3.8 MATERIAL PALETTE & HERITAGE PRINCIPLES

The proposed palette of materials is designed to respond and enhance the local vernacular. The variation in tones of bricks elements, orange for exterior elevation and buff brick for the internal court, makes reference to numerous local buildings in Welwyn Garden City (including Peel Court, Rosanne House, Council Offices).

A reconstituted stone basement runs along the western, northern and eastern elevations:

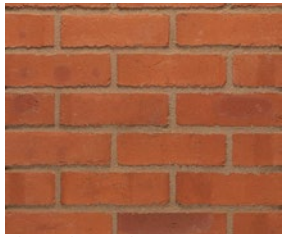
The mansard roof and associated dormers are orange Norfolk pantiles.

KEY WEST ELEVAION

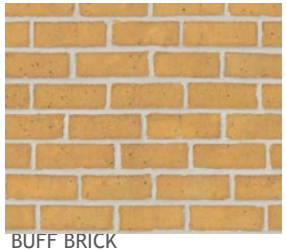
3.9 *Proposed street view looking West along Broadwater Road*

ARCHITECTURE & DESIGN EVOLUTION

ORANGE NORFLOK PANTILE



ORANGE BRICK

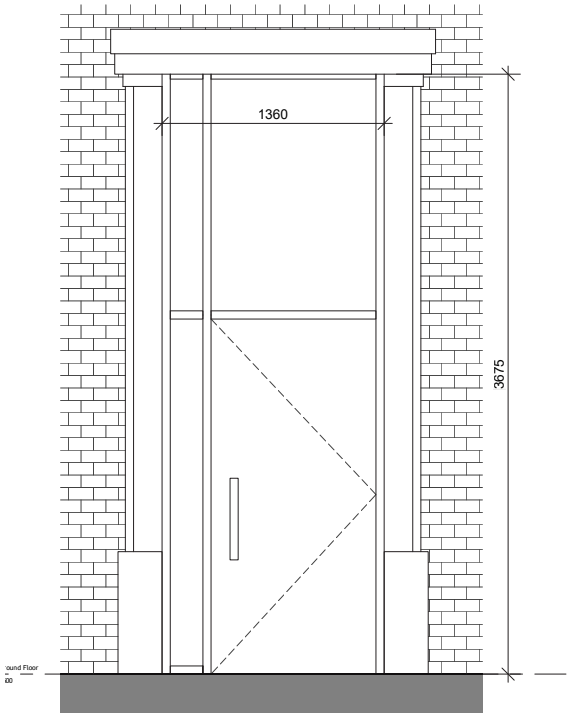


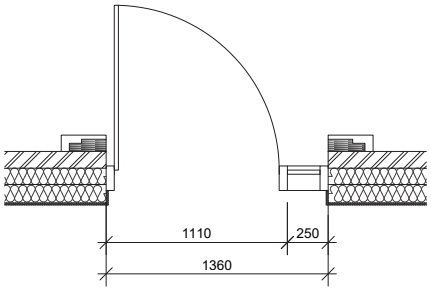
BUFF BRICK

RECONSTITUTED STONE

3.10

3.11





3.12

3.10 *Materials palette*

3.11 *Welwyn Garden materials*

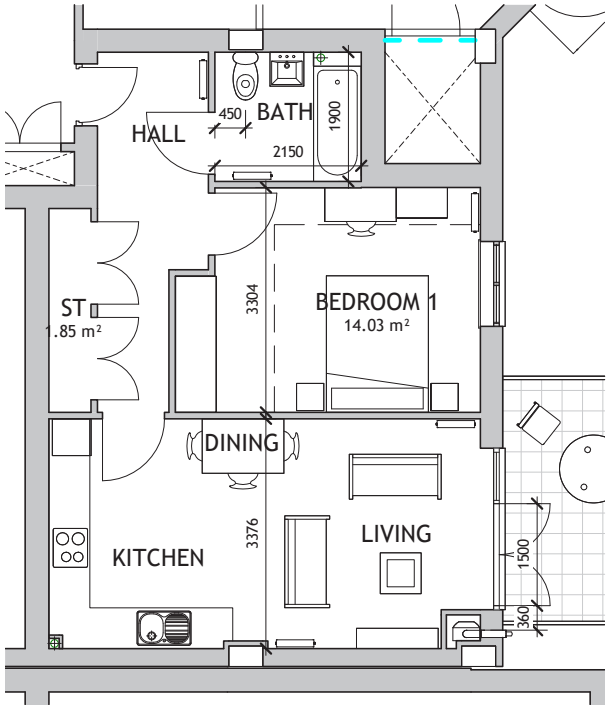
3.12 *Proposed details for main entrance*

3.9 UNIT TYPES LAYOUTS

Layouts are designed to comply with the NDSS. They also follow the Hightown brief, and guidance in the Housing Quality Indicators, especially with respect to furniture and circulation.

Key	
SO	Shared ownership
SR	Social rent
AR	Affordable rent

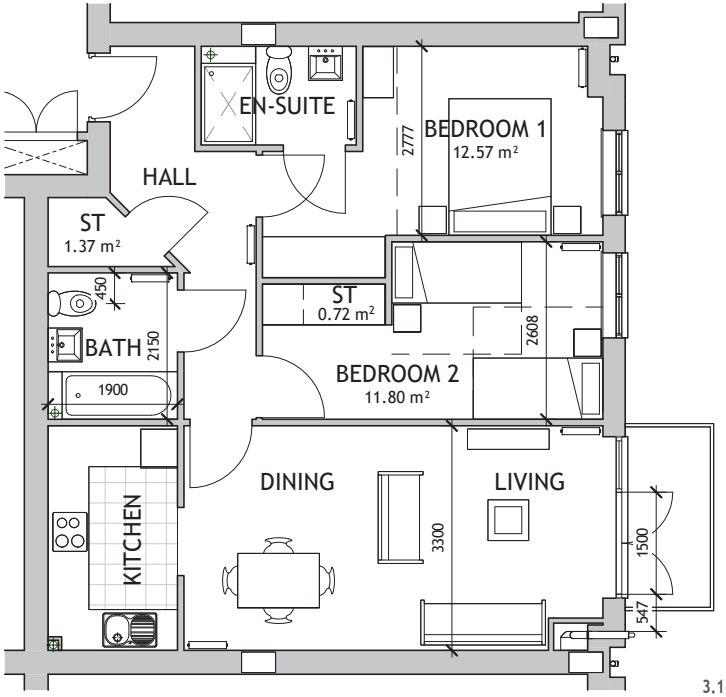
Units & Tenure Mix					
Size	SR	AR	SO	Total:	M4 (2)
1B2P	8	22	21	51	6
2B3P	7	4	18	29	6
2B4P	6	22	20	48	14
	21	48			
Total:		69	59	128	26



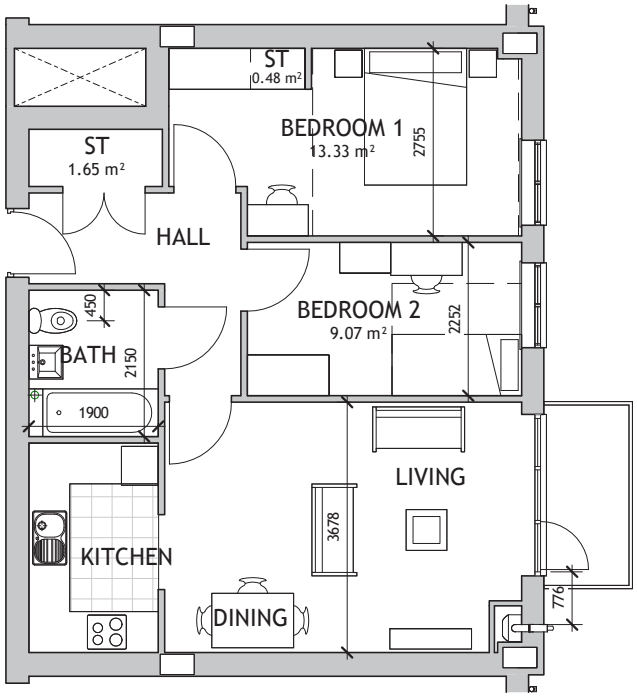
3.15

3.15 *Unit types layout 1 bed 2 people*

ARCHITECTURE & DESIGN EVOLUTION



3.16



3.17

3.16 *Unit types layouts 2 bed 3 people*

3.17 *Unit types layouts 2 bed 4 people*

3.10 ILLUSTRATIVE VIEWS

3.18 *Illustrative view north-west elevation*

note: landscaping is indicative only

3.18

3.18 *Illustrative view south-west elevation*

note: landscaping is indicative only

3.19

ARCHITECTURE & DESIGN EVOLUTION

3.20 *Illustrative view west elevation*
note: landscaping is indicative only

3.20

ARCHITECTURE & DESIGN EVOLUTION

3.21

3.21 *Illustrative view patio elevation note: landscaping is indicative only*

3.11 LANDSCAPE STRATEGY

The centrepiece of the design concept is the inner courtyard, which is a raised podium, half a storey in height, covering the basement carpark.

This creates a safe, car-free and quiet space, enclosed on three sides by buildings, but open on the south side to light and sun. Here the proposed soil depth will be adequate for naturalistic shrub and tree planting without containers.

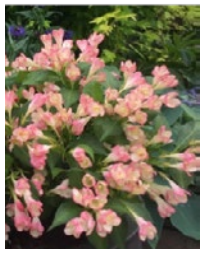
The landscape approach to this area is mainly formal. Down the centre runs a long central space, surrounded, in the Welwyn Garden City tradition, by clearly defined low hedges, enclosing a grassed community area with edge seating, for informal meeting and play. New tree and shrub planting surround this space, disguising the long vents that provide the carpark below with natural light and ventilation. On each side, the ground floor flats have private patio areas. These private areas are clearly separated from the main public path that runs round the courtyard, by further low formal hedges, in which private gates are provided.

The central courtyard is linked to the street level by a gently sloping ramp designed to be suitable even for wheelchair users.

Surrounding the new building, the site benefits from an existing diagonal belt of hedgerow trees along the rear boundary (east), and a row of upright oak trees, forming part of a formal avenue along Broadwater Road (west).

New planting to the north boundary will continue the avenue of fastigiate trees (hornbeam in this location due to the proximity to the building) and formal clipped hedge immediately surrounding the building, will serve to screen the grilled openings that provide ventilation to the basement car park.

New planting to the southern boundary will be native trees and shrubs.



PLANTING TO PODIUM COURTYARD

Clipped Hedges and accents
Upright trees
Mixed shrub and herbaceous-planting with Purple, Peach and Terracotta flowers to attract pollinators

3.22

3.22 *Illustrative images for landscape strategy from the report "landscape design references & startegy" by the Alban Landscape*

Podium Drainage

Note: All courtyard areas (hard & soft) to be underlaid with
Green-roof water storage & drainage layer (Bauder or equal approved)
Draining to rainwater outlets within podium roof slab, to Structural Engineers detail

Hard Landscape

- Raised blockwork planters
- Bow-top metal railings and gates 1.0m high; black finish
- Slab paving to patios; pedestal mounted Textured finish; charcoal colour 450x450 stack bond
- Slab paving to pathways; pedestal mounted Textured finish; buff colour 600x450 stretcher bond
- Resin-bound aggregate paving (Emergency vehicle access) 6mm grade
- Resin-bound aggregate paving (Pedestrian areas) 3mm grade
- Gravel maintenance paths
- Aluminium edging to material interfaces; laid flush
- Timber slatted wall-top bench seats
- Car park roof vents

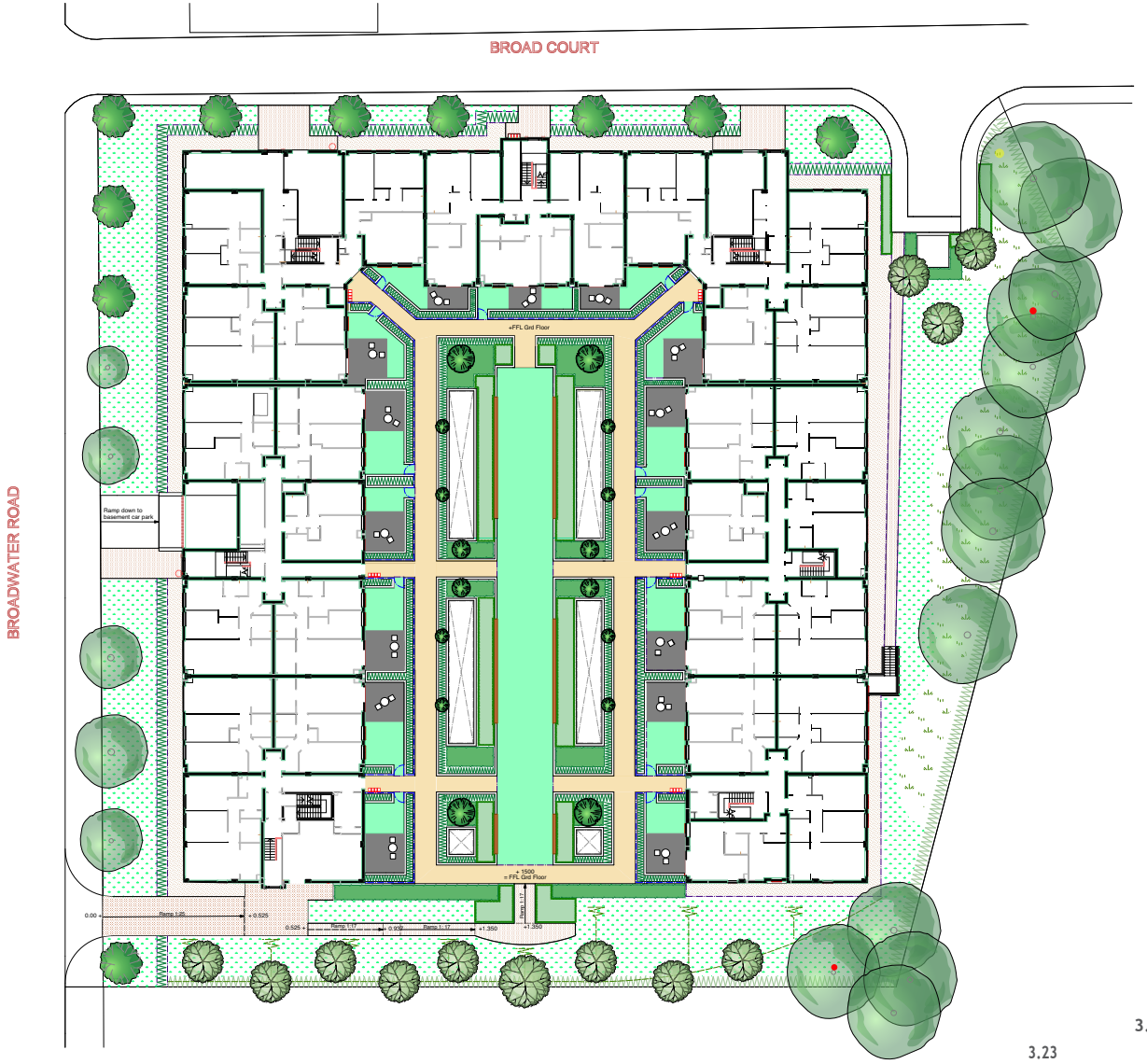
Soft Landscape

- Existing trees retained Refer to arboricultural report for details of trees to be removed
- Proposed Trees - native species Ultimate height 12m+
- Proposed Street-trees (fastigiate forms) Ultimate height 12m
- Proposed Courtyard trees (Large, med and small) Clipped cylindrical forms Ultimate height to 5m
- Proposed medium height shrubs Ultimate height 0.9-2m
- Proposed groundcover shrubs & herbaceous Ultimate height 0.6m
- Proposed evergreen Hedge Maintained in clipped form Ultimate height 1.0m
- Proposed native species hedge Ultimate height to 5m
- Proposed Astroturf
- Proposed short grass lawn
- Proposed Wildflower meadow

Ecological Enhancements

- Proposed Log pile
- Proposed Bird Boxes Schwegler 1B or equal approved

Additional bat & bird boxes are to be incorporated within the building structure.
For details refer to McBains Architect's drawing No's BRW01-MCB-ZZ-ZZ-DR-A-0504 / 0505-S2-P1.1



3.23

3.23 *Landscape proposals by Alban Landscape drawing n.19512.004*

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4.0

ACCESS STATEMENT

ACCESS STATEMENT

4.1 ACCESS AND CIRCULATION

A single vehicular access to the proposal is located onto Broadwater Road, where a ramp will provide direct access to the basement level: car parking, bike storage and electrical charging points will be situated on this level.

Entrance lobbies along the western and northern side of the site will give pedestrian, street level access to five of the stair cores.

The southern side of the site, which is raised from the level of the main street, is accessed by a Part M2(4) compliant ramp and will give residents access to the all stair cores and to the amenity areas of the podium.

Two lifts are placed within the north area of the U-shaped block

SITE BOUNDARY

VEHICULAR ACCESS

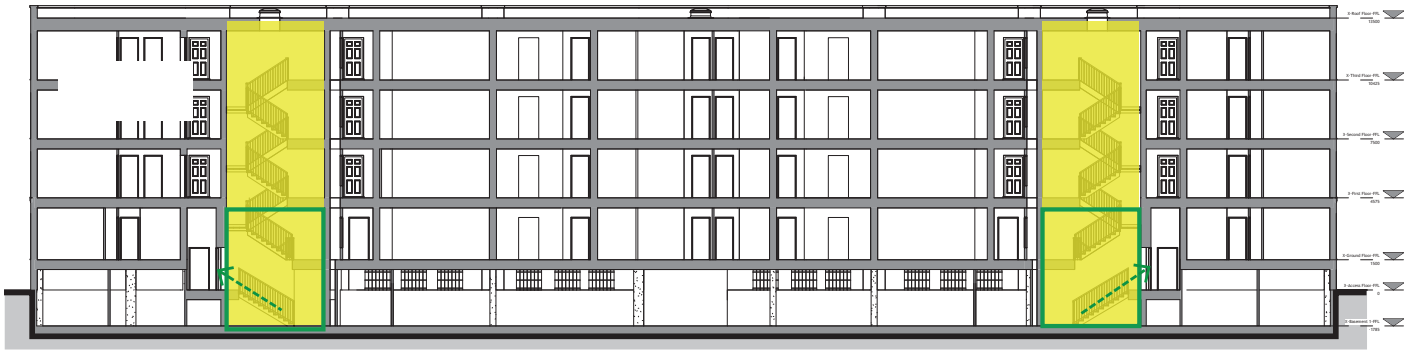
STEP FREE ACCESS

ACCESS

STAIR

LIFT

ACCESS TO THE BASEMENT



4.1 *Indicative plan and section of circulation movement.*

4.1

4.2 PARKING STRATEGY

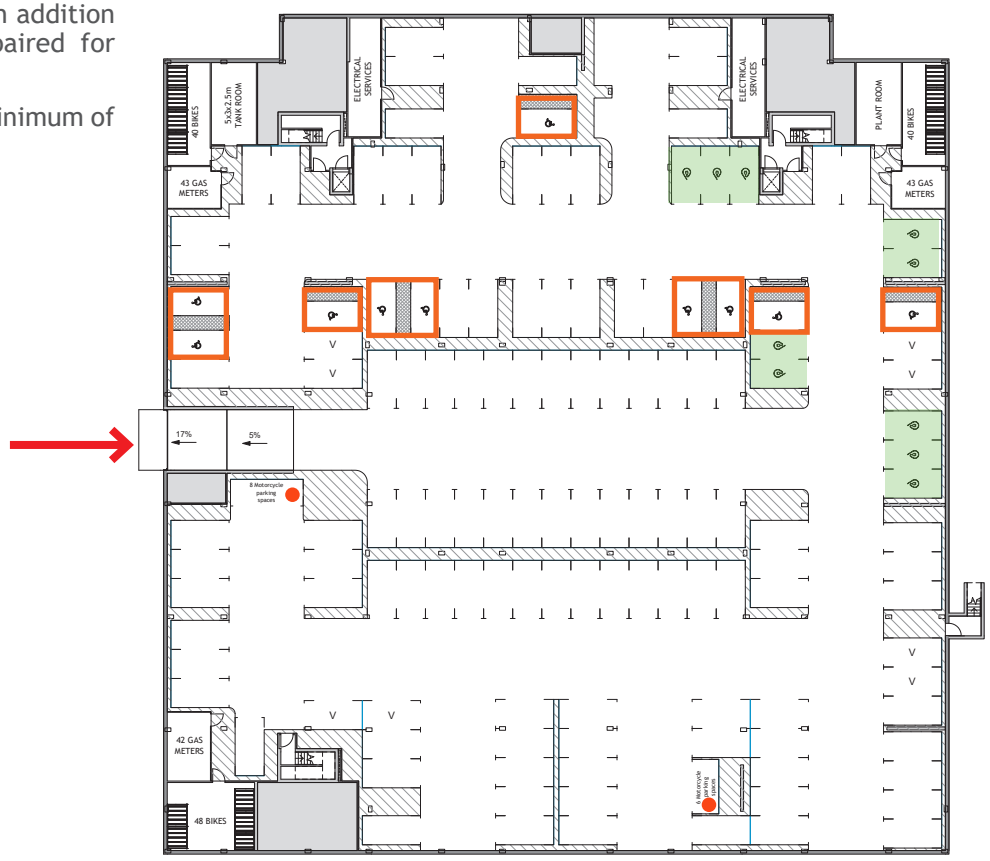
Parking is located in the semi-basement, accessed from Broadwater Road by a ramp, where a total of 136 spaces (106%) have been provided. These include

- 10 spaces for disabled parking and
- 10 spaces with electric charging points.

In addition, there are 14 spaces for motorcycle parking.

The standard car parking space has dimensions of 2.4m x 4.8m; and the disabled spaces have a 1.2m transfer space in addition to the 2.4m width of the standard space (often paired for efficiency).

The car circulation is designed to be efficient with a minimum of 6m between the aisles.



4.2

4.2 *Basement floor plan*

4.3 REFUSE COLLECTION STRATEGY

Successful recycling starts within the home: each kitchen will be supplied with a triple bin unit, which makes for effort-free segregation of waste and of recyclables.

The block design allows for ample space for waste recycling in three good-sized, street level stores, in locations that are convenient for local authority collection.

A turning area is proposed in Broad Court for refuse vehicles, and in operation, Hightown's management teams will liaise with the local authority partners, to ensure that on collection days, bins are accessible, and returned to base after collection.

Refuse Strategy Plan
1 : 200

4.3 Refuse strategy Plan

CLIENT: Hightown
PROJECT: 29 Broadwater, Welwyn Garden City .
DOCUMENT: BRW01-MCB-XX-XX-DA-A-0011-D5-P1_Sustainable Design Statement- November 2019 | ©McBains

5.0

FIRE SAFETY

FIRE SAFETY

5.0 FIRE SAFETY

Fire safety is a vital consideration, whether it relates to prevention, fighting any fire, or escape.

5.1 DESIGN APPROACH

We have first of all designed the building fully to comply with the relevant Building Regulations, which govern warning, escape, fire spread, and access for the fire service.

As part of the planning design evolution, Hightown brought in a specialist fire consultant, to give assurance that, if granted planning permission, consent under the Building Regulations would not require modification of the planning drawings. The consultant checked all relevant plans, located the nearest fire hydrants, and liaised Herts Fire & Rescue so that the design would give good access in an emergency.

In addition, at the start of design, Hightown decided that, irrespective of the design features needed for full compliance with Building Regulations Part B, it would also specifically require that: external wall materials would be all masonry, with no use of cladding materials; timber would not be used in balconies; premises information boxes for the fire service would be provided as standard; and that a sprinkler system should be installed in the basement carpark.

M10 FIRE CONSULTANCY

for fire safety strategy refer to the full version of document by M10 FIRE CONSULTANCY ref: DOC1238_58681_00_19_004

5.2 KEY FEATURES OF FIRE SAFETY DESIGN

The key features of the building, from a Part B compliance perspective, are set out below, together with the design elements of the planning drawings that ensure compliance.

Site Layout

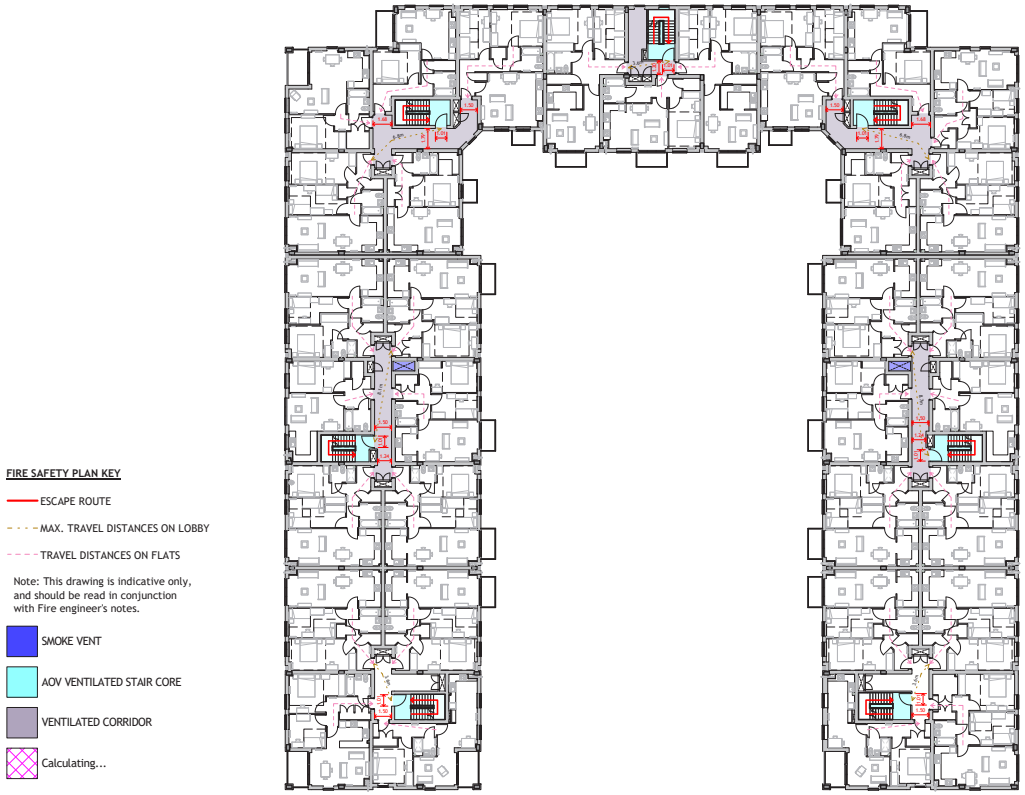
The site layout is a “horseshoe” shape building comprising seven blocks, enclosing a car-free landscaped courtyard. Not all of the blocks are therefore close to a highway. So that, in particular, fire service vehicles could reach the stair cores in the east wing, within the acceptable hose distance of 45m, we proposed to run dedicated fire mains in the basement, from Broad Court, to dry mains that rise within those stair cores. For mains water, there is an existing fire hydrant in Broadwater Road within an allowable distance of 90m. This was then broadened in the final site-wide fire access strategy, see plans, so that, although not a regulatory requirement, all blocks have dry mains and risers, with designated fire appliance stands, one of which incorporates a length of fire path off Broadwater Road, together with planned pedestrian routes for fire fighters, from vehicle to stair core.

5.2 *Fire Access Strategy GF Plan*

FIRE SAFETY

Building Design

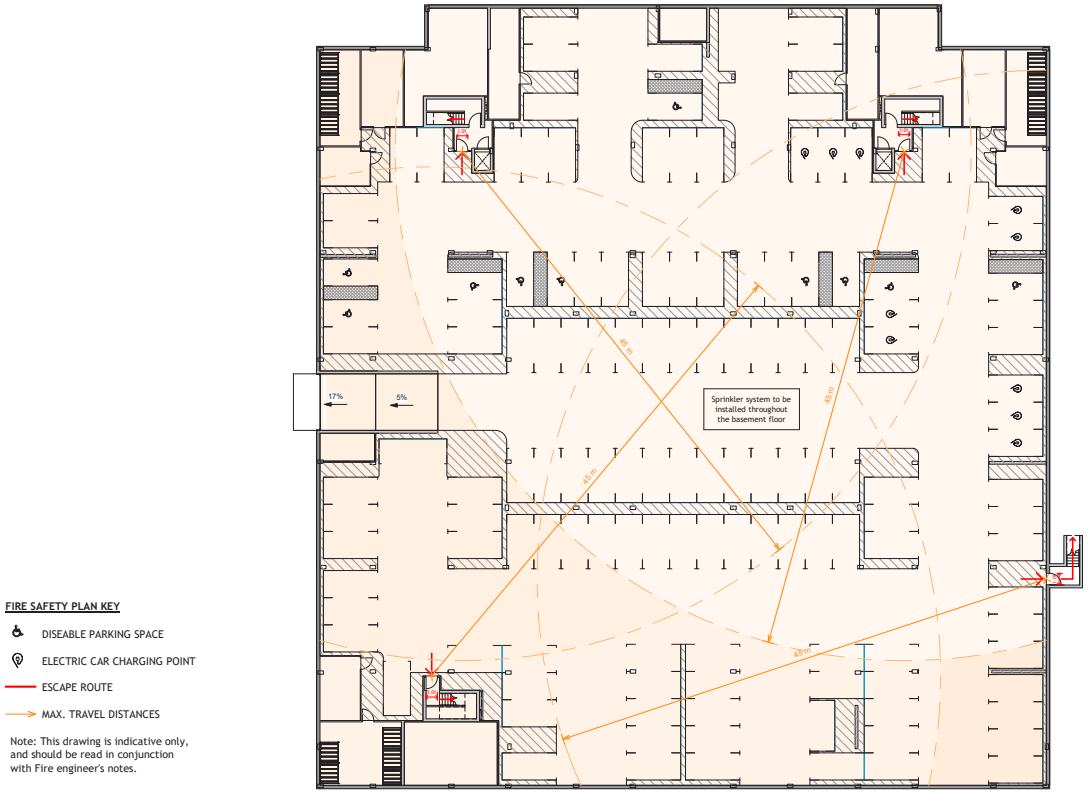
The design is a single four-storey, low-rise building (top floor 10.5m above street), comprising seven blocks, each with a single common stair, with compliant corridor and exit door widths. In accordance with Building Regulations Approved Document B, the escape from each flat is via a smoke-sealed corridor to a 1.1m wide protected staircase, which discharges to safety either to the inner courtyard or to the street or to both. Where, in two of these common stairs, the travel distance required to reach the protected common stair exceeds 4.5m, we have adopted smoke control (automatic opening vents) in the protected lobby, as well as above the stairs, thus increasing the allowable distance to 7.5m, with which the design complies. Non-combustible external materials are proposed for the structure throughout.



5.3 *Fire Safety Strategy FF&SF Plan*

Basement

The basement carpark, a storage use in terms of the Approved Document's purpose groups, is some 1.8m below ground, and has four exits, at each corner, which discharge to safety either directly to outside or via protected stairs, segregated from the residential stair cores. The basement is designed with natural ventilation, to equal at least 5% of the floor area, by means of central roof vents, and perimeter vents on three sides. Four fire main outlets are provided in the basement, and, although not required by Approved Document B, a sprinkler system in addition.



5.4

5.3 *Fire Safety Strategy Basement Plan*

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6.0

ASPECT OF SUSTAINABILITY

ASPECTS OF SUSTAINABILITY

6.0 INTRODUCTION

This section demonstrates how the proposals follow sustainable design principles, in support of Policy SP10 of the Welwyn Hatfield Borough Council Draft Local Plan.

6.1 SUSTAINABILITY STRATEGY IN LAND PROCUREMENT

Hightown supports the government's decision to move forward with the rejuvenation and regeneration of brownfield sites, and aims to buy land in sustainable locations, which are close to facilities and well-served by means of transport other than the car.

The application site is a case in point, being within walking distance of the Garden City centre, Campus West, the railway station, and the main employment centre. It is also immediately next door to a primary school and within a very short walk of the Peartree local centre with its shops and health centre.

This location encourages walking and cycling, and hence healthy lifestyles, and particularly suits those of our residents who do not have access to a car.

6.1

6.1 Aerial view of the site in a wider context (source Google Earth)

A_Garden City Centre

B. Campus West

C. Railway station

D. Job centre

E. Peartree Primary School

F. Peartree health centre

6.2 GREENING THE SITE

Currently the site, an office building surrounded by an open carpark, has little ecological value and overwhelmingly comprises hard surfaces, which promote rapid water runoff and contribute to urban heat reflection.

The design concept of the proposed building is to hide parking in the basement, and cover it with a planted podium - and so create a central landscaped courtyard that is quiet, car-free, green and sheltered. Around the outside of the new building, further land will be released from surface parking and restored to life with new planting and greenery.

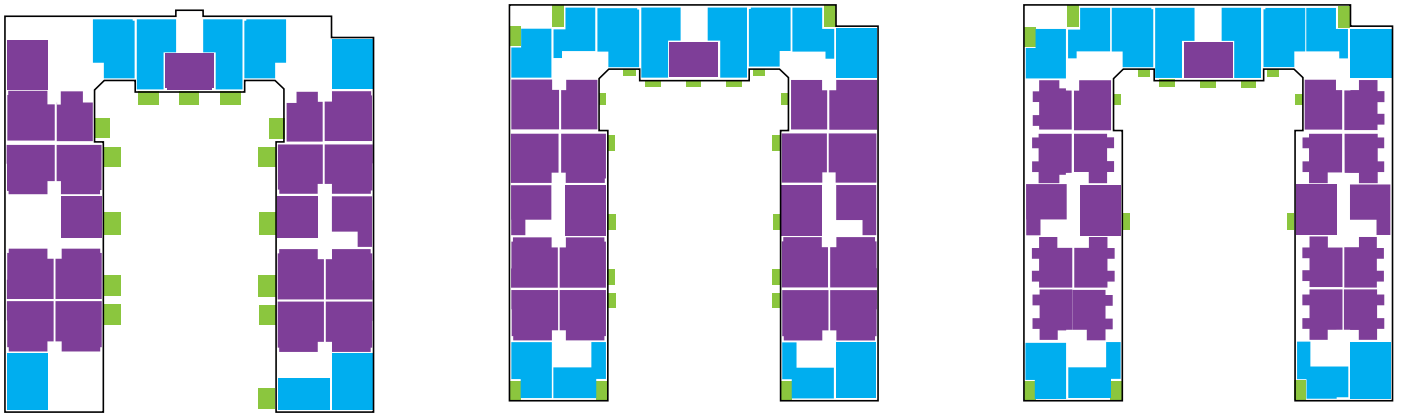
Not only does this basic concept give visual prominence to greenery over parking, which subtly “demotes” the car, it also nudges residents away from unthinking use of the car, by requiring a short walk, and (except for wheelchair users) stairs, before the start of any journey.

For more details of ways in which walking and cycling will be promoted, see the Travel Plan by Yes Engineering, which accompanied this application.

6.3 ORIENTATION AND BUILT FORM

A flatted form has inherent advantages in terms of minimising heat loss, because of the smaller area of external wall. In choosing a U-shape form, with two long north/south wings, there are also orientation benefits, since most flats face either east or west, giving passive thermal gain. Full height windows enhance this effect. Following constructive feedback from a pre-application meeting, the design was amended so that all the north-facing flats on plan were made dual-aspect, either as north/south, or, turned so that living rooms faced either east or west, in all cases to benefit from the passive thermal gain effect.

The design has also been subject of an overheating review. The predominant east or west orientation naturally avoids the need for energy-intensive cooling in summer. Where flats do face south on plan (at the end of the two wings) and could therefore be exposed to long periods of summer sun, they have been given shady recessed balconies, and dual orientation for cross-ventilation. Window design is such that internal blinds and external shutters can be fitted, if in the longer terms, rising global average temperatures should warrant it. Furthermore, the new trees introduced to the southern boundary, as part of the landscaping scheme, will add extra areas of dappled shade.



6.2

6.2 *Single and dual Aspect diagram*

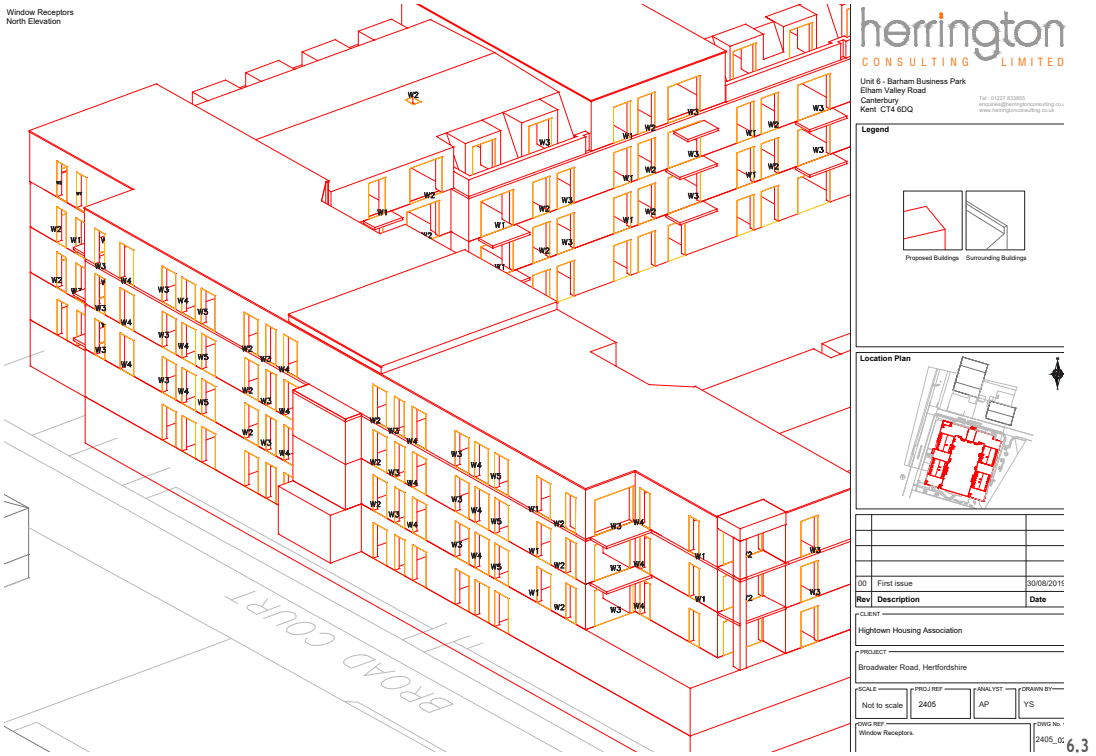
ASPECTS OF SUSTAINABILITY

6.4 DAYLIGHT AND SUNLIGHT

Following pre-application comment, a specialist report was commissioned from Herrington Consultants to study daylight and sunlight aspects of the design.

The proposal, which already provided generous glazed areas, was modified following the consultants' draft report in just two areas, to provide an extra window in one flat type, and to scale back the extent of a balcony overhang in another.

The Herrington report, which accompanies this application, shows full compliance with accepted standards of daylight and sunlight.



herrington
CONSULTING LIMITED

6.3 *Daylight and Sunlight Assessment extract form the document by HERRINGTON CONSULTING LTD*

McBains Hightown

6.5 ENERGY

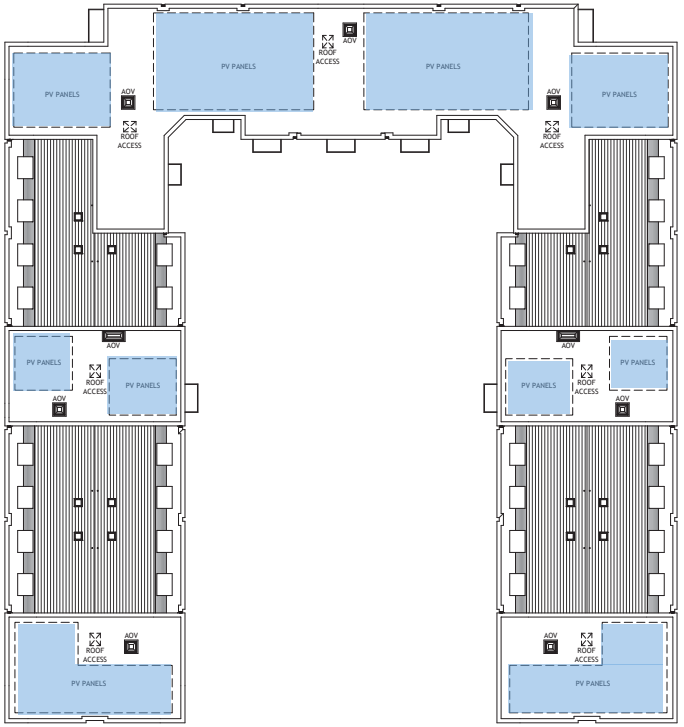
For heating and cooling, following the Energy Hierarchy, Hightown favours thoughtful design to minimise energy use, see above, combined with a well-insulated fabric, and the combination of high-efficiency A-rated gas boilers, supplemented by onsite PV, as currently the best way of reducing emissions while at the same time avoiding fuel poverty for our tenants.

Gas is still by a wide margin significantly more economical than electricity per unit of energy output. At the time of writing (October 2019) the government is engaged on a consultation on changes to the energy conservation provisions of the Building Regulations, Part L that will see further quite radical improvements to fabric efficiency, effective by autumn 2020, and in the longer term, effective 2025, the end of gas heating in new homes. Although the application design does show where gas boilers and their flues could be accommodated, this choice of heating system may be subject to review as the regulatory and technological environment evolves.

For lighting, all fittings will provide for, or use, low energy lamps. In terms of power, the building is relatively lightly serviced. It will use lifts only for access from basement carpark to the wheelchair-accessible ground floor flats, and the on-site rainwater recycling, though marginally increasing landlords power use, will bring greater savings elsewhere. Natural car park ventilation has been designed to avoid the need for mechanical plant.

All homes will be provided with smart meters, which have been shown to constrain consumption.

Onsite renewable electricity generation is provided in the form of roof top photovoltaic panels, which will feed into the landlord's supply and/or be exported to the grid.



6.4

PHOTOVOLTAIC PANEL

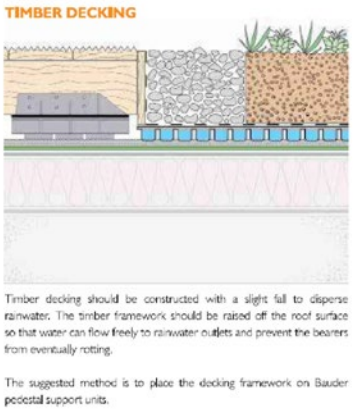
6.4 *Roof plan*

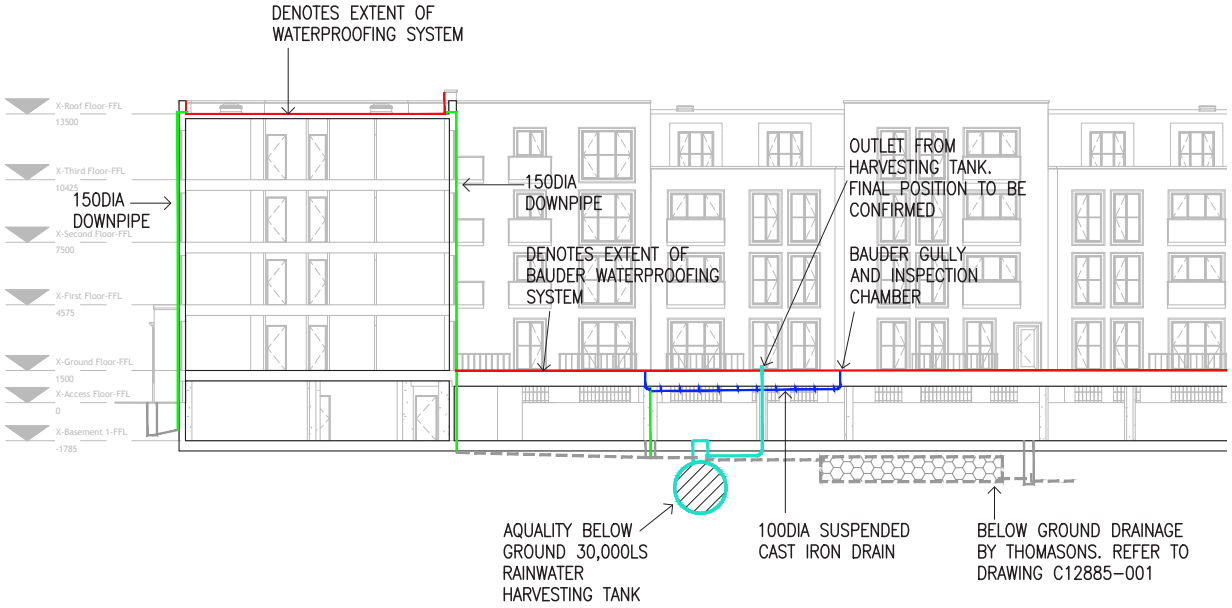
6.6 WATER

The East of England is the country's driest region, where water resources are likely to be most subject to future stress. Therefore, it is vital to design to reduce demand and consumption.

As new build, all units will be metered, and within the flats devices will be deployed to discourage consumption, such as low flush wc's, bath flow restrictors, and aerated shower heads, to meet the design water consumption of 110 litres per person per day.

Provision is also made for roof and podium rainwater to be harvested in a central basement tank, for reuse in watering the new planting, and specifically in preserving the podium landscaping during hot weather. See the design from Marks Heeley Partnership that accompanies this application.





6.5 *Podium drainage system by MARKS HEELEY consulting structural and civil engineers*

6.5