

**SURREY COUNTY COUNCIL
THAMES YOUNG MARINERS,
SURREY OUTDOOR LEARNING & DEVELOPMENT CENTRE**

DESIGN & ACCESS STATEMENT

PART 7 - SUSTAINABILITY & STRATEGIES

ISSUE 02

October 2022

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Sustainability & Energy



9.1 BREEAM Pre-Assessment

Pick Everard have been appointed to undertake a desktop pre-assessment to demonstrate how the proposals for TYM can achieve BREEAM Excellent.








This assessment has been completed using BREEAM UK New Construction 2018 V6.0. There are ten categories used to assess the merits of each scheme, a summary of the findings is provided below:

- Management - 14no. credits of 21 targeted.
- Health & Wellbeing - 14no. credits of 17 targeted.
- Energy - 20no. credits of 23 targeted.
- Transport - 6no. credits of 12 targeted.
- Water - 6no. credits of 9 targeted.
- Materials - 12no. credits of 14 targeted.
- Waste - 4no. credits of 10 targeted.
- Land Use & Ecology - 6no. credits of 13 targeted.
- Pollution - 8no. credits of 12 targeted.
- Innovation - 1no. credits of 18 targeted.

This results in a score of 70%, which meets the threshold for Excellent.

HEA 07 Safe Access

Key

-  Cycle Access (Shared Road User)
-  Cycle Store
-  Pedestrian Access
-  Pedestrian Drop Off Area
-  Delivery / Service / Maintenance Vehicle Access
-  Delivery Vehicle Parking
-  Public Vehicular Access

Note

Cycle Access is NOT a dedicated Cycle Path

9.1.1 HEA 07 Safe Access



Cycle Access and Storage



Managed Vehicular Access



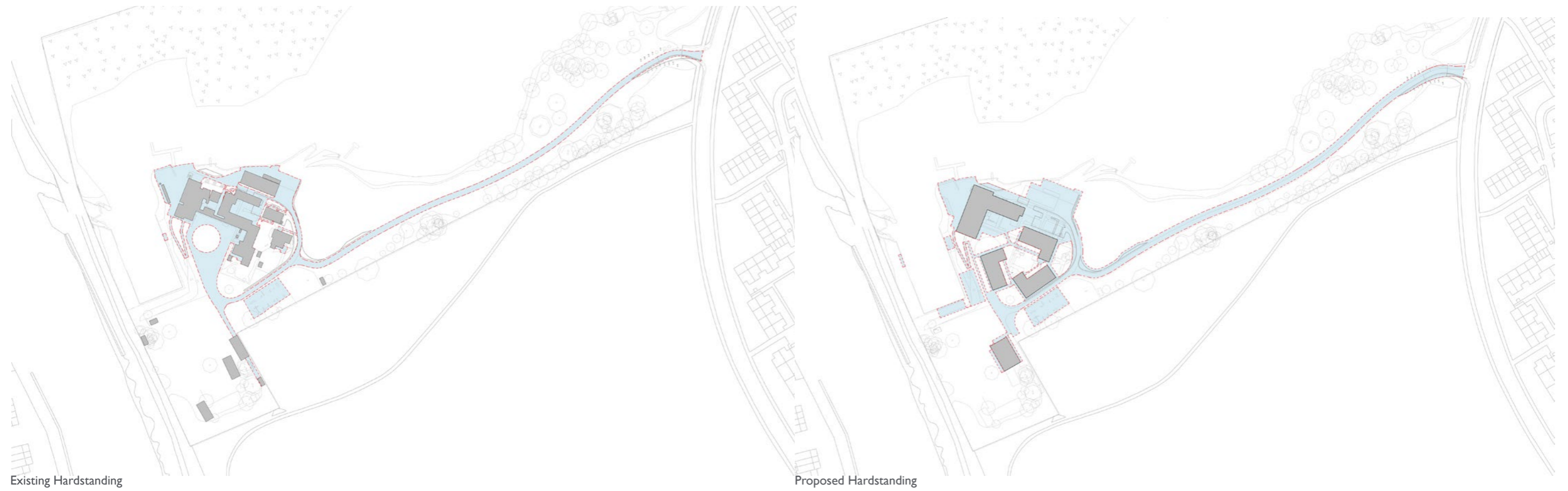
Dedicated Pedestrian Access



Public Vehicular Access and Coach Drop off

9.1 BREEAM Pre-Assessment

9.1.2 LE 01 Previously Occupied Land



LE 01 Previously Occupied Land

- Key
- Hard standing - Building
 - Hard Standing

9.2 Sustainable Urban Drainage Strategy

Atkins have been appointed to prepare a Drainage Strategy on the Thames Young Mariners site. The strategy can be found in report PR-200-ATK-ZZ-00-RP-C-00001, titled Drainage Strategy. An extract of the introduction is located below for reference:

This report presents the surface and foul water drainage strategy for the proposed development. It provides details on the proposed surface and foul water networks, demonstrating how the use of Sustainable Urban Drainage System (SuDS) have been adopted to reduce flood risk and promote biodiversity benefits as well as improve water quality and amenity value.



KEY:

- PROPOSED SURFACE WATER CARRIER DRAIN
- PROPOSED SURFACE WATER DRAIN BRANCH PIPE
- SITE BOUNDARY
- PROPOSED CONNECTION PIPE
- PROPOSED LINEAR CHANNEL DRAIN
- PROPOSED FILTER DRAIN
- A-XX PROPOSED ACCESS UNIT
- ⊗ F-XX PROPOSED OUTLET UNIT
- G-XX PROPOSED GULLY
- ▶ FLOW ARROW
- ◻ PROPOSED CELLULAR STORAGE TANK
- PERMEABLE PAVING AREA
- GREEN ROOF AREA
- OFF-SITE STORM WATER CATCHMENT AREA
- HW1 PROPOSED HEADWALL
- SCP XX PROPOSED SURFACE WATER CATCHPIT
- SMH XX PROPOSED SURFACE WATER MANHOLE
- S-IC XX PROPOSED SURFACE WATER INSPECTION CHAMBER
- ⊗ FC XX PROPOSED FLOW CONTROL
- ⊕ EXISTING TREE ROOTS PROTECTION AREA
- ⊕ PROPOSED TREE
- EXISTING GRASSLAND TO BE ENHANCED
- EXISTING LOW ROPES COURSE, ARCHERY AREA; MULCH SURFACING



KEY:

- PROPOSED FOUL WATER DRAIN
- PROPOSED FOUL WATER DRAIN BRANCH PIPE
- SITE BOUNDARY
- ▶ FLOW ARROW
- FMH XX PROPOSED FOUL MANHOLE
- F-IC XX PROPOSED FOUL WATER INSPECTION CHAMBER
- EX.MH XX EXISTING FOUL MANHOLE
- ⊕ EXISTING TREE ROOT PROTECTION AREA
- ⊕ PROPOSED TREE
- EXISTING GRASSLAND TO BE ENHANCED
- EXISTING LOW ROPES COURSE, ARCHERY AREA; MULCH SURFACING

9.3 Energy Strategy

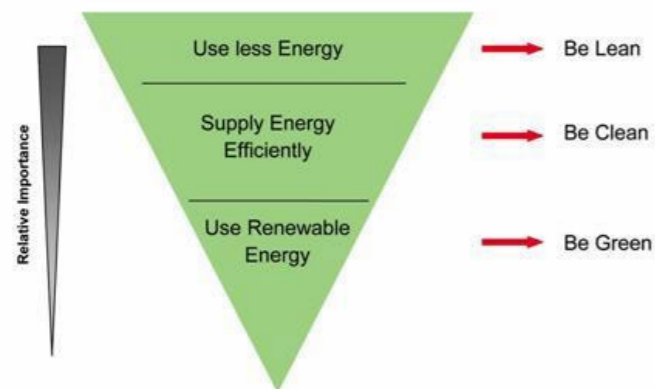
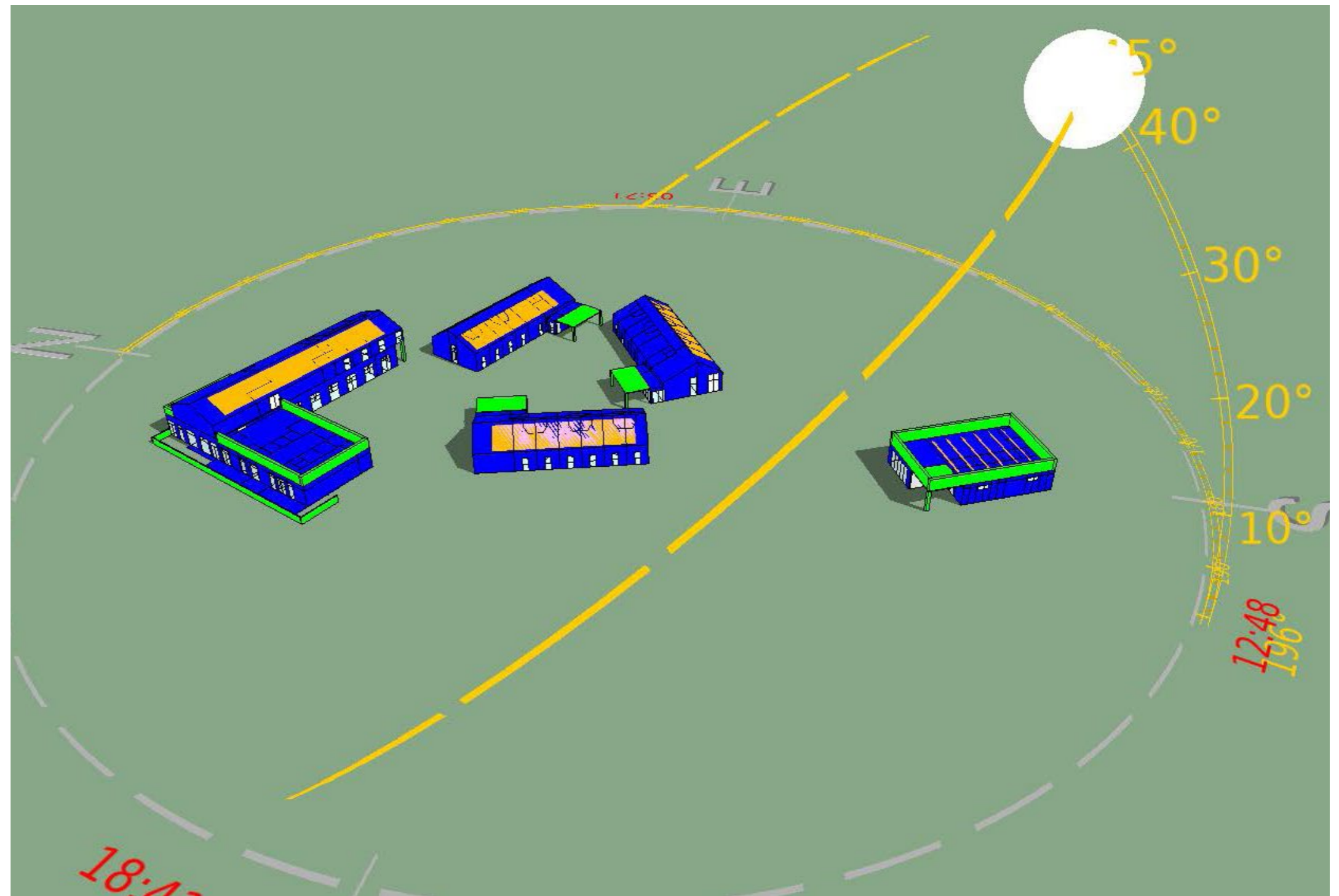
9.3.1 Energy Statement

Atkins were appointed to undertake an Energy Statement. Their findings are provided in report PR200-ATK-XX-V-Energy Statement-00000 titled Energy Statement. An extract of the summary is provided below for reference:

The overarching objective of the proposed strategy is to use the LETI standards and achieve maximum realistic energy reduction and CO2 savings using combination of energy demand reduction measures, energy efficiency and efficient energy supply technologies.

In summary, the energy assessment shows the proposed energy strategy for the development:

- Complies with Part L 2021 Building Regulations
- Exceeds regulated operational Net Zero target against Part L 2021 and Part L (SAP10.2) baselines
- Exceeds regulated and unregulated operational Net Zero target against Part L 2021 and Part L (SAP10.2) baselines



9.3 Energy Strategy

9.3.2 Daylight Assessment

Atkins were appointed to undertake a Daylight Assessment. Their findings are provided in report PR200-ATK-XX-V-TYM Daylighting Report-00001 titled Daylight Assessment Report. The Executive Summary is provided below for reference:

Atkins has been appointed to carry out a daylighting assessment to assess the compliance of the proposed Thames Young Mariners development against the Average Daylight Factor and No-Skyline criteria stipulated within report BR 209, site layout planning for daylight and sunlight: a guide to good practice (3rd edition). A 3-dimensional model of the Thames Young Mariners design was developed using IES VE software, based on proposed site layout plans from the architectural team, with all key inputs and assumptions outlined within this report.

The daylighting assessment has been carried out for all the habitable rooms. The modelling results show that the assessed rooms pass the BR 209 Average Daylight Factor and No-Skyline criteria.

The daylighting and no Skyline analysis are carried out to see if the perimeter rooms of the building or in other words all occupied spaces have enough daylighting availability in it or not. In the Analysis if the rooms don't comply it is generally recommended to add more windows or enlarging of existing window. Similarly for no skyline it is check that from the room if the sky is visible or not, if it is visible to what extent it is visible.

9.3.3 Overheating Assessment

Atkins were appointed to undertake an Overheating Assessment. Their findings are provided in report PR200-ATK-XX-RP-V-Overheating Report-00000 titled Overheating Assessment Report. An extract of the results is provided below for reference:

From the results, it can be concluded that the Social and Learning Spaces, Office spaces and the Kitchen are failing to meet the requirements of TM52, despite multiple optimistic assumptions and hence are under risk of overheating. Therefore, sufficient mechanical cooling or ventilation is to be provided to these spaces for thermal comfort.

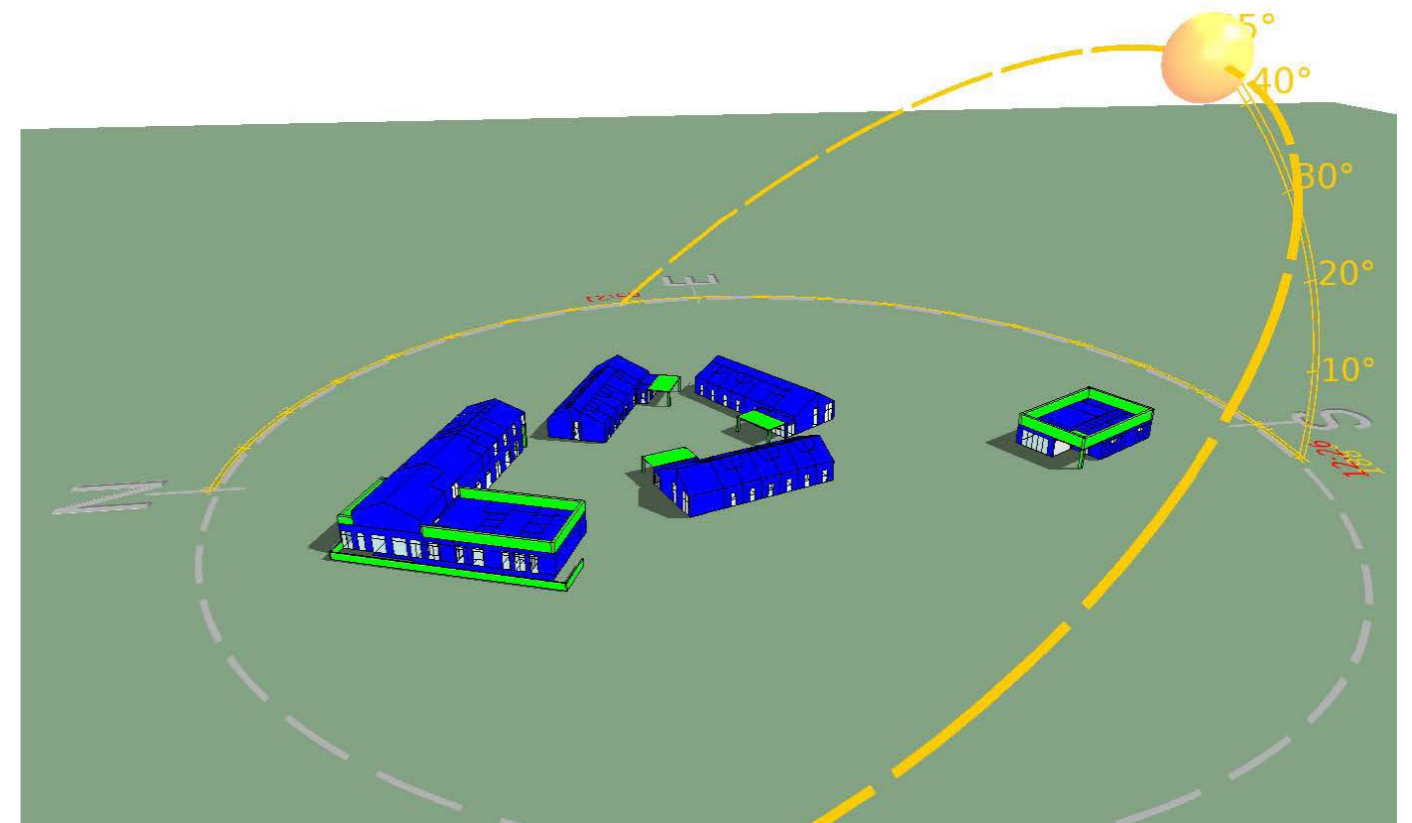
9.3.4 Sustainability Statement

Atkins were appointed to undertake a Sustainability Statement. Their findings are provided in report PR200-ATK-XX-V-Sustainability Statement-00000 titled Sustainability Statement. An extract of the results is provided below for reference:

This Sustainability Statement demonstrates that the proposed development is targeting good standards of design and build-quality. Much attention has been given to reducing the environmental impact throughout the lifetime of the development and not just during occupation.

The BREEAM pre-assessment demonstrates that the development can potentially achieve a BREEAM Excellent rating. It should be noted that this pre-assessment has been undertaken early in the design process and is therefore subject to change. It is also important to note that the threshold for BREEAM Excellent can be achieved by attaining other credits within the BREEAM scheme, and not achieving some of those allocated in the pre-assessment.

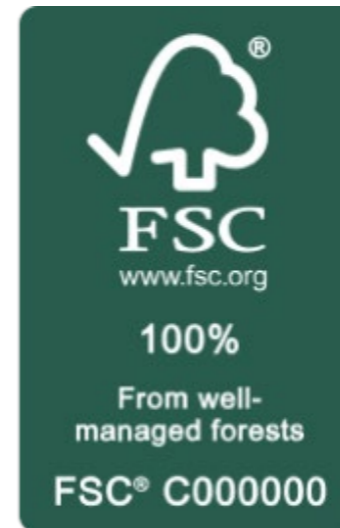
In conclusion, this report demonstrates that the proposed development can meet the sustainability planning policy requirements. The design team has carefully considered the site's potential environmental impacts, which will be managed and mitigated in line with the relevant planning policies.



9.4 Material Sourcing

Specifications will define a requirement for materials to be responsibly sourced, ideally from UK manufacturers. This will be benchmarked to the requirements defined by the BREEAM criteria for respective elements, to ensure alignment with the Excellent rating.

The contractor shall obtain Environmental Product Declaration (EPD) certificates for products from each manufacturer, and compliance with associated responsible sourcing standards will be an underlying requirement.



Strategic Information

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10.1 Accessibility & Inclusivity

SOLD strive to make their activities suitable for all user groups. The existing buildings were constructed before current legislation was established to promote equality and this has proven problematic.

These new proposals will comply with access requirements defined in the Building Regulations (Part M) that support the Equality Act (formerly the Disability Discrimination Act – commonly referred to as DDA). This involves ensuring level access around the site and into the buildings, with stair access supported by lifts in multi-storey buildings (for TYM this applies to the staff residential accommodation). External access routes around the site are generally flat until approaching the water’s edge, which is below a bank that is accessed by ramp and steps.

The common user groups comprise schools who may have a mix of genders and abilities within each class that visit TYM. We have liaised closely with SOLD to explore how inclusivity could be made inherent in the scheme. Each class is divided into two groups of fifteen to allow suitable adult supervision for the various water and land based activities.

To cater for this, changing rooms have been sized accordingly, with private individual cubicles and larger single gender changing rooms if a small group would like to change together. These may also be used by family groups or adult guardians to maintain segregation for safeguarding.

Dedicated fully accessible changing rooms with shower and toilet are included with each of the changing areas on lower ground and upper ground. These are provided with level access and the sanitary fittings defined in Building Regulations Part M, known as a Doc M Pack, which include grab rails and shower seat. Within the lower ground changing rooms, the showers include an accessible provision that includes the same Doc M Pack fittings to allow inclusion. If a wheelchair user chose to change with the group, they would be allocated the single gender changing room that has been sized to suit an accessible provision.

Toilets have been designed in accordance with guidance for schools, with open areas including wash troughs to enable supervision, and private toilet cubicles.

These measures help to provide diversity in the configuration of changing rooms and toilets so that the use profile relates to group size rather than the gender mix within groups.

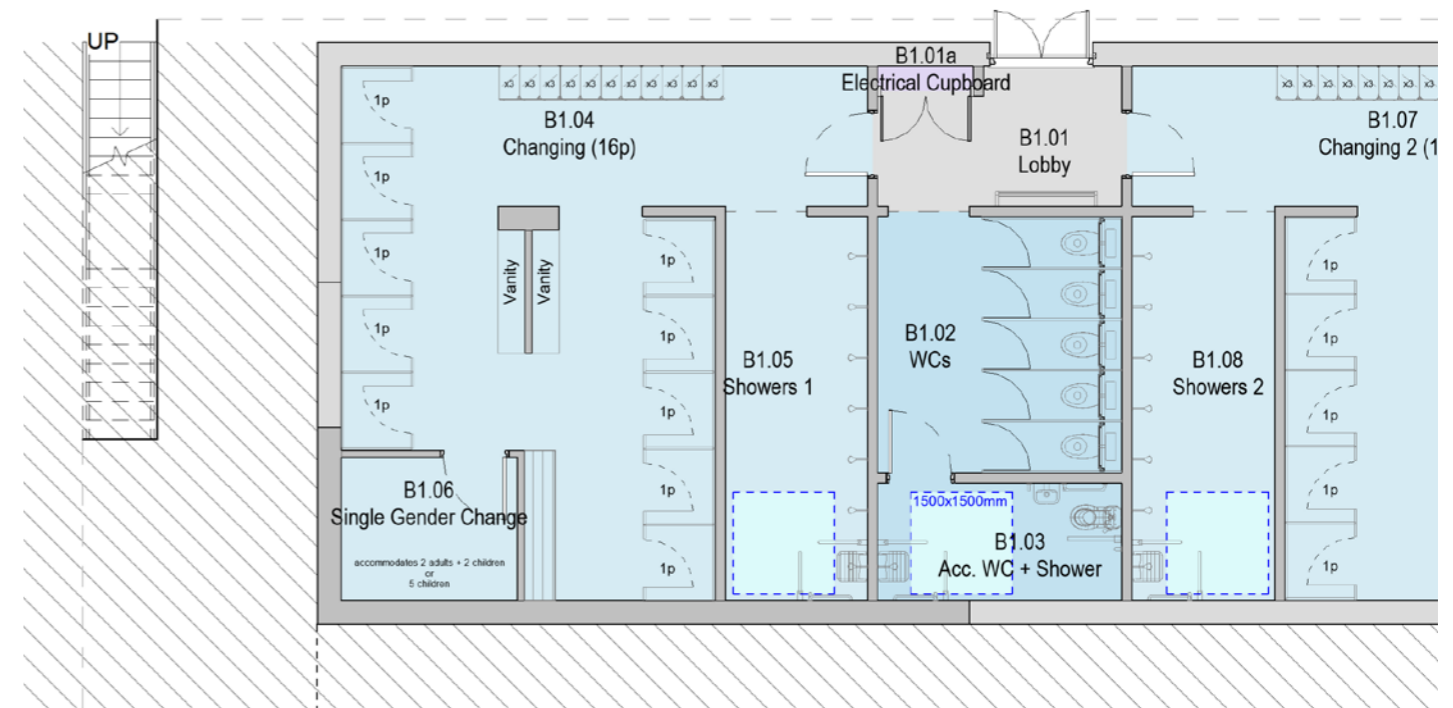
The northern wing of the main building includes a fully accessible toilet close to reception that can also serve the meeting room.

The staff residential accommodation includes a three bedroom apartment and an hotel style bedroom for occasional use. The sanitary provisions and spatial arrangement are based on the London Plan space standards to ensure proposals provide a normal domestic setting. This accommodation is located on the first floor of the main building accessed by dedicated lift and staircase.

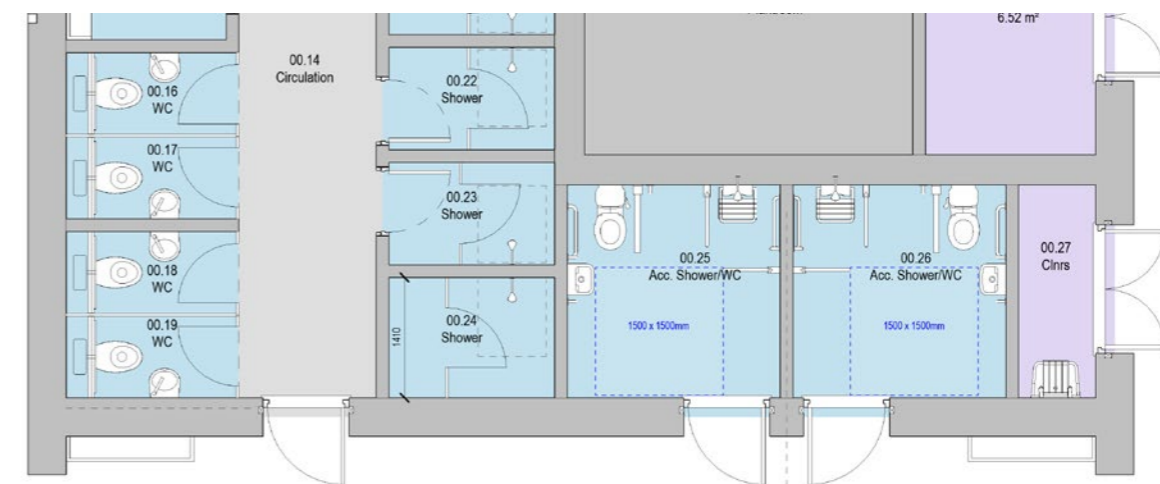
The guest residential accommodation is configured into dormitory style bedrooms that accommodate four children within each room sharing an ensuite shower room. Separate bedrooms with ensuite shower rooms are included for the adult guardians. Each residential block also includes a fully accessible bedroom and shower room, with the shower room having managed access from both the bedroom and adjacent social space to reduce travel distances depending where people are within the building.

We challenged SOLD to review the quantity of fully accessible bedrooms within the three guest residential blocks. Their experience from similar overnight residential accommodation at other sites they operated showed a single room associated with each group would be sufficient to cater for the needs of their regular client base.

For the camping changing block two fully accessible changing rooms are included with shower and toilet (fitted with Doc M Pack).



Accessibility Integrated into Main Building Design



Accessibility Integrated into Camping Block Design

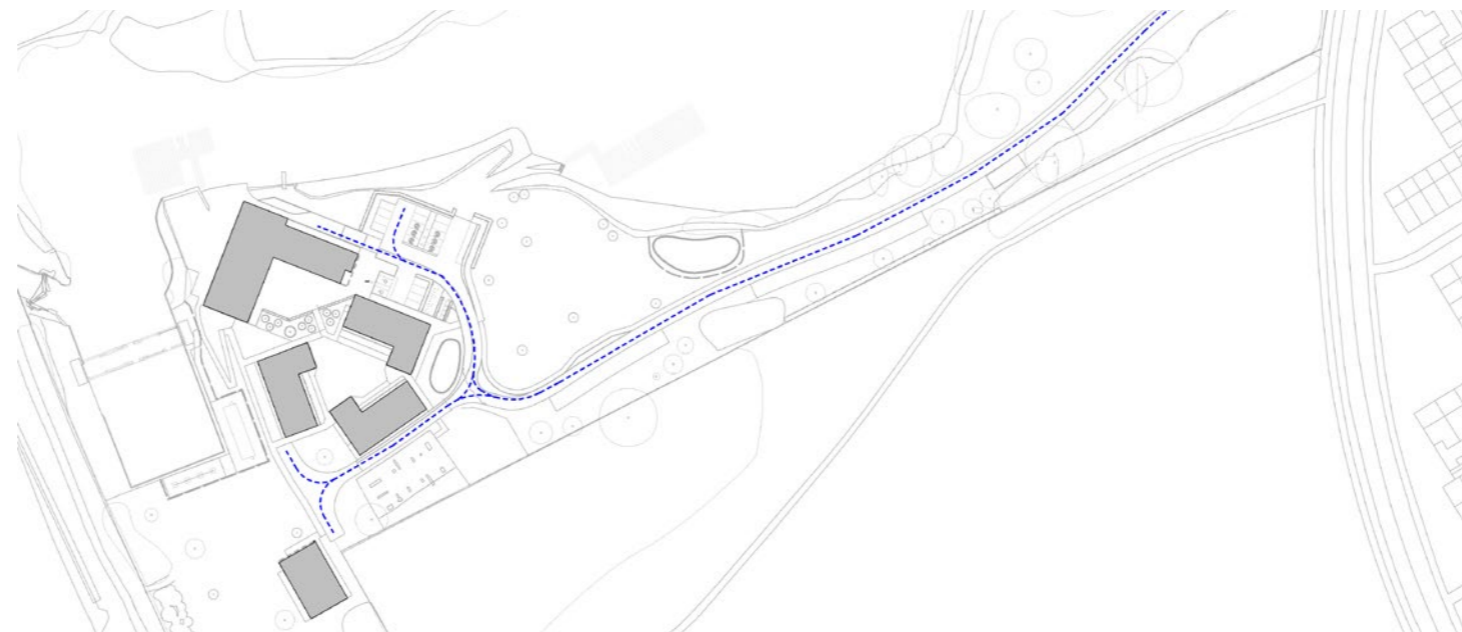
10.2 Fire Strategy Statement

Osborn Associates were commissioned to produce a Fire Strategy Statement. Their findings are provided in the report titled Thames Young Mariners Planning Fire Statement. An extract from this report is located below for reference.

From Section 9 - Local Development Document Policies relating to Fire Safety:

No automatic fire detection is to be provided within the Camping Changing Block. The Guest Residential buildings will be provided with L2 standard automatic fire detection and alarm system, designed in line with BS 5839-1 guidance recommendations. In the Main Building, manual fire detection and alarm is sufficient to comply with fire safety requirements for non-residential areas. However, an L2 standard automatic fire detection and alarm system in line with BS 5839-1 should be provided within the building to support the provision of overnight bedroom. LD2 standard automatic fire detection and alarm system in line with BS 5839-6 should be provided within the residential apartment.

	Approved Doc B - Fire Safety	Evacuation Strategy	Travel Distances:						Sprinklers	Fire Detection & Alarm	Disabled Intercom	Structural Fire Performance	Compartmentation:					Fire Fighting Access
			Places of special fire hazard	Plant rooms	Short stay bedroom	Bedrooms	Bedroom corridor	Other areas					Special fire hazard areas	Residential area	Protected hallway	Protected corridor	Protected lobby	
Main Building	Vol 2 non-resi Vol 1 residential	Simultaneous	9m single 18m alternative	9m single 18m alternative	9m within the room	N/A	N/A	18m single 35m alternative	Not required	L2 automatic fire detection and alarm (BS 5839-1). LD2 automatic fire detection and alarm (BS 5839-6) to the residential apartment.	Top of stair Disabled changing Disabled toilets	60 minutes fire resistance	30 minutes	60 minutes fire resistance	30 minutes	N/A	30 minutes	15% perimeter or within 45m of every point of the footprint
Guest Residential	Vol 1 residential	Simultaneous	9m single 18m alternative	9m single 18m alternative	N/A	9m within the room	18m single 35m alternative	18m single 35m alternative	Not required	L2 automatic fire detection and alarm (BS 5839-1).	Disabled toilets	30 minutes fire resistance	30 minutes	N/A	N/A	30 minutes	N/A	15% perimeter or within 45m of every point of the footprint
Camping Block	Vol 2 non-resi	Simultaneous	9m single 18m alternative	9m single 18m alternative	N/A	N/A	N/A	18m single 35m alternative	Not required	Manual detection and alarm is sufficient to comply.	Disabled changing Disabled toilets	30 minutes fire resistance	30 minutes	N/A	N/A	N/A	N/A	15% perimeter or within 45m of every point of the footprint



Fire Engine Route

10.3 Proposed Phasing Strategy

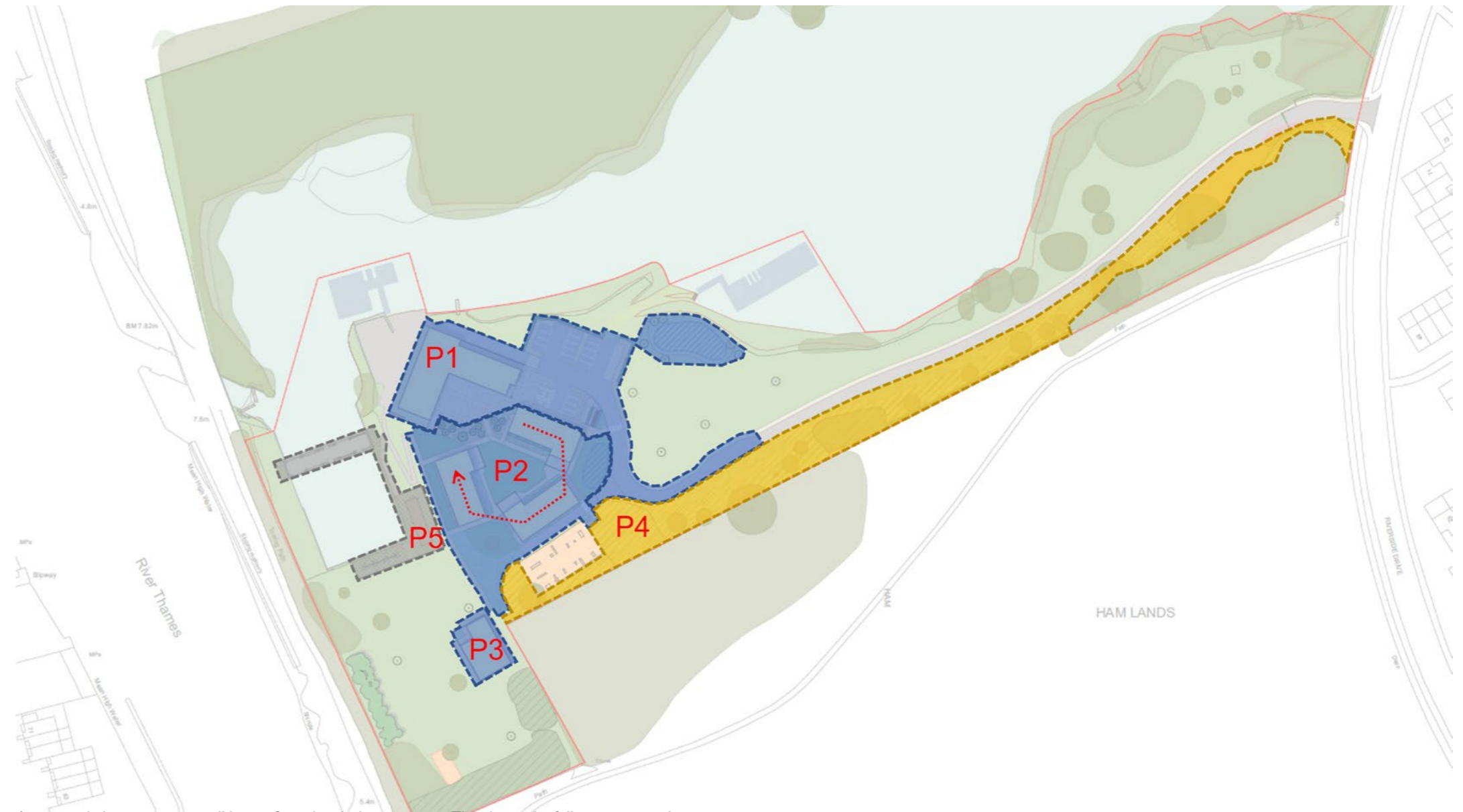
The early design options allowed an opportunity to build the new facility in a phased approach. This would enable SOLD to continue operating in the existing building while the main building was constructed. However, liaising with LBoR through the pre-application planning process has prioritised locating the new buildings over the brownfield footprint of existing development. This means existing buildings will need to be demolished to facilitate new construction.

To allow SOLD to continue reduced operations during the construction phase it will be necessary to include temporary accommodation alongside the contractor’s welfare accommodation.

Discussions will take place with tendering contractors after submission of the planning application. This will inform the development of a favoured construction strategy and identify any constraints at different stages of the works.

The development may be completed in phases to suit funding availability. Initial handover may comprise the construction of the main building and one of the guest residential buildings. Additional guest residential buildings and the camping changing block would follow later.

SOLD shall organise the installation of high ropes, coasteering, and climbing wall after handover. This allows them to manage the selection of features to suit their planned activities and they will have direct communication with the supplier to enable ongoing support for testing and maintenance of safety equipment.



Anticipated phasing strategy will be confirmed with the contractor. This shows the following approach:

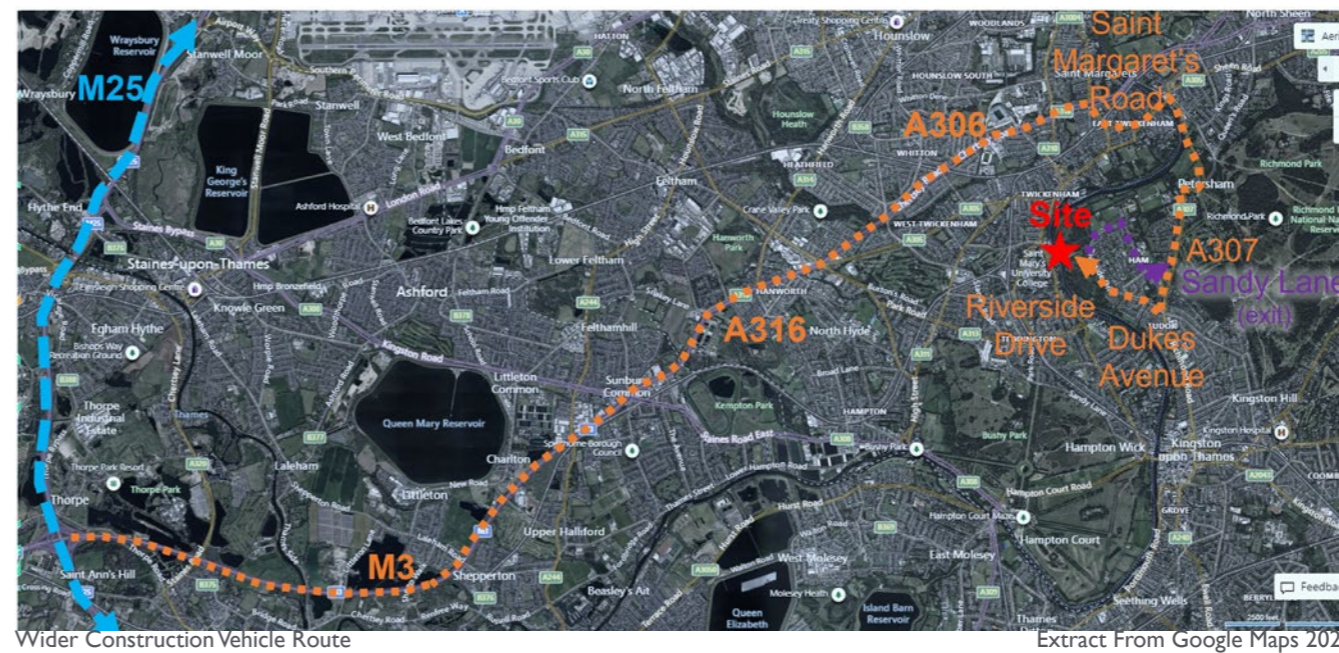
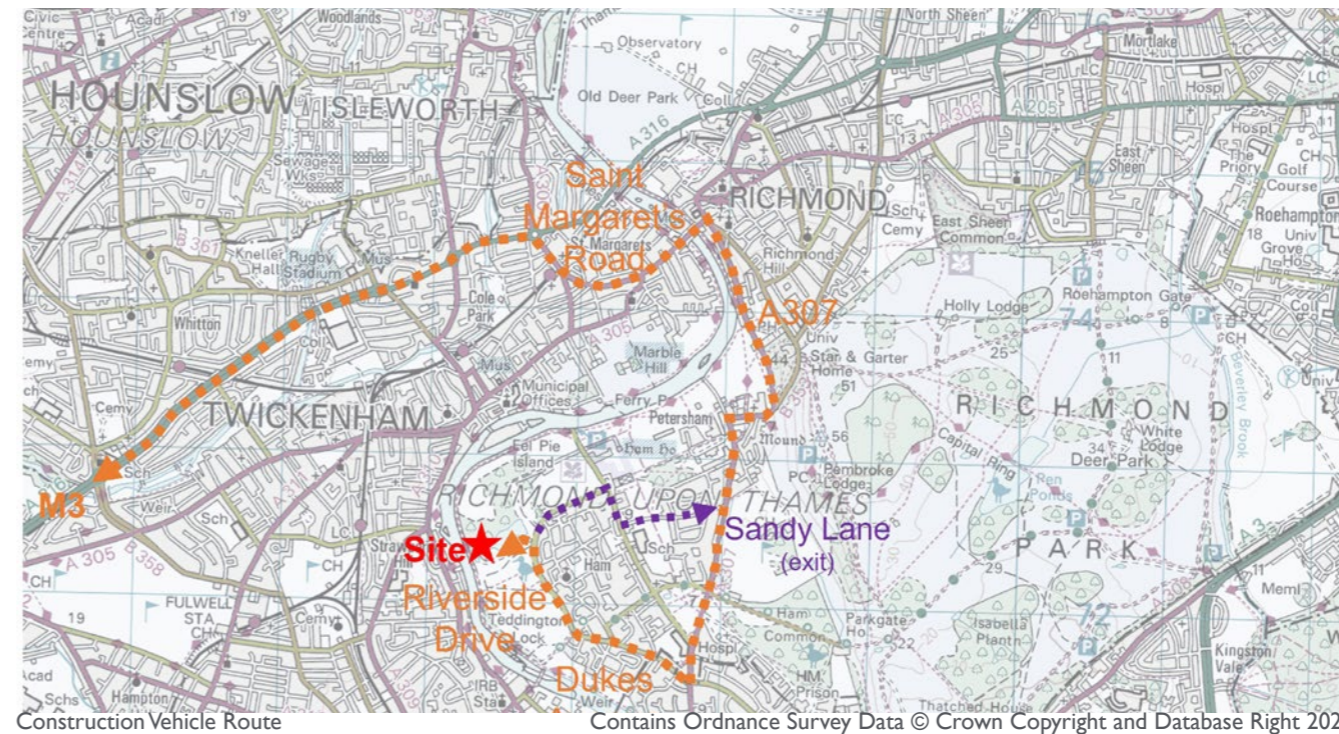
- P1 - Main Building and car parking
- P2 - Guest Residential Blocks
- P3 - Camping Block
- P4 - Landscaping (to suit planting season)
- P5 - Activity Areas

10.4 Construction Transport Management Plan

An initial Construction Transport Management Plan (CTMP) is submitted with this application. The selected main contractor will review and develop this plan to accommodate their methodology, adding details to reflect the programme, frequency, and type of deliveries. Further details can be found in the Outline Construction Management Plan PR-200-PEV-XX-XX-RP-D-00001. A summary Of this plan is provided below for reference:

All construction vehicles are expected to approach the site and turn left off Riverside Drive into the TYM site, through the one existing site access for all vehicles and pedestrians, represented by the orange route in Plan 3.1. When leaving TYM, they are expected to turn left out of the site, shown in purple on Plan 3.1. The routes taken by construction vehicles will be the most direct and appropriate to and from main A roads, and avoid dense residential areas where possible. The construction vehicles will exit through Sandy Lane, which is a bus route. The wider public highway network route is shown in Plan 3.2.

Before works commence, a local assessment will be made by the contractors to determine any route conflicts with roadworks or closures, or any other planning applications that may result in construction periods running concurrently.



- Key
- ★ TYM site
 - ⋯→ Route to the TYM site and route to main roads
 - ⋯→ Route leaving the TYM site
 - ⋯→ M25

10.5 Outline Programme

SOLD are targeting occupation of the new facility in September 2024 to align with the new school year.

The construction package will be tendered under a framework using a mini competition (September to October 2022) for selection of a main contractor. They will appoint a design team who will develop design proposals from January 2023 through Stage 4 & 5 ready for construction from August 2023. The scheme has been established based on modern methods of construction (MMC) that allows off-site manufacture of building components that improves erection times on site.

Once a main contractor is selected and the construction strategy confirmed, a detailed construction programme will be completed. This information will inform the CTMP.

	2021		2022												2023												2024													
	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December		
RIBA Stage 0/1 - Briefing																																								
RIBA Stage 2 - Feasibility																																								
RIBA Stage 3 - Concept Design																																								
Pre-Application Consultations																																								
Planning Period																																								
Main Contractor Procurement																																								
RIBA Stage 4 - Detailed Design																																								
RIBA Stage 5 - Technical Design																																								
Construction																																								
Completion																																								

Appendices

11

11.1 Planning Submission List

- Design and Access statement
- Design Drawings
- Planning Statement
- Transport Statement (including delivery and servicing plan)
- Travel Plan
- Fire Statement
- Outline Construction Management Plan
- Flood Risk Assessment
- London Sustainable Drainage Proforma
- Statement of Sustainable Drainage Systems
- Foul sewage and utilities statement
- Community Engagement Report
- BREEAM Pre-Assessment
- Sustainable Construction Checklist
- Energy Report (including decentralised energy feasibility)
- Landscaping scheme
- Tree Survey
- Arboricultural Impact Assessment
- Arboricultural Method Statement
- Archaeological Statement
- Preliminary Ecological Appraisal
- Biodiversity Net Gain Assessment
- Bat Emergence Survey
- Acoustic Assessment
- Operation Need/MOL Statement
- Urban Greening Factor
- Preliminary Contamination Report
- Ground Investigation Report
- UXO Risk Assessment