

# Archio

## Design and Access Statement

Angel Yard Cohousing  
Sussex Street, Norwich, NR3 3DG

May 2022

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Angel Yard Cohousing

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## Contents

1. Introduction	3
2. About Archio	4
3. Scheme Overview	5
4. Client Brief	6
5. Site Context, Opportunities and Constraints	7
6. Design Evolution	16
7. Proposed Development	22
8. Sustainability Strategy	44
9. Access	45
Appendix. A Schedule of Accommodation	46
Appendix. B Response to Pre-App	47
Appendix. C Tree Studies	51

# 1. Introduction

Archio have prepared this Design and Access Statement to support a Full Planning Application for new cohousing on an allocated site at 70-72 Sussex Street, Norwich, NR3 3DE.

This is a significant project for Norwich. It brings forward high-quality, custom built, environmentally and socially sustainable housing that will diversify the area's housing offer. The proposed courtyard of homes will complete the streets in this important area of the city, and will reflect the wider character of Norwich.

This statement describes how Archio have developed the proposals alongside TOWN and the future residents from Sussex Street Cohousing through a series of co-design workshops. It also describes how Archio have developed the proposals to respond to pre-application advice from the Senior Planning Officer, Sarah Hinchcliffe, and the Conservation Officer, Jessica Jenkinson (See Appendix B).

## **Project Team**

Planning and Development Management - TOWN

Quantity Surveyor - Crowle Consultancy

M&E & Sustainability Consultant - Joel Gustafsson Consulting

Structures & Civils - Simple Works

Heritage Consultant - Icení

Transport Consultant - Civic

Fire Consultant - Design Fire Consultants

Air Quality and Noise Consultant - Logika

## 2. About Archio

At Archio, we imagine a better quality of life for everyone. We think that access to decent homes, buildings and spaces provides the foundation to help us grow as individuals and as communities.

We were founded with a mindset that design should be used to tackle major societal challenges. We seek out opportunities to progressively shape a better, more sustainable and more inclusive world for now, and for future generations.

We listen and respond to the everyday issues people face in their neighbourhoods, because we recognise that good design can have a transformative impact on physical and emotional health.

We believe that regeneration is most effective when design teams, councils and local communities co-produce visionary approaches that enrich lives. We are focused on working with purpose-led clients, like Sussex Street Cohousing and TOWN, who have a long-term interest in the vitality of the communities they operate in.

**Top and Bottom Left:** Temple Gardens, Somerset

**Top Right:** Becontree Avenue, Barking

**Bottom Right:** Brasted Close, Lewisham, community engagement



### 3. Scheme Overview

The proposal is for 34 homes and common facilities in three buildings around a common courtyard garden:

#### **Oak Street Building**

The four-storey Oak Street building contains the common house at ground floor and 12 flats on the upper floors. The common house incorporates a common room, a shared kitchen and laundry and two multipurpose guest bedrooms. The Oak Street building also contains the main stair and lift, a new electricity substation and the communal refuse store.

#### **Sussex Street Building**

The Sussex Street building contains 16 flats over four floors.

#### **Chatham Street Terrace**

The Chatham Street Terrace comprises 6 two-storey plus attic storey three-bedroom houses.

The proposed development also includes parking for 9 cars, including 1 accessible parking space, and secure cycle parking.

Refer to the schedule of accommodation (Appendix A) for a breakdown of the flat and house sizes.



**Below and Above:** Illustrative views of the proposed development



## 4. Client Brief



Cohousing is a form of intentional community in which people make a positive choice to live together in a neighbourly and mutually supportive way. In cohousing communities, each household has its own private dwelling, and all households share additional community facilities within a 'common house'. Outside amenity space is often pooled to create a large shared garden, and car parking is kept to a minimum and out of the way. For increasing numbers of people, cohousing is a response to the need to live in greater harmony with nature, reduce carbon emissions and combat loneliness and isolation.

Sussex Street Cohousing is a group of now over 30 members. They bought the application site in 2015 and have been working with enabling developer TOWN since 2019 to bring forward plans to realise their vision of *"creating a diverse, sustainable cohousing community in Norwich, to enrich lives and improve wellbeing through cooperation, respect and kindness to people and the planet"*.

The members are committed to cohousing because they want to live more sustainably through sharing resources and costs. Accordingly, the client brief details the group's aspirations to integrate a shared laundry, a 'library of things', communal waste management, energy generation and storage and car-sharing.

The brief also sets high sustainability design targets including:

- Natural and sustainable construction materials
- Homes aiming to achieve Passivhaus low energy standards
- Integration of renewable energy sources such as solar PVs
- Minimisation of embodied carbon as well as operational carbon

**Right:** Sussex Street Cohousing members reviewing plans at a codesign workshop



# 5. Site Context; Opportunities and Constraints

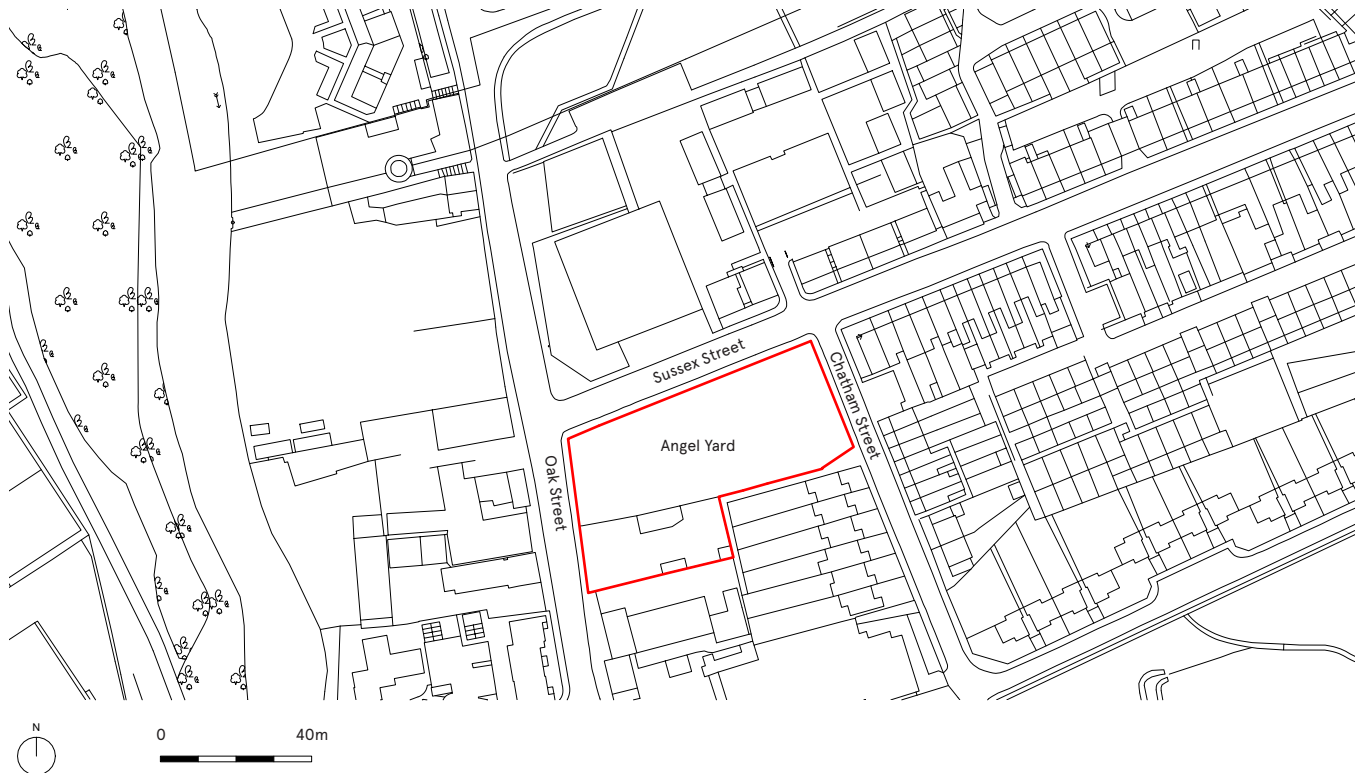
## 5.1. Location

The site is a vacant plot in the 'Norwich Over the Water', north of the City Centre and in the local area of St Augustine's. It sits within the Norwich City Centre Conservation Area and is adjacent to the Northern Riverside Conservation Area. The area has an established residential community but also several light industrial and related sites which are in the process of transition to a more residential pattern of use.

Please refer to the separate Heritage and Townscape Assessment for a full description of the site and proposals in relation to these conservation areas.

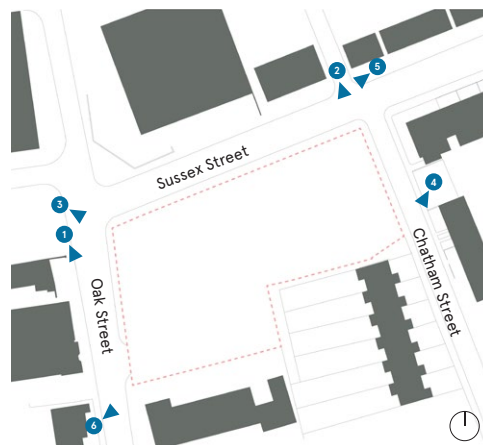
Key features of the immediate context are highlighted in the site photos on the following pages.

Below: Site location map



## 5.2.1. Site Photographs

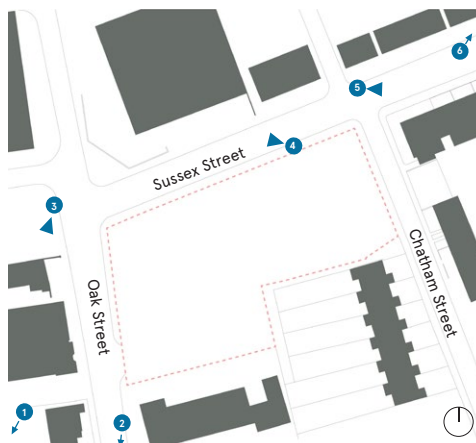
Right: Site photographs taken in October 2019





## 5.2.2. Context Photographs

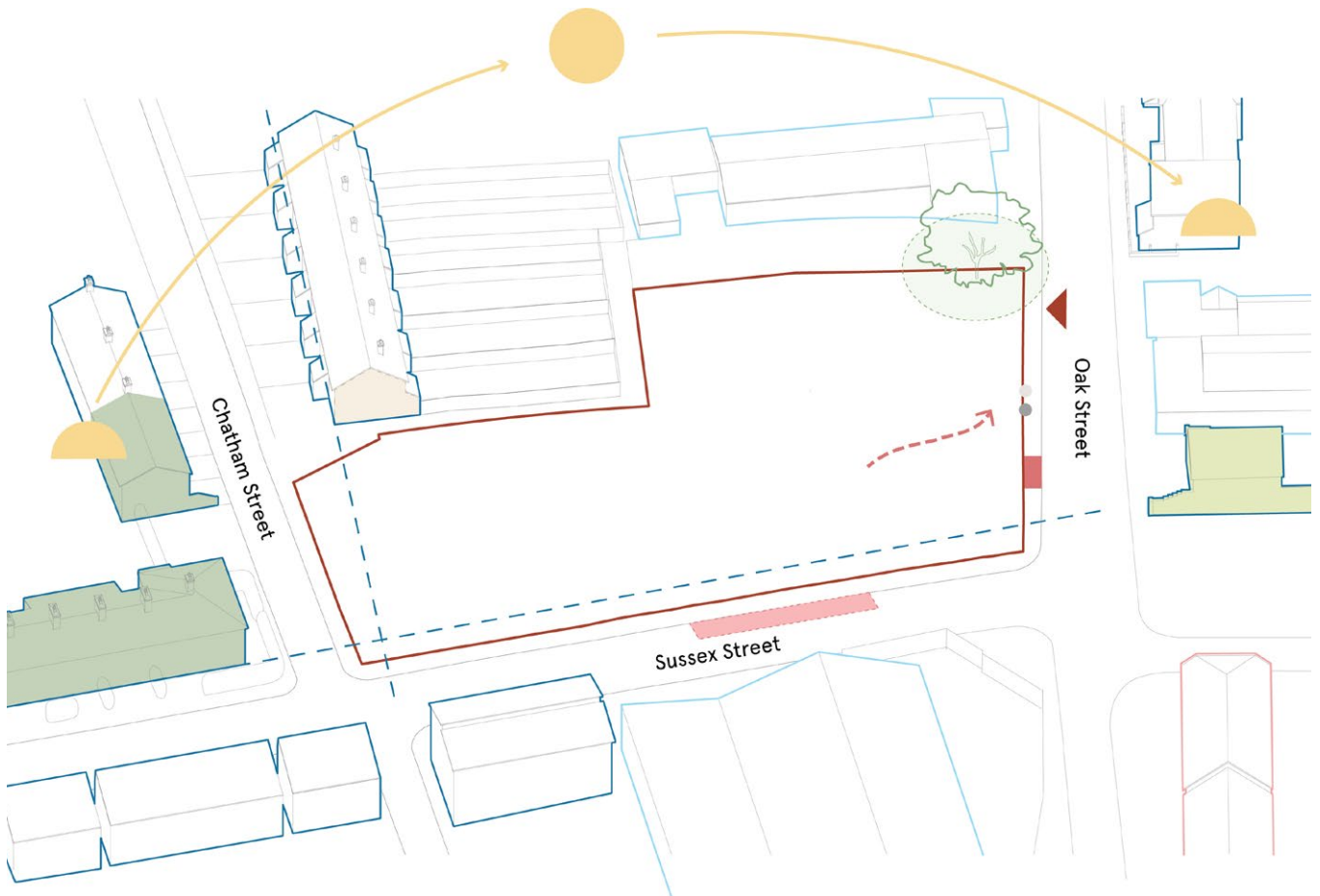
Right: Photographs of the surrounding context taken in October 2019



### 5.3. Opportunities & Constraints

**Below:** Site opportunities & constraints diagram

The site has several opportunities and constraints. These are highlighted on the diagram below, and are described in more detail on the next page.



#### Key

- Site boundary
- - - 1.3m level change
- - - Established street line
- ▶ Current vehicles access
- Sun path movement
- Industrial buildings (mostly 1-2 stories)
- New residential development (mostly 3 stories)
- Residential buildings (mostly 2-3 stories)
- Statutory listed buildings
- Locally listed buildings
- On site tree root protection area
- Dropped kerb
- Street parking area
- Telegraph pole
- Meter box
- Blank facade to Chatham Street house



## 5.3. Opportunities & Constraints - Continued

### Street Edges

The site is surrounded and clearly defined by existing street edges. In addition to allowing easy access for pedestrians and servicing vehicles such as refuse lorries and fire tenders, this presents the opportunity for the development to create an active street frontage by reinstating the missing street edges. In doing so, the development is also able to establish a precedent for the likely redevelopment of nearby sites with similar conditions.

### Surrounding Context

Surrounding buildings, while predominantly two-to-three storeys in height, are mixed in scale and type. To the east, the locally-listed terrace on Sussex Street creates a historic building line parallel to the street edge. To the south on Chatham Street the 20th century terraced houses are designed with a car parking forecourt so these homes are set away from the street edge. This is not typical of the development pattern elsewhere in this area, creates a poor street condition and should not be repeated.

To the north and west of the site the urban landscape is more piecemeal with semi-industrial buildings, 20th century flat blocks and housing sites in development providing the setting for the Listed Great Hall building on Oak Street.

### Orientation

The site has no street frontage to the south which means that the principal rear orientation of most dwellings will be south-facing. This will help with the solar gain needed to heat these homes passively and will create good amenity for residents. The centre of the site, where a communal garden is proposed, is orientated well to receive lots of sunlight, without overshadowing.

### Topography

The site is predominantly level, with a 1.5m level change sloping down towards Oak Street. This requires careful consideration to ensure level access to all dwellings and within the shared garden.

### Vehicle movements

Sussex Street and Chatham Street are quiet residential streets, whereas Oak Street receives the most passing vehicle traffic. There are two dropped kerbs, one along Sussex Street and one on Oak Street. Some street parking exists on Sussex Street.

### Tree

There is a willow tree in the south west corner of the site. Refer to Appendix C. and to the Landscape Design Statement and the Arboricultural Impact Assessment for the proposed justification for removing and replacing this tree.

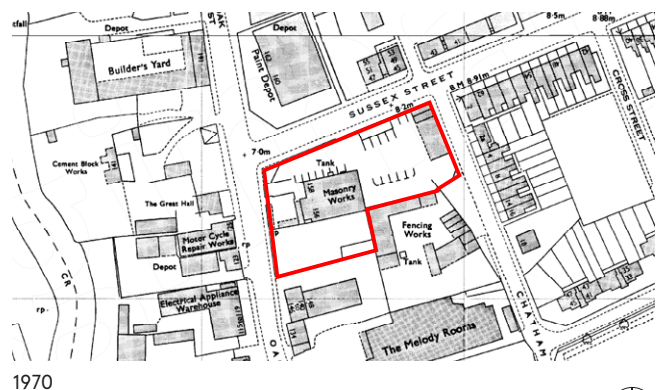
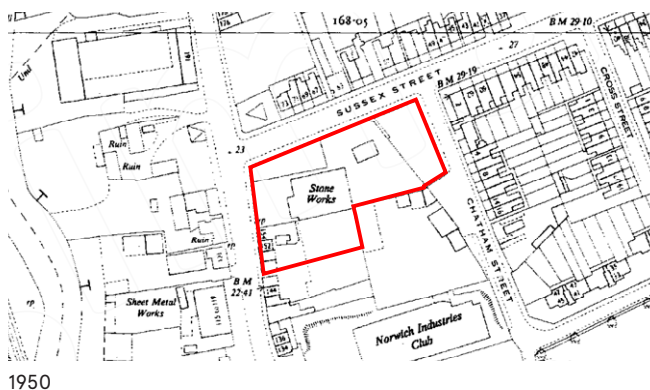
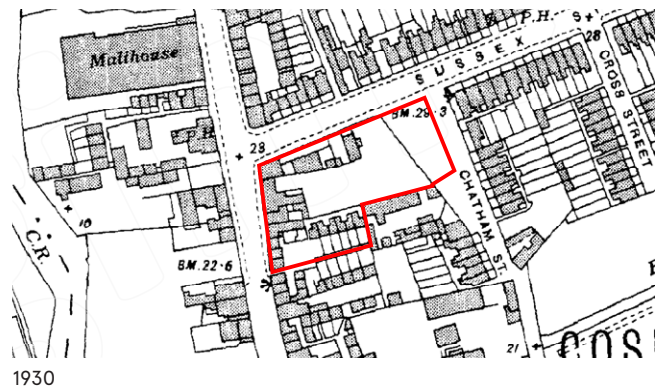
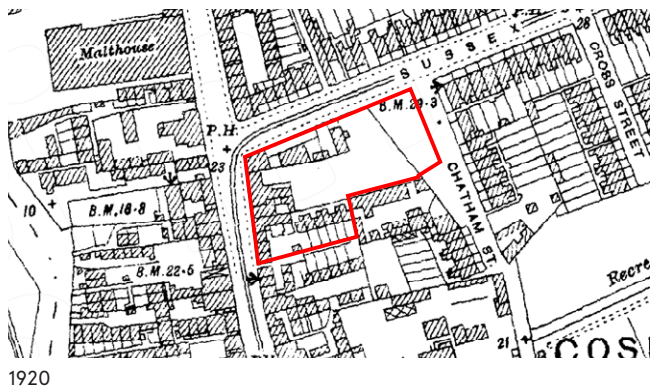
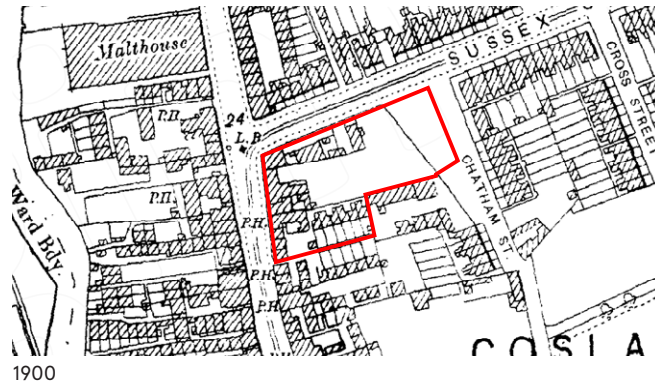
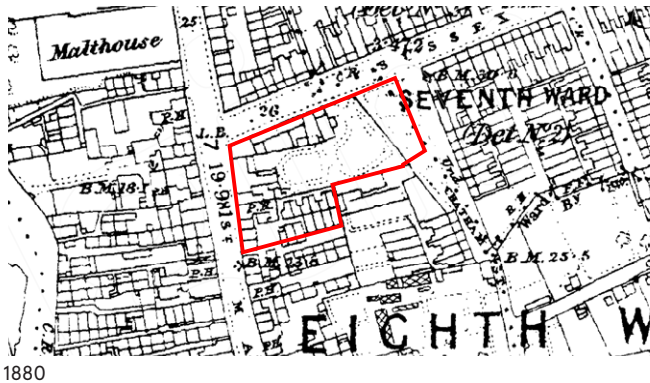
## 5.4. Historic Development

The historic development of the site is described in detail by Icení in the Heritage and Townscape Assessment.

The historic maps on this page show that the historic development on the site was concentrated up against the Oak Street and Sussex Street frontages and that the middle of the site was left open. The historic aerial photo on the following page shows that this open space was once wooded. The proposal to plant semi-mature trees within the central common garden courtyard will partially reinstate this condition.

The site was most recently occupied by an industrial building, which was demolished in 2009. This had replaced a terrace of sixteenth/seventeenth and nineteenth-century terraced buildings sometime around 1950.

Below: Historic OS maps

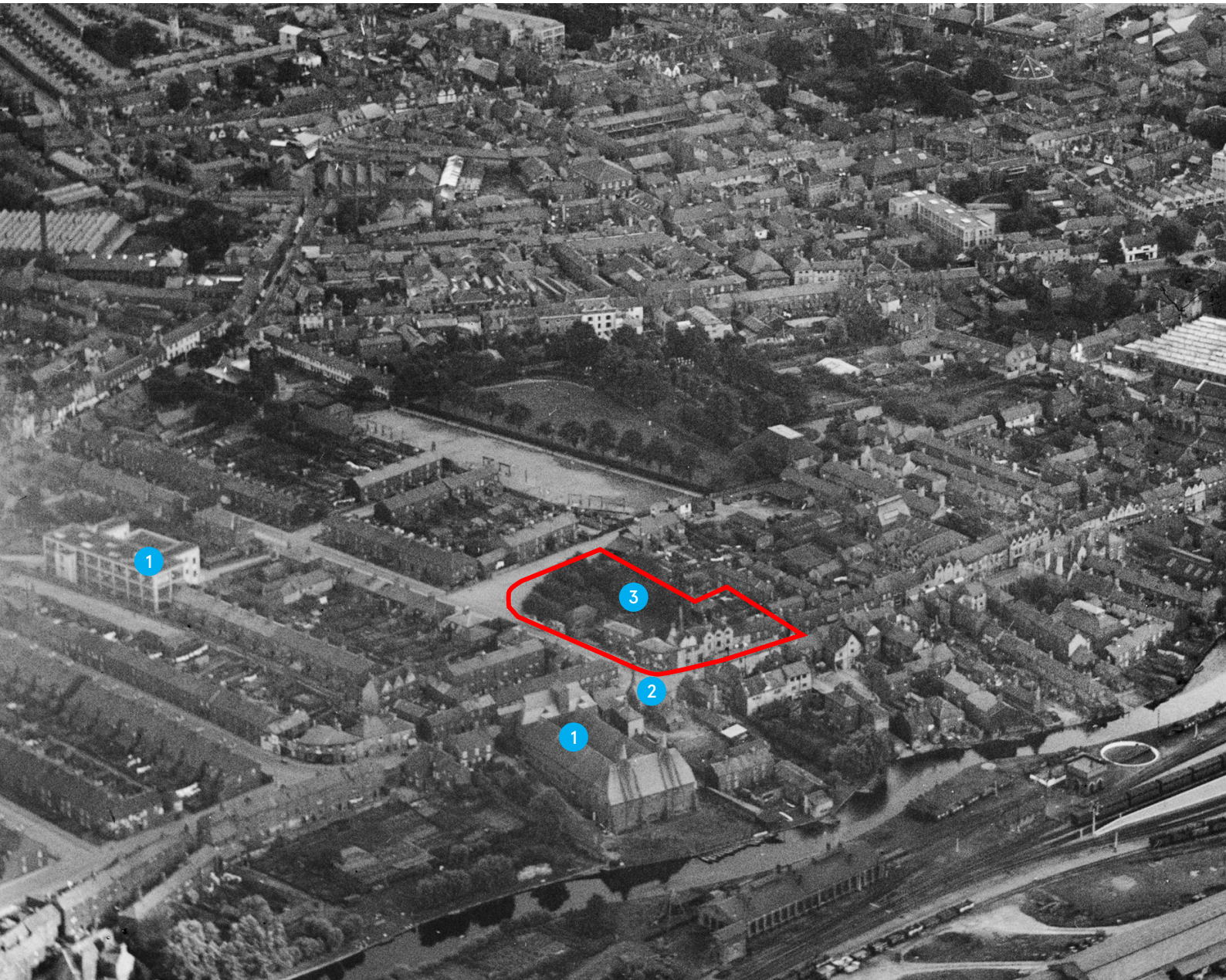


## 5.4. Historic Development - Continued

The aerial photo on this page shows the site around 1926. The key features are:

1. A mix of scales and types - two to three storey terraces interspersed with larger buildings
2. Curved shop fronts on both corners of the Oak Street and Sussex Street junction
3. Development on the site concentrated up against the Oak Street and Sussex Street frontages with open wooded space behind

**Below:** Aerial photo looking south east taken around 1926



## 5.4. Historic Development - Continued

The historic photos on this page reinforce key features of the historic context:

1. Curved shop fronts on both corners of the Oak Street and Sussex Street junction
2. Vertically proportioned windows with white painted frames
3. Arched brick lintels above front doors

**Top:** No. 154-158 Oak Street,  
junction with Sussex Street -  
George Plunkett, 1936

**Bottom:** No. 14-20 Ebenezer  
Terrace, behind Sussex Street -  
George Plunkett, 1959



## 5.5. Extant Planning Permission

The site is subject to an extant 2009 approval for a mixed use redevelopment (Ref: 09/00296/F) which was partially implemented. The description of development is:

*'Demolition of industrial units at the site of 70 - 72 Sussex Street and replace with a largely residential development of 9 town houses, 3 apartments and 5 duplex apartments, with 238 sqm commercial space'*.

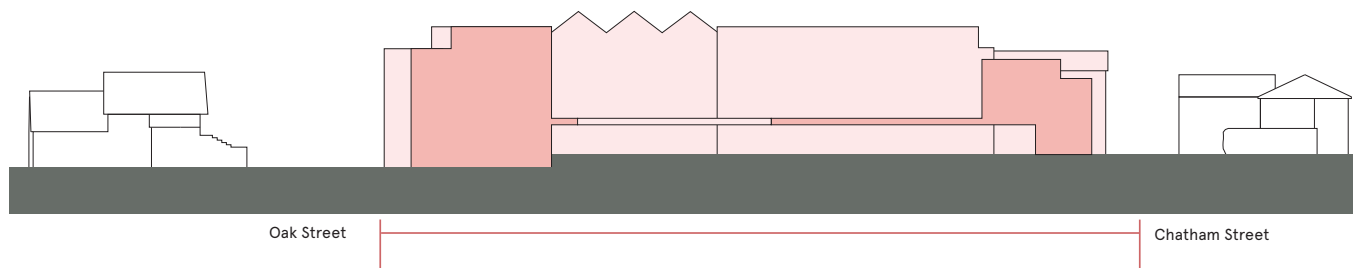


**Above:** Sketch view of extant scheme from corner of Sussex St. and Oak Street

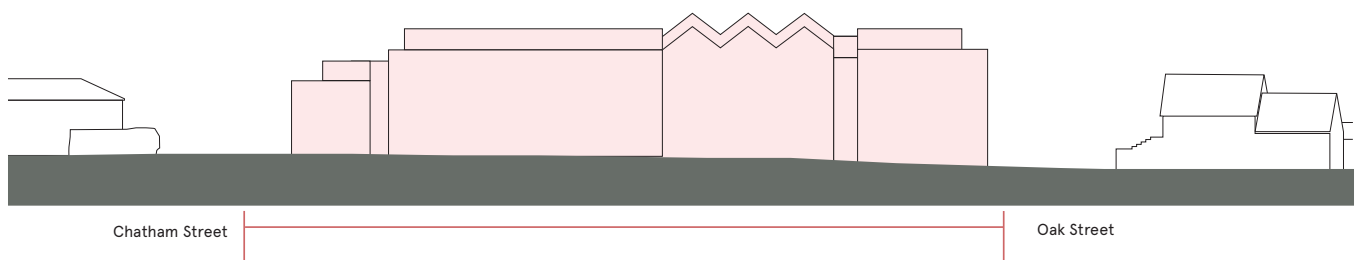
**Below:** Section through previously approved scheme

The sections on this page illustrate the scale of the extant scheme (comparative sections of the current proposal are included later in this statement). Key features of the approved scheme with which the current proposal shows continuity are:

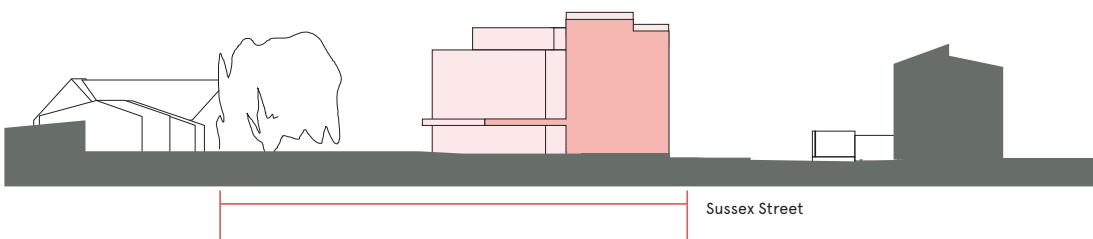
- Curved shopfront at the corner of Oak Street and Sussex Street
- Four storey buildings on Oak Street and Sussex Street with a differentiated top floor
- Three storey terraced houses on Chatham Street with a differentiated top floor
- Flat roofs generally (broken up by three small gables on Sussex Street)
- Brick as the main external material



Site Long Section



Sussex Street Elevation



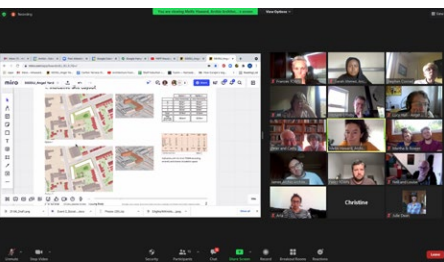
Site Cross Section

# 6. Design Evolution

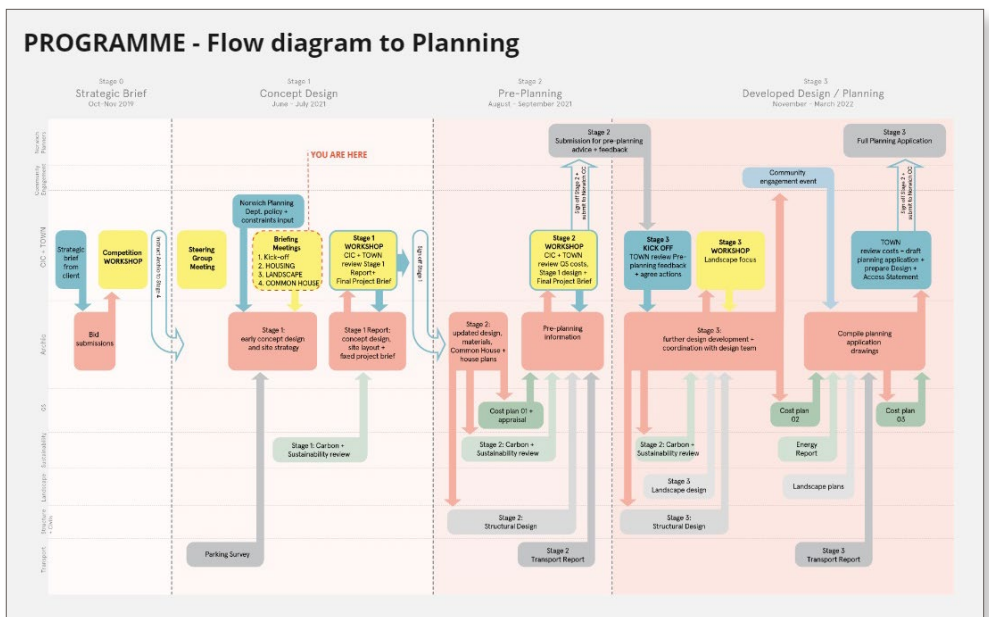
Archio has developed the proposals for this site alongside TOWN and the members of Sussex Street Cohousing through a co-design process interspersed with multidisciplinary technical meetings with the wider professional team. The codesign process took the form of a combination of on-line and in-person workshops over the past 10 months covering a wide range of topics including:

- Shared living
- Communal circulation
- Private amenity
- Dwelling layouts
- Landscape and shared garden

This process allowed for iterative development of the design through RIBA Stages 1 to 3, with a review at each stage against the Client Brief, planning policy and other considerations.



Above: Screenshot from an online design group workshop



Right: The project codesign plan



Right: Sussex Street Cohousing members at a codesign workshop

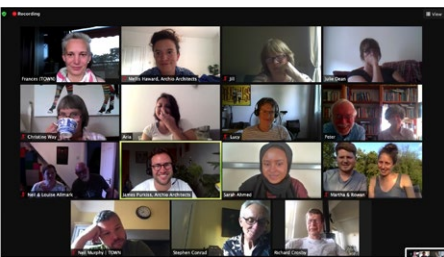




## 6.1. RIBA Stage 1

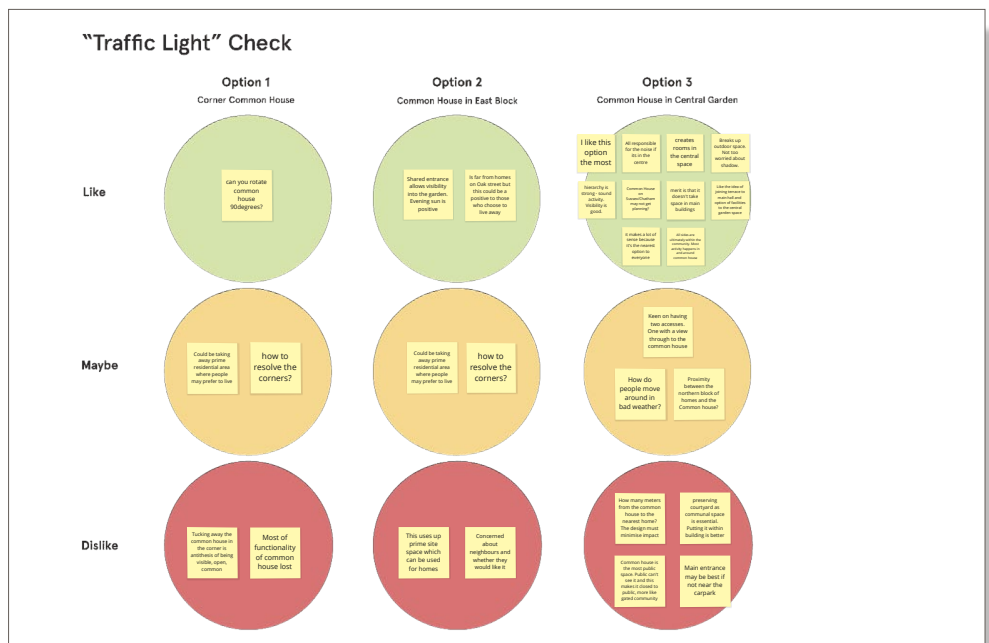
RIBA Stage 1 ran from June to July 2021. The key decisions made through the RIBA Stage 1 workshops were:

- Broadly C-shaped layout with small setbacks and front door / gallery access preferred
- Common house to be located on Oak Street ground floor with flats above
- Flats to be located on Sussex Street
- Houses to be located on Chatham Street
- Vehicle access to parking area from Oak Street
- Parking to be limited to preserve space for amenity

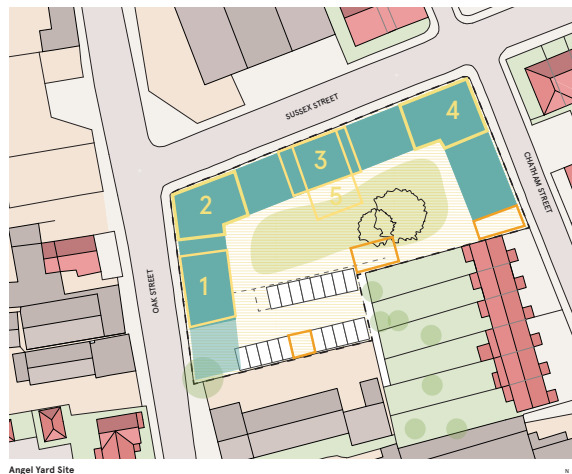


Above: Screenshot from a RIBA Stage 1 codesign workshop

Right: Example exercises from a RIBA Stage 1 codesign workshop



### 3. Possible Position on Site

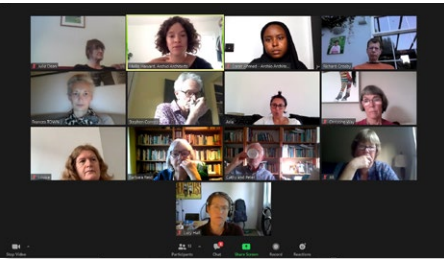


- 1. Oak Street**
  - utilises the ground floor of the busiest surrounding street, which might otherwise might be more challenging for residential use
  - perhaps too close to the car parking
  - great position for morning sunshine, not much evening sun
  - long view across the green space
- 2. Corner of Oak Street and Sussex Street**
  - partly utilises the ground floor of the busiest surrounding street, which might otherwise might be more challenging for residential use
  - great position for morning sunshine, not much evening sun
  - corner view across the green space
  - uses the corner of the site, which is harder for ground floor residential use
  - the corner position bridges between the two different characters of the surrounding streets (busier Oak Street, quieter Chatham Street)
- 3. Front of Sussex Street**
  - great position for morning sunshine and evening sun
  - central view across the green space
  - the central position bridges between the two different characters of the surrounding streets (busier Oak Street, quieter Chatham Street)
- 4. Corner of Chatham Street and Sussex Street**
  - great position for morning sunshine, not much morning sun
  - corner view across the green space
  - uses the corner of the site, which is harder for ground floor residential use
  - the corner position connects to the quieter, more residential Chatham Street - might noise and activity here be an issue?
- 5. Central to Site**
  - Prominent in the communal garden- spilling out
  - possibly eats into central garden too much
  - gets morning and evening sunshine

## 6.2. RIBA Stage 2

RIBA Stage 2 ran from August to September 2021. The key decisions made through the RIBA Stage 2 workshops were:

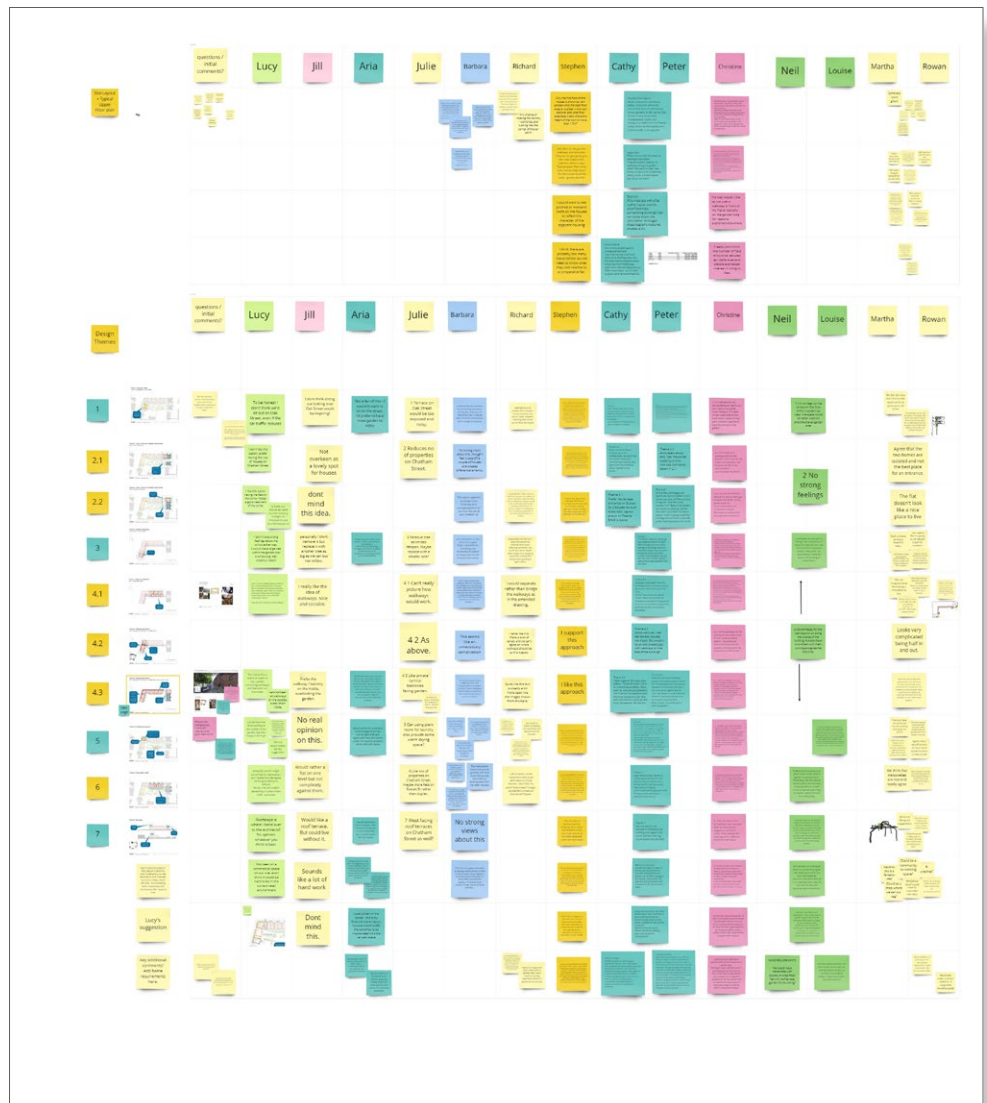
- locating the main pedestrian entrance on Sussex Street close to the corner with Oak Street, creating a 'feature' entrance similar to the yard typology found across Norwich and keeping the principal pedestrian and servicing accesses separate;
- placing the walkway access to the upper floor Sussex Street flats on the street-side of the block to allow for private south facing balconies overlooking the common courtyard garden;
- placing the access walkways on the courtyard side for the upper floor Oak Street flats and unifying this with west-facing balcony space; and
- limiting the ratio of car parking to 0.25 to meet the requirement for this to be provided off-street without excessive land take, consistent with the members' projections for car ownership and sharing.



Above: Screenshot from an online RIBA Stage 2 codesign workshop

Right: Example exercise from a RIBA Stage 2 codesign workshop

The design group members compiled feedback on sticky-notes on a shared online Miro whiteboard

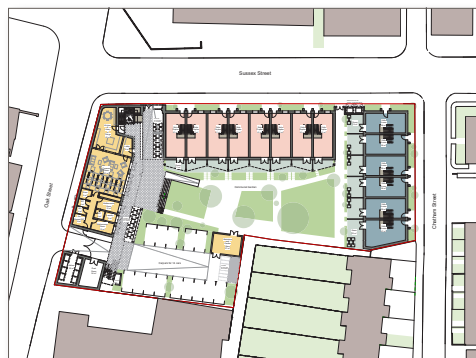
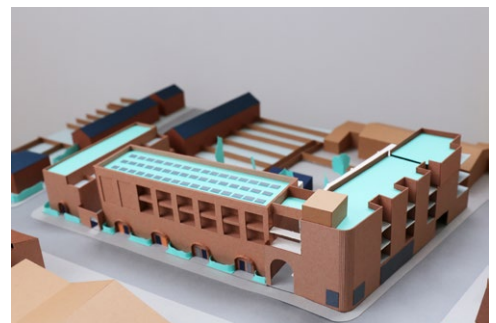
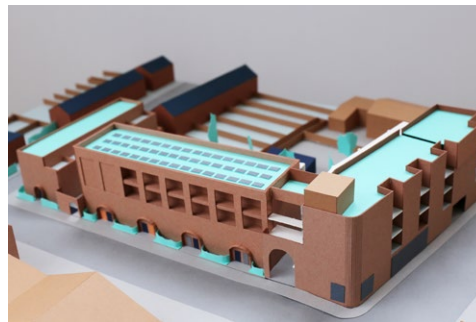


### 6.3. RIBA Stage 2 - Pre-application

The RIBA Stage 2 designs were submitted to Norwich Council for pre-application advice in September 2021 and Sussex Street Cohousing, Archio and Town met the Senior Officer, Sarah Hinchcliffe, and the Conservation Officer, Jessica Jenkinson, in November 2021.

The written feedback from the pre-application confirmed that the proposals were acceptable in principle, subject to comments and further design development. See Appendix A. for a description of the design development in response to these comments.

Right: Model photos and plans submitted for pre-application advice at the end of RIBA Stage 2



## 6.4. RIBA Stage 3

RIBA Stage 3 ran from November 2021 to April 2022. The workshops at RIBA Stage 3 focused on the detailed layouts of the flats and houses and the common house, the design and materials of the elevations, and the landscape design.

Key conversations included discussions regarding privacy and overlooking, overlapping of uses of shared spaces and building in resilience for future needs (aging and growing families). Important decisions made with members at his stage included:

- introducing three-bedroom 'garden' flats on the ground floor of the Sussex Street block to provide a type of dwelling that could be equally useful for families with children, for downsizing older people or for those with impaired mobility or with a long-term need for level access and multiple bedrooms;
- varying the mix of 2b4p apartment floorplans to provide a mix of living conditions and bathroom numbers, and additional study spaces to some dwellings – reflecting the custom requirements of some members; and
- development of the elevations to provide a strong street presence, learning from notable Norwich character references that resonate with Sussex Street Cohousing members.



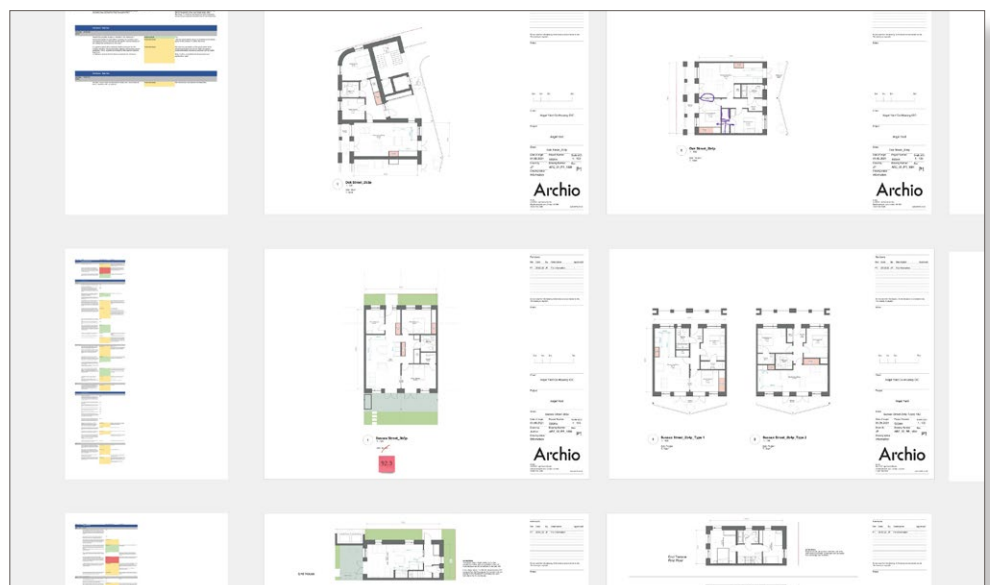
Above: Early RIBA Stage 3 sketch view looking up Sussex Street

Right: Photos from a RIBA Stage 3 codesign workshop



Right: Example exercise from a RIBA Stage 3 codesign workshop

This screenshot from the shared online Miro whiteboard shows layout options for the flats and houses



## 6.5. Community Exhibition

Angel Yard members organised a community exhibition over two days in December 2021 at St Augustine's Church hall, supported by Archio and TOWN. This page shows the exhibition boards prepared by TOWN and Archio. A summary of the community feedback is included in the separate Statement of Community Involvement.

One change that was made following conversations with residents at the exhibition was to introduce sloping pantile roofs to the front of the Chatham Street houses to bring the eaves height down to a similar height to the existing homes on the other side of the street.



Above: Early RIBA Stage 3 sketch view looking down Oak Street



Above: Photo of Archio, TOWN and the Sussex Street Cohousing members meeting local residents at the community engagement event

Right: The consultation boards presented at the community engagement event

### What is Angel Yard?

With the support of award-winning developers and architects we're building Angel Yard - a unique, sustainable cohousing development in the centre of Norwich, UK. Our cohousing group is run by its members for its members, just as our community will be.

We want to live in a beautiful, diverse, intergenerational, sustainable cohousing community in Norwich and to promote the well-being of the community through the establishment and nurturing of a culture of cooperation, mutual support and kindness.

#### Journey so far

Our first members came together in 2018 when we sought out our developer and architect to create a sustainable cohousing community in Norwich. We've since worked together to develop a vision for the project.

Working with them, hundreds of the most interesting and innovative ideas have been shared. We've since worked together to develop a vision for the project.

We know the process of creating new things together with our local neighbours is a great one and we're looking forward to 2023 to see our cohousing community come to life.

#### Site location

Angel Yard is located in the heart of Norwich, in a vibrant and diverse area. It's a great location for a sustainable cohousing community.

#### Member enquiry

Join our community and help us create a sustainable cohousing community in Norwich. Contact us today for more information.

### What is cohousing?

Imagine living on a street where you know all your neighbours, where children can play outside safely and there are people around to lend a hand in a tough spot. Cohousing is a community-focused, people-powered way of living, where neighbours own their homes but share resources and responsibilities. It's a way to build a home, meet balanced community, and cut living costs, consume less and spend more wisely.

#### What are the benefits?

There are so many positive reasons to live as part of a cohousing community.

- All a responsible support network by providing mutual assistance, companionship and help.
- A great neighbourhood.
- Low cost, sustainable and inclusive living.
- High quality of life.
- A great place to live.

#### What other people say

"It's great to have people to lean on in an emergency. Day-to-day, the shared resources you can't get anywhere else are a real benefit. Cohousing is a really great way of living. It's a great way to build a home, meet balanced community, and cut living costs, consume less and spend more wisely."

#### Where does cohousing come from?

Cohousing is a way of living that has been around for a long time. It's a way of living that has been around for a long time. It's a way of living that has been around for a long time.

#### Based on a key principle:

A sense of place and shared resources. Cohousing is a way of living that has been around for a long time. It's a way of living that has been around for a long time.

### Sustainable living

The sustainability of our development is of utmost importance. In the context of climate emergency, we are striving for a Net Zero development, using a recognised framework to assess sustainability design and all available contemporary technologies. We are working with our design team, and sustainability consultants JG Consulting to:

- Design to Passivhaus Principles
- Reduce our embodied carbon
- Install green energy

#### Sustainable transport

In our bid to achieve a sustainable development, we are committed to reducing our private vehicle ownership. We are looking to do this by:

- Encouraging the use of sustainable public transport
- Providing on-site car share provision to resident members of Angel Yard
- Providing safe and secure bicycle parking for all resident and guest.

#### Cycle and green travel

We are committed to providing a safe and secure cycle parking facility for all resident members of Angel Yard.

#### Landscape design

We are committed to providing a high quality landscape design for our development.

### Proposed Design

The design for our cohousing community has emerged out of a collaborative design discussion with the residents and the team of the design team, following by themes:

- Local
- Sustainable
- Green
- Neighbourly

#### Plans

The homes are arranged around a large communal garden, creating a private block that responds to the local terraced housing.

On the ground floor, homes will have their own front and back gardens, but will be a shared space for the whole community.

On the first floor, we can provide a shared space for the whole community.

#### Roof line and massing

The roof line and massing of the development will be designed to blend with the surrounding terraced housing.

# 7. Proposed Development

## 7.1. Design Principles

The design principles for this proposed development summarise many aspects of what will make this place exceptional for the city of Norwich, and ideal for the future residents. Proposals have developed through studying the context, in close collaboration with future residents, and having received feedback from the community. Ideas have been generated and reiterated, and the designs have been tested through this iterative process, within the context of the design team's knowledge of what makes a great home, and an excellent piece of a neighbourhood.

1. Reinstate the street edges of Oak Street, Sussex Street and Chatham Street, reinforcing the existing and historic street network, whilst increasing the pavement width along Oak Street to give more space to pedestrians.
2. Activate the public realm by positioning residential front doors and planted front gardens to the street. Locate the large windows to the common house on the ground floor of Oak Street, where they will be prominent, welcoming and visible.
3. Build an 'open' courtyard, with a special central garden, in the tradition of Norwich courtyards. Position parking within the courtyard, but at the edge, so as not to impact on the safety or greenness of the shared garden, and so as not to dominate the street scene.

**Below:** Illustrative view of the proposal looking west along Sussex Street



## 7.1. Design Principles - Continued

4. Tap into Norwich's existing cycle culture, by 'celebrating' the bicycle storage, making it easy to use and visible, rather than being tucked away in a ground floor store.
5. Connect the co-housing community with their local community, by creating an openness to the architecture, using large gaps between buildings, allowing views through to the semi-private central garden, along with welcoming views into the communal spaces.
6. Be responsive to the architectural character of Norwich, both the varied domestic and civic building scales, whilst reflecting a contemporary Norwichy-ness in the proportions and material detailing.
7. Mitigate impact on the climate by using every opportunity to heat and cool the homes passively and by using renewable energy sources. Also be conscious to hide the 'machinery' of the services required to support this, by using high enough parapets and by positioning solar panels on the inside slope of pitched roofs.
8. Offer a good mix of different sizes and types of homes, to support an intergenerational and supportive co-housing community. Have a particular focus on varying degrees of privacy with many choices of generous private outdoor spaces.
9. Support the co-housing group's ambition to live in an intentional sharing community – by providing shared facilities such as the common house and workshop, and in the design of generously wide shared walkways, quadruple height entrance area and central courtyard garden. These will encourage neighbourly interaction across the generations.
10. Create light and happy homes to live in – ensure the homes are flooded with natural light, with all double or triple aspect homes. Orientate all living spaces to the central garden, to encourage passive surveillance and neighbourliness. Use walkways and balconies to shade the homes from solar gain.

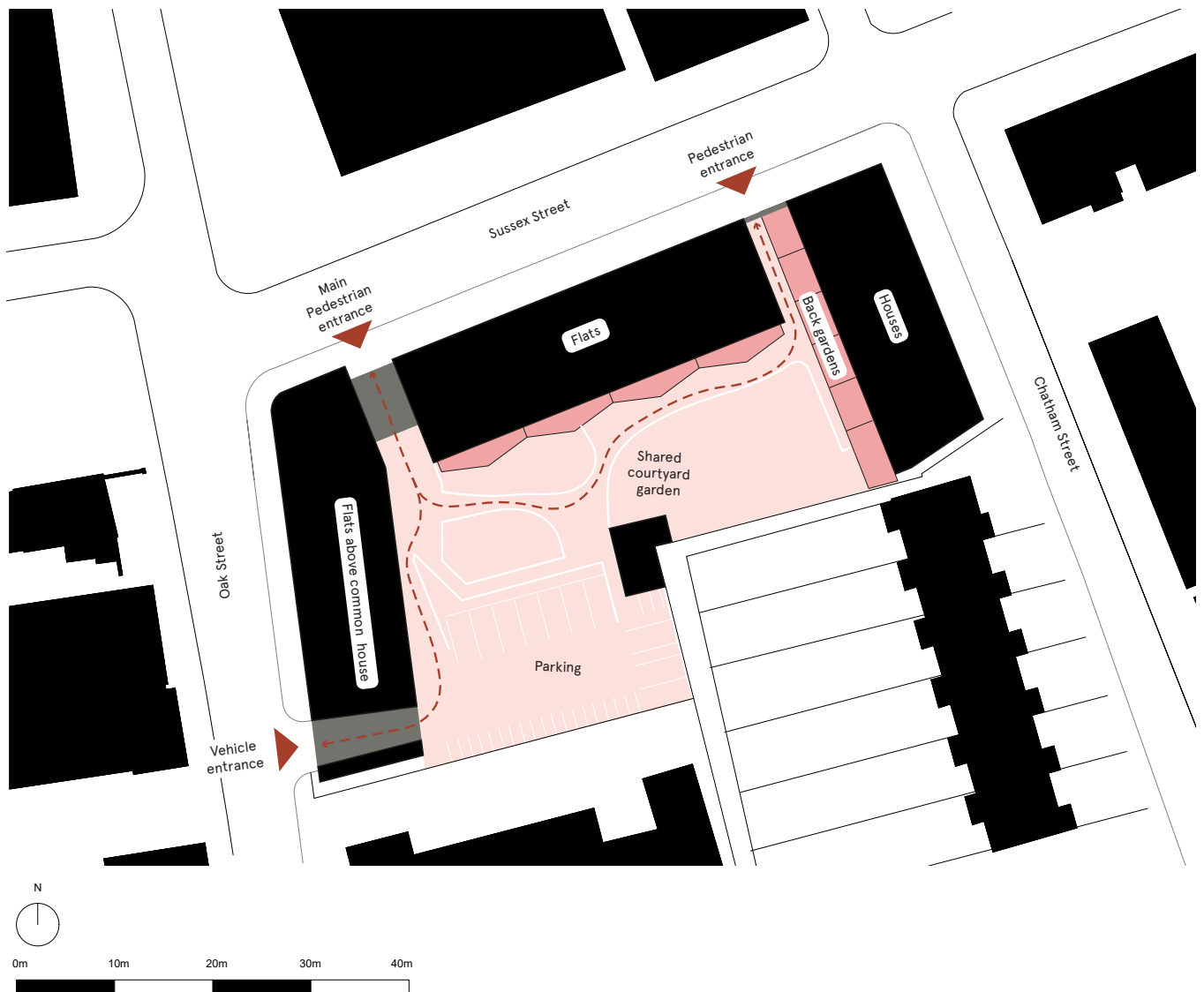
## 7.2. Overall Layout

The plan diagram on this page shows the overall layout of the proposed development.

The general approach to the layout is to restore the traditional pattern of fronts to the street and backs to other backs. The public fronts provide access and privacy to the private backs which are nonetheless visible in glimpses from the street through breaks in the building line. This perimeter block approach is tried and tested and reflects the characteristic features of Norwich's distinctive yards, as illustrated on the next page.

Further more detailed reasons for the layout decisions are set out on the following pages.

Below: Block plan diagram





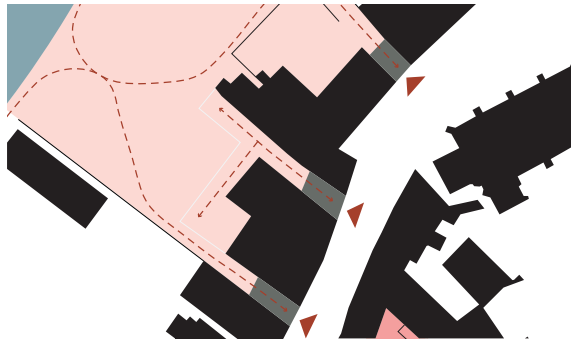
### 7.3. Courtyard Precedents

As part of the design development Archio visited and researched some of the historic courtyard spaces in Norwich, to learn typological lessons from them.

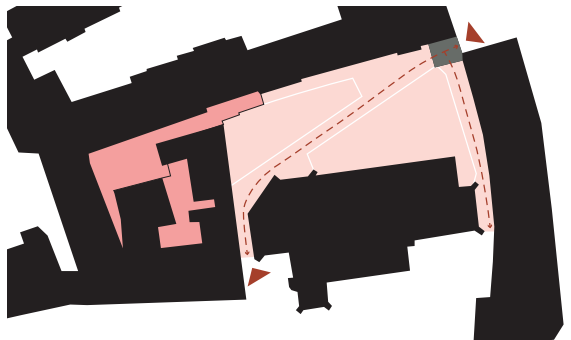
**Norris Court Gardens, Elm Hill**  
 Elm Hill was built around 1420, and is the most complete medieval street in Norwich. Norris Court Gardens on the south side of the street is a triangular garden, accessed through a narrow arched alleyway. Like the proposal for Angel Yard, the garden is accessed through an archway and is semi-private, with small private gardens bordering the edge.



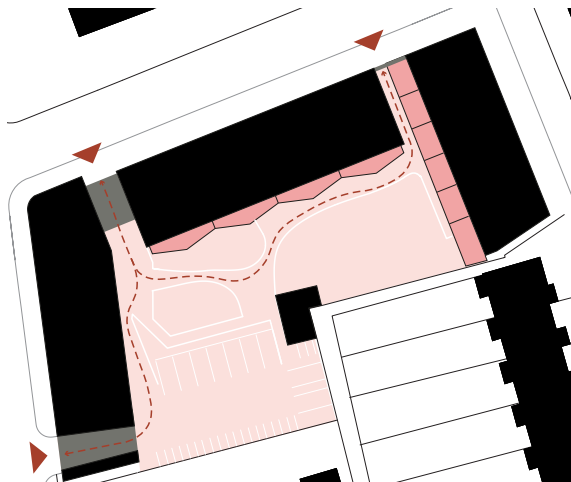
**Towler's Court**  
 Towler's Court on the north side of the Elm Hill is a large semi-public garden, accessed through three wide and tall arched entrances. Like the proposal for Angel Yard, the garden is glimpsed from the street, through the large archway.



**Tombland Alley**  
 A pedestrian footpath crosses through this courtyard, bounded by St George Church to the south and Augustine Steward House to the north. Like the proposals for Angel Yard there's a change in level across the courtyard, against an area of paving and a covered corner entrance.



**Angel Yard**  
 Angel Yard is conceived as a new courtyard garden in the lineage of historic courtyards and yards in Norwich.



## 7.4. Common Courtyard Garden

Like the historic precedents of Norwich's courtyard, the Angel Yard courtyard will be a semi-private garden, accessed through an archway. Like at Towler's Court, the courtyard will be seen from all surrounding streets. Small private terraces will line the edge of the courtyard garden, as at Norris Court, and paths will cross the space, as at Tombland Alley. The common garden, which will be overlooked by all the flats and houses, will help to sustain an intentional sharing community by providing a place for residents to meet and to care for together.

**Above:** Illustrative view of the common courtyard garden

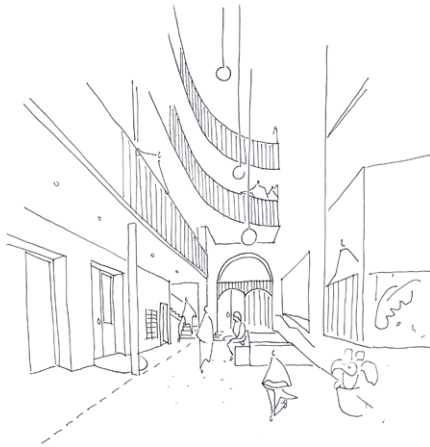


## 7.5. Main Entrance Archway

The design for the main entrance archway continues a Norwich tradition of open arched entrances, giving views through to courtyard spaces behind.

To emphasise the gap between the Sussex Street and Oak Street buildings and to create a transparent and welcoming feature in the streetscape, the proposed arch will be formed as a lightweight metal screen.

The quadruple height covered space within the entrance area and in front of the common house entrance will be an important meeting point for the cohousing residents.



**Above:** RIBA Stage 2 sketch of the arch from inside the covered entrance area

**Below:** Illustrative view of the entrance "arch" from Sussex Street



## 7.6. Archway Precedents

Norwich's architectural vernacular has a reoccurring motif of archways, whether in the historic gateways to the Cathedral or the terraced housing to the surrounding streets. The images on this page illustrate some of those archways which have inspired the proposed design.



The Erpingham Gate



The Ethelbert Gate



The Bishop's Gate



Angel Yard



Houses on St Faiths



Houses on Gildencroft Road



Houses on Sussex Street



Angel Yard

## 7.7. Site Layout

The proposed parking is located against the southern site boundary and accessed from Oak Street via a vehicle gateway through the Oak Street building. The location has been chosen to keep the centre of the site clear for the common courtyard garden. The vehicle gateway is located at the southernmost end of the Oak Street building to keep it as far away as possible from the junction with Sussex Street, as advised by the Transport Officer. Only 9 parking spaces are proposed for 34 homes, this is because the group are committed to car sharing. Reducing the demand for cars means that more space can be given over to the garden.

The main pedestrian entrance is located off Sussex Street, next to the common house and through the gap between the Oak Street building and the Sussex Street building. The secondary pedestrian entrance is located off Sussex Street through the gap between the Sussex Street building and the Chatham Street terrace. It is located here to provide access to the cycle stores in the rear patio gardens of the houses and the ground floor flats on Sussex Street.

Below: Site plan diagram



## 7.8. Oak Street Building

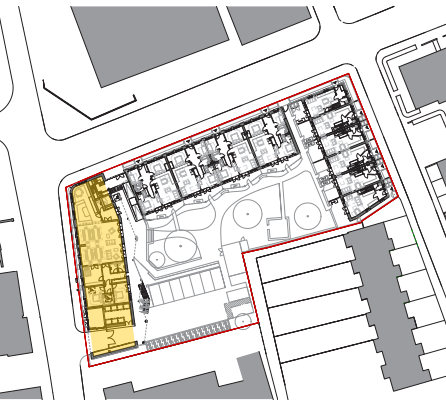
The proposed four-storey Oak Street building is aligned with the Oak Street boundary to reinstate the historic street frontage.

The building is setback approximately 0.8m from the back of the pavement to make the existing narrow pavement safer and more comfortable for pedestrians and to provide space for planting which will grow up the façade, softening the street edge and giving a greening effect which will help mitigate the effect of removing the willow tree (refer to Landscape Design Statement for further details).

The common house, which is the focal point of any cohousing community, occupies the ground floor on the corner of Oak Street and Sussex Street. This is the most prominent location on the site and presents a welcoming view of the shared spaces to the community and to passers-by as well as a pleasing aspect onto the Great Hall, on the other side of Oak Street, for residents using the common house.

The common house will benefit from afternoon/evening sun from the west, when it is likely to be most heavily used. The change in site level close to Oak Street means that the common house can provide higher floor to ceiling heights in these community or 'civic' areas. The common house also thus occupies the part of the site least suited to residential use because of traffic noise.

The building is curved on the junction of Oak Street and Sussex Street to mark the most public corner of the site and to echo the historic curved shopfronts. The corner space is occupied by the common house kitchen which includes a 'library of things' wall. This will read similarly to a shopfront, displaying shared household objects to visually demonstrate the cohousing residents attitude to sustainable living.



**Above:** Key plan, Oak Street building highlighted yellow

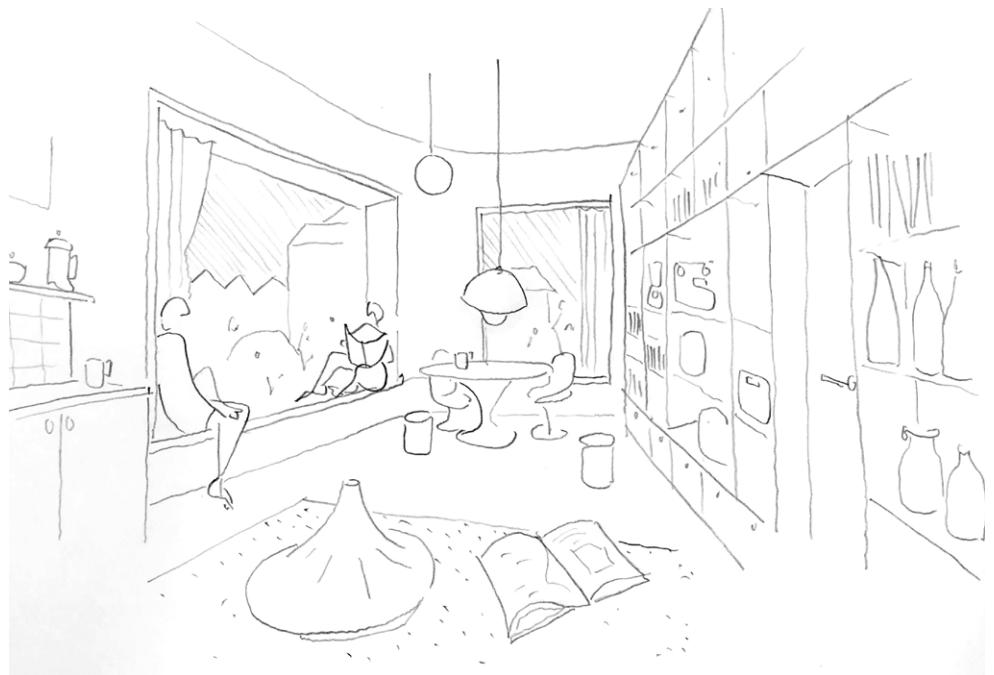


**Above:** Angel Yard site, looking north up Oak Street 1936, with corner shops, with rounded corners and shop windows



**Above:** Library of Things, Crystal Palace Library London

**Right:** Sketch view of proposed shared kitchen with the 'library of things' visible through large 'shopfront' windows



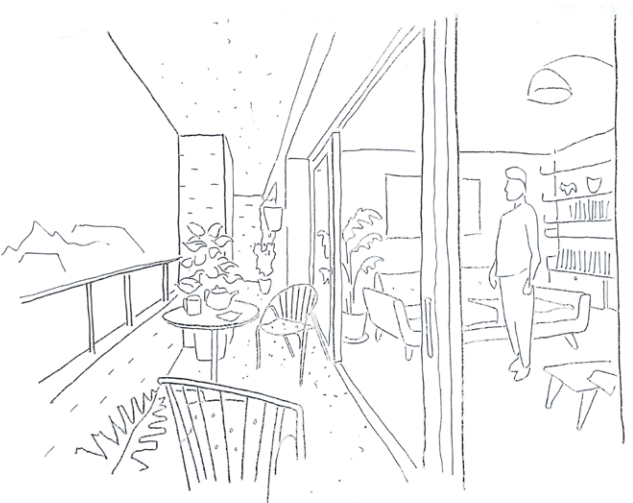
## 7.8. Oak Street Building - Continued

The ground floor of the Oak Street building also accommodates a new substation and the vehicle gateway, providing access to the car parking and refuse storage. The substation fronts Oak Street to allow for continuous emergency access by UK Power Networks.

Open walkways on the east side of the building provide access to flats on the upper floors and also serve as shared balconies overlooking the courtyard garden. They will benefit from morning sun from the east, so will be a good spot for a morning coffee with neighbours (see sketch below). The open walkways enable natural cross ventilation of the flats, to help mitigate overheating, and access to natural light.

**Below:** Sketch sections of the Oak Street building balconies and walkways from a RIBA Stage 3 codesign workshop

In addition to the shared walkways/balconies, the upper floor flats also have private west facing balconies, with access to afternoon and evening sun and views over Oak Street towards the river Wensum.



West facing private balcony overlooking Oak Street



East facing walkway/shared balcony overlooking the courtyard garden

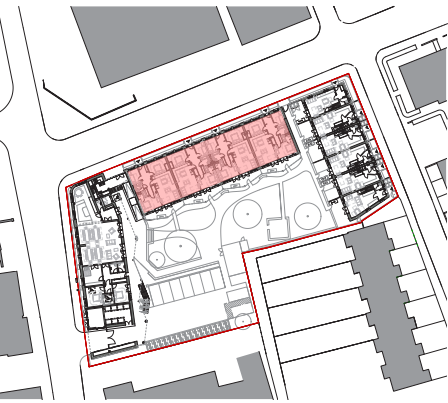
## 7.9. Sussex Street Building

The proposed four-storey Sussex Street building is aligned with the Sussex Street boundary and will also reinstate the historic street frontage. The building is setback approximately 1.5m from the back of the pavement to reflect the setback of the Listed terraced houses on Sussex Street and to provide space for front garden hedge planting to continue the existing hedge line.

The ground floor flats are accessed individually from private front doors on Sussex Street. The multiple doors will complement the front doors of the existing terraced houses and will contribute to an active street frontage.

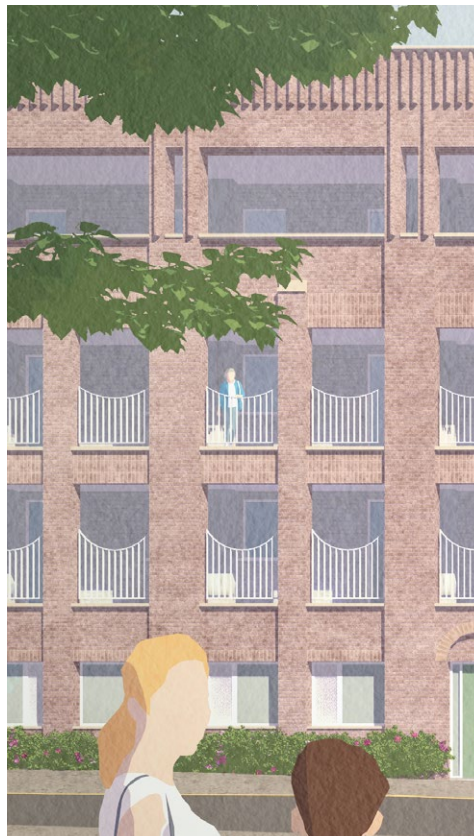
The flats on the upper floors are accessed from inset open walkways on the north facing Sussex Street elevation. Like on the Oak Street block, the walkways are open to enable natural cross ventilation and access to natural light.

Locating the walkways on the north side of the building frees up the south facing elevation for private balconies. These provide views into the courtyard garden and solar shading to help prevent overheating.



**Above:** Key plan, Sussex Street building highlighted pink

**Right:** Illustrative views of the Sussex Street building showing the north facing inset walkways and south facing private balconies



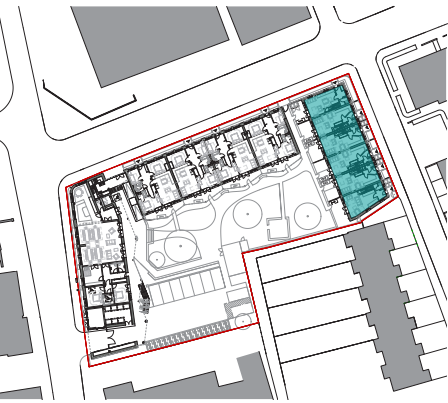


## 7.10. Chatham Street Houses

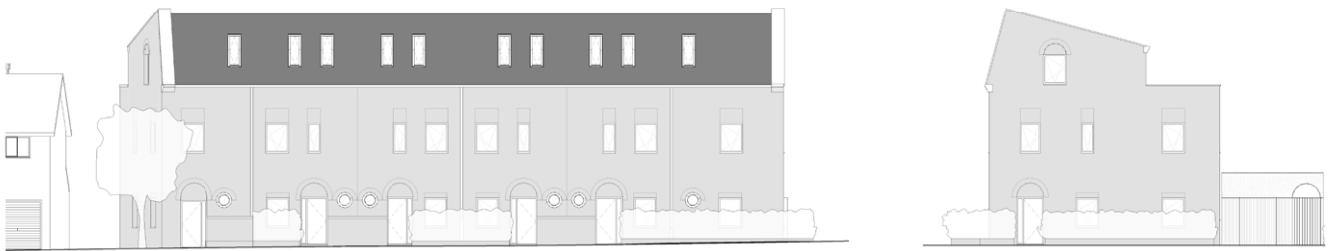
The six proposed Chatham Street houses are two-storeys, plus an attic storey. The terrace is aligned with the Chatham Street boundary and is setback approximately 1.5m from the back of the pavement to reflect the setback of the historic houses on the other side of Chatham Street.

The terrace sits forward of the c20th houses to the south, which were designed with parking forecourts. This is because the larger set back of these existing houses is not typical of the development pattern elsewhere in this area and creates a poor street condition.

The open plan living and kitchen spaces at ground floor look east over Chatham Street and will contribute to an active street frontage. On the other side these spaces open onto private west facing patios on the edge of the common courtyard. The houses also benefit from west facing second floor roof terraces.



**Above:** Key plan, Chatham Street houses highlighted blue



**Above:** Elevations of the proposed Chatham Street houses

## 7.11. Housing Quality

### **Mix**

For a full unit mix breakdown refer to the schedule of accommodation (Appendix A). The proposed unit mix has been determined by Sussex Street Cohousing to support an intergenerational community. This does not necessarily mean smaller flats for older people and larger flats and houses for families. Instead the scheme provides a range of dwelling types, including larger level access flats, that could be equally useful for families or downsizing older people. In total, 28 of the 34 proposed homes (82%) are family sized units with four or more bed spaces.

The scheme provides a variety of flat and house layouts to fulfill a range of tastes and needs, including for people who work from home, house-shares and people with resident or visiting families. For example, the scheme accommodates different tastes regarding the privacy of external amenity. The amenity for the Oak Street flats is split between communal walkways and shallow west facing balconies which are relatively public compared to the large private balconies to the Sussex Street flats.

The unit mix includes three one bedroom flats, two of which will be provided for people with mild-to-moderate learning disabilities. These are located in the Oak Street block close to common house, to ensure that these residents feel as close as possible to the heart of the cohousing community (Refer to the Planning Statement for more details).

### **Space standards**

All of the flats and houses exceed the Nationally Described Space Standards minimum areas, including for storage.

Archio have undertaken initial coordination of the services to ensure that there is adequate space for utilities in addition to the minimum storage requirements. Rational and efficient but generous circulation space is key to making livable flats so Archio have worked hard with the residents to develop flat and house plans which include generous and naturally lit hallways.

In addition to their own flat/house each resident will have access to the common house, including the spare guest bedrooms, laundry and workshop.

## 7.11. Housing Quality - Continued

### **Amenity**

Each flat/house has a private amenity space (patio/balcony/terrace) in addition to access to the common courtyard garden. All homes fulfill or exceed space standards in terms of amenity.

### **Aspect**

All of the flats/houses are at least double aspect which is important for access to daylight and sunlight and for cross ventilation.

### **Security**

The two communal entrances and the vehicle access will be access controlled to ensure that residents will feel secure within the cohousing and to allow children to safely play within the common courtyard garden.

### **Overlooking**

The proposals could lead to levels of overlooking that are greater than in developer housing. Archio have discussed the level of overlooking in detail in the codesign workshops with the future residents who are comfortable with the proposals. In fact, the reduced overlooking distances are seen by the group as a positive in terms of creating community and neighbourliness.

The proposed terraced houses are adjacent to the existing terraced houses on Chatham Street. The proposed second floor terraces are set back from the rear elevation line of the existing Chatham Street properties so any overlooking of the existing gardens will be equivalent to the existing overlooking from the rear windows of the existing Chatham Street properties.

## 7.12. Scale and Massing

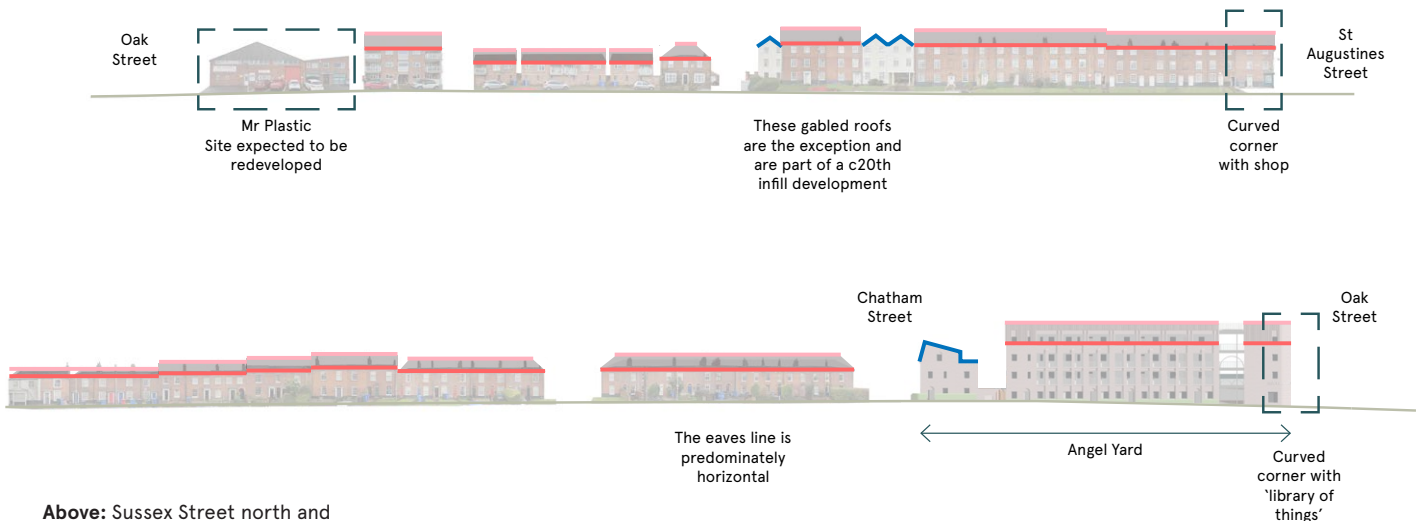
### 7.12.1. Roof form

The collaged elevation on this page shows that the eaves lines and rooflines on Sussex Street are predominantly horizontal (aligned with the street edge).

Flat roofs with parapets are proposed on the Oak Street and Sussex Street blocks. Much in the way that the chimneys that are visible across the wider neighbourhood served the needs of the housing of the time, so flat roofs here will maximise the efficient space for the photovoltaic panels and air-source heat pumps that are the essential plant and machinery of contemporary sustainable housing, and ensure that they are easy and safe to maintain.

The horizontal parapets to these flat roofs cap a continuous four-storey elevation to the street which will provide a strong presence appropriate to the prominent corner location. They are consistent with the predominantly horizontal eaves lines and rooflines on Sussex Street (as illustrated in the collaged elevation on this page, the only gabled roofs on Sussex Street are part of a c20th infill development on the north side of Sussex Street).

Pitched roofs are proposed on the Chatham Street housing to bring the eaves line down to meet the eaves line of the Listed Sussex Street terrace. The asymmetric roofline draws parallels to the more contemporary c20th housing on the northern side of Sussex Street, opposite the site.



**Above:** Sussex Street north and south street elevations

#### Key

- Eaves line
- Pitched gable end
- Attic storey/ roofline

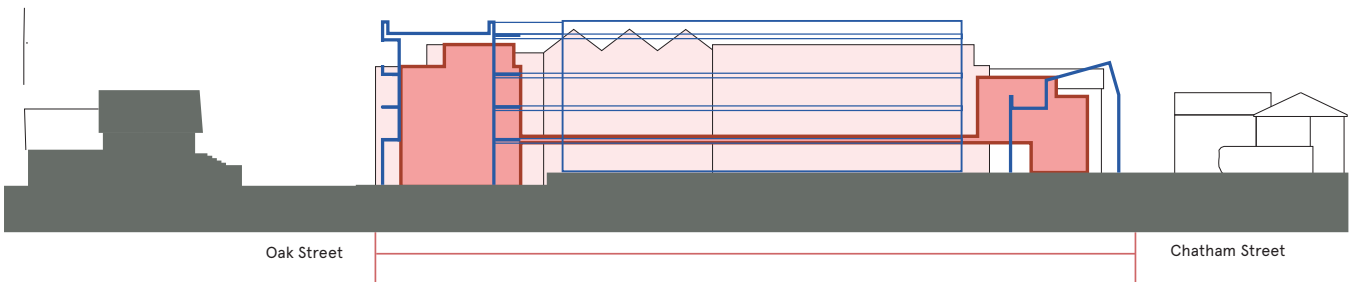
## 7.12.2. Comparison with Extant Planning Permission

The sections on this page illustrate the scale of the proposal in relation to the extant planning permission. The height of the proposed Oak Street and Sussex Buildings are marginally taller than the extant scheme because:

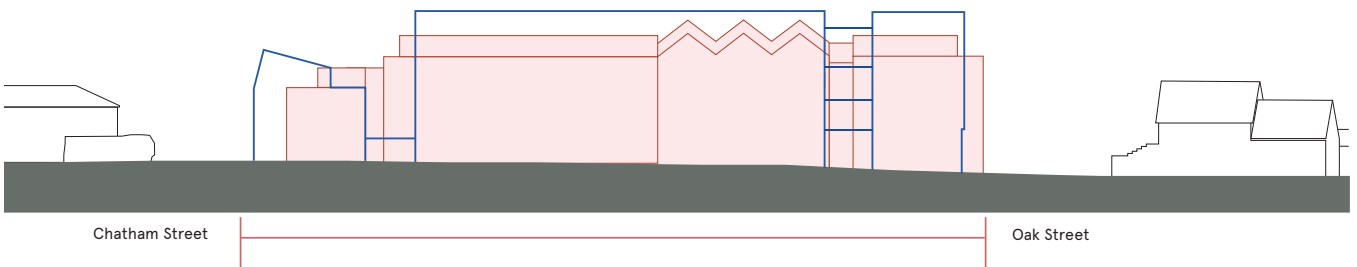
Key:

- Extant Scheme
- Proposed Scheme

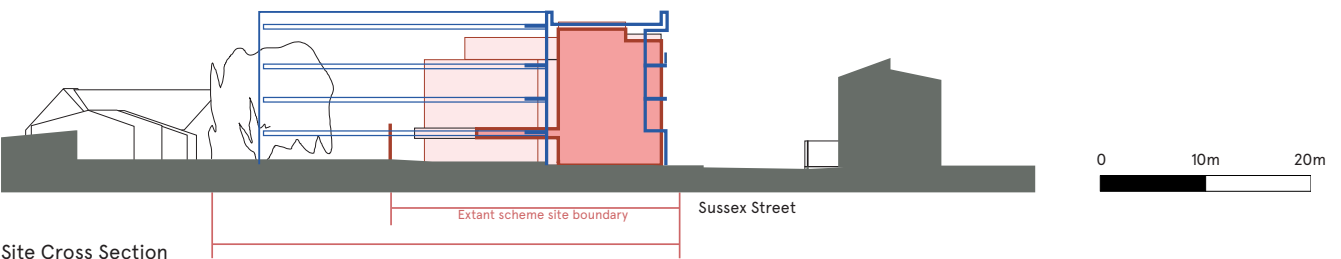
- the internal floor to ceiling heights are taller (approximately 2.5m), which will make internal quality better; and
- the current proposals include a 1.1m parapet to conceal the photovoltaic panels and air-source heat pumps and to provide safe maintenance access.



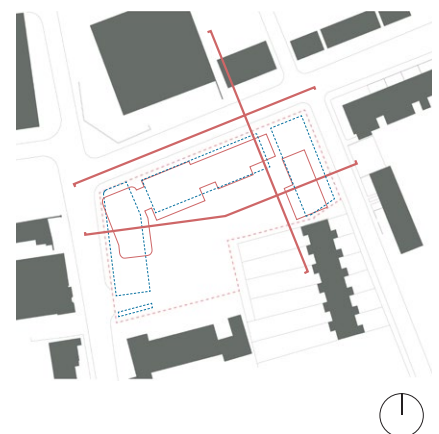
Site Long Section



Sussex Street Elevation



Site Cross Section



## 7.13. Elevation Design

### 7.13.1. Sussex Street precedent

The proposed design draws on the existing elevations on Sussex Street to inform the elevation articulation. The annotated photos on this page highlight some key characteristics of the existing Sussex Street housing.

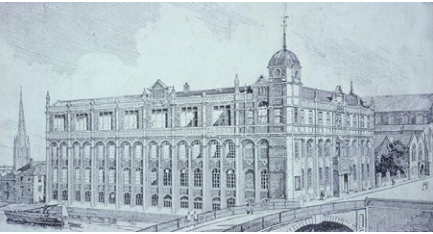


#### Key

1. Roofline
2. Eaves line
3. Vertical window proportion
4. Soldier-course lintel to windows
5. Arched lintel to front door

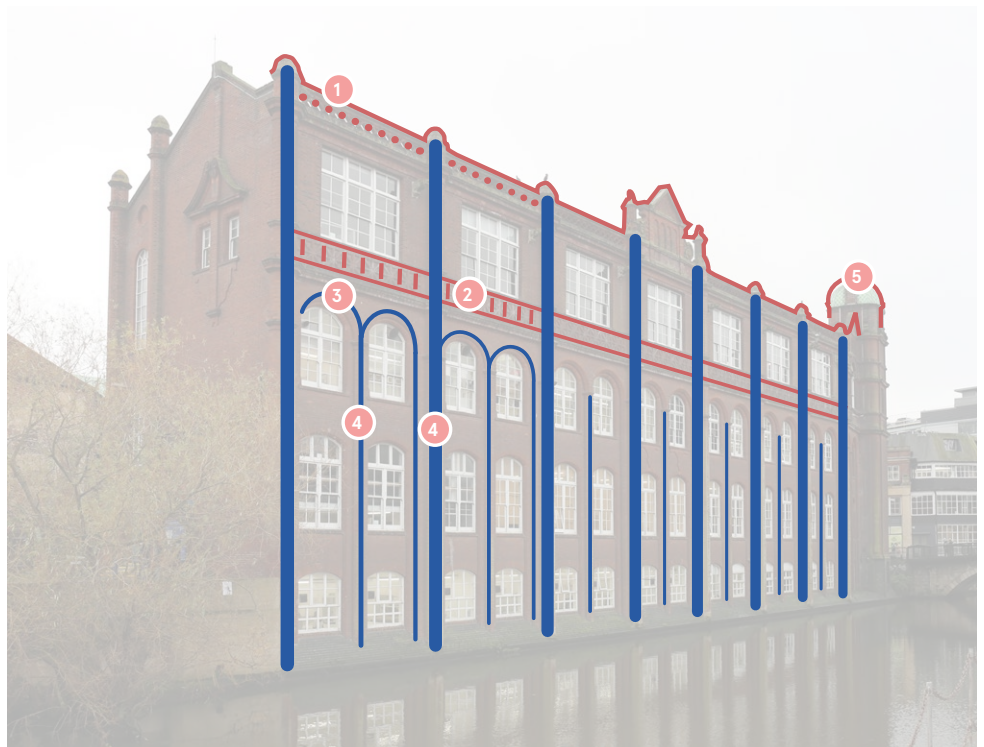
## 7.13.2. Norwich Technical Institute Precedent

The design also drawn on other larger buildings in Norwich to inform the elevation articulation. These include the c19th Norwich Technical Institute, illustrated on this page. The annotated bay studies on the following pages show how the design reflects the key characteristics of these buildings.



**Above:** Sketch view of Norwich Technical Institute, 1891

**Right:** Norwich Technical Institute, St Georges Street, Norwich



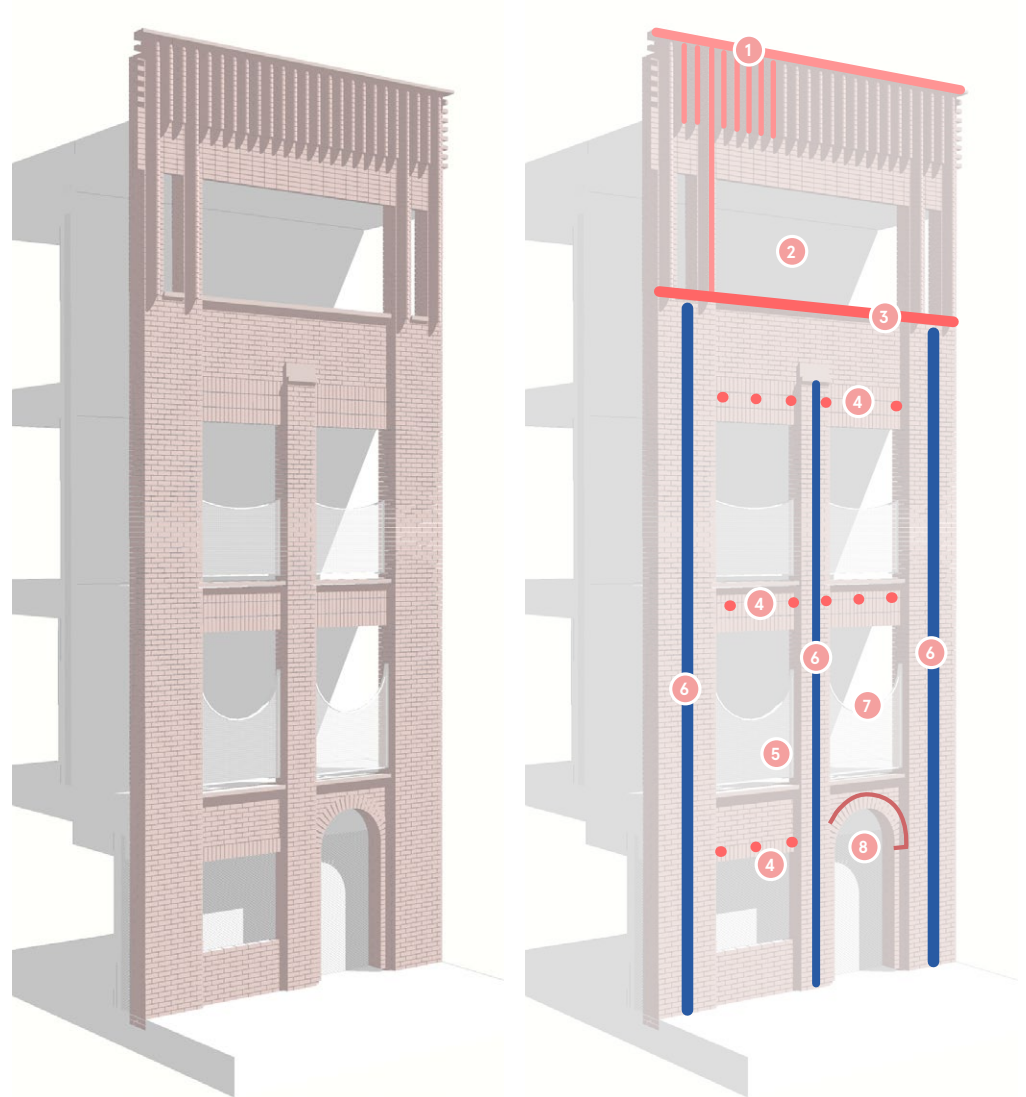
### Key

1. Textured parapet at roof line
2. Horizontal detail band at attic storey
3. Arched window lintel, changes in radius moving from ground to second floor
4. Alternating thick and thin (shallow and deep) piers with larger piers extending full height of building
5. Taller projecting corner feature

### 7.13.3. Proposed Sussex Street and Oak Street Elevations

The bay studies on this page show how the design reflects key characteristics of other larger buildings in Norwich, including the Norwich Technical Institute and the historic flats on Sussex Street.

Right: Bay study of proposed Sussex Street elevation



#### Key

1. Textured parapet at roof line
2. Attic storey with large openings / different scale of opening
3. Perceived eaves line below attic storey
4. Soldier course brick detailing
5. Curved balustrades, changing in radius moving from first to second floor
6. Alternating thick and thin columns with larger piers extending full height of building
7. Vertical window proportion
8. Doorway with arched brick lintel

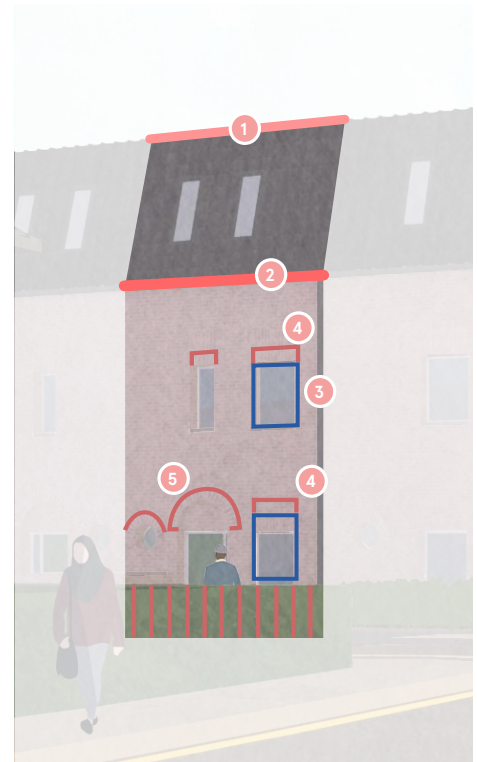
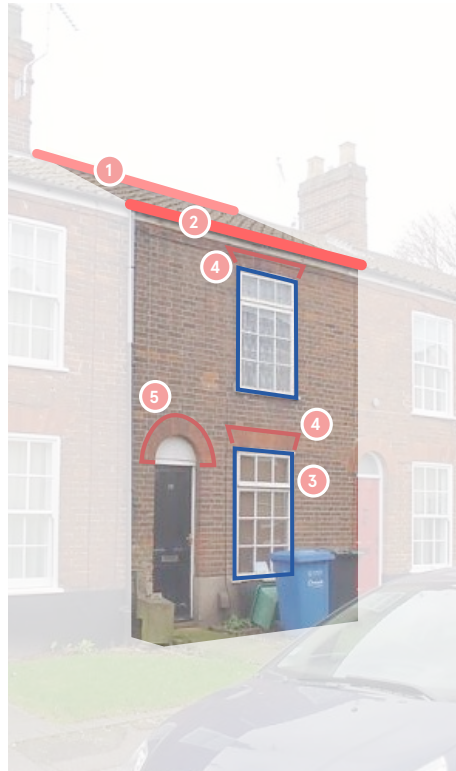


### 7.13.4. Proposed Chatham Street Elevations

The annotated photos and elevations on this page show how the house elevations reflect key characteristics of the existing terraces on Sussex Street and Chatham Street.

**Right:** Typical house on the southern side of Sussex Street

**Far right:** Proposed houses on Chatham Street



**Key**

- 1. Roofline
- 2. Eaves line
- 3. Vertical window proportion
- 4. Soldier-course lintel to windows
- 5. Arched lintel to front door

### 7.13.5. Existing Elevation Materials

The collage on this page illustrates that there is some variety in building forms and materiality within the immediate surroundings.

#### Elevation materials

The predominant elevation material is brick in a variety of red tones. These range from dark red stock bricks and orange rubbing bricks on the older buildings to lighter red/pink stock bricks on the twentieth century flat blocks.

A significant exception is the Listed Great Hall on Oak Street which is constructed from flint in combination with red bricks, and which therefore has a grey/pink appearance.

There are also examples of lighter coloured render on Sussex Street and Oak Street and noticeably on a significant proportion of the buildings fronting St Augustines Street.

#### Roofing materials

The predominant roofing material is pantiles. The pantiles on the older houses are typically red clay or black glazed. The pantiles on the twentieth century buildings are typically grey concrete. There are also examples of corrugated sheet metal and fibre cement roofing on the neighbouring commercial/industrial buildings.

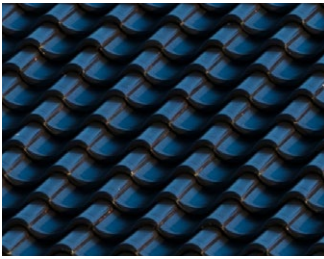
#### Window frames

Window frames are typically white.

**Below:** Collage illustrating the variety of building forms adjacent to the site



### 7.13.6. Proposed Materiality



#### **Roofing material - Black glazed pantiles:**

To echo the black pantiles on the existing Listed Sussex Street terraced houses.

#### **Parapet copings and sills - Light pre-cast concrete**

To complement the white painted cast concrete sills on the existing Listed Sussex Street terraced houses.

#### **Window frames and other metalwork - Very light grey**

To complement the white frames of the majority of the neighbouring buildings.



Above: pantiles used at Goldsmith Street, Norwich



#### **Street elevations - Pale grey/pink stock brick:**

This primary material will complement the existing buildings on Sussex Street and Oak Street, in particular the grey flint and red brick Old Hall.

The grey/pink grey brick will differentiate the buildings from the darker red/orange brick Listed Sussex Street terraced houses. The aim is to complement, not to mimic.



Above: pale grey/pink stock brick

The attic-storey on the Sussex Street and Oak Street buildings will be differentiated by a change in brick texture, using cow-nosed specials in the same brick. These will create contrast through texture and shadow without cluttering the elevations with an additional material.



#### **Courtyard elevations - Pale grey/white brick or painted block :**

This paler secondary material will contrast with the street elevation brickwork, and will reflect light into the courtyard garden, and into the south facing living spaces.

Lighter finishes within courtyards are typical of Norwich, for example the courtyards at Tombland Alley and Elm Hill.



Above: pale grey/white brick

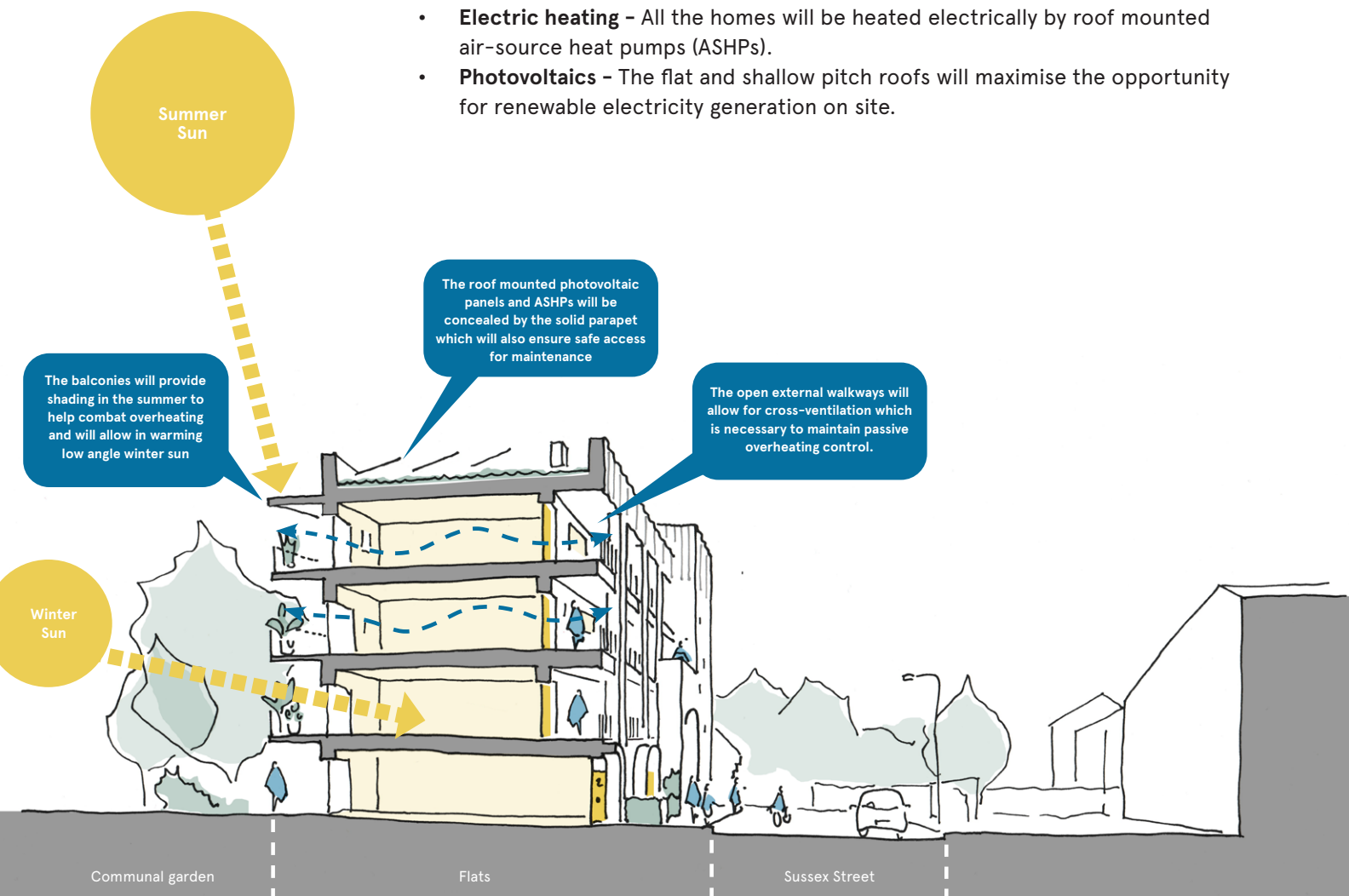
## 8. Sustainability Strategy

Archio have worked with Joel Gustafsson Consulting (mechanical and electrical engineers) to ensure that the proposal will fulfill the client's brief. Please refer to the separate Energy Statement for a full description of the sustainability strategy.

Key elements of the sustainability strategy are as follows:

- **Form factor** - The compact form of the buildings, minimising insets or top-floor set-backs, and the simple thermal envelope will reduce overall heat losses/gains, and enable the building to aim for Passivhaus certification - the highest standard of passive energy performance.
- **Fabric performance** - The thick external wall and deep roof build-ups will accommodate sufficient insulation to achieve high fabric performance in accordance with best practice guidance.
- **Lighting** - The windows are sized to maximise daylighting into living spaces with the aim of reducing the need for electric light during daylight hours. Low energy LED lighting with dimming controls will also be used to reduce energy consumption and related heat gains.
- **Heat recovery** - Dwellings will be mechanically ventilated with heat recovery (MVHR) systems which, combined with high airtightness, will minimise heat loss in the winter whilst maintaining background ventilation.
- **Electric heating** - All the homes will be heated electrically by roof mounted air-source heat pumps (ASHPs).
- **Photovoltaics** - The flat and shallow pitch roofs will maximise the opportunity for renewable electricity generation on site.

**Below:** Sketch section drawn early in Stage 3 to illustrate some key elements of the sustainability strategy



## 9. Access

### **Car parking, cycle parking**

Refer to the separate Transport Statement by Civic.

### **Access for services**

Refer to the separate Transport Statement by Civic.

### **Refuse storage and collection**

Refer to the separate Transport Statement by Civic.

### **Communal circulation**

The inclusion of a lift and ramps/slopes on the ground floor means that level access will be provided to the common house and to all of the flats and houses.

### **Common house**

The common house includes a wheelchair accessible bedroom and bathroom which comply with Building Regulations Part M4(3).

### **Accessible homes**

All the flats comply with Building Regulations Part M4(2) and all the houses comply with Building Regulation Part M4(1).

## Appendix A – Schedule of Accommodation

Unit Number	Unit Type	Proposed GIA sqm	National Space Standards minimum GIA sqm	Conform to Internal Space Standards?
1	3b5p House - 3 Storeys	106	99	yes
2	3b5p House - 3 Storeys	105	99	yes
3	3b5p House - 3 Storeys	105	99	yes
4	3b5p House - 3 Storeys	105	99	yes
5	3b5p House - 3 Storeys	105	99	yes
6	3b5p House - 3 Storeys	105	99	yes
7	3b5p - 1 Storey	92.3	86	yes
8	3b5p - 1 Storey	92.3	86	yes
9	3b5p - 1 Storey	92.3	86	yes
10	3b5p - 1 Storey	92.3	86	yes
11	2b4p+ - 1 Storey	83.3	70	yes
12	2b4p - 1 Storey	74.2	70	yes
13	2b4p - 1 Storey	74.2	70	yes
14	2b4p - 1 Storey	74.2	70	yes
15	2b4p+ - 1 Storey	83.3	70	yes
16	2b4p - 1 Storey	74.2	70	yes
17	2b4p - 1 Storey	74.2	70	yes
18	2b4p - 1 Storey	74.2	70	yes
19	2b4p+ - 1 Storey	83.3	70	yes
20	2b4p - 1 Storey	74.2	70	yes
21	2b4p - 1 Storey	74.2	70	yes
22	2b4p - 1 Storey	74.2	70	yes
23	2b3p - 1 Storey	77	61	yes
24	2b4p - 1 Storey	74.2	70	yes
25	2b4p - 1 Storey	74.2	70	yes
26	1b2p - 1 Storey	53.9	50	yes
27	2b3p - 1 Storey	77	61	yes
28	2b4p - 1 Storey	74.2	70	yes
29	2b4p - 1 Storey	74.2	70	yes
30	1b2p - 1 Storey	53.9	50	yes
31	2b3p - 1 Storey	77	61	yes
32	2b4p - 1 Storey	74.2	70	yes
33	2b4p - 1 Storey	74.2	70	yes
34	1b2p - 1 Storey	53.9	50	yes

## Appendix B – Response to Pre-Application Advice

The RIBA Stage 2 design was submitted to Norwich Council for pre-application advice in September 2021. Sussex Street Cohousing, Archio and TOWN met the Senior Officer, Sarah Hinchcliffe, and the Conservation Officer, Jessica Jenkinson, in November 2021. The written feedback from the pre-application confirmed that the development proposals were acceptable in principle, subject to the following comments. Note: the response to the Conversation Officer comments are covered separately in the Heritage and Townscape Assessment by Icení, and the response to comments regarding the existing tree are covered separately in the Landscape Design Statement by Farrer Huxley.

<b>Pre-Application Design Comments (paraphrased)</b>	<b>Current Design Response</b>
<b>Building Design</b>	
<p><b>1</b> The design of the buildings is largely influenced by your clients requirements to achieve a highly energy efficient, low carbon development using Passivhaus principles...Such a development is greatly encouraged and this aspect of the proposals needs much more detailed explanation within your submission.</p>	<p>Refer to the separate Energy Statement by Joel Gustafsson Consulting and section 7 of this DAS.</p>
<p><b>2</b> The concern is that the scheme is largely inward-looking and in places feels detached from its setting and neighbouring buildings. Each of the three proposed blocks on Oak Street, Sussex Street and Chatham Street would benefit from more integration, interaction and sensitivity to their respective street frontages.</p> <p>The intention to create a development which is homely and welcoming within needs to be reflected in the whole of the exterior of the buildings.</p>	<p>We have progressed the design to integrate with the street frontages in the following ways:</p> <ul style="list-style-type: none"> <li>• Large ground floor windows on Oak Street: <ul style="list-style-type: none"> <li>- To provide views through the common house to the common garden</li> <li>- To provide views of the Great Hall from the common house</li> </ul> </li> <li>• Curved 'Shopfront' on the corner of Sussex Street and Oak Street: <ul style="list-style-type: none"> <li>- To reinstate the historic building form</li> <li>- To provide views into the common house kitchen and the 'Library of Things'</li> </ul> </li> <li>• Widening of the pavement on Oak Street: <ul style="list-style-type: none"> <li>- To make the existing narrow pavement safer and more comfortable for pedestrians</li> <li>- To provide space for planting which will grow up the facade</li> </ul> </li> <li>• Main entrance archway on Sussex Street formed as a lightweight metal screen (was a heavy brick arch): <ul style="list-style-type: none"> <li>- To provide clear views in to the shared garden, and out to the street</li> </ul> </li> </ul> <p>Arched front doors on Chatham Street and Sussex Street:</p> <ul style="list-style-type: none"> <li>- To create an active street frontage</li> <li>- To complement the front doors of the neighbouring terraced houses</li> </ul> <ul style="list-style-type: none"> <li>• Hedges on the back of the pavement on Chatham Street and Sussex Street: <ul style="list-style-type: none"> <li>- To echo the existing hedge line on the corner of Sussex Street and Chatham Street</li> </ul> </li> </ul>
<p><b>3</b> Sussex Street and Chatham Street development should be set back from the pavement slightly to reflect the existing character of these street scenes which allows a small front garden, with use of hedging or railings where necessary as a form of boundary treatment.</p>	<p>We have set the Sussex Street building and the Chatham Street houses back from the pavement and are proposing to form the boundary with hedging to echo the existing hedge line on the corner of Sussex Street and Chatham Street.</p>

### Scale

- 1 The flat roof form has facilitated the creation of a fourth floor of accommodation. This is not a scale of development that is found in the locality and is accentuated by the blocky form of the proposed development. Further reassurance needs to be provided that this scale of development is appropriate in this location.
- 2 We have suggested that the entirely flat roof scheme be altered to introduce some variation to the roofscape to reflect the gabled and hipped roofs of Sussex Street, Chatham Street and Oak Street.
- 3 A pitched roof is considered more appropriate for the houses.

Refer to the Heritage and Townscape Assessment by Icení for a response regarding the appropriateness of this scale of development.

We are proposing to differentiate the top storey as an attic-storey through a change in the opening proportions, fenestration and brick texture. This is an approach which reflects the treatment of other four storey buildings in Norwich, including the Norwich Technical Institute.

Refer to the Heritage and Townscape Assessment by Icení for a response regarding the appropriateness of flat roofs and horizontal parapets in this location.

We are proposing flat roofs on the Oak Street and Sussex Street buildings to provide the space required for photovoltaic panels and air-source heat pumps, and to ensure that they are easy and safe to maintain. This quantum of flat roof is required to achieve the project's sustainable targets.

We have revised the design to include pitched roofs on the houses, using clay roof tiles to complement those on used on the historic houses of Sussex Street. The asymmetric roofline also draw parallels to the more contemporary housing on the northern side of Sussex Street, opposite the site.

### Appearance

- 1 Aspects of concern include how the punched openings to the walkways on the second and third floors are viewed in the Sussex Street, street scene and the resultant loss of interaction with the community.
- 2 Aspects of concern also include the materials, design and appearance of the external walkways and balconies on the courtyard facing elevations, which will be visible to an extent when traveling north along Oak Street

We have progressed the design to adapt these punched openings to the walkways to correspond with the vertical proportions of the sash window openings of the existing homes on Sussex Street and Chatham Street.

The walkway will be busy with people walking to and from their homes, and by being 'open' allows these domestic scenes to be visible and interactive from the street, rather than hidden away.

Refer to our illustrative view of the courtyard. This shows our proposal to use a lighter brick on the courtyard elevations in combination with lightweight painted steel walkways and balconies. It also shows the intention for the walkways and balconies to provide a framework for planting to continue the courtyard planting up the buildings.

### Transport, Parking and Servicing

- 1 The highways officer is concerned about the visibility from the access onto Oak Street. Firstly, you need to justify why access on to the higher order road frontage has been chosen rather than taking access to the site from one of the quieter roads.

Refer to the Transport Statement by Civic.



- 2 You should also ensure that adequate waste and recycling storage provision can be accommodated on the site, 1 x 1100 litre bin is required for waste and one for recycling to serve 6 households. Located within 5 metres of the highway and accessed by a pram dropped kerb.

The communal waste and recycling storage for all the flats is located in the Oak Street block adjacent to the proposed vehicle access.

We are proposing individual brick built waste and recycling storage for the Chatham Street houses.

Please refer to the Planning Statement for full details and quantum.

#### Amenity Impacts

- 1 In accordance with policy DM12 at least 10% of the properties will need to be built to the equivalent of the lifetime homes standard (Building Regs M4(2)).
- 2 Care must be taken with such a large amount of elevated terraces, walkways and balconies to not give rise to unacceptable levels of overlooking.
- 3 The relationship of the roof terraces to the Chatham Street properties with the existing properties to Chatham Street is particularly close and a cause for concern in relation to overlooking.

We have designed all the flats to meet Building Regs M4(2), accessible and adaptable dwellings. The houses meet Building Regs M4(1), visitable dwellings.

We have discussed the level of overlooking in detail in our co-design workshops with the future co-housing residents who are comfortable with the proposals.

The proposed second floor terraces are set back from the rear elevation line of the existing Chatham Street properties so any overlooking of the existing gardens will be equivalent to the existing overlooking from the rear windows of the existing Chatham Street properties.

#### Noise

- 1 A noise impact assessment will be required because the site is located within a densely populated area in which a mix of residential and commercial uses coexist alongside each other in close proximity.

Refer to the Noise Impact Assessment by Noise Consultants Ltd.

#### Biodiversity

- 1 The site has been cleared of previous buildings and has remained vacant and become subsequently overgrown in the intervening period. An ecological assessment will be required to identify any impact on wildlife or biodiversity of the proposed development, including site survey and biodiversity enhancements.

Refer to the Ecological Assessment by Hopkins.

#### Flood Risk/Drainage

- 1 Whilst the site falls within Flood Zone 1 it is situated within a critical drainage catchment area and policy DM5 of the Norwich local plan states that it is important that development minimises the risk of flooding on the development site and where possible to reduce the risk.

Refer to the Drainage Strategy and Flood Risk Assessment by Simple Works.

#### Energy and water

- 1 The policy requirement set out in JCS Policy 3 is to secure at least 10% of the developments energy demand from on-site 'decentralised and renewable or low-carbon energy'.

Refer to the Energy Statement by Joel Gustafsson Consulting.

<p>2 Buildings should be designed to be capable of incorporating energy production technologies without detracting from the appearance of the development, the listed building or conservation area.</p>	<p>We are proposing a 1.1m parapet to the flat roofs on the Oak Street and Sussex Street buildings to conceal the photovoltaic panels and air-source heat pumps and to allow for safe access for maintenance without the need for complex fall-arrest systems.</p>
<p><b>Housing Mix and Affordable housing</b></p>	<p>Refer to the Planning Statement by TOWN.</p>
<p><b>CIL and Self Build Exemptions</b></p>	<p>Refer to the Planning Statement by TOWN.</p>
<p><b>Community Engagement</b></p>	<p>Refer to the Statement of Community Involvement by TOWN and Sussex Street CIC.</p>

## Appendix C - Tree Studies

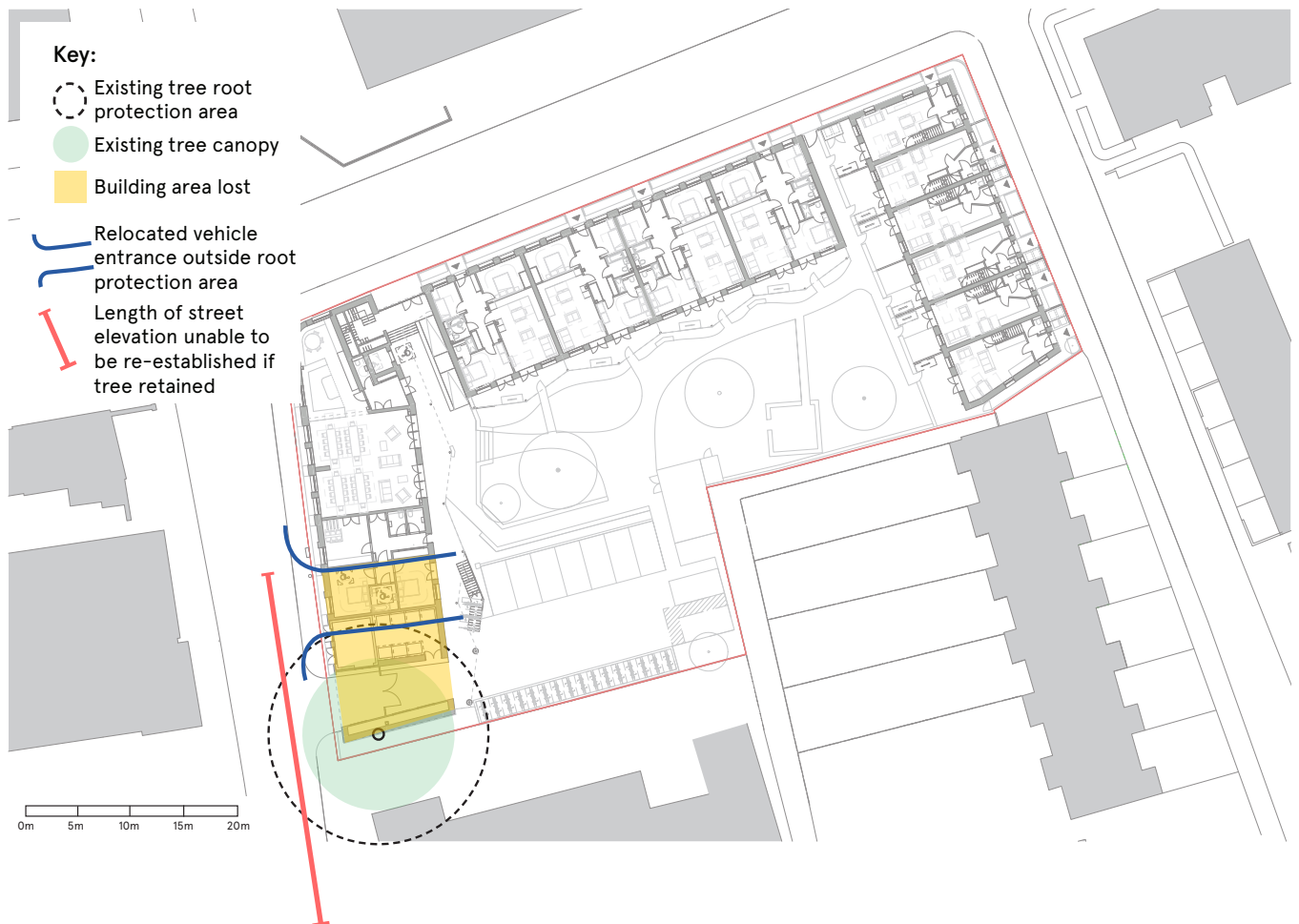
### Testing the scheme with retained tree

In parallel to our design process as described, we considered how we could approach the design if we were to retain the existing willow tree.

The following pages describe these design tests in more detail, and on this page we have summarised the main constraints and impacts on the design:

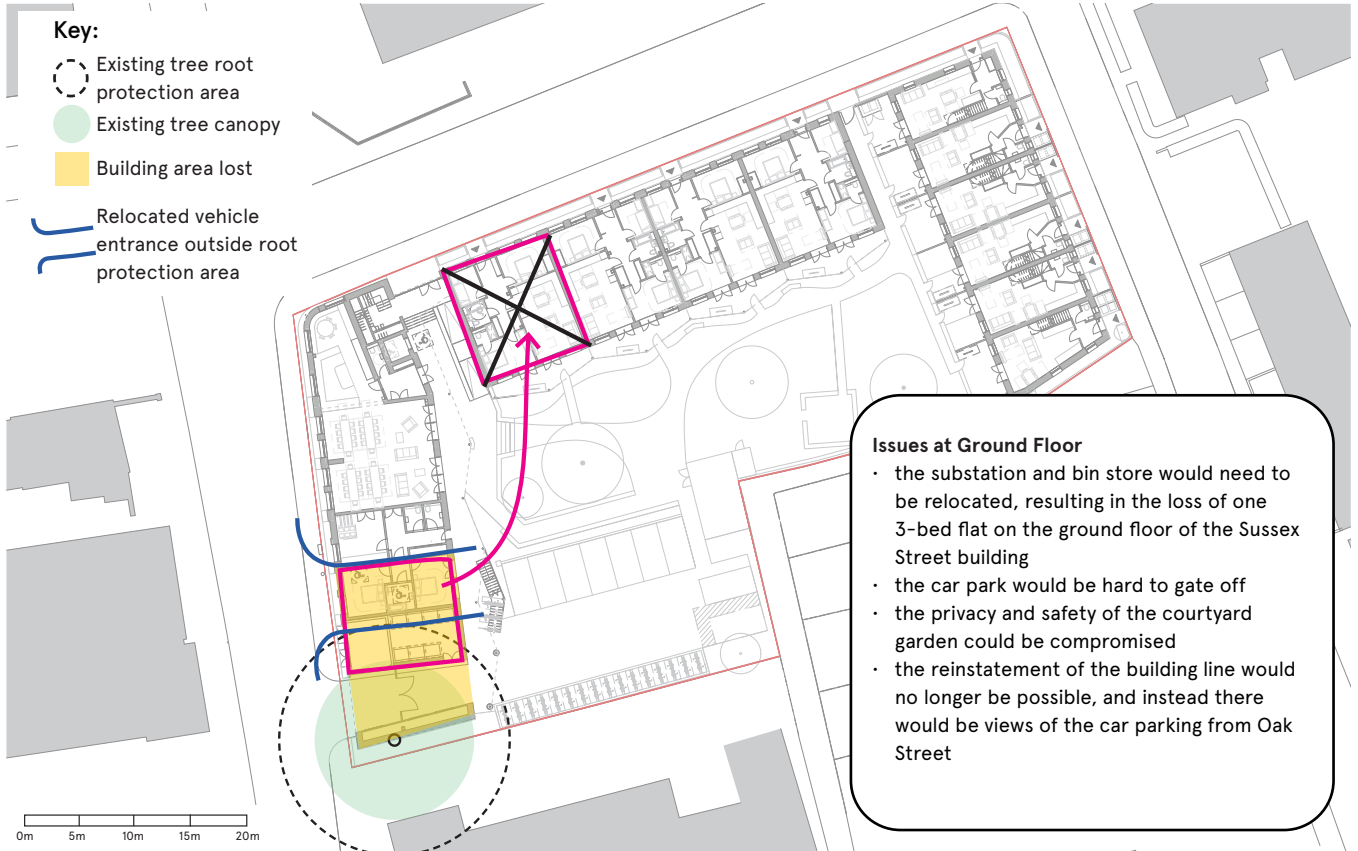
#### Impact of retaining the tree:

- as can be seen in the diagram below the tree has a root protection area which is wider than the tree's canopy,
- building foundations and hard landscaping, required for vehicle access, cannot be located within this root protection area,
- as such the vehicle entrance would need to move north up Oak Street, bringing this entrance point closer to the junction with Sussex Street which would be more dangerous
- this would also reduce the length of the building line and active frontage along Oak Street by approximately 15m which is a key positive impact of the scheme,
- removing the building line at this southern end of the site would allow for views into the car parking area, which could be seen as having a negative urban impact.



## Test 01 - Reduce the scheme by 4 homes

If the tree were to be retained, the ground floor uses would need to be relocated, and in total three 2-bed flats and one 3-bed flat would be lost from the scheme.



## Test 02 - Relocate the common house uses and 3 homes

If the tree were to be retained, the ground floor uses would need to be relocated, possibly into a 2 storey block at the southern boundary, pushing parking centrally.

