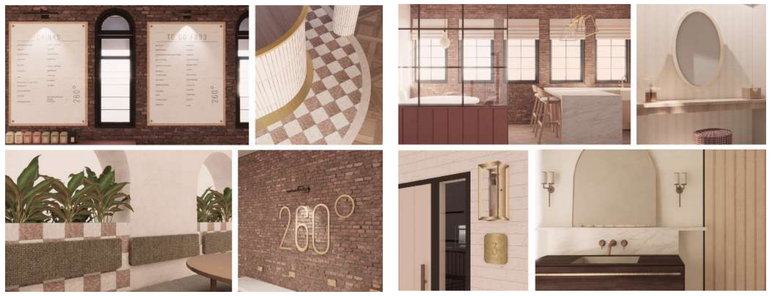


THE TEMPERED HOUSE

BRIEF
Guided by the concept of ‘Tempered,’ this project is an adaptive reuse of a former cutlery works, transforming the heritage structure into high-quality residential living. The design attains an architectural equilibrium between Sheffield’s industrial grit and refined contemporary living. The space will integrate shared amenities such as a gym, cafe, working areas and a central courtyard. The proposal demonstrates how industrial heritage can be refined rather than erased, whilst still delivering a contemporary space.

The project is located at Sellers Wheel, a Grade II listed building, in Sheffield’s Cultural Industries Quarter. This scheme is aimed at urban young professionals (25-35) who seek high quality city centre design led living. This scheme will cater to individuals who value heritage, material quality and amenity led lifestyles supporting their work, wellbeing and urban living.

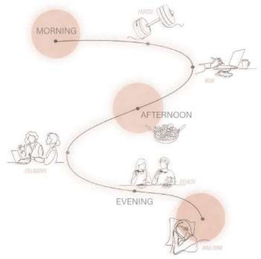
This proposal responds to Sheffield’s over-reliance on student housing by providing a dedicated residential hub for young professionals. Despite a 42% graduate retention rate, the city centre lacks high-quality, long-term accommodation. The proposal is situated within Sheffield’s current phase of regeneration, a £470 million project, rather than a ‘knock down and rebuild’ approach this scheme has focused on the refurbishment and reuse of historic buildings such as Leah’s Yard and Cambridge Street Collective.

CONCEPT

Tempered

TEMPER
01.
To improve the hardness and elasticity of metal through controlled reheating and cooling, achieving a balance between brittleness and ductility.
02.
The process of refining raw strength to make it suitable for long-term use, balancing structural power with comfort and control.

The concept Tempered explores how Sheffield's industrial past can be refined and controlled to support modern inhabitation. By retaining the heritage while introducing calm, luxurious interiors, the project balances strength and durability, much like the tempering of metal, to refine Sheffield's industrial architectural and cultural heritage.



Urban Living

Sellers Wheel is located in the heart of Sheffield's Cultural Industries Quarter. Situated on Arundel Street, the site provides excellent connectivity with it being a short walk from Sheffield railway station and the main bus interchange. Surrounded by a range of buildings such as creative studios, residential developments, and academic institutions Sellers Wheel serves as a key architectural anchor within this vibrant, regenerated urban area.

Urban Living Distribution

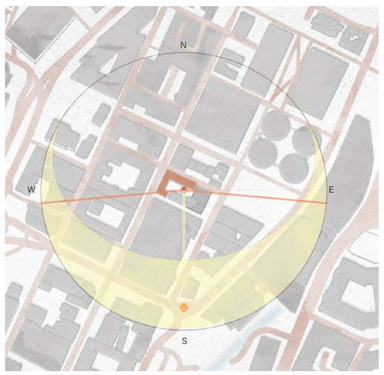
The current City Centre is dominated by Student Accommodation with a lack of high-quality, long-term options for young professionals. The project aims to fill this gap by offering premium living for the 24–35 demographic, providing an alternative to the basic apartment.

- Hotels
- Apartments
- Student Accomodation

Demographics

The City Centre is currently dominated by the 15–24 age group (49%). While Park Hill and Wybourn maintain a strong professional foothold (19.5% aged 25–34), there is a clear lack of tailored housing for this demographic in the immediate urban core.

- **City Centre**
  Majority (49%) aged 15-24
- **Park Hill and Wybourn**
  Majority (19.5%) aged 25-34



Sun Path

Influenced by its high density urban context, the sun path travels across the southern sky, providing sunlight onto Arundel Lane and the central courtyard, casting varied shadows throughout the day. During the Summer solstice months the sun will penetrate deeper into the courtyard, maximizing natural illumination. In contrast, the low winter sun creates elongated shadows cast by the urban surroundings, resulting in a more sheltered microclimate.

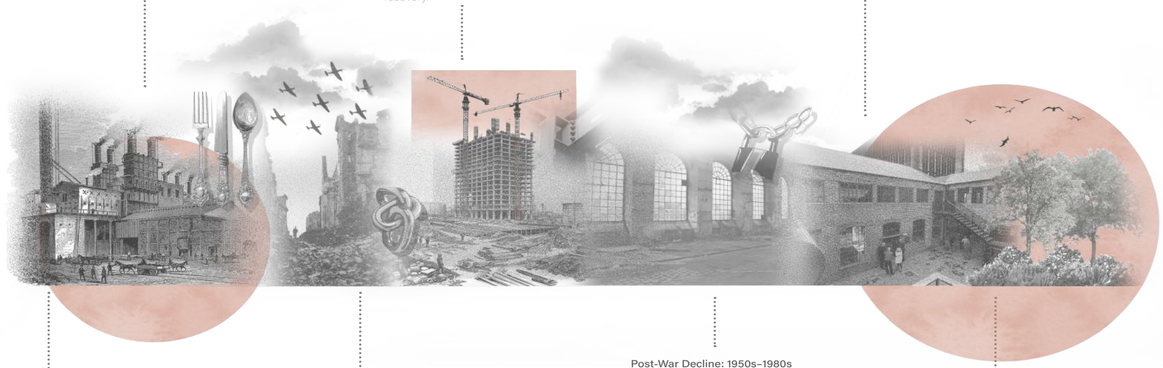
Timeline

SITE

Industrial Peak: Early 20th Century
Sheffield becomes internationally recognised as the "Steel City," with large-scale manufacturing factories shaping its skyline. Sellers Wheel becomes the long-term home of John Sellers & Sons, producing fine cutlery, razors, and engraved steel plates, contributing to Sheffield's reputation for metal craftsmanship.

Post-War Reconstruction: 1945-1950s
Following the Second World War, Sheffield undergoes rapid reconstruction, prioritising functional rebuilding of industrial infrastructure and housing to support economic recovery.

Regeneration: 1990s - Present
Former industrial buildings are repurposed for residential, cultural, and commercial use, redefining Sheffield's industrial heritage. In 1995, Sellers Wheel is designated a Grade II Listed Building, recognising its architectural and cultural significance.



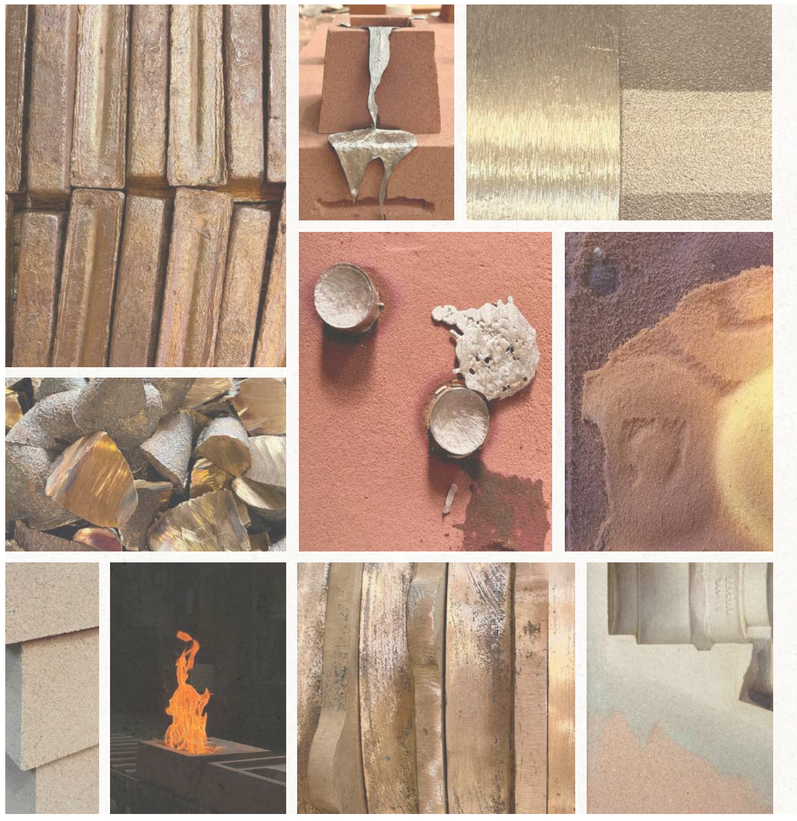
Industrial Cutlery & Craft: 18th–19th Century
Sheffield establishes its identity through steel and cutlery production. Sellers Wheel was constructed in the late 1800s as a three-storey brick cutlery works, purpose-designed to accommodate Sheffield's steel manufacturing process, from heavy manufacturing at ground level to fine finishing above.

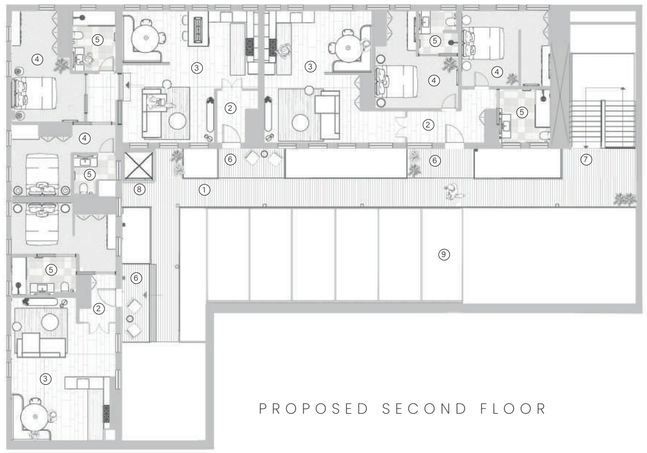
Destruction The Sheffield Blitz: 1940s
Heavy bombing targets steel and manufacturing infrastructure, causing widespread destruction to industrial buildings and surrounding communities.

Post-War Decline: 1950s–1980s
The collapse of traditional industries leads to factory closures, unemployment, and the abandonment of industrial buildings across the city. Sellers Wheel reflects this decline, as industrial production slows and the building falls into disuse.

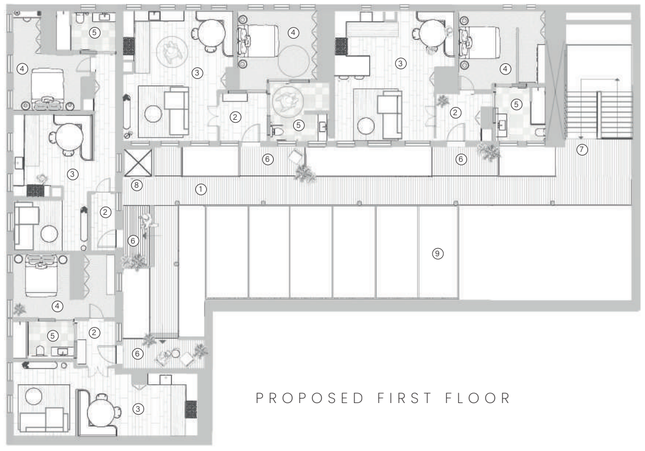
Adaptive Reuse: 2011–Present
Industrial structures are refined to support modern living and culture, balancing heritage, durability, and comfort. A major restoration by Cartwright Pickard transforms Sellers Wheel into a mixed-use development. The introduction of spaces such as Tamper Coffee reflects the wider trend of repurposing industrial buildings for contemporary use.

MATERIALITY

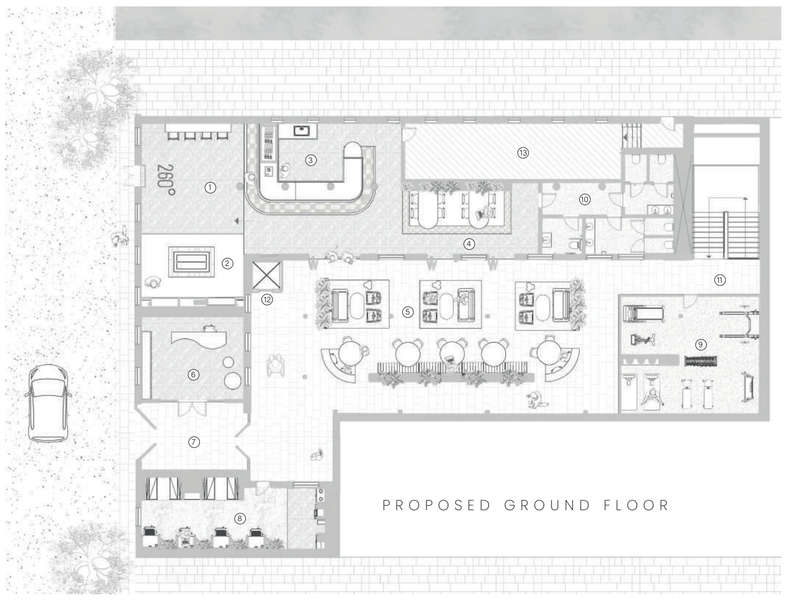




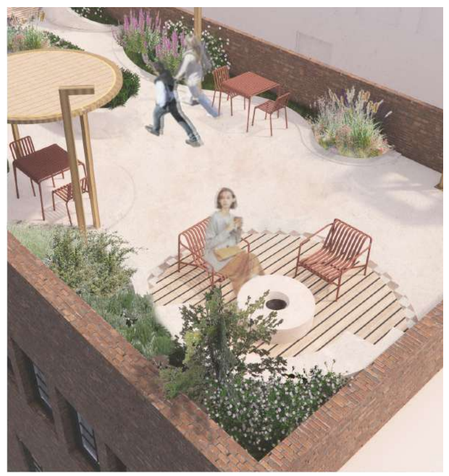
PROPOSED SECOND FLOOR



PROPOSED FIRST FLOOR



PROPOSED GROUND FLOOR



Blue-Green Roof

Within the scheme a Blue-green roof has been incorporated. This eco-friendly feature combines rainwater (blue) with vegetation (green), creating a sustainable, dual-purpose system for urban buildings. They store rainwater in a layer beneath the vegetation, allowing it to be slowly released or used for irrigation. Not only does this reduce flood risk but provides an additional thermal insulation layer for the building underneath. Blue-green roofs are considered sustainable because they transform a building's roof into a multi-functional climate tool that manages water, saves energy, and supports nature all at once.

260°

SECTION