's Heritage (London: HMSO Books, 1991), 116.

roughly 5,710 people.[7] The site consisted of a maze-like network of interweaving roads bound by Virginia Street to the north, Mount Street to the east, Church Street to the south, and Boundary Street to the west. The interior streets were laid out in an east-to-west scheme, with only two of the streets, Jacobs and Fournier, spanning the entire distance across, connecting Mount Street with Boundary Street. [Figure 1] The remaining streets were narrow, often terminating abruptly into buildings. Interior courtyards merged into alleys and the difference between public street and private space was indiscernible. An article in the *Pall Mall Gazette*, published just two days after the opening ceremony of the Boundary Street Estate, describes the site of Old Nichol Street as "a rabbit-warren of over-crowded filthy tenements, a tangled congeries of dangerous, vice-ridden courts and alleys, hideous enough to make the shades of Nelson's gallant captains shudder to realize that their names were ever associated with such a stronghold of disease and crime."[8] The *Times* very succinctly described the pre-1891 area of Old Nichol as "one of the worst, if not the worst, in London."[9] The problem at hand was one facing growing industrializing cities across the world: populations were growing faster than housing could be built to hold them.

The LCC responded to the problem of overcrowding and unsanitary housing with slum clearance. In the United States and England, entire swaths of neighborhoods were being leveled—and their residents being displaced—in the name of slum clearance. The site of Old Nichol Street was demolished to make way for a new housing scheme, one that the council hoped would meet the residential and economic needs of the working class. From these efforts, the Boundary Street Estate emerged.

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[7] "The Prince of Wales and Workmen's Dwellings," *The Times* (London), March 05, 1900, accessed January 30, 2019, http://tinyurl.galegroup.com/tinyurl/8xiMA1, 8.
[8] "The New Nichol," *The Pall Mall Gazette* (London), March 05, 1900, accessed January 30, 2019, British Library Newspapers, Part I: 1800-1900.
[9] "The Prince of Wales and Workmen's Dwellings," 8.

At the time it was completed, the Boundary Street Estate consisted of 23 blocks each rising five-stories, housing 5,380 people within 15 one-room, 522 two-room, 388 three-room, 98 four-room, seven five-room, and three six-room units.[10] The estate provided residents and the surrounding community with two schools, laundry facilities, two community club rooms, 77 workshops, 18 retail stores, playgrounds, and gardens.[11] The buildings, which still exist, radiate out onto seven tree-lined streets from a central elevated circular park, Arnold Circus. [Figure 2]

With its circular park core, the estate resembles the 1898 Garden City urban planning scheme of Ebenezer Howard, in which six streets radiate outward from a circular Central Park. [Figure 3] The Boundary Street Estate site is considerably smaller in scale than that of Howard's Garden City, roughly half the size, with Garden City proposing streets of 120 feet wide,[12] and Boundary Street Estate producing streets of 50 feet wide.[13] But between the two, a major premise emerged: the goal of a self-sustaining estate. Howard writes of Garden City, "Its object is, in short, to raise the standard of health and comfort of all true workers of whatever grade—the means by which these objects are to be achieved being a healthy, natural, and economic combination of town and country life, and this on land owned by the municipality."[14] Within the Boundary Street Estate, the goal of self-sustenance primarily referred to the aim of the estate to support itself financially, paying for itself within a 60-year span, but it also manifested through the system of public resources it provided.[15] In the Garden City, Howard outlined zones for housing, commerce, and agriculture and in much the same way, the Boundary Street Estate

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[10] "The Prince of Wales and Workmen's Dwellings," 8.
[11] "The Prince of Wales and Workmen's Dwellings," 8.
[12] Ebenezer Howard, *To-morrow: A Peaceful Path to Real Reform* (Routledge, 2003), 14.
[13] "The Prince of Wales and Workmen's Dwellings," 8.
[14] Howard, *To-morrow: A Peaceful Path to Real Reform*, 13.
[15] "The Prince of Wales and Workmen's Dwellings," 8.

provides areas not only for housing, but also community through schools and parks, and commerce through its workshops and retail spaces.

Through the plans of both Boundary Street Estate and the Garden City, it becomes clear that the primary focus was on the layout of the street, the urban cityscape, not necessarily on the buildings that inhabit the space. The drawings of Garden City give no indication of the necessary or desired building designs; they merely outline a utopian landscape that dictates how the city operates. On architecture, Howard writes:

> Noticing the very varied architecture and design which the housing and group of houses display—some having common gardens and cooperative kitchens—we learn that general observance of street line or harmonious departure from it are the chief points as to house-building over which the municipal authorities exercise control, for, though proper sanitary arrangements are strictly enforced, the fullest measure of individual taste and preference is encouraged.[16]

The Boundary Street Estate scheme operates in much the same way, placing emphasis on the relationship between the building and the street while allowing the architecture to take on an individuality between blocks.

The brick buildings of the Boundary Street Estate primarily adhere to the Arts and Crafts style, with brick facades, steep-pitched roofs, and multi-paned windows surrounded by ornate brick detailing. [Figure 4] The individual facade designs, however, vary from block to block. Some feature Queen Anne style turrets and undulating roof lines, while the emphasis of others is placed on the multi-colored brick patterning of the exterior. What remains consistent is the placement of the buildings and their relation to the street. The blocks span the entirety of the streets they sit on, leaving no room for the cramped alleys that once dominated the landscape. The areas between the buildings contain planned greenspace and paved courtyards. What was

[16] "The Prince of Wales and Workmen's Dwellings," 15.

produced at Boundary Street Estate was not just a housing community, but a neighborhood that was connected to its surroundings and that the general public could experience as well. With the buildings only rising five-stories from the ground, the residents were effectively still in communication with the street and the surrounding cityscape.

The complex, however, still failed to meet the housing needs of the working class. The estate displaced more units than it replaced, and the new higher rents meant that the working class residents for whom it was designed could not afford to live there.[17] Following the completion of the estate, an editorial in the *Times* noted, "Unfortunately, the new tenants are a totally different set of people."[18] The seven-year time span in which it took to construct the housing estate left previous residents scrambling for temporary housing and when that was unachievable, many simply moved to areas with conditions similar to the neighborhood from which they had just been displaced. Boundary Street Estate only produced enough housing to hold 5,380 residents, 400 less than the 5,710 who were previously living within Old Nichol Street, but these new residents were now primarily solidly middle-class.[19]

An 1899 *Daily News* article, "No Room to Live," was one in a series of reports that focused on the problem of London housing and the LCC, attempting to uncover the issues of homelessness, overcrowding, and poor housing within the city. The article notes:

> When [the Council] clears away a slum area, displacing scores of families, and then rebuilds, many of the people will not go back to the new dwellings because they don't like blocks, and many more are kept away by the high rents. …The new dwellings become tenanted by a better-off class, while the displaced slum-

[17] "The Prince of Wales and Workmen's Dwellings," 8.
[18] "The Prince and Princess of Wales," *The Times* (London), March 05, 1900, accessed February 1, 2019, http://tinyurl.galegroup.com/tinyurl/8xzdW4.
[19] "The Prince of Wales and Workmen's Dwellings," 8.

> dwellers, the driven-out, go to overcrowd the already overcrowded smaller properties lying near."[20]

The problem of housing was not fixed, only geographically shifted.

The Boundary Street Estate should not be viewed entirely as a failure, however. The *Times* editorial from 1900 asserts, "The Boundary Street Estate is, no doubt, a very good work, but it is too much of a show place, and if in some respects it is an example to be imitated, in others it is a warning of what to avoid."[21] The Boundary Street Estate provided a promising foundation for council housing in London—a scheme that worked well to transform the cityscape from that of overcrowded and unsanitary to spacious, with wide streets, ample greenspace through public parks and private gardens, and a self-sufficient community of shops and amenities. What remained to be solved was how to create this for the actual working class.

1972: The Slab

From 1900 to 1972, a span of time that produced two world wars and saw six monarchs, working-class housing continued to be an intractable issue in London, specifically in its East End. The LCC was still active through this time, employing nearly 40 percent of members from the Royal Institute of British Architects, with post-war efforts focused on rebuilding the British landscape and spirit.[22]

Among those architects involved with the LCC were Alison and Peter Smithson, who served in the group's Schools Division until 1950, when they established themselves as

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[20] "No Room to Live," *Daily News* (London), March 14, 1899, accessed February 1, 2019, http://tinyurl.galegroup.com/tinyurl/8xgJE4.
[21] "The Prince and Princess of Wales," 9.
[22] Helena Webster, ed., *Modernism without Rhetoric: The Work of Alison and Peter Smithson* (London: Academy Group, 1997), 17.

influential architects of the post-war era with their winning competition design for the Hunstanton Secondary School in Norfolk (1950-54).[23] The project served as a launching point from which the Smithsons entered the international scene of architecture.

It is important to note that the Smithsons were prolific writers, contributing greatly to the magazine *Architectural Design*, and writing several books, such as *Ordinariness and Light: Urban Theories 1952-1960 and Their Application in a Building Project* (1970), *Without Rhetoric: An Architectural Aesthetic 1955-1972* (1974), and *The Space Between* (2017). While the Smithsons developed lengthy theories around architecture, they relatively produced little in the way of built works. The Smithsons established themselves as intellectuals, tending to use language in a peculiar way that makes their theories somewhat challenging to comprehend. Many of the concepts established align with the Modernist rhetoric, leaning toward abstraction. It is in this way that the Smithsons sometimes alienate their readers, tending toward lofty language and vague concepts.

In 1952, the Smithsons joined a group of young artists, architects, critics, and historians known as the Independent Group. The group was centered upon the Institute of Contemporary Arts in London and included members such as architectural critic Reyner Banham, photographer Nigel Henderson, and artist Eduardo Paolozzi. The group discussed the ideologies of found objects in Dadaism, anti-art of Jackson Pollock, and the burgeoning field of sociology. The Smithsons were also introduced to Henderson's work documenting London's East End through photography. At first glance, Henderson's images, black and white scenes of everyday street life, appear mundane. Shots of children playing hopscotch, young boys crowding outside of a shop

[23] Marco Vidotto, Santiago Castán, and Graham Thomson, *Alison + Peter Smithson* (Barcelona: Gustavo Gili, 1997), 12.

entrance, a man simply crossing an empty street, were a kind of *ôbjet trouvé* and *l'art brut* that became the foundation from which the Smithsons launched their architectural theories.[24] This, combined with the work of Henderson's wife Judith in the field of anthropology as sociology,[25] would come to dominate the Smithsons' architectural philosophy—what they labeled "life-of-the-street."[26] This preoccupation with the street and its workings would become abundantly clear in the way of public housing—the first iterations of which the Smithsons developed for the Golden Lane housing competition in the same year.

World War II left large swaths of London completely decimated following extensive bomb crusades. Physical devastation of the urban fabric combined with a growing population and the ongoing problem of a lack of housing left the city with a need for large-scale public housing schemes. The City of London held a design competition for the Golden Lane site (1951-52). What the Smithsons proposed for this design competition elevated the life-of-the-street scenes of Henderson's photographs through streets-in-the-air—large decks that span the entirety of the façade. The basic building form was modeled after Le Corbusier's Unité d'Habitation at Marseilles of the same year,[27] although the *rue interieur* in Le Corbusier's Unité was pushed to the exterior.[28] The Smithsons later described these streets-in-the-air: "Today our most obvious failure is the lack of comprehensibility and identity in big cities, and the answer is surely in a

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[24] Webster, *Modernism without Rhetoric*, 24.
[25] Peter Smithson, Catherine Spellman, and Karl Unglaub, *Peter Smithson Conversations with Students: A Space for Our Generation*, 1st ed. (New York: Princeton Architectural Press, 2005), 37.
[26] Alison Margaret Smithson, ed., *Team 10 Primer* (London: Studio Vista, 1968), 48.
[27] Alan Powers, Sandra Lousada, and Ioana Marinescu, *ROBIN HOOD GARDENS: RE-VISIONS* (Twentieth Century Building Studies; No. 1. London: Twentieth Century Society, 2010), 30; Webster, *Modernism without Rhetoric*, 32.
[28] Peter Eisenman, *Eisenman Inside Out: Selected Writings, 1963-1988*, Theoretical Perspectives in Architectural History and Criticism (New Haven: Yale University Press, 2004), 41; Webster, *Modernism without Rhetoric*, 32.

clear, large scale, road system—the 'Urban Motorway' lifted from an ameliorative function to a unifying function."[29] They saw the car as the problem of the modern age and the streets-in-the-air a solution that would maintain the pedestrian quality of the sidewalk above the density and the noise of the actual road.

A year after joining the Independent Group and developing designs for Golden Lane, the Smithsons reproduced Nigel Henderson's images of London's East End alongside their own design concepts for public housing to the ninth Congrès Internationaux d'Architecture Moderne (CIAM) Congress at Aix-en-Provence through their "Urban Re-Identification Grille."[30] [Figure 5] Alison and Peter firmly established themselves as the leaders of a group of young architects who would set out to challenge the Functional City theories within CIAM.[31] What they proposed was a new urban scale, a "hierarchy of association," that would replace the 1933 CIAM Athens Charter categories of dwelling, work, transportation, and recreation with the categories of house, street, district, and city.[32] The Smithsons saw this idea of re-identification as the task of their generation, to "re-identify man with his house, his community, his city."[33] The house was to be at the scale of man, looking "inward to family and outward to society." Next, the street would provide a further extension from which connections would be made, followed by district and city. Each of these were categories of communication, differentiated in the ways people

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[29] Alison Smithson, *Team 10 Primer*, 48.
[30] Max Risselada, Dirk Van Den Heuvel, and Nederlands Architectuurinstituut, *Team 10: 1953-81, in Search of a Utopia of the Present* (Rotterdam: NAi, 2005), 30.
[31] Eric Paul Mumford, *The CIAM Discourse on Urbanism, 1928-1960* (Cambridge, Mass.: MIT Press, 2000), 225.
[32] Risselada, Van Den Heuvel, and Nederlands Architectuurinstituut. *Team 10*, 30.
[33] Alison Smithson and Peter Smithson, *Ordinariness and Light: Urban Theories 1952-1960 and Their Application in a Building Project 1963-1970* (Cambridge, Mass.: MIT Press, 1970), 18.

interacted with one another. They used their designs for the Golden Lane Project to illustrate these ideas.

The CIAM 9 Congress solidified the division in post-war architectural thought between New Empiricism and the continuation of the pre-war Heroic Period of Modernism.[34] Older, established architects championed the New Empiricism model which followed a socialist scheme and found influence in the unaffected-by-war architecture of Sweden. The opposing side to the architectural debate was comprised mainly of young architects, like Alison and Peter Smithson, who found the New Empiricism model to be a betrayal of the pre-war avant-garde Heroic Period.[35] For the new generation of architects, a continuation of the Modern Movement combined with a historical consideration of Classical architecture was the way forward. On the post-war architectural climate, Peter Smithson noted:

> The war seemed to give an obligation to perform in the post-war period what the architects of the thirties had promised… in 1945, when it could be visited again, Prouvé's market at Clichy was six years old; Mies' earliest IIT building two or three—or they were just under construction—either way they were just coming up on our horizon. And we feel we have a natural right, both as apprentices-by-proxy and as being members of the family who 'design-by-thinking-of-the-making,' to inherit as a landscape of the mind the thoughts and the ways of putting things together of Mies van der Rohe.[36]

As Smithson notes, his new generation continued the work of Modernists Le Corbusier and Mies van der Rohe. The Garden City schemes of earlier public housing, such as the Boundary Street Estate, were far out of favor with young architects. The Smithsons explained that their generation

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[34] Webster, *Modernism without Rhetoric*, 14.
[35] Webster, *Modernism without Rhetoric*, 14.
[36] Alison Margaret Smithson and Peter Smithson*, Changing the Art of Inhabitation* (London: Artemis, 1994), 30.

was experiencing what every new generation of architects experience: dissatisfaction with the past and a desire to produce new ways of order.[37]

It was exactly these new ways of order that continued to dominate discussion at the tenth CIAM Congress in Dubrovnik in 1956. It was the conference that would mark the end of CIAM, as the younger generation, consisting of Jacob Bakema, Aldo van Eyck, Georges Candilis, Shad Woods, Giancarlo de Carlo, José Coderch, Charles Pologni, Jerzy Soltan, Stefan Wewerka and the Smithsons, had already started meeting informally outside of the main group, ultimately forming Team 10.[38] The Smithsons presented their "scales of association" at CIAM 10, which they outlined later in the Team 10 Primer:

> In most cases the group of dwellings does not reflect any reality of social organization; rather they are the result of political, technical and mechanical expediency. Although it is extremely difficult to define the higher levels of association, the street implies a physical contact community, the district an acquaintance community, and the city and intellectual contact community—a hierarchy of human associations.[39]

The hierarchy of human association designed a new scale for the city of London, still following the same house, street, district, city scheme as presented at CIAM 9. [Figure 6] Alison Smithson would later say of London that it had never challenged itself to be more than a collection of villages.[40] The Smithsons sought to produce scales of community from which London would grow.

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[37] Alison Smithson, *Team 10 Primer*, 82.
[38] Alison Smithson, *Team 10 Primer*, 2.
[39] Alison Smithson, *Team 10 Primer*, 48.
[40] Powers, Lousada, and Marinescu, *ROBIN HOOD GARDENS: RE-VISIONS*, 64.

As CIAM broke apart, Team 10 continued to be the platform from which Alison and Peter Smithson shared their architectural theories. The Team 10 Primer serves as the manifesto to this movement. Each discussion was described as a "family meeting."[41]

The Smithsons' architectural theories continued through the concept of New Brutalism. The term New Brutalism emerged in the early 1950s to refer to an architectural style that had not even fully emerged yet, and instead described an attitude shared by young architects in England.[42] Banham heralded the Smithsons' Hunstanton School building as the paradigm for this New Brutalism,[43] pointing to the qualities of "formal legibility of plan," "clear exhibition of structure," "valuation of materials for their inherit 'as-found' qualities," and "clear exhibition of services."[44] The Smithsons attest their concept of New Brutalism differed from that of Banham.[45] They too, however, cite their Hunstanton School as the first manifestation of their New Brutalism.[46]

The design concepts for the Hunstanton School followed both the forms of Japanese architecture and the architectural theories of Ludwig Mies van der Rohe, a leading figure in modernist architecture through the International Style. On Mies, Peter Smithson writes: "Two separate but reciprocal themes emerge: an almost autonomous, repetitive, neutralizing skin; and an open-space-structured building—recessive, calm, green, urban pattern. Together they are

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[41] Alison Smithson, *Team 10 Primer*, 3.
[42] Reyner Banham, *The New Brutalism: Ethic or Aesthetic* (Documents of Modern Architecture. LCNAMES. New York: Stuttgart: Reinhold; Krämer, 1966),
[43] Webster, *Modernism without Rhetoric*, 30.
[44] Banham, *The New Brutalism: Ethic or Aesthetic*, 357.
[45] Alison Smithson and Peter Smithson, *Without Rhetoric: An Architectural Aesthetic 1955-1972* (Cambridge, MA: MIT Press, 1974), 6.
[46] Smithson and Smithson, *Without Rhetoric*, 6.

Mies' immortality."[47] These themes are carried out within the Hunstanton School design. [Figure 7] The building featured a striking horizontality, accentuated by strong geometric rectangular forms and repetitive curtain wall windows. The outdoor courtyard space was an open greenspace, restricted in use by the absence of access doors, designed to allow for light and air, but to keep children (and the noise that accompanies them) out.[48]

The other key notion the Smithsons derived from Mies was the notion of materials as luxury. The Mies quote, "architecture begins when two bricks are put carefully together,"[49] was revised by Peter Smithson to read: "architecture begins when you bring three bricks carefully together, while Brutalism begins when you are trying to uncover the brick-ness of the brick."[50] It was this concept of material as luxury that elevated the architecture from building to fine art, from ordinariness to dignity. Peter Smithson even went so far as to call the bricks of Mies' buildings "almost sexy."[51] Going back to the first days within the Independent Group, the idea of *l'art brut*, the raw art, and the as-found, can be seen in a focus on materiality. The plain bricks and the exposed concrete were pure and made the user aware of the "thingness" of the form.[52] The Smithsons described it as the New Brutalist assemblage-of-the-bare-necessities technique.[53] "What is new about the New Brutalism among *Movements* is that it finds its closest affinities not

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[47] Smithson and Smithson, *Changing the Art of Inhabitation*, 16; Alison Margaret Smithson and Peter Smithson, *The Heroic Period of Modern Architecture* (New York: Rizzoli, 1981), 13.
[48] Vidotto, Castán, and Thomson, *Alison + Peter Smithson*, 22.
[49] Smithson and Smithson, *Without Rhetoric*, 21.
[50] Peter Smithson, Catherine Spellman, and Karl Unglaub, *Peter Smithson Conversations with Students: A Space for Our Generation* (1st ed. New York: Princeton Architectural Press, 2005), 24.
[51] Smithson and Smithson, *Changing the Art of Inhabitation*, 16.
[52] Smithson and Smithson, *Changing the Art of Inhabitation*, 17.
[53] Smithson and Smithson, *Without Rhetoric*, 64.

in a past architectural style, but in peasant dwelling forms, which have style and are stylish but were never modish: a poetry without rhetoric."[54]

The Smithsons' theories were finally put into built form with Robin Hood Gardens (1966-1972). [Figure 8] The housing estate was commissioned by the Greater London Council (formerly LCC) to redevelop a dock-side area in London's borough of Tower Hamlets. The previous site consisted of tightly-condensed tenements, the Grosvenor Buildings, a disused Queens Theatre, and other miscellaneous buildings.[55] [Figure 9] Three requirements were laid out by the Council for the design of Robin Hood Gardens: "a site zoning at 136 persons to the acre; the solution of an 'open-space deficiency' in the area, and a need to protect living rooms and bedrooms from the noise of the adjacent traffic."[56] The Robin Hood Gardens housing estate consisted of two buildings spanning five acres, but only contains 210 units housing roughly 700 people.[57] [Figure 10] The Smithsons labeled the project a "socialist dream" the main theme of which was protection. "To achieve a calm center," they wrote, "the pressures of external world are held off by the buildings and outworks."[58] The enemies which they were protecting against were "traffic, noise, air pollution, vandalism, and lack of quality."[59] Robin Hood Gardens was in effect an updated 1952 Golden Lane Project design, featuring the signature street decks and stacked concrete slabs. On the form of structure, the Smithsons wrote, "starting with our 1952 city housing project Golden Lane we have been concerned with what form the house—and the

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[54] Smithson and Smithson, *Without Rhetoric*, 6.
[55] Alison Smithson and Peter Smithson, "Robin Hood Gardens London E14." Architectural Design, September 1972, 559.
[56] Powers, Lousada, and Marinescu, *ROBIN HOOD GARDENS: RE-VISIONS*, 28.
[57] Pangaro, Anthony. "Beyond Golden Lane, Robin Hood Gardens." Architecture Plus, 1973.
[58] Alison Smithson and Peter Smithson. "Socialist Dream." Alison and Peter Smithson Archives. Folder BA-184.
[59] B.S. Johnson, prod., "The Smithsons on Housing" (BBC 2, 1970).

group of houses—should take. We would say that the form of the house groups should be such that each individual can choose his degree of contact…or protection…and thereby pleasure…in the machine driven society."[60] The slab form provided a structure from which the street decks could be realized, but were also seen as favorable during the years 1966 through 1968 because structures in the range of five to nine stories received more government funding.[61] For the Smithsons, the slab form also provided a scheme that could meet the density requirements set out by the council, but still remain relatively open and spacious. On overcrowding, the Smithsons cite the reduction of urban densities as a human necessity. "In ecological terms, crowding means violence: some scientists suggest we shall decline from the street diseases of overcrowding long before the population increase overruns the food supplies."[62] The problem of crowding outlined by the Smithsons could be solved with a form of mass housing that was spread out across five acres.

Robin Hood Gardens is situated between the roadways of East India Dock Road to the north, Cotton Street to the west, Poplar High Street to the south, and both Robin Hood Lane and the Blackwall Tunnel Approach to the east, making the site extremely sensitive to the problem of noise.[63] [Figure 11] The Smithsons devised a design solution predicated on noise adjacencies. As Peter Smithson explained, they placed the noisy next to the noisy: street-decks were placed on the exterior façade facing the streets; living rooms were placed adjacent to the decks; vertical elements were placed on the exterior of the building to act as further noise buffers.[64] There were

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[60] Smithson and Smithson, *Without Rhetoric*, 19.
[61] Powers, Lousada, and Marinescu, *ROBIN HOOD GARDENS: RE-VISIONS*, 34.
[62] Smithson and Smithson, *Without Rhetoric*, 16.
[63] Smithson and Smithson, "Robin Hood Gardens London E14," 559; Vidotto, Castán, and Thomson, *Alison + Peter Smithson*, 123.
[64] Powers, Lousada, and Marinescu, *ROBIN HOOD GARDENS: RE-VISIONS*, 63.

a variety of units, ranging from one to four bedrooms. The block on Cotton Street featured seven floors: ground access to flats for the elderly on the ground floor, two street decks, two levels of interlocked maisonettes, and one level of flats. The Blackwall Tunnel South building featured three street-decks.[65] The interiors of Robin Hood Gardens followed the Parker Morris standards outlined in the Parker Morris report of 1961, which was widely taken into effect in 1967. These standardized interior elements, such as room sizes, and led to the interiors of all council flats within London during this time being generally the same.

The Smithsons described Robin Hood Gardens as a "building for the socialist dream." They defined this socialist dream as Roman, establishing a connection to the socialist ideals of antiquity. The Smithsons cited seven reasons behind their labeling of the project as Roman, including: repetition, the anonymous client, universality, a matching heroism to its surrounding forms of the East India Dock and the Blackwall tunnel, and bold statement of landform.[66] [Figure 12] The Smithsons saw repetition as a beneficial trait to the housing estate form, one that allowed structures to make more sense together.[67] "When we ourselves are *moved* by repetition it is by very grand, very simple affairs; all dominated by big-scaled, repeated forms, and bent or curved on plan so that repetition in a mechanical sense seems melted away."[68] This notion appeared at Robin Hood Gardens through the two slab forms. While not entirely identical, the two forms could be understood as repeated elements which were then given slight bends to detract from overbearing repetition. For the Smithsons, the epitome of this socialist dream could

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[65] Smithson and Smithson, "Robin Hood Gardens London E14," 563.
[66] Alison Smithson and Peter Smithson. *Robin Hood Gardens, 1966-1972, Tower Hamlets, London*. July 26, 1977. Revised November 27, 1986 by Alison Smithson. Harvard Graduate School of Design, Alison and Peter Smithson Archive. Folder BA179.
[67] Smithson and Smithson, *Ordinariness and Light*, 40.
[68] Smithson and Smithson, *Without Rhetoric*, 32-33.

be seen through the architecture and city planning in Bath, England—a town with connections to the ancient Roman state. The Smithsons stress the melting social-hierarchy found within Bath that is created through its built form. They assert the entire city takes the shape of one large housing estate with "each class drifting imperceptibly into the others and none being deprived of the civilized benefits of taste."[69] The Smithsons saw the street-decks of Robin Hood Gardens as being equivalent to the terrace house forms of Bath, citing both as an established "word in the form-language of architecture capable of being articulated through its sub-forms toward an 'ideal-house.'"[70]

The notion of form-building continued in the design of Robin Hood Gardens through the transportation moat devised to control the problem of the car. The structure had a sunken roadway that allowed cars to enter the housing estate, park, and exit the housing estate without ever coming into contact with a pedestrian. For this control of the car, the Smithsons looked to Disneyland, Port Grimaud, and Mies at Lafayette Park in Detroit.[71] On the control of the automobile and the street, the Smithsons wrote, "the deepest consideration of systems of access—especially of roads and private-car parking—may be the key to the invention of the obviously-missing present-day urban forms."[72] The repeated notion of "without rhetoric" refers here to the absence of display of mechanics, to be aware of how things work without actually seeing the process. On the built form of Robin Hood Gardens, the Smithsons wrote:

> What we have tried to do in the development of the basic idea… is to evolve the form and sub-forms so as to indicate clearly how the place is to be used. So that

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[69] Alison Smithson, Peter Smithson, and Simon J. B. Smithson, *The Space Between*, Edited by Max Risselada (Verlag Der Buchhandlung Walther König, 2017), 37.
[70] Alison Smithson and Peter Smithson, "Signs of Occupancy," (Architectural Design, February 1972), 95; Smithson and Smithson, *Without Rhetoric*, 77.
[71] Smithson and Smithson, "Signs of Occupancy," 92; Smithson and Smithson, *Without Rhetoric*, 16.
[72] Smithson and Smithson, *Without Rhetoric*, 78.

> its occupiers are left in no doubt, yet be unaware of having been 'told', which is intended to be the quiet part and which the noisy, where one is expected to walk and where to drive, where to place, where to deliver or bring the ambulance. The form-language of the building to indicate and enhance use.[73]

Every mechanism, defined as cars, appliances, and fixtures, was to be taken care of, put in its place. This would be done through the built form of the flats and through a highly-manufactured landscaping.

Robin Hood Gardens cannot be completely understood without also taking into account the landscape and surrounding context of the city. One of the Smithsons' guiding principles of architecture was the relationship between the landscape and the built form. "That is what we tried to do at Robin Hood Gardens, to effect a lock between built-form and counterpart space; with the old trick towards this end of bent ground forms…It would seem as if a building today is interesting only if it is more than itself; if it charges the space around it with connective possibilities—especially if it does this by a quietness."[74] The landscape is composed of a series of grassy man-made mounds designed to create a stress-free zone by preventing noisy activities like a game of football.[75] Sports and children's play were confined to specified areas of courts and playgrounds pushed to the edge of the property, reminiscent of the containment of children's play at the earlier Hunstanton School.

The towering mound has both classical and historic English precedents. The Smithsons first looked to Classical Rome and the fortification system of *Limites Romani*, or limes, which consisted of walls and "earthen ramparts."[76] The stress-free zone was modeled after Gray's Inn

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[73] Smithson and Smithson, "Signs of Occupancy," 95-96.
[74] Smithson and Smithson, *The Heroic Period of Modern Architecture*, 13; Smithson and Smithson, *Without Rhetoric*, 36.
[75] Powers, Lousada, and Marinescu, *ROBIN HOOD GARDENS: RE-VISIONS*, 36.
[76] Alison Smithson, "Ruminations on Founders Court," *Architectural Design*, August 1973, 524-531.

in central London, which represented the "calm ideal" the Smithsons strived for through their built forms.[77] The duo also looked to the scheme of the Royal Crescent at Bath to form the monumental and kinetic relationship between the landscape and the buildings.[78] The mounds, the largest of which, rising two stories, obstructs the views of the housing unit from the ground, recalls the steeped hill at the Royal Crescent which was designed to drop off drastically to allow for a view unobstructed by cattle feeding in the fields below. [Figure 13] "At the new city scale making a garden should be like making a range of hills. Hills are a great formal idea, ever various, expressive of mood, expectant of weather. Today we might make contour relief by means of the same earth shifting equipment that opencasts coal. Only this scale of modelling is bold enough to tell from above at the new city scale of things."[79] All of this, however, is contained within a series of walls.

The walls around Robin Hood Gardens were designed to be sound barriers. They also work toward the Smithsons' theme of protection: all programmatic elements are contained inside. During their travels to Greece, Alison and Peter Smithson observed ancient Greek defensive walls to see if any relationship existed between the geometry of the wall and the street.[80] They found that none really existed, and they sought to change that with their own designs. The walls are ten feet high concrete structures featuring angled tops and a gap between each section to allow a slight view of the structure from the outside.[81] [Figure 14] The walls that were built as acoustic barriers also took on the form of a defensive element, one that gives the

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[77] Powers, Lousada, and Marinescu, *ROBIN HOOD GARDENS: RE-VISIONS*, 64; Smithson and Smithson, *Without Rhetoric*, 14.
[78] Webster, *Modernism without Rhetoric*, 73.
[79] Smithson and Smithson, "Robin Hood Gardens London E14," 561-62.
[80] Smithson, Spellman, and Unglaub, *Conversations with Students*, 20.
[81] Powers, Lousada, and Marinescu, *ROBIN HOOD GARDENS: RE-VISIONS*, 28-28.

feel of a prison. Robin Hood Gardens becomes an island on which only the residents inhabit. The public community space that was created through the Boundary Street Estate is gone, and what is left is a private zone of quiet, calm air. The only communications are between the built forms of the two building slabs and the greenspace between, not through the people.

In 1972, Peter Smithson created a series of photomontages which combined aerial photographs of the dock-side site with the proposed plans and sections of Robin Hood Gardens. The collages highlight the Smithsons' design strategies for Robin Hood Gardens, but also provide a visual framework from which their theories can be examined. The photomontage of the Blackwall Tunnel South Block presents a section of the ninth floor with a view looking south toward the docks alongside the River Thames. [Figure 15] The section consists of a series of unfurnished rooms all a part of the same flat unit. The only distinguishing features are the fixtures and appliances: a bathtub indicates the location of the bathroom and counters indicate the location of the kitchen. The sparse interior space is juxtaposed against a busy picture of the surrounding landscape. The connecting aspect is the street-deck, populated by two cutouts of people. The Smithsons' theory of the streets-in-the-air emerges visually as the people appear to almost step off the ledge and onto the city below, as if the deck were a sidewalk on the ground and not a platform suspended in the sky. The collage also works to establish the monumentality of the building form. The surrounding large industrial structures along the dock appear dwarfed in comparison to the looming structure of Robin Hood Gardens. A second photomontage of the Blackwall Tunnel South Block presents a plan of the upper-level of the eleventh floor. [Figure 16] Again, the actual architectural drawing does little to convey the program of the interior space with the only easily recognizable room being the bathroom. This collage, rather, explores the interaction of the spatial forms produced by Robin Hood Gardens with the existing context of the

city. The people within the plan are placed outside of the actual living unit and instead placed within the open sun balcony surrounding the elevator shaft. The connections to the exterior cityscape and greenspace are exaggerated even further by a tree placed on the balcony (keep in mind this is the eleventh floor). Cutouts of people are scattered along the sidewalk, working to create a visual parallel between the "street life" of the street-deck and the street life of the actual street below. Cars are present, but sparse, placed off to the side and in their place, just where the Smithsons wanted them to be. The surrounding playground and tennis court evoke a sense of potential exterior activity. A third photomontage of the Blackwall Tunnel South Block presents the same view as the previous example, this time on the tenth floor. [Figure 17] The interior is again unpopulated and the only features displayed are kitchen counters. The only human figure within the collage is placed on the sun balcony lying face-down. Only one car is on the road which presents a divergent scene from the busy reality the Smithsons were tasked with creating protection against. Peter Smithson's photomontages highlight several key factors about the architects' ideas and theories on Robin Hood Gardens. At the most basic level, the collages provide an outline for the architectural design of the housing structure through plan and section. Further analysis of the images, however, reveals the visual ideals that were imagined for Robin Hood Gardens by the architects. Street-decks were to become streets through which community was fostered, cars were to be contained, and greenspaces were to flourish. The collages also show the reality of the project as one that was pasted on the existing urban fabric, easily identifiable as separated and divorced from the context of the city.

Today, the building is undergoing total demolition. Despite efforts by the Twentieth Century Society in collaboration with leading figures such as Amanda Baillieu, Zaha Hadid, Neil Jackson, Peter St. John, Sir Stuart Lipton, Richard Rogers, and Deborah Saunt, the estate was

denied a listing by the Minister for Heritage at the Department for Culture Media and Sport in May 2008.[82] The legacy of the project, however, lives on. As Peter Smithson wrote of the Eames chairs, "A lot of energy has been poured into their detail; it is workmanlike, explicit, even eloquent, but it is quiet. They can be photographed as a fragment, they can be enjoyed as a fragment. They have high object-integrity."[83] Smithson's 1966 statement celebrating the design of the Eames chair can be appropriated to describe his own designs with Alison. Every detail of Robin Hood Gardens was planned out, such as the design, structure, and material of the playgrounds which the Smithsons had formed theories around, questioning how children play and how they react to form.[84] Most images of Robin Hood Gardens are just portions of the overall form, yet the whole is still able to be read and understood. The Victoria and Albert Museum curated an exhibition on Robin Hood Gardens, presenting only a fragment of the complex, and audiences were nonetheless able to recognize the building. As Helena Webster notes of the Smithsons' work, "the Smithsons had reduced architecture to product design."[85] The product (the housing estate) can be placed anywhere; the project was divorced from the urban context in which it was situated.

The Smithsons' son, Simon Smithson, believes Robin Hood Gardens to be the most significant building completed by his parents. He argues that Robin Hood Gardens presents a structure that comprises all of the key guiding factors in their works: community, context, and a uniquely English relationship between landscape and built form.[86] But at Robin Hood Gardens,

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[82] Powers, Lousada, and Marinescu, *ROBIN HOOD GARDENS: RE-VISIONS*, 16.
[83] Smithson and Smithson, *Changing the Art of Inhabitation*, 76.
[84] Alison Smithson and Peter Smithson, "R.H.L. Playgrounds," Alison and Peter Smithson Archive, Special Collections, Frances Loeb Library, Harvard University, Graduate School of Design, Folder BA-179.
[85] Webster, *Modernism without Rhetoric*, 41.
[86] Powers, Lousada, and Marinescu, *ROBIN HOOD GARDENS: RE-VISIONS*, 78.

what we see is a scheme ignorant of context, even, perhaps, blatantly distancing itself from the surrounding landscape in the name of protection.

Anthony Pangaro asserts that where Robin Hood Gardens fails as a model for community, it excels as a model for privacy.[87] The estate is private to an extreme through the existence of the retention wall, the grassy mound, and the sunken transportation moat. Pangaro continues, "It seems that once the presence of shops, views of outside community life, and the automobile have all been taken away, the thing that remains is only a corridor."[88] When the streets are elevated, they lose all context. It is no longer the East End streets of Nigel Henderson's photographs, full of life with children jumping rope and riding bikes. Nor is it the imagined street-decks of Peter Smithson's photomontages, full of residents congregating outside. The vitality that naturally occurs in city neighborhoods is lost within the contained walls of Robin Hood Gardens. The space becomes a vacuum or a private, isolated island, cut off from society. There is a connectivity from within through the relationships of the built form, but it is not enough to foster the spirit of the city.

Architect Peter Eisenman faults the rhetoric of the Modern Movement for the shortcomings of Robin Hood Gardens. He, like Pangaro, points to a paradox between what is being written and what is actually built, but goes on to establish the Smithsons, and the Modernist Movement as a whole, as perhaps elitist, chalking up their work to the concept of "give the people what they would want if they knew what they wanted."[89] This attitude sometimes comes across in their writings. Peter Smithson responded to the notion that some people perceive Mies' work as looking all the same, by insinuating those were the same people

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[87] Pangaro, "Beyond Golden Lane, Robin Hood Gardens," 44.
[88] Pangaro, "Beyond Golden Lane, Robin Hood Gardens," 41.
[89] Eisenman, *Eisenman Inside Out: Selected Writings, 1963-1988*, 55.

who "confuse a sixties Braun toast-maker with a record player."[90] The Smithsons seemed to have abandoned the concept of the Welfare State all together and moved back to their start with designing schools, this time tackling the University of Bath.[91] The future of London council flat housing would be left in the hands of the GLC.

1974: The Rise of the Tower Block

If Robin Hood Gardens represents the "building as a street," Grenfell Tower represents the "towers in the park"—the two main architectural metaphors of twentieth-century urbanism as described by architect Peter Eisenman.[92] Grenfell Tower is situated within the Lancaster West Estate, a site built up by the Kensington and Chelsea London Borough Council following further slum clearance in the 1960s. Grenfell Tower was an addition brought on in 1974, designed by architect Nigel Whitbread and constructed by A.E. Symes. [Figure 18]

The London borough of Kensington and Chelsea presents a different backdrop compared to the East End borough of Tower Hamlets, home to Boundary Street and Robin Hood Gardens. Whereas London's East End population is majority working class, the West End neighborhood of Kensington and Chelsea is the home to the United Kingdom's highest average salary, £123,000.[93] The borough is also the site of London's largest wealth gap, with a median average salary of £32,700.[94] Grenfell Tower is a distance of just under two miles away from Kensington Palace, home of the royal family. Here, the concern is not just about housing the working class; it

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[90] Smithson and Smithson, *Changing the Art of Inhabitation*, 22; Smithson and Smithson, *Without Rhetoric*, 42.
[91] Webster, *Modernism without Rhetoric*, 102.
[92] Eisenman, *Eisenman Inside Out: Selected Writings, 1963-1988*, 41.
[93] Bell, "London Fire: A Tale of Two Tower Blocks."
[94] Bell, "London Fire: A Tale of Two Tower Blocks."

is also focused on also making those buildings presentable for their wealthy neighbors, with some residents of Grenfell Tower citing this as motivation for recent renovations to the building.[95] What was created was a cheap, cost-cutting façade of stability with an interior that lacked the proper facilities for its users.

Following the destruction of the building on the night of June 14, 2017, the main question arose: how did this happen? Current investigations reveal the cause of the flames to be from a refrigerator on the fourth floor that caught fire. What should have been a small blaze, easily contained within one unit, quickly became an inferno that engulfed the entire building due to a combination of factors, such as poor government oversight, cost-cutting renovations, and the design of the building itself. Investigations have been quick to point the finger to a 2016 renovation by the architecture firm Studio E Architects which replaced the building's previous cladding with combustible aluminum cladding. [Figure 19] The *New York Times* described the wrapping as lethal, pointing to a cavity of about two inches that existed between the cladding and the insulation that acted as a chimney in the event of a fire.[96] Such cladding is illegal in the United States and other European countries, but pre-October 2018 Britain still allowed the flammable material on the side of apartment buildings.[97] Other safety measures, such as fire sprinklers, were non-existent in the building because they are only required in post-2007 high-

[95] John Boughton, *Municipal Dreams: The Rise and Fall of Council Housing* (London: Verso, 2018), 4; Kirkpatrick, Hakim, and Glanz, "Why Grenfell Tower Burned: Regulators Put Cost Before Safety."
[96] Kirkpatrick, Hakim, and Glanz, "Why Grenfell Tower Burned: Regulators Put Cost Before Safety."
[97] Kirkpatrick, Hakim, and Glanz, "Why Grenfell Tower Burned: Regulators Put Cost Before Safety."

rise apartment complexes following regulations put in place by the International Fire Sprinkler Association.[98]

Little consideration, however, has been given to the architectural design of the building as it relates to the tragedy. The tower spans 24 stories, with 127 one- and two-bedroom flats on each floor. The building has one central stairway. Grenfell Tower provides communal spaces on the first four floors, such as a boxing club, quiet area, and a nursery complete with a play area.[99]

The tower block structure encompasses what Eisenman labeled the towers in the park, a scheme that follows Le Corbusier's paper project in which high-rise business towers, set in a greenspace, were taken from the realm of the street and propelled upward. The structure itself is completely divorced from the ground plane. The image of the London skyline from North Kensington resembles the towers in the park configuration, with the repeated block form breaking through the sky. [Figure 20] The difference, however, lies in the space between. There is no spatial connection between the site of Grenfell and the surrounding blocks. Grenfell stood alone in its monumentality.

The tower block design presents a solution to the on-going issue of housing in London: how to house a dense population within the very tight constraints of the city. Move upward. Tower blocks were raised beginning in the 1960s, but very shortly after their emergence, it became clear the scheme was not working. The Smithsons saw tower blocks as too private, doing nothing to create community among the people of a building.[100] But just as the Smithsons worked with forms that had been shown ineffective, tower blocks continue to rise.

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[98] Bell, "London Fire: A Tale of Two Tower Blocks."
[99] "How the Tragedy Unfolded at Grenfell Tower."
[100] Dirk Van Den Heuvel, Max Risselada, Beatriz Colomina, Alison Smithson, Peter Smithson, and Design Museum. *Alison and Peter Smithson: From the House of the Future to a House of Today* (Rotterdam: 010 Pub., 2004), 62.

The Smithsons' theme of protection at Robin Hood Gardens is heightened even further at Grenfell through the tower block form. At Robin Hood Gardens, protection was thought about in terms of exterior forces. The enemies were the car, the street, noise, and traffic. The main focus protecting the exterior, however, left the interior vulnerable—a shortcoming that would prove disastrous. Within the tower block scheme of Grenfell, communication is essentially limited to one area: the central staircase.

There is absolutely nothing distinctive about the design of Grenfell Tower. The tower consisted of a monotony of window columns. Vertical elements of cladding protruded outward forming columns in which the windows sit. Two sides had three columns of windows; two sides had four columns of windows. Between each window pane was, yet again, more cladding—this was a space that could be occupied by more glass, allowing more light to enter each apartment, but instead formed more of a dense box that rose into the sky. Each floor was distinguished on the exterior through the same thick slabs of aluminum cladding. The one- and two-bedroom apartments followed the Parker Morris Standards outlined in 1961 and adopted in 1967, but no other defining architectural features existed.

In comparing Grenfell Tower with the two previous examples of Boundary Street Estate and Robin Hood Gardens, it becomes clear a lot of effective design concepts seen within these two projects were lost in the production of an efficient model built to provide a solution for one problem. The connections with outdoor space and the city streets that are seen in Boundary Street Estate disappear as the tower block model propelled upward without any manifestation of even a single balcony. The space and quietness that accompanied Robin Hood Gardens were lost. With Grenfell, all that was left was a form that did only what it was asked, housing as many people as possible within a small footprint. But even in that sense it failed to meet requirements,

as the council cut costs with refurbishments, leaving residents living in ticking time bombs of housing.

It can be definitively established that the Grenfell Tower structure failed, but the question remains: where do we go from here?

From the Humble to the Monumental: Where Do We Go from Here?

The trajectory of London public housing can be traced through the changing fabric of the city. The scale of the humble, brick dwellings of the Boundary Street Estate was drastically altered to a monumental scale following both world wars and radical growth in architectural theories through the Modernist Movement. The Smithsons championed architectural theories that served as a turning point in London council flat history. While Robin Hood Gardens and Grenfell Tower might not have been able to work effectively as housing, they can serve as cautionary tales from which to build.

The Boundary Street Estate effectively balanced the relationship between public and private space through the central public greenspace and community spaces, such as schools, retail spaces, and workshops placed at street level. Each building is connected to an actual street, crowded with people and cars; the human-to-human connection is strong. The buildings still stand today, a testament to their effectiveness as a housing form. Where they failed was in the density of housing—a requirement that led to the formation of the monumental form through the slab of Robin Hood Gardens and the tower block of Grenfell Tower.

Robin Hood Gardens effectively handled the problem of density in a way that was not fully realized at the Boundary Street Estate. The two huge slab forms encompassed five acres of East End property; however, there was still a feeling of spaciousness and calm produced through

the matching monumentality of the landscape. The "stress-free zone" conceptualized by the Smithsons actually works in providing Robin Hood Gardens with a large, open quiet greenspace, however, not necessarily to the estate's benefit. The raised streets of Robin Hood Gardens eliminated the car, but also eliminated a sense of community. Person-to-person contact was limited to the residents within the housing complex. The Smithsons presented a housing scheme that was steeped in precedent and theory, but that ultimately ignored the context of London's East End. As Anthony Pangaro notes, "the built reality of Robin Hood Gardens is less convincing than the theory behind it."[101] Their elaborate series of metaphors surrounding the architecture, from the precedents of ancient Rome and Greece, the English heritage of Bath, and the Modernist forms of Mies van der Rohe and Le Corbusier succeed within written works, but in the built form, the ideas simply do not come through.

Perhaps the Smithsons were testing a last-ditch solution of the slab before the eventual decline of council flats through the notorious tower block form. The private, isolated qualities found at Robin Hood Gardens were accentuated even further in the tower block structure of Grenfell Tower. At Grenfell, there was no connection to the outside. No exterior space existed on the building itself. The connective qualities that the two monumental slab forms combined with the central greenspace provided at Robin Hood Gardens disappeared and all that was left was a box in the sky made out of cheap aluminum cladding. With these two examples, it becomes apparent that Peter Eisenman's categories of Modernist building metaphors, the "towers in the park" and the "building as a street," really only differ in form, but both remain divorced from city fabric in which they sit.

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[101] Pangaro, "Beyond Golden Lane, Robin Hood Gardens," 37.

The problem of public housing architecture still remains today. On March 1, 2019, the *New York Times* published the article "New York Has a Public Housing Problem. Does London Have an Answer?" in which author Michael Kimmelman proposed that the city of New York look to new redevelopments currently under construction in London's East End borough of Hackney (just next to Tower Hamlets) for design and planning inspiration to solve the ever-growing housing crisis.

One new redevelopment described by Kimmelman, Colville Estates, works with the same towers in the sky type used at Grenfell, but also includes four-story buildings that mimic but modernize the scheme found in Boundary Street Estate. [Figure 21] The plans show mid-rise structures that are attached, but share a lot of the same qualities as the Boundary Street scheme: a central greenspace, flats that open directly onto outdoor courtyards, connections through outdoor pedestrian routes. The two tower blocks on the estate, known together as Hoxton Press, sit on the outer edge of the scheme. [Figure 22] The difference between these structures and Grenfell Tower, however, lies in the access to outdoor space, with units containing balconies, and a spatial connection produced between the tower blocks and the mid-rise structures. The two tower blocks are in communication with each other and their surrounding context through a shared planned outdoor space at ground-level. All of the buildings within the Colville Estate are made of the tried and true brick, windows are large and allow for ample natural light to pour in from the outside. The second redevelopment Kimmelman points to, Kings Crescent, aims to renovate an existing estate built in the 1970s with programs that users requested, like balconies. The plan features courtyards adjacent to city streets that integrate the site within the city fabric.

Kimmelman asserts that the schemes in Hackney are some of the "most promising public housing" he has seen in awhile. He cites efforts of local government, but also the architecture of

the buildings, pointing to “material language” and “open space.” [102] Here, I agree with Kimmelman. The estates plan to house more people than the previous structures, and the attention to the context of already established built structures and the street works to create communities. The spaces utilize forms previously seen in council flat housing, but redevelop them to prioritize user programs, outdoor connections, and safe materials.

Perhaps another reason the Colville Estate program excels it that it is new. Buildings simply cannot last for thirty years without maintenance. Renovations have to take place, which did not happen at Robin Hood Gardens. These renovations have to be thoughtful, which was not the case at Grenfell Tower. Maintenance cannot merely mean tacking on dangerous cladding with no regard for the residents. Context needs to be considered; the street should be incorporated. Above all, the user should be taken into account—a goal that seems to have been forgotten somewhere in the web of theory spun by the Smithsons. It is in these new ways that the redeveloped housing communities of Hackney at Colville Estate and Kings Crescent seem promising. Perhaps London council flat housing has a bright future, but for this, only time will tell.

[102] Michael Kimmelman, "New York Has a Public Housing Problem. Does London Have an Answer?" *The New York Times*, March 01, 2019, accessed March 04, 2019, https://www.nytimes.com/2019/03/01/arts/design/hackney-london-public-housing.html.

Images

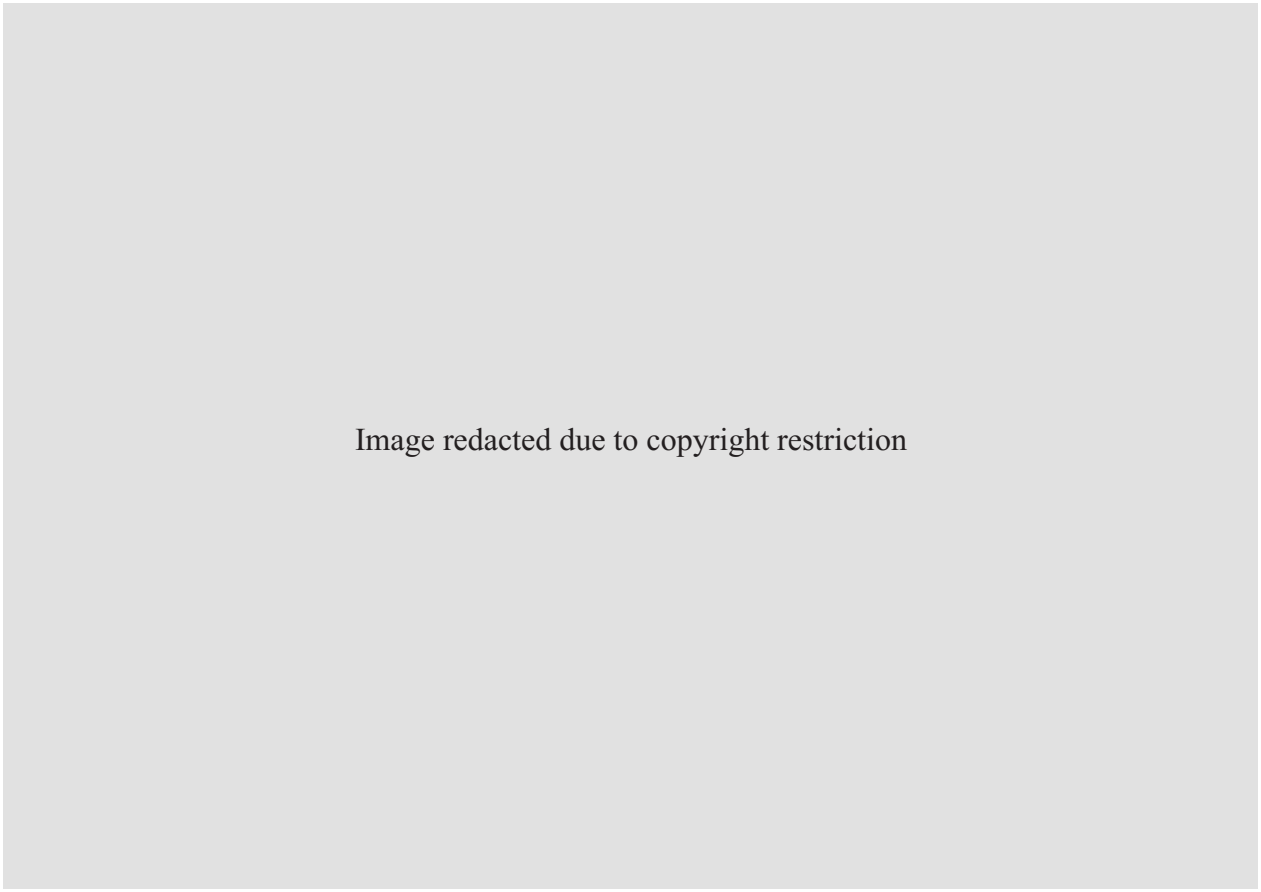

Figure 1: © Metropolitan Archives. "The Nichol, Early 1890s." Digital image. Boundary Community Launderette. 2010. Accessed April 08, 2019. https://boundarylaunderette.wordpress.com/boundary-estate-a-history/.

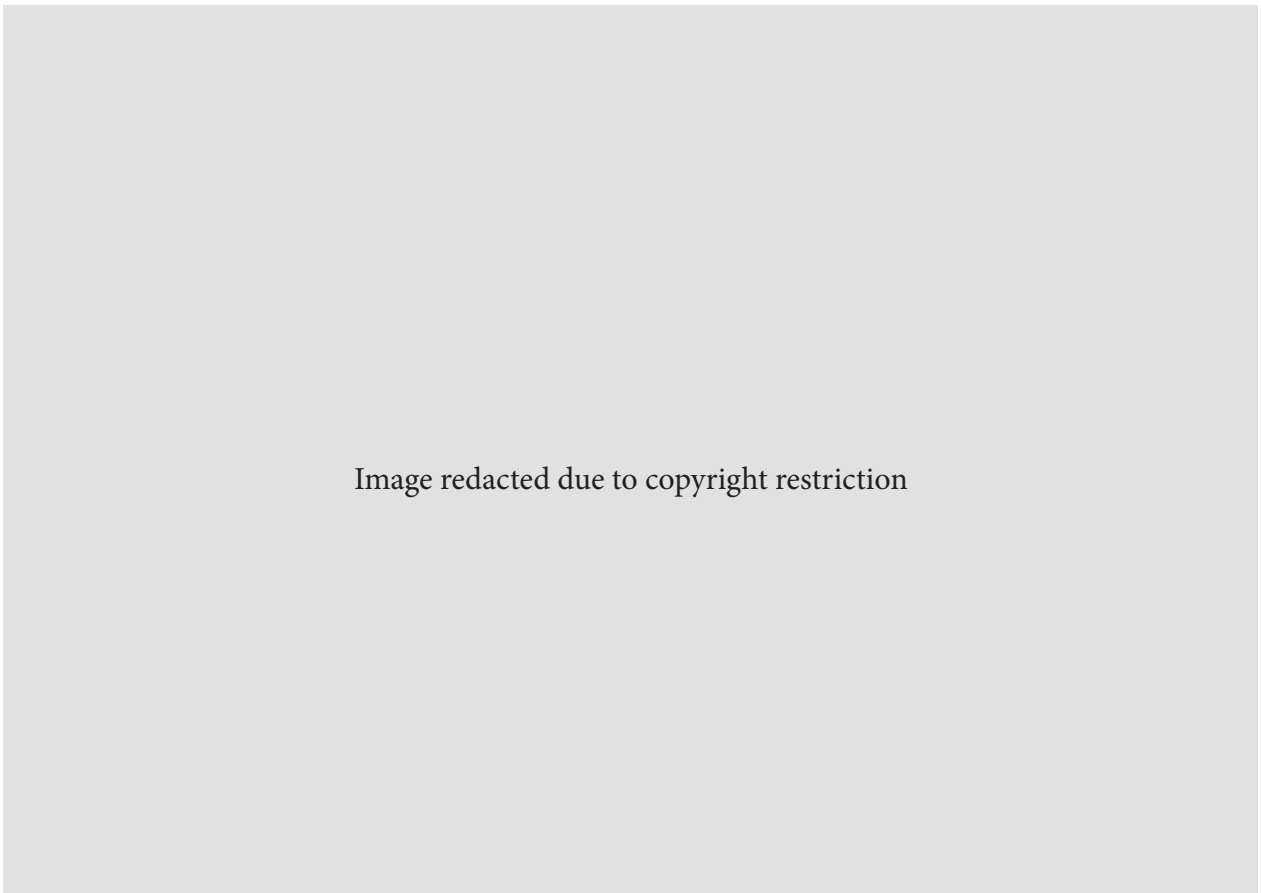

Figure 2: © Metropolitan Archives. "'The Boundary Street Scheme' - 1900 Map." Digital image. Boundary Community Launderette. 2010. Accessed April 08, 2019. https://boundarylaunderette.wordpress.com/boundary-estate-a-history/.

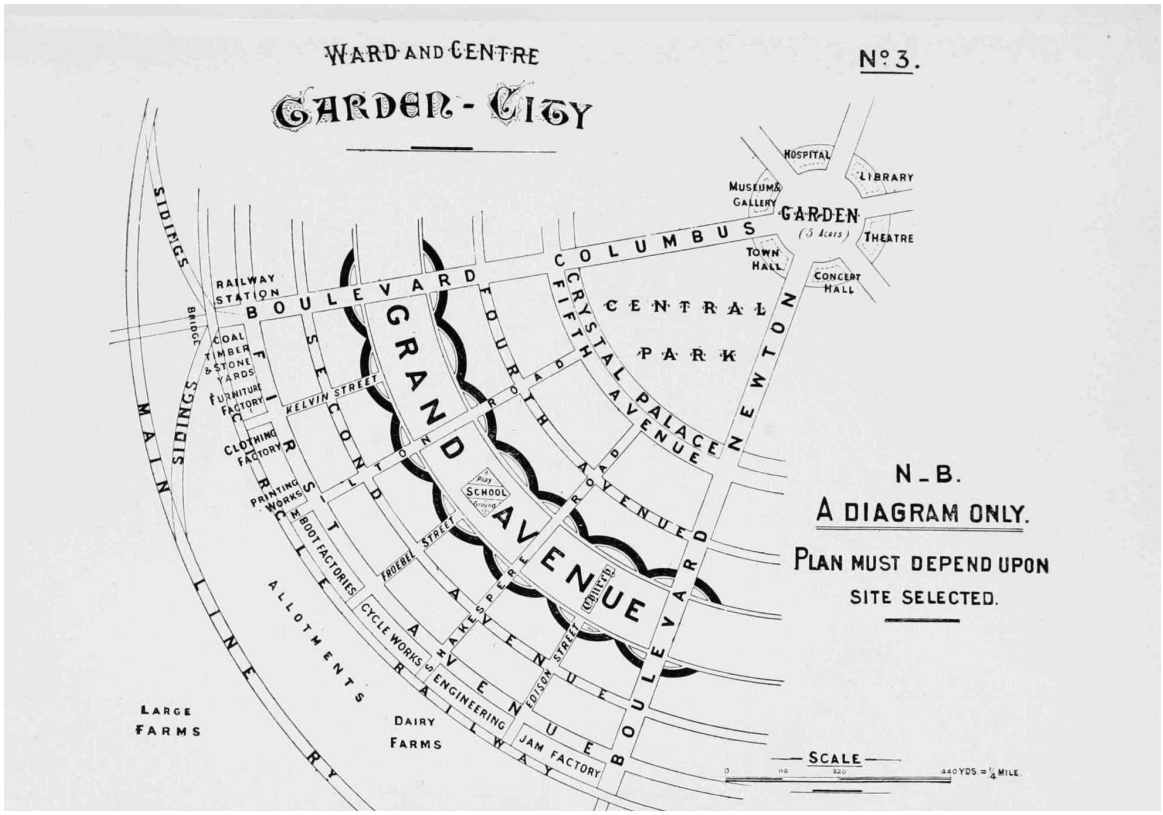

Figure 3: The Garden City Model. (Howard, Ebenezer. Garden Cities of To-morrow (being the Second Edition of "To-morrow: A Peaceful Path to Real Reform"). London: S. Sonnenschein & Co., 1902. Accessed April 08, 2019. http://tinyurl.galegroup.com/tinyurl/9iB6q3.)

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Figure 4: "Boundary Estate: Arnold Circus." Digital image. London Metropolitan Archives. 1907. Accessed April 08, 2019. https://bit.ly/2WZ63GP.

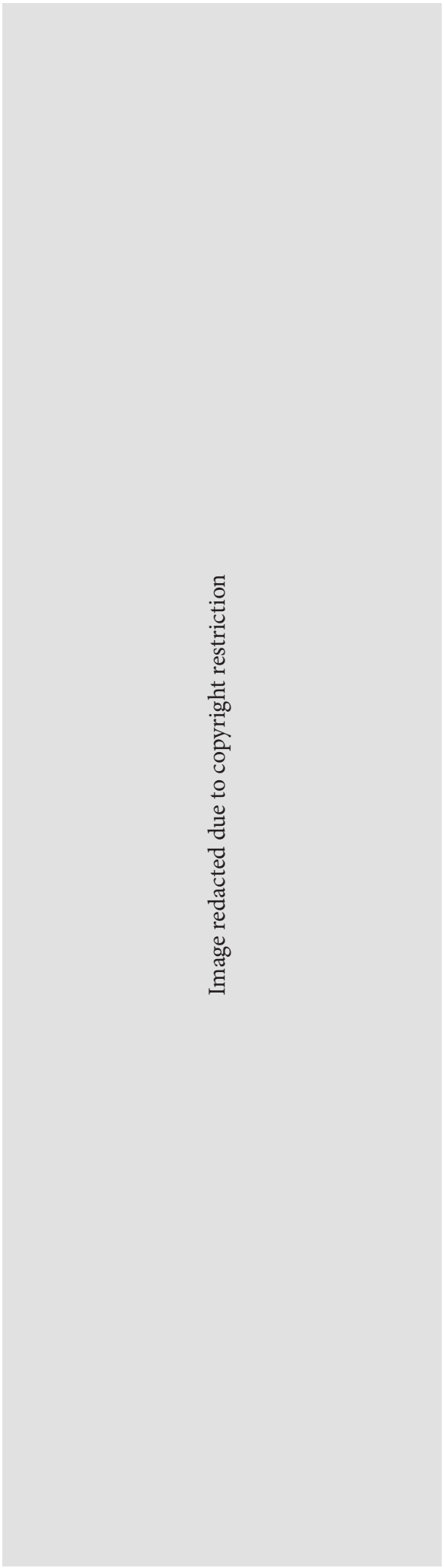

Figure 5: Smithson, Alison and Peter Smithson. “Urban Re-Identification Grid.” 1953. Smithson Family Collection. (Boyer, M. Christine. *Not Quite Architecture: Writing around Alison and Peter Smithson*. Cambridge, Massachusetts: MIT Press, 2017.)

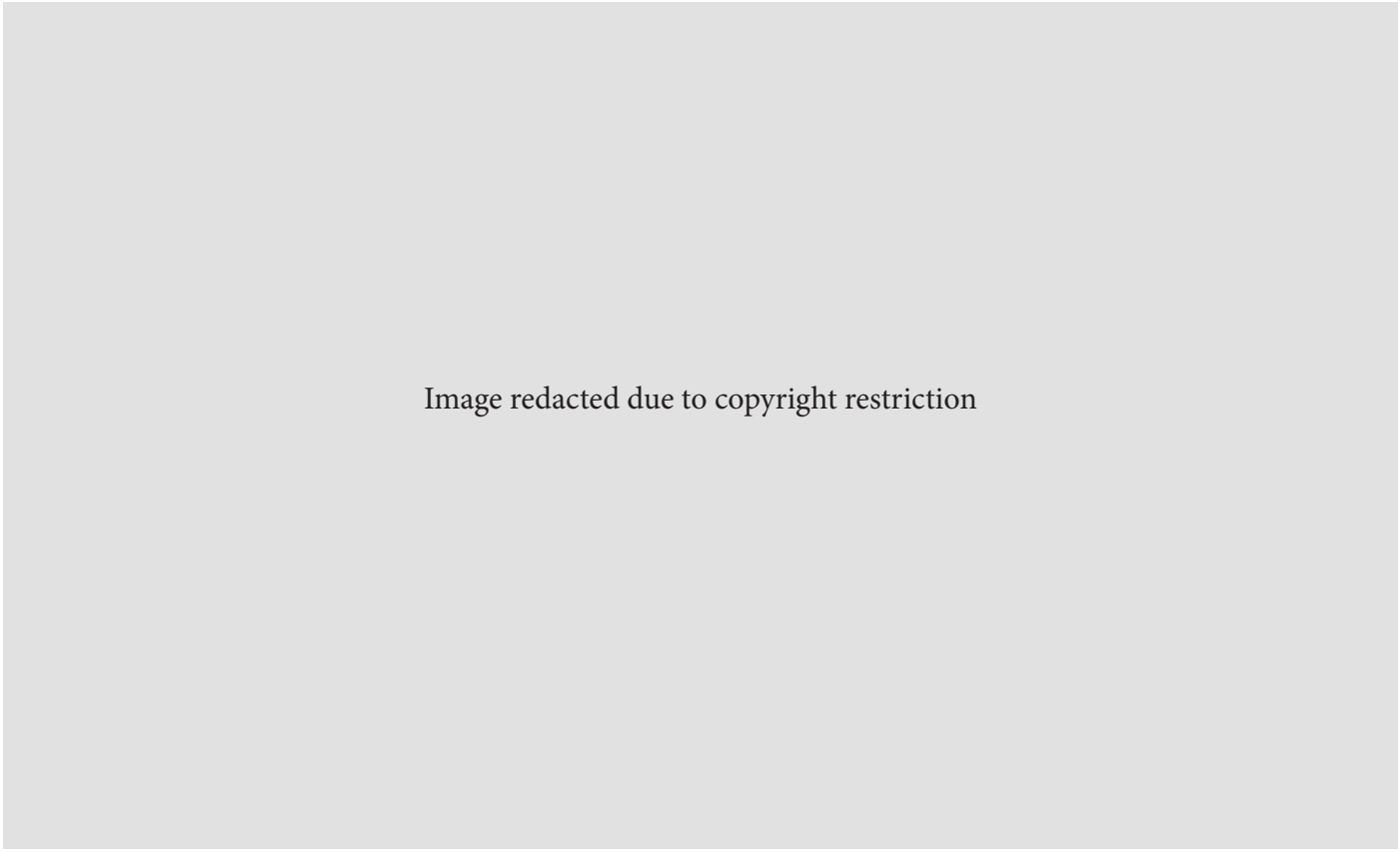

Figure 6: Smithson, Alison and Peter Smithson. Heirarchy of Association. 1954. (Smithson, Alison, and Peter Smithson. *Ordinariness and Light: Urban Theories 1952-1960 and Their Application in a Building Project 1963-1970*. Cambridge, Mass.: MIT Press, 1970.)

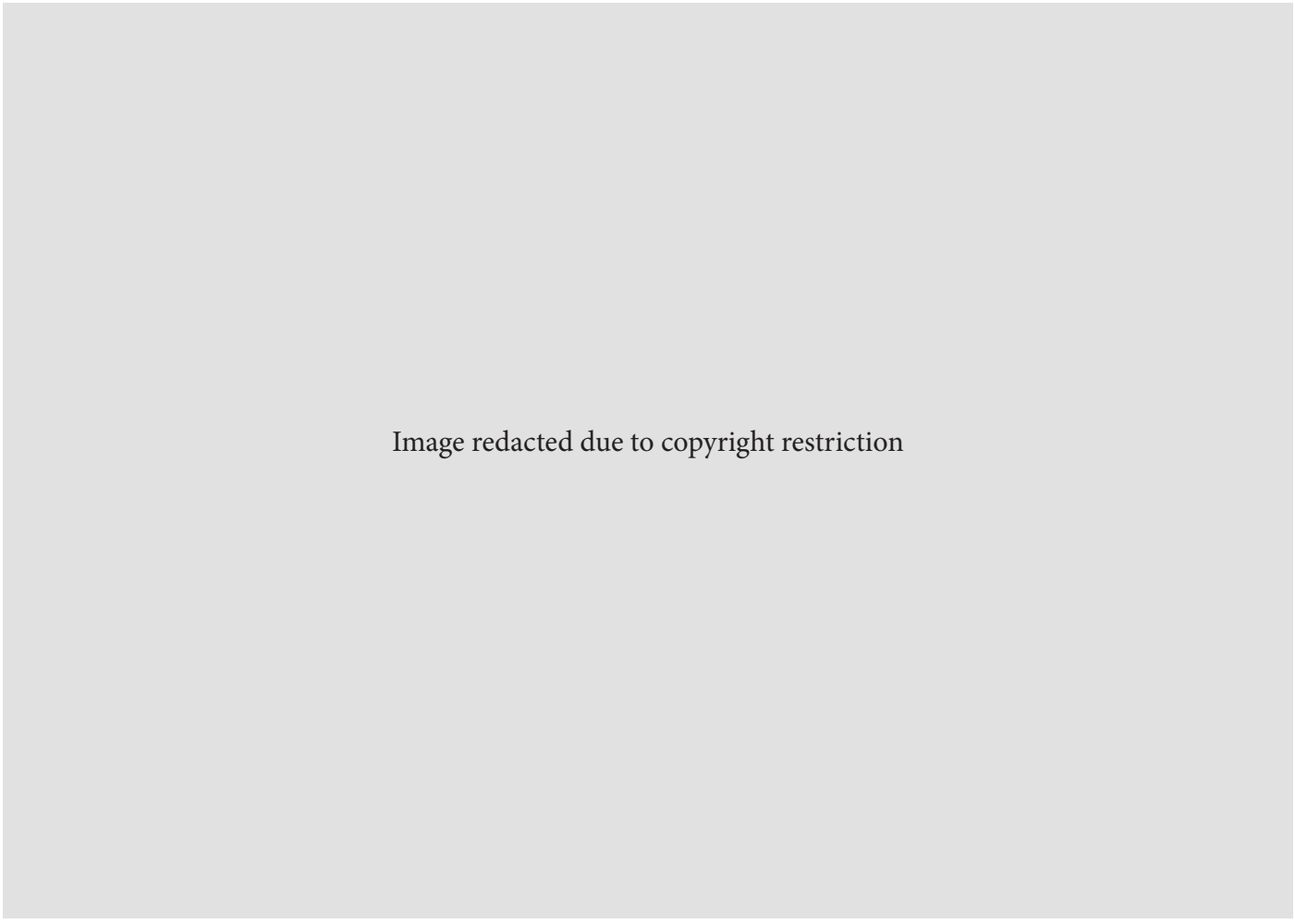

Figure 7: Hunstanton School, Alison and Peter Smithson, 1950-54. Hedrich Blessing. (Webster, Helena, ed. *Modernism without Rhetoric: The Work of Alison and Peter Smithson*. London: Academy Group, 1997.)

Figure 8 (above): Robin Hood Gardens. © 1972 Sandra Lousada and © The Smithson Family Collection. Reproduced by Permission. (Robin Hood Gardens. Digital image. Municipal Dreams. February 04, 2014. Accessed March 06, 2019. https://municipaldreams.wordpress.com/2014/02/04/robin-hood-gardens-poplar-an-exemplar-a-demonstration-of-a-more-enjoyable-way-of-living/.

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Figure 9 (left): Previous land map at the site of Robin Hood Gardens. (The Alison and Peter Smithson Archive, Special Collections, Frances Loeb Library, Harvard University, Graduate School of Design, Folder BA-184.)

Figure 10: SEIER+SEIER. "The Smithsons, Peter and Alison Smithson, Architects: Robin Hood Gardens, London 1966-1972." Digital image. Flickr. October 23, 2015. Accessed April 08, 2019. https://bit.ly/2UI7FqZ. Used under Creative Commons Attribution 2.0 Generic (https://creativecommons.org/licenses/by/2.0/).

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Figure 11: Site plan and elevations of Robin Hood Gardens. (The Alison and Peter Smithson Archive, Special Collections, Frances Loeb Library, Harvard University, Graduate School of Design, Folder BA-184.)

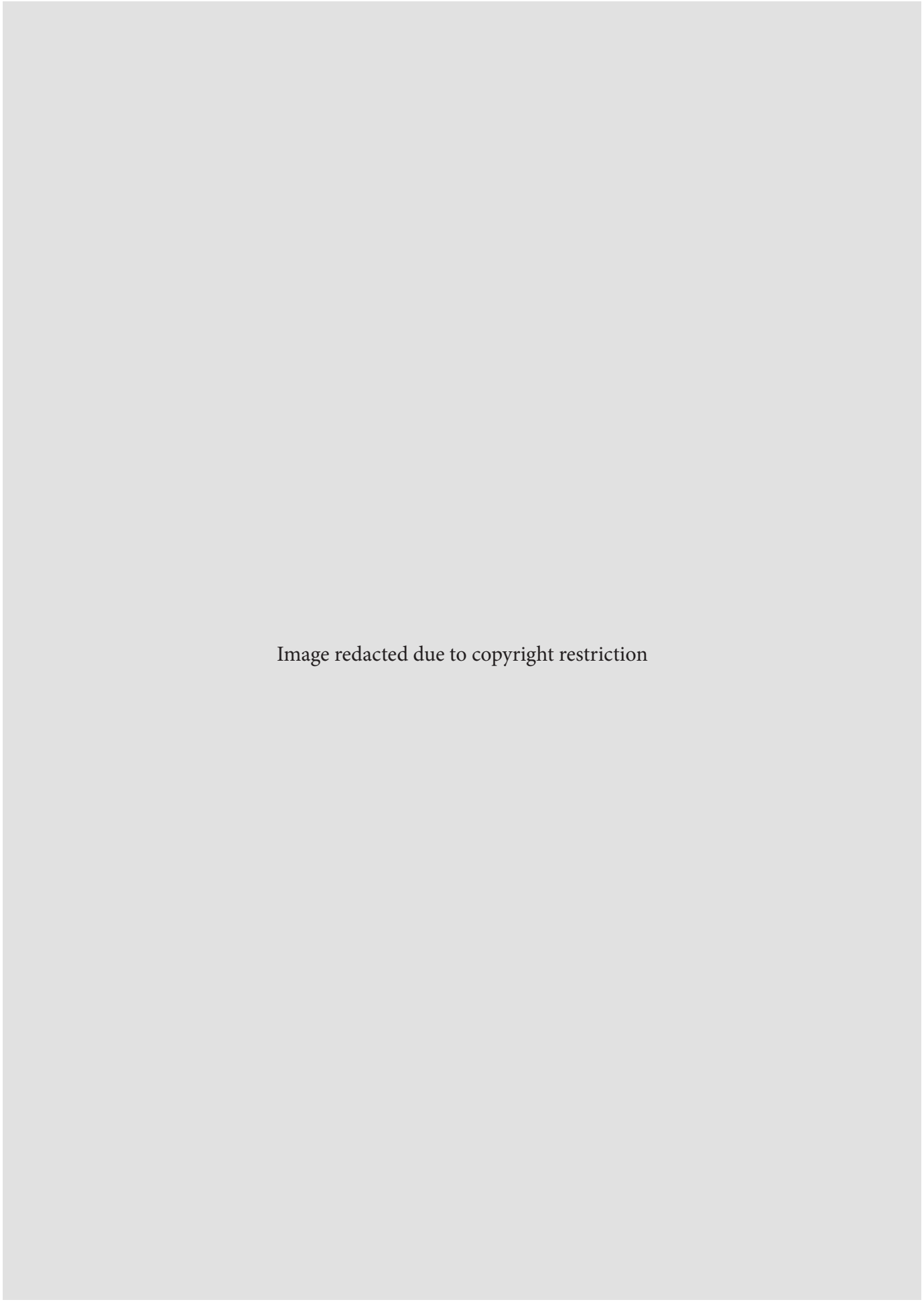

Figure 12: Smithson, Alison and Peter Smithson. “Socialist Dream.” July 26, 1977. Revised by Alison Smithson, November 27, 1986. (The Alison and Peter Smithson Archive, Special Collections, Frances Loeb Library, Harvard University, Graduate School of Design, Folder BA-179.)

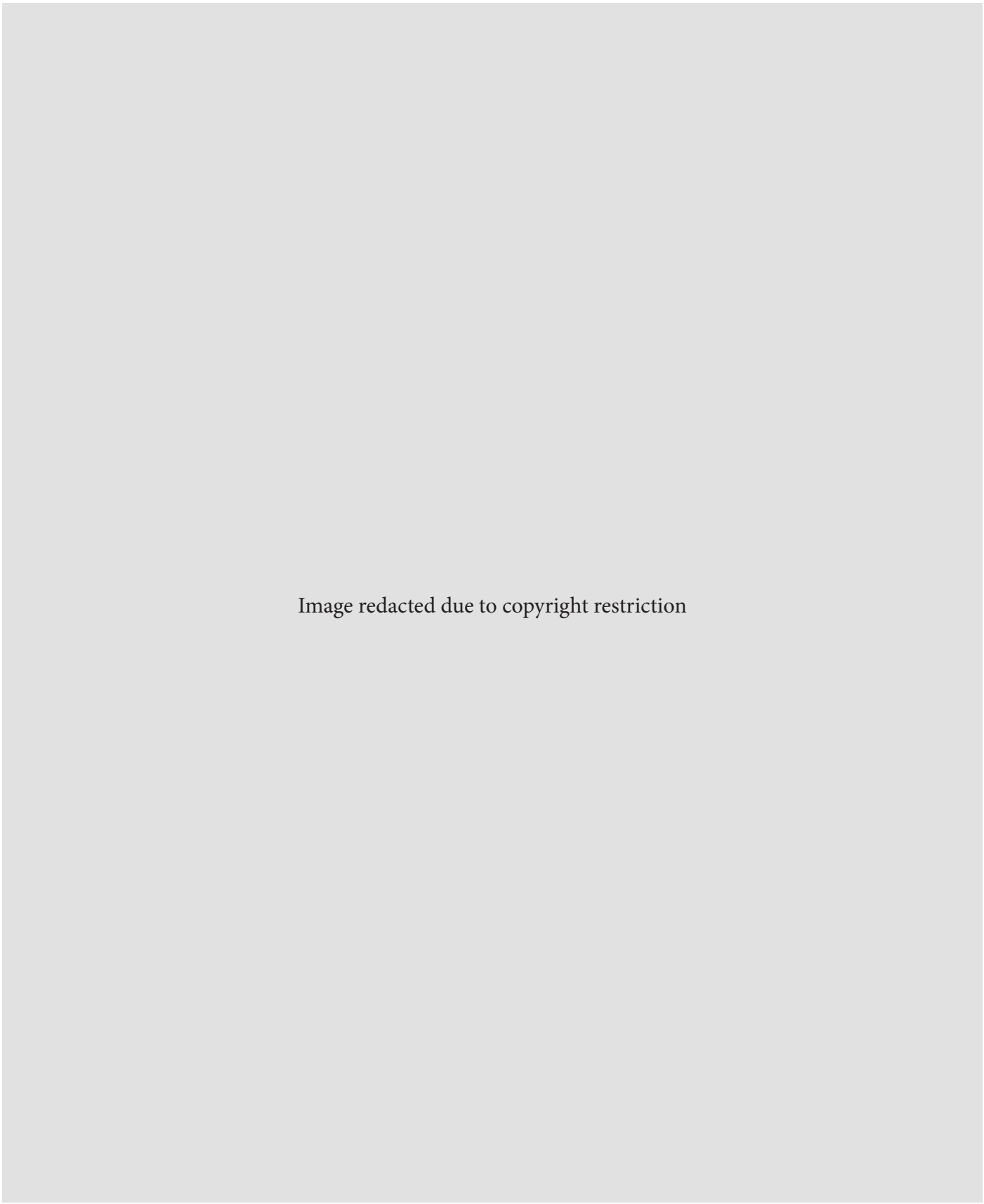

Figure 13: Royal Crescent and terrace houses, Bath, England. Photographs by Peter Smithson. September 1966. (Smithson, Alison, Peter Smithson, and Simon J. B. Smithson. The Space Between. Edited by Max Risselada. Verlag Der Buchhandlung Walther König, 2017.)

Figure 14: Cadman, Steve. "Robin Hood Gardens." Digital image. Flickr. March 21, 2008. Accessed April 08, 2019. https://bit.ly/2uXj9bY. Used under Creative Commons Attribution-ShareAlike 2.0 Generic (https://creativecommons.org/licenses/by-sa/2.0/).

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Figure 15: Smithson, Peter. "Blackwall Tunnel South Block, 9th floor, outside flat 194 'Type 4 B,' looking south." Collage. July 11-12, 1972. Drawing by CHW 1971. (The Alison and Peter Smithson Archive, Special Collections, Frances Loeb Library, Harvard University, Graduate School of Design, Folder BA-184.)

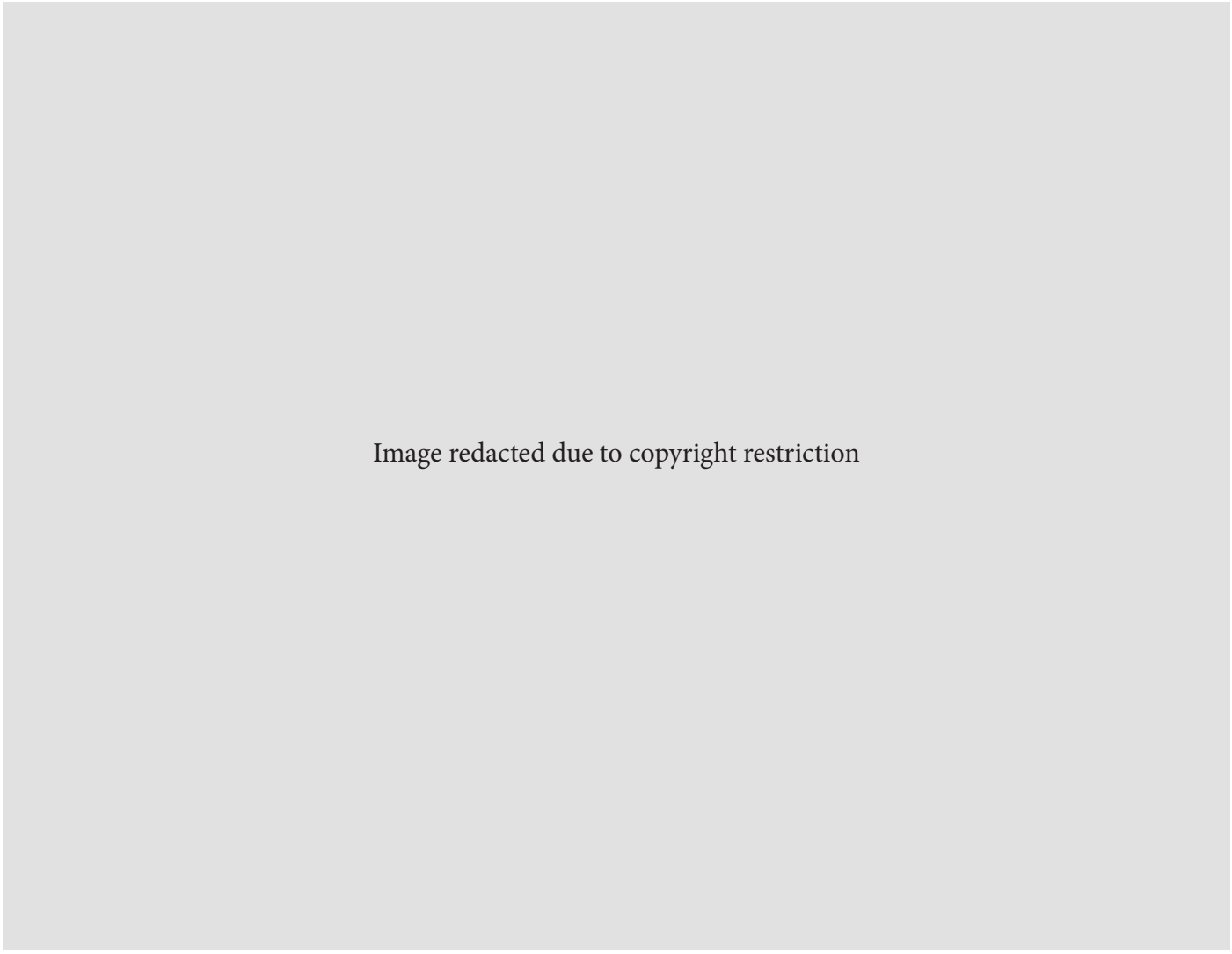

Figure 16: Smithson, Peter. "Blackwall Tunnel South Block, 'Type 6 up' flat, upper level, 11th floor." Collage. July 11-12, 1972. Drawing by CHW 1971. (The Alison and Peter Smithson Archive, Special Collections, Frances Loeb Library, Harvard University, Graduate School of Design, Folder BA-184.)

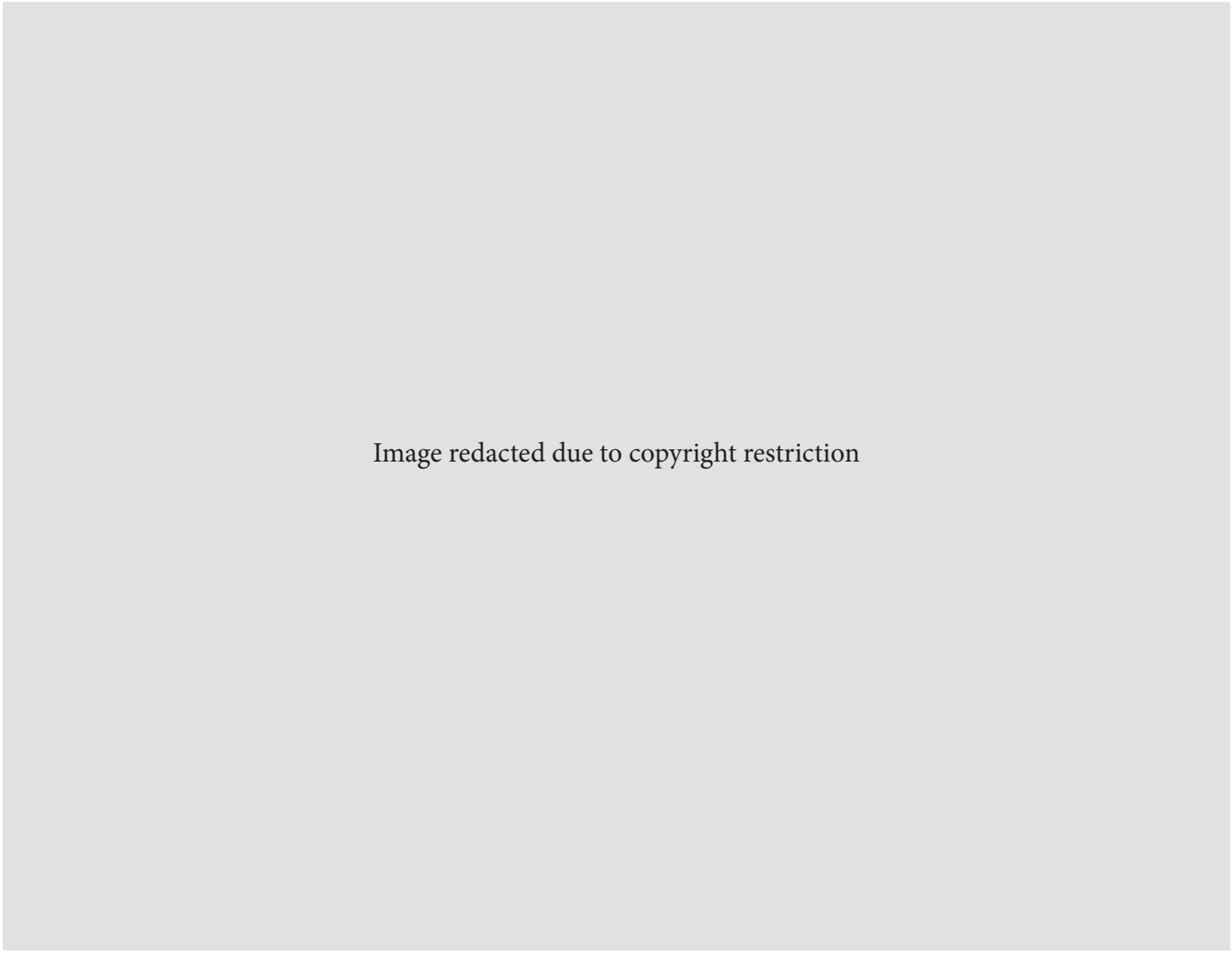

Figure 17: Smithson, Peter. "Blackwall Tunnel South Block, 10th Floor, 'Type 6 up' flat, deck level." Collage. July 11-12, 1972. Drawing by CHW 1971. (The Alison and Peter Smithson Archive, Special Collections, Frances Loeb Library, Harvard University, Graduate School of Design, Folder BA-184.)

Figure 18: Faichney, Will. “Grenfell Tower, Lancaster West Estate.” Digital image. Flickr. November 11, 2012. Accessed April 08, 2019. https://bit.ly/2Vx4Whj. Reproduced with Permission.

Figure 19: Faichney, Will. "Grenfell Tower, North Kensington." Digital image. Flickr. January 01, 2015. Accessed April 08, 2019. https://bit.ly/2Vxwi71. Reproduced with Permission.

Figure 20: Faichney, Will. "North Kensington Blocks at Sunset." Digital image. Flickr. January 01, 2015. Accessed April 08, 2019. https://bit.ly/2v3CzMp. Reproduced with Permission.

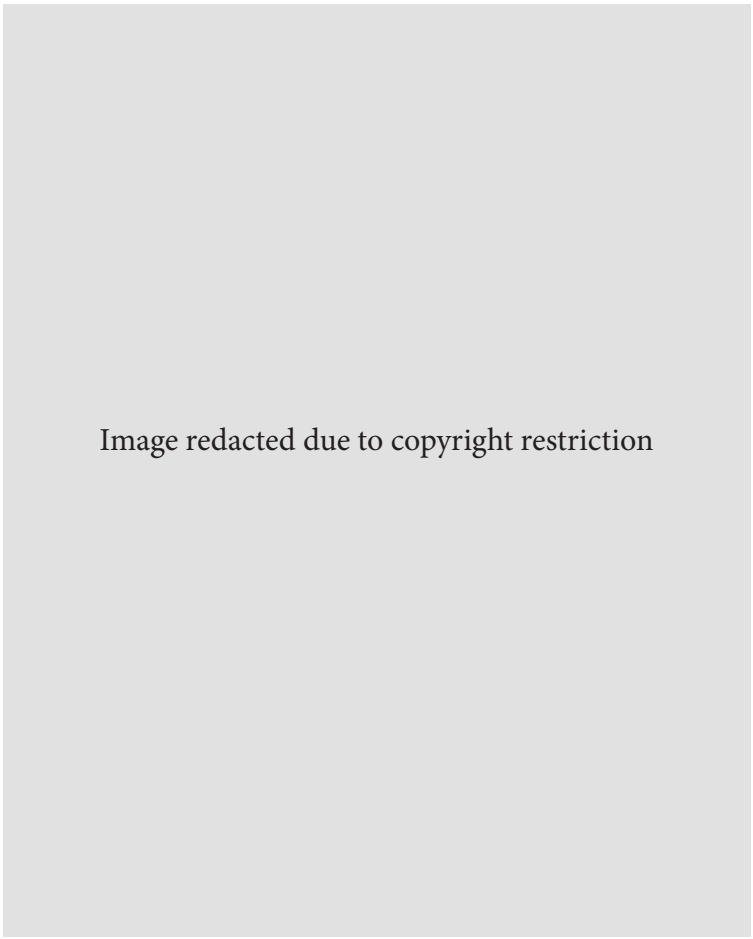

Figure 21 (left): Colville Estate, Hackney, London. Photo by Peter Landers. (Kimmelman, Michael. "New York Has a Public Housing Problem. Does London Have an Answer?" *The New York Times*. March 01, 2019. Accessed March 04, 2019. https://www.nytimes.com/2019/03/01/arts/design/hackney-london-public-housing.html.)

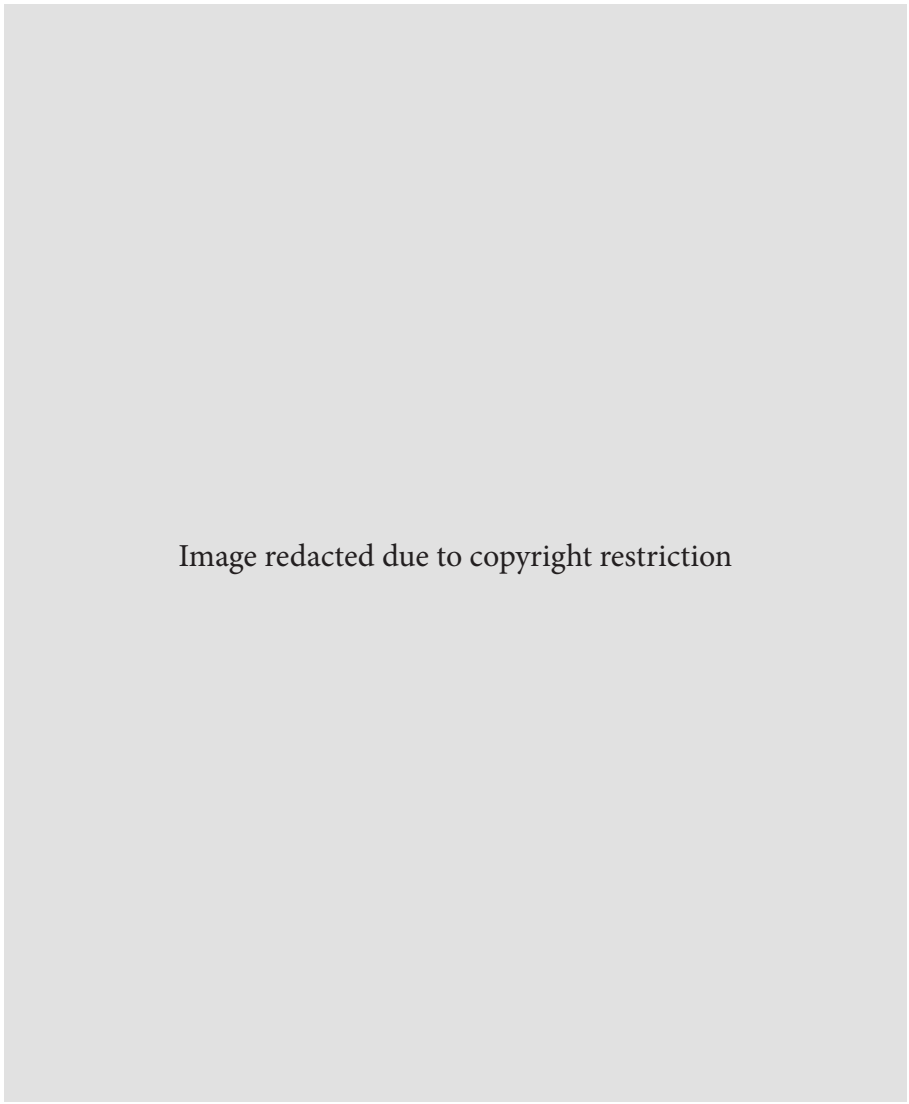

Figure 22 (right): Hoxton Press, Colville Estate, Hackney, London. Photo by Simon Menges. (Kimmelman, Michael. "New York Has a Public Housing Problem. Does London Have an Answer?" *The New York Times*. March 01, 2019. Accessed March 04, 2019. https://www.nytimes.com/2019/03/01/arts/design/hackney-london-public-housing.html.)

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