Rochford & Martlesham

Design proposals

Activating the Ground Floor

Ground floor undercrofts have been re-planned to address known issues throughout the blocks. In order of priority the issues are refuse facilities, access control, resident safety, parking and cycle parking. A glazed brick has been selected for it's robust nature and bright tones to denote entrances. Alongside sits a darker tone brick to strengthen the base. All doors into refuse and bike stores are slatted in order to provide views into these spaces before entering. Supergraphics inform users of function, without the need for language. In line street parking is situated amongst new trees and planting.



Martlesham - North Elevation



Martlesham - North West Entrance



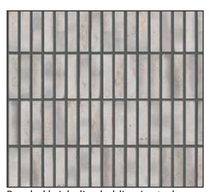
Rochford - North East Entrance



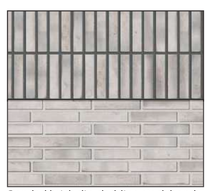
Oxidised metal panels over windows



Bonded clay briVck slip cladding in stretcher bond



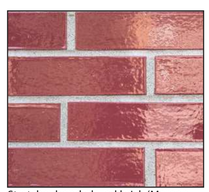
Bonded brick slip cladding in stack



Bonded brick slip cladding stack bond



Bonded brick slip cladding soldier



Stretcher bond glazed brick (Maroon - Martlesham)



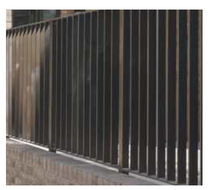
Stretcher bond glazed brick (Green - Rochford)



Aluminium windows, doors & overheating louvres



Parapet, window & capping colour



Dark PPC metal louvre balustrade, screen & fence



Slim metal window surrounds



GRC rainscreen claddin, external risers & base



Precast cill & capping

Rochford - Art and Nature Courtyard

Landscape proposals




Sloping lawns with trees


Stepped access


Sculptural play elements amongst nature


Art and nature in a playful setting


DDA compliant sloped access with lawn



Repurpose existing landscape features such as boulders

Rochford Courtyard - Art and Nature

The Rochford courtyard space will weave art and nature through space. Artistic elements such as sculptural benches and play sculptures will also provide a playful art connection.

The space will also incorporate new bio-diverse planting and tree planting along with natural play elements and a relocated playspace.

The proposals prioritises access, with two paths. a new path is proposed adjacent to Willan Road (Note: NOT DDA compliant) and a second DDA compliant path zig zags down through playful lawns, planting and trees.

Summary of key design principles as follows:-

- **New access path proposed adjacent to curved upper edge of Willan Road, Note: New path is not DDA compliant.**
- **New DDA compliant path, largely 1:21 grade.**
- **Sloped lawns with playful steeping stone path.**
- **A new set of steps provides direct access to the south eastern corner of the Rochford block.**
- **New playspace following a nature theme, with scope for sculptual playful elements.**

KEY

1 - New access path proposed adjacent to curved upper edge of Willan Road, Note: New path is not DDA compliant.

2 - New DDA compliant path with landings.

3 - Play space with play items for 0-5 year olds and suitable play surface, scope for play to follow nature theme.

4 - Proposed path.

5 - Proposed planting.

6 - Proposed tree planting.

7 - Playful lawns with stepping stone path.

8 - Exising trees to be retained.

9 - Proposed steps

10 - Proposed retaining walls for new slope and steps.

11 - Proposed low retaining walls to enable existing trees to be retained.

12 - Picnic tables.

13 - Location of existing mural on Rochford block (new mural artwork tbc)`

Martlesham - Playful & Active Courtyard

Landscape proposals

Rochford Courtyard - Art and Nature

The Martlesham courtyard space places an emphasis on creating an active community space with a focus on play for 0-11 year olds. .

Planting and trees softly segregate the different play and activity zones in the courtyard. A linear birch grove underplanted with bulbs runs across the space linking to the existing trees with playful lawns underplanted with spring bulbs.

The birch grove acts a soft buffer between the toddlers play space and play for older children / multi-generational play space.

The courtyard includes a zone for outdoor fitness and social zone with dynamic seating elements that are flanked by avenues of blossoming cherry trees, the space and seating have been designed as an area that will appeal to girls away from the main play area.

The entrances to the understorey from the courtyard are wider to allow for clear pedestrian access.

Summary of key design elements as follows: -

- **Design maximises area for use as valuable playspace and other activities.**
- **Play equipment to be for 0-11 year olds with scope for some multi-generational play items.**
- **Informal space with seating that could be identified as a spaces for girls.**
- **Picnic tables shaded by tree planting.**
- **Soft landscape buffer to Griffin Road composed of planting and tree planting.**
- **A number of existing tree retained along with new tree planting.**
- **Path access to understorey parking.**

KEY

1 - Play space for ages 0-5 years
2 - Play space for ages 5-11years, with multi genrational play elements
3 - Natural play, birch grove
4 - Pocket social space with seating / space for girls
5 - Fitness zone
6 - Picnic tables.
7 - Path access to ground floor understorey.
8 - Existing trees on grass
9 - Planting with seating / benches
10 - Buffer planting
11 - Proposed tree planting
12 - Road layout as per UDF




Picnic benches with trees for shade


Outdoor fitness


Social space / space for girls


Larger statement piece of play equipment for 5-11 year olds


Multi-generational play


Nature and play

Rochford & Martlesham

Thermal Performance

Overview

The retrofit of Rochford & Martlesham blocks will provide a 'Fabric First' approach to retrofit and aims to:

- **Reduce the heating requirement, and heating bills, in flats by insulating the external walls**
- **Reduce the heating requirement, and heating bills, in flats by installing high quality windows, with improved ventilation**
- **Reduce occurrences of damp, mould and condensation by improving ventilation, and blocking up any air gaps in the walls**
- **Reduce the risk of thermal bridging (or 'cold spots') in flats**
- **Improve the indoor comfort for residents - so flats don't feel too hot in Summer or too cold in Winter**
- **Decarbonisation by reducing the energy demand**

There are signs of damp, mould or condensation in some dwellings. Extract fans are often not powerful enough so the ventilation system will be improved. Following refurbishment, resident liaison officers will engage with residents and explain how best to use the ventilation system. and windows.



Thermal Imaging - Rochford



Thermal Imaging - Martlesham



Vertical Louvres to Eliminate Night Time Overheating



Vertical Louvres (Internal Aspect)

Fabric Specification.

The following inputs have been reviewed and confirmed with the design team. The design team is to provide notice to the assessor if these performance figures have changed.

Table 4 Broadwater Farm Residential Fabric Specification

ELEMENT	FABRIC PARAMETERS OPTION 2
Gable End Walls	0.15 W/m2K
Non-Gable End Walls	0.19 W/m2K
Sheltered Wall Between Unheated Corridors	0.31 W/m2K
Floor	0.23 W/m2K
Roof	0.12 W/m2K
Windows	1.1 W/m2K (g-value:0.4)
Personnel Doors	1.1 W/m2K
Air Permeability*	Martlesham – 2.36 (m^3/m^2.h at 50Pa) Rochford - 2.46 4.5 (m^3/m^2.h at 50Pa)
Thermal Bridging Y-value	25%

*Minimum measured across existing dwellings.

Natural Ventilation Strategy

For a natural ventilation strategy, to comply with Part O, there are window opening limits on CIBSE TM59 as described below.

(a) When a room is occupied during the day (8am to 11pm), openings should be modelled to do all of the following.

i. Start to open when the internal temperature exceeds 22°C.
ii. Be fully open when the internal temperature exceeds 26°C.
iii. Start to close when the internal temperature falls below 26°C.
iv. Be fully closed when the internal temperature falls below 22°C.

(b) At night (11pm to 8am), openings should be modelled as fully open if both of the following apply.

i. The opening is on the first floor or above and not easily accessible.
ii. The internal temperature exceeds 23°C at 11pm.

(c) When a ground floor or easily accessible room is unoccupied, both of the following apply.

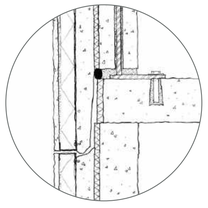
i. In the day, windows, patio doors and balcony doors should be modelled as open, if this can be done securely.
ii. At night, windows, patio doors and balcony doors should be modelled as closed.

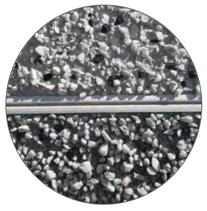
(d) An entrance door should be included, which should be shut all the time.

For this analysis, as described in Table 5, bedrooms are occupied 24 hours and Kitchen/Living Rooms are occupied during from 0900 to 2200.
Internal doors are included and left open in the daytime and assumed closed when occupants are sleeping.
The window and door openings used for the natural ventilation analysis are illustrated in the table and image across.

Cladding Panels

The original design expressed the LPS construction with the concrete panels being separated by deep joints. The horizontal MJ's provide an opportunity to introduce detail in the facade, such as changes to brick bond.









Existing North Elevation

Proposed North Elevation