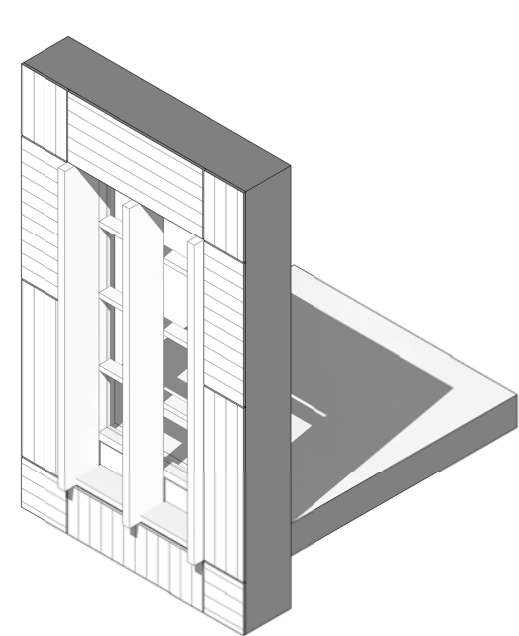
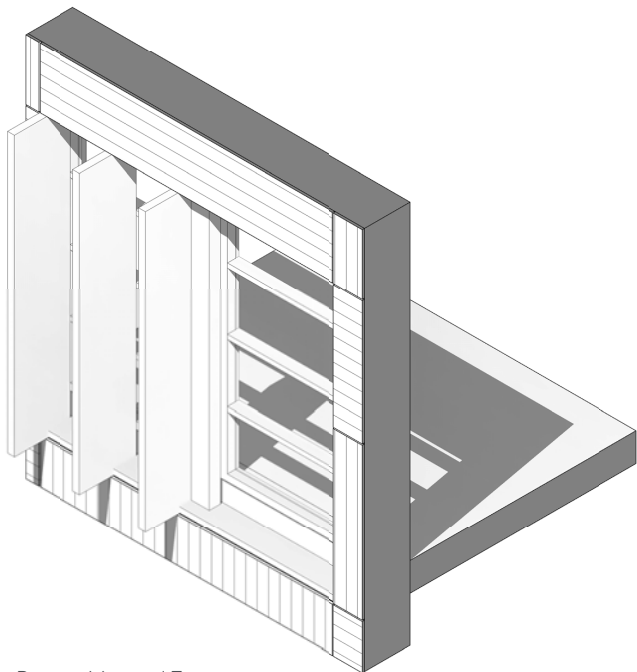


3.10.1 Privacy Screening

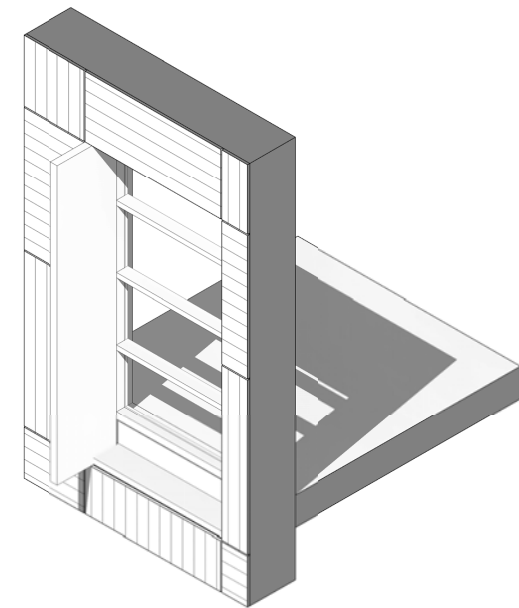
The liveability of the apartments has been given much thought in terms of orientation, daylight levels, visual amenity and overlooking. The latter has been considered carefully and windows and balconies have been positioned to minimise direct views from neighbours. All residential flatted developments have layouts that require further measures and in inverted corner arrangements the Design Team have developed further architectural features to ensure that residents privacy is not compromised and these include opaque films to glazing, balcony screens and vertical fins to windows to limit oblique views.



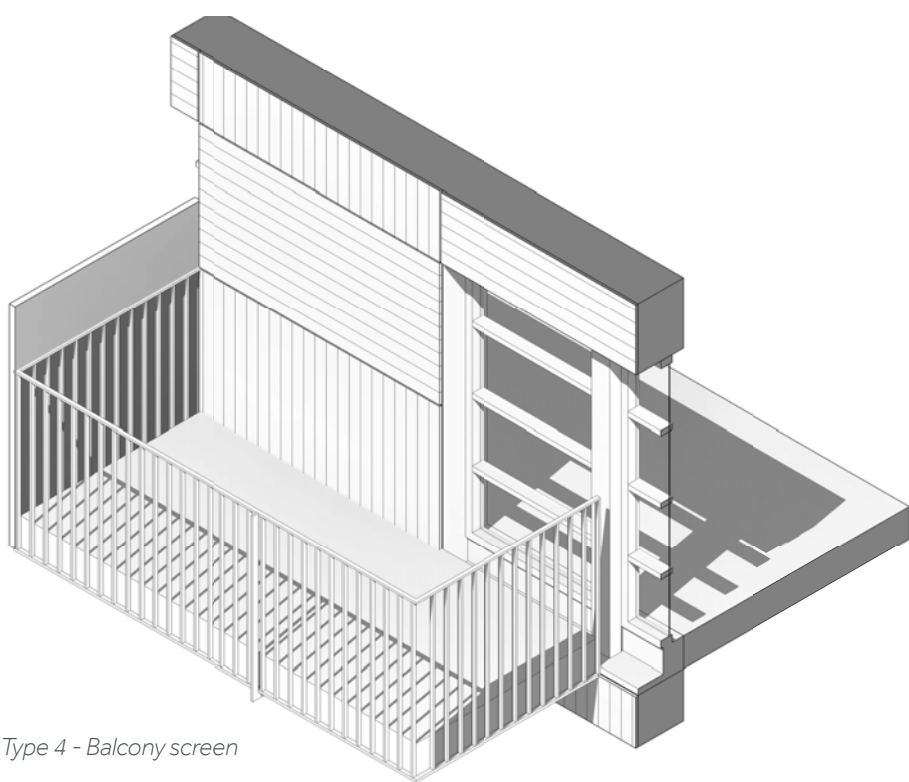
Type 1 - Single Bay - 3 Vertical Fins



Type 3 -Double Bay - 3 Vertical Fins

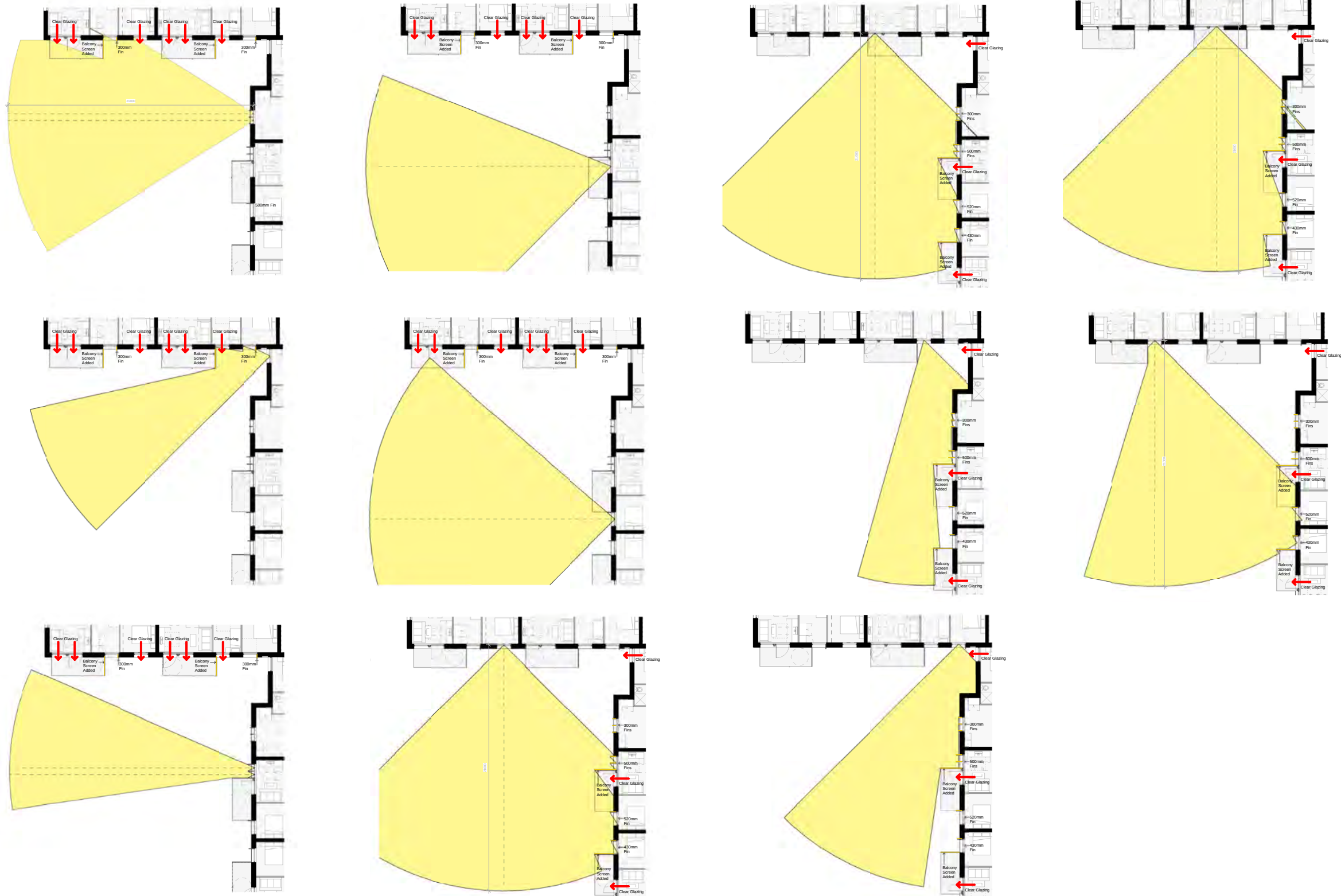


Type 2 - Single Bay - 1 Vertical Fin



Type 4 - Balcony screen

3.10.2 Overlooking Studies - Inverted Corners



3.11 Appearance of the Development

3.11.1 Introduction

The architectural language of this scheme derives from the history of the site and the mix of local characteristics which define it today.

The area of Hayes, south of the new Crossrail station, is undergoing a significant change from historical industrial land to a new, high density residential neighbourhood. The new buildings and public spaces that will need to be created will be very different in scale and use than what is currently on site, but should retain the specific character and unique sense of place that traces back to what has existed before.

On one hand, the site could be described as a generic, industrial parcel of land on the edge of Hayes town, occupied by sheds and blank, vehicle dominated spaces. It does however have its own specific identity which we have explored and sought to express in architectural language.

The references used are quiet and subtle. Whilst the site is not the focus of the community nor occupying a bold corner location (like Access Storage) it plays an important role in completing and connecting the southern lands to the station and High street.

With this in mind, we have designed an arrangement of buildings and public spaces which quietly connect the neighbourhood together.

The architectural forms follow suite, designed to be calm buildings with small, subtle details and human scale landmarks.

The site has a range of technical challenges and constraints (such as the railway) that will define its character.

The design team has worked with each constraint, using each one as an opportunity to design solutions that are deliberately visible and tell subtle, honest stories about the place.



The Site : A cross-hatch fabric of industrial sheds



Nestles Avenue : Metroland style development with green



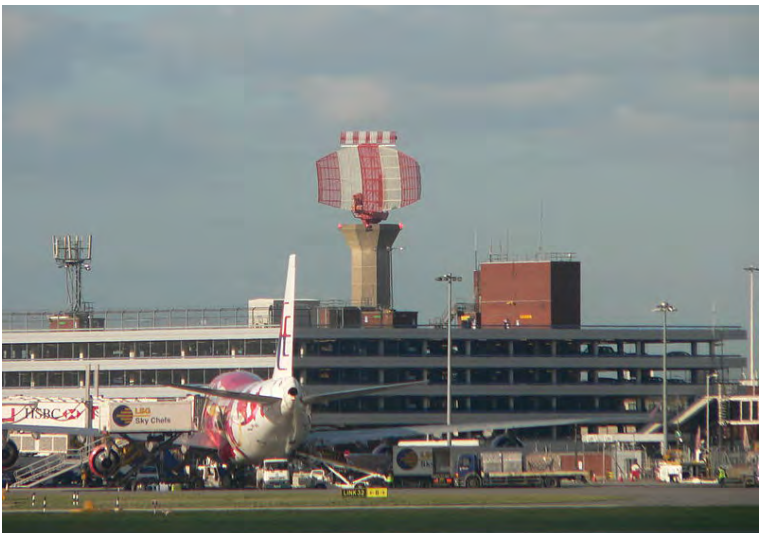
Nestle Factory : Art Deco facade by Wallace, Gilbert and Partners



Hayes and Harlington Station : Northern edge of site dominated by Great Western Railway, Heathrow Express and Crossrail.



Regents Canal and High Point Village to the North



Nearby Heathrow radar : sets the 67.9AOD IHL constraint

3.12.1 Design Themes

Four primary themes have been defined, they are used to describe the different elements that have influenced and inspired the proposed design:

- 1. London Brick Vernacular
- 2. Industrial Heritage
- 3. Art Deco and Modernist Heritage
- 4. The Factory in a garden



Brick Vernacular



Industrial Heritage



Art Deco / Modernist



The Factory in a Garden

3.12.2 Design Theme: London Brick Vernacular

The site has a history of uses which relate strongly to industrial development and the urban landscape.

The arrival of The Grand Union Canal and early brick manufacturing in the Hayes area inform the primary identity of the design, which in a quiet but powerful way refers to London brick vernacular.

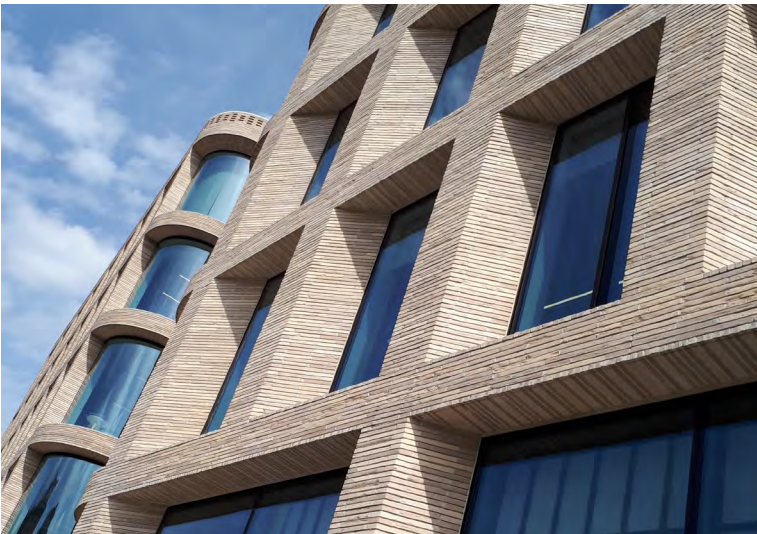
This is a simple material choice which ties contemporary development along Nestles Avenue and the broader city together, using a single, very versatile material.



Brick Making in Hayes, circa 1750



Minimalist Brick Facade with roof pitch detail



Linear brick detailing



A mixture of brick tones used to define buildings



Brick Frames and edges details

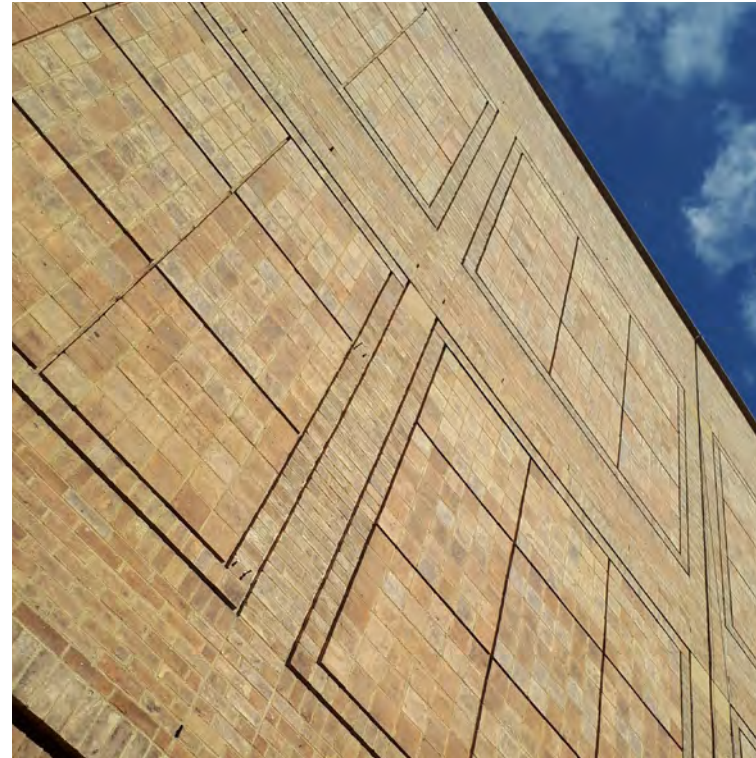


Simple brick buildings with basket weave bonds

The brick vernacular “style” has a strong tradition and identity.

To avoid the design becoming repetitive and generic, the design team studied creative examples of brick and developed creative details that differentiate these buildings in unexpected ways.

The subtle nature of these details give the buildings a dual reading of large simple, urban blocks and intricately detailed objects.



Flush, monotone brick facade articulated by 10 and 15mm recessed joints



Horizontal brick texture punctured with pronounced window surrounds



Unconventional brick slip panels : an effective patchwork facade of colour and pattern.



Horizontal facade reading created by smooth and glazed brick bands.

3.12.3 Design Theme: Industrial Heritage

Hayes and the surrounding area has a long history of industrial development, beginning circa1800. With the arrival of the Grand Union canal.

This linked the area to central London and the north of England, allowing timber and brick to be manufactured and moved from the site.

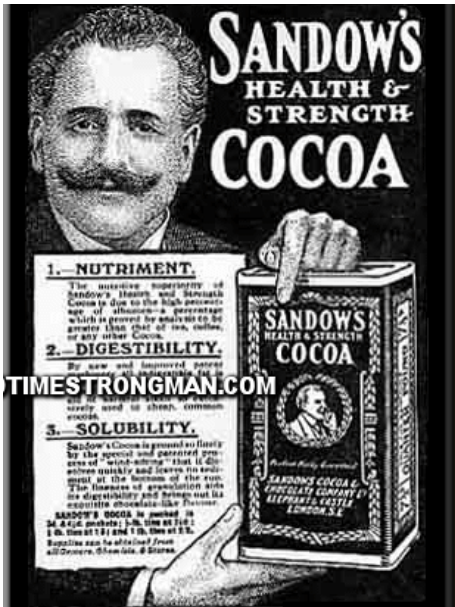
This commercial history extends through to modern day with companies like Tarmac, Nestle and Heathrow Airport having close relationships with the area.

The current composition of the site began to take shape around 1912, when it was owned by the colourful character Eugene Sandow, the world's first strong man.

He was responsible for building the original Sandow Cocoa factory on the site and establishing the neighbouring sports fields. Sandow's Cocoa was a short-lived venture, shut down during the first world war due to Eugene Sandow's German nationality. The factory was reopened as the Hayes Cocoa company for a short time before being acquired by Nestle, who operated from it until 2015.

Post War development saw the construction of Claremont House and the crosshatch arrangement of industrial sheds on the land.

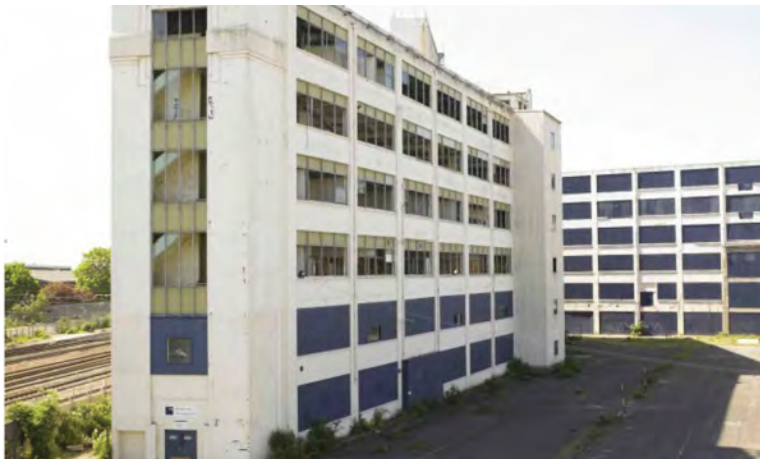
We have used the development of the site's industrial and commercial uses to define the character of the design work.



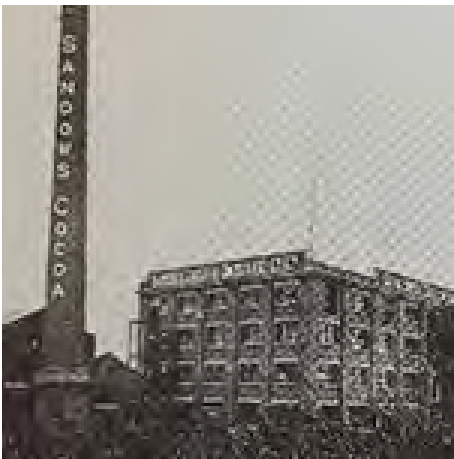
Eugene Sandow



Historic timber yards along the Grand Union Canal



The EMI Vinyl Factory



The original Cocoa Factory



The EMI Vinyl Factory

The industrial character and heritage of Hayes has been used as an inspiration for the design.

This could be defined as large, simple building forms which are extended or altered over time for pragmatic reasons that usually result in a patchwork of textures and materials.

The bold, simple forms of the industrial buildings are layered with smaller, lighter weight metal components such as chimneys, pipework, gantries, stair cases, ducting and windows.

The same sensibility has been adopted during the development of these buildings.



Nestle Factory : Simple industrial blocks with a secondary layer of metal components



Industrial details of the Tarmac Plant, 2018



Existing industrial sheds on site, 2017



Interesting metal details and brick textures on site, 2017

3.12.4 Design Theme: Art Deco Heritage

Hayes is located within the 1920's and 1930's suburban Metro-Land area of London.

During this period, architects like Wallace, Gilbert and Partners designed a series of highly recognisable, stylised factories in the area such as the Hoover Factory, The Vinyl factory and The Hayes Cocoa Company (subsequently renamed Nestle factory).

The style used was Art-Deco inspired modernism: clean horizontal lines with square façades, flat roofs and curved corner features. Bright feature colours and flamboyant, geometric window details.

Art Deco is an idealistic style that presents the same positive image of progress and industry as modernity. Bold clean lines that reference speed and transport are particularly appropriate to our site considering its proximity to Crossrail and the Heathrow Express, along with Heathrow airport and the nearby motorway.

The style is also characterised by repeating geometric details that seem inspired by machinery and industrial process.

Art Deco did celebrate luxury, high quality finishes and craftsmanship. Many classic examples of the style use polished wood, stone, glass, hand laid brick and metal details that would be exorbitantly expensive to achieve using traditional craftsmanship today.

The proposed design uses modern materials, technology and manufacturing systems to achieve finely detailed buildings. These buildings are very different to historical examples, but still embrace the same spirit of craftsmanship and quality in a contemporary manner.



Thomas Wallace



Hoover Factory : Western Avenue, Perivale.



The Spitfire Building, Penfold Street Westminster



Nestle Factory : Hayes

Nestle Avenue is currently characterised to the north by the Art Deco Nestle factory and it's garden landscapes, Claremont House and Stanford House.

While these buildings are not all regarded as valuable examples of Art Deco, they do all reference the style and influence the historic character of Nestles Avenue.

On the Northern Railway boundary and the Southern, Nestle Avenue boundary we have chosen to reference the Art Deco character of the site with the strong horizontal reading of the railway screen and the geometric "zigzag" form of the Nestle duplex units.



Geometric Inspirations of Art Deco Design and Fashion



Hoover Factory and Residential Art Deco Precedents



Art Deco Product and Furniture Design



3.12.5 Design Theme: The Factory in the Garden

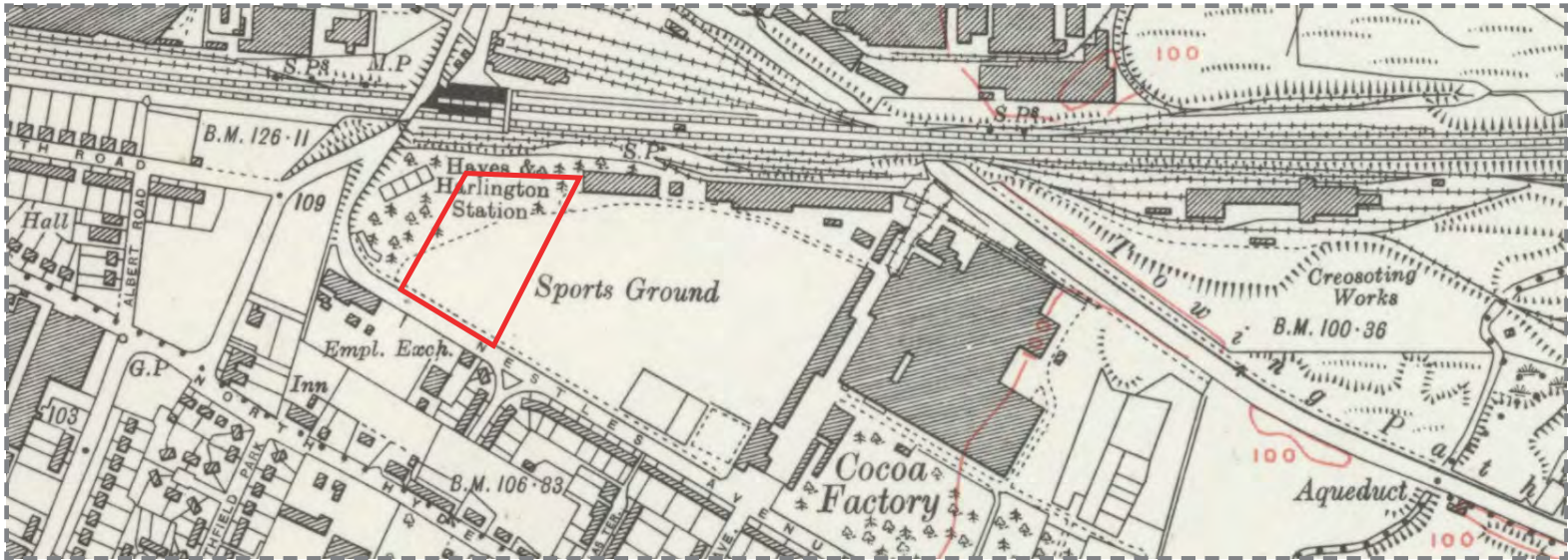
The factory was reopened as the Hayes Cocoa company for a short time before being bought by Nestle, who operated from it until 2015.

Nestle appointed the architects Wallace, Gilbert and Partners to design the new factories, the grand Art Deco style offices, decorative rails and to establish Wallace gardens on Nestle Avenue.

Our specific site remained a sports field, ancillary to the Nestle complex until the 1950's when it was separated into a collection of smaller land parcels and sold to other owners.

The site's relationship to the Nestle factory is now quite distant due to the mix of unrelated industrial uses now separating them, but a connection still exists as part of Nestle Avenue and the wider masterplan.

To give the project a unique character that relates to the historic factory fields, we chose to develop an abstract motif based on the image of a sports field.



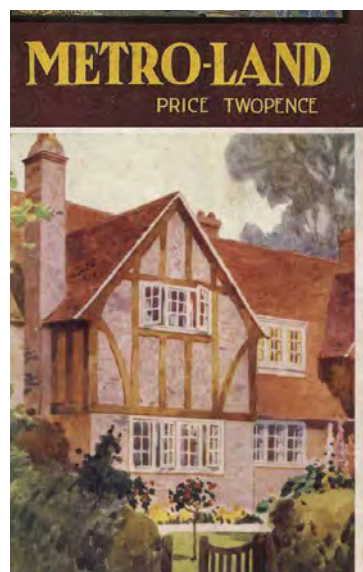
The site as a sports field in 1948



Cross-hatch arrangement of sheds in the site, 2017



Nestles Avenue green buffer and the Wallace gardens



Metro Land idealism : Suburban Garden Landscapes

The strongest association with the sports field was the woven, cross-hatch patterns cut into grass by groundsmen.

This quickly became a positive, simple metaphor for the project and it's specific character in the history of this area of Hayes.

This offers a remarkably recognisable motif that evokes a very clear image of a grass field.

The unrelated but parallel example of a cross-hatch pattern of industrial sheds (see previous page) on this land convinced the design team to develop the detailed design concept using a similar pattern.

The recognisable motif is naturally generated by a process similar to weaving, knitting and brick laying, so it translates very clearly into building components.

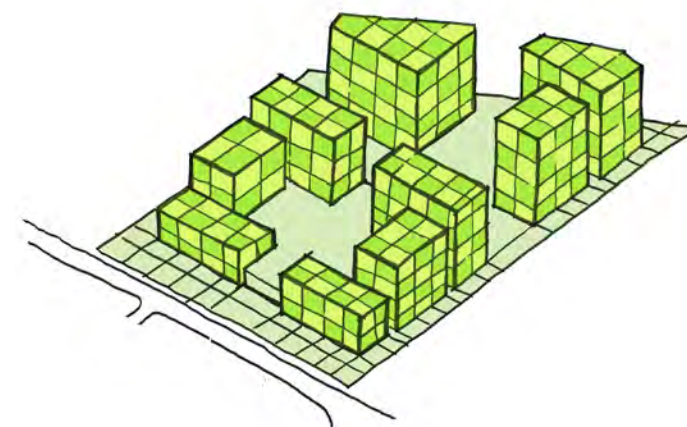
The building arrangements and the brick patterns used in the panellised systems of the façades deliberately reference this pattern.

The texture and patterns of the proposed buildings are an abstraction of the original reference. This is a normal process of association and appropriation in architecture when meaning and narrative can be recognised.

We believe the relationship between architecture and the landscape is a robust theme which will remain relevant in future.



Woven, cross hatch patterns in grass fields



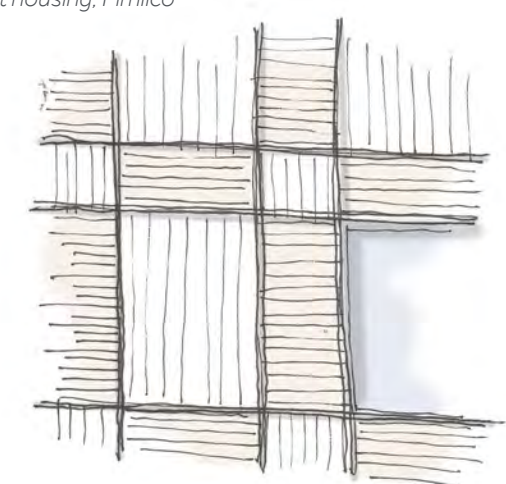
Concept sketch : The cross hatch motif applied to the site



Precedent : Chequerboard facade pattern of Sir Edward Luyten's Page Street housing, Pimlico



*Brick Precedent :
Vertical and Horizontal brick courses across a facade*



Initial concept sketch of panellised brick

3.13.1 Design Development: Massing and Facade Principles

The site is divided into a North and a South portion by Sandow Avenue, which connects the station and high street in the west to the historic entrance to the Nestle factory and Wallace gardens in the east.

The northern buildings sit on a triangular plot, formed by the alignment of the railways. They are the taller blocks with more density

The southern buildings site on a rectangular plot that steps down in height from Sandow Avenue to the more suburban scale of Nestles Avenue.

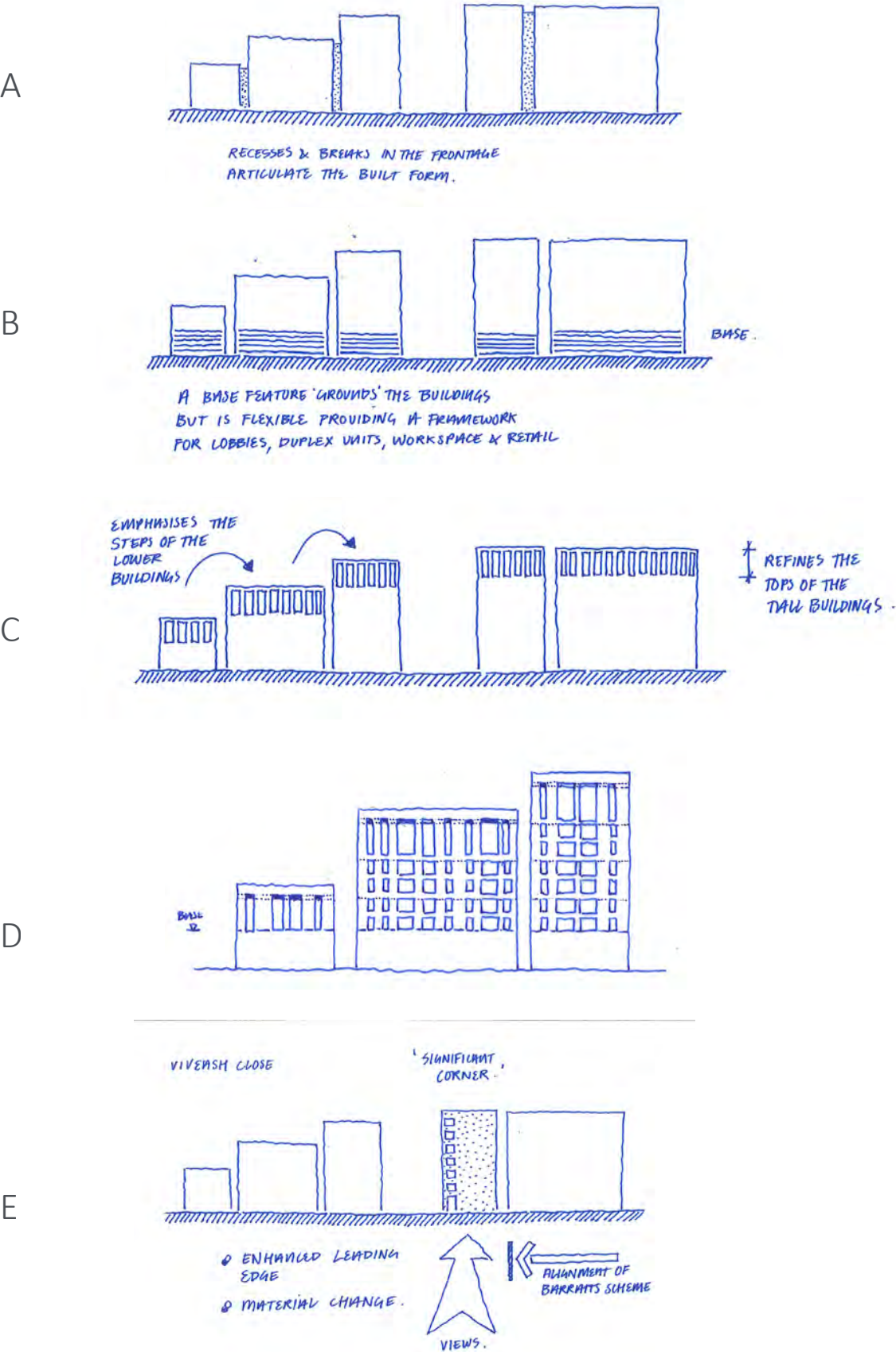
Sketch A is a diagrammatic elevation from Viveash Avenue, showing the mass and height of the scheme stepping up from Nestles towards the higher blocks in the North. The blocks are broken by Sandow Avenue and then further articulated by inset units and balconies that also mark the entrance lobbies. This articulation establishes a collection of smaller blocks arranged across the site.

The buildings all have a strong double height base as shown in sketch B. This grounds each building and helps to clearly define the public spaces and active frontages. Ground floor uses are a mix of residential units, lobbies, workspaces, retail and amenities.

The blocks do not step or articulate on the upper floors. To establish a top to each building, a double height reading of windows, metal panels and open balconies are used. (Sketch C) These provide a consistent reading that allows the simple changes in height to provide variation in blocks.

The body of each block is then composed of windows and balconies which stack vertically. (Sketch D) Within this simple reading there are multiple secondary details like delicate window frames, brick patterns and recessed joints that establish a woven horizontal and vertical reading.

Once the typical details and generic arrangements have been established, special areas such as leading edges and corner details are emphasised with a simple change in material or pattern.

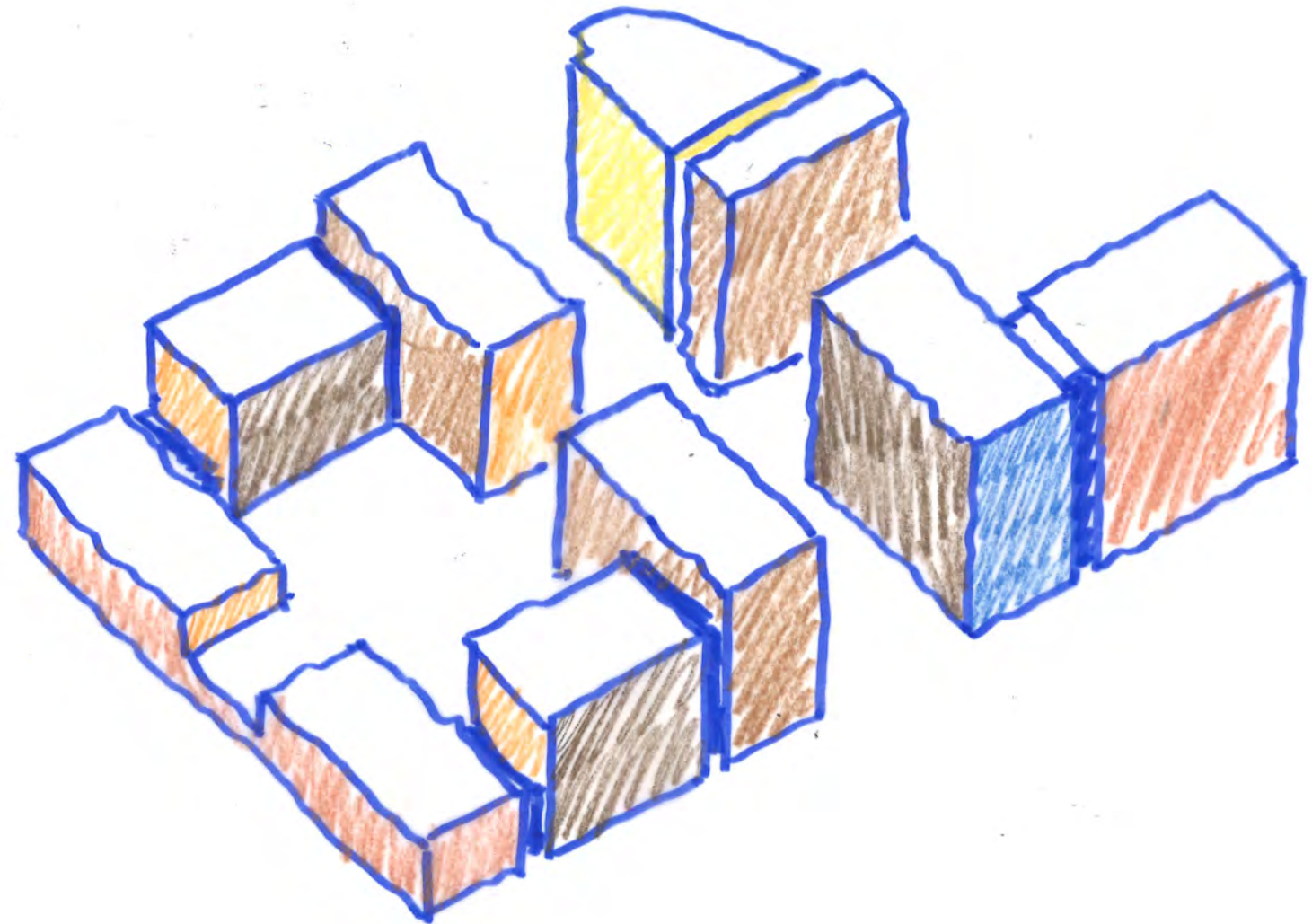


3.13.2 Design Development: A Campus of Buildings

The articulated masses break the overall development into a neighbourhood of smaller, more legible blocks.

The design becomes a comfortable, human scale arrangement of urban streets, public spaces and buildings.

In order to visually identify each block as a separate but related identity, various materials, textures and patterns were chosen. This creates a family of buildings that relate to each other, but have individual "personalities"



Early concept massing sketch

As in the early concept design sketch opposite. The view from Nestles Avenue, shows the blocks stepping down across the site to a very specific design response required by the suburban character of Nestles.

The sawtooth parapet detail in the centre of the site indicating the direction of Sandow Avenue is deliberately prominent.

This marks the centre of the site and the primary public space provided by the scheme.



Early concept sketch view

3.13.3 Design Concept: Panellised Construction

While the design is clearly read as a traditional London Brick Vernacular facade, modern construction logic and technology means that the buildings will be assembled using very different skills and techniques than would have been used in the past.

Precast concrete panels will be manufactured in off-site factories and delivered as complete components with external brick slip façades, metal and glass details already installed.

This is the industrial reality of our time which is worth exploring and honestly expressing in the façades. The design intent has always been to express the intelligence and elegance of the construction system rather than hide it within the façade.

Panellised construction requires a range of design details which are very different to normal brick construction, this offers very high quality of finish, repeatability and design opportunities which would be very difficult to achieve using traditional methods.

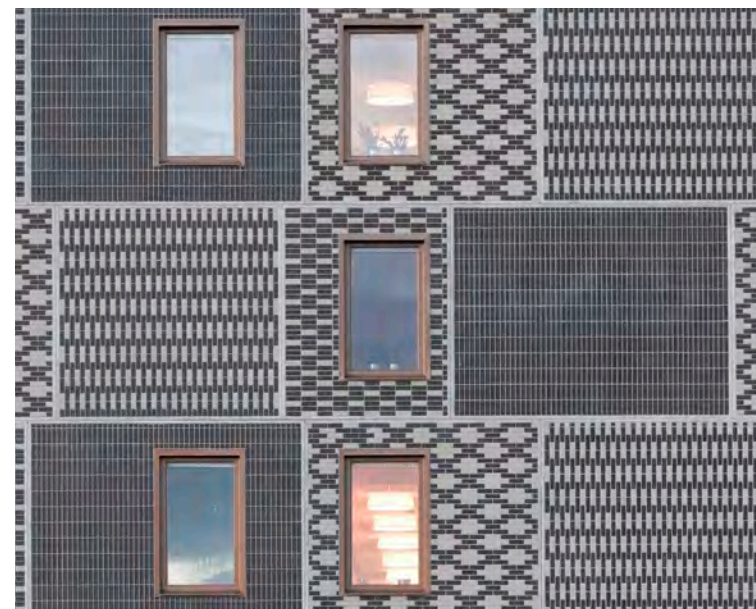
The design team chose to “embrace” the thin proportions of brick slips and the layered structural systems used for this type of construction. The solid balcony detail was conceived as an opportunity to deliberately expose the wall build-up, as though a panel had been pulled open (like the front face of a cabinet). This detail exposes the 20mm edges of the brick slips and the metal structural frame holding them.



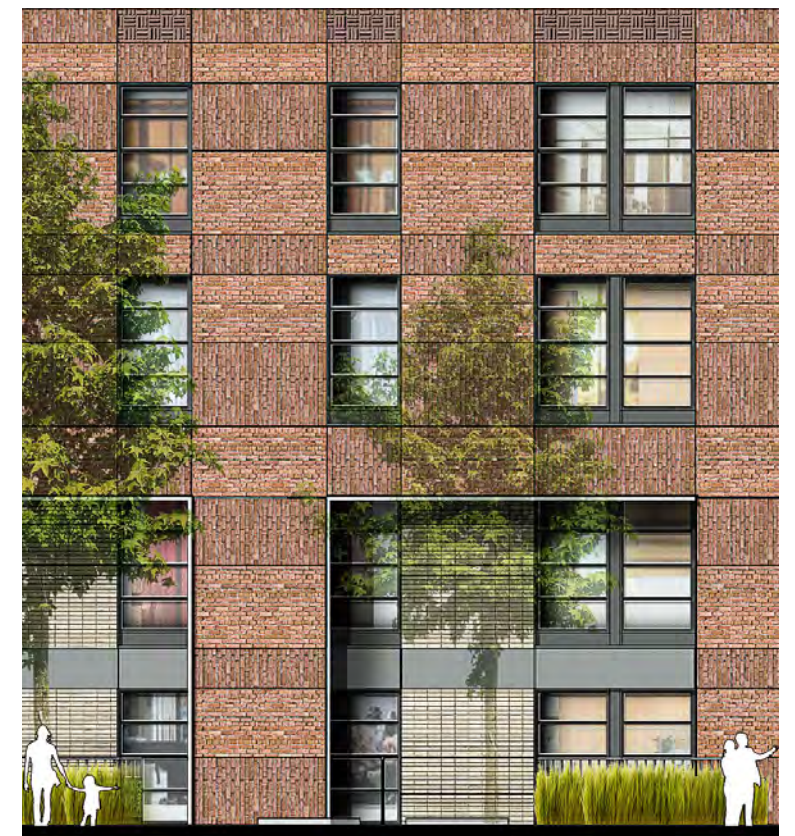
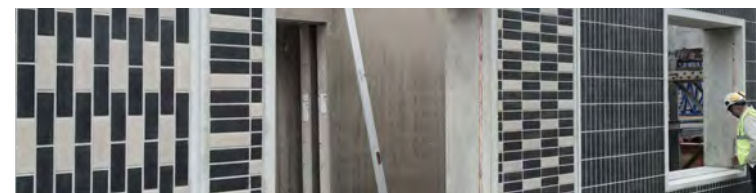
On-site construction of panellised brick façades by Farrells, 2017



Quality control of brick slip facade



Unconventional brick slip detailing : extending the possibilities of brick using new technology



Elevation of brick panels

3.13.4 Design Concept: Brick Slips and Texture Finish

1. Smooth
2. Sanded
3. Dragwire
4. Part engobe
5. Sanded embossed
6. Smooth and sanded brick slip panels using the same raw materials
7. Dragwire and Part Engobe textures used for horizontal and vertical brick panels

1



2



3



4



5



7



6



6



3d view of typical proposed facade panel

3.13.5 Design Development: Cross-hatch Facade Patterns

We have chosen to develop the brickwork façade as a cross-hatch “patchwork” of individual panels which are carefully framed planes.

Window reveals are metal cover plates which match the frame colours and neatly finish the brick edges.

Corner details are an inverted “bird’s mouths”. Brick slips are set using a thin 3 - 5mm mortar joint, which then increases to 15mm at the cross-hatch joints. The larger grid pattern allows for panellised construction and expansion joints to become a visible part of the design, integrated into the façade reading.

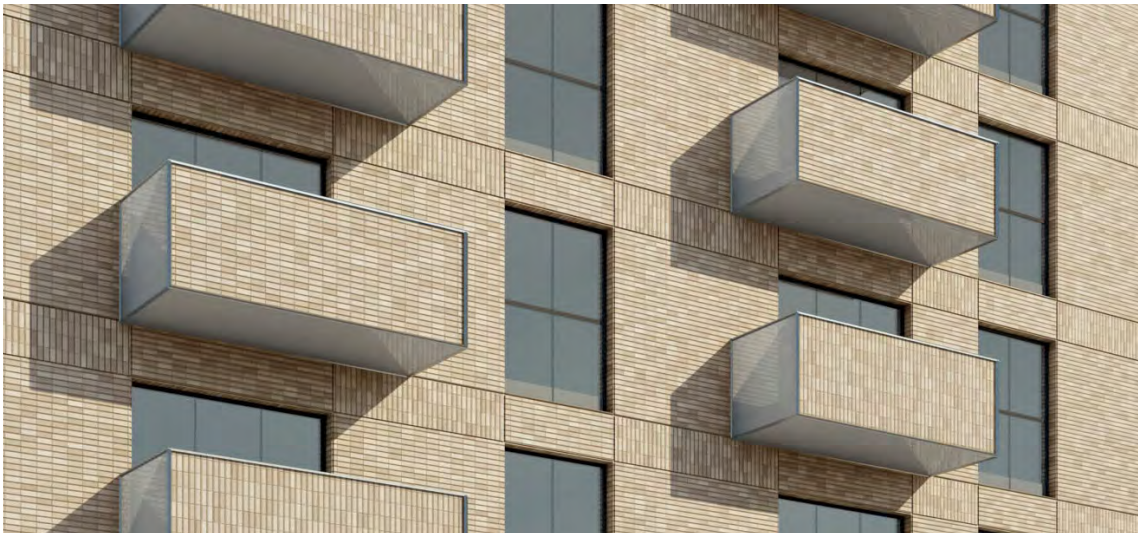
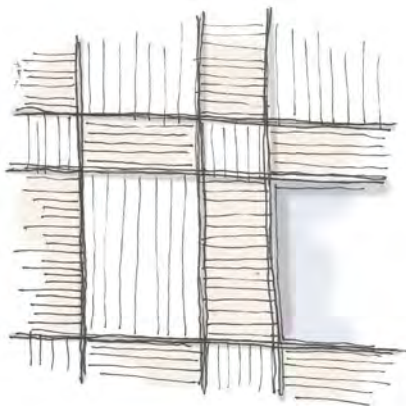
With this type of construction, the mortar joint is no longer a technical requirement in the same way as traditional bricklaying. There is however a historical reading which we have chosen to use for visual differentiation: The brickwork used on the ground and first floor will have a smooth or flush mortar joint, as is normal for traditional London stock brick. Above first floor, the mortar joint becomes 5mm recessed, giving the upper buildings a sharper, more defined mechanical quality.

The primary reading of the façade becomes the texture pattern of cross-hatch brickwork. This is achieved with alternating panels of header (vertical) and stretcher (horizontal) bricks. A mix of surface finishes have been chosen to further differentiate the cross-hatch pattern: Horizontal panels use dragwire brick slips, while the vertical panels are part engobe. This change in finish will be more and less visible depending on daylight and moisture, giving the buildings a dynamic and variable facade.

The building forms and other architectural details are all very subtle, which allow the brick patterns to dominate the façades.

Each building on the site follows the same design concept, but uses different colours of brick and a different mix of brick bonds to establish unique character.

Running bonds are used both horizontally and vertically to effectively express the cross-hatch theme. Other patterns, like Stacked Bond, Flemish bond, and header bonds are also used. Detail panels are highlighted with a basket weave bond that effectively changes the scale of detailing.



Concept render : Minimal details allow the subtle brick patterns to become the primary facade reading.



Stock Brick Wall with flush mortar joints



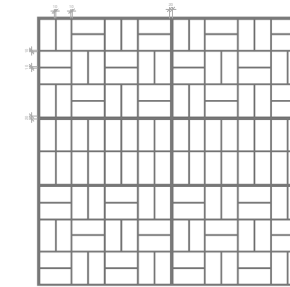
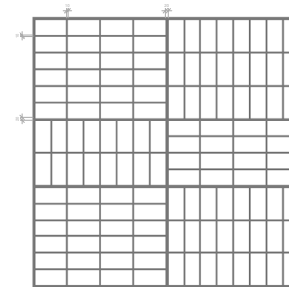
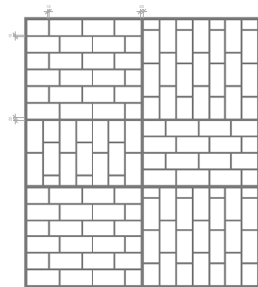
Grey Brick wall with recessed mortar joints



Base arcade and standard brick details of upper buildings

A series of partial facade studies produced during the design development.

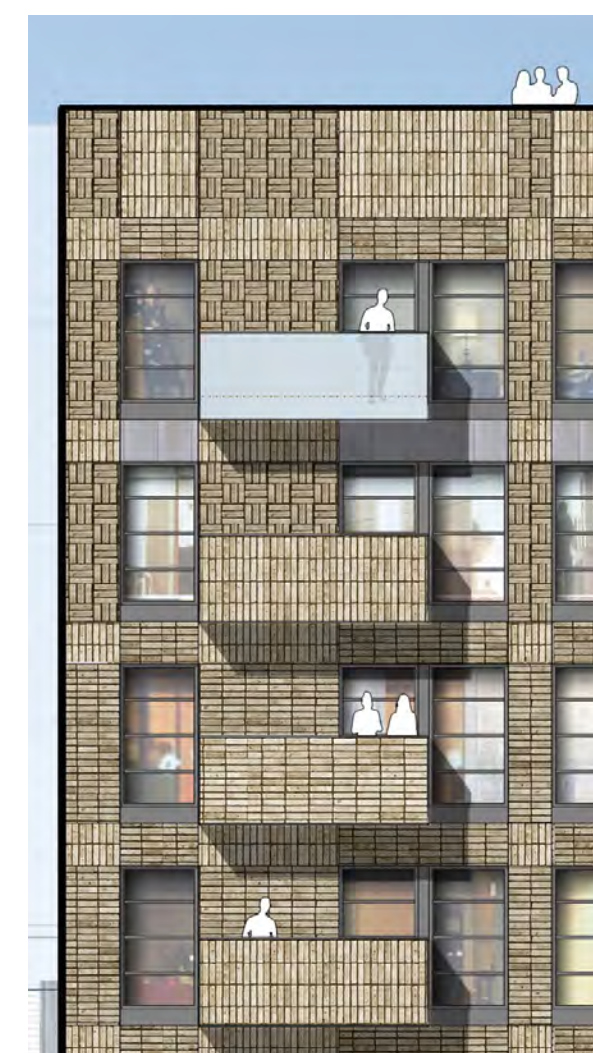
Horizontal and vertical running bond was chosen as the typical brick bond to emphasise a single direction within each panel.



Running Bond Patterns



Stacked Bond Patterns



Stacked Bond and basket weave patterns

3.13.6 Design Concept: Brick Tones

A variety of brick tones have been chosen to establish character for each of the individual buildings.

The mix of colours is intended to be recognisably different and yet still belong to a single theme. The best analogy would be the great variety of patterns and colours one can find in tweed fabrics: Even though each piece of cloth is different, they all belong to a single family and can be easily recognised as a whole.

The design intent has always been to establish a similar combination of individuality and consistency across the family of buildings in this scheme.

Within the colours, a secondary surface texture finish will be used to highlight the vertical and horizontal cross-hatch bonds. This finish is a subtle effect using the same base clay.

The brick tones chosen are :

Red Brick

Buff / Beige tone brick

Grey Tones - The scheme requires a gradient of 4 grey tones, from very light to almost black.

Brown tone Brick - Used for the base details of all buildings. This brick has the most colour variety and closely matches normal London Stock. The Brick will always be used in a stacked bond and have a flush mortar joint, making it clearly different from the upper building details.

