

# 5.0 THE SCHEME

## PRECEDENTS





# 5.0 THE SCHEME

## VISUAL - VIEW LOOKING NORTH TO MEWS





**5.0 THE SCHEME**  
**VISUAL - VIEW LOOKING SOUTH TO MEWS**





# 5.0 THE SCHEME

## 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 prioritize 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

### Key Sustainability and Renewable Energy Commitments

- Fabric First
- High levels of airtightness
- High performing floor U values for external envelope
- Grey rainwater harvesting with water butts
- EV charging point
- Dual flush toilets
- 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
- De-carbonised heating





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## ENERGY STRATEGY

### RENEWABLE DEVELOPMENT

- Key focus is not only to provide high quality residential accommodation to meet future housing needs but to also deliver a renewable energy source and improve water attenuation and biodiversity to enhance the sustainability of the Belmont Close development.
- Aiming to reduce operational carbon.
- Each unit will house 9 PV panels
- Each property will house an Air source heat pump, with the outdoor unit being able to be access via terraces and adequate provisions of internal space for hot water cylinders.

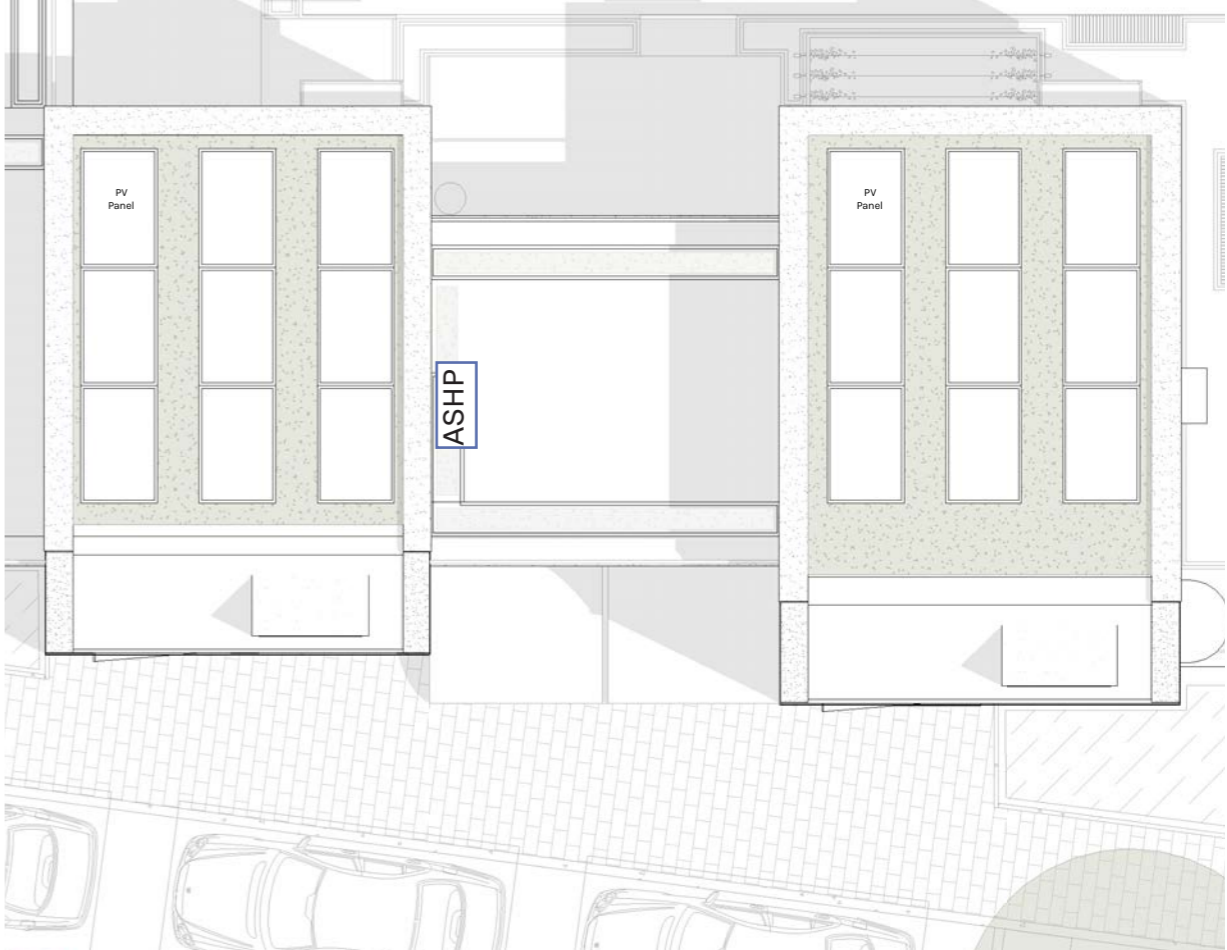
Please refer to The PES Energy & Sustainability Statement for further information.



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2



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- 1 PV & Sedum roof
- 2 ASHP External Unit
- 3 Proposed Roof Plan



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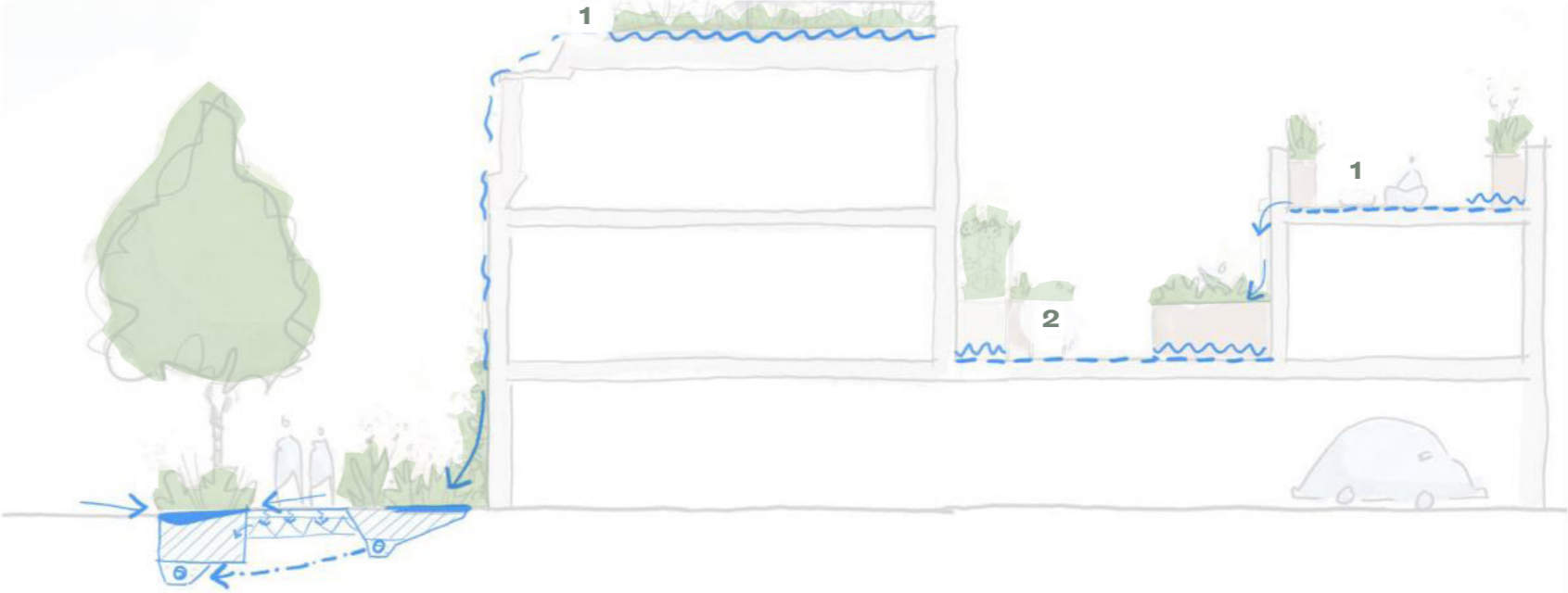
## SUDS STRATEGY

### RENEWABLE DEVELOPMENT

Creating sustainable landscapes which are climate resilient is a key part of the landscape aspirations for the scheme. It is proposed that Sustainable Drainage Systems (SuDS) will be utilised within the development with the aspiration of reducing 'traditional' surface water drainage techniques as much as possible, with the inclusion of green roof substrate storage and rain gardens to promote a sustainable drainage strategy, and water butts to create opportunities for grey water use.

- 1 Green roof substrate storage
- 2 Deck drainage mat

Please refer to PES FRA & SuDS report and Jim Kelly Landscape Sketchbook for further details.



1



- 1 SuDs Sketch
- 2 SuDs Landscape Rain Garden
- 3 SuDs Landscape Rain Garden



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## HOLISTIC SUSTAINABILITY

### HOLISTIC SUSTAINABILITY

With sustainability and landscape being a driving factor for the proposal, a number of design moves have been implemented which allow for a resilient and adaptable scheme to accommodate a changing climate. These include:

1. Solar shading details for south facing openings
2. East & west facing openings are prioritised to prevent solar gain in the summer months whilst promoting natural, cross ventilation
3. Hit and miss brickwork detailing provided for privacy and solar shading
4. Vegetated barrier provides natural solar shading
5. Solar panels are provided on the roof of each unit
6. Biodiverse rich green roofs provide an eco system for wildlife, help with sustainable drainage and allow for an increase in thermal efficiency by reducing the risk of over heating
7. Oriel windows allow residents to have fully operable windows whilst maintaining privacy into habitable rooms and providing natural surveillance
8. Rain gardens and SuDs landscapes promote sustainable drainage





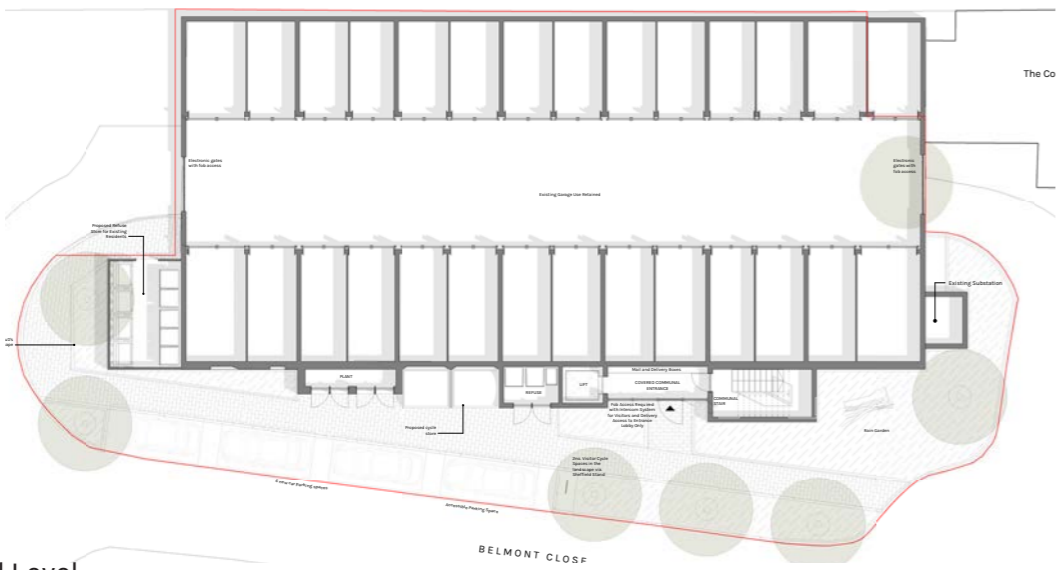
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## VISUAL - VIEW LOOKING EAST TO MEWS





# 5.0 THE SCHEME LAYOUTS



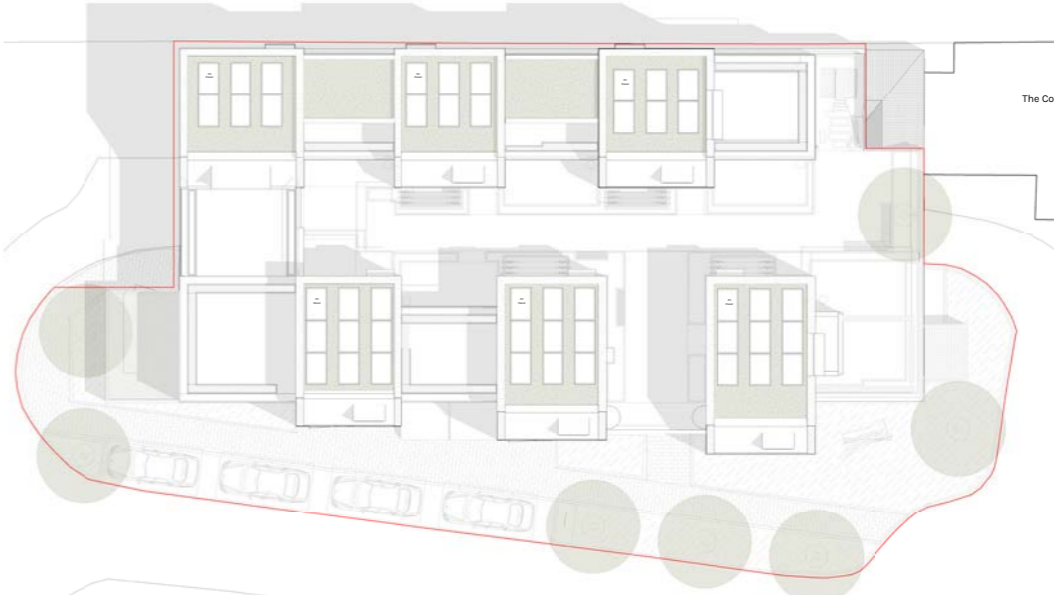
Proposed Ground Level



Proposed First Level



Proposed Second Level

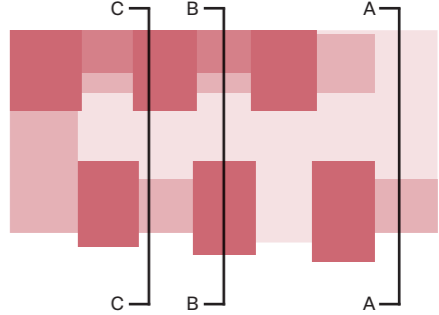


Proposed Roof Level



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## OUTLOOK & OVERLOOKING

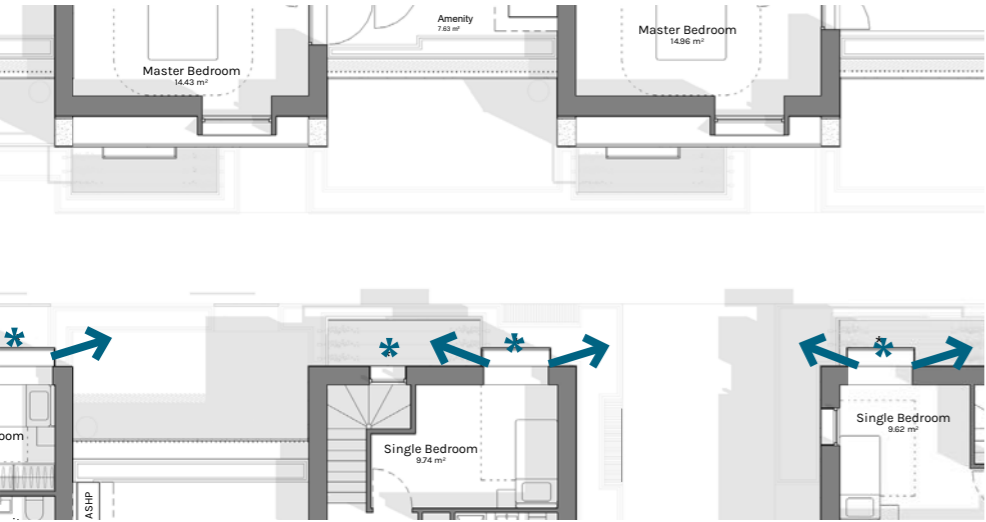


### OUTLOOK & OVERLOOKING

**NEIGHBOURING OUTLOOK**  
 The proposed scheme has been designed so that it does not give rise to a visually intrusive built form that causes obstruction within the natural environment which could harm views from neighbouring residential outlooks. The scheme also looks to mitigate any concerns around overlooking and daylight impacts on the residential dwellings on Belmont Close by providing generous offset distances and by implementing sensitive window details to reduce privacy concerns

**OVERLOOKING**  
 To remove privacy concerns between bedrooms on the mews, where building offsets are not as generous as with the surrounding context, oriel windows have been provided which will have opaque glazing which fronts the mews and clear, operable glazing to the flanks. This benefits the residents by providing all year operability to reduce the impacts of climate change whilst maintaining privacy and contributing towards the natural surveillance of the mews

\* Indicated Obscure Glazing at Levels 02



L02 Plan showing Oriel Window Outlook



Section CC



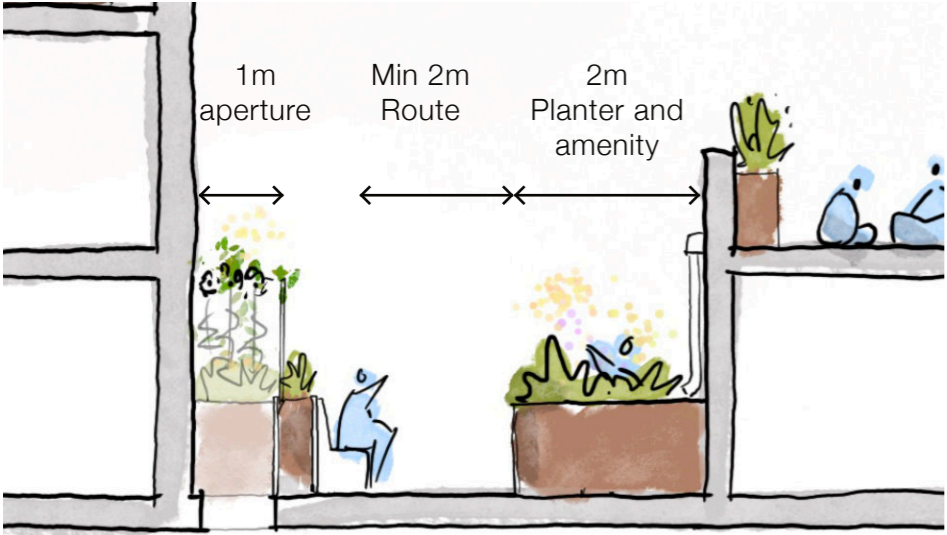
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## DEFENSIBLE SPACE

### DEFENSIBLE SPACE

The perimeter of the ground floor of each unit (at the mews level) is set back from the communal amenity in order to provide privacy to the habitable rooms within. The defensible space ranges from 1000mm to 3000mm and is designed into the scheme in the following ways:

- 1. Minimum of 1000mm deep, raised planting zone
- 2. Minimum of 1000mm deep lightwell to car park below with 1100mm tall railing, this also is benefited from a raised planter zone in front of this
- 3. A minimum of 2000mm private terrace on the mews level off the primary living space of each unit.



Lightwell and defensible space sketch section



Holistic approach to defensible space is shown a 3D cutaway view



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## PRIVATE AMENITY

### PRIVATE AMENITY

The private amenity provisions for units provide a duality of policy compliant outdoor space for each unit. The amenity for units is broken down into two distinct areas which offer a different character to residents.

The first is a generous private terrace area provided on the mews level off the primary living spaces for units. This provides a visual and physical connection between the outdoor amenity space and family living areas to ensure these exciting, bright and unique gardens can be fully utilised by the residents. These gardens are both secure and well screened offering privacy to the residents.

The second is a private roof terrace located on the first floor of the units. As opposed to the mews level amenity, the roof terraces provide residents with pleasant outlook over and through the breaks in the massing, maximising the amount of daylight and sunlight whilst ensuring privacy is ensured.

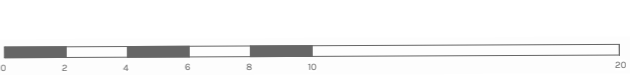


Private Roof Terrace Amenity



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## PRIVATE & COMMUNAL AMENITY



### PRIVATE & COMMUNAL AMENITY TOTALS

**PRIVATE AMENITY TOTALS**

- Unit 01 - 34SQM
- Unit 02 - 35SQM
- Unit 03 - 43QM
- Unit 04 - 50QM
- Unit 05 - 20SQM
- Unit 06 - 37SQM

**COMMUNAL AMENITY TOTALS**

Mews - 130SQM



- First floor Amenity
- Second Floor Amenity



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## VISUAL - VIEW LOOKING TO MEWS





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## LANDSCAPE

### LANDSCAPE DESIGN

A clear and considered landscape strategy has been implemented to enhance the proposal. The primary goals of this are as follows :

- Create an intuitive and safe arrival experience for residents
- Create a landscape buffer around the scheme to soften arrival experience and ensure space for a habitat opportunities
- Ensure homes have adequate and attractive defensible space
- Ensure that residents have a clear and generous route to their front door
- Provide adequate provisions sustainable drainage facilities

Public landscape design is a priority of the design process for the site. The scheme aims to enhance the public landscape offering by creating a layered landscape which will increase ecological richness in a provision that replaces the existing shrub coverage.

The goal of the scheme is to make a provide a landscape which promotes biodiversity of the site whilst providing a positive contribution to the appearance and character of the area whilst maintaining and enhancing the greenery to the residents of Belmont Close.

Please refer to the Jim Kelly Landscape Sketchbook for further details.





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## AMENITY PRECEDENTS

