

**Quilting Urban Fabric:
Imagining Patchwork Quilting as an Architectural
Methodology for Sustainability and Collective Care**

by

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Dalhousie University is located in Mi'kmaq'i,
the ancestral and unceded territory of the Mi'kmaq.
We are all Treaty people.

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To my Parents

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Abstract

As a tradition of making that is both material and social, patchwork quilting is a practice of domestic craft with meaningful potential to inform architectural and urban design in the interest of cultural, environmental, and economic sustainability. Quilting is an act of homemaking and placemaking that embeds spaces and materials with a unique feeling of home while archiving collective memories and expressing personal narratives. This thesis imagines the quilting bee as a methodological framework for collectively designing and making homes from salvaged scraps of urban fabric and is tested through the collaborative design of a cohousing project on Robie Street in Halifax, Canada. The quilting methodology is envisioned as an act of resistance against the forces of development that erase memories, narratives, and labour embedded in historical homes, and reframes the cultural meaning of homemaking as a collective and ongoing act of reciprocal care between people and material.

Acknowledgements

Over the past four years, I've come to believe in architecture as a profoundly collaborative practice. This thesis stands as testament to that belief, as it was made possible thanks to the support and contributions of an extraordinary community.

First, I would like to acknowledge that this work took place during a global pandemic. I am deeply grateful to all those whose tireless work allowed us to safely continue our studies throughout these past two years.

Many thanks to my committee. To my advisors Steve and Lisa: thank you for being so generous with your knowledge and for your inspiring perspectives. To my supervisor Catherine: I can't thank you enough for your invaluable insights and thoughtful guidance.

Thank you to my studiomates for sharing in all the highs and lows of the architecture school rollercoaster. Your friendship has made it fun. Congratulations to you all.

Thank you Sam for your constant encouragement and for all the late-night walks home from studio.

Finally, thank you Mum and Dad for your unconditional support, for your unwavering confidence in me, and for all your tuna casseroles.

Chapter 1: Introduction

Patchwork City

When I look at Halifax, I imagine a patchwork quilt. Each colourful house is a piece of the pattern. The house represents its maker in the composition of the city fabric, mediating between the individual and the collective. Houses are arranged in patterned blocks, which both reflect and shape the communities who inhabit them. These blocks are stitched together by our social connections to one another, which give the fabric its strength and texture. The quilt is meaningful to the people who dwell in it, as each fragment of material has become imbued with personal narratives and collective memories throughout generations of ongoing use, wear, and repair. Our patchwork city is vibrant and comforting, dynamic and sentimental, and wraps us in a distinct feeling of home. This image of the city as a quilt inspired a deeper exploration of the shared qualities between patchwork quilts and vernacular architecture in Halifax.

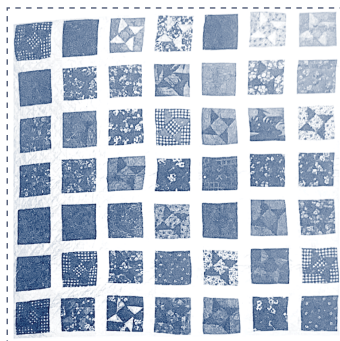
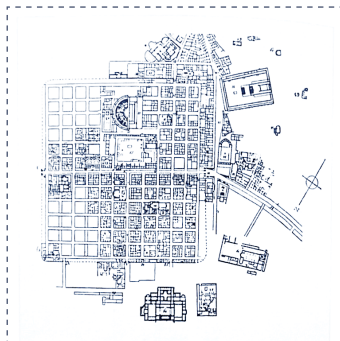


Collage depicting the image of the city as a patchwork quilt

Following Oswald Ungers, the imaginative process allows us to make creative leaps between dissimilar phenomena by recognizing the shared qualities that bridge them (Ungers 1982, 14). This qualitative intersection between quilts and architecture is best described by Bernard Herman, who contemplates that:

Architecture is a built habitable space, an aesthetic synthesis of design (the idea) and construction (the material realization of the idea). As a physical and spatial manifestation of cultural ideas, relationships, and values, architecture shapes and is shaped by how people imagine themselves and the world in which they live. At its heart, architecture concerns itself with the deployment, experience, and aesthetics of space. So too does quilting. For quilts are not just made, they are inhabited. (Herman 2006, 207)

As this thesis argues, imaginative thinking reveals that quilting has multifaceted potential to inform and inspire architectural and urban design from the scale of the city to the dwelling, to the scale of the maker's hand.



A city plan and a patchwork quilt shown in juxtaposition to highlight their commonality (Ungers 1982, 42-43)

There is a curious dissonance between the humble materiality of a patchwork quilt and the powerful meanings and values that it possesses as a cultural object. This transformation in value can be explained by the process of quilting, in which people and material are socially engaged in a reciprocal act of care. When people invest care into material in the forms of craft and maintenance, that material becomes a reflection of their labour and values. Quilts are material manifestations of the social, cultural, environmental, and economic values that contextualize their creation. In the collective act of quilt-making, called a 'quilting bee', members of a community come together to share materials, labour, stories, and knowledge. Through this unique process, scrap materials of little value are transformed into useful, meaningful and functional objects that express collective values, narratives, and memories. This collective production of value can be

studied and translated from the quilting bee to architecture in the interest of making homes in Halifax reflect our collective values and align with the trajectories of our culture and history.

This thesis adopts Oswald Ungers' method of imagination as a framework for translating quilting to an architectural process of making homes. A thorough study of the quilting bee, followed by the examination of quilting through an architectural lens, allows for each step of quiltmaking to be envisioned as a stage of making architecture. The quilting bee process is mimicked at a variety of scales within the making of home and emphasizes the aspects of salvaging and reusing material, layering dynamic patterns of structure and experience, and using modularity as a means of personal expression.

The quilting process will be used to imagine the design and construction process of a cohousing project on Robie Street, on a site where six historical homes once stood. It is intended as a critique of our current residential development practices. In the context of Halifax, a surge of developer-led residential projects is rapidly altering the nature of our urban fabric, both materially and socially. While the demolition of historical homes by the block erases collective memory from the city, these old homes are being replaced by towers that show little regard for the materiality and craft that characterize our city. This major change in the pattern of our fabric has consequent impacts on our emotional attachment to our city.

The quilting methodology suggests an alternative approach in terms of materials, patterning, and social organization. The quilt and its process are characterized by material reuse,

modular construction, and expression through pattern. As culturally produced objects, quilts archive memories, record traces of labour, and tell the stories of their makers. As products of homemaking, quilts represent reciprocal acts of care between people and material. The architectural analogy to the quilting process centers these characteristics in its design with the intention of creating spaces that evoke a feeling of home, both at the scale of the individual and at the scale of the city.

Thesis Question

As we call for architectural steps forward in Halifax that suit our contemporary housing needs and align with the trajectories of our material culture and history, this thesis asks if quilting can help us imagine a process of making home in Halifax that reflects our collective identities, values and desires. In other words: Can we collectively quilt our urban fabric?

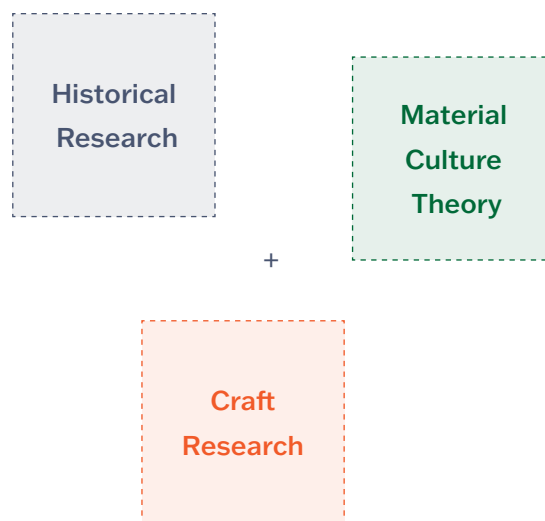


Collage depicting the imagined act of quilting urban fabric

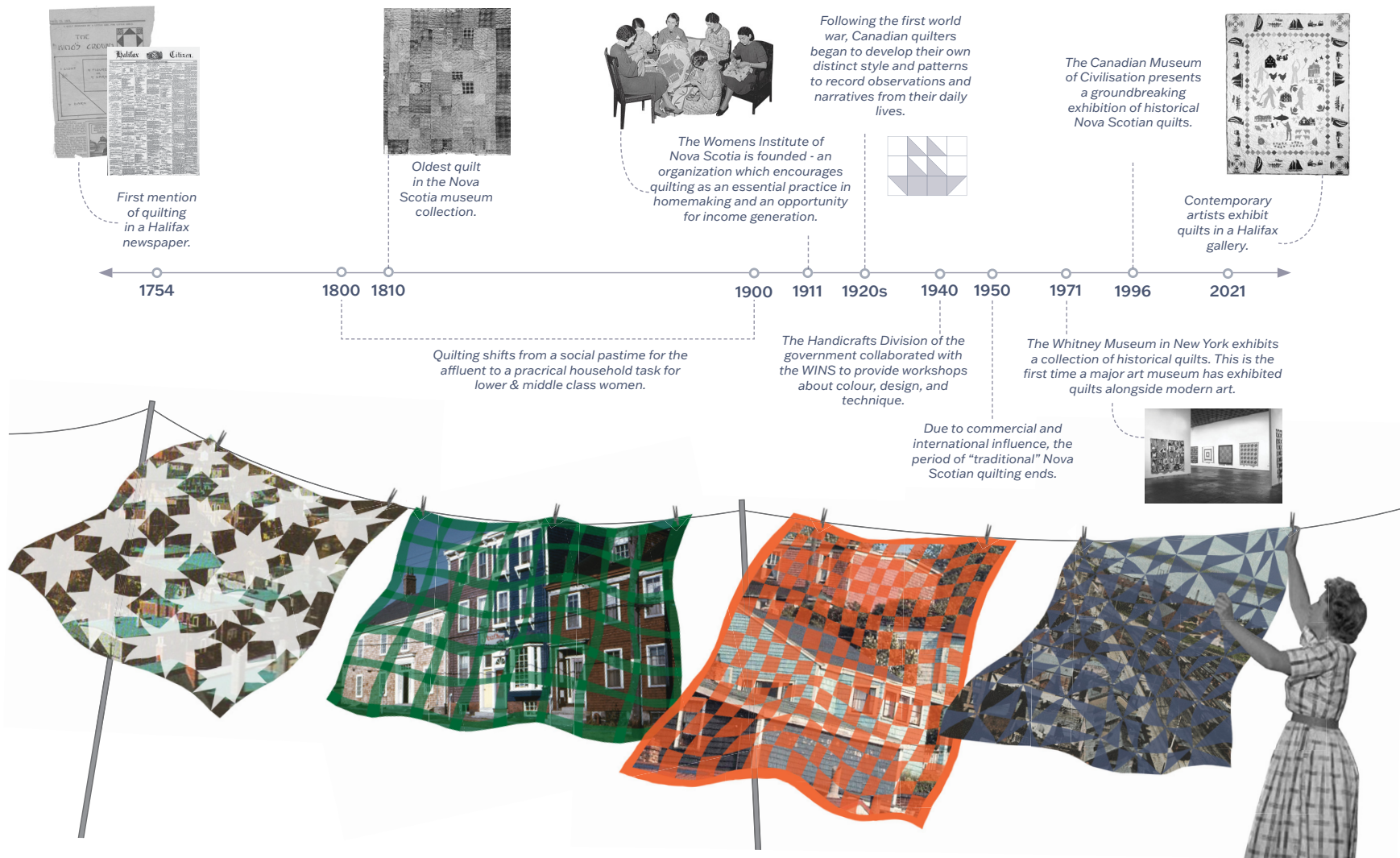
Chapter 2: How to Quilt

Research Methods

Quilting is studied through a mix of research methods that combines historical inquiry, material culture theory, and craft research. The most common methods employed in the study of objects of craft are historical research and material culture theory (Niedderer and Townsend 2015, 5). These approaches are both fundamental to a comprehensive understanding of quilts. Quilts are rarely produced in isolation: they are steeped in historical traditions and cultural values; and composed of materials that signal their particular social, economic, and ideological contexts. While historical and cultural perspectives are central approaches to understanding quilts, the integration of craft research adds significant depth to the understanding of how they contain and express personal and cultural values. In the interest of gathering qualitative information, craft research was an essential method.



Historical inquiry, material culture theory, and craft research are used to form a multifaceted understanding of the quilting process.

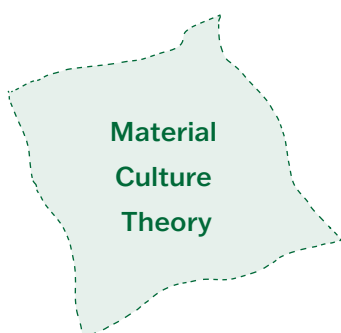


Timeline of landmarks in quilting history in Nova Scotia



Historical Research

While various forms of patchwork quilting are practiced throughout the world, characteristics of Nova Scotian quilting reflect regional specificities that have developed over generations. The practice of quilting was introduced to Nova Scotia centuries ago by European settlers (Garner and McKendry 1979, 1). It is impossible to know exactly when, but the earliest mention of a quilt in a Halifax newspaper was in 1754, and the oldest surviving quilt was made around 1810 (Robinson and MacDonald 1995, 14). The craft appealed to early Nova Scotian homemakers as a practical and economical way to reuse household textiles and produce warm blankets at a time when new fabrics were inaccessible (Houk 1981, 3). Few early quilts remain because of their utilitarian nature; unlike later, more decorative quilts that were made for display and used sparingly, the early quilts were primarily functional objects and used until they were worn out (Garner and McKendry 1979, 1). The historical research of quilting in Nova Scotia offers insights into the origins of patchwork quilting in the region, the motivations behind the craft, and the traditions of symbolism and folklore that the practice has accumulated over time. Through this understanding, contemporary quilts are imbued with regional historical characteristics that continually link them to past traditions.



Material Culture Theory

Material culture theories allow for deep analysis of the manifestation of value in crafted objects. Igor Kopytoff's biographical method offers a framework for understanding cultural constructs of value and identity that are renegotiated throughout the cycles of production and exchange of objects

(Kopytoff 1986, 64). He recognized that the process of making must be understood as part of the object's life as a whole. This perspective illuminates the material value of a quilt with respect to the dynamic social practice of quilt-making. Building on Kopytoff, Chris Gosden and Yvonne Marshall call attention to the changing dynamics of meaning and value between people and objects over time (Gosden and Marshall 1999, 170). This life-history approach which centers time as a key factor in the formation of object value is especially relevant to quilts, as the repurposed materials from which they are made allow them to span and transcend multiple timelines of human and material life. Finally, Henry Glassie's theory of material culture defines objects of craft as the tangible yield of human conduct and thought (Glassie 1999, 41). This idea is used to understand how quilts are expressive of ideas, memories, stories, and values. It illuminates a link between makers and the legible traces of themselves that they leave in material. Furthermore, it allows quilts to be read as primary sources of information.

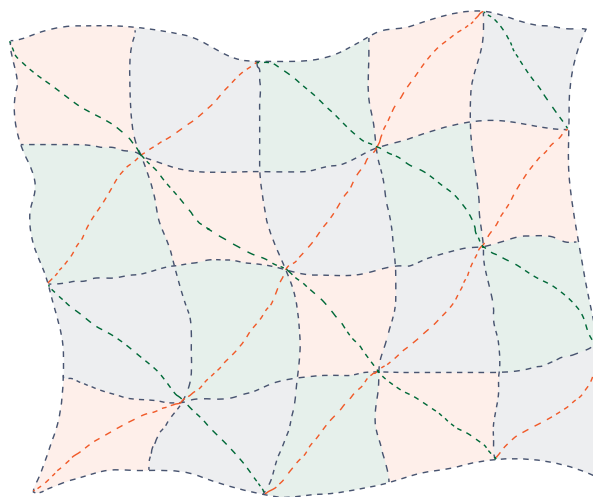


Craft Research

Craft research - that is, research conducted through the practice of craft - produces experiential and emotional knowledge (Niedderer and Townsend 2015, 1). Being largely tacit and intuitive, these forms of knowledge are often perceived as contrary to knowledge produced through traditional academic research, which requires quantitative evidence and justification in order to be perceived as rigorous (Niedderer and Townsend 2015, 6). However, the qualitative aspects of craft production that elude most academic documentation are integral to understanding how hand-made objects, like quilts, hold and reflect their makers' values. In order to gain insights into these elusive qualities, I

hosted a quilting bee on March 26, 2022 in Halifax as an act of craft research. The event was informed by local quilting bee traditions and brought together nine women who each contributed scraps of fabric to the project. Through the steps of the quilting process, these scraps were transformed to create an object of craft that reflects each quilter and that represents the connections they formed through the collective act of making. Observing first-hand the emotional and experiential phenomena that occur during a quilting bee was an essential component of the research because it allowed the values embedded in the quilt to become perceptible far beyond what could be deduced from historical texts and theories alone. (See Appendix A for a detailed account of the quilting bee.)

In this chapter, the collective quilting process will be described in terms of its history in Nova Scotia, its manifestation of material culture theory, and its experiential and emotional qualities gleaned first-hand from the quilting bee. Through this research, connections were found between materials, care and craft, where the act of making is deeply connected to emotions, narratives, and memories that are both personal and collective.



Quilting is understood through a patchwork of research methods.

Step 1: Assembling the Quilters



Quilters gathered at a quilting bee.
(Robinson and MacDonald 1995)

Quilting is a laborious craft that is physically demanding and time consuming to undertake alone, but many hands make light work. Quilts were often made by groups of women who would come together to sew at quilting bees. Beyond the practicality of quilting bees, they offered women the opportunity to combine their productive housework with social time (Robinson and MacDonald 1995, 19). Women who otherwise could not afford to take time away from their responsibilities to spend hours visiting with relatives and friends could justify attending quilting bees because they were simultaneously producing bedding to warm their families and community members.

Perhaps most importantly, strong informal support networks were forged around quilting. In Nova Scotia in particular throughout the 19th and early 20th century, men would leave for extended periods of time to work in fishing and seafaring (Garner and McKendry 1979, 1). Women of lesser means who were left to care for large families and farmland relied on one another to endure the harsh conditions of coastal life. Quilting bees were occasions for women of different generations to share their knowledge and stories. Strong sewing skills were an important part of a young woman's education throughout the nineteenth and early-to-mid-twentieth centuries (Robinson and MacDonald 1995, 19). Quilting bees were opportunities for young women to learn techniques from their elders, while also receiving religious, cultural, and even political teachings. The intergenerational nature of quilting bees has ensured the survival of the practice and the transmission of traditions over time.

Information gleaned from archival photographs shows that quilting bees of the early to mid-twentieth century were often hosted in people's homes. The space would need to be large enough to accommodate the full size of an outstretched quilt, plus space for the participants to sit and circulate. The quilting bee would activate the home as a community hub, where neighbours would gather in shared domestic space.



Elders, women, and a child gathered around a quilt (Collier 1951)

Over time, the motivations behind quilting have shifted. Throughout the 20th century, women sought out quilting bees as an opportunity to socialize and form networks of friendship and support (Robinson and MacDonald 1995, 19). Women would often gather to make quilts to contribute to charitable causes, both local and abroad (Robinson and MacDonald 1995, 24). Some would make elaborate quilts for display at exhibitions or for sale (Robinson and MacDonald 1995, 19). In these ways, quilting offered women important forms of agency. In more recent times, appreciation for the craft has grown to acknowledge quilting as a medium of fine art. Nova Scotian textile artists use quilting to explore themes of gender, community, materiality, and sustainability (Craft Nova Scotia 2021, 3-5).



Scrap material from worn-out garments are gathered.

Step 2: Gathering Scrap Material

Traditionally, patchwork quilts in Nova Scotia were made of wool and cotton fabric scraps from family clothing (Houk 1981, 11). A scrap is generally defined as a small fragment or useless remnant of waste material (*Concise Oxford Dictionary* 1984, 942). In the case of old clothing, this could mean a garment that was outgrown, torn beyond repair, out of style, or even offcuts that remained from dressmaking or tailoring. Since fabrics were expensive commodities, the motivation behind repurposing them was partly economical (Garner and McKendry 1979, 1). Collecting scrap fabric for quilting was an opportunity to keep meaningful pieces of cloth although they were no longer useful. This could include the old shirt of a passed-away loved one, a stained dress that was worn to a special occasion, or children's clothes that have long been outgrown.

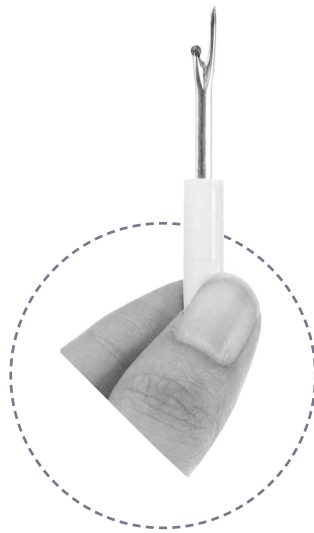
The quilters each brought scrap fabrics to the quilting bee. In their eyes, the scrap materials had little remaining exchange value or use value in their current forms (Thomas 1991, 14-15). However, the transition from their former object lives to their new ones as components of the patchwork shifted the definition of their use value. Although they were no longer fulfilling their original purposes, in the context of quilt-making they were reclaimed as useful pieces of textile for their colour, texture, and strength. Additionally, the social act of quilting exposed an important dimension of value that the material still held: sentimental value. In a capitalist society, sentimental value can be eclipsed by the concepts of use and exchange value (Roberts 1994, 125). Nora Roberts describes sentimental value as the very reason why her grandmother's tattered quilt, with no discernable exchange value, has immeasurable value to her as a family heirloom.

Despite the fact that it has worn thin over the years and no longer functions well as a warm blanket, and that the tattered edges make it less desirable to some, the quilt still has an important use: to archive memories (Roberts 1994, 125). The same can be said for each scrap contributed to the quilt.

Step 3: Scrap Disassembly

The useable scrap materials are gathered through a careful process of disassembly. Scrap clothing is taken apart at the seams to yield large sections of fabric that will become quilt pieces, while unusable pieces like collars and zippers are set aside. This scrap fabric will form a material palette that will help determine the pattern and size of the quilt. Judy Elsley notes the importance of disassembly in the quilting process. She writes:

Whether she used old clothes or crisp cottons, the quilter begins work on her patchwork by cutting or ripping the fabric apart. Indeed, a patchwork quilt cannot come into existence without that tearing. This deconstructive act is, paradoxically, also one of the quilter's most creative acts - an act of courage, necessity, and faith. (Elsley 1993, 4)



Worn-out garments are disassembled by hand. This image shows a seam ripper, which is used to pick apart seams without damaging the fabric.

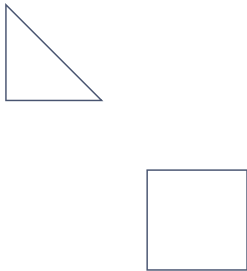
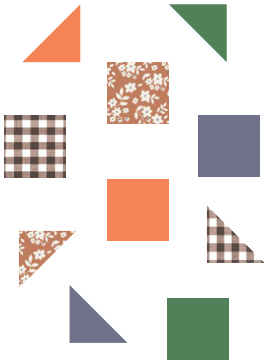
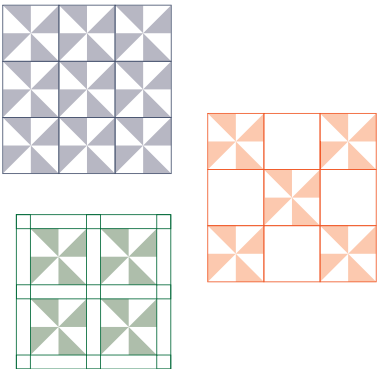
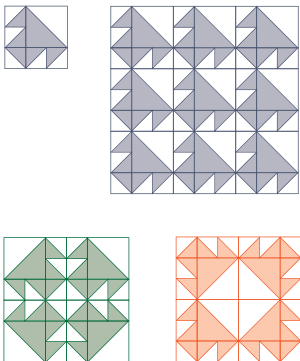
The moment when quilters begin cutting the scrap fabric is the moment that a sense of authorship begins to arise. It is unclear whether this disassembly process marks the end of a material object's life, the beginning of a new one, or the continuity of an object's life that is transformed from one state to another. This condition may be described as a state of inbetweenness, in which the transforming object maintains connectedness to its various subjectivities (Basu 2017, 2-3).

Step 4: Designing the Pattern

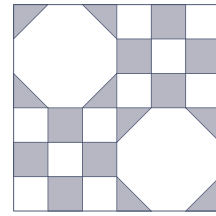
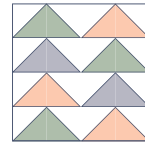
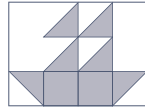
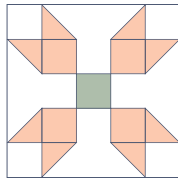
Patterns for quilting begin with basic variables of colour and geometry. In Nova Scotia, traditional patchwork block patterns are typically composed of squares and/or equilateral triangles and require at least two contrasting colours or tones (Houk 1981, 3). Within these few variables, countless pattern designs are possible. While some patchwork patterns are purely geometric compositions that are pleasing to the maker, many depict objects from nature like flowers, geese, or stars. It is also common to see humanmade objects represented, like windmills or log cabins. Quilt patterns from the eighteenth and nineteenth centuries are steeped in symbolism and folklore. Much of this folklore was tied to prevalent cultural values such as Christian beliefs, marriage blessings, or the desire to bear children (Garner and McKendry 1979, 2-3).



Collage depicting a quilt as the backdrop of domestic life.

BLOCK		QUILT	
Geometry	Colour	Aggregation	Orientation
 <p><i>Nova Scotian quilt blocks are traditionally composed of squares and equilateral triangles.</i></p>	 <p><i>Colours and prints were determined by clothing and scraps from the local textile industry. Plaids and florals were common. Among solid colours, blues, greens and reds were favoured.</i></p>	 <p><i>Quilt blocks can be placed directly next to one another, but often they are separated by blank blocks or strips of fabric called sashing.</i></p>	 <p><i>Orientation is used to create secondary patterns.</i></p>

Components of the vernacular Nova Scotian quilt pattern language



Flower



Sailboat



Flying geese

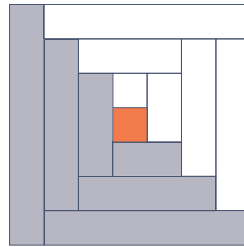
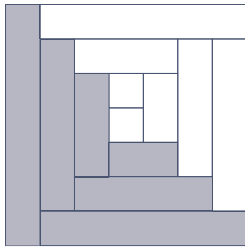


Snowball

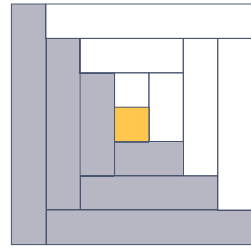
The language of quilting was used to symbolize and express observations from daily life.



Log Cabin



Plan



Elevation

The projection of the symbols was typically in either plan or elevation.

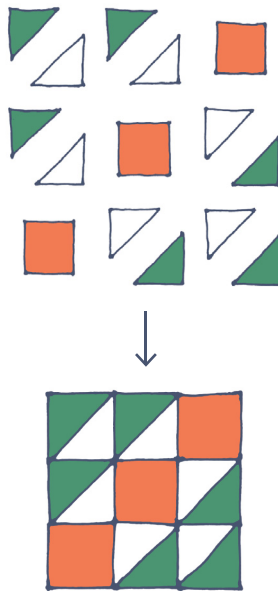
Vernacular quilt symbolism (Houk 1981)

There are deep-rooted connections between quilts and domestic life. The presence of the quilt in the home was a feat of homemaking that represented the performance of a valued skill, a powerful act of care, and a meaningful expression of agency. Quilts occupy a range of domestic spaces: from the most public when they are displayed on clotheslines to the most intimate when they warm a bed. Traditionally, quilts were the product of domestic labour performed by women, who incorporated themes and narratives from their daily observations and experiences into their work. As Glassie expresses, “things composed of words and things crafted out of scraps of the world differ in the experience to which they bear clear witness” (Glassie 1999, 45). A reading of a quilt can offer rich insights into the conditions of daily life that diary entries or letters might never describe. Awareness of quilts as literary objects has gradually evolved throughout the twentieth century (Bower 1994, 33). Following the 1970 exhibit “Abstract Design in American Quilts” in 1970 at the Whitney Museum, feminist scholars discovered and began appreciating the writerly qualities of quilting more fully (Bower 1994, 33).

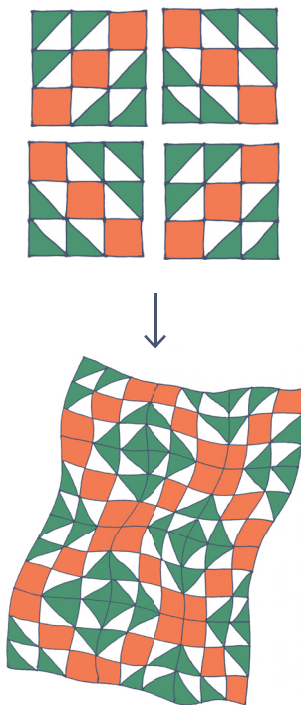
Step 5: Composing the Patchwork

The moment of combining each individual quilt block into a whole patchwork symbolized the community of people that was formed during the quilting bee. Patchwork quilts have a strong ability to symbolize community. As Elsley writes:

By focusing on community and emphasizing relationships – between people, panels, fabric – the quilt offers more than aesthetic values; it dissipates a monolithic and prejudicial central power into a myriad of individual voices, each claiming power for itself without setting up competition with others. (Elsley 1993, 22)



Fragments of geometry and colour are combined to form a pattern block.

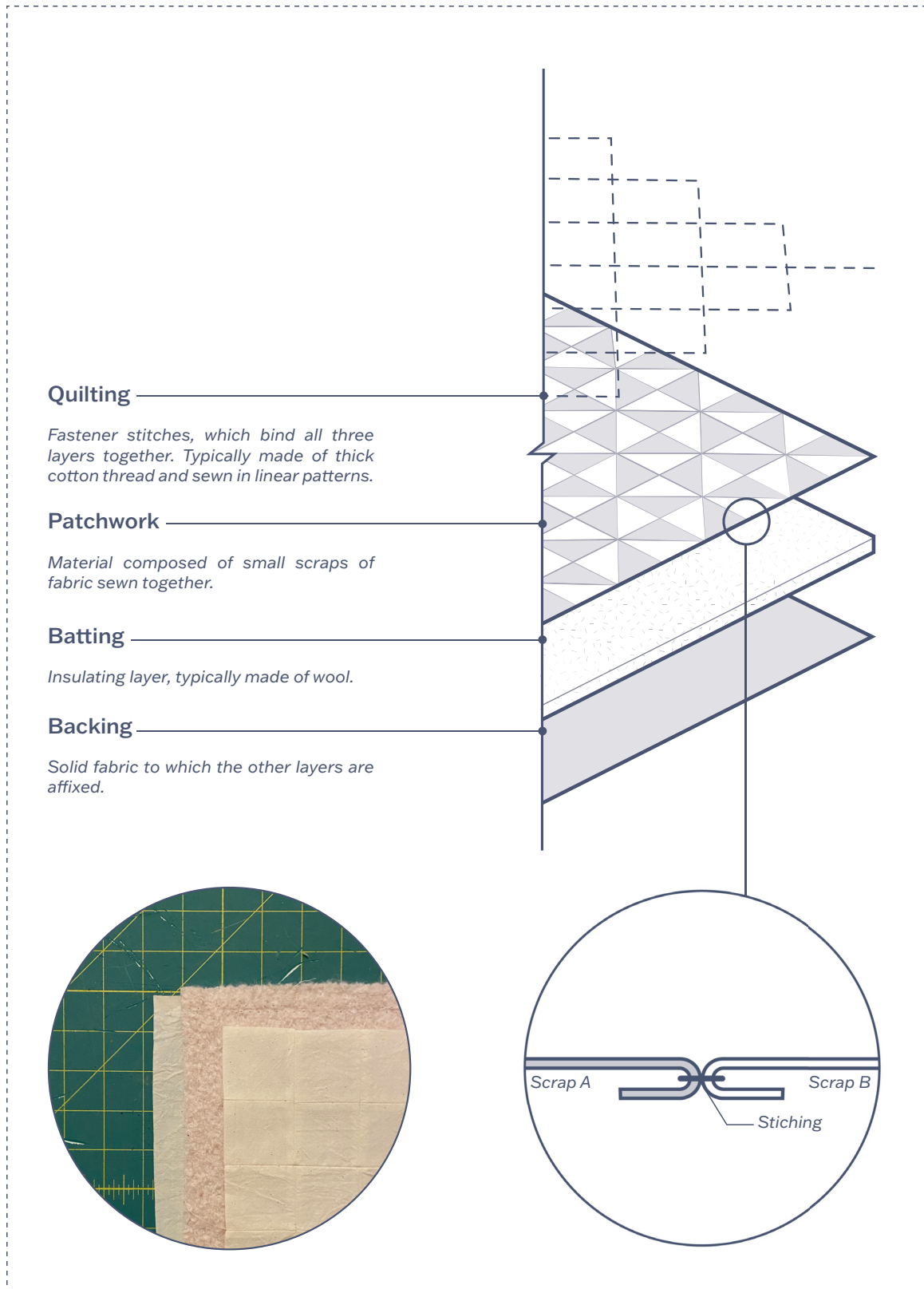


Blocks are arranged and combined to create a secondary pattern at a larger scale.

Traditionally, blocks are typically seen joined in one of three ways: arranged directly adjacent to one another, separated by bands of fabric called sashing, or alternated by solid blocks of fabric (Greene 1985, 7-8). The first method was selected for the quilting bee, since it is more economical and does not require large pieces of solid fabric. It also has the benefit of creating a more cohesive composition and generating secondary patterns where similar and dissimilar colours at the edges of the blocks meet. When the blocks are placed next to one another, new forms and patterns become visible, blurring the boundaries between them. These spontaneous moments of graphic harmony and tension are exciting to discover.

Step 6: Assembling the Patchwork

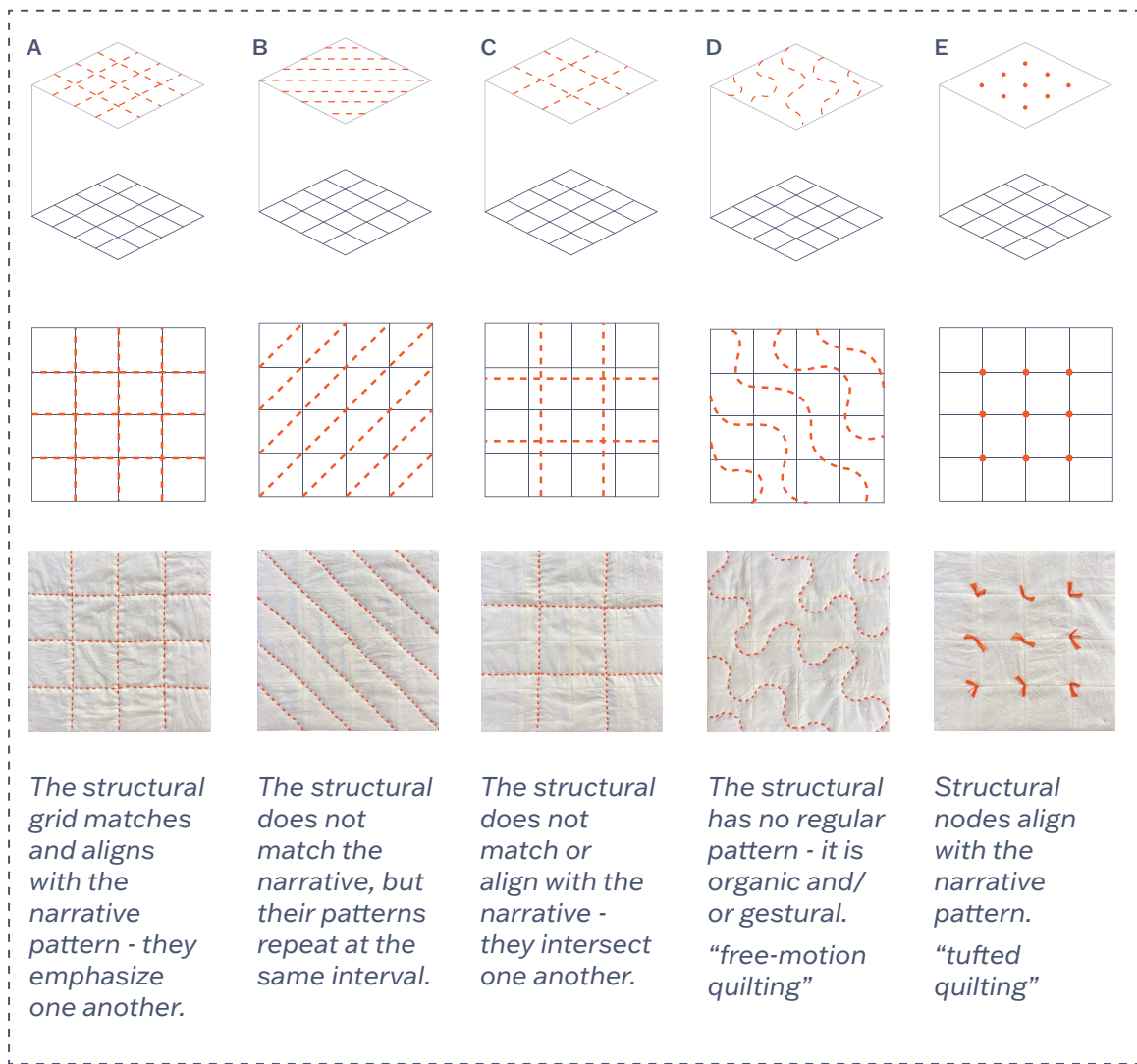
Patchwork quilts are composed of three layers: a backing, a batting, and a top. The bottom layer is the backing. This is a solid piece of woven fabric that stabilizes the other layers (Greene 1985, 11). Next is the layer of batting, which is typically made of cotton, wool, or polyester. In some historical examples of quilts, alternative quilt batting materials have been discovered, such as old clothes, newspaper, and even older quilts (Robson and MacDonald 1995, 24). The batting acts as an insulating layer, offering warmth and comfort to the user. It is this batting layer that gives the quilt its volume as a three-dimensional object. The final layer is the patchwork top, which is composed of small fragments of scrap materials sewn together. Finally, all three layers are bound together by quilting stitches made of strong thread (Greene 1985, 11).



The quilt assembly.

Step 7: Quilting

While the graphic pattern of the patchwork may be the most eye-catching, the quilting stitches form a secondary pattern of texture that is important to the tactile character of the quilt. It often interacts with the patchwork by aligning with the seams and intersections of the pieces, transforming the graphic motifs into low relief sculptures. Seams that join the patchwork are concealed by the other layers, but the quilting stitches are exposed, revealing the maker's skill. They are the legible traces left by the hand of the maker.



Alignments of quilting stitch patterns and patchwork patterns.

While quilts store memories and object histories, they are also archives of labour. When appreciating a quilt, it is hard not to pause and consider the tremendous amount of time the quilter poured into the countless stitches. To women of past centuries for whom quilting was necessary work, making quilts under difficult circumstances and creating objects of comfort from the scraps of daily life was a powerful and radical act of care. In the age of rapid consumerism, the slowness of quilting defies capitalist systems of production. In this way, quilting represents a feat of resistance that is equally political and personal (Bailey 2021, 46).

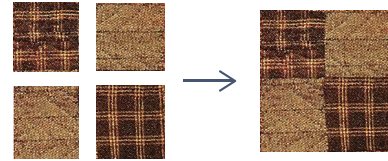
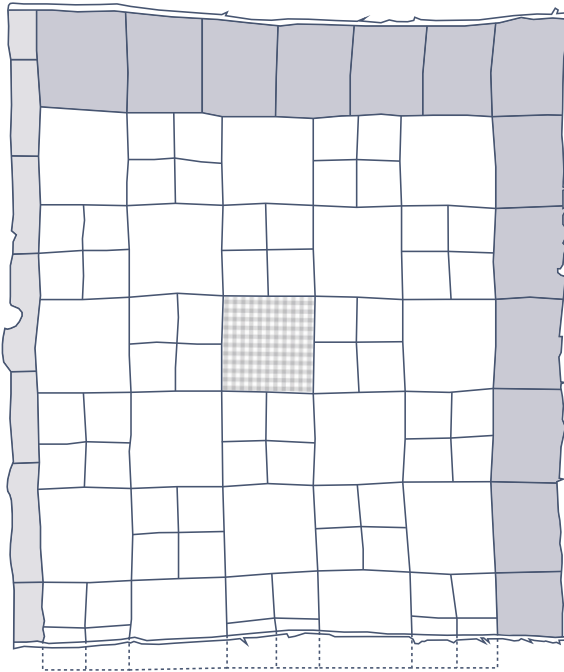
Step 8: Binding

The final stage in quilt making is the binding, which consists of trimming the excess of all three quilt layers and applying a narrow strip of fabric to cover the raw edges (Houk 1981, 7). This binding establishes a boundary around the perimeter of the quilt that marks the final extent of the patchwork. While this boundary begins as a solid line, it softens and dissolves over time as the use of the quilt wears away at its edges.





When reading historical quilts, the condition of the binding tells a story about the life of the object. Examining the oldest remaining quilt in Nova Scotia as an example, it is clear to see that the edges have accumulated the most traces of wear and tear. Along the bottom edge, the binding cuts through four-patch blocks and seems to be in much fresher repair compared to the top binding. It appears as though the bottom edge of the quilt became so tattered that it was cut away and rebound. This underscores the utilitarian character of this quilt and the ongoing labour that it demanded.



The oldest remaining quilt in Nova Scotia was made around 1810 in Cumberland County. Although the identity of the maker is unknown, characteristics of the quilt reveal information about the conditions of their life. The quilt is made from remnants and scraps of well-worn wool clothing. The four-patch pattern is among the most basic of quilt patterns, as it requires only the most fundamental sewing skills. It is also a pattern well-suited to a limited palette of colours, and alternating the four-patches with solid blocks would have saved the quilter time. The finished quilt is roughly the size of a child's bed, and seems to have been not only mended, but enlarged over time.



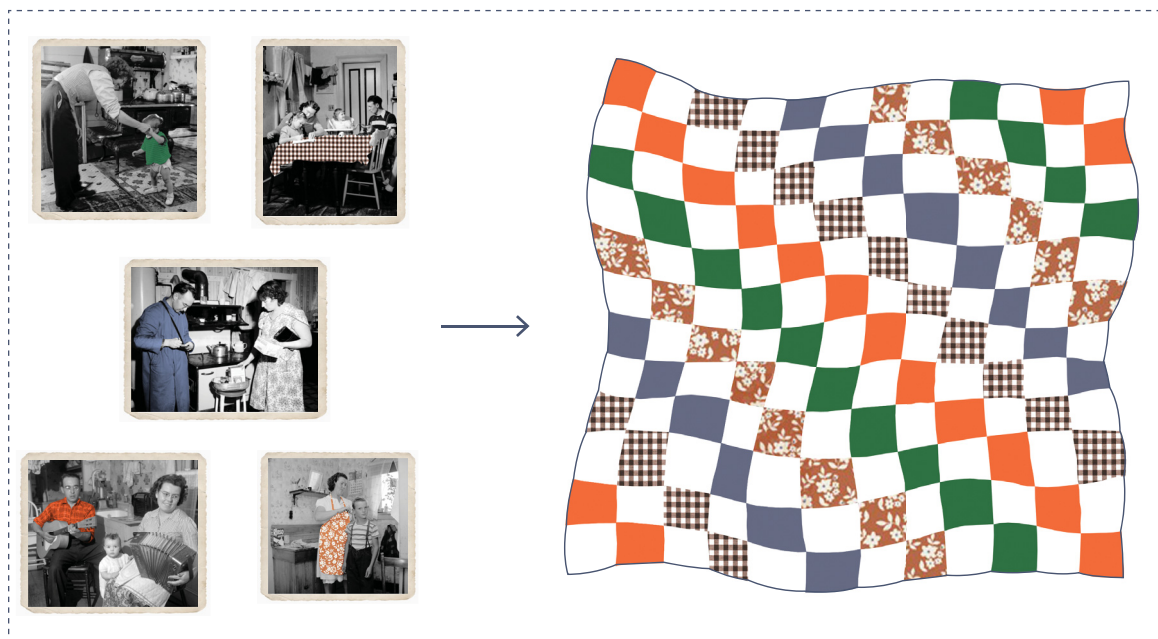
four-patch quilt block construction

-  strips added to make use of pieces of fabric that could not be cut into squares
-  patches added to enlarge the original quilt design
-  medallion
-  original blocks prior to mending

The oldest remaining quilt in Nova Scotia from 1810, analysed to reveal stories through traces of use, wear, and repair. (Robson and MacDonald 1995)

Use and Life

Although the quilting process draws new use value and sentimental value out of our scrap materials, it does not seem true to call the quilt a commodity. In its new functional form as a blanket, the quilt certainly could be sold or exchanged. Quilts can be found for sale in second-hand stores and antique shops, but to those who partook in the quilting bee, its worth could never be monetized. Due to the labour and memories invested in the material, the process of quilting was also one of decommodification, rendering the quilt singular and unique for those who witnessed its making (Kopytoff 1986, 69). Because its makers feel beholden to it, it will be cared for over time, and in return, it will offer warmth and comfort to its users. This cycle will allow the quilt to endure for generations and continue accumulating value in the form of memories and narratives as it is touched, torn, mended, displayed, or perhaps even repurposed.



Collage of memories embedded in fabric, which retain their sentimental value although their form and purpose are altered in the making of a quilt. While the quilt is a single object, it is simultaneously an archive of distinct object fragments, each with its own histories and memories.

Chapter 3: How to Translate

The previous chapter highlights the qualities and values of quilting as a cultural means of production. In order to transition from purely pragmatic design approaches to more creative modes of thinking, Ungers stresses the importance of thinking in qualitative values rather than quantitative data and focusing on synthesis rather than analysis (Ungers 1982, 14). In this chapter, the imaginative leap from quilting to architecture is made by examining the qualities of quilting through an architectural lens. Ideas about how memory becomes embedded in material over time, how craft is an expressive act of agency that contributes to placemaking, and how material and social processes align to create meaning, are all equally applicable to architecture and to quilt-making. While the thought of quilting architecture may seem novel, case studies reveal that quilting has informed built works of architecture in direct ways. Architects have referenced quilting in the design of wall assemblies that incorporate salvaged materials and modular systems of construction. Other case study projects have been examined for their quilterly qualities. Although their makers may not have had quilting in mind, this thesis identifies ideas and projects with qualities that sit at the intersection of quilting and architecture.

Scrap Fabric

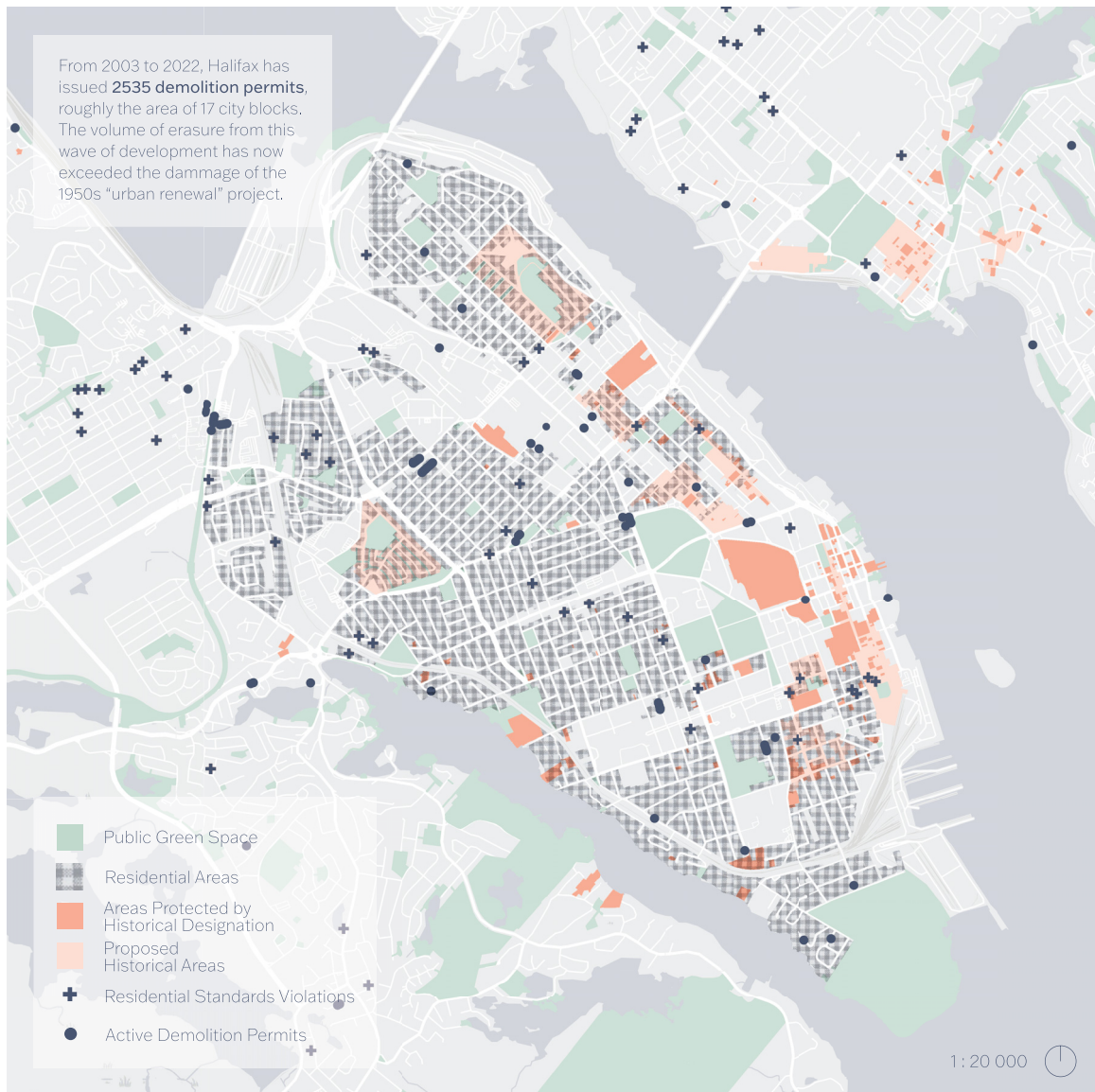
The urban fabric of peninsular Halifax has an abundance of scrap fabric in the form of old houses. Although they are rich with character, colour, and craft, many of these houses are regarded as scrap for reasons similar to the discarded garments: either they do not suit our needs and can't be altered to fit, or they have fallen into disrepair and are too

tattered to mend. Throughout the city, Haligonians are noticing block after block of these historical homes vanish as they are torn down to make way for new residential developments. These new developments reflect little consideration for the existing material and social fabric of the city, with their glass and concrete facades towering high above their surroundings.

Jane Jacobs cautions against developments of this nature, stating that there is a need for aged buildings in the city fabric (Jacobs 1961, 187). She explains that large swaths of new construction built at one time are inherently inefficient for sheltering wide ranges of cultural and population diversity (Jacobs 1961, 191). She notes that the disadvantages are particularly pronounced in homogenous residential buildings, where people of different needs have less choice over their living conditions (Jacobs 1961, 194). Old buildings, on the other hand, have vitality and are responsive to human needs



A historical home destined for demolition. The decorative woodwork elements on the facade appear to be hand-crafted. Their slight irregularities add to their charm. The pink paint is wearing away to reveal a previous layer of blue, perhaps the preferred colour of a previous owner. Its entire block will be demolished to make way for a mixed-use residential development consisting of two towers, 20 and 26 floors respectively. Photographed October 2021.



This map quantifies the erasure, showing all the buildings on the Halifax Peninsula that are either at risk of or scheduled for demolition at this very moment, which speaks to the substantial volume of available scrap fabric. Houses that have fallen below residential standards are highly susceptible to demolition. It also reveals that the residential neighbourhoods of Halifax remain largely unprotected by government-designated historical heritage status. (Base map from ArcGIS with information from Open Data Halifax 2022).



Rendering of the towers that will replace the pink house and its neighbours. The demolition of the existing houses is estimated to emit 160 tonnes of carbon dioxide (Cameron 2022, 1). From 2003 to 2022, Halifax has issued 2535 demolition permits, which is estimated to equal the area of 17 city blocks (Cameron 2022, 3). The volume of erasure from this wave of development now exceeds the damage of the 1950s “urban renewal” project, which caused the demolition of 2539 buildings, which created significant social and cultural damages to the city that are still felt today (Cameron 2022, 27).

through eternal changes and permutations (Jacobs 1961, 195). The value of old buildings is irreplaceable in cities, as it can only be created by time (Jacobs 1961, 199).

The traditional method of removing an old building in Halifax is to use an excavator or wrecking ball to knock it down into a pile of rubble (Corson 2000, 3). Currently, due to limitations in our waste management systems and cultural blindspots for value, most material from demolition sites in Halifax ends

up in landfills (Corson 2000, 3). Alternatively, the potential value of these materials can be harvested through a process of architectural salvage, in which a building is taken apart by hand. The craft, care, and labour involved in such a process mirrors the feeling of taking a garment apart seam by seam. While the salvage process is often dismissed as a viable option due to the time that it requires, this kind of radical care is necessary in the paradigm shift that it takes to quilt urban fabric. In Fitz and Krasny's manifesto *Critical Care: Architecture and Urbanism for a Broken Planet*, the authors stress the vital importance of adopting ethics of care in architecture and urbanism:

Restoring the future to good condition does not mean more of the same, largely developer-driven and capital-centric architecture and urbanism, but rather a long-term commitment to planetary care based on human and non-human livability. (Fitz and Krasny 2019, 12)

They explain that gendered views have historically separated architecture and care (Fitz and Krasny 2019, 26). Many of the same political forces have kept the ideas of domestic craft separate from architecture. Architectural salvage is an act of care that builds meaningful interconnectedness between people and material, and in turn between people and the city ecosystem. Furthermore, paradigm shifts begin with deconstruction.

The architectural salvage process of a typical house in Halifax results in a palette of materials that range from the scale of the body to the scale of the hand. These materials include doors, windows, shutters, handrails, hand-hewn lumber, masonry, millwork, and hardware, to name a few (Ecology Action Centre 2022, 8). The patina of these components conveys the generations they have spent witnessing the events of our daily lives. Traces of past labour

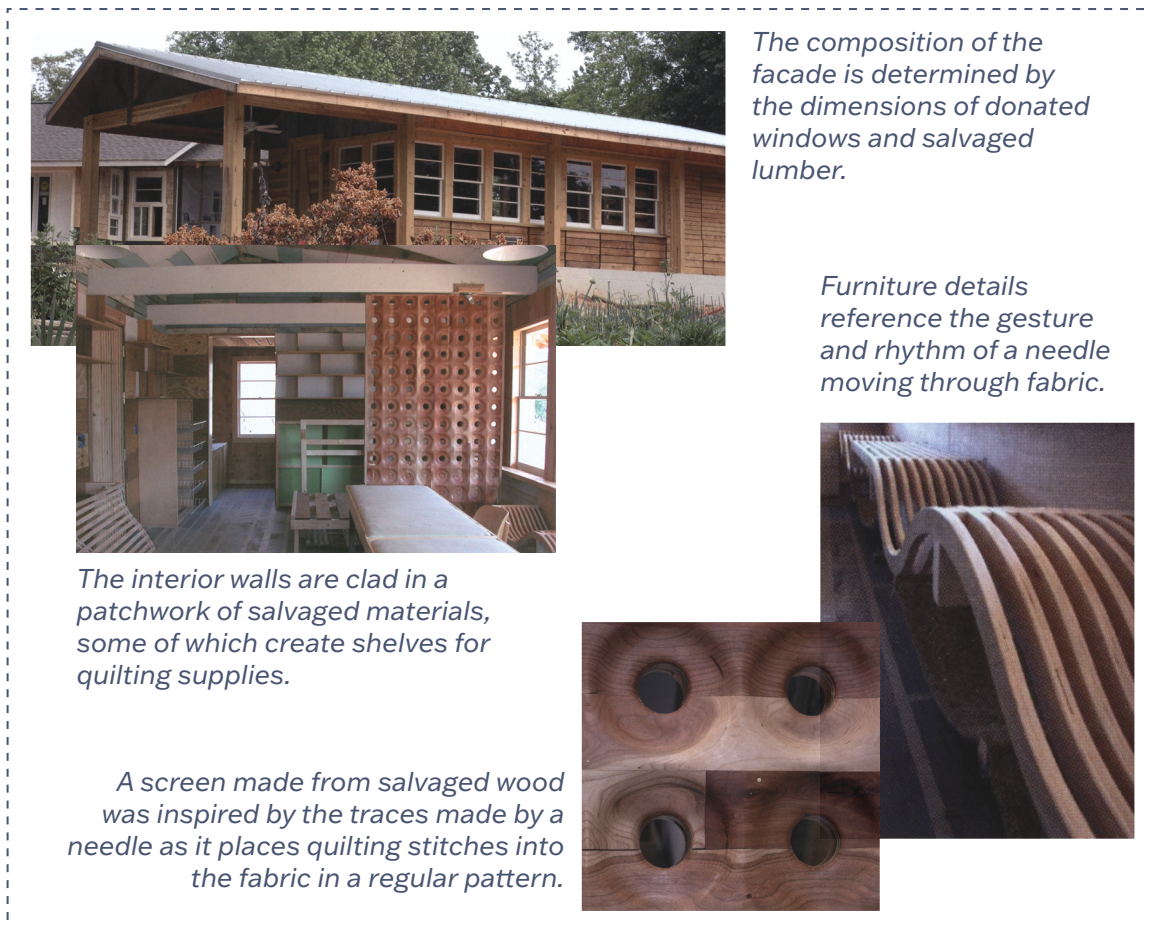
Assembly

As Gottfried Semper proclaimed, the textile element of architecture is the enclosure (Forty 2000, 233). Not only do walls resemble textiles in their materiality, but they also wrap their occupants in a gesture of comfort and protection that is remarkably quilt-like. More than any other element of architecture, we use walls to express our identities. We paint them our favourite colours, hang photographs and artwork on them, and when our space needs adjusting, we move them.

Quilts have inspired wall assemblies that incorporate reused materials to create warm and personal environments, few moreso than the Quilting Studio project (Garmaz 2009, 14). This design-build project was a collaboration between architecture students and Ms. Mozell Benson, a renowned quilter from Waverley, Alabama. The quilting studio sought to integrate the values of quilting into the process of architectural making and apply them in the creation of a small home and studio for Ms. Benson. The project was a study of how architecture has the unique ability to preserve social fabric.

The Quilting Studio was initially intended to be prefabricated, to resemble the process of quilting as closely as possible both in terms of structure (connections) and materiality (different colors and textures) (Garmaz 2009, 15). The quilt was adopted as a metaphor for the design process (Garmaz 2009, 16). The project carefully negotiated the line between conscious design and vernacular expression, maintaining the connection to the vernacular through local reused material.

The project was conceptually driven by Gottfried Semper's writings about the importance of the textile element (or skin) in the development of architectural form (Garmaz 2009, 18). The interior and exterior, as well as the ceiling and floor of the studio, were treated as a series of skins, and thus assumed the compositional qualities of Ms. Benson's quilts for both pragmatic and aesthetic reasons (Garmaz 2009, 18). The enclosure was composed of a three-layer structure referencing the layers of a quilt (Garmaz 2009, 18). The students used donated and/or salvaged materials to create the structure. The aesthetic was born out of available resources. Ms. Benson's process of reflective improvisation centers around a desire to avoid waste (Garmaz 2009, 17).

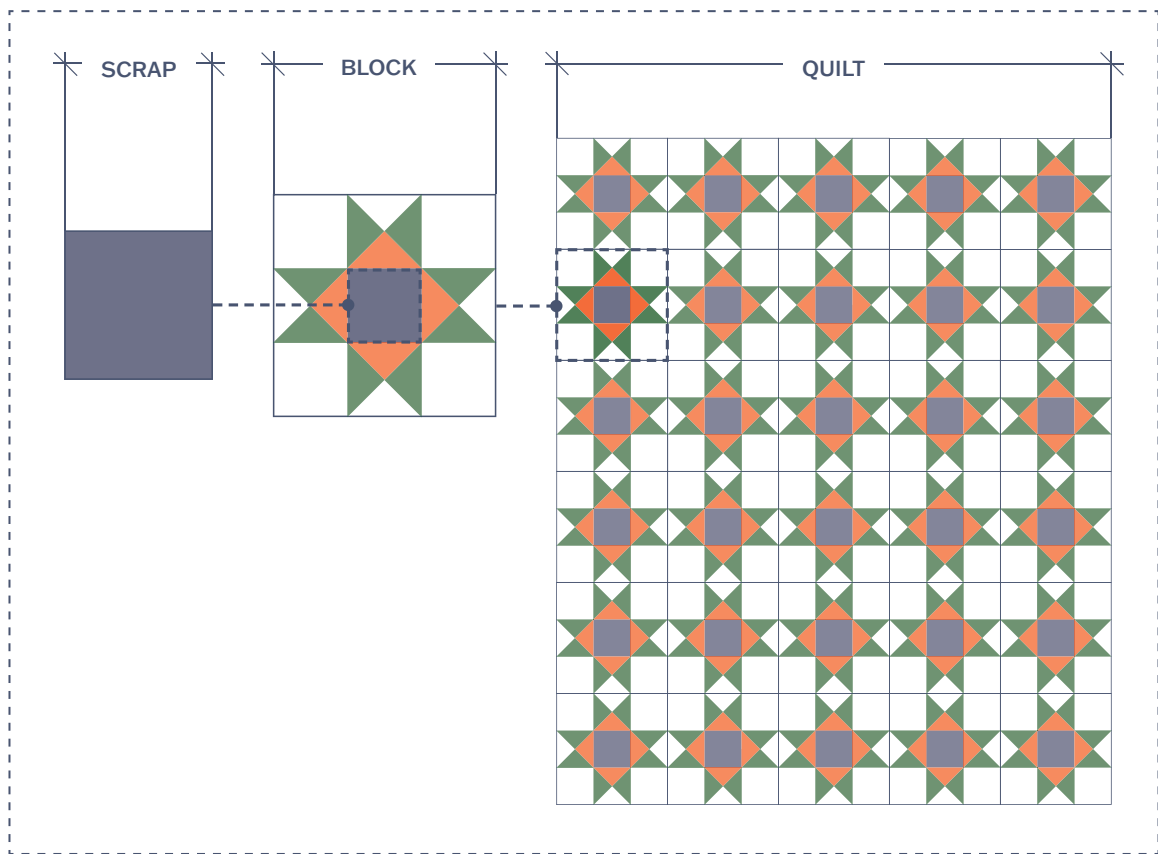


The Quilting Studio features walls made of salvaged materials referencing the assembly of a quilt. Interior details reference gestures and traces of a needle through fabric. (Garmaz 2009)

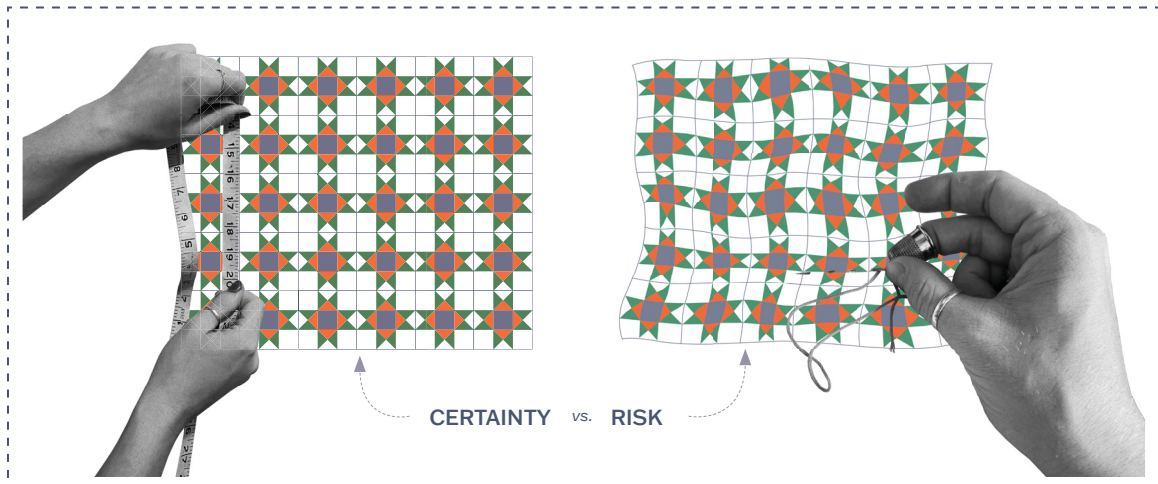
Modularity

During the quilting bee, each quilter crafted their block according to a pattern that was chosen by the quilting bee organizer. While each person interpreted the pattern with different materials, the geometric regularity established by the block pattern ensured that each block fit together.

Modular prefabrication and craft are concepts often placed in opposition. David Pye does this when he speaks of workmanship of certainty versus workmanship of risk (Pye 1968, 9). The former describes the quality which results from a process of mass-production in which the maker has no control over the specific outcome because the product is highly regulated. The latter describes the character of a handmade product of craft in which the results are



Modular quilt assembly.



Quilts benefit from the characteristics of both workmanship of certainty and workmanship of risk.

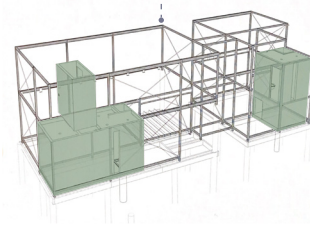
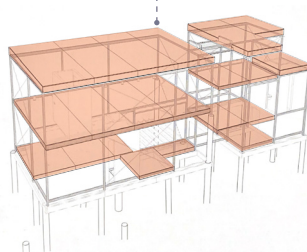
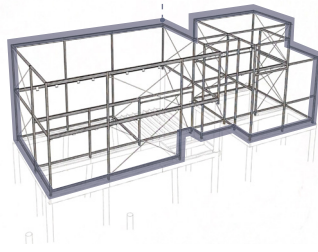
susceptible to chance (Pye 1968, 20). Being at once handcrafted and modular, quilts benefit from the advantages of both workmanship types. Furthermore, the experience of building from prefabricated modules requires collaboration. When asked about the experience of modular construction, a local homebuilder replied that the moment when large prefabricated components arrive to the site, the entire team is united in a collective effort reminiscent of barn-raising (Watts 2022).

The modularity of quilts inspired the design and assembly of the Loblolly House designed by Kieran and Timberlake. The project is an experimental prefab house which tests an element-based approach to mass housing, which presupposes the eventual disassembly and reuse of the building materials from which it is made. The thousands of parts involved in the making of a house were collapsed into a few dozen prefabricated blocks that slid into an industrial aluminum frame. In their manifesto-style book, the architects make direct reference to quilting as a superior method for building compared to the metaphor of weaving. The house is situated off the coast of Maryland's Chesapeake Bay.

In their manifesto "Quilting not Weaving," the architects Stephen Kieran and James Timberlake speak of the advantages of prefabricating modular units with geometric certainty (quilting), versus measuring and installing successive elements in series (weaving).



Loblolly House case study (Kieran and Timberlake 2008, 100).



The Loblolly House is made from a prefabricated aluminum structure, prefabricated wall and floor panels, and prefabricated pods containing mechanical and plumbing.

Loblolly House case study (Kieran and Timberlake 2008, 100).

Pattern-Making

This section explains how pattern can be observed and crafted across scales to express individual and collective identities. Patterns in quilts are derived from experiences and observations from domestic life. In turn, our daily lives contain meaningful patterns from the scale of the detail to the scale of the urban fabric. These patterns shape our movements, experiences, and connections to one another. The medium of quilting has traditionally been used to represent built environments that structure community. A celebrated example of this tradition can be found in Gee's Bend, Alabama. There, generations of women have been using quilting to express the unique character of their rural village. The "housetop" quilt patterns blend plan and elevational perspectives to depict colourful houses and outbuildings separated by streets. To the quilters of Gee's Bend, their work is strongly architectural in that it is built piece by piece from vernacular knowledge and creates structures that organize identity and affirm human relationships (Arnett, Cubbs and Metcalf 2006, 7). This act of crafting representations of the community through quilting creates a dialogue between reality and imagination, between the environment as it is built and the environment as we perceive it (Bremner and Hinton 2013, 84). Quilting the city reveals and creates patterns that carry information about the structures of our built environment and the way that we inhabit those structures through experience, feeling, and connection.



Gee's Bend "housetop" quilt variations (Arnett, Cubbs and Metcalf 2006, 39-46)

The significant symbolic component of this pattern is the house. Houses are extensions of their inhabitants. In *Poetics of Space*, Gaston Bachelard describes houses as vessels for memory and imagination (Bachelard 1964, 6). This ability

to hold pieces of our lives makes the house a container for identity. In *A Pattern Language*, Christopher Alexander studies patterns in our built environments and interrogates how they contribute to the creation of nourishing places. He encourages ways of looking at patterns that recognize both their physical structure and the simultaneous structures of human feeling that they represent (Alexander 1996). In residential neighbourhoods, Alexander underscores the importance of identifiable spatial units in order for people to feel a sense of belonging (Alexander 1977, 81). He states that development destroys neighbourhoods by rendering them homogeneous: “The homogeneous and undifferentiated character of modern cities kills all variety of life styles and arrests the growth of individual character“ (Alexander 1977, 43). These theories help to explain how the colourful patchwork pattern of houses in Halifax upholds individual and collective identity.

Pattern can also serve as a means of expressing personal and collective identity at the scale of the detail. This is true in quilting, where pattern blocks are interpreted by individuals to reflect the nuances of that maker’s technique and sensibilities while aligning with the collective traditions of construction and meaning of the quilt. A quilting detail can be found in the the Palazzo Querini Stampalia restoration, where Carlo Scarpa designed a pattern for the tile flooring which craftspeople were invited to interpret as they desired (Fondazione Querini Stampalia 2022). The result is a dynamic composition that is expressive of the process of its making as well as the skill and tacit intuition of its makers. This expression remains legible over time, and the craftspeople and the objects remain tied together after the conclusion of the making process (Zambonini 1988, 3). The

act of making, especially when informed by vernacular craft knowledge, carries meaning that endures over time:

We should note that most built forms - when informed by local geologic and material conditions along with society's traditions and the communal trust - tend to preserve and reinforce their meaning in time and remain as physical documents of the cause that created them. (Zambonini 1988, 14)



Tile pattern in the Palazzo Querini Stampalia restoration by Carlo Scarpa. (Fondazione Querini Stampalia 2022)

Homemaking and Placemaking

Quilting has long been practiced as an act of homemaking, daily tasks of labour and care traditionally performed by women within and around the home. While most homemaking responsibilities like cleaning and preparing food are solitary work, quilting stands apart as a highly social event that brought people together to care for materials and for one another. It activated the home as a community hub where the lines between the public and private realms became blurred and where people formed meaningful social connections to one another. Henri Lefebvre argues that social space is socially produced (Lefebvre 1991, 26). In doing so, he shifts agency away from specialists like architects and places it in a much broader social context (Awan, Schneider and Till 2011, 29). The concept of social space acknowledges the contribution of others and dismisses the notion of

sole authorship. Furthermore, it characterizes space as a dynamic entity that is continually produced over time and is not fixed to a single moment of completion (Awan, Schneider and Till 2011, 29). This notion empowers the social act of homemaking as a continual practice of spatial production.

Lefebvre remarks that referring to the people who live in a building as mere “users” or “inhabitants” carries a marginalizing vagueness (Lefebvre 1991, 362). As active participants in the ongoing process of producing subjective space through everyday activity, the people who live in a building should instead be recognized as makers. As makers, folks who engage in the collective production of space express their agency by engaging transformatively with the structures that surround them (Awan, Schneider and Till 2011, 31). This expression of spatial agency is essential in creating a sense of belonging which characterizes the feeling of home. When social phenomena occur at a particular location, space becomes place (Massey 1994, 168). Dominant contemporary understandings of place and identity, and particularly the notion of home, depend on the security of boundaries. However, Doreen Massey argues that the feeling of home occurs when the boundaries are blurred, forcing us to recognize our interconnectedness:

A large component of the identity of that place called home derived precisely from the fact that it had always in one way or another been open; constructed out of movement, communication, social relations which always stretched beyond it. In one sense or another most places have been ‘meeting places’. (Massey 1994, 171)

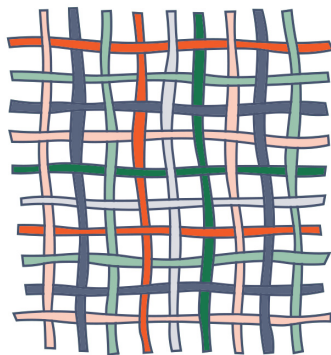
With these notions in mind, it is clear that social acts of homemaking such as quilting constitute a meaningful form of placemaking, the collective and collaborative process of creating spaces.

Chapter 4: Quilting Urban Fabric

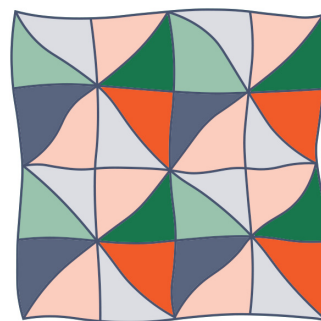
The translations and intersections explored in the previous chapter inform a methodology for quilting architecture. The methodology is characterized by the salvage and reuse of scraps of urban fabric, the opportunity for spatial agency through modularity, the recognition and implementation of meaningful patterns and the invitation of collective and social participation in the ongoing making process.

Program

The quilting methodology is tested through the design of a cohousing project in Halifax. Unlike co-operative housing, which tightly weaves people together through collective ownership of the entire building, cohousing is a built environment characterized by dwellings aggregated around shared amenities where the ownership structure allows for private ownership over one's own individual home. (Scotthansen and Scotthansen 2005, 167). Each home can therefore maintain the presence of a distinct patch, while contributing to the social pattern of the fabric.

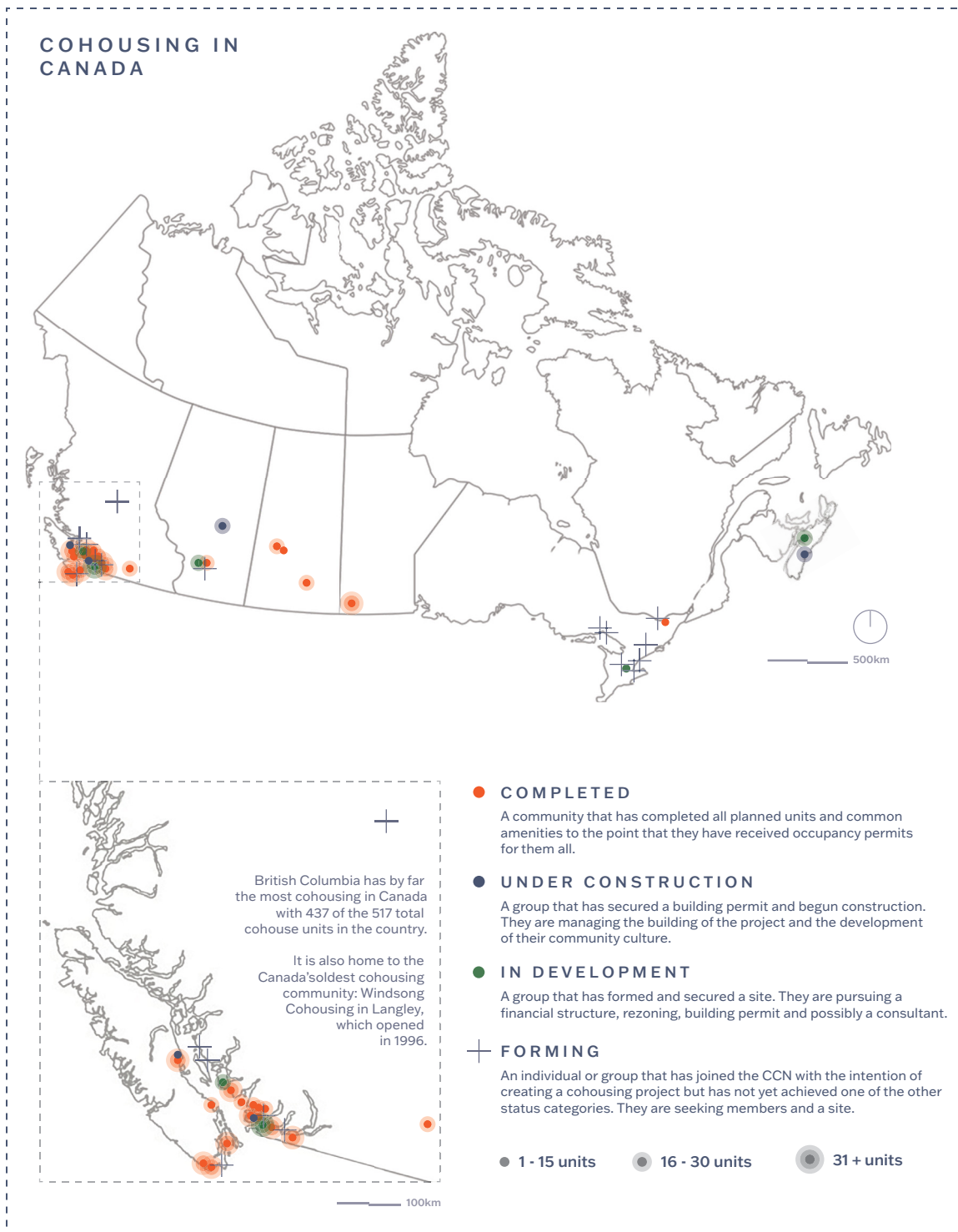


Co-operative housing tightly weaves individuals together through collective ownership of the entire building.



Co-housing is characterized by individual ownership of each dwelling.

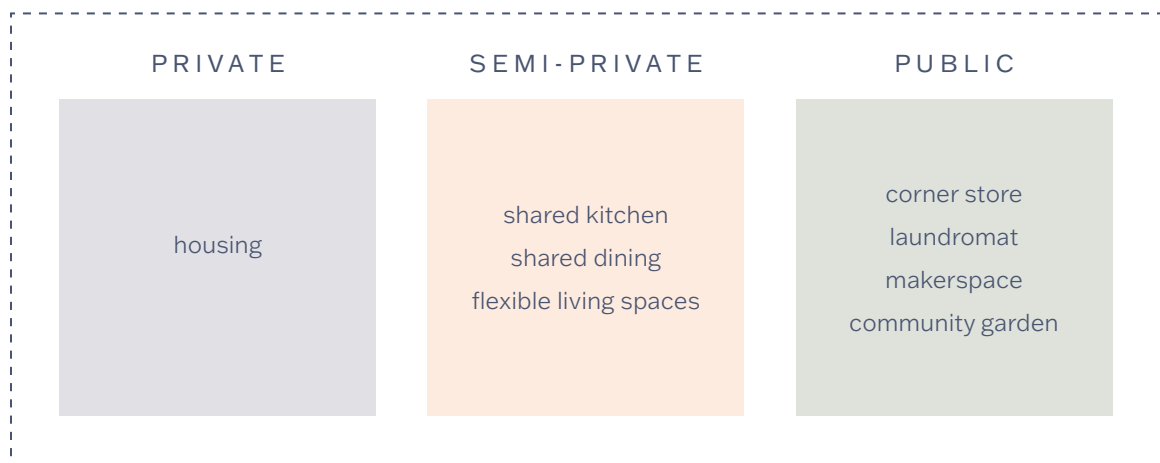
The diagram compares the concepts of the woven versus patchwork ownership structures of cohousing relative to co-operative housing.



This map indicates all the co-housing projects in Canada. It reveals that the majority of co-housing options in Canada are located in British Columbia. There is no completed co-housing east of Ontario. While two rural co-housing projects are underway in Nova Scotia, this project would be the first urban co-housing option in the Atlantic provinces. (Canadian Cohousing Network 2022)

Individuals, families, and elders choose co-housing because it offers a balance of community and privacy, the environmental and economical benefits of sharing resources, and the sense of community that is reminiscent of a village where everyone knows their neighbour. It is characteristic of cohousing to offer a variety of dwelling types for people of different needs and abilities. Much like a quilting bee, the design and construction process of creating cohousing is strongly collaborative (Scotthanson and Scotthanson 2005, 3). People across generations come together to share materials, labour, stories, and ideas over the making of both quilts and cohousing.

Shared spaces within the co-house include a communal kitchen and dining space, and both indoor and outdoor flexible living spaces. Along with the co-housing program, the building also features shared amenities between homeowners and the public. These include a corner store, laundromat, makerspace workshop, and community garden. These programs stitch the building into its social context by creating space that serves the community, both within and around the co-house. They also offer the opportunity for live-work conditions.



The diagram lists the various public, semi-private, and private program components.

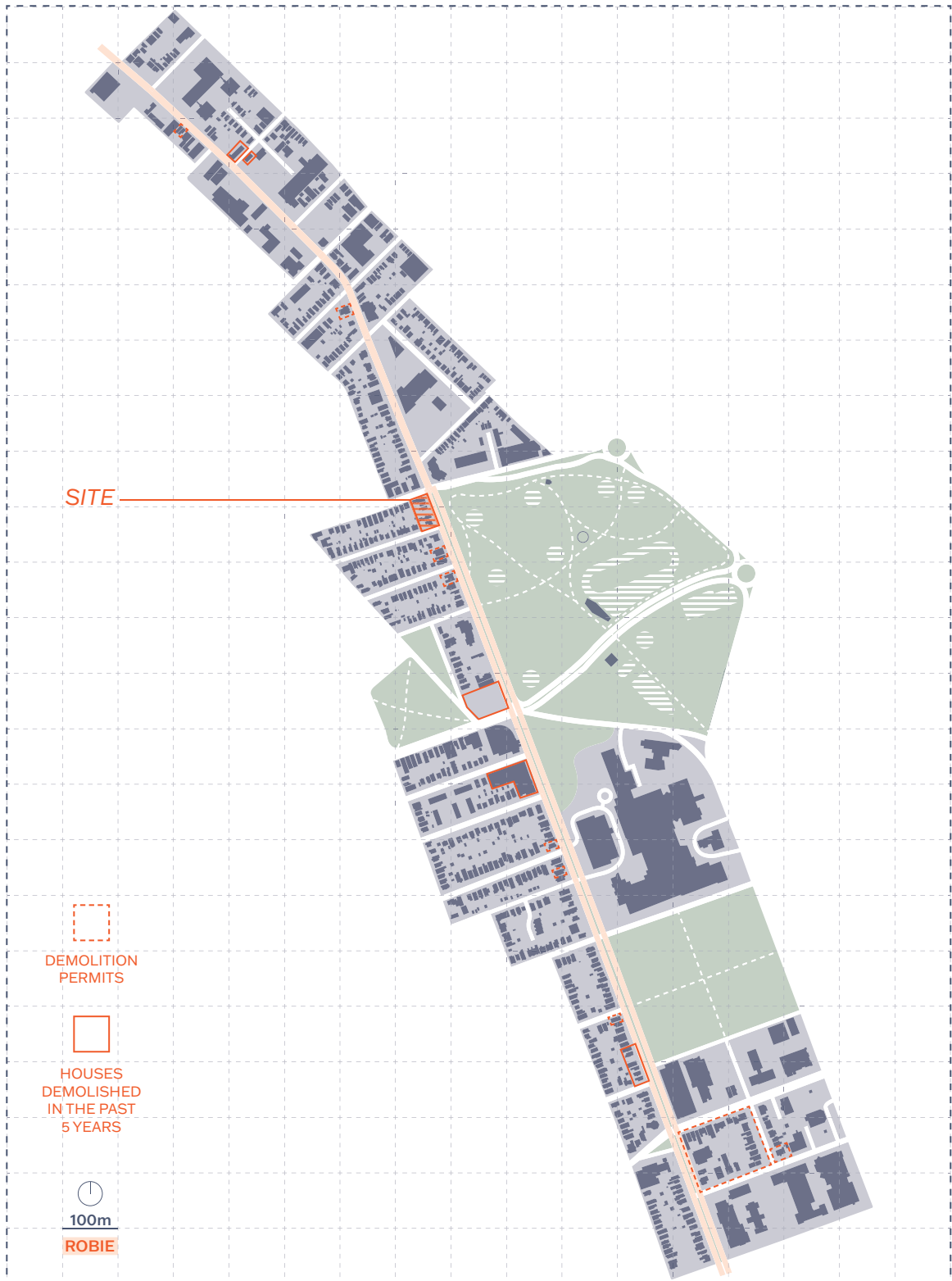
Site and Context

The project is situated on an empty site along Robie Street where six historical homes were recently demolished. These six houses held space for affordable rental apartments, single family dwellings and businesses. The demolition of these houses has left a tear in the existing neighbourhood that has yet to be filled. The site faces three streets, each with distinct urban conditions. The longest edge of the site is along Robie Street to the east, Halifax's primary transit corridor. Across Robie Street, the site faces the Halifax Common, with views of Citadel Hill beyond. Along Cunard Street to the north, the site is adjacent to restaurants and community buildings, while it is nestled into a residential neighbourhood along Compton Avenue to the south.

Along Robie Street, many blocks of historical homes have been demolished in recent years to make way for high-rise apartment buildings as city regulations change to permit larger-scale construction along that zone (Cameron 2022, 3). Large-scale developments and wasteful demolition practices such as these have been identified as major Halifax contributors to the climate crisis (Cameron 2022,



Photo of the site prior to demolition. The red box indicates the houses that were torn down.



Map showing the site on Robie Street and the demolition sites and permits along the same street



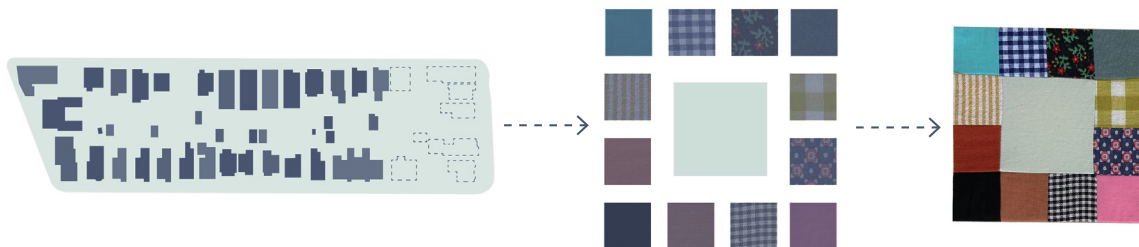
Plan of existing site. Base map from Google Earth 2022.

8). There is a critical need for mid-rise residential buildings that exemplify low-carbon development practices. Testing the quilting methodology on this site demonstrates an alternative possibility to the prevalent harmful construction and demolition practices and is applicable throughout Halifax.

***Parti* Pattern**

Before we set out to quilt, we need a pattern. A traditional quilt pattern begins with an observation from the quilter's daily life. Through a graphic language of squares and triangles suspended in a grid, the quilter distills their observation into a symbol. Regardless of how abstracted the symbol may seem, it is meaningful to those who are familiar with the story that it tells, and who share in the perspective that it represents.

An attentive look at the fabric of Halifax from above reveals a distinct block pattern: a ring of houses arranged around a patch of green space, often with public or work/live program at the corners. The dwellings connect to the street through a colourful front door, and connect to the back yard through a kitchen window. This pattern is reminiscent of waving to your neighbour from your back porch as you hang laundry on the line or tend to your garden. The blocks are separated by strips of circulation that allow for both circulation and light.



The diagram explains how the quilted *parti* was derived from the existing pattern of houses and city blocks in Halifax. The two contrasting components of the quilt pattern are colourful houses around the perimeter and bright green space at the centre.



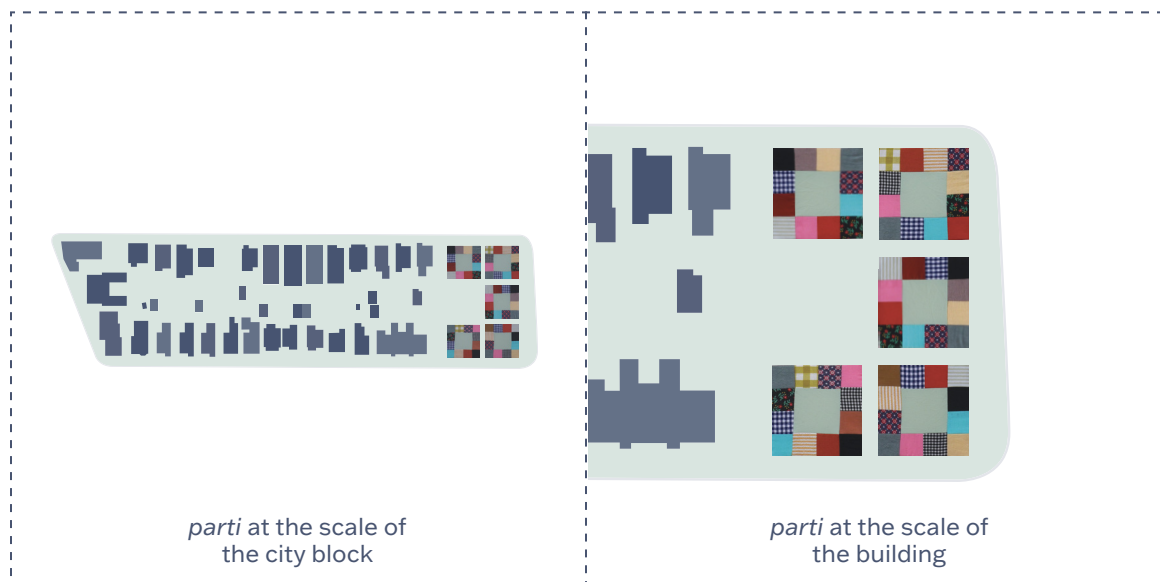
At the scale of the quilt, each block is aggregated by a strip of sashing to represent the street. The separation between blocks allows space for circulation and light. The Halifax neighbourhood quilt pattern serves as the *parti* for the design.

Patchwork Plan

The *parti* pattern is used at two scales. First, it is used at the urban scale to situate the building on the site in a way that mends the tear in the existing pattern. Five volumes wrap around the empty end of the block to complete the pattern of built space, while leaving green space at the centre to respect the existing patch of old-growth trees.

At the scale of the building, the *parti* is used within each volume to organize private dwellings around cores of shared space. Natural light pours into the shared spaces from atria above, like the quality of light in a backyard. The separations between blocks allow for more light to permeate through the building. It also creates a rhythm of porosity that brings the building closer to the form of a neighbourhood block of houses.

The volumes are stitched together by threads of circulation that run vertically through the centres of the cores and horizontally to connect the cores. The circulation paths widen in areas to create shared spaces. Avoiding the use of corridors to mediate between dwellings and shared spaces is meant to encourage neighbourly interactions by facilitating direct connections between social and private space.



The diagram shows how the *parti* is used at both the urban scale and at the scale of the building.



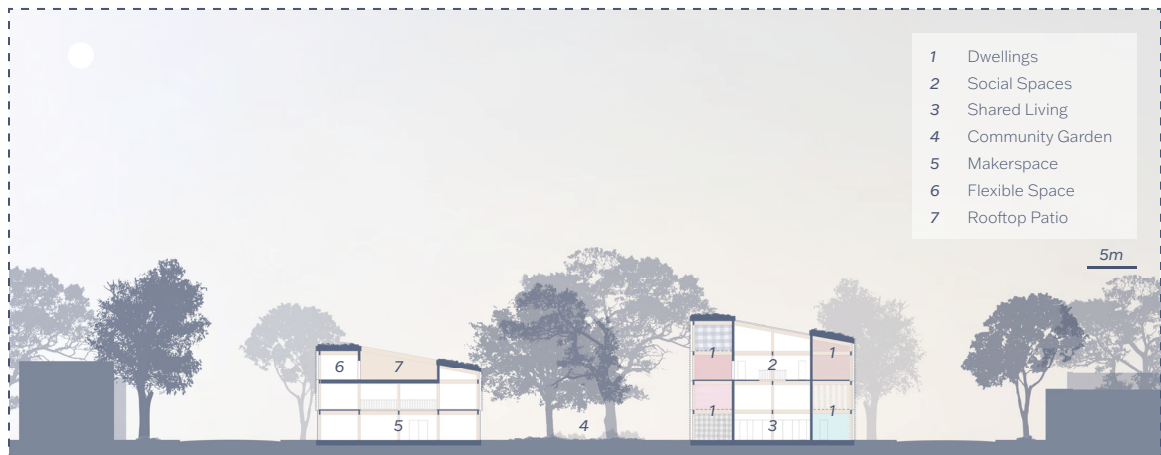
Level 1 plan



Section A



Level 2 plan



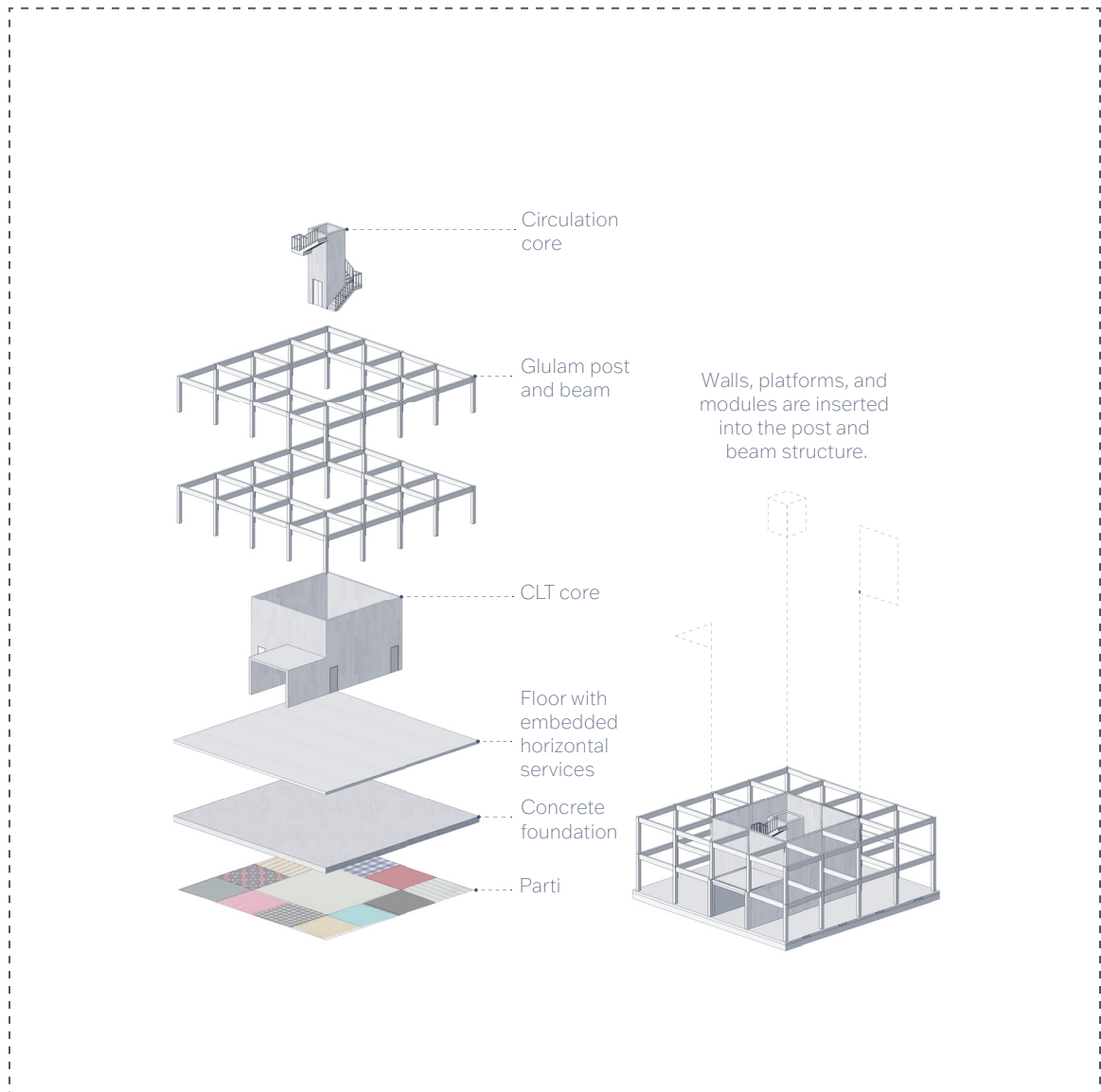
Section B

Patchwork Volume

Each volume of the co-house begins with a structural frame that follows the principles of Open Building. Since its development in the 1960s, the objective of the Open Building movement is to increase the flexibility and adaptability of buildings over time (Open Building 2022). This is primarily achieved through the separation of the elements of a building with different life cycles. Post and beam structures are characteristic of Open Building as they allow for walls to be moved over time. Other characteristics include services that are easily accessible for maintenance, repair and replacement.

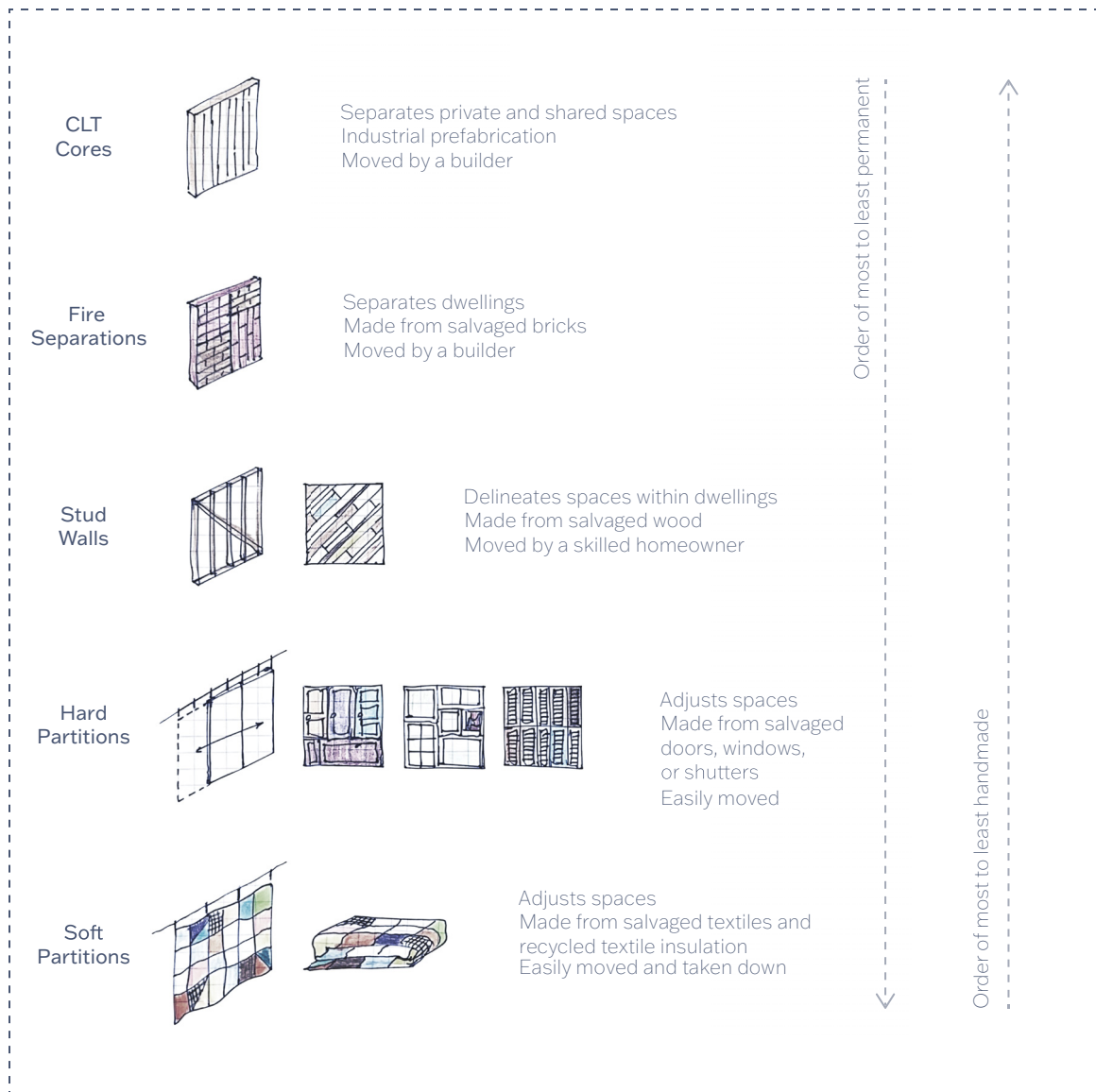
Open building aligns with the objectives of the thesis toward the goal of sustainable construction, collective design, and anticipating future material reuse. Open building supports and encourages the transition to a society based on co-creation where homeowners are invited to co-produce their homes with designers (Open Building 2022). Typically Open Building designers engage with future residents early and present a range of design options that allow residents to customize their space based on their unique lifestyles.

The glulam post and beam structural system wraps around an 8-meter by 8-meter cross-laminated timber core. The 4-meter structural bays offer flexible volumes of space suitable for creating any type of room. Each level is 6 meters in height so occupants can choose to customize their home with a mezzanine level or to leave the ceiling high. Services run vertically along the CLT core and horizontally under layers of removable flooring. The open structure is designed to host plug-in modular components that delineate the different dwellings and rooms.



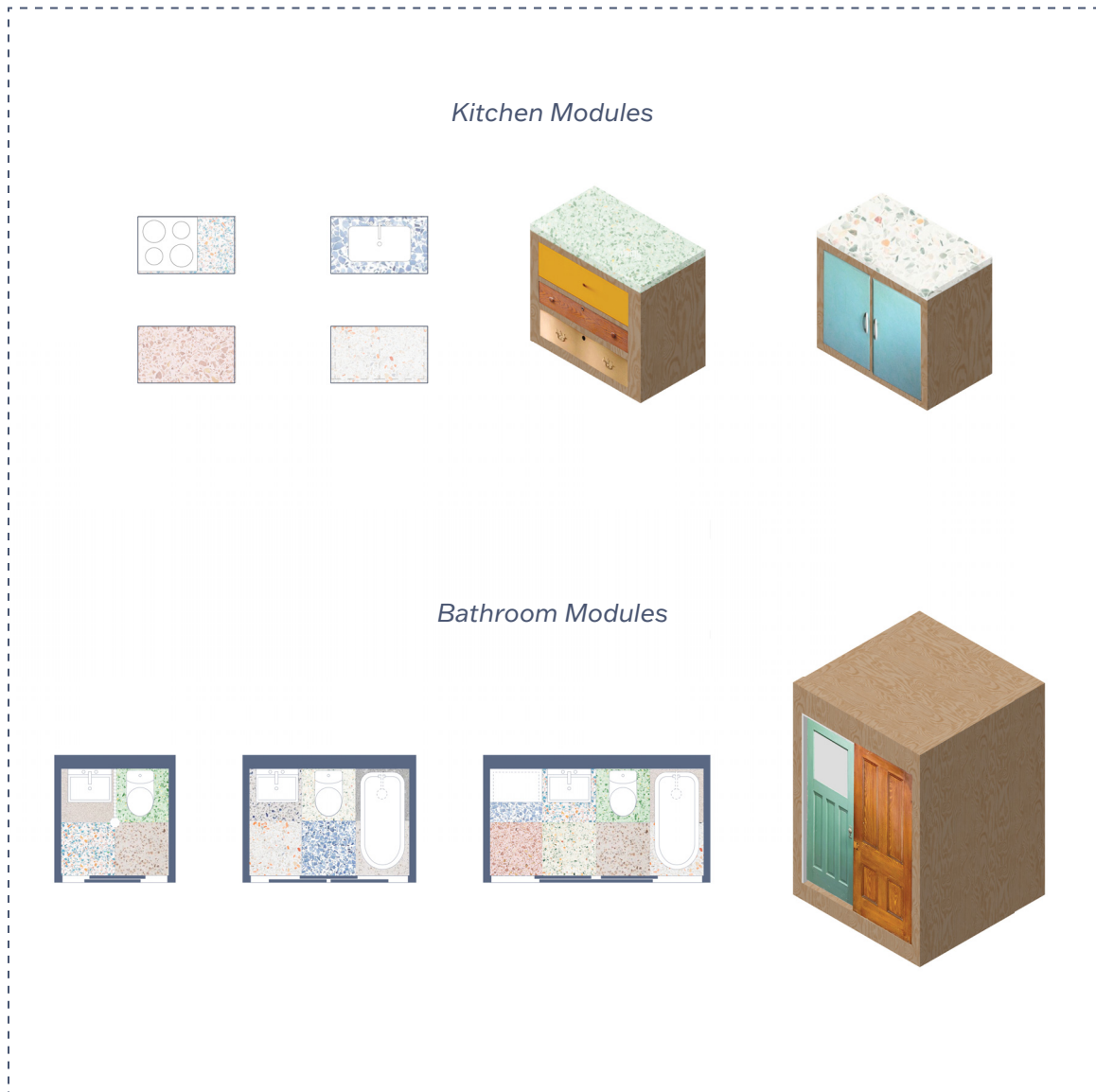
Exploded axonometric drawing showing the open structure system as it relates to the *parti*.

The first type of modular component is walls. Walls not only relate to textile elements of architecture in terms of their materiality, they also wrap us in a gesture of comfort and protection. More so than any other element of architecture, people use walls to express themselves. Walls are painted, adorned with art, and even moved when space needs to be adjusted. The modular walls are made from salvaged



A variety of modular walls made from new and salvaged materials.

materials from old homes. They perform a range of uses from providing fire separation to softening noise. They range from most permanent to most easily moved. The most moveable wall types are partitions that can be moved by homeowners throughout the day so that the act of customizing space can occur on an everyday timescale.



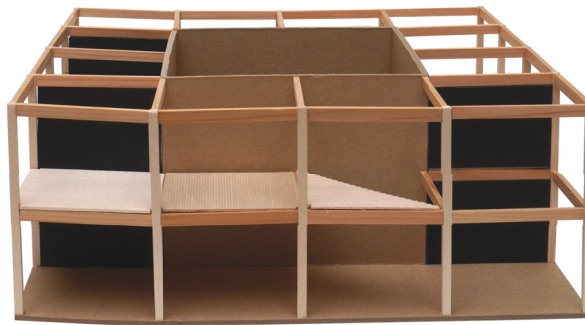
Prefabricated kitchen and bathroom modules.

The second type of modular component is the prefabricated kitchen and bathroom units. They contain electrical and plumbing manifolds that connect to the vertical service chases via dry friction and clamp connections so that they can be easily installed and moved over time if necessary. The units are made from plywood with salvaged millwork, fixtures, and doors, with recycled aggregate terrazzo

surfaces. The most tactile and most frequently moved parts of the modules are intentionally made from salvaged materials, encouraging a tactile relationship between the hands of the homeowners and the materials of their home that carry the most memory and character.

The system of open structure and modules was tested through physical models made from salvaged modelling materials. The models served as playful tools for designing through the action of making and for inviting participatory design input from others.

The volumes are stacked to create two levels, with double-height space at the ground level and varying heights on the second level. The heights of the volumes reflect the unique urban conditions around them. The volumes adjacent to the low-rise residential buildings of the existing block kneel to meet the neighbouring houses, while the volumes on Robie Street gesture upwards at the mid-rise apartment building on the opposite corner. Green roofs with alternating angles collectively create the appearance of a fabric-like undulating surface, while their sloped angle lets natural light from the south into the backyard.



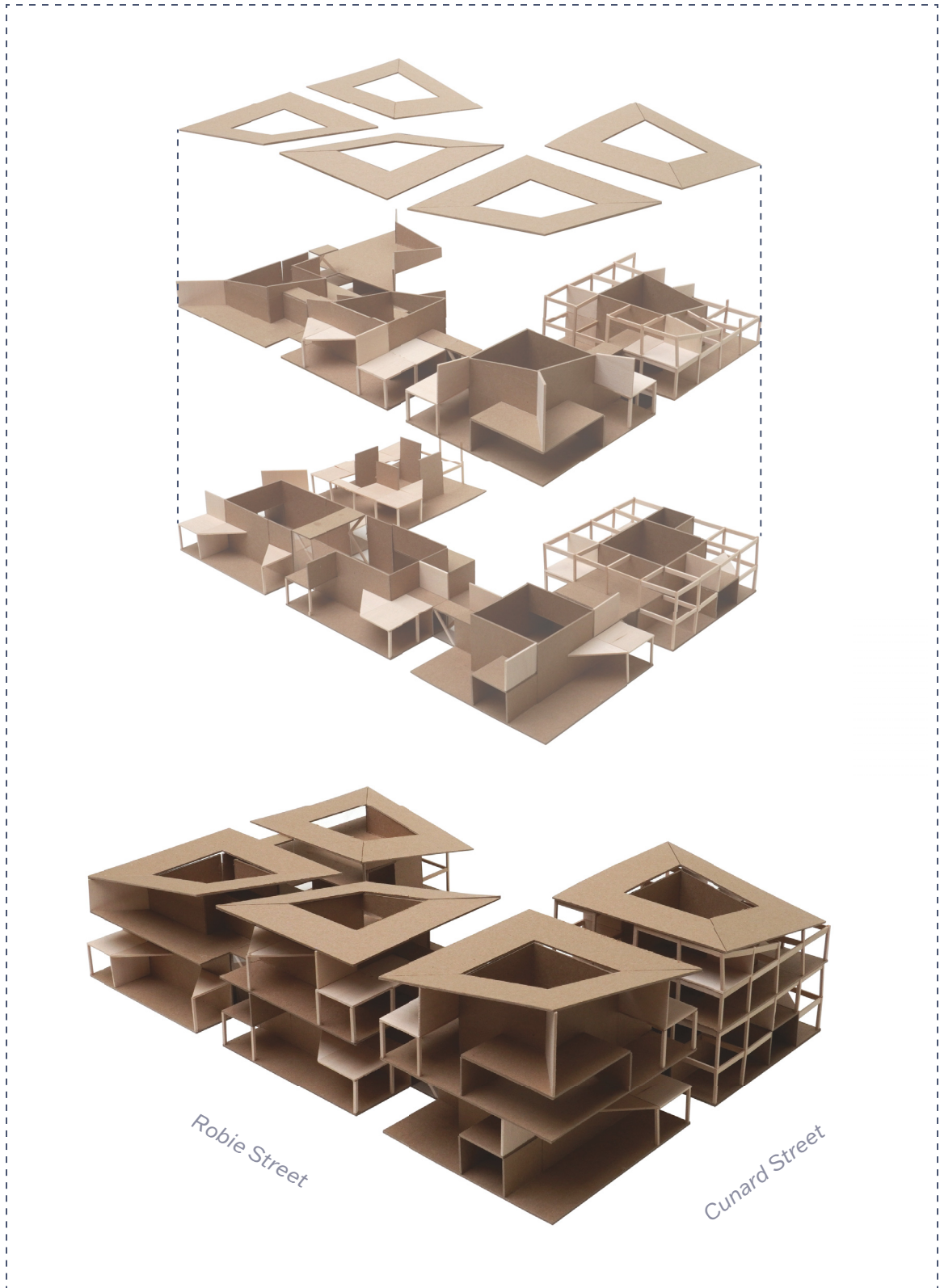
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These models were used to explore the possible variety of home sizes and configurations. Black foam represents firewalls and wood platforms are used to create mezzanine levels.

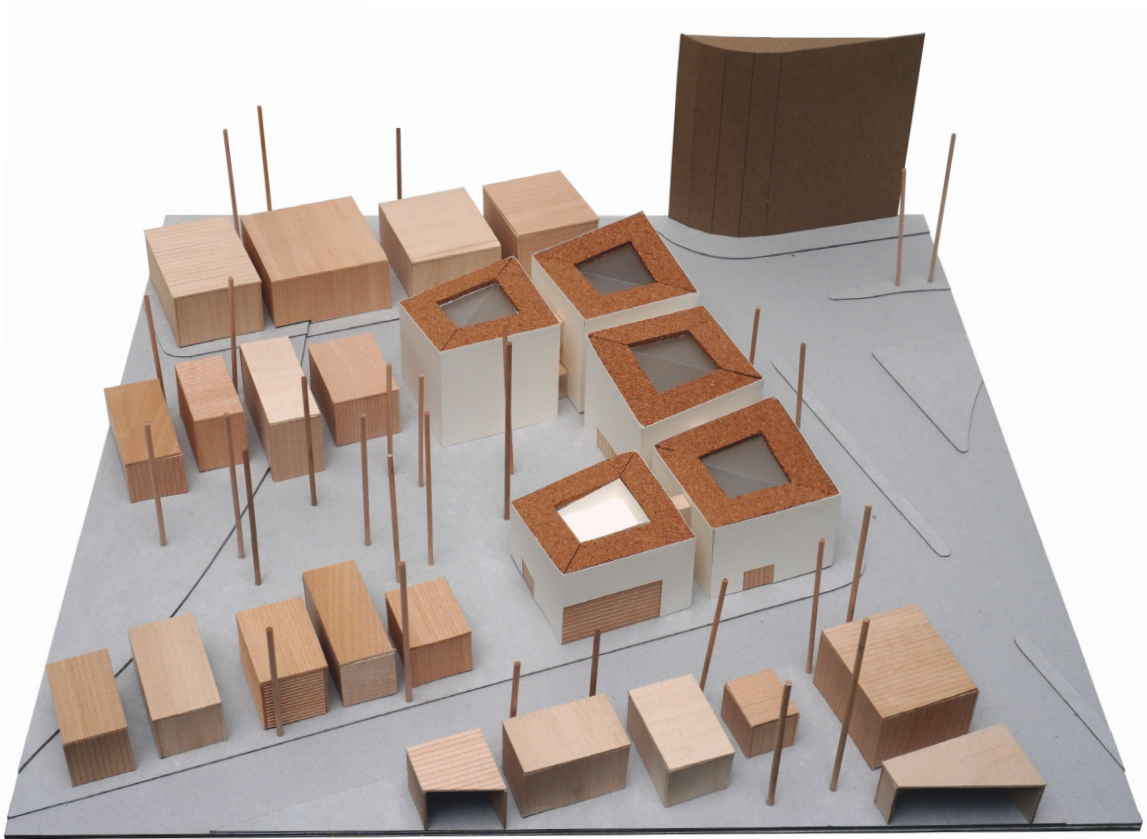


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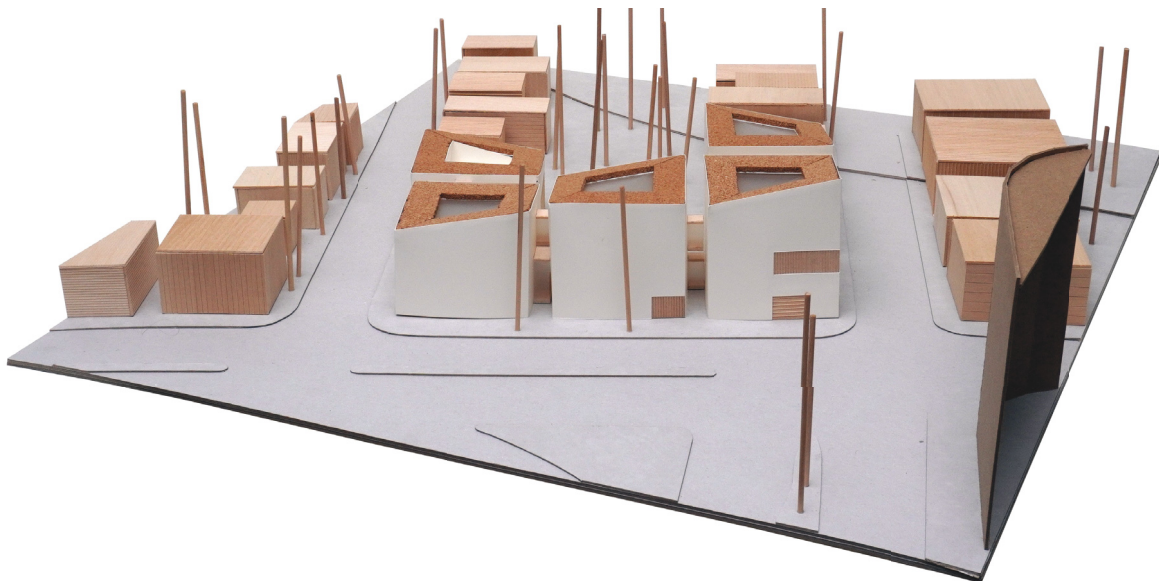
The interior spaces are delineated with moveable partitions represented in white card and quilted partitions modelled in gingham. Bathroom and kitchen modules are represented with coloured card volumes and pink card is used to imagine openings of windows or doors onto the common interior spaces.



Volumes of dwellings are stacked and varied in elevation to create a form that responds to different site conditions in elevation.



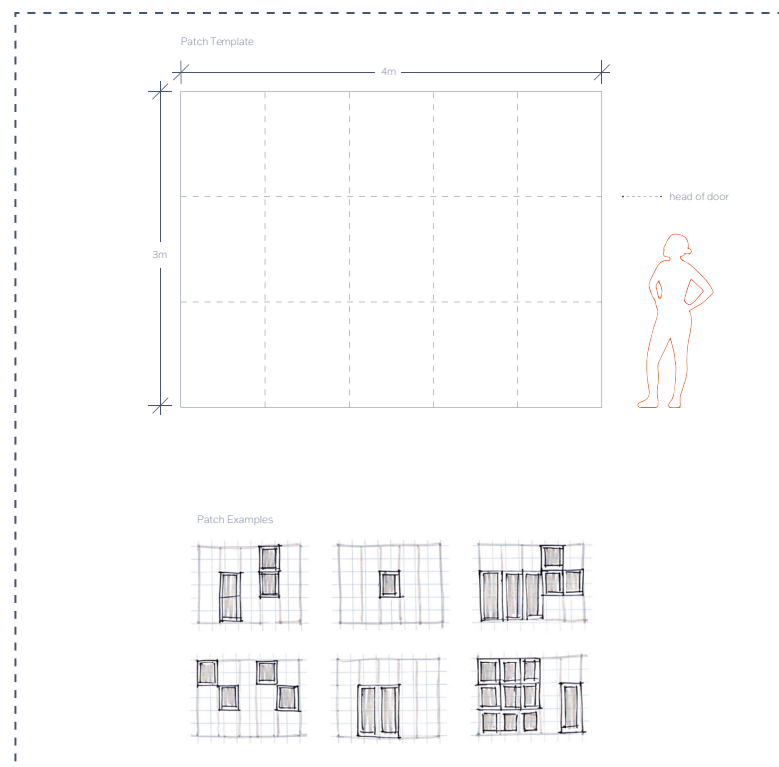
The volumes adjacent to the residential areas kneel to meet the height of the neighbouring houses.



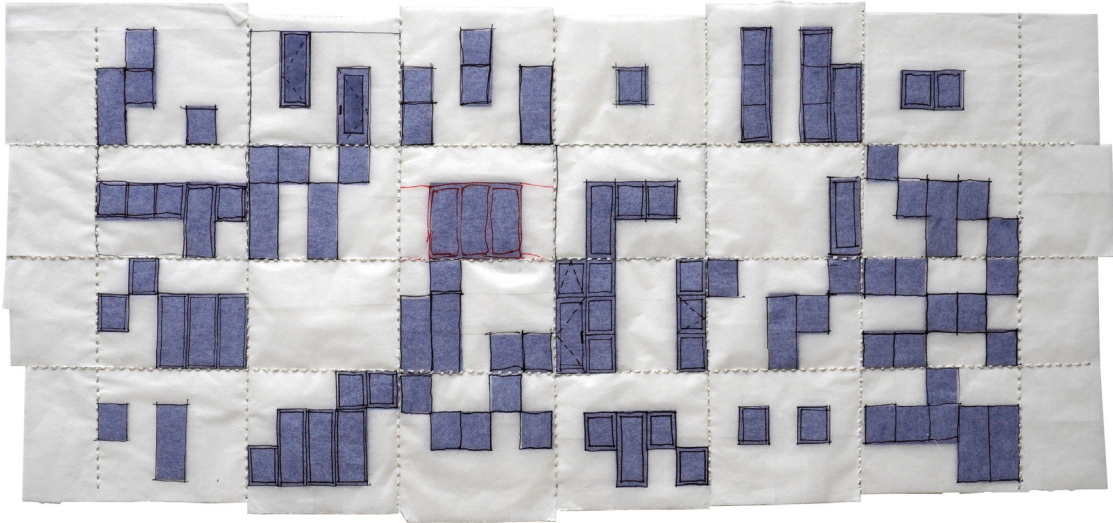
The volumes on Robie Street gesture upwards at the mid-rise apartment building on the opposite corner.

Patchwork Façade

The façade presents an opportunity to create a patchwork that is made and experienced by both homeowners and community members. First, each structural bay that presents to the exterior of the building is divided into a grid, which serves as a pattern which homeowners are invited to customize with a combination of openings in the form of windows and balcony doors. To test the pattern, students in studio were invited to sketch a patch of the façade. Much like the quilting bee, the result was a collection of unique interpretations that are quilted together to create a cohesive whole that blurs the lines between dwellings. While the modular walls of the dwellings inside the building reflect the decisions and identities of individuals, the façade is a wall shared by all inhabitants of the co-house at once and reflects their individualities simultaneously.



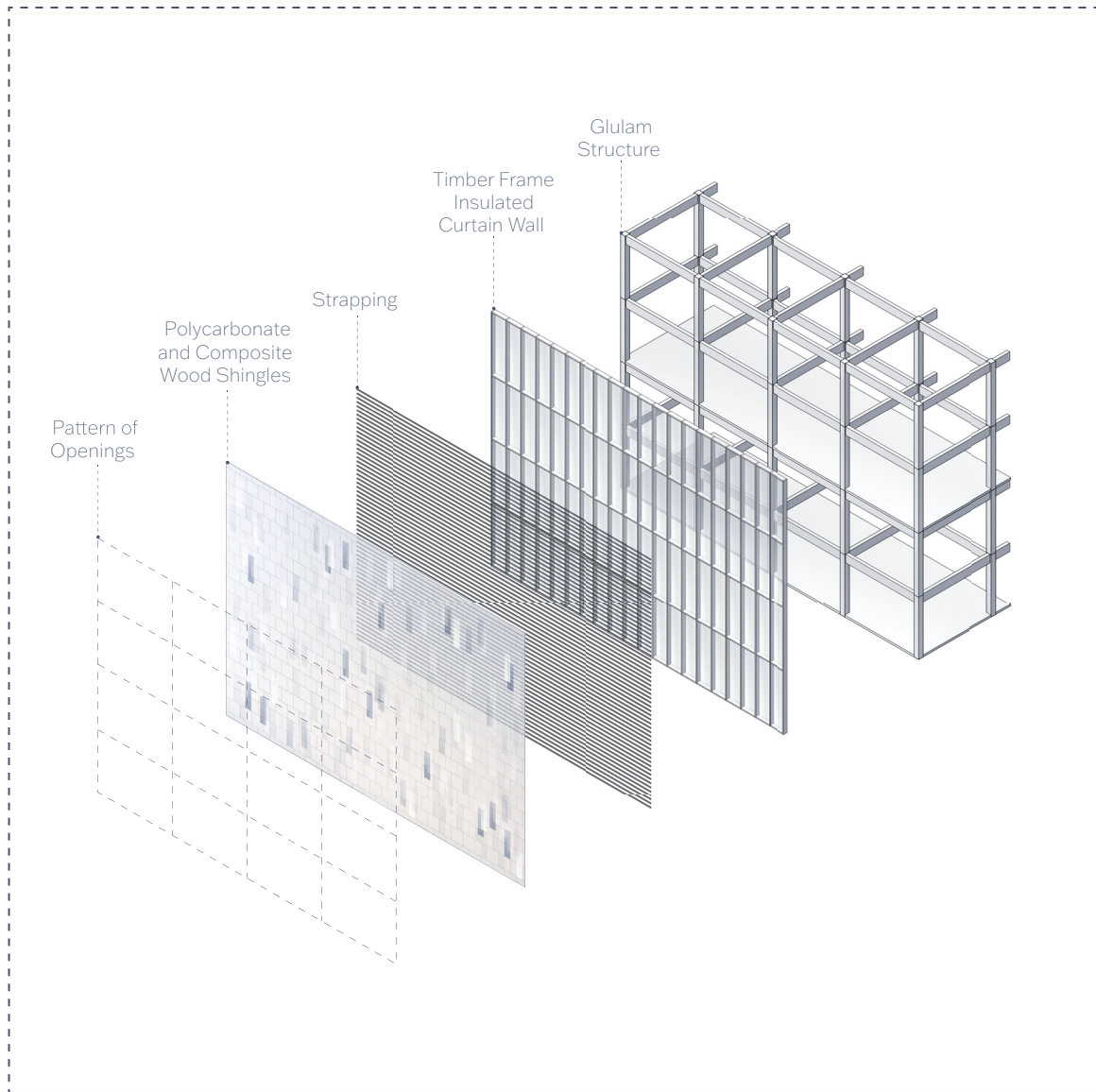
The façade pattern invites inhabitants to customize their patches of the façade with windows and balcony doors.



Collaborative quilted drawing which tests the facade pattern.

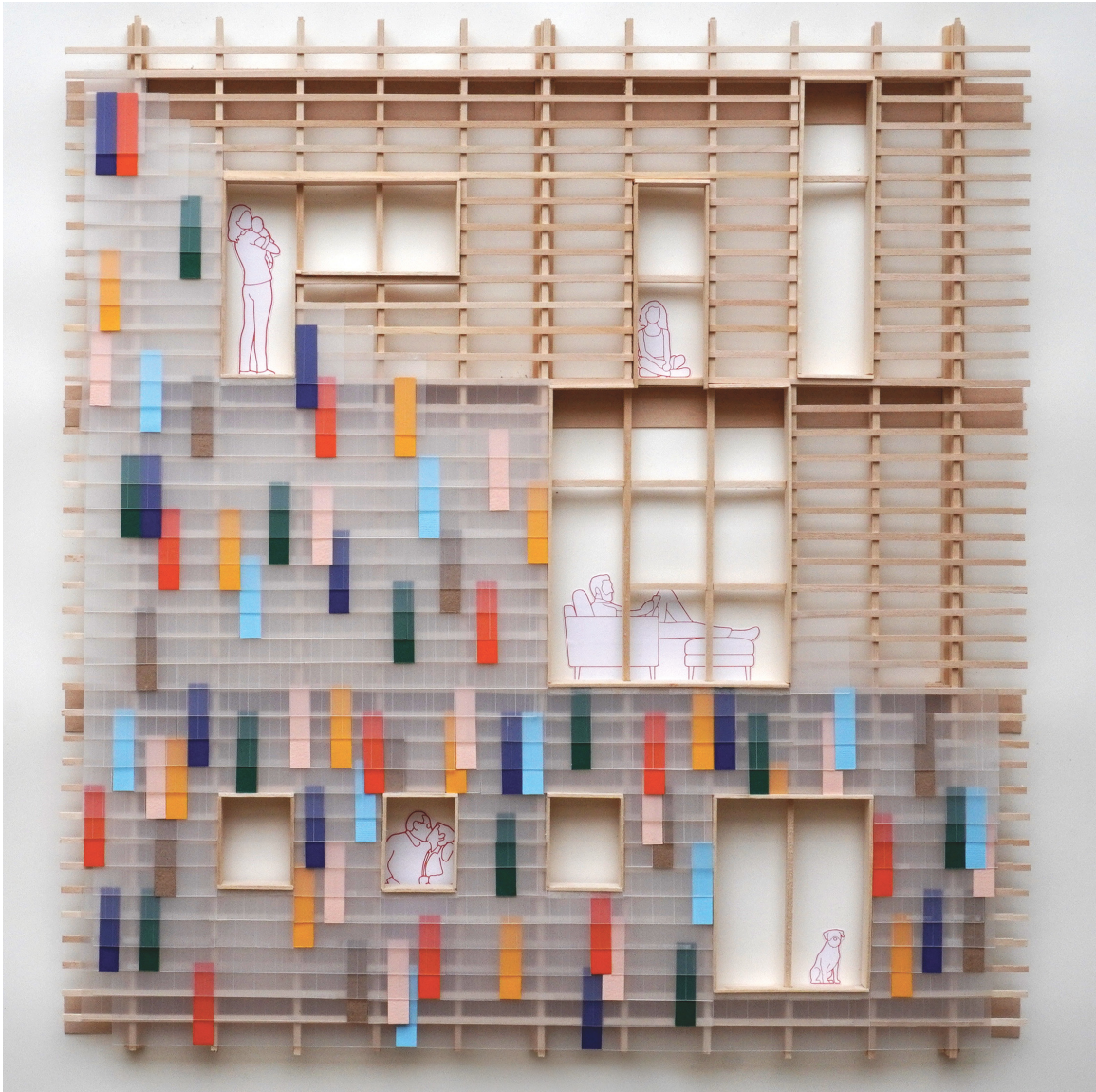
The patterns shape the first layer of the façade outboard of the structure, which is made from an insulated timber frame curtain wall. As a modular and prefabricated system, the curtain wall quickly encloses the structure to protect it from the elements. The following layer is a timber screen made from wood slats which create a cavity between the curtain wall and the outer skin. The final layer of the façade is made from polycarbonate shingles, which let light into the building while offering privacy to the inhabitants. The polycarbonate shingles are interspersed with coloured shingles made from composite wood.

Like a quilt, the façade has three functional layers: the solid backing of the curtain wall, the insulating layer of the air cavity, and the patchwork layer of the shingles. The thickness of the layers gives the façade a depth generous enough to offer the homeowners space to insert themselves and their belongings into it. Whether sitting in a window bench, leaning against the railing of a Juliet balcony, or placing books and plants on a deep window sill, homeowners become part of this living patchwork by inhabiting it.



Exploded axonometric drawing of the quilted facade layers.

When looking for commonalities between patchwork quilts and vernacular houses in Halifax, the most striking connection is the mosaic of colour. Houses in Halifax and throughout Nova Scotia are traditionally clad in cedar shingles and painted in bright hues. The act of shingling itself resembles quilting, as it is a slow process of combining small planes of material into a cohesive fabric by hand. As old houses are demolished and replaced by buildings clad in glass and steel, the craft of shingling is fading from our urban fabric.



Quilted facade model

Shingling the co-house both references patchwork and acts to resist the erasure of the city's vernacular materiality by perpetuating an important tradition of craft.

The volumes of the building are shingled in what I imagine to be a social and collective event where co-house homeowners and community members alike are invited to learn the craft and share in an experience of making that creates meaningful and lasting connections between people and material.



Inhabited section, showing dwellings and shared spaces.

Chapter 5: Conclusion

This thesis is envisioned as an example of how architects might look for inspiration in objects of domestic craft when designing homes, for handcrafted objects are material manifestations of our cultural and social values. While quilting has long been ignored by the dominant architectural imagination due in part to gendered concepts of craft, this thesis has sought to reposition it as a medium that is rich with information and inspiration for architecture. Quilting offers a model for collective making that builds meaningful connections between people and material. From ideas about modular construction, material reuse, collaborative design, and personal expression, quilting not only holds ideas that are applicable to architecture, it also frames them through the narrative of quiltmaking as acts of care for our urban fabric and towards one another. The act of quilting is also the building of community, both materially and socially, in a way that maintains and strengthens the historical and cultural identity of place while imagining new possibilities.

When beholding a quilt, it is hard not to pause and consider the tremendous amount of time, labour, and care that the quilters poured into the countless stitches that hold the fabric together. Patchwork quilts inspire wonder and nostalgia by presenting fragments of material, each embedded with individual memories, narratives, and character, as a cohesive whole that reflects collective making, cultural identity, shared stories and radical care. These are the same feelings that our urban fabric will continue to evoke if we appreciate it as a patchwork and maintain it both materially and socially through collective acts of homemaking.

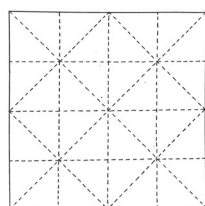
Appendix A: The Quilting Bee

To experience the quilting process first-hand, nine friends were invited to participate in a quilting bee: a traditional gathering where women collaboratively make a quilt. Each quilter contributed scraps of fabric in the form of unwanted garments or old household textiles. The participants reminisced about the memories embedded in each scrap as they disassembled the material and exchanged pieces to create their blocks.



Catalogue of the fabric scraps and their embedded memories. Each person's contribution of material and narrative was a gesture of support for the project. The materials were therefore received as gifts, which created links between each quilter and their unique piece of fabric (Gosden and Marshall 1999, 173). As the fabrics were swapped over the course of the evening, quilters were heard saying things like "I'm using a piece of Hande and a piece of Elly," which shows how people's identities and stories were connected to the material they brought.

A template allowed each quilter to design a pattern for their block using variables of colour and geometry. The theme of the quilt was “the feeling of home,” which inspired a delightful variety of patterns ranging from traditional to contemporary; and from representational to abstract. The template offered endless opportunities to create whatever patterns the quilters desired while structuring them within the same grid so that they would align once combined.



Template



Instead of using the template, Shae moved pieces of fabric around until the composition felt right. For her, the feeling of home is about a sense of balance and harmony.



Fiona represented the form of a vernacular pitched roof, carefully constructed of colourful trusses.



Elly's pattern is composed of fragments of a home, arranged in a composition that reflects the chaos of daily life.



Mallory represented two large arrows pointing inward to symbolize the love you must feel towards yourself to feel at home in your body.



Janelle chose a pattern that reminded her of a blanket that she had as a child.



Holly interpreted a traditional windmill pattern in contrasting blue fabrics. She was intent on expressing the value of care through the precise crafting of her block.



Hande's block depicts an aerial view of four houses that form a courtyard. Two individuals are seen sharing a kiss in the courtyard at night.



For Mary, home is a feeling that begins in the senses. Her block design uses a combination of colours and textures so that it can be interpreted through both sight and touch.



Chelsea represented a family of colourful patches in the center protected by an enclosure of larger blue triangles around the perimeter.

Catalogue of the blocks and their meanings. This stage in the process establishes the quilt as a literary object that can be read as a source of information, as it serves as a record of human conduct and thought (Glassie 1999, 41)

The composition of the quilt top was a second opportunity to explore the theme of home. The placement of the red block in the center of the quilt references the hearth of a house. While this arrangement was intentional, secondary patterns accidentally arose throughout the quilt top in places where the same colours in different blocks were placed adjacent. This blurred the boundaries between blocks and created a unified whole. The layers were quilted with red cotton thread, using a method which consists of tying knots to create small tufts across the surface of the patchwork. The quilt was bound in red cotton to create an edge condition that will no doubt become a palimpsest of use, wear, and repair as the object is reshaped over time.



The finished quilt. Makers: Mallory Burnside-Holmes, Holly Dickinson, Hande Ersoy, Fiona Forbes, Elly Hannon, Chelsea Kinnee, Janelle Levesque, Mary MacIsaac, Shaelyn Sampson.

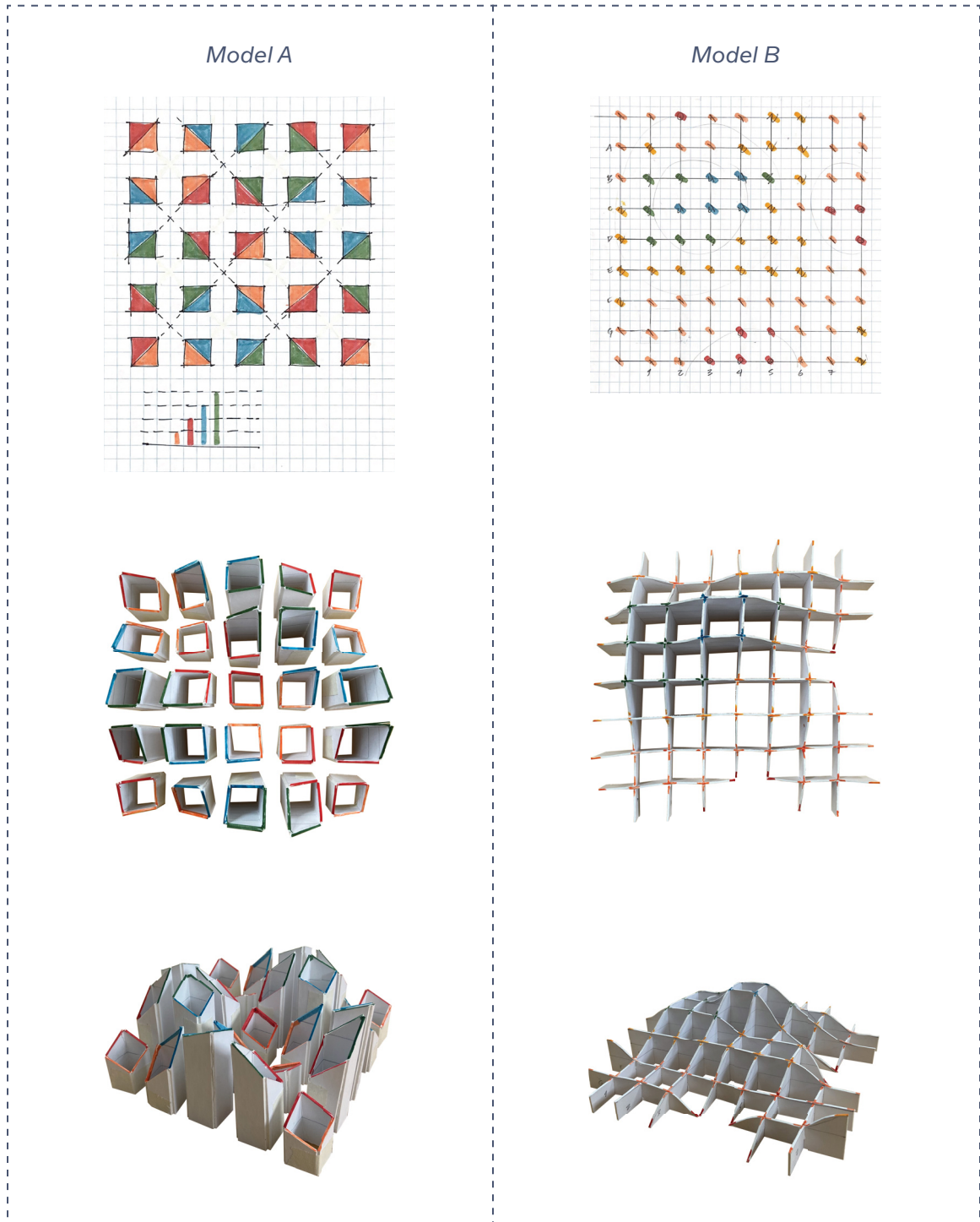
The quilting bee offered not only the experience of making a quilt but also demonstrated the social dimension of quilting. Most of the quilters did not know one another before the bee but formed meaningful bonds over the course of the project. As the patchwork came together, the theme of the home was not only visible but tangible. The quilt offers a sense of warmth, comfort, and familiarity to those who made it. This experiment in making served the thesis as an invaluable act of research, as the quilting process is characterized by tacit and emotional knowledge that can only be gained through experience.



Photos from the quilting bee. March 26, 2022, Halifax, Nova Scotia.

Appendix B: Process Models

Translated Patterns



These models were used to explore how two-dimensional patterns can be expressed as three-dimensional forms, where each colour is translated to a height.

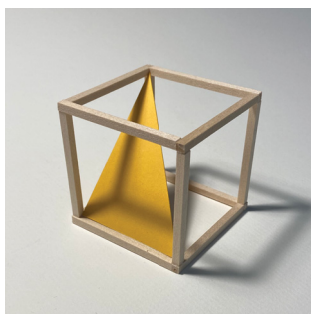
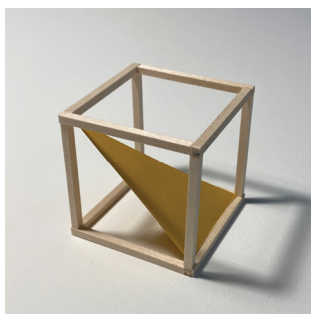
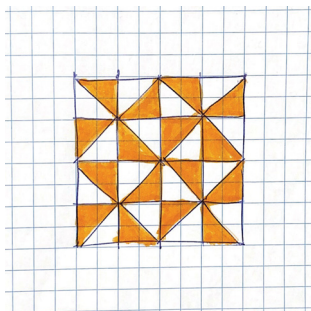
Exploded Quilts



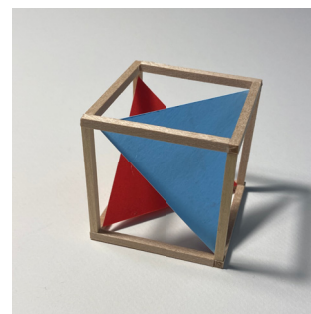
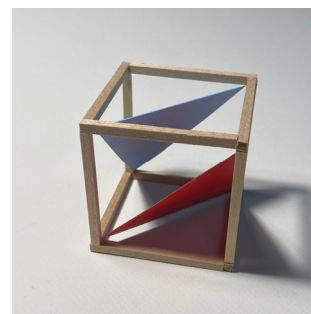
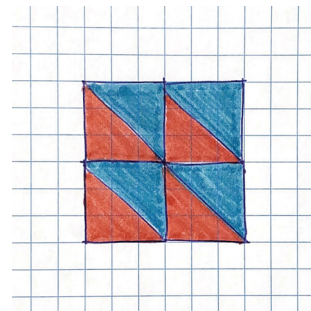
These models emerged from using sewing pins to project patchwork pieces into three-dimensional planes. They imagine quilt patterns as inhabitable spaces.

3D Quilt Blocks

Block A



Block B



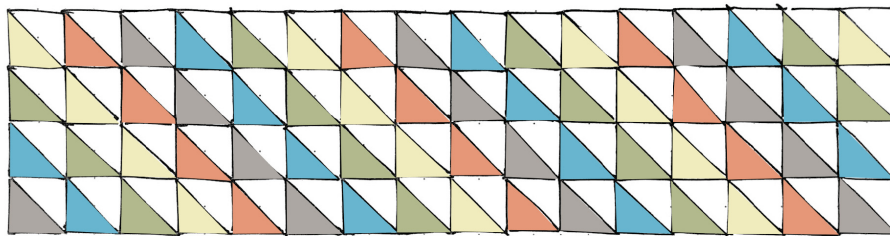
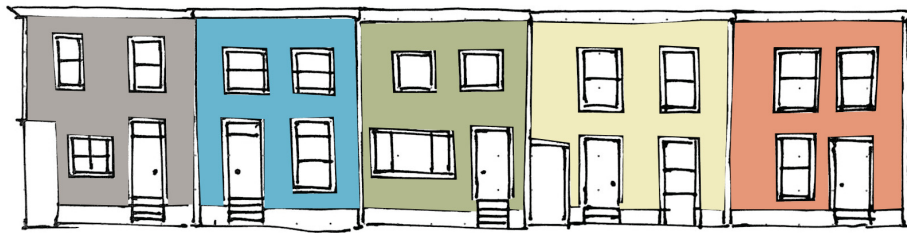
These models imagine quilt block patterns as plan drawings for three-dimensional forms.

B1 Charette



The objective of the B1 charette was to explore intersections between quilting and architecture through mixed media collage. B1 participant: Matthew Beck.

Appendix C: Wish Image



Imagining colourful shingled houses in Halifax as a patchwork quilt.

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