Section 4

Design Response

Architectural Statement

The brief and vision for the site has been to create a truly ground breaking destination of elderly healthcare excellence for our residents and the local community, fostering integration, health and wellbeing in a vibrant mixed-use, care-led development that will significantly enhance the existing site, surrounding neighbourhood, and allow elderly residents with long-term health conditions, including dementia, to be cared for in a beautiful, safe environment.

The following section identifies the main site constraints and opportunities that have played a part in sculpting the final design response, and describes the development of the concept, along with an illustrative analysis of the proposed design.

The design intends to in-fill the site with a similar built form typology to that of the surrounding buildings. The Melliss Avenue frontage will have a welcoming recessed arrival area, to allow for residents to be dropped off and picked up and this will form the front door to the development.

The ground floor area will be for communal and community use, it will have an open and welcoming feel and certain areas will be accessible to the public, typically the café and children's play area to the riverside. Controlled access will be in place to other facilities such as the treatment areas, hair salon and private residential access points.

The redevelopment of the landscape within the MOL and new public access, will create a destination for the area and foster intergenerational mixing.

The buildings' language and use of materials will be in keeping with, and enhance and improve upon the surrounding built form. The elevations have been designed so that the ground floor is light, open and welcoming, whilst the middle 3 levels have a contemporary, timeless language, with the use of masonry, timber and extruded balconies taking full advantage of river views. The upper 2 levels step back in plan and are of a recessive nature, toned down in detail and texture to reduce the perceived scale of the building.

The levels above ground contain a mixture of larger 1, 2 and 2b+ bedroom specialist extra care units that are designed to be wheelchair accessible and/or adaptable, to

allow for ageing in place for the resident, and to provide space for very high levels of care to be delivered within the care unit. Each care unit has access to a balcony and the communal areas on the ground floors, whilst providing dedicated space within the unit for socialising between residents; a key finding of the research undertaken by ESRO.

There are a total of 89 units, with on-grade parking for circa 30 cars. This will provide space for residents, staff and visitor parking alike. The operator will provide a regular mini-bus service to the shops and transport nodes to allow for the free and easy movement of its residents, staff, visitors and wider members of the public, space permitting.

The orientation and massing of the buildings allow for the maximum number of specialist extra care units to have access to direct sunlight and river views - all key attributes for longevity. Building heights vary between 4 and 6 storeys and respond to the surrounding built form with this articulation in height.

Marchese Partners have been working in the senior living sector for over 20 years, and through numerous awards, have been recognised internationally as leaders in seniors living design for over 10 Years. Working closely with specialist extra care providers, and research organisations, they have developed a wealth of experience and knowledge in the design and development of specialist extra care environments, enabling them to conceptualise and develop projects by responding to seven fundamental Design Principles. These Design Principles are used to guide the vision and establish a consistent framework for design decisions. They drive the design process and will serve as the guiding principles for the project as it moves forward.



The 7 Design Principles

Familiarity refers to the extent to which the built environment and its elements are recognisable to seniors and how easily they are understood by them

Legibility refers to the extent to which the built environment and its elements help Seniors understand where they are and how to identify which way they need to go. Legible environments employ typologies, language and materiality that provide easy to understand hierarchies

Distinctiveness relates to the extent to which the environments give a clear image of where the Senior is, what the uses are for and how they are to be used. Distinctiveness reflects culture and character of their life history through colour, texture, forms and materials

Accessibility refers to the extent to which environments and its components enable Seniors to mobilise around spaces and places they need or desire to visit regardless of any physical, sensory or cognitive impairment

Connectivity relates to ability for environments to act as conduits and connectors for seniors, their family and friends and the wider community

Safety refers to the extent to which environments and its parts enable Seniors to use, enjoy, socialise and move around the spaces without fear of falling, tripping and becoming disorientated

Individual Choice relates to the fact that we are all unique. Environments must facilitate our diverse desires and needs. Environments should not adopt a 'one size fits all' mentality. We must consider the wide variety of lifestyles when designing Seniors environments so that every person is afforded the same level of choice

Site Constraints and Opportunities

With an area of 1.6 acres, the site is wholly enclosed both physically and visually by a 2.4m metal fence, grass bank and Thames towpath to the east.

Access is afforded from Melliss Avenue to the southwest of the site, but the site has no pedestrian access from either road or towpath and is secured by spiked fences on all sides. Vehicles approaching the site will need to be able to manoeuvre freely on and off the site, with minimal manoeuvring on the existing roads to minimise potential conflicts with residents' cars.

As identified previously, the existing Metropolitan Open Land zone runs through the site, with many existing structures and hard standing area currently located within this zone, there is a requirement to open up the MOL and reinstate the landscape as required by local and national policy, and there is therefore a significant opportunity to benefit both the local ecology, and welfare/leisure of the residents and public alike.

To the north of the site is the Thames Water site (still in use) which is secured by a metal security fence around its perimeter, the southern alignment of which, defines the northern boundary of the site.

To the north-west of the site, a restricted construction zone is in force; this is located directly above the Thames Water transfer tunnel, and is a critical constraint to the design of any above or below ground structures.

Along the length of the eastern boundary, the Thames towpath runs north to south along the river bank. At approximately 1.5m above the level of the site, this elevated tree lined route is valued and enjoyed by both locals and those visiting alike. There are existing connections to the towpath from Kew Riverside, and there is therefore an opportunity to provide additional links, adding permeability to the site and local area as a whole, and enabling those using the towpath, to enjoy the site through public facilities and activities.

At the upper levels, residents will of course benefit from views north and south of the river, and out across the west of London.

Key

Site Boundary

Main vehicular access from Melliss Avenue (South)

Secondary Vehicular access from Melliss Avenue

••••• Views at 2nd floor level and above

Thames Towpath

Tree Line

(1) Restricted build zone over transfer tunnel

Thames Water building and Security Fence

3 Elevated 1.5m high bank

Existing screening and trees - views over and through from 2nd floor and above

Trees to Melliss Avenue screening site

6 Melliss Avenue rear parking and gardens

Opportunities to provide connection to the towpath

8 Saffron House Trees



Planning Constraints

In addition to physical constraints in and around the site, there are some key planning constraints that were also considered during the design development.

As discussed previously, the MOL line has played a significant role in the ongoing development of the concept design. As will be identified in the following pages, the proposed scheme encroaches the MOL, similarly to other buildings along the river front, and the following design progression analysis explains the reasons for this encroachment.

Further to the MOL, Clause 4.8.8 of the recently adopted Local Plan, seeks to ensure 20m setbacks are provided between habitable rooms. Certainly in the southern area of the site, this setback is considerable due to the location of Saffron House to its boundary.

With the requirement for a restricted construction zone over the Thames Transfer Tunnel, the MOL and required setback lines, the area of land with no constraint is limited to approximately 47% of the total site area.

As the building height increases, it was considered that the development could have an impact on the adjacent residences in terms of their amenity to daylight and sunlight. Detailed analysis has been undertaken to ensure that any impact is minimised or mitigated, and to assist this process, the building has been designed to step back at the upper levels.

Not only does this enable the building to maximise daylight and sunlight, it further softens the massing, and visual appearance of the built form, and provides a smoother transition in built form, between Terrano House to the north, and Saffron House to the south.

Key

Site Boundary
Site Area: 7128 m²

Metropolitan Open Land Line

Building Setback Line

Daylight/Sunlight Consideration

Thames Transfer Tunnel





Design Progression - Built Form

The Brief

The Red and Yellow Care model has been developed, tried and tested in conjunction with the 2 lead authors of the National Dementia Policy and is fully compliant with all 17 of its key objectives. The operational brief requires that the development will have a high level of staffing and that in order to achieve the required operational efficiencies in employing these specialist staff, 100 specialist extra care units are required to be delivered.

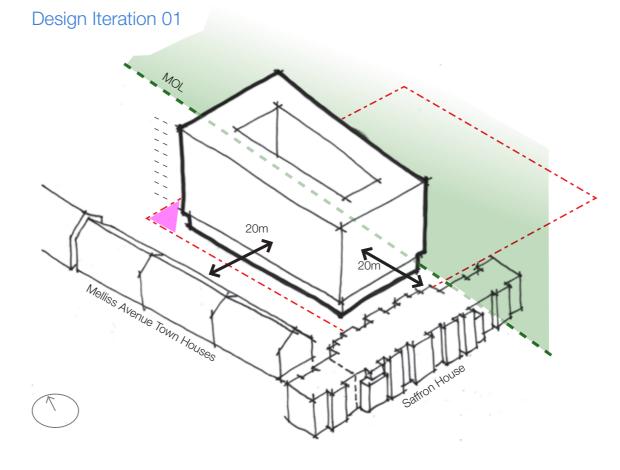
In conjunction with the business nee, the Biothane Plant re-development is required to respond to a number of unique constraints:

Most significantly, the requirement not to provide 'vulnerable' uses at ground floor level, and the additional direction by the Environment Agency of having no resident accommodation in a basement construction, meant that all specialist extra care units needed to be located at level 1 and above.

Where locating plant in a basement level risks the ongoing operation of the facility should a flood occur, requiring residents to be away from their homes, carers, doctors and day-to-day therapy due to the length of time recovery operations would take, it was decided that all critical MEP systems should be located on the ground floor, along with the required amenity accommodation. This accommodation and the space it commands is a critical factor in both design and viability terms, and with the EA requirements to consider, the best location for these facilities is at Ground Floor level.

This has therefore been a fundamental driver in the development of the design, and when put into context, the proportion of gross internal area dedicated to operational, functional, plant and circulation space will amount to approximately 40% of the total GFA. The remaining 60% will accommodate all specialist extra care units, from first floor and above.

To provide full and proper services in terms of health, support and amenity, these ratios are consistent with other developments, and while the schedule of accommodation identifies the extensive nature of all the functions necessary to deliver the services associated with the Red and Yellow specialist extra care development, the development of the concept design, and overall built form, has therefore been strongly driven by the constraints and brief requirements identified above, and is summarised opposite.

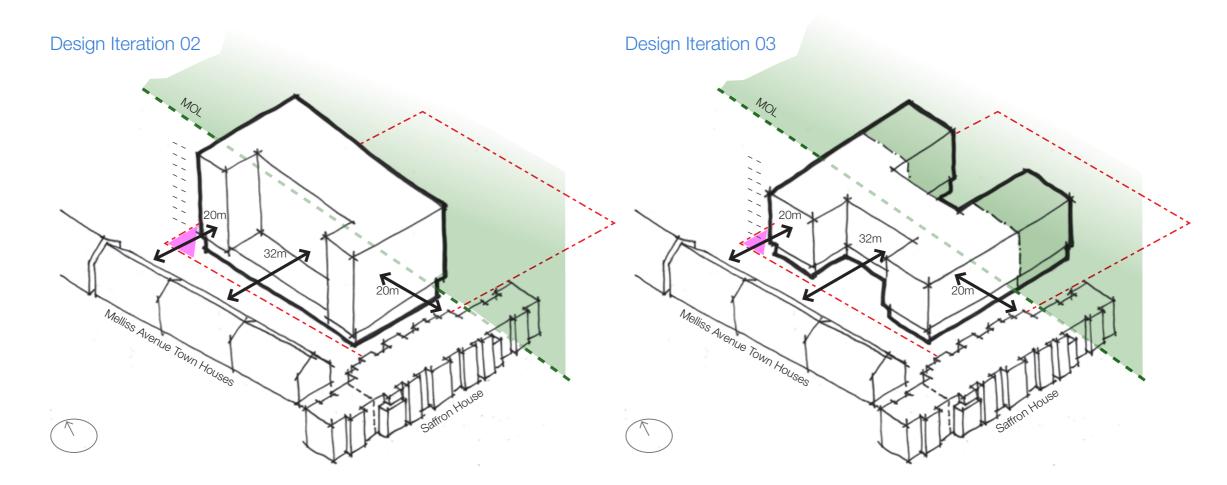


01 Initial Response

The starting position for the development of the scheme began with a direct implementation of the brief, limiting the building footprint to a site area defined by both the requirement to provide 20m setbacks, containing the whole development behind the MOL, and locating residential accommodation from level 1 onwards.

To enable a scheme which provided the required target of 100 units, the required amenity and plant accommodation, being located at Ground Floor, the residential accommodation needed to be allocated across 7 floors.

This produced a built form which was significantly larger in both mass and height to the surrounding buildings, and would both negatively impact their current amenity, and most significantly their daylight and sunlight. Furthermore, the plan form required an extensive central atrium and perimeter circulation which proved extremely inefficient and costly.



02 Daylight Sunlight to Melliss Avenue

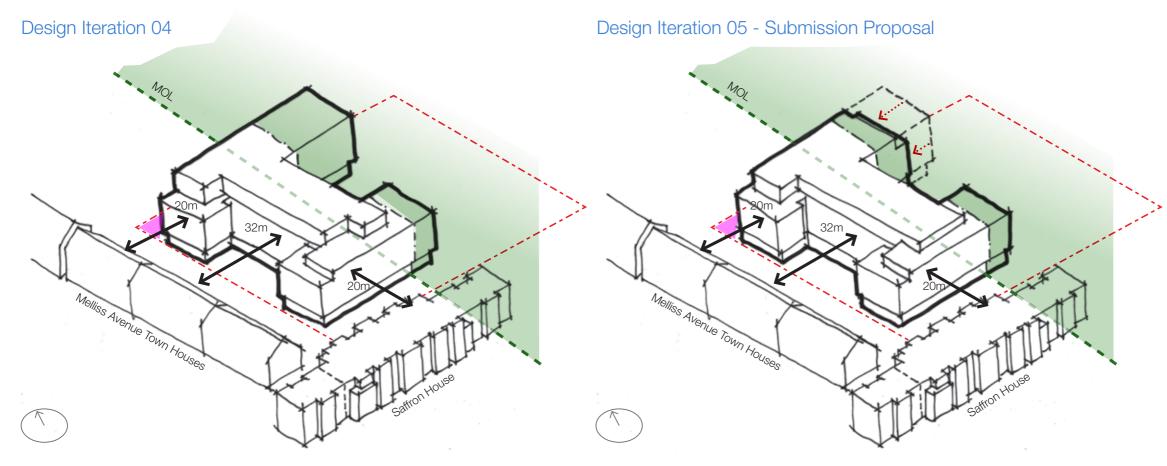
Through daylight and sunlight analysis, it was deemed that the properties to Melliss Avenue would be significantly impacted by a 7 storey building, notwithstanding the building out of scale to the adjacent properties. So to provide better daylight and sunlight amenity to the existing Melliss Avenue town houses, the central block was modified to provide a greater setback, and so increased to 32m, with the two book-ends retaining the required 20m setback.

However, with the removal of the central atrium, the scheme still required 7 floors plus ground as a means of maximising the number of units, and where benefits were provided to Melliss Avenue, this still impacted the daylight and sunlight to Saffron House and was still very much out of scale with the adjacent buildings. Due to the reduction in GIA, the number of units reduced significantly to approx 75; a significant reduction to the required brief.

03 Height Reduction and Formation of MOL Garden

With the previous iterations impacting daylight and sunlight, and requiring 7 floors of residential accommodation, it was clear the scheme needed to respond; providing improved townscape, whilst ensuring the basic business requirement for circa 100 units was provided. To achieve this, the number of residential levels was adjusted to 4 floors only; this enabled the height of the building to be reduced, significantly increasing the daylight and sunlight amenity to Melliss Avenue and Saffron House.

However, to achieve the required number of units, some encroachment into the MOL was required, and so reflecting on local precedent, two wings were formed in which to locate the required additional units. This greater reflected the footprints of existing built form in the locale.



04 Massing Adjustments

With the scheme now achieving the required number of units, the remaining problems regarding the views from Saffron House and encroachment into the MOL still needed to be resolved.

To reduce the impact on the MOL, the southern wing was reduced - this had the added benefit of increasing the visual amenity and connection to the River from Saffron House. Further articulation was undertaken to provide additional daylight and sunlight benefit to Melliss Avenue and Saffron House, by providing setbacks at level 4. This also allowed the building form to match closer the existing heights of these two adjacent buildings.

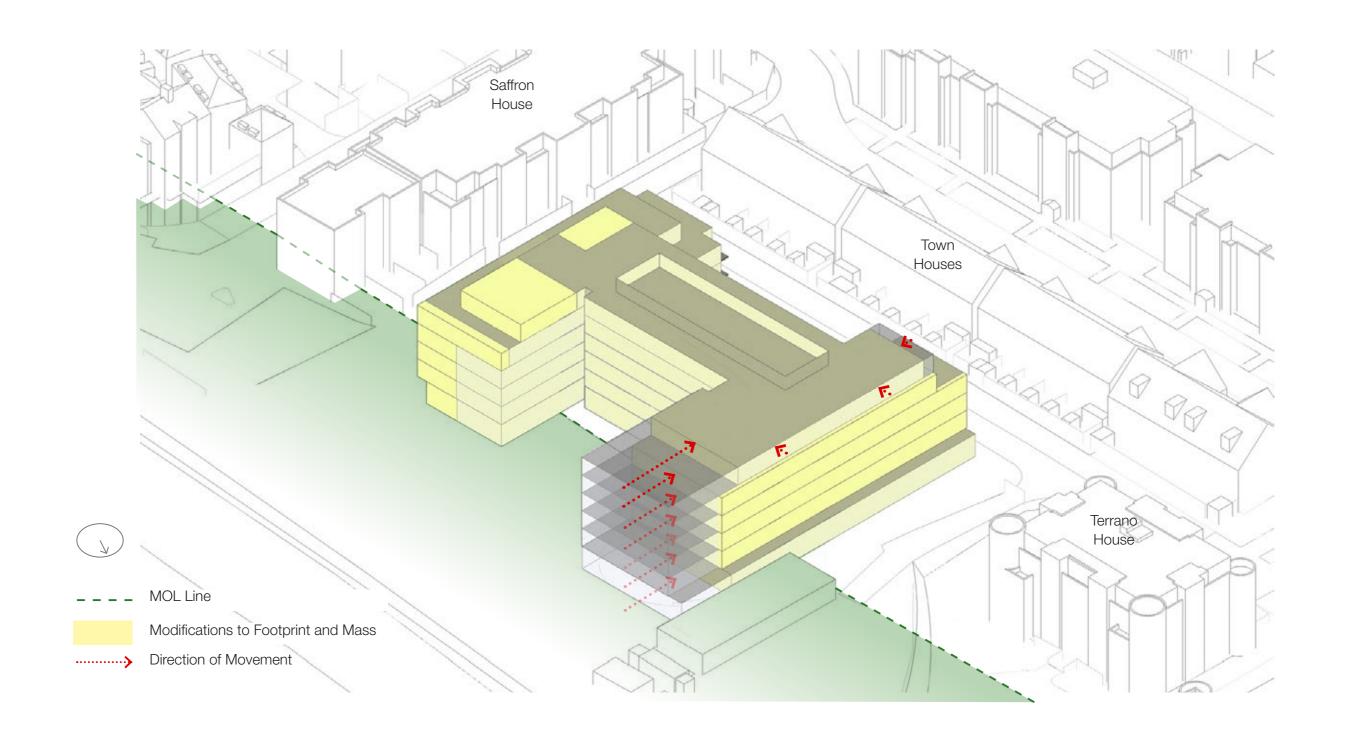
With the increased height of Terrano House to the north, the height of the building was increased from 4 floors to 5 in the northern wing; providing a softer transition in height from the North to the South, and greater articulation and interest to the proposed elevations to the West and South.

05 LBR and GLA Feedback Adjustments

Throughout the design development process, the team have attended a series of pre-application meetings with both the London Borough of Richmond and GLA. Encroachment into the MOL has been a particular topic of debate, and it has been clear that both LBR and the GLA desired a reduction in the encroachment.

Further analysis of the scheme provided opportunities to relocate some accommodation from the northern wing to level 5 of the southern wing, and whilst some accommodation was retained, the GIA has been reduced by over 700sqm and the unit count reduced from 96 to 89.

On the basis of the changes above, compared to the existing site and structures, there will be a net reduction in built footprint, a reduction of over 700sqm in hard standing, an increase of 2700sqm of soft landscaping and an additional 300sqm of biosolar roof.



Design Progression - MOL Assessment

MOL Policy

The Site partly falls within the designated Metropolitan Open Land (MOL). London Plan Policy 7.17 protects MOL from development that has an "adverse impact on the openness of the MOL." MOL is therefore afforded the "strongest protection" and development will be refused "except in very special circumstances, given the same level of protection as in the Green Belt. Essential ancillary facilities for appropriate uses will only be acceptable where they maintain the openness of MOL".

The Site was last used by Thames Water as a water treatment works associated with the Stag Brewery in Mortlake. The treatment works are now redundant following the closure of the brewery. Prior to the use by the brewery, the site is understood to have been used as a sewage treatment facility.

Whilst the site is no longer in use by Thames Water, a number of water treatment structures, plant and holding tanks remain, as well as areas of hard standing. In particular, the part of the site that faces the River Thames has a mixture of treatment works, plant, other structures, hard standing and limited vegetation all of which sits within the MOL boundary. To the east, the boundary of the site is marked by a line of trees and shrubs and a 2.4m high spiked metal fence, beyond which lies the accessible Thames Path.

The biodiversity report demonstrates that over 50% of the site is currently covered in hard standing surfaces and buildings, with the remaining area predominantly being wasteland followed by tall ruderal herbs and scrub - mostly present around the site's perimeter. Semi-mature trees, bramble and metal fencing line the Site's boundary. Views in and out of the Site are extremely limited.

The Proposals and Public Benefits

While the proposals detailed within this DAS illustrate that the development will breach the MOL boundary, it has been shown that this breach is only in part, and the proposed overall improvements and enhancement of the MOL within the site, along with the wider public benefits, are considered to greatly outweigh this. Given the current state of the site, there is ample opportunity to repair the current harm being caused to the openness of the MOL.

The existing facility has been de-commissioned, and as part of the redevelopment of the site, any required removal and remediation of contamination will be undertaken and various benefits will enhance and restore the currently fenced off industrial openness of the MOL in accordance with policy requirements.

Substantive replanting will take place, in particular to the east of the site, which will introduce the 'potential for more wildlife' and 'enhance opportunities for landscaping'. Additionally, the removal of the existing screening will 'open up views both within and out' of the site as well as key views from across the Thames.

Crucially, the proposals will restore 'openness' and put the site back to 'predominantly open use' through the introduction of a publicly accessible garden within the MOL which will see a significant increase in the level of public green open space introduced to the site over and above the existing condition. Furthermore, the garden, which will act as a new 'community use', will have direct access from the Thames Path. The existing 'inappropriate screening' will be removed and no boundary treatment will be erected to the eastern end of the site. This will greatly improve the enjoyment and usability of the Thames Path. The provision of public toilets adjacent the cafe terrace will further benefit the amenity of the towpath, which currently lacks any facilities or opportunity for respite for members of the public. It is also proposed to install a children's play area in the garden, which will also be open to the public and continue to 'support the outdoor open space use' of the site. Lastly, there is huge potential to 'conserve and enhance the open nature and biodiversity' of the site through the proposals.

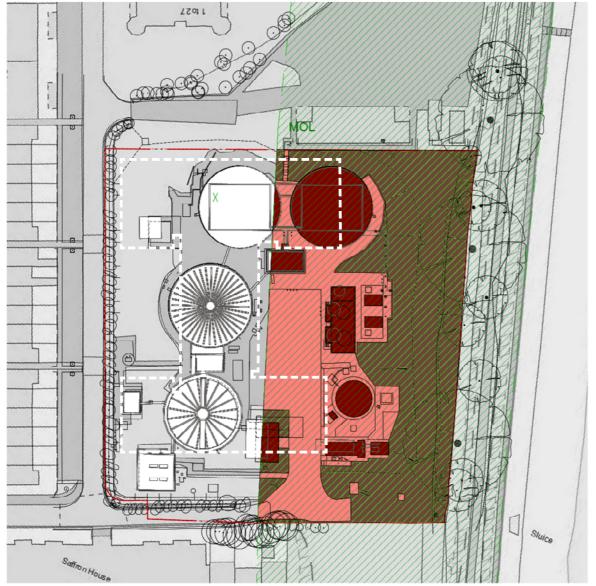
Benefits to the MOL

- Reinstates the open accessible land within the MOL
- Provides a mixture of uses such as an accessible garden, children's play area and open landscaped cafe terrace
- Improves and enhances the site by opening the MOL to the wider public
- Provides a rich active frontage to both Melliss Avenue, the gardens and river beyond
- Creates additional access points to the river, which are currently not available
- Enhances the connectivity and permeability to the river
- Ensures an inclusive and accessible environment to residents and public alike



TABLE OF COMPARISION

	EXISTING	PROPOSED	TOTAL
BUILT FORM	589.8 sqm	528.1 sqm	- 61.7 sqm
HARD STANDING	1354.4 sqm	439.7 sqm	- 914.7 sqm
WASTELAND	1949.6 sqm	0 sqm	0 sqm
PUBLIC LANDSCAPE	0 sqm	2926 sqm	+ 2926 sqm
BIOSOLAR ROOF		325.5 sqm	+ 325.5 sqm



Existing Site MOL Analysis

LEGEND

BUILT FORM WITHIN THE MOL

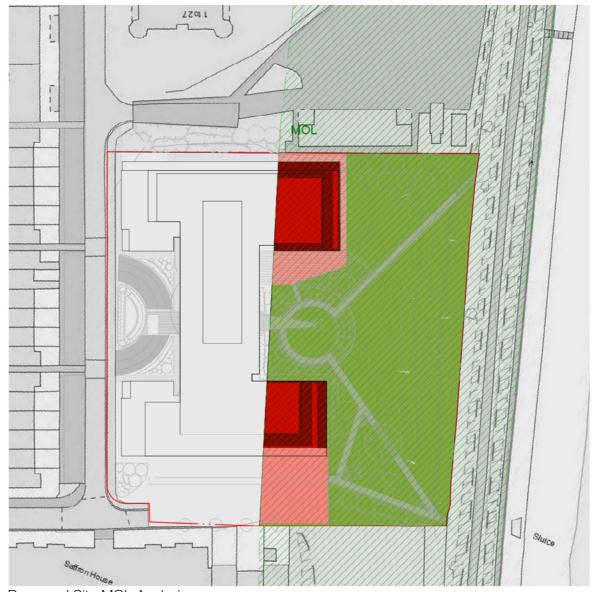
HARD STANDING AREA - IMPERVIOUS SURFACE WITHIN THE MOL

PROPOSED SOFT LANDSCAPING

CURRENT WASTELAND

MOL - METROPOLITAN OPEN LAND based on London Borough of Richmond upon Tharnes - Local Plan - Proposals Map, Adopted July 2015

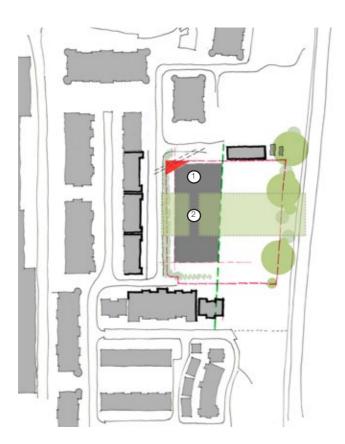
GREEN ROOF AND PLANTER



Proposed Site MOL Analysis

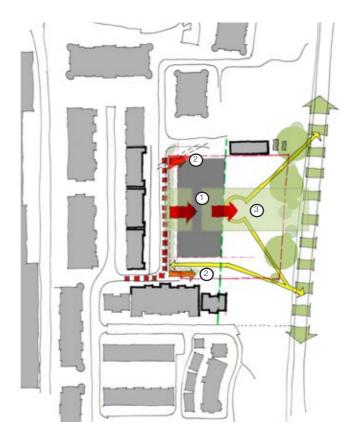
^{*} AREA OF SITE WITHIN THE MOL APPROX. 3893.8 sqm

Design Progression - Development Concept Principles



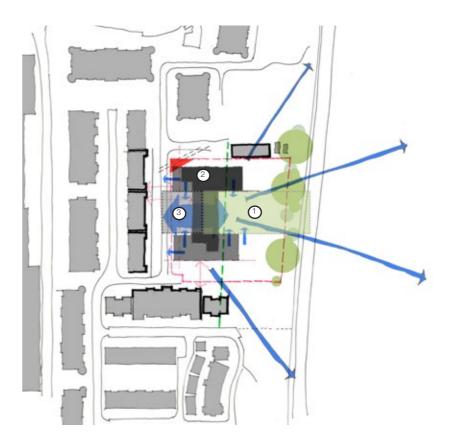
01 Context in Footprint

- Building footprint is established based on physical and planning constraints, including building setbacks and MOL
- 2. Solid maximised footprint is broken with open green space to the MOL, and entrance courtyard to Melliss Avenue
- 3. Plan form responds better to context, scale and massing of existing, surrounding built form



02 Activation of the MOL

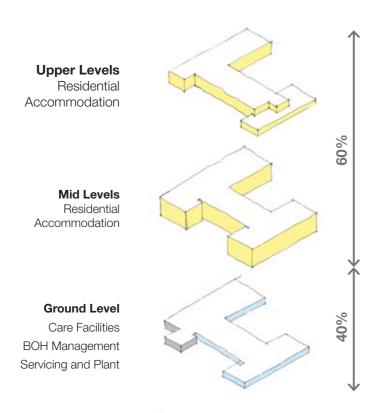
- A central access point is established to simplify wayfinding and circulation, and enable continuity and connection from Melliss Avenue to the MOL beyond
- Pedestrian and vehicular access is segregated, with servicing to the north and car parking to the south of the site
- 3. Central garden courtyard formed providing focus to the development and connections to the towpath



03 Visual Connectivity

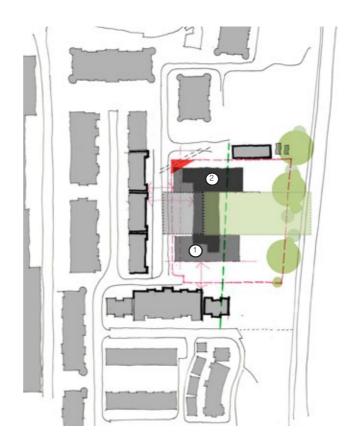
- With the MOL activated, residents and public alike are encouraged to enjoy the newly formed landscaped amenity and F&B facilities
- 2. U-shaped built form provides greater number of specialist extra care units with river views, and allows residents to visually connect with both the internal activity and exterior views
- 3. The formal entrance courtyard is reflected in the MOL garden courtyard and allows for disabled access at the same level as the ground floor





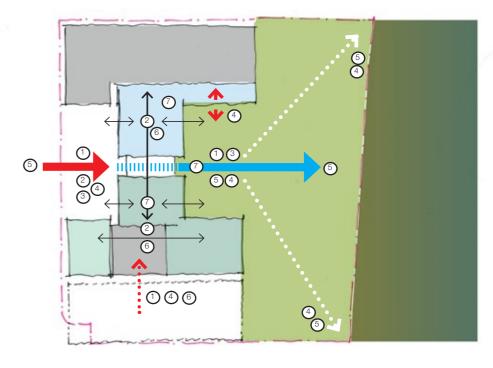
04 Arrangement of Accommodation

- 1. Accommodation is arranged to suit Environment Agency requirements
- Specialist Extra Care units situated on floors level 1 and above



05 Minimising Impact

- Building setbacks at upper levels to minimise impact to residents along Melliss Avenue and Saffron House
- 2. Northern wing accommodation maximised where habitable room offset is the greatest to Terrano House



06 Applying the Principles

- FamiliarityConnectivityLegibilitySafety
- 3 Distinctiveness 7 Individual Choice
 4 Accessibility

Design Progression - Stakeholder Engagement

Consultation Programme

Community engagement played a vital role in the development of the proposals for a Specialist Extra Care facility at Melliss Avenue, and the engagement programme was designed to reach out to different audiences, including direct neighbours, the wider community, potential future residents of the Specialist Extra Care facility.

In support of this process, the team have submitted 4 rounds of pre-application documents, and attended a number of pre-application meetings with the London Borough of Richmond, and where required, the Greater London Authority.

The consultation programme sought to:

- 1. Inform.
- 2. Identify local priorities and concerns.
- 3. Provide the opportunity to actively get involved in the shaping of the proposals.

Engagement Methods

A variety of engagement methods and tools were used throughout the programme, including:

One-to-one Meetings

Meetings were offered to political stakeholders and community stakeholder groups, with several meetings held throughout the programme.

Community Questionnaire and Newsletters

A community questionnaire was distributed to the local community and stakeholders as part of the first phase consultation.

Kew Mid-Summer Fete

Red & Yellow, as the main sponsor of the Kew Mid-Summer Fete on Saturday 23rd June, operated a stall as part of the first phase consultation.

Consultation Events

Two widely advertised public drop-in consultation events were held at the Kew Riverside Primary School.

Website

A dedicated project website was made live in February 2018, allowing stakeholders and residents to partake in the first and second phases of the consultation online.

Site visits

Site visits were arranged for those stakeholders who requested one.

Stakeholder Feedback

As expected, feedback from stakeholders reflected their main areas of interest, with those representing the neighbouring residents concerned about localised issues such as traffic impact, and those concerning elderly care and well-being interested in the Red & Yellow care operation.

Overall, the feedback from the stakeholders demonstrated support for the principle of the proposed use on the site, with several remarking on the local need for Specialist Extra Care and others noting its preference to just having a residential scheme.

Design Modifications

The whole stakeholder engagement process has provided valued insight and feedback into the ongoing design and development of the proposals.

A detailed review has been provided within the Statement of Engagement documentation. However, most significantly, through discussions with LBR and the GLA at the latter stages of the design process thus far, significant design changes have been implemented to the scheme to reflect feedback regarding the extent of the proposed built form, with particular attention to the area within the MOL zone.

Further to reducing the footprint of the building within the MOL, we have also reduced the scale and mass of the building by providing additional setbacks at the upper levels, and increased some setbacks already in place.



Red & Yellow Project Website, Community Newsletter and Questionnaire

"The concept is good. The elderly should be able to live independently for as long as possible." "I think this is a wonderful idea and will bring balance to our local community."

"I would like to see Red & Yellow commit to 'green' traffic, encouraging people to walk to/from the new development and not be reliant on cars for transport."

"The play area will be used by all the toddlers who live here and would be a welcome addition."

"The building proposed is

increasing problem with security in the area and CCTV is a minimum requirement for this development."

"The access from towpath should be controlled and monitored e.g. CCTV for the prevention of crime."

> "I am concerned about the increased level of motor traffic that will be generated both during construction and once the building is complete."



Consultation Event & Community Feedback - which has actively contributed to design development

Design Progression - C2 Use

Red & Yellow cater for senior residents with long-term specialist health conditions; an approach which distinguishes them from other Extra Care providers.

A range of comprehensive and bespoke domiciliary care services will be provided at Kew, that include help with personal care, daily routine, companionship and nursing, and in addition, specialist care will be provided on demand, from doctors and specialist consultants; facilities will therefore be provided on site, in support of these services. The care team will be registered with and operate under the strict supervision of the Care Quality Commission who Red and Yellow have been working with to ensure the built environment fits with the high level of care that will be delivered in it.

Dedicated nurse call systems will be installed in all care units so that residents have the ability to call for care at any time of the day, and the use of digital phone applications is being investigated due to the many benefits these can bring to the efficiency of providing care, and benefits to residents. Additional technologies such as toilets with the ability to detect sugar levels, to aid in the diagnosis of diabetes, and sensors to register when people are in and out of bed will also be investigated for their benefits to residents' ongoing care needs.

These facilities are required to keep residents active and engaged, whilst encouraging use and inclusion by the local community. This accommodation and the space it commands is a critical factor in both design and viability terms, and with the EA requirements to consider, the best location for these facilities is at Ground Floor level for ease of access and navigation.

To further support the residents, and requirements of a C2 use class, sprinklers will be provided throughout to enhance fire protection associated with vulnerable residents, a generator will be provided to maintain critical services, and care units are designed to provide full accessibility for medical and therapy staff, employing a single service lift and corridor accessing all floors; this also enables and facilitates further community interaction between residents, able to visit one another on the same level, without the need to transfer via different cores.

To provide for and benefit the social needs of each resident, a range of leisure, lounge and dining spaces will also be provided; enabling residents to enjoy spending time with their partners, friends or family - even when they no longer have the ability to leave the grounds - and the proposed development will provide the following for both public (in some instances by appointment) and residents use:

- Hydro-Therapy and Exercise Pool
- Medical Treatment Centre
- Rehabilitation and Exercise Facilities
- Restaurant for both public and resident use
- Café similarly for both public and resident use
- Library
- Activity Room
- Hair Salon

All care units are designed to enable immediate care at the required level, with future proofing to allow upgrade of fittings and facilities to scale with a residents' care needs, and a range of specialised features will be provided in all units, and throughout the development including:

- 1. Low level power and light switches for wheelchair users, and switches specifically designed for those with poor grip or motor skills
- 2. Kitchen controls at an accessible level
- 3. The ability to adjust and adapt kitchens to residents' changing needs
- 4. Each unit will have a Red and Yellow designed bath¹ which has been specifically designed for this market; lower height, internal seat/step to aid bathing and movement in and out of the bath and curved edges to minimise injury
- 5. Ergonomically designed kitchens, specifically for wheelchair users, with lower wall cupboards and worktop level, horizontal opening ovens
- 6. Flush, level thresholds for all doors
- 7. Integrated Telecare systems throughout
- 8. The ability to install ceiling mounted hoist systems from master bedroom to en-suite bathroom
- 1 https://www.ideal-standard.co.uk/concept-freedom.html























