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Unconventional
Affordable
Housing!

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ATLAS

RETHINKING

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RECOMMENDATIONS

BOOKLET / DESIGN STUDIO
NEWCASTLE UPON TYNE

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Booklet / Design studios

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Ministero
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e della Ricerca



Italiadomani
Fondo Nazionale
di Ripresa e Resilienza



POLITECNICO
MILANO 1863
DIPARTIMENTO
DI ARCHITETTURA
E STUDI URBANI



UNIVERSITÀ
DEGLI STUDI
DI TRIESTE



UNIVERSITÀ
DEGLI STUDI DI BARI
ALDO MORO



Politecnico
di Bari

1. The project's framework

The profound socio-demographic transformations that have taken place in Europe over the past decades have led to major changes in household composition and what is typically referred to as the family. As a consequence, the ideal equivalence between “family” and “housing typology”, as promoted by the Modern Movement, collapsed highlighting the increasing distance existing between housing demand and housing supply. The above-mentioned transformations have resulted mainly in an increase in the number of households of single people, divorced couples with children, single parents and the elderly, as well as in the spread of the phenomenon of cohabitation among different population groups in search of affordable housing solutions. At the same time, changes in the labour market, namely a significant rise in temporary employment and delocalisation, have forced people to organise their lives between more than one dwelling and led to the emergence of new lifestyles, such as couples living apart together in long-distance relationships. In addition, worsening employment and economic conditions have reduced housing affordability, increased precarious and informal housing conditions and set constraints on access to housing, even for middle-income groups and people whose housing demands appear to be increasingly changeable across their life trajectories.

While unconventional* and affordable housing practices can take many shapes and emerge from a diversity of household situations, the lack of an adequate offer by social and public housing policies reflects the inadequacies, dissatisfaction with or inaccessibility of conventional housing offers. A key hypothesis underlying the research is therefore that unconventional solutions can be strategies to cope with such inadequacies and a lack of affordability, better responding to changing or intensifying demands. The intersection between the two levels, affordability and unconventionality, has yet to be explored in-depth and can provide valuable insights for a reflection on existing housing (design).

1. The project's framework

The Research Project of National Relevance “UAH! Unconventional Affordable Housing” – guided by Politecnico di Milano with Università degli Studi di Trieste, Politecnico di Bari and Università di Bari – aims at identifying and analysing existing affordable and unconventional housing solutions, investigating practices, projects and policies – thus, gaining an understanding of the wide range of housing phenomena considered unconventional and affordable in Europe; analyse these housing solutions and evaluate their qualities, innovative features, shortcomings and criticalities; and at developing architectural design experiments & proposals (in each of the research units' geographical contexts) at the intersection of policy and design, in order to explore the feasibility of innovative solutions within a given context.

*** By “unconventional” we mean above all:**

- the non-equivalence between the idea(s) of family and the type of housing;**
- the presence – among households – of different (social and cultural) profiles and different age populations.**



2. The context

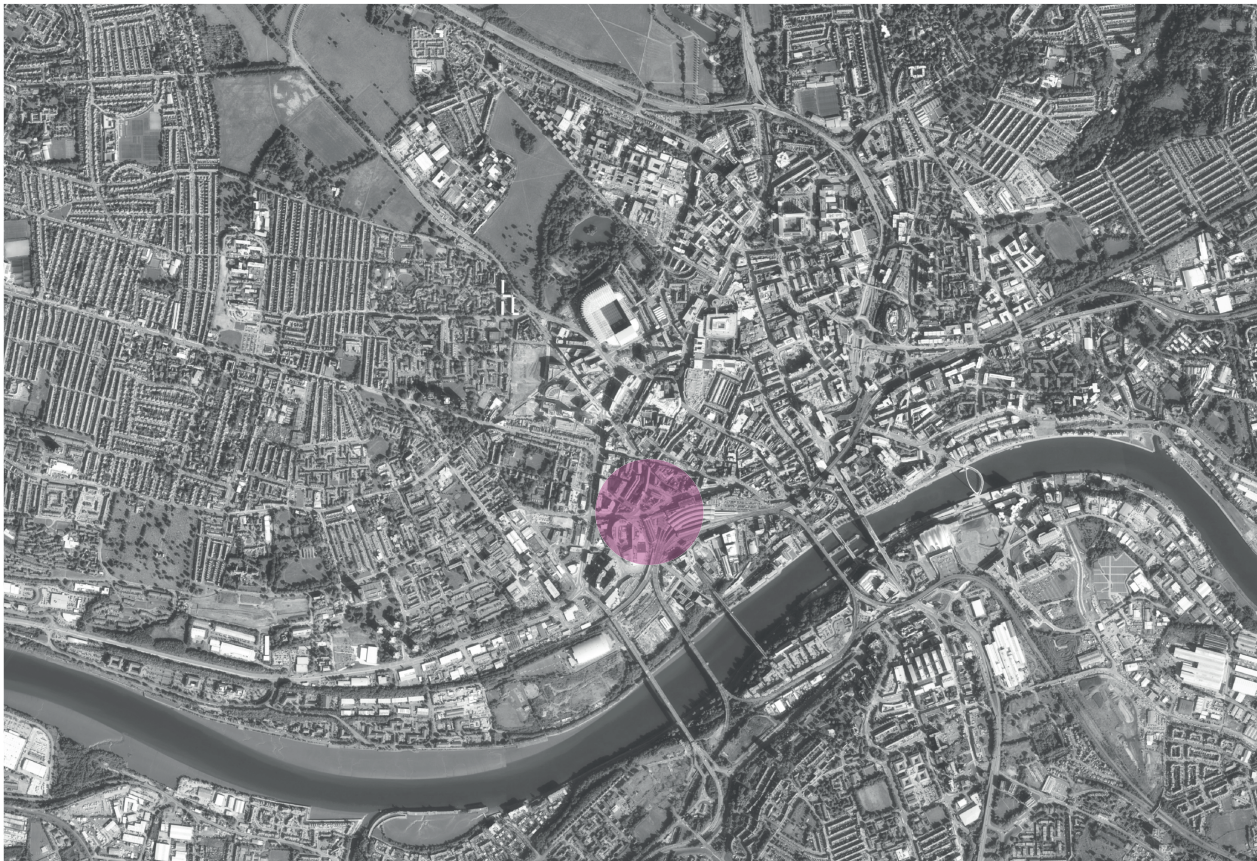
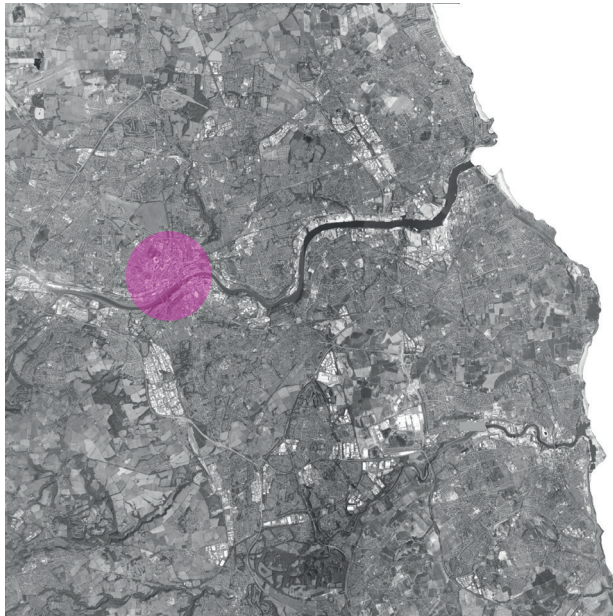
Newcastle upon Tyne is the regional capital of the north-east of England, located on the north bank of the River Tyne, near the North Sea coast. The city centre lies roughly 15 miles from its metropolitan border with Northumberland, the most northerly county in England and flourished from its Roman settlement roots to an industrial powerhouse in the 19th and 20th Centuries. Known originally as Pons Aelius, the earliest Roman settlement was around a river crossing on route to Hadrians Wall and the northern edge of the Roman Empire. The urban form and identity of Newcastle was defined when the 11th Century, Norman *new castle* was constructed on the site of the former Roman fort, giving the town its name. By the medieval period, Newcastle had established its distinctive street pattern, defences, markets, and churches. Its town walls and now stone castle, along with its Cathedral, elevated Newcastle to become one of England's key medieval towns. Located near the Scottish border, Newcastle was a strategic military base throughout the Anglo-Scottish conflict and became a centre for the coal industry from the 13th century onward.

The Industrial Revolution drove the town to expand beyond its medieval walls, which no longer served as a defence after the Jacobite rebellions. The growth of Georgian architecture, the rise of cultural institutions - like the Theatre Royal and the Literary and Philosophical Society, and figures such as Charles Avison and Thomas Bewick - marked Newcastle's cultural growth. 19th century Newcastle played a pivotal role in the birth of the railway age. *The Rocket*, a locomotive invention of George and Robert Stephenson revolutionised transport worldwide. By 1860, the Tyne had become Britain's second most significant river and at the centre of the Golden Age of coal, iron, and steam. Newcastle's industrial base powered Britain's global economic reach, particularly through coal, shipbuilding, and railway engineering.

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2. The context



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The city's transformation into a *City of Palaces* was largely driven by Richard Grainger, who developed a neoclassical city centre. A number of new bridges across the Tyne were symbols of innovation and engineering excellence. Newcastle and the wider Tyneside region became a significant shipbuilding powerhouse in the Victorian era, producing a third of the world's ships and exported vast quantities of coal.

Material culture from the cities Roman and medieval history remain, with fragments of Hadrian's Wall still visible within the city and its environs, as a protected ancient monument. Historically, a defensive wall bound Newcastle. First constructed in 1265, the wall segmented the city into wards that related to the towers built into the wall, with modern road infrastructure informed by the spatial delineations of the city's early settlements.

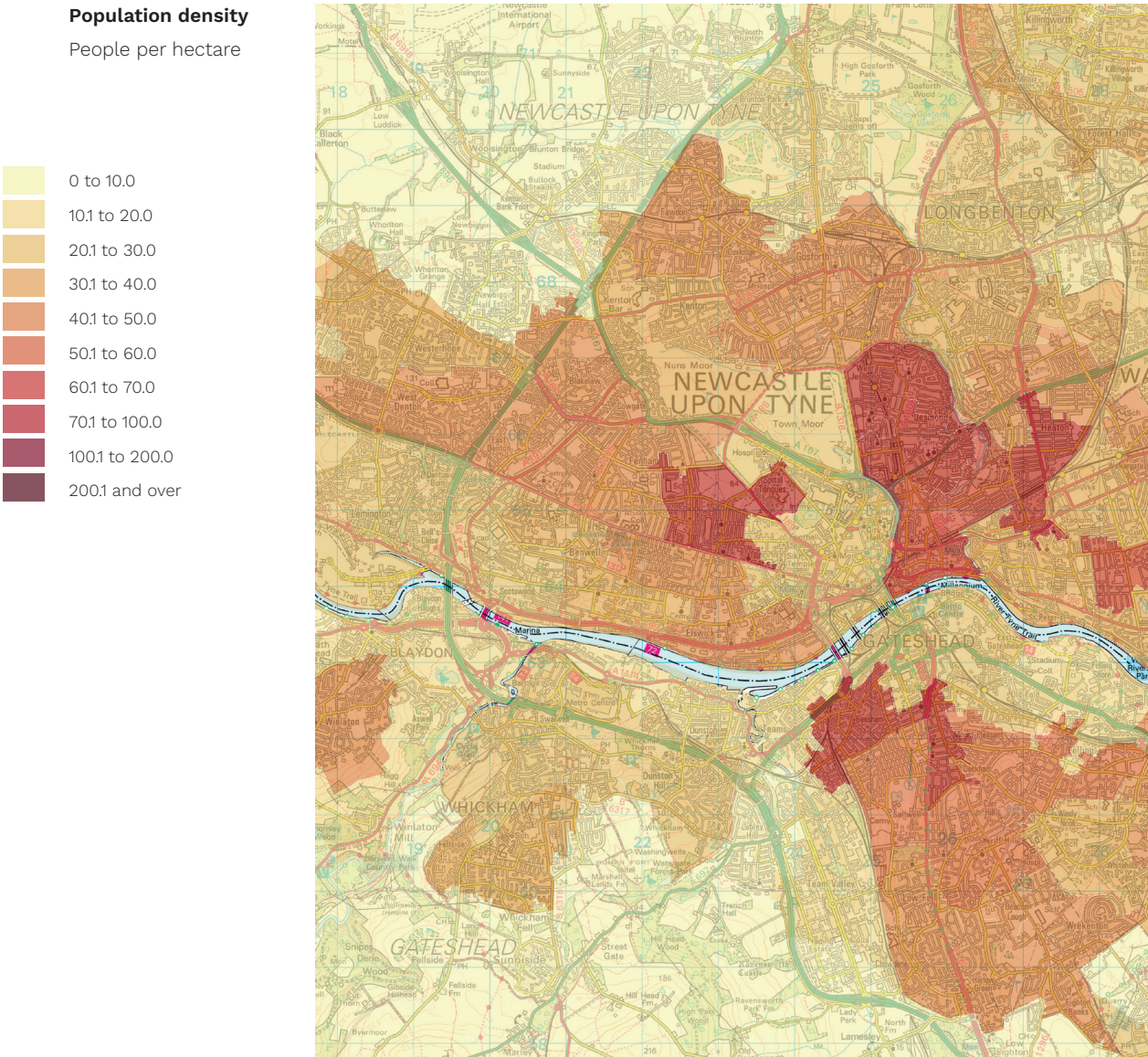


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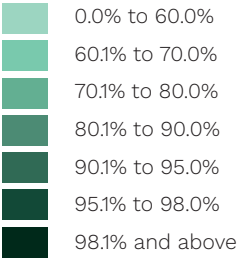
2. The context

With an estimated population of 829,000 in 2024, Newcastle upon Tyne is a rapidly growing city which saw a population increase of 7.1% between 2011 and 2021. Ethnic diversity is also increasing making Newcastle a vastly multicultural urban centre. Newcastle is a lively student hub and has a young population with a median age of 34.



Country of birth UK

Percentage of the population born in the UK



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2. The context



3. The site:

1 Charlotte Square

1 Charlotte Square is positioned in the centre of Newcastle Upon Tyne, England. The Georgian Grade II Listed building was designed by architect William Newton, circa 1770, and holds much heritage importance.

The building is one face of Newcastle's first garden square and was named after Queen Charlotte, wife of King George III. The enclosed square was originally designed as an exclusive space for the emerging industrial elite. At the time of construction, it was situated on the outskirts of the then town centre and in proximity to theatres, assembly rooms and Central Station for railway use.

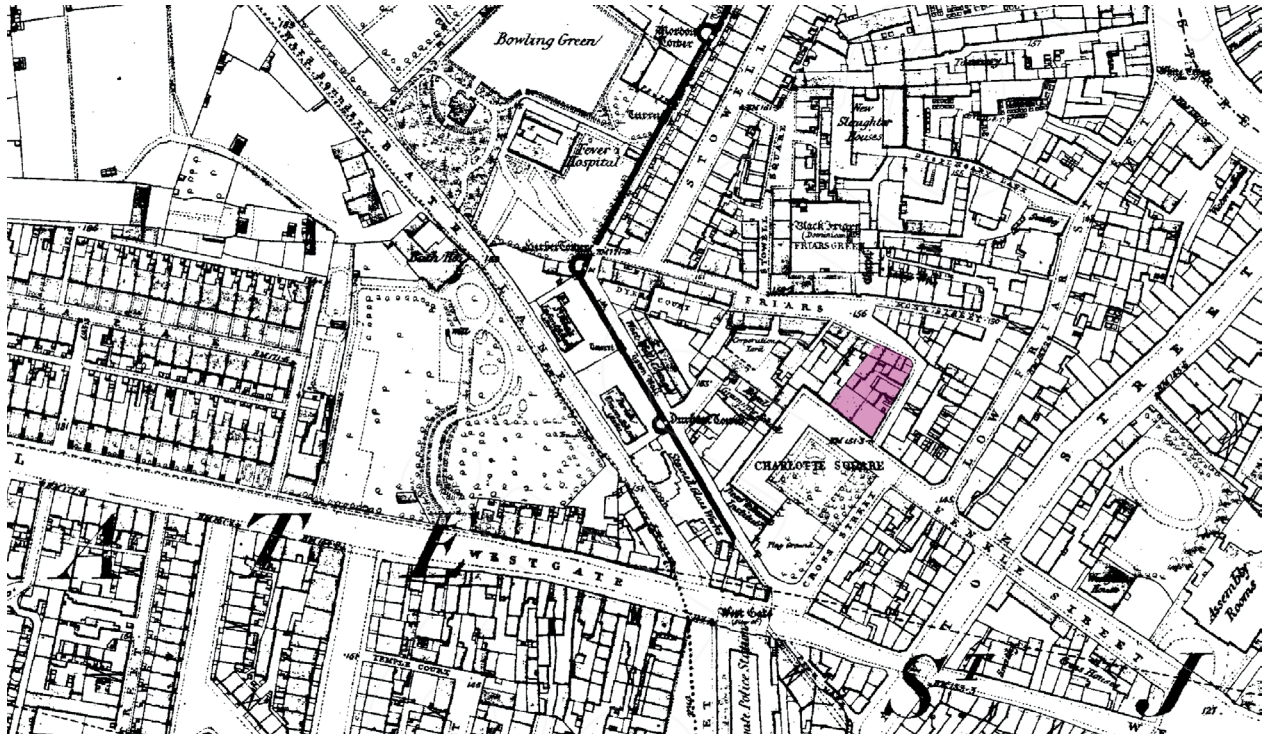
The site and the square in its entirety, were not spared development in later years and the site can be read as a palimpsestic metaphor for the city and urban development. Remnants of medieval buildings, proximate Roman escarpments and 20th century development are all present within the bricolage of the site. Comprising of an original Georgian townhouse and added perpendicular wing to the rear, the main L-shaped building shrouds the Old Coach House. Both comprise the site for the project, which seeks to consider the adaptive reuse of the total site as a coherent assemblage of buildings and spaces that speak of their collective domestic, leisure, industrial and adapted heritage.

Charlotte Square remains a charming and attractively small square, somewhat tucked away from the bustling traffic. Positioned adjacent to the site, the medieval Blackfriars was originally established as a Dominican Friary in the 13th century and is one of Newcastle's oldest surviving structures, embodying centuries of cultural and architectural evolution.

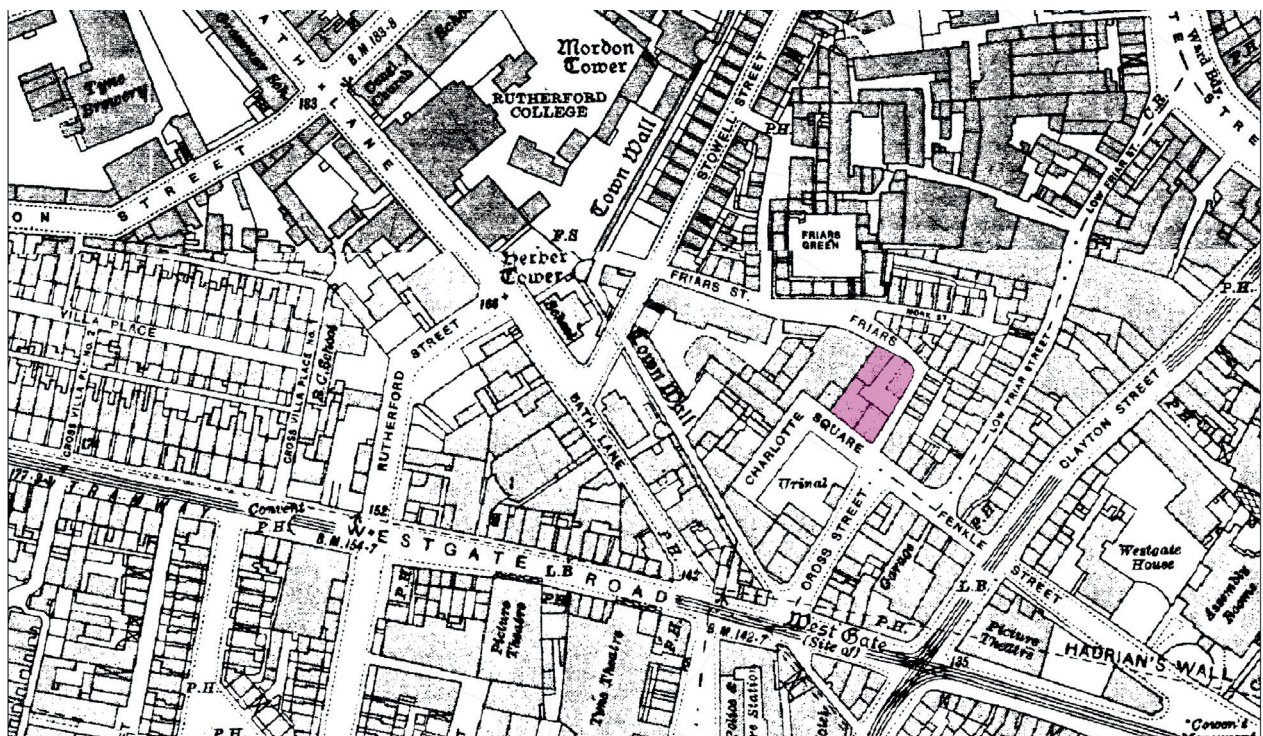
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3. The site: 1 Charlotte Square



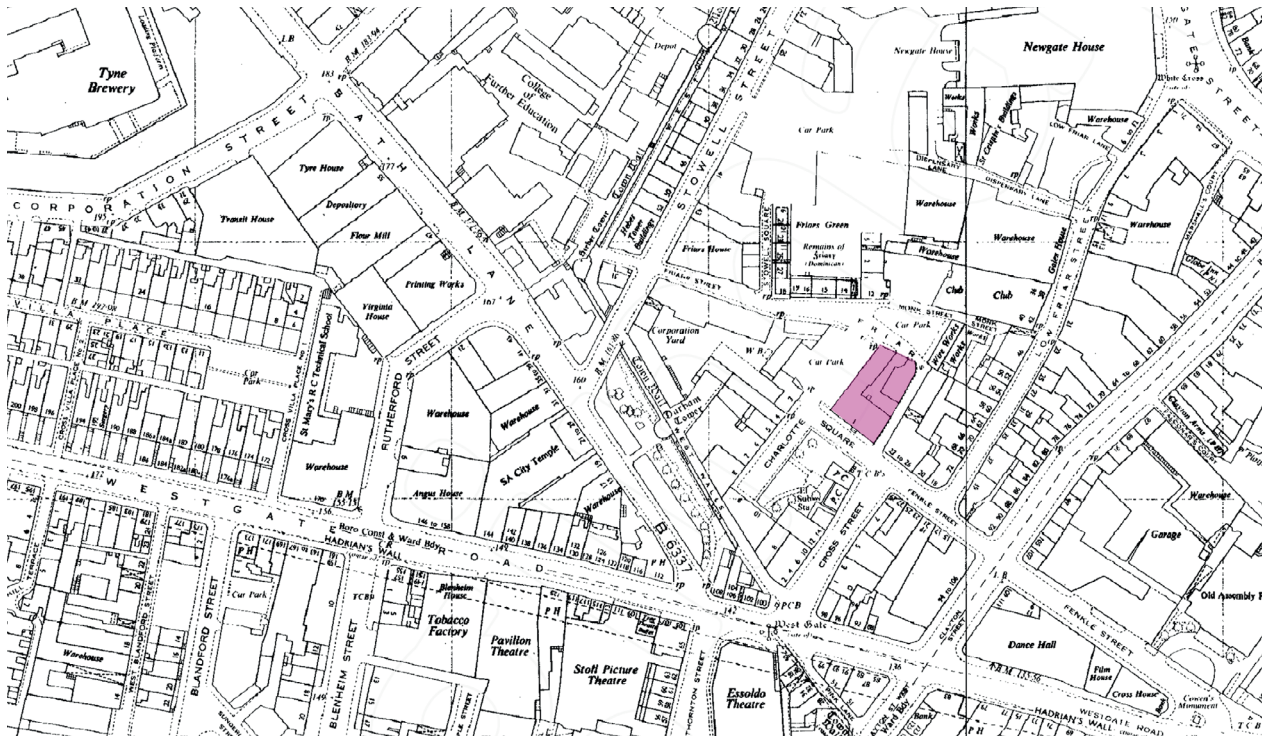
Charlotte Square, 1860



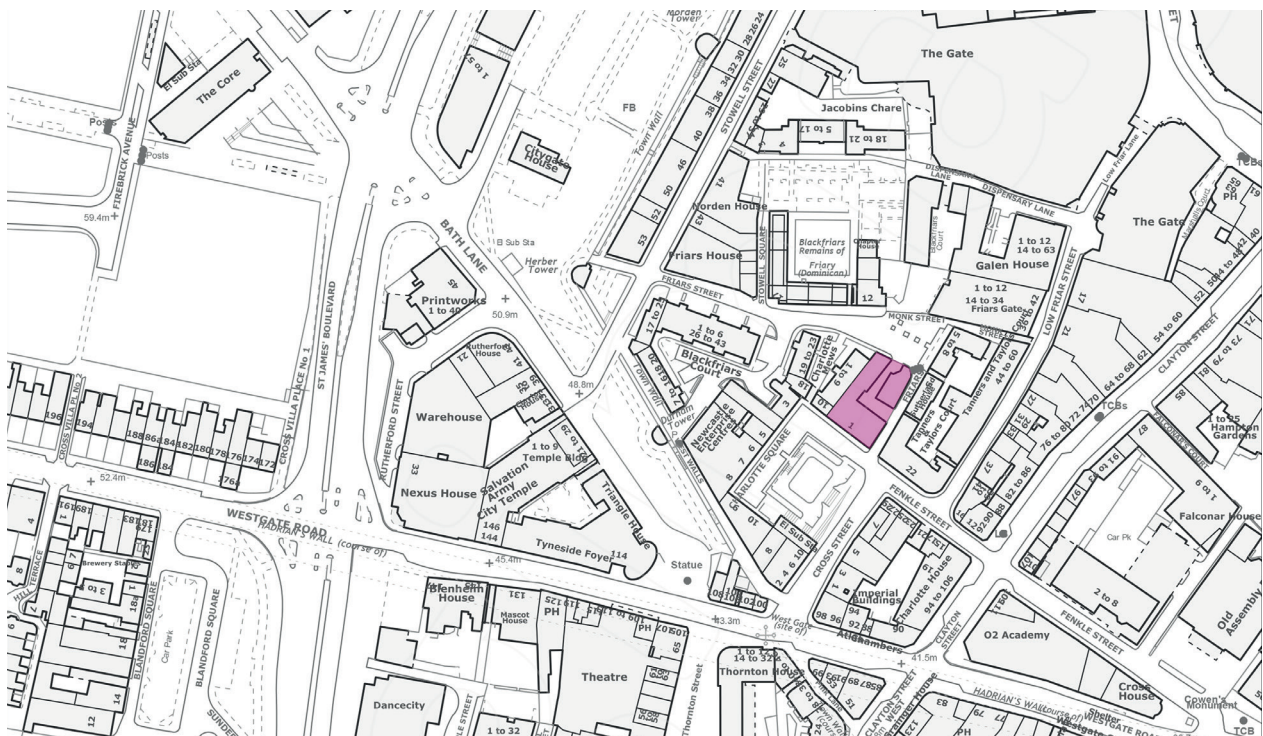
Charlotte Square, 1910

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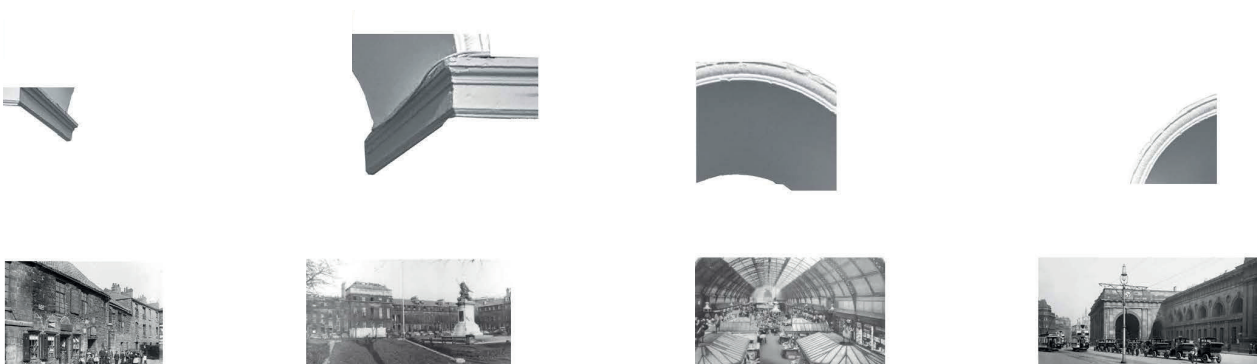


Charlotte Square, 1860

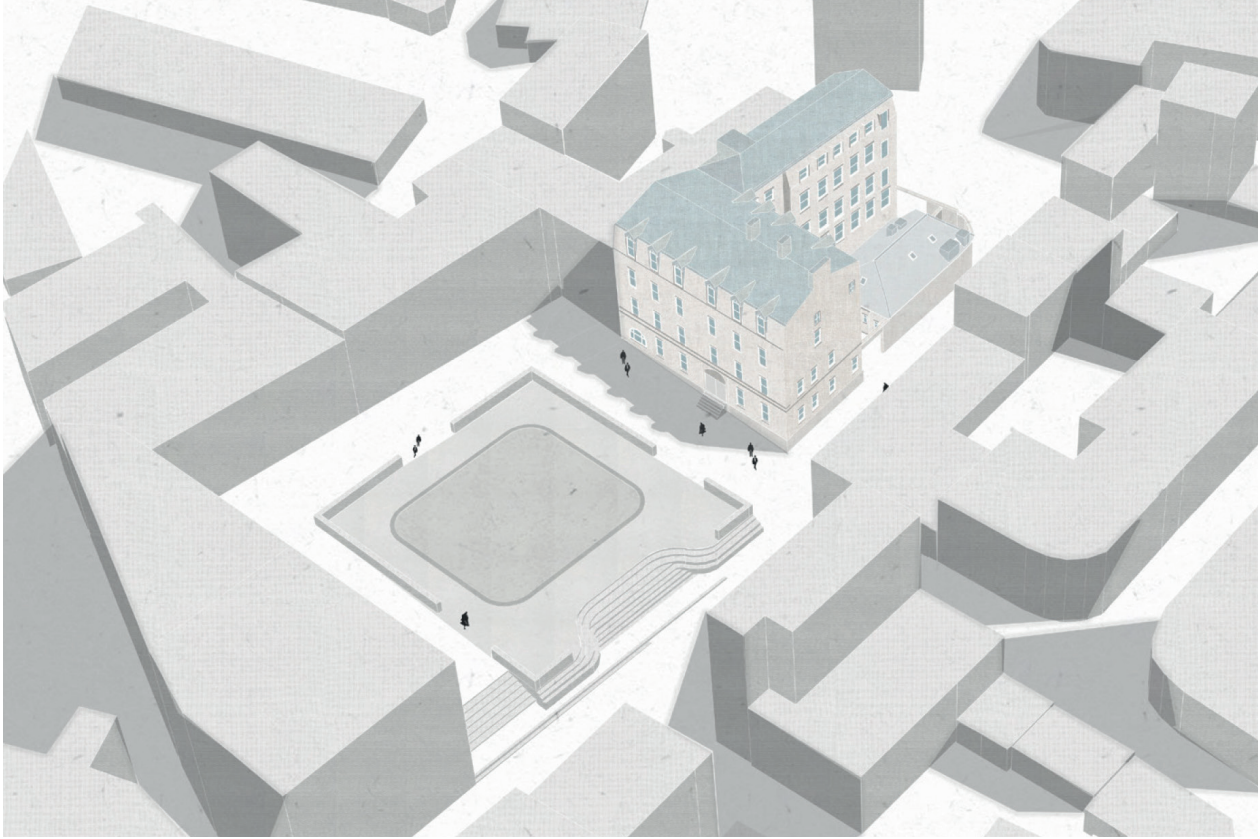


Charlotte Square, 2015

3. The site:
1 Charlotte Square



Tracing the heritage artefactual language of
Newcastle upon Tyne

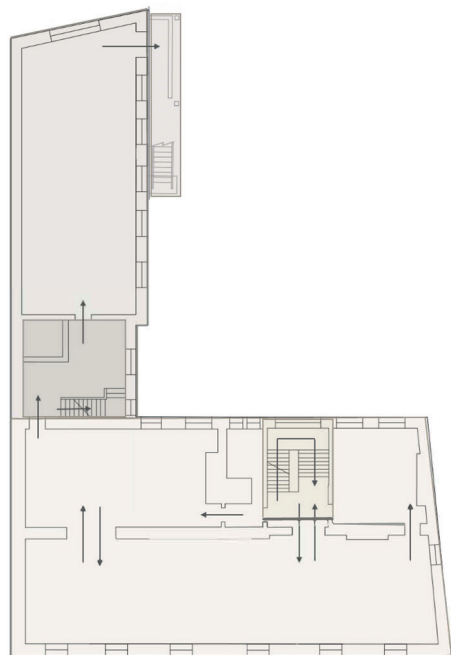


1 Charlotte Square, Newcastle upon Tyne

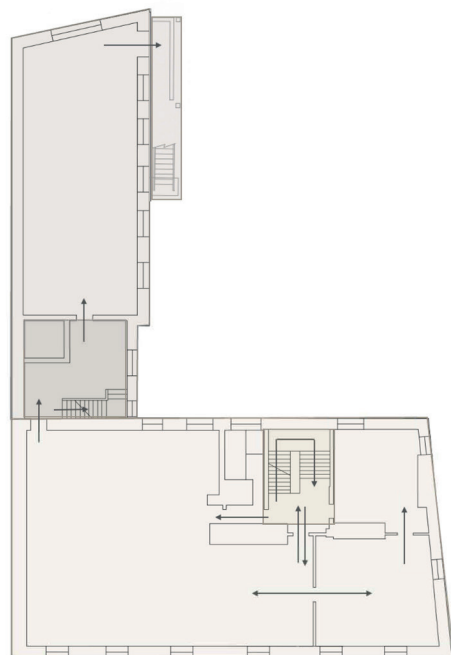


Charlotte Square elevation study

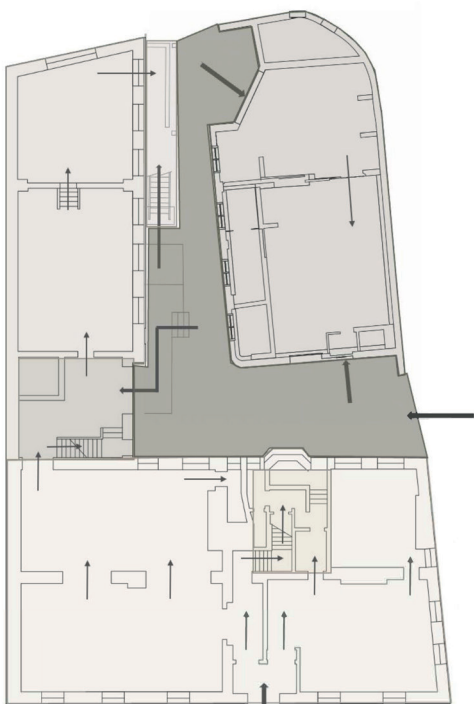
3. The site:
1 Charlotte Square



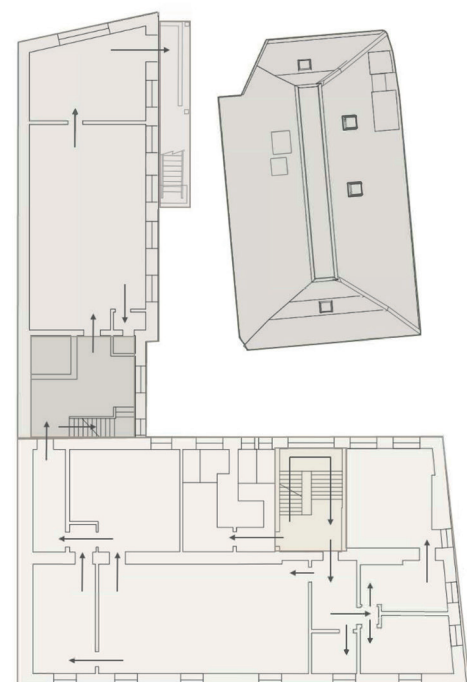
Second floor



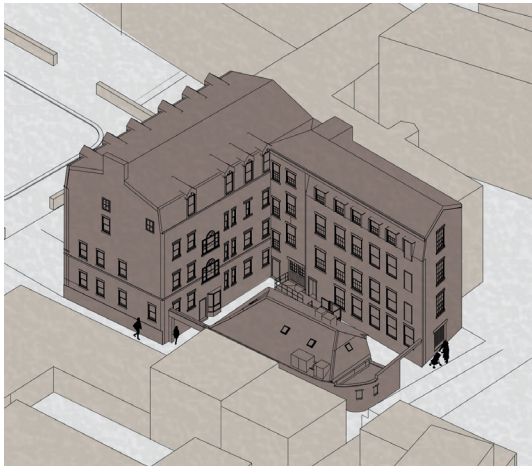
Third floor



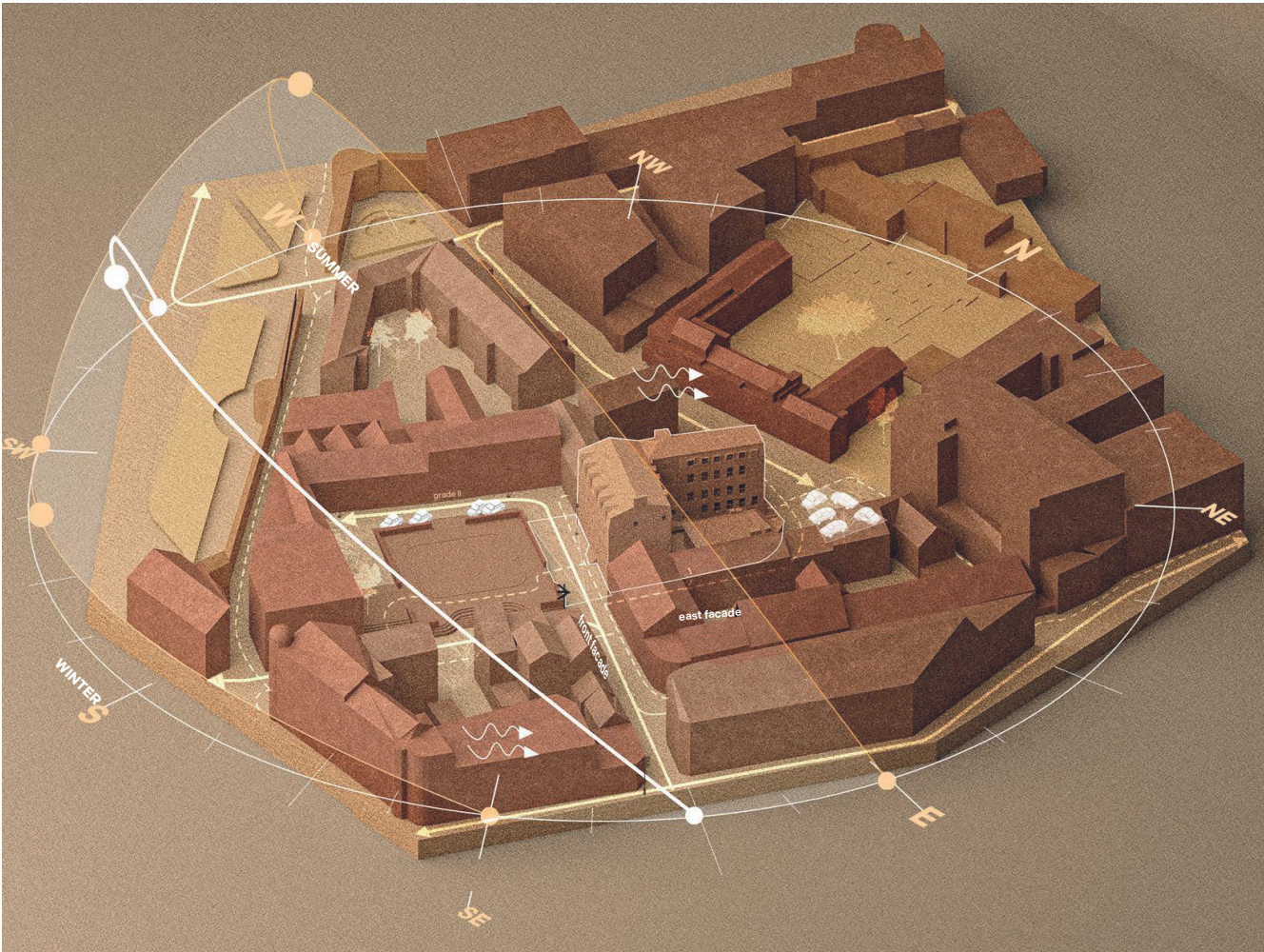
Ground floor



First floor



Old coach house and rear of the site



Site environment conditions



Grade I listed



Grade II listed



Scheduled monuments

3. The site: 1 Charlotte Square





3. The site:
1 Charlotte Square



Front entrance



Former warehouse



The old coach house; exterior



1 Charlotte Square



The old coach house & former warehouse



The old coach house & courtyard entrance



The old coach house & courtyard



Interior stairwell; 1 Charlotte Square



The old coach house; interior

4. Design/Unpacking methodology

The UK is grappling with a significant housing crisis, characterised by a chronic shortage of affordable homes, escalating property prices, and rising rental costs that far outpace wage growth. This crisis disproportionately affects vulnerable groups, including low-income families, young people, and displaced individuals, such as refugees and those experiencing homelessness. Factors such as stagnating housing supply, restrictive planning policies, and a lack of investment in social housing have exacerbated the issue, leaving many unable to access safe, secure, and stable accommodation. Meanwhile, socio-demographic shifts, including the rise of single-person households and multi-generational living, highlight a growing disconnect between housing demand and traditional housing models. The urgency to address this crisis calls for innovative solutions in policy and design that prioritise affordability, adaptability, and inclusivity.

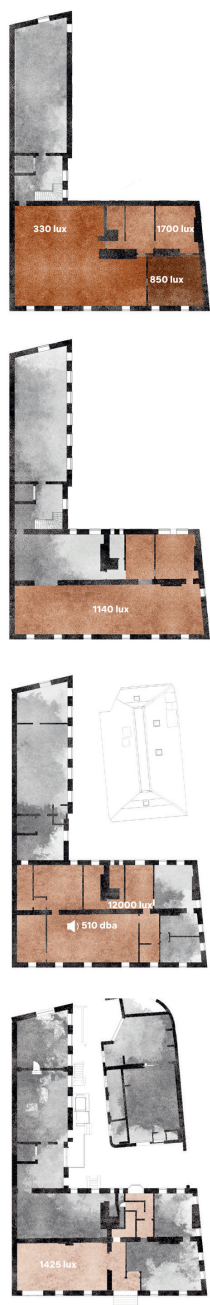
The design proposals present a set of interventions to the constituent parts that make up 1 Charlotte Square and its immediate context. Thematically, they respond to themes of affordability, unconventional households, and spatial anthropology, to reimagine the building through the principles of adaptive reuse. The proposal addresses the needs of diverse household types, including, cohabitation, single-family living, multi-generational groups, and individuals, supported by research into the regional context.

Transformations of the building into a dynamic hub combine transitional housing with community-oriented spaces that prioritise adaptability, inclusivity, and sustainability. Each thoughtful solution caters to the needs of displaced individuals while fostering resilience, belonging, and opportunity. They embrace creative reuse and sustainable practice, underpinned by design for disassembly and material honesty to breathe new life into the building.

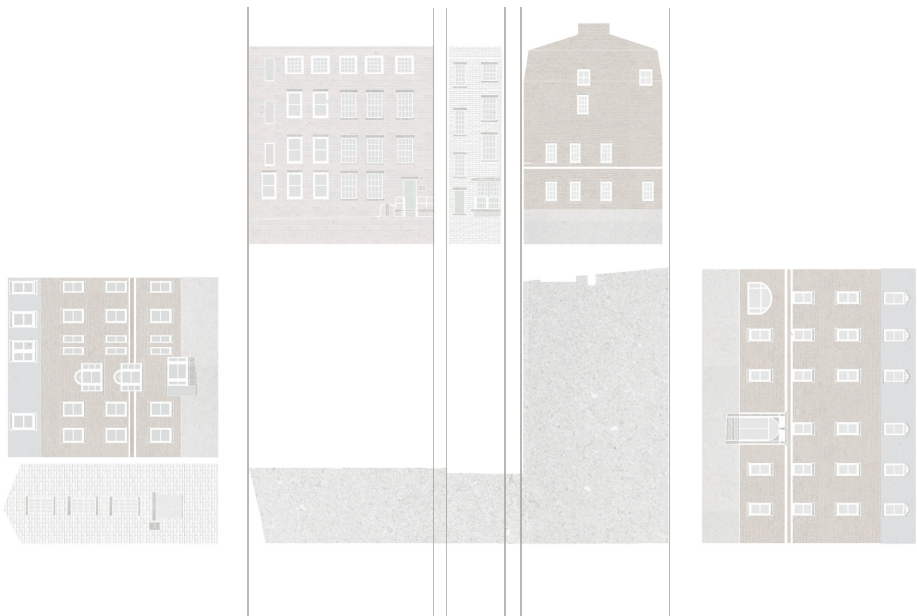
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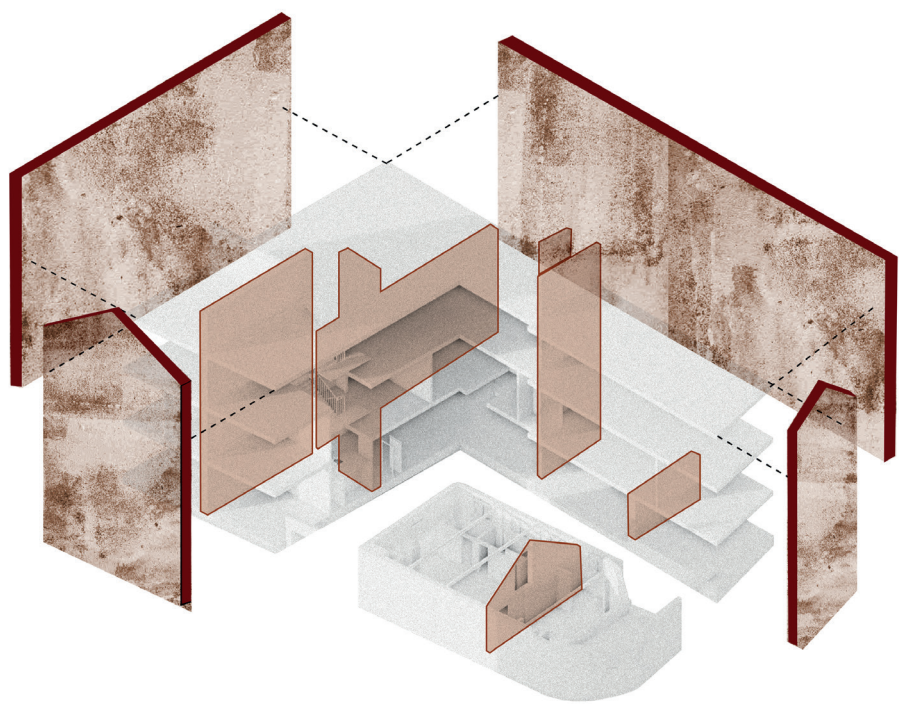
4. Design/Unpacking methodology



Site environmental analysis



Unpacking the building



Existing loadbearing walls

4. Design/Unpacking methodology

The rich historical and social context of the area, narrative and shared experiences guide the design proposals to create space that reflects the building's heritage and contemporary needs. They consider alternative ways of providing affordable and unconventional housing in an urban, heritage context, which include:

Space to receive residents and visitors

Spaces for living

Shared and communal space

Food preparation and consumption

Quiet spaces for reflection, counselling and wellbeing

Community gathering areas (e.g. workshops, co-working spaces, social agenda)

Public and community interface

Specialist spaces inform the user experience and narrative approach to projects within a reimaged, listed building for unconventional households and/or displaced individuals. They focus on the arrangement, adaptation, and interrelationship of spaces, balancing heritage space with contemporary social needs. They address a complex accommodation schedule while integrating human-scale detailing with an emphasis placed on multi-layered narratives, textural appreciation, and materiality. Key themes include:

Adaptive reuse of historic buildings

Designing for displaced individuals

Affordable and unconventional housing solutions

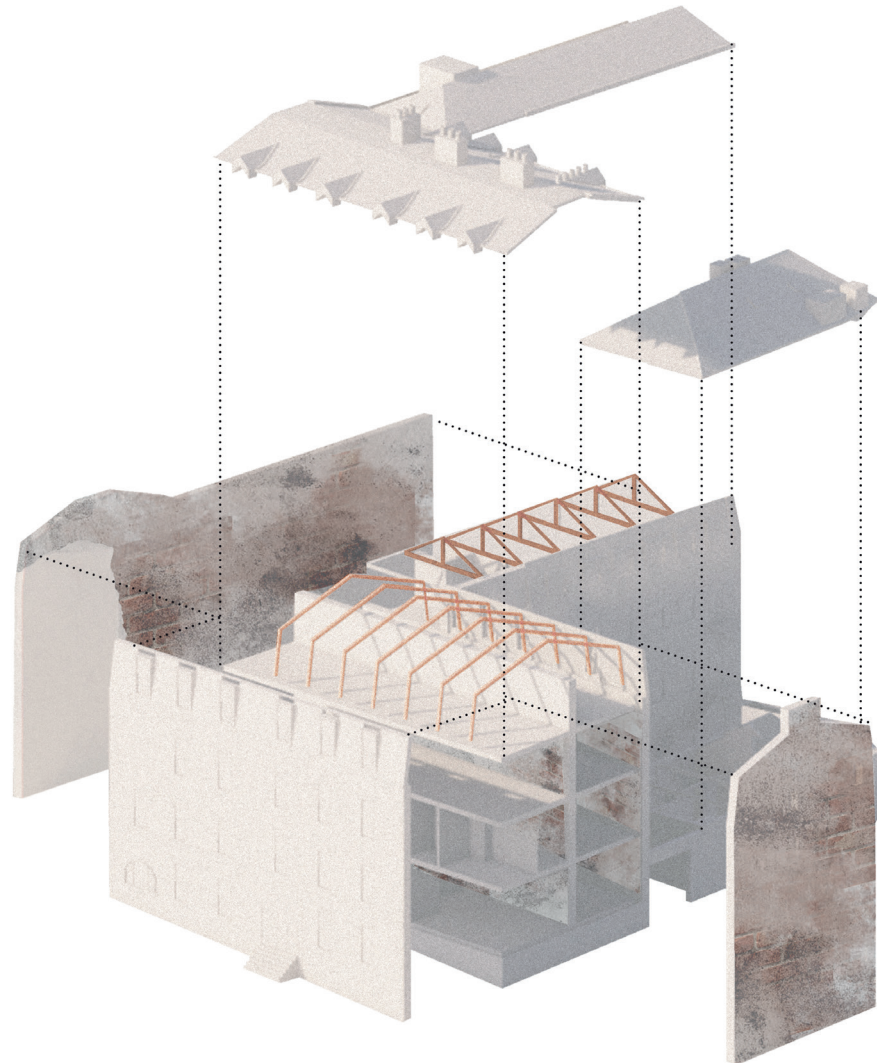
Community-building and resilience

Material and spatial storytelling

Human occupation and demountable fit-out

Adaptability, sustainability, and transformation

4. Design/Unpacking methodology



Decoding the existing building

The projects embrace the potential for interior spaces to engage, educate, and inspire users as vessels for storytelling, interaction, and adaptability. They consider housing and living spaces as more than a physical solution. They support evolving household profiles, encourage shared community experiences, and respond to socio-economic challenges through sustainable, creative, and impactful interior architectural solutions.

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4. Design/Unpacking methodology

A. SITE PHENOMENON

The adaptive reuse of heritage settings serves as a powerful approach to preserving and revitalising historical sites while engaging deeply with the broader concepts of memory, identity, and place. Design actions exist at the intersection of the material and immaterial, reading the absence of physical heritage in tandem with remnant material culture, to enhance a sense of place through imagined reinterpretations of space.

The research inquiry explores the role of adaptive reuse in maintaining the essence and aura of heritage sites, decoding the intrinsic qualities of site and their reconstitution through creative processes. By situating practice-based and phenomenological research within the design studio, the projects demonstrate how adaptive reuse preserves and transforms heritage and fosters a deeper engagement with the site's historical and spatial narratives.

The approach emphasises the importance of interpreting the sites intangible qualities – such as aura, essence, and memory – that persist within incomplete or absent heritage. It offers a nuanced understanding of heritage, where absence is not perceived as loss, but as a heightened phenomenological experience of place.



Decoding fenestration

4. Design/Unpacking methodology

B. LISTED BUILDINGS

In the UK, a listed building is one that is ‘of special architectural or historic interest’ and is not exclusive to occupied buildings. The design, decoration or craftsmanship of the building, its architectural value, its socio-economic and history significance, or an exemplar of a technological innovation are all listable definitions. Association with well-known people and events can also impact the listing of buildings.

Grade II buildings are nationally important and of special interest; 92% of all listed buildings are in this class. 1 Charlotte Square’s Grade II Listing focuses primarily on its Georgian elevations. The proposals work to retain and restore the listed building parts in unison with the adaptive reuse of the unlisted interior spaces to provide an innovative change of use for the site.

C. CHANGE OF USE

Changes to the nature of city centre use, retail, social demographics and home working have modified city centres from their 20th century role as social, residential and commercial hubs. The number of unoccupied listed buildings in the city centre of Newcastle – particularly from first floor upward – presents the city with a solution to the ongoing housing shortage. The change of under-inhabited urban buildings to housing stock, fits with a national programme to revitalise city centres by reintroducing people and businesses back into city centre spaces. The UK governments *Build Back Better High Streets* programme aims to invest £10bn to help drive the regeneration of town centres through place-shaping.



Site phenomenon collage




Heritage remnants

5. References


UAH! collects references, projects, readings, exhibitions in order to frame the broad background of the research topic. Here is a selection of references that we consider relevant to Northumbria's approach to the topic.


 Click on the title to access the pdf (if available) or the research's website.


> READING AND RESEARCH


Couture, A. & Ring, P. (2024) 'Imagined Heritage', in As Found: Booklet – Affective Restoration and Typological Strategies for Reuse, booklet presented at the As Found symposium (9–10 Sept. 2024), KU Leuven/Ghent. Hasselt: Hasselt University. Available at: <https://www.uhasselt.be/media/3augtrlu/booklet-as-found.pdf> (Accessed: 11 July 2025). 

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Northumbria University (2024) IE Practice 2024. Available at: <https://www.ie-practice-2024.co.uk> (Accessed: 11 July 2025). 

Ring, P. (2007) Re-Use and the Archaeology of Storytelling, Interiors Forum Italy/IUAV – Venice: Interiors in the Re-Habitation of Existing Buildings. In: A. Cornoldi, (Ed.) Gli Interni nel Progetto Sull'Esistente, Padova, Italy: Il Poligrafo

5. References

> PROJECTS AND PRACTICES

Lubetkin Apartment

Studio+naama
London, GB

Michelberger Hotel

Tuckey Design Studio
London, GB

Caring Wood – Multi- family settlement

Rural Office
Carmarthen, GB

Goldsmith Street

Mikhail Riches
London, GB

Grandby Four Streets

Assemble
London, GB

Gasholder Park

Bell Phillips
London, GB

Redevelopment of Three Historic Houses Bovenbouw

Architectuur
Antwerp, BE

ono architectuur

Antwerp, BE

Scheeplos

De Vylder Vinck Taillieu
Ghent, BE

PC Caritas

De Vylder Vinck Taillieu
Ghent, BE

Astley Castle

Witherford Watson
Mann
London, GB

The Rockfield Centre

Page\Park
Glasgow, GB

**UNCONVENTIONAL
AFFORDABLE
HOUSING** explores the
new possibilities of
contemporary living
at the intersection
of affordability and
unconventionality,
starting from a
reflection on existing
housing projects,
practices and policies.

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