

3.0 DESIGN DEVELOPMENT

APPROACH TO SUSTAINABILITY

OUR APPROACH

DFA are deeply committed to creating sustainable projects that address the key challenges of delivering a sustainable built environment. The approach integrates various principles and strategies to ensure that our designs align with the vision of local authorities. Below is an overview of our approach and expertise in addressing sustainability themes:

Net Zero Carbon by 2040:

Our projects prioritise energy efficiency, renewable energy generation, and carbon offset strategies to minimize operational carbon emissions.

Sustainable Design Solutions:

We prioritize passive design strategies, such as optimizing building orientation for solar gain, natural ventilation, and daylighting, to reduce energy consumption.

Passivhaus Standard:

Our team includes certified Passivhaus designers who apply their expertise to ensure energy efficient and comfortable spaces for the residents.

Circular Economy:

Our design approach incorporates strategies such as material re-use, recycling, and designing for disassembly to create a closed-loop system.

Green Infrastructure Framework:

Our designs leverage the principles of the Green Infrastructure Framework by incorporate features such as green roofs, living walls, urban agriculture, and sustainable drainage systems to enhance biodiversity, promote well-being and manage storm water runoff.

RIBA 2030 Climate Change:

DFA are a member of RIBA 2030 Climate Change. We encourage each team member to take ownership of the RIBA 2030 Climate Change spreadsheet to submit their project-specific data and actively engage with the sustainability figures. The team discuss what worked, what didn't, and areas to improve, and set future targets, with a lessons learnt approach.



1 Welham Manor, Hatfield: A **landscape-led** residential scheme, incorporating the **use of native and species-rich planting**, aiming to **maximise biodiversity net-gain**.
 2 Elm Farm House, Barnett: **Adaptive re-use** of 4 agricultural barns, **utilising the embodied carbon**.



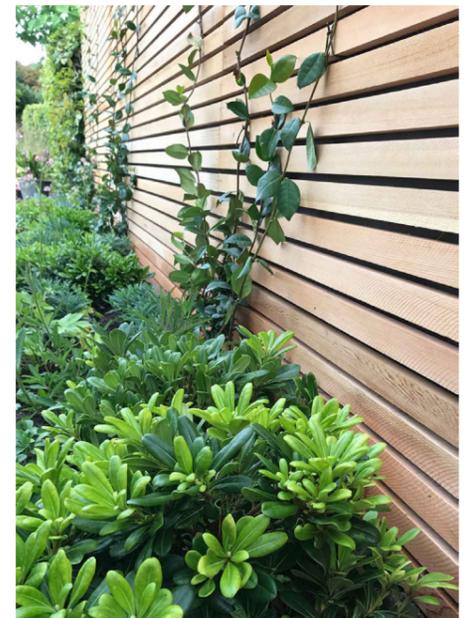
3 Honor Oak Park: Sensitive approach to all **existing tree protection orders and root protection areas** across the site to provide 6 cabin style houses built out of **lightweight timber** construction on a **raised deck to protect the tree roots**

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SUSTAINABILITY TARGETS

DFA SUSTAINABILITY TARGETS

- Fabric First
- High levels of airtightness
- High performing floor U values for external envelope
- Grey rainwater harvesting with water butts
- Dual flush toilets
- EV charging points
- Smart thermostats
- LED low energy lighting
- Flow regulated showers and taps
- High performing external doors- both thermally and air tightness
- Grassed landscape amenity with planters
- Utilisation of native planting which are adapted to the local micro-climate and soil conditions
- Maximising new on site trees to enable carbon capture
- Bird boxes/bat boxes
- Brick build- longevity



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INTERNAL DESIGN REVIEW

DESIGN LED DEVELOPMENT

Dowen Farmer Architects were approached to review the existing commercial site with a brief of providing a design lead residential development. The brief was to design a high-quality response that followed architectural principles established within the surrounding Conservation Area with a shared communal landscape and car parking at the heart of the proposal.

The design is required to respond to the constrained nature of the site, ensuring the development considers the potential impacts on outlook and privacy to both the neighbouring and proposed dwellings.

DESIGN PROCESS

The intention is that the building would improve the existing site condition, seamlessly stitching into the Orchard Road Conservation Area. By creating a high quality shared amenity offering, provided within a mews scaled space, the proposed landscaping will thread together and unify the development, whilst offering a safe and secluded shared space.

Dowen Farmer Architects is a process driven outfit that aspires to respond to sites specificity with the outcome of each project having a unique quality that gives a bespoke identity. As part of this process, a small number of the teams members conducted an internal initial design review session in which the team were tasked to provide five ideas in five minutes.

A selection of these initial ideas are provided on the following page.



1 DFA Internal Design Review / Photograph
2 DFA Internal Design Review / Photograph
3 DFA Internal Design Review / Photograph

3.0 DESIGN DEVELOPMENT

INITIAL SITE CONCEPTS



INITIAL PLAN CONCEPTS

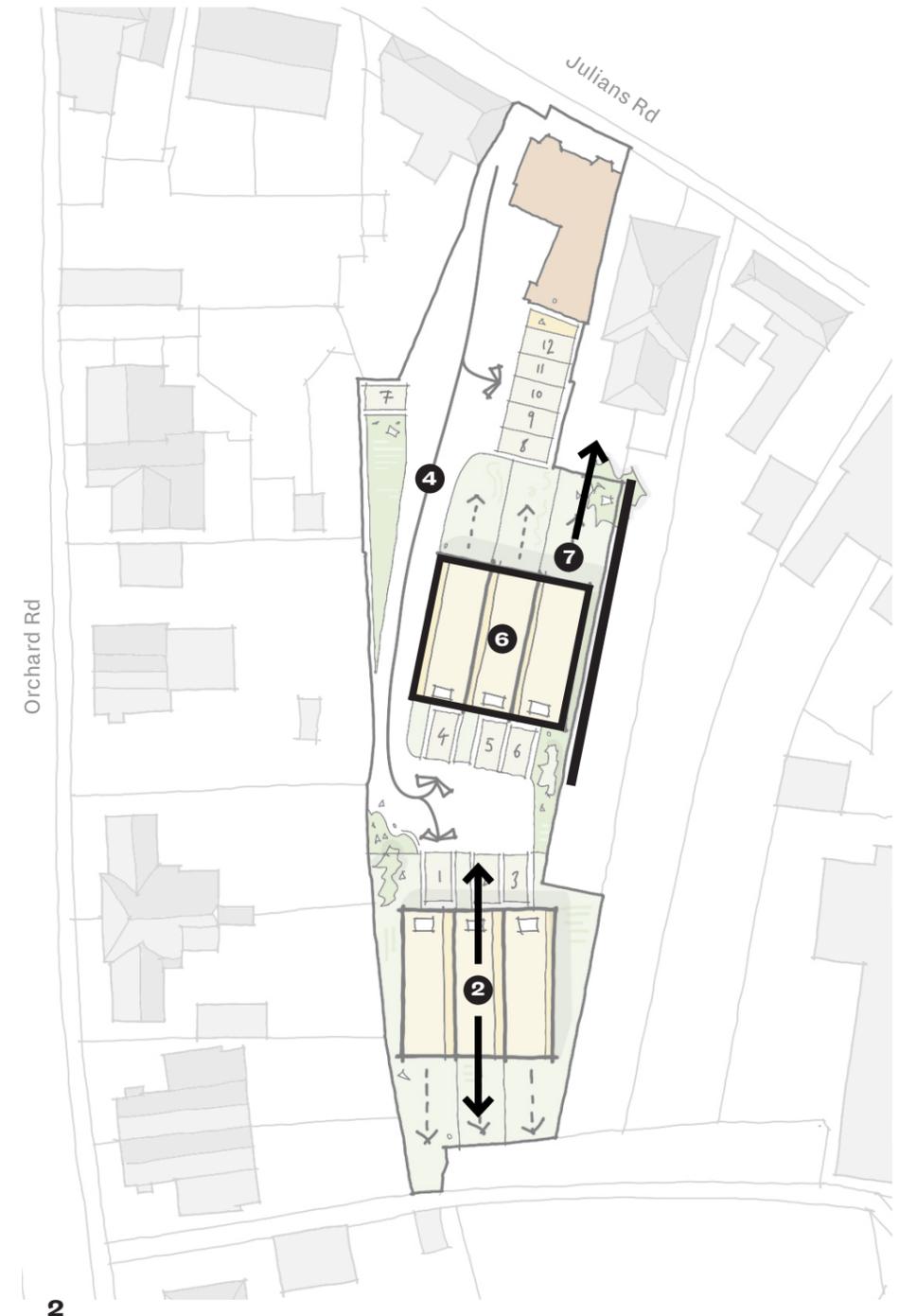
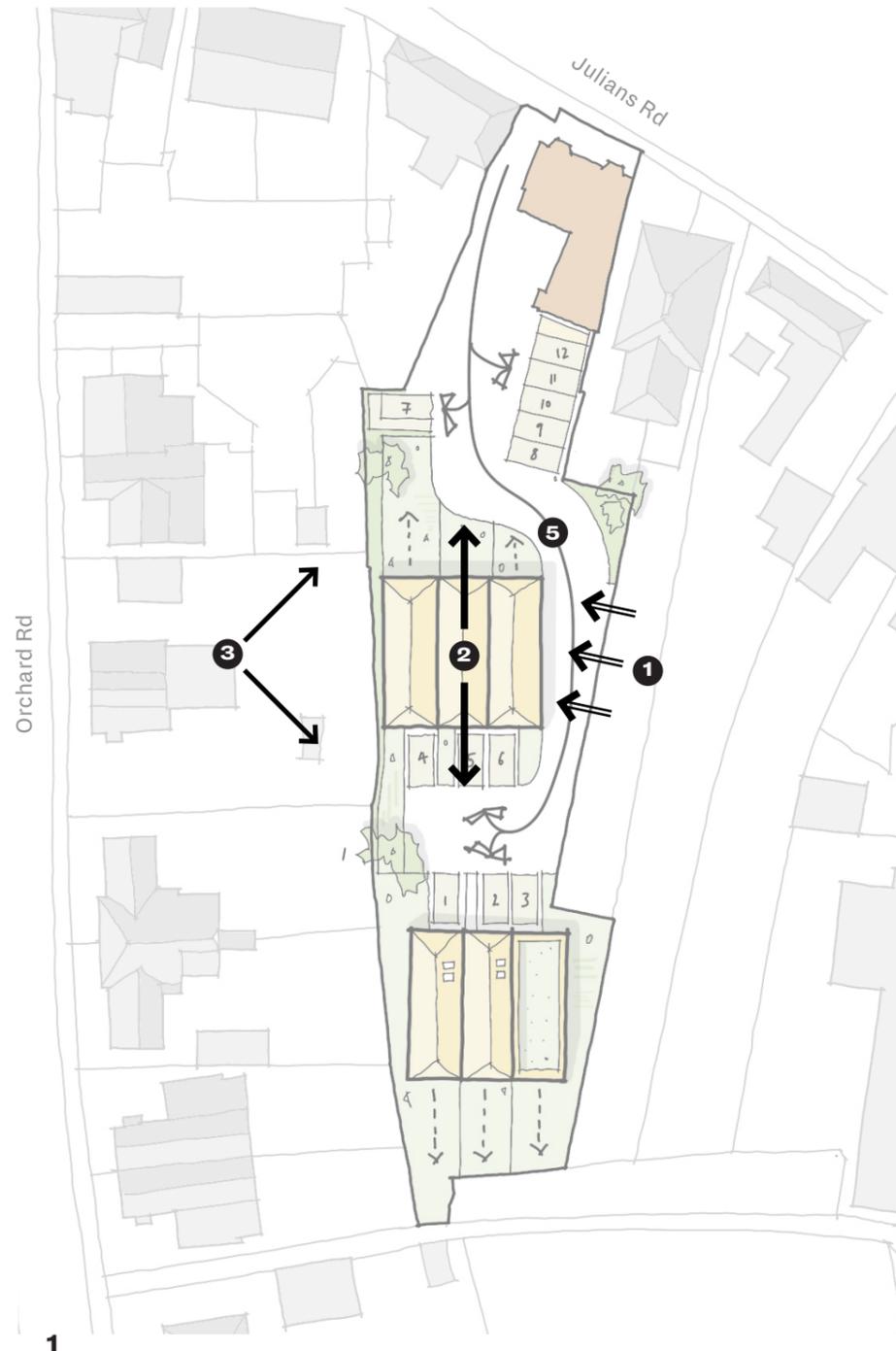
Following the *Internal Design Review*, the team began to further develop a number of different approaches to the site. A summary of these ideas and the potential constraints and opportunities of the options is as follows:

OPTION 01 & 02 - PROS

- ✓ 1. Minimal development along the eastern boundary ensures a positive relationship with the neighbouring property/garden. Mass of existing warehouse currently located on site is located in the same position as front block therefore there is no material difference in impact on neighbouring gardens to the west. (Option 01)
- ✓ 2. Primary residential outlook is orientated north / south, mitigating overlooking into neighbouring properties.
- ✓ 3. Bulk of development towards the north is located in the same position as the existing building, therefore the condition of the relationship with properties along Orchard Rd remains similar.
- ✓ 4. Locating vehicular access along the western boundary (Option 02) increases area available for amenity spaces and increased biodiversity.

OPTION 01 & 02 - CONS

- 5. Proposed vehicular access (Option 01) increases hardscaping requirements and reduces area available for communal and private amenity provision.
- 6. Development along the eastern boundary where there is no existing building raises concerns around the impact of the development on the neighbouring residential gardens. (Option 02)
- 7. Locating the front block along the eastern boundary (Option 02) creates a potential overlooking issue with the adjacent residential property at 31 Julians Road.



- 1 Plan Sketch Option 01
- 2 Plan Sketch Option 02

3.0 DESIGN DEVELOPMENT

INITIAL SITE CONCEPTS



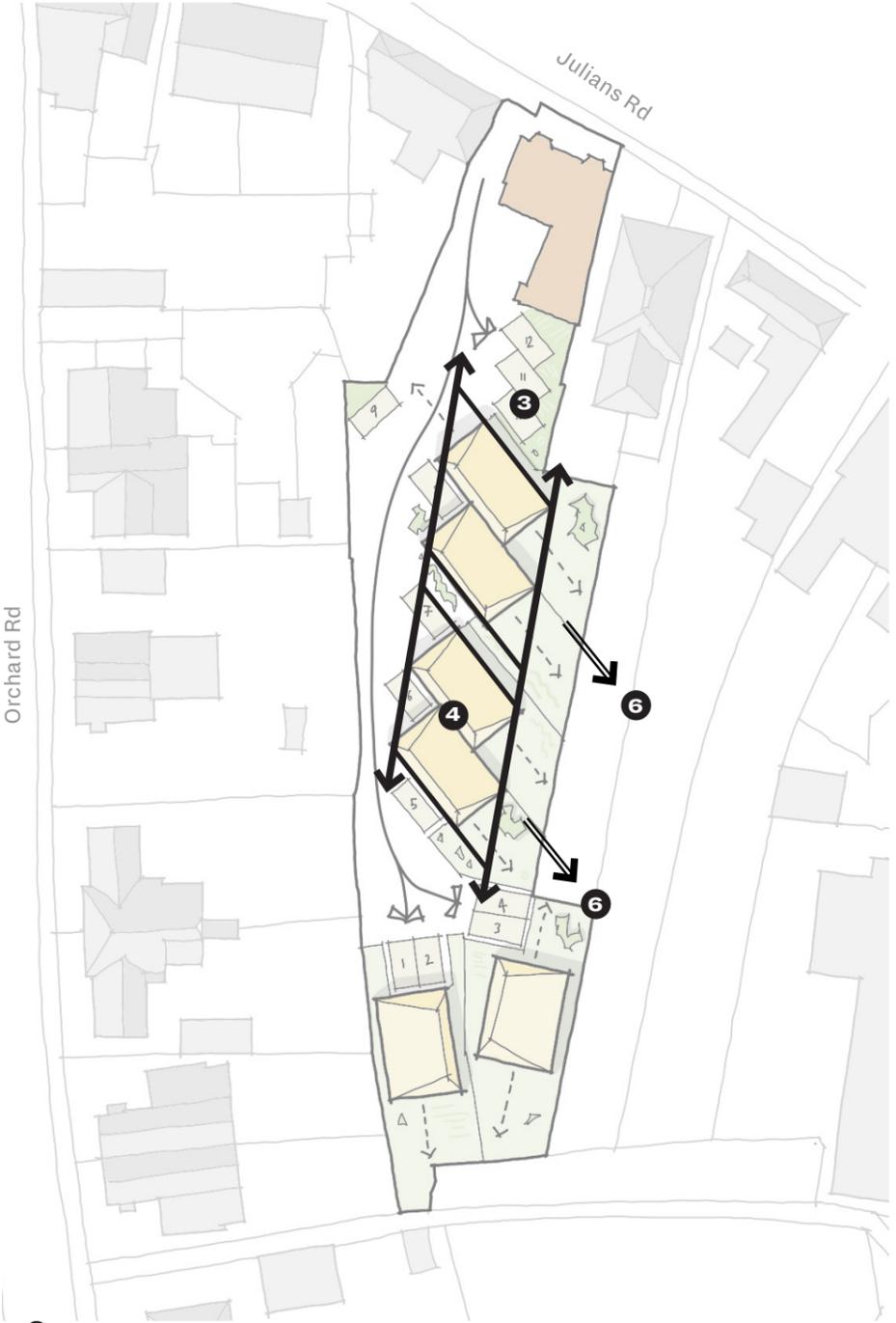
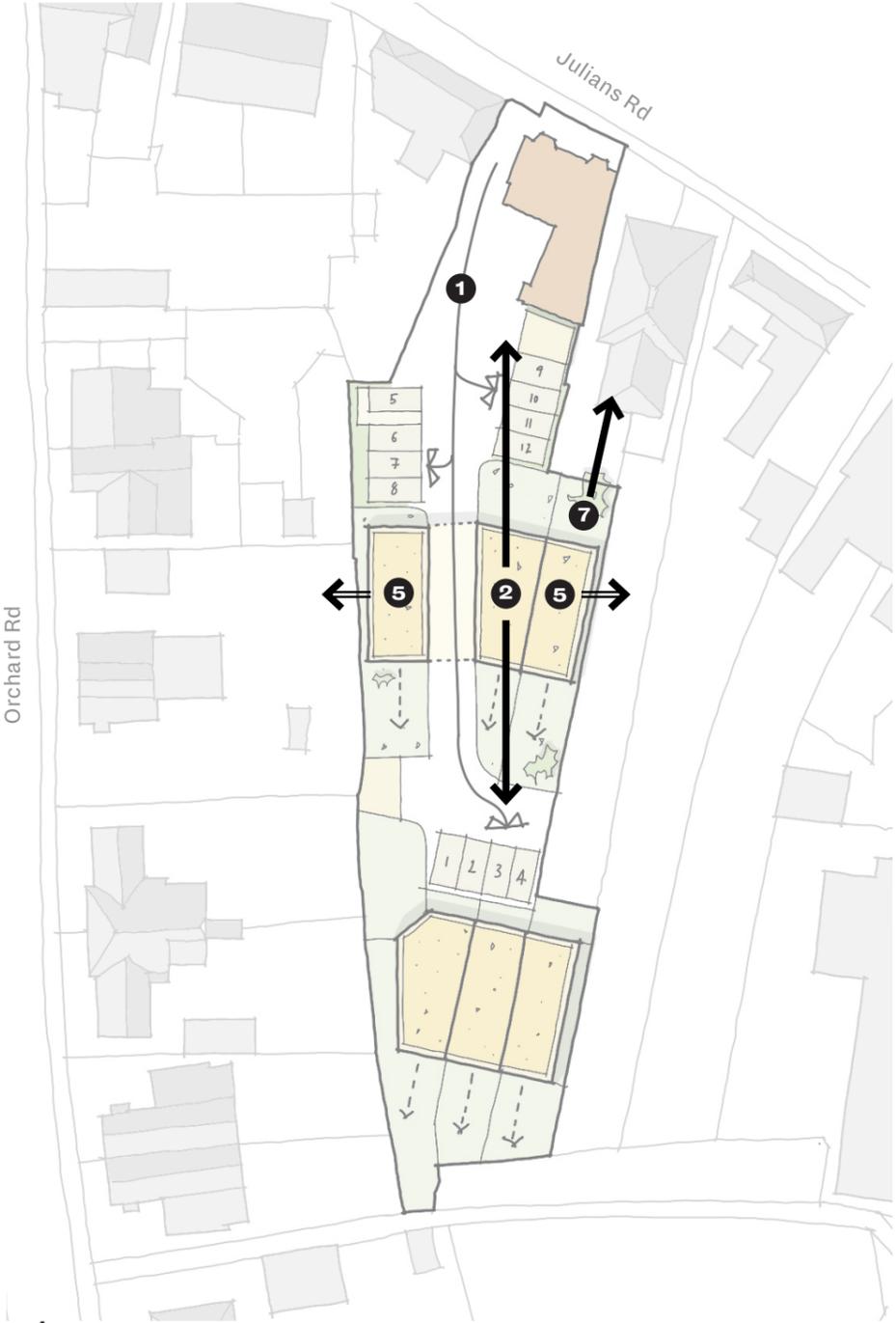
INITIAL PLAN OPTIONS

OPTION 03 & 04 - PROS

- ✓ 1. Central vehicular access (Option 03) provides an efficient and easily accessible route for residents cars and servicing whilst maximising urban-greening.
- ✓ 2. Primary residential outlook is orientated north / south, mitigating overlooking into neighbouring properties. (Option 03)
- ✓ 3. Concentrating development along the centre of the site (Option 04) ensures that the proposed development sets back from both boundaries.
- ✓ 4. The scheme is separated into smaller blocks with stand-alone detached properties. This breaks down the perceived bulk and scale of the development and is in-keeping with the surrounding context. (Option 04)

OPTION 03 & 04 - CONS

- ✗ 5. The proposed development - particularly to the north - abuts both the east and west boundaries raising concerns around the impact of the development on the neighbouring residential gardens due to perceived bulk. (Option 03)
- ✗ 6. Although orientating the units directs aspect away from the neighbouring properties by creating oblique views, it does direct views into neighbouring gardens. (Option 04)
- ✗ 7. Locating the front block along the eastern boundary (Option 03) creates a potential overlooking issue with the adjacent residential property at 31 Julians Road.



1 Plan Sketch Option 03
2 Plan Sketch Option 04

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SITE STRATEGY



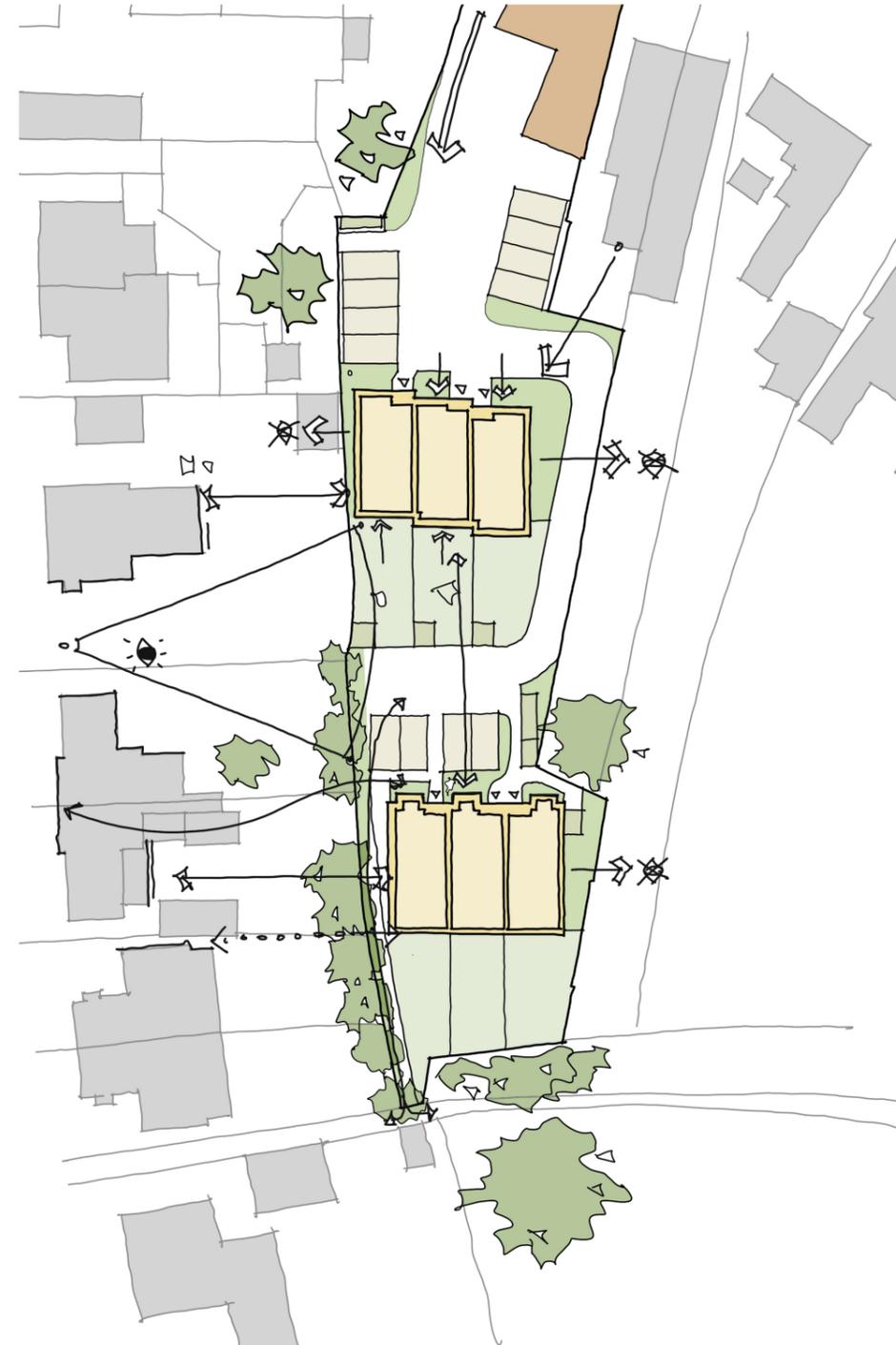
SITE STRATEGY

SITE STRATEGY

The surrounding context - with its historic urban grain, heritage assets, and residential setting - have driven a clear strategy for this project and the proposed site layout. The proposed massing responds to the grain of the surrounding residential properties and has been crafted to respond to the visual townscape analysis the design team have undertaken.

The below provides a summary of the key points which have driven the site specific design response:

1. Orientating the massing in order to direct residential outlook north-south along the site, mitigating overlooking into neighbouring properties.
2. Stepping the building line of the front block to breakdown the perceived massing of the site when viewed from the site approach off of Julians Road.
3. Providing a secondary pedestrian access from the southern boundary of the site, providing convenient access to local amenities.
4. Considering the key views of the site from, neighbouring gardens, Julians Road, and Orchard Road to ensure that the proposed scheme does not have an adverse affect on the conservation area.
5. Units 01-03 will sit within the footprint of the existing warehouse building, ensuring that the outlook from the residential properties on Orchard Road is improved.
6. Aligning the proposed massing with the neighbouring context to maintain views through the site.
7. Setting back the proposed building lines from the eastern and western boundaries to mitigate overbearing impact on neighbouring sites. The only exemption being the western boundary of Units 01-3 where the existing warehouse abuts the boundary.
8. Every residential unit is provided with dedicated secure external cycle storage, two car parking spaces, and a generous private garden.



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LOCAL REFERENCES

LOCAL CONTEXT

When reviewing the local architecture in greater detail, there are several features that provide articulation and interest. The residential properties within close proximity to the site are often characterised by front facing gables, prominent chimney stacks and brick/timber facade detailing.

Example 1 & 2 - highlights the contrast between brickwork at ground and mock Tudor render at first floor which breaks down the two-storey facade. The bay window typology with a third storey of roof accommodation is also common within the context as are moment such as the arched porch in example 1.

Example 3 - reflects the variation in the window proportions and sizes common in the local context. Furthermore, the mock Tudor timber fenestration applied to the facade is seen throughout many examples within the area.



References to the Character Assessment:

- Gabled Roof
- Flint Cladding
- Facade Decoration



References to the Character Assessment:

- Gabled Roofs
- Flint Cladding
- Mock Tudor Decoration



References to the Character Assessment:

- Gabled Roofs
- Dormer Windows
- Fine Facade Details

- 1 4 Julians Road
- 2 21 Julians Road
- 3 14 Julians Road