TOWER HAMLETS

St George's and John Orwell Leisure Centre

Feasibility Report

24th November 2021
Revision C

TOWER HAMLETS

FAULKNERBROWNS ARCHITECTS

John Orwell and St. George's Leisure Centre

Rev A	19 November 2021
Rev B	22 November 2021
Rev C	23 November 2021

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Client and Collaborators

TOWER HAMLETS

FAULKNERBROWNS ARCHITECTS

EXECUTIVE SUMMARY

The London Borough of Tower Hamlets Council commissioned this feasibility study to develop design options for the refurbishment / replacement of the St. George's and John Orwell Leisure Centre facilities in the south-west of Tower Hamlets. These options have been assessed at high level in order to advise the Council of the options available.

The existing St. George's Leisure Centre has been closed since the outset of the Covid pandemic in March 2020, whilst the John Orwell Leisure Centre has subsequently reopened. Several inspections of the St. George's Leisure Centre have been carried out by Chamberlain Consulting LLP who have made an assessment of the existing building and measures required to allow the building to become operational again. These reports highlight areas of concern that require further investigation.

This feasibility study outlines a number of design options which seek to either refurbish or demolish the current leisure centre buildings to provide a new, updated sports facility, with wet and dry functions co-located on one site.

The Council's key strategic objectives were to:

- Provide updated leisure and health facilities that meet the Council's objectives for health and wellbeing
- Identify and cater the increasing demand for leisure offers locally
- Potentially consolidate facilities onto one site to help improve access and community participation in sport / activity
- Contribute to the vitality of the Borough
- Ensure financial sustainability

Based on the above strategic objectives, the consultant team were asked to develop design options and to test the capacity of both sites to address the following:

- Co-located leisure facilities
- Latent demand for leisure facilities
- Massing study of options
- Initial high level costing based on the massing studies
- Opportunities for residential development as part of the proposals to provide much needed housing in the Borough

The London Borough of Tower Hamlets Council are also keen to encourage sustainable forms of travel such as public transport, walking and cycling as far as possible, and to discourage car use.

The team were asked to assess and appraise the options in terms of cost, ability to increase demand, income generation and co-location and co-use of facilities as well as programme implications and risks to the delivery of the project. This feasibility study focuses on refurbishment and new build options for a co-located leisure centre on one site to assist the Council with how best to proceed with redeveloping the existing leisure centre sites.

Indicative floor plans were produced for each option to see how the uses could be accommodated on the sites and to allow for high level cost estimates to be produced. Several principle strategic options were identified for the approach to the John Orwell and St. George's site as follows:

ST GEORGE'S
Two options have been explored for the St George's site based upon the following parameters:

Option 1
Existing building demolished
New build Leisure Centre with co-located wet and dry facilities.
Existing non-listed building demolished / locally listed building repurposed

Option 2
Existing building demolished
New build residential development
Leisure Centre function moved to John Orwell site and co-located with dry sport provision.

Given the design of and construction methodology used for the current St George's Leisure Centre, substantive changes to its internal layout were considered impractical. This report does not, therefore, include an option for the refurbishment of that building. The Council has costings from surveys for the refurbishment of the existing building, which estimated that the cost of works to allow the building to reopen were c. £9.9m, to give it up to 5 years additional life would cost a further £3.5m, and to extend its life by up to 20 years would cost an extra £10m. As no design work was required to inform these options, as they were for the refurbishment of the existing building, this option is not set out in this report.

ST GEORGE'S SITE OPTIONS	AREA (m2)	MID POINT NET CONSTRUCTION RATE
Site 1 Option 1	5,130m²	£23,322,365

St. George's Site Options

JOHN ORWELL
Three principal building sites within the John Orwell land ownership boundary were identified with several design options developed for each site based on the following parameters:

Site 1 Option 1 + 2
The Site 1 design options are outlined on pages 46-49. Site 1 is located to the west of the hockey pitch and east of the existing residential properties on Codling Close and Torrington Place. The land formerly housed warehouses which served the Wapping Basin. These have subsequently been demolished with the land remaining undeveloped, consisting now of dense low level vegetation. Two options have been developed to meet the following brief:

New build Leisure Centre with co-located wet and dry facilities.
Existing non-listed building demolished / locally listed building repurposed
Hockey Pitch Retained
Possible residential development options on site identified.

Site 1 Option 2 provides the highest quantum of accommodation of these two options and has a slightly more advantageous relationship with the adjacent residential properties in terms of scale and massing.

Site 2 Option 1 / 2 / 3 / 4 / 5 / 5b / 6
Several design options have been developed Site 2 and are outlined on pages 50-77.

Site 2 is located to the south of the hockey pitch, north of Wapping Pierhead, and adjacent to the existing John Orwell Sports Centre building. The site sits on the mouth of the former Wapping Basin. Of the three sites explored, Site 2 has the potential to create the most generous space around a new leisure centre building and has the least impact in terms of proximity to other buildings / park space. Seven options have been developed to meet the following brief:

New build Leisure Centre with co-located wet and dry facilities.
Existing non-listed building demolished / locally listed building repurposed
Hockey Pitch Retained / Rotated / Relocated Options
Possible residential development options on site identified at high level

Site 1 Option 5/5b has the least adverse impact, with the most comfortable fit within the context, optimal proximity to adjacent sensitive receptors, and provides the largest quantum of facilities. However, it relies on the rotation of the hockey pitch.

Site 3 Option 1 + 2
Site 3 is located on the existing John Orwell Sports Centre building site, to the east of the hockey pitch. The two options explored are presented on pages 78-81 and include varying levels of refurbishment to achieve the brief:

Co-locate wet and dry facilities with elements of refurbishment.
Locally listed building repurposing options
Hockey Pitch Retained
Possible residential development options on site identified

All Site 3 options have a level of compromise as the refurbishment of the existing sports hall will not be provide compliance with modern Sport England Guidance. Due to the restricted size of the site and limited options for building configurations, circulation routes are inefficient and it is not possible to achieve the full brief in terms of building area quantum or sizes of key spaces, including changing facilities.

JOHN ORWELL SITE OPTIONS	AREA (m2)	MID POINT NET CONSTRUCTION RATE
Site 1 Option 1	5,496m²	£24,514,908
Site 1 Option 2	5,822m²	£25,970,815
Site 2 Option 1 + 2	5,130m²	£23,213,436
Site 2 Option 3	5,624m²	£25,417,636
Site 2 Option 4	5,624m²	£26,737,636
Site 2 Option 5	5,744m²	£27,052,896
Site 2 Option 5b Rooftop Pitches	5,924m² 1,400m²	£28,514,002
Site 2 Option 6	5,744m²	£29,142,896
Site 3 Option 1	4,024 m²	£23,284,373
Site 3 Option 2	5,026m²	£28,989,510

John Orwell Site Options

EXECUTIVE SUMMARY

PREFERRED DESIGN OPTION

John Orwell Site 1 Option 2 and Site 2 Option 5/5b provide the most new facilities with the least detrimental impact upon the wider site. However, the proximity of Site 1 Option 2 to the surrounding residential neighbourhood is a concern and would likely pose significant challenges from a planning approvals standpoint. The proximity to the boundary also limits views from within the leisure centre towards the west and does not make the most of the site's potential. Site 2 Option 5/5b does not impact the southern boundary wall or existing public car park to Scandrett Street unlike most Site 2 options. It does, however, require the reprovision and reorientation of the existing hockey pitch.

Site 3 Option 1 is the most advantageous of the Site 3 options, however, the building layout is highly compromised in terms of facilities that comply with modern Sport England standards, changing provision quantum, and general efficiency of circulation through the building.

The increased quantum of facilities results in Site 1 Option 2 and Site 2 Option 5/5b as having the highest net construction cost of the options explored on this sites, at £26M and £27/28.5M respectively. Site 3 Option 1 provides less building area but has high net construction costs due to the nature of the building as part refurbishment / part new build, with higher construction rates per m2.

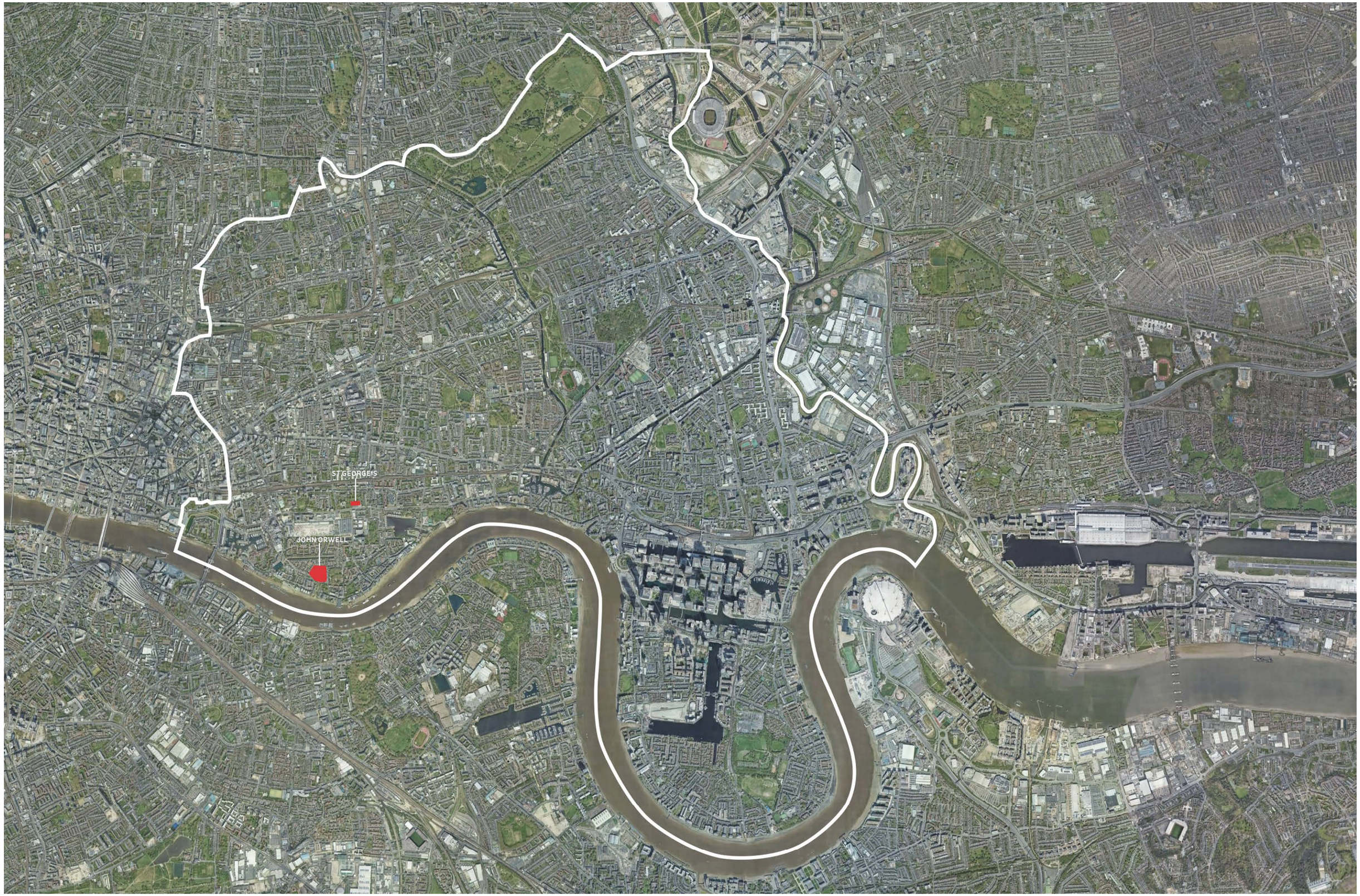
St. George's Site Option 1 is not recommended as it would provide less facilities overall. The synergy of not having all facilities co-located alongside the external hockey pitch is also less advantageous. The development of St. George's as residential would have strong potential to generate income through land sale or rent as a means to help cross-fund a new leisure centre on the John Orwell site.

In consideration of the above, the options assessed within the business case modelling are recommended in the following order:
1. Site 2 Option 5/5b
2. Site 1 Option 2
3. Site 3 Option 1

Please note that the costs included in this report are based on a desktop analysis using market data to calculate high level cost estimates to provide an indicative cost. These do not include fees or take account of site specific costs. They do, however, provide a relative assessment of the cost of each option, relative to others included in this report.

DELIVERY

Once the options are refined, a more detailed analysis of different methods of delivering the proposals in this report is required, including options for delivering any residential component.



Location Plan showing St. George's and John Orwell sites

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Location Plan showing St. George's and John Orwell sites

1.0 INTRODUCTION

The John Orwell and St. George's Leisure Centre feasibility project was commissioned by The London Borough of Tower Hamlets Council, and comprises an assessment of development options of the two existing sites, as per the site boundaries outlined in red on the adjacent site plan diagrams, to provide new co-located leisure facilities on one site.

The feasibility report also explores high level opportunities for residential development across both sites to assist in meeting increased housing needs within the Borough. This would provide an opportunity to cross-fund the leisure centre development.

This feasibility report focuses on the new Leisure Centre building and is intended to assist the Council with decisions on how to proceed with redeveloping the existing John Orwell and St. George's Leisure Centre sites.

The existing St George's Leisure Centre is in a very poor state of repair and has been unable to reopen to the public following its closure as a result of the Covid-19 lockdowns. A recent condition survey undertaken by the Council has identified a cost of c. £13.5M to repair and refurbish the facility to enable it to reopen for up to five years, or c. £23.5M to stay open for up to 20 years, subject to further investigation of the structural condition of the building. The borough, however, already has an under supply of water space provision and high levels of forecast population growth, so the permanent loss of a pool in the area would exacerbate existing and future shortfalls.

There are a number of factors to take into account; the extremely high reinstatement costs of St. George's, including the age of the facility, the proximity of John Orwell Sports Centre and the potential affordability and sustainability considerations from a potential rationalisation of provision.

The ambition behind the new Leisure Centre is to improve facilities provision and community access to health and wellbeing facilities, whilst the opportunity for new residential accommodation would contribute towards the increased need for homes within Tower Hamlets, and potentially contribute towards the cost of new leisure centre facilities. The project forms a significant regeneration opportunity with an important role to play in the transformation of Wapping and diversification of its economy.

The purpose of this report is to investigate different options for a new / repurposed Leisure Centre with co-located facilities to replace the existing split Leisure Centre facilities across the existing two sites.

As part of this report, the project team have analysed the existing site and client objectives, and based upon the options that have been developed, associated massing studies and initial cost estimates were carried out in order to test their viability.

John Orwell Location Plan

St George's Location Plan

London Borough of Tower Hamlets Boundary + The Existing John Orwell and St. George's Leisure Centre Sites

2.0 SITE ANALYSIS

SITE CONTEXT

The London Borough of Tower Hamlets
Wapping is a district within in The London Borough of Tower Hamlets and is located approximately 3.5 miles east of central London, south of Hackney, and west of North Woolwich. It is bounded to the south by the River Thames. The London Borough of Tower Hamlets has a population of approximately 324,745.

The Sites
The two sites that form the basis of this study are shown adjacent images.

John Orwell Site

The John Orwell site is located on the former Wapping Basin, on the corner of Scandrett Street and Tench Street, and is the current home of the John Orwell Sports Centre, which is a dry sports facility. The site includes a full size external hockey pitch with covered spectator viewing, alongside an external tennis court. This is a multi-use pitch that also accommodates 5 / 9 /11 a side football, as well as rugby use. The Sports Centre is comprised of two main building components, a locally listed single story former warehouse building which currently accommodates a fitness suite, and a 1980 building which comprises a sports hall and associated changing accommodation. The site includes a car park with 21 spaces. Additional public car parking is located to the south boundary of the site on Scandrett Street.

The site is bounded to the west and north by existing low scale residential terraces. Further residential buildings are located to the south side of Scandrett Street, and are of a generally higher scale, including the Grade II listed Wapping Pier Head buildings. Wapping Gardens is an attractive public park located to the east, that forms a leafy pedestrian route to the existing John Orwell Leisure Centre entrance. The Grade II listed St Johns Church is located to the south east corner of the site, diagonally opposite the sweeping curve of the existing site boundary wall. The public realm is generally of good quality and the quality of the surrounding buildings have a positive impact on the site.

St. George's Site

The existing St. George's Leisure Centre site is located to the north of the A1203 Highway adjacent to the junction with Wapping Lane. The site is bounded to the west by the Grade I listed St George's Church, one of only six Hawksmoor churches in London. The site is bounded to the north by the attractive St George's Church Gardens, which are home to several Grade II listed memorials and monuments. A four-storey apartment building is located to the east of the site on Solander Gardens, and the 3-4 Storey King Henry Terrace is located opposite to the south side of the A1203 Highway.

The existing building is comprised of two components; a two storey block to the east which houses administration, changing facilities, and the training pool; and a four storey block which accommodates the 33.3m swimming pool. A single storey ancillary block is located to the western boundary. The spectator viewing decks which surround the 33.3m pool perimeter are no longer deemed structurally safe to use, and there are several other areas at risk of structural failure. An 18 space car park wraps around the east and north elevations of the existing leisure centre, also forming a service access route for the building's plant rooms and refuse stores.

The land is for both sites is owned by The London Borough of Tower Hamlets Council.

Aerial view showing St. George's and John Orwell sites

Site Context - Transport Links

2.0 SITE ANALYSIS

TRANSPORT LINKS

Both sites are well served by many different types of transport links. The London Borough of Tower Hamlets Council are keen to encourage sustainable forms of travel such as public transport, walking and cycling as far as possible, and to discourage car use.

Pedestrian Links
John Orwell has a relatively quiet and pedestrian friendly path network as a result of its residential / domestic neighbourhood setting, which has leafy tree lined streets and parks surrounding the site.

By contrast, the St George's site has a more urban and busy feel due to the presence of the A1203 Highway that bounds the site. Notwithstanding this, there are good pedestrian physical links to the site from the wider Wapping area and surrounding transport infrastructure, including Shadwell Overground and DLR Train Stations to the north east.

Bike links
There are several cycle routes that currently serve both the John Orwell and St. George's sites. In the recent past Tower Hamlets has been at the forefront in promoting cycling as a mainstream transport mode. The busy off-road Cable Street cycle route was the prototype of the successful Cycle Superhighways that followed and the school cycle training and participation programmes pioneered by the borough have become the template for TfL across London.

The 'Tower Hamlets - A Cycling Borough' (2015) strategy sets out how The London Borough of Tower Hamlets plans to enhance cycling infrastructure over the coming years to reduce the reliance on vehicles to create a healthier approach to transport culture. This also ties into the health and wellbeing agenda of providing new sports and leisure facilities.

Public Transport - Bus
Both the John Orwell and St George's sites are served by the 100 bus route which runs from St Paul's Tube Station to Shadwell Overground and DLR Train Stations. The D3 bus routes also serves both sites and runs from Bonner Road to Leamouth.

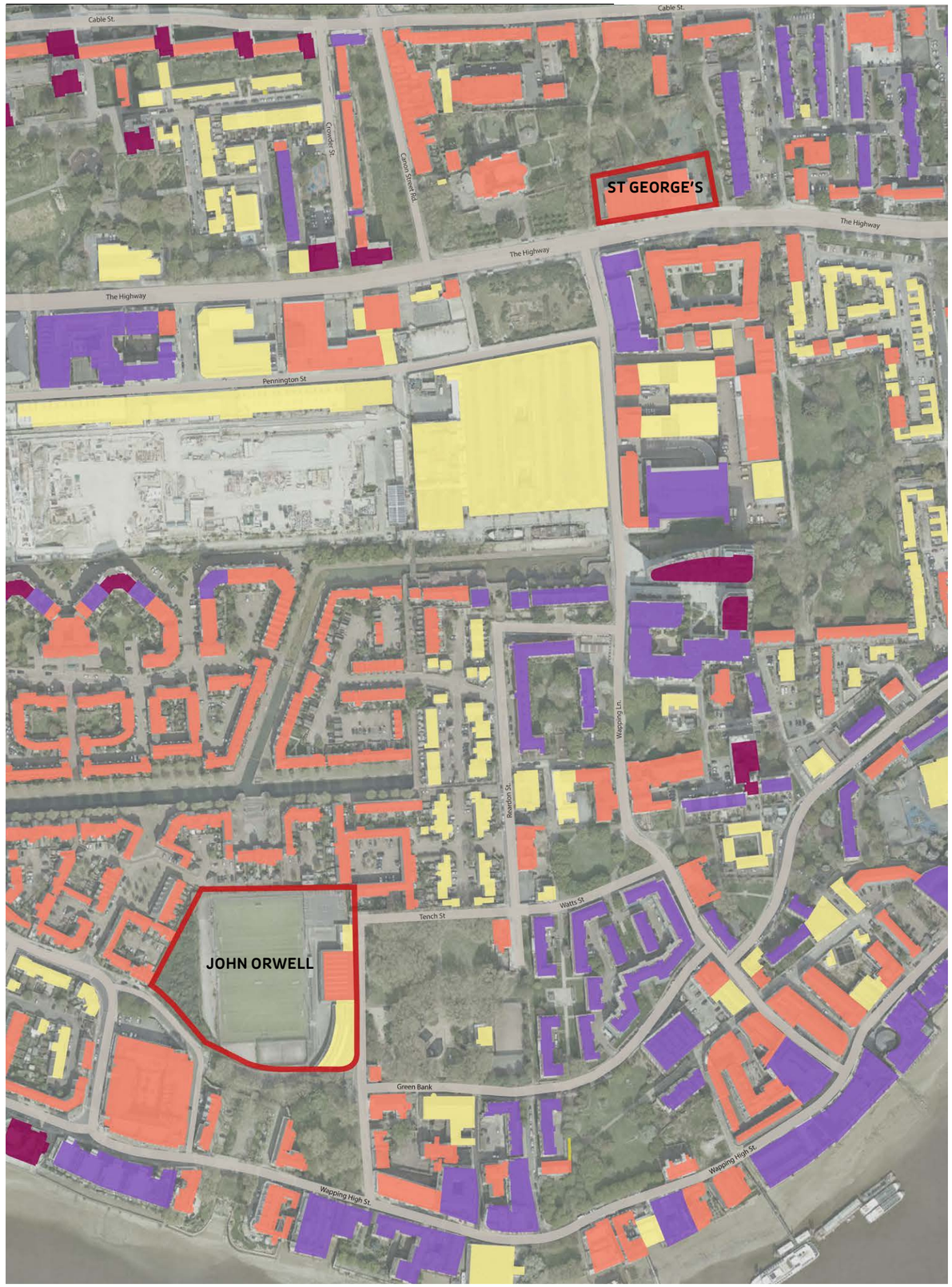
Public Transport - Train
The John Orwell site is located 0.3 miles to the west of Wapping London Overground Station, which has good connections to wider London, including Clapham Junction.

The St. George's site is located 0.2 miles to the south of Shadwell London Overground and DLR stations which provide good connectivity to the London Underground and Crossrail networks.

Vehicular links
Both sites are well served by adjacent road infrastructure and currently have on site

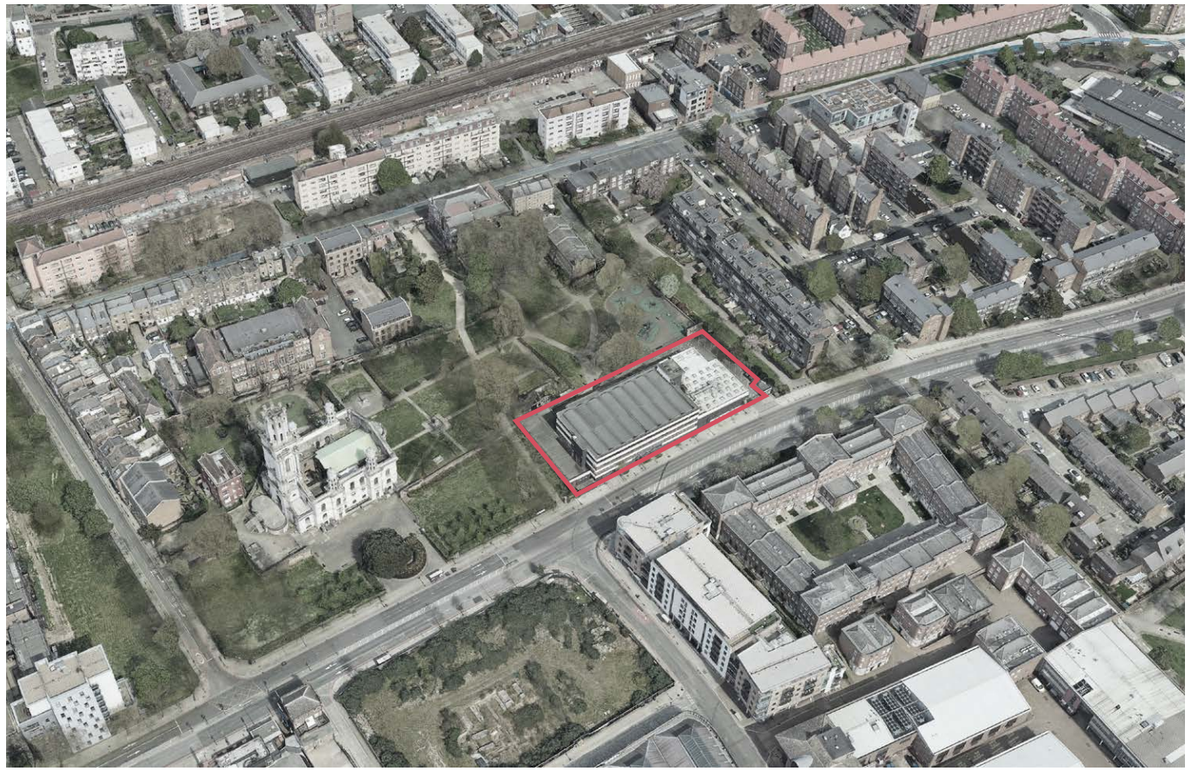
Key:

- Pedestrian Links
- Cyclists Links
- Bus Links
- Train Links
- Vehicular Links
- Bus Station
- Train Station
- Car Park

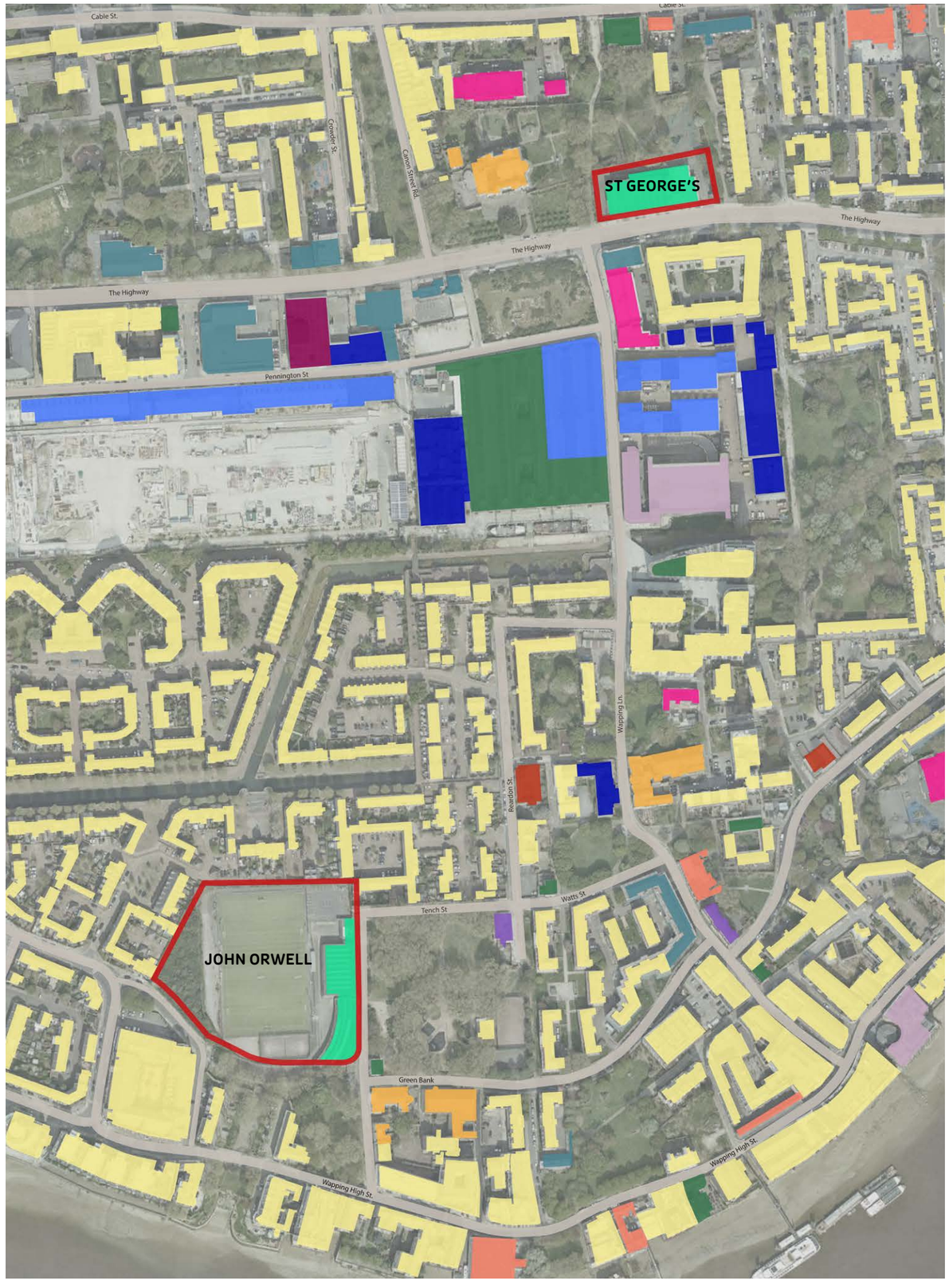


Existing Building Heights 1-2 Storey 3-4 Storey 5-8 Storey >8 Storey

John Orwell Site Aerial Photograph



St. George's Site Aerial Photograph



Site Context - Ground Floor Land Uses

2.0 SITE ANALYSIS

Building Heights

Existing building heights for both sites are shown on the opposite page.

John Orwell is principally surrounded by low rise residential developments to the north, west and south, with Wapping Gardens located to the east. Most of the taller buildings are located on the riverside to the south or further west beyond Wapping Gardens.

The St. George's site is similarly bounded by low-medium rise buildings in each orientation, with the tallest buildings being the Solander Gardens apartments to the west, and Wapping Lane commercial and residential building on the south side of the A1203.

The Local Authority SPD does not specifically addresses height parameters for either the John Orwell or St. George's site.

For the purposes of this study, we have assumed that the maximum number of building Storeys as three (ground + two upper levels). This model would provide the most appropriate massing and scale for each location, in consideration of the heritage and listed buildings adjacent to each site.

Building Uses

Building uses surrounding both sites are shown on the adjacent analysis diagram.

The majority of buildings in proximity to the John Orwell site are residential, alongside some landmark religious buildings, including St. John's Church and St. Patrick's Catholic Church.

St. George's context is of a similar residential nature, however, it has a more urban setting being located adjacent to the A1203 Highway. The Grade I listed St. George's Church is one of only six Hawksmoor Churches within London and is a strong local landmark. A Montessori school and retail unit is located on the south side of the A1203 with residential properties above, adjacent to Kings Charles Terrace which is also a residential building.

2.0 SITE ANALYSIS
ST. GEORGE'S

HISTORICAL CONTEXT

HERITAGE
The first documentary reference to the Shadwell area dates back to 1223 (a corruption of 'St Chads Well'). Between the 16th & 18th centuries, a rise in the population of the many riverside communities, of which Shadwell is one, reflected a growth in the shipping and ship building industries located along the banks of the Thames, east of the City. Tiny settlements grew into distinctive villages supporting the maritime trade, and by the time Shadwell became a separate parish in 1669, the local population had grown to about 8000.

During the 17th century, churches and chapels-of-ease were being constructed in response to London's eastward spread, and in the 18th century a commission was established to implement the construction of fifty new Anglican churches in areas of population growth. The New Churches Act was passed by Parliament in 1711 and enabled money to be raised for the construction of the churches from coal tax. Of the 50 churches planned, only 12 were built to designs by architects associated with the Office of Works, including St George-in-the-East (Wapping) and St Anne (Limehouse). These also represent two of the three Borough churches designed by architect Nicholas Hawksmoor, a pupil of Sir Christopher Wren.

St George in the East Conservation Area
The St George in the East Conservation Area was designated in July 1969 and extended south across the Highway in October 2008. It protects the setting of Hawksmoor's St George-in-the-East, one of the 18th century churches constructed under the New Churches Act to service the burgeoning communities of the East End. Located in the heart of the Conservation Area, the church is surrounded by historic properties of note, including the late 18th century Rectory and Town Hall (1860). Memorials located in the church grounds include the Raine family memorial (founders of Raine's Foundation School, 1719), and a First World War memorial, both Grade-II listed.

The Conservation Area is also located in an Area of Archaeological Importance or Potential. Evidence of Roman roadside settlement has been established in two areas of the Borough, one in the vicinity of Old Ford Road in Bow, and the other along The Highway in Shadwell, where a road followed the river bluff from a location just north of the Tower to the Roman outport of Ratcliffe. Policies associated with Archaeology and Ancient Monuments apply to development proposed in the Conservation Area and its surrounds.

Listed And Locally Listed Buildings In The Vicinity Of The Site
Considered the most original of Hawksmoor's East End churches, St George-in-the East, constructed between 1714-26, was dedicated in 1729 to serve Wapping Stepney and the area to its north. The tower was added between 1720-3, plasterwork between 1723-4 and the pews and carving in 1729. At the time of its construction, the surrounding area was still largely rural, with open fields to the north of the churchyard (itself occupying an area known as the Gun Field), otherwise enclosed by buildings lining the principal roads. The 18th century churchyard was lined with rows of trees along the north, south and eastern boundaries, and in 1862, when further land had been added; a new layout included a Rector's Walk and Lime Avenue.

The Cannon Street Road and Cable Street buildings are Grade II listed and are of value for their group setting and their role in the historic presentation of the church. Their retention and appropriate presentation is therefore important to the preservation of the areas historic significance.

The Cable Street Mural on the gable of St. George's Town Hall commemorates the Battle of Cable Street in 1936 and frames the northern entrance into St. George's Gardens. The Battle of Cable Street took place as a result of opposition to a march by the British Union of Fascists. Anti-fascist protesters, including local Jewish, socialist, anarchist, Irish and communist groups, clashed with the Metropolitan Police, who attempted to remove the barricades erected to stop the march.

ENVIRONMENT

Features
The are a number of mature trees adjacent to the site boundary which run alongside the western and northern edges of the site the perimeter of St George's Gardens which help define pedestrian entrances and routes through the park.

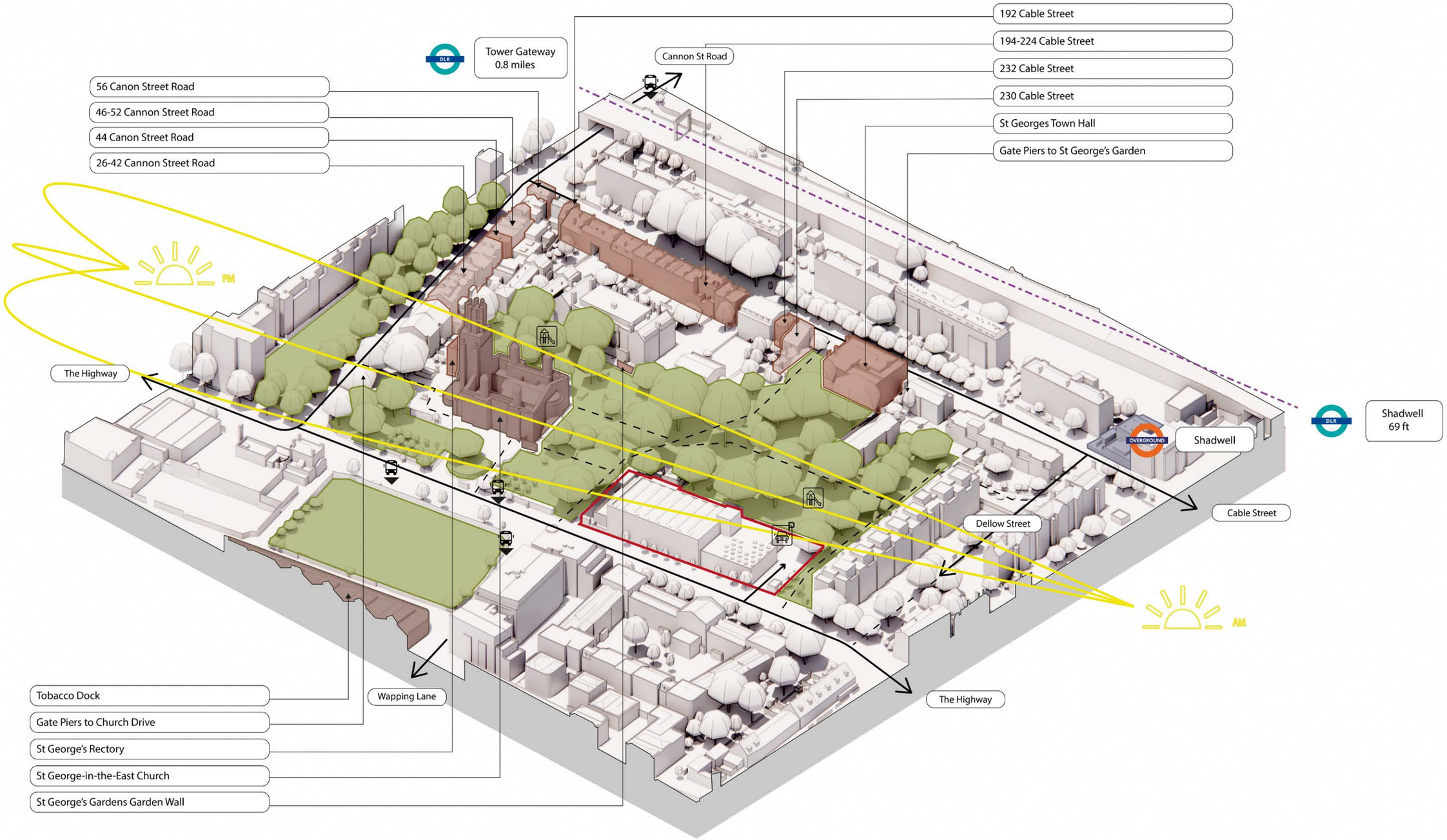
Flood Risk
The site is located within Flood Zone 1 and has a low probability of flooding.

Site Topography
There are no significant level changes across the site based upon the information available. However, a more accurate Topographical Survey will need to be carried out in order to confirm these assumptions and whether disabled access routes around the site, such as from disabled parking to points of access are appropriate for each of the design options in this report.

St. George's Church

Cable Street Mural

St. George's Gardens



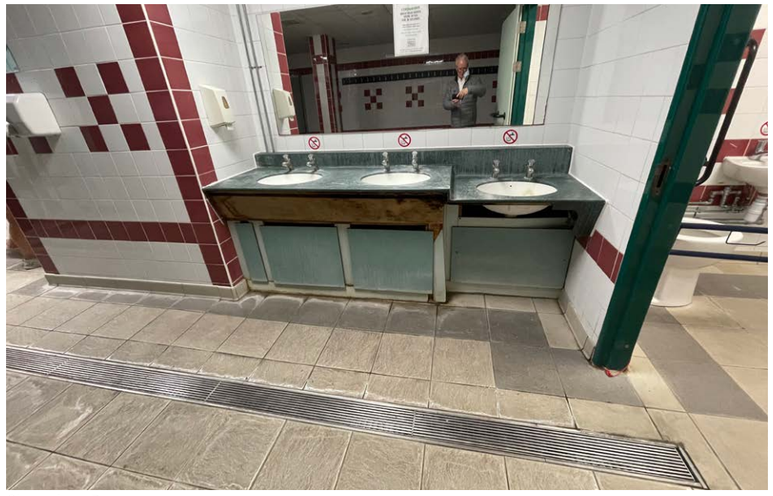
Site Analysis Isometric

Site Aerial Image

South Elevation

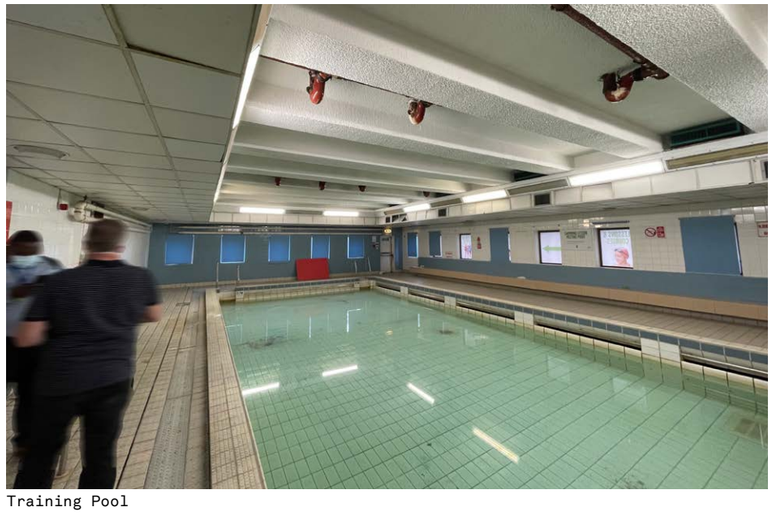
Entrance / Reception

Car Park / Service Yard



Changing Room

33.3m Pool (Image Pre Building Closure)



Training Pool

2.0 SITE ANALYSIS

ST GEORGE'S EXISTING BUILDING

The existing St. George's Leisure Centre site is located to the north of the A1203 Highway adjacent to the junction with Wapping Lane. The site is bounded to the west by the Grade I listed St George's Church, one of only six Hawksmoor churches in London. The site is bounded to the north by the attractive St George's Church Gardens, which are home to several Grade II listed memorials and monuments. A four-storey apartment building is located to the east of the site on Solander Gardens, and the 3-4 Storey King Henry Terrace is located opposite to the south side of the A1203 Highway.

The site includes no external pitch provision. The existing building is comprised of two components; a two storey block to the east which houses administration, changing facilities, and the training pool; and a four storey block which accommodates the 33.3m swimming pool. A further single storey ancillary block is located to the west. The spectator viewing decks which surround the pool perimeter are no longer deemed structurally safe to use. An 18 space at grade car park wraps around the east and north elevations of the existing leisure centre.

The existing Leisure Centre has been closed since the outset of the Covid pandemic in March 2020. Several inspections have been carried out by Chamberlain Consulting LLP who have made an assessment of the existing building and measures required to enable it to become operational again. These reports highlight significant issues preventing the reopening of the facility. A cost of c. £13.5M has been identified to rectify these issues and upgrade the building to a standard that will be safe to reopen to the public, but only for a short term period of five years. The cost of extending its life for up to 20 years is estimated to be an additional £10m

The 33.3m swimming pool is an unrecognised size under Sport England or ASA standards. This makes it difficult to use by athletes as a lane training pool. The pool has no movable floor or pool cover to assist in the control of heat loss when the pool is not in use. The pool was not drained when the centre closed in 2020, and the filtration systems were turned off. As a result, the pool water has become stagnant and highly contaminated. It is unknown whether this can now be processed by the pool filtration plant and will likely lead to filtration plant failure. The existing building services are beyond economical repair. The pool ventilation system is longer fit for purpose, the main electrical panels are obsolete, incoming electrical mains requires replacement. Repairs would not meet current carbon targets.

Due to the age of the building, the thermal fabric of the envelope is also highly inefficient and leads to significant heat loss with subsequent life cycle / operational cost implications. Any refurbishment option would need to consider building envelope upgrades as a fundamental measure to improve building performance.

The changing accommodation within the existing building is dated and of a poor standard not fitting with a modern leisure centre. Damage to vanity areas, tiling, and ceiling tiles are prevalent through the changing areas. The interior finishes and fixtures and fittings are generally of a similar poor condition and are in need of refurbishment to bring them up to modern standards.

Externally, the architecture does little to engage with the public realm and has limited transparency of activity. The ground floor level of the building facade is predominantly solid with limited areas of glazing. This limits the potential of the building to encourage participation in sport and outreach to individuals who do not currently use the centre.

OPPORTUNITIES

1. Opportunity to stack leisure accommodation over 3-4 floors in order to minimise footprint and to create more external space.

2. Improve the impact of the arrival point into the site and create an activated gateway into the building.

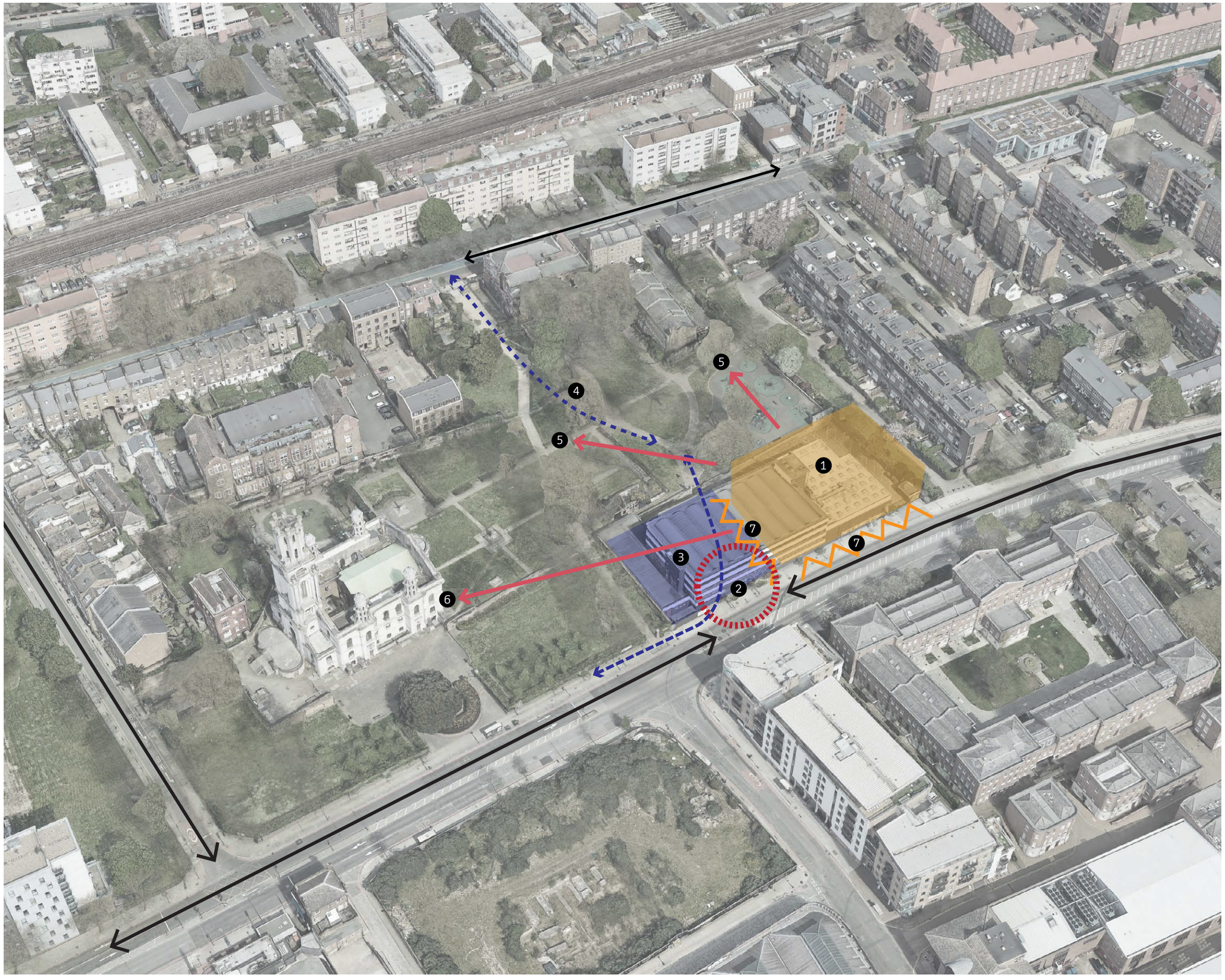
3. Create a new plaza space which will provides a new piece of public realm that engages with the St. George's Gardens and the new leisure centre.

4. Create new pedestrian link to the north of the site onto Cable Street.

5. Opportunities to an active facade that engages with the park and creates park views.

6. Create strong visual connections with St. George's Church and create a piece of civic architecture that responds to its heritage context.

7. Create activation onto the A1203 Highway and new plaza to encourage participation in sport.



St. George's Site Opportunities

St. George's Site Constraints

CONSTRAINTS

1. **Existing Building Site**
Not possible to maintain existing building on site and build a new facility due to limited site area.

2. **Grade I listed St. George's Church**
Will have a significant influence over the scale and massing of any proposed development.

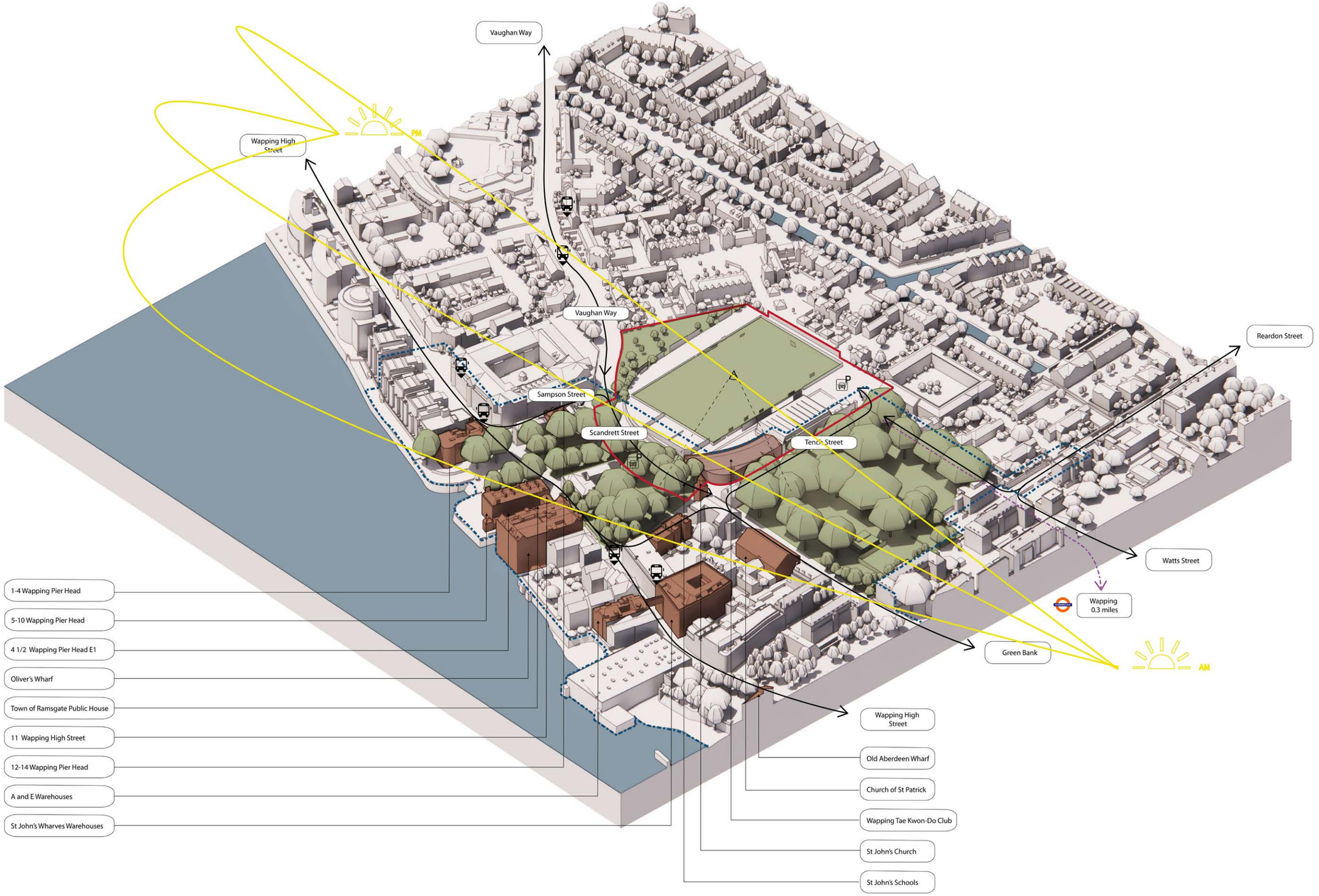
3. **St. George's Gardens**
Park which includes a series of Grade II listed monuments and mature trees that bound the St. George's Leisure Centre site.

4. **Proximity to A1203**
Busy road adjacent to the south boundary that will impact ability to naturally ventilate any new development. Acoustic issues will need to be considered.

5. **Listed Buildings**
The site is surrounded by a series of Grade II listed buildings which are sensitive receptors and will influence scale and massing of proposals.

6. **Parking**
Among of on site parking to be reduced to blue badge spaces. Quantum to be reviewed against required building footprint.

7. **Proximity to Existing Residential**
The site is located adjacent to other non-listed residential buildings that will influence scale and massing. Overlooking between the leisure centre and surrounding residential buildings will need to be carefully considered.



Site Analysis Isometric

St. John's Church

The Turks Head

Wapping Pierhead

2.0 SITE ANALYSIS
JOHN ORWELL

HISTORICAL CONTEXT

HERITAGE
The London Docklands area lies predominantly within the flood plain of the lower Thames and its tributaries. Prior to the massive engineering projects of the 19th century, the area largely comprised riverside marshland and rough grazing land. Wapping Lane was once called Old Gravel Lane and was a causeway that crossed what was Wapping Marsh. Historically, the Thames banks to the east of London provided ideal conditions for riverside wharves. By the 16th century, both sides of the river were lined with wharf buildings, serving the business needs of the merchants. Towards the end of the 18th century, pressure to re-organise the port grew when the existing wharves were unable to support its demand.

The Dock waterways and their connections with the river Thames provide the most significant unifying theme for the Docklands today. The river walls, dock entrances, jetties, piles and timber whalings survive as evidence of the unique history of London's dockland industry, leaving the Borough with a distinctive architectural waterside legacy to protect.

Wapping Pierhead Conservation Area
The Wapping Pierhead Conservation Area was designated as a Conservation Area in July 1969. The area has rich architectural and historic interest and it includes the former entrance to the London Docks. Together with St. Katharine's Dock, the West India and Millwall Docks on the Isle of Dogs and East India Docks, the Royal Docks (Albert, Victoria and George V Docks) and the Surrey Docks, this forms part of London's historic docklands.

The Conservation Area was originally designated around the historic pierhead, which is now in-filled to form private gardens. Georgian terraces were originally developed on either side of the dock entrance, but now look in to the community gardens. The Conservation Area was later extended in 1975 to include the 19th century warehouse buildings to the east, which inform the predominant character of the redeveloped Docklands area. Stretching between Wapping Pierhead to the west, through to the Wapping Underground Station, the Conservation Area includes a number of 18th century buildings, many of which are now statutorily listed. The Conservation Area was most recently extended north in 2008 and encapsulate part of the John Orwell site, including the historic warehouse building.

Listed And Locally Listed Buildings In The Vicinity Of The Site
There are a number of statutory listed buildings within the Wapping Pierhead Conservation Area, including the locally listed former warehouse that currently accommodates the John Orwell Leisure Centre Fitness Suite. Immediately to the south east of the site lies the Grade II Listed Kingston Public Library, Museum and Art Gallery and the Grade II Listed St Johns Church.

Most of the early housing in the docklands dating back to the 18th and 19th centuries has been listed. One of the finest surviving residential developments falls within the Conservation Area. The two terraces either side of the former entrance to the London Dock at Wapping Pierhead were designed by Daniel Alexander in 1811. They combine the traditional domestic Georgian style with the more austere warehouse aesthetic.

Scandrett Street, formerly known as Church Street, separates St. John of Wapping Church from its burial grounds and contains some of the oldest surviving buildings in the area. The tower of St John's Church, the adjacent 1760 school buildings and St Patrick's Church to the rear, built in 1879 from the 'penny a week contributions' of its largely Irish congregation, are now listed buildings.

ENVIRONMENT

Features
The are a number of mature trees adjacent to the site which run alongside Tench Street and define the edge of Wapping Gardens to the east, and Scandrett Street to the south, which bounds the former mouth of the Wapping Basin and current residential buildings. These trees and open spaces are important features which contribute to the leafy welcoming character and appearance South and East edges of the Wapping Pierhead Conservation Area which they lie within.

Flood Risk
There are three main areas at risk of tidal flooding in Tower Hamlets, the Isle of Dogs (extending into Poplar) Wapping and Blackwall (all located in Flood Zones 2 and 3). There are two main areas at risk of fluvial flooding in the north-eastern corner of the borough. While the actual fluvial and tidal flood risk is considered to be low when flood defences are taken into account, there is still a residual risk of flooding through breaching or overtopping of defences. Non-river related flooding, such as sewer surcharge and surface water flooding exists throughout the borough during heavy rainfall events. This is known to be an issue within Critical Drainage Areas.

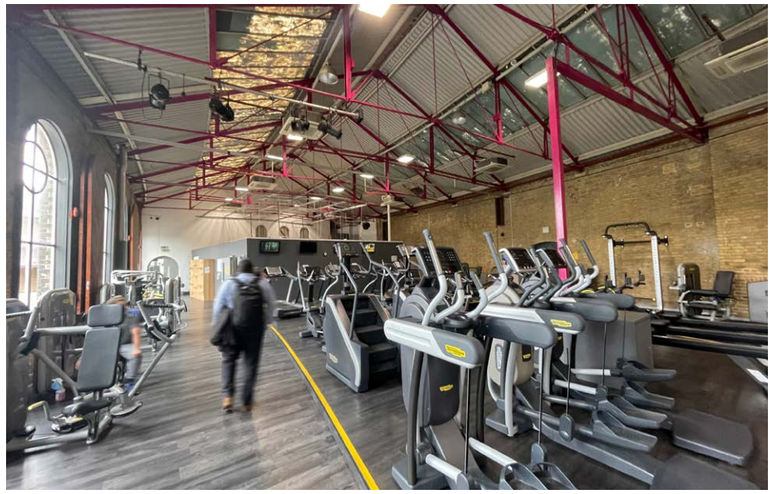
The site is located within Flood Zone 3 but is an area that benefits from flood defences. Land and property in this flood zone would have a high probability of flooding without the local flood defences. These protect the area against a river flood with a 1% chance of happening each year, or a flood from the sea with a 0.5% chance of happening each year.

The floodplain areas associated with the River Thames do not have a Flood Zone 3b or functional floodplain associated with them, as they are classed as defended and would not flood during a 1 in 20 year event. Therefore, the functional floodplain has been defined as the area situated on the river side of the raised defence line.

Site Topography
There are no significant level changes across the site based upon the information available. However, a more accurate Topographical Survey will need to be carried out in order to confirm these assumptions and whether disabled access routes around the site, such as from disabled parking to points of access are appropriate for each of the design options in this report.

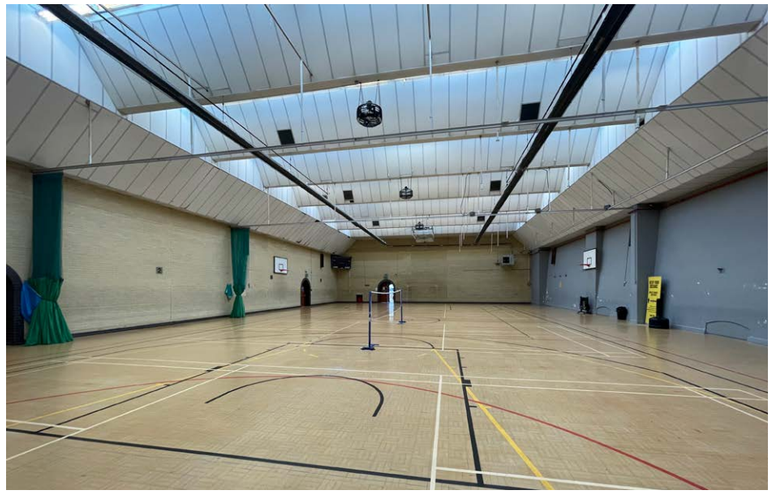
Site Aerial Image

Hockey Pitch



Fitness Suite

Vaughan Way



Sports Hall

Scandrett Street

Changing Room

2.0 SITE ANALYSIS
JOHN ORWELL

JOHN ORWELL EXISTING BUILDING

The John Orwell site is located on the former Wapping Basin, on the corner of Scandrett Street and Tench Street and is the current home of the John Orwell Sports Centre, which is a dry sports facility. The building is discreetly located behind a historic masonry wall which defines the south and east boundaries of the site. As a result the building has little presence onto its surrounding context and limited engagement with the public realm.

The site includes a full size external hockey pitch with covered spectator seating, alongside an external tennis court. This pitch is multi-use and also accommodates 5 / 9 /11 a side football, as well as rugby use. The Sports Centre is comprised of two main building components, a locally listed single-storey former warehouse building which currently accommodates a fitness suite, and a 1980 building which comprises a sports hall and associated changing accommodation. The site includes a car park with 21 spaces. Additional public car parking is located to the south boundary of the site on Scandrett Street.

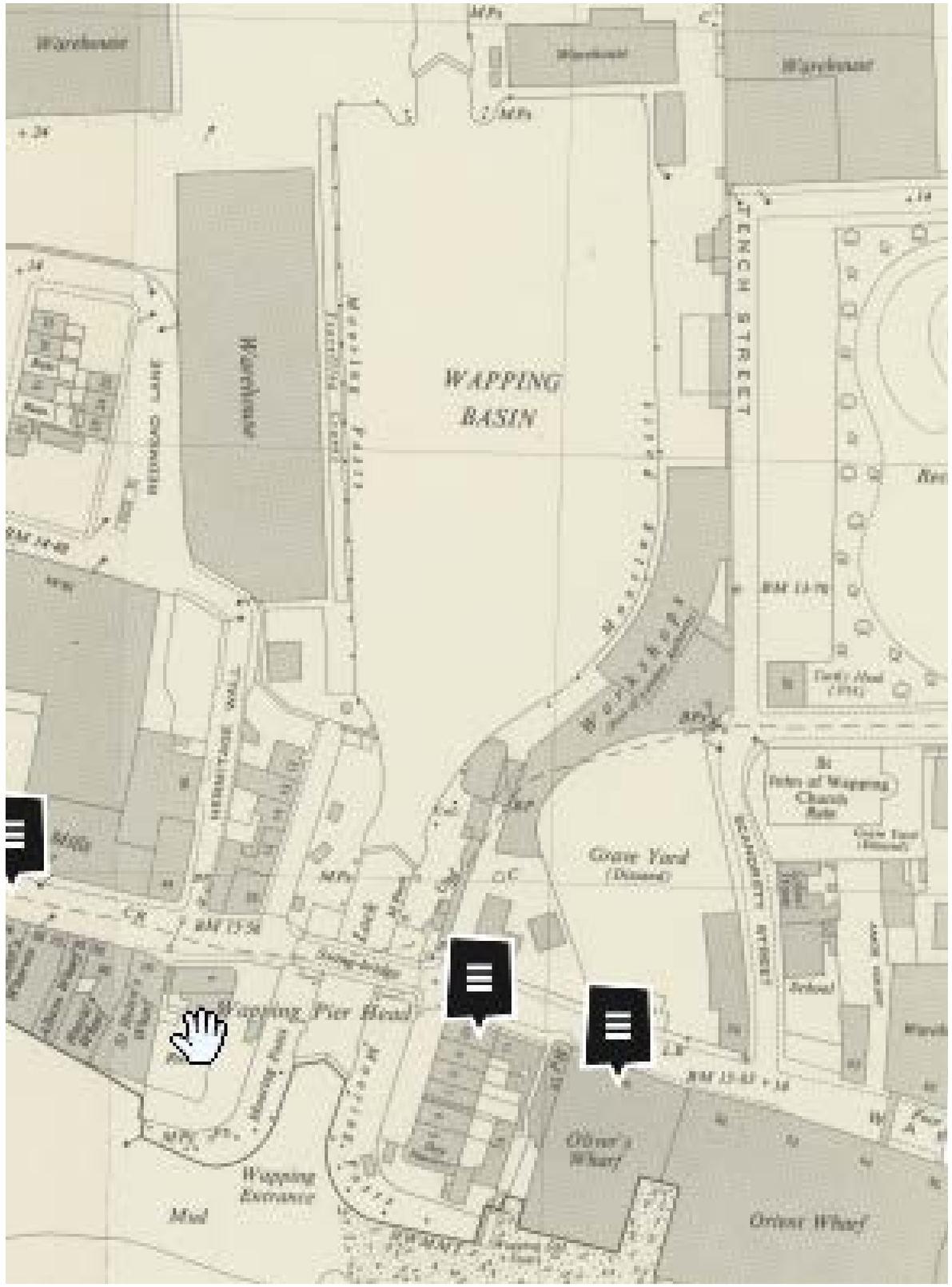
The existing 1980s block includes a 4 court Sports Hall with natural top light. However, this hall does not comply with current Sport England design standards, having a smaller footprint and clear head height dimensions than modern standards.

The lower height of the soffit alongside localised reductions in height as a result of the perimeter bulkhead limits the number of sports that can be effectively accommodated in the hall under modern standards / requirements. Physical projections into the space in the form of structural column locations and MEP installations, as well as wall recesses to door entry locations, further limits the number of sports, such as five-a-side, that can be accommodated safely. The sports hall has a solid floor construction with parquet timber finish. Under modern standards the floor would be a sprung timber floor which provides optimal sport performance and enhanced comfort for users, reducing the likelihood of repetitive impact injuries on joints over time.

The changing accommodation within the existing building is of a mixed standard, with some areas having been subject to refurbishment in 2016, which included the installation of glass shower cubicles, new bench seating an updated wall and floor tiling. Other changing and toilet accommodation areas are less attractive and appear dated.

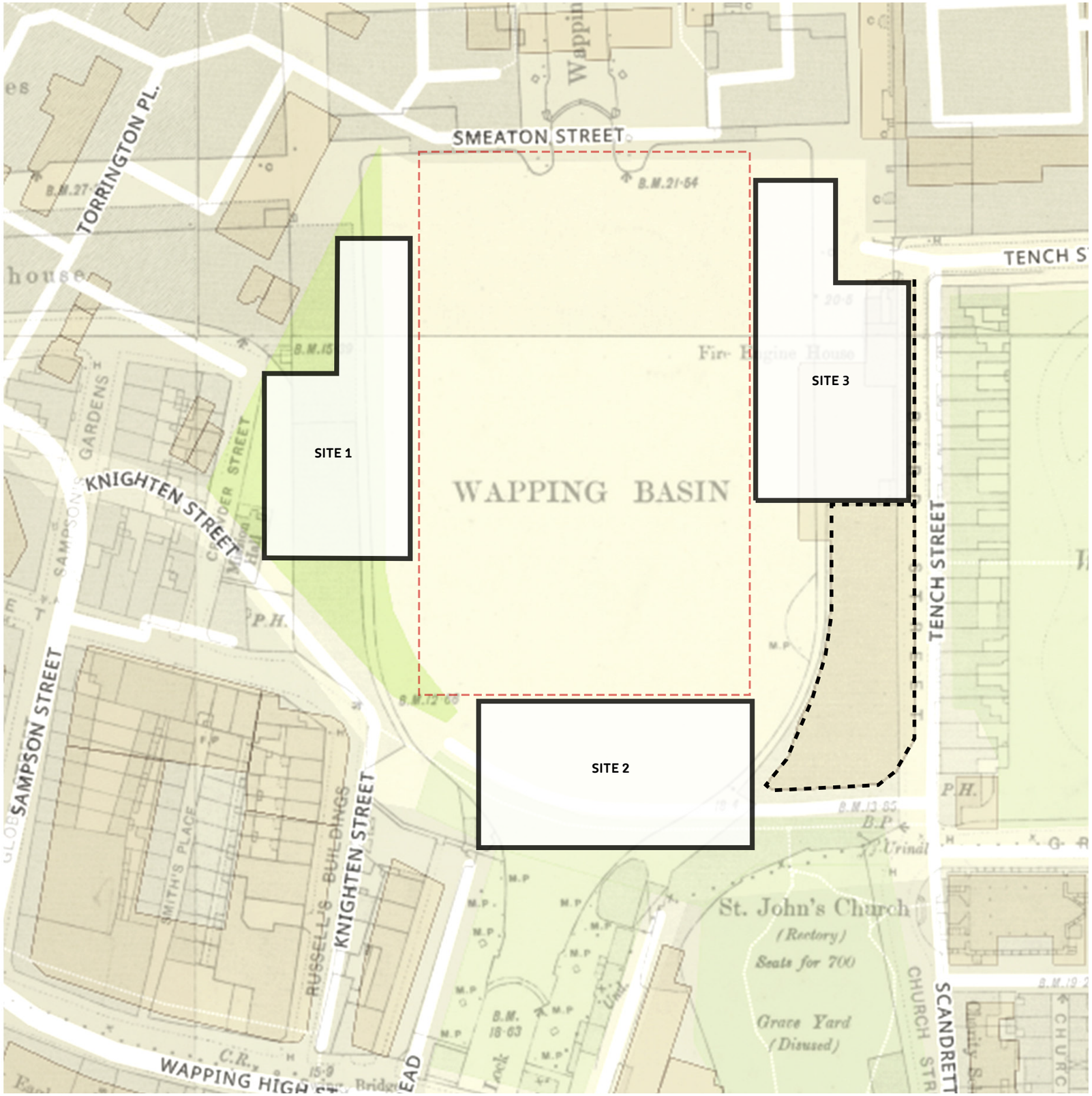
The historic single-storey warehouse to the south of the site accommodates the 55 station fitness suite, and also includes a studio space to the north of the space where the building interfaces with the 1980s block. A mezzanine has been introduced which provides some additional functional training space. The building is of solid masonry construction with a lightweight roof supported on a lightweight metal truss system that also incorporates single glazed rooflights. The nature of the building construction results in a thermally inefficient envelope that has potential for improvement as part of any refurbishment / repurposing works.

Externally, the Hockey pitches are of a good standard having been refurbished in 2014. The pitch has an Astroturf finish and is also used for 5 / 9 /11 a side football, as well as rugby hire. The external pitch also benefits from covered spectator seating.



1910 - Historic Map Showing the former Wapping Basin

1910 + 1940 Overlay



Proposed Site Options with Historic Underlay + Hockey Pitch Outline

2.0 SITE ANALYSIS
JOHN ORWELL

WAPPING BASIN

The John Orwell site is located on the former Wapping Basin, on the corner of Scandrett Street and Tench Street and is the current home of the John Orwell Sports Centre, which is a dry sports facility.

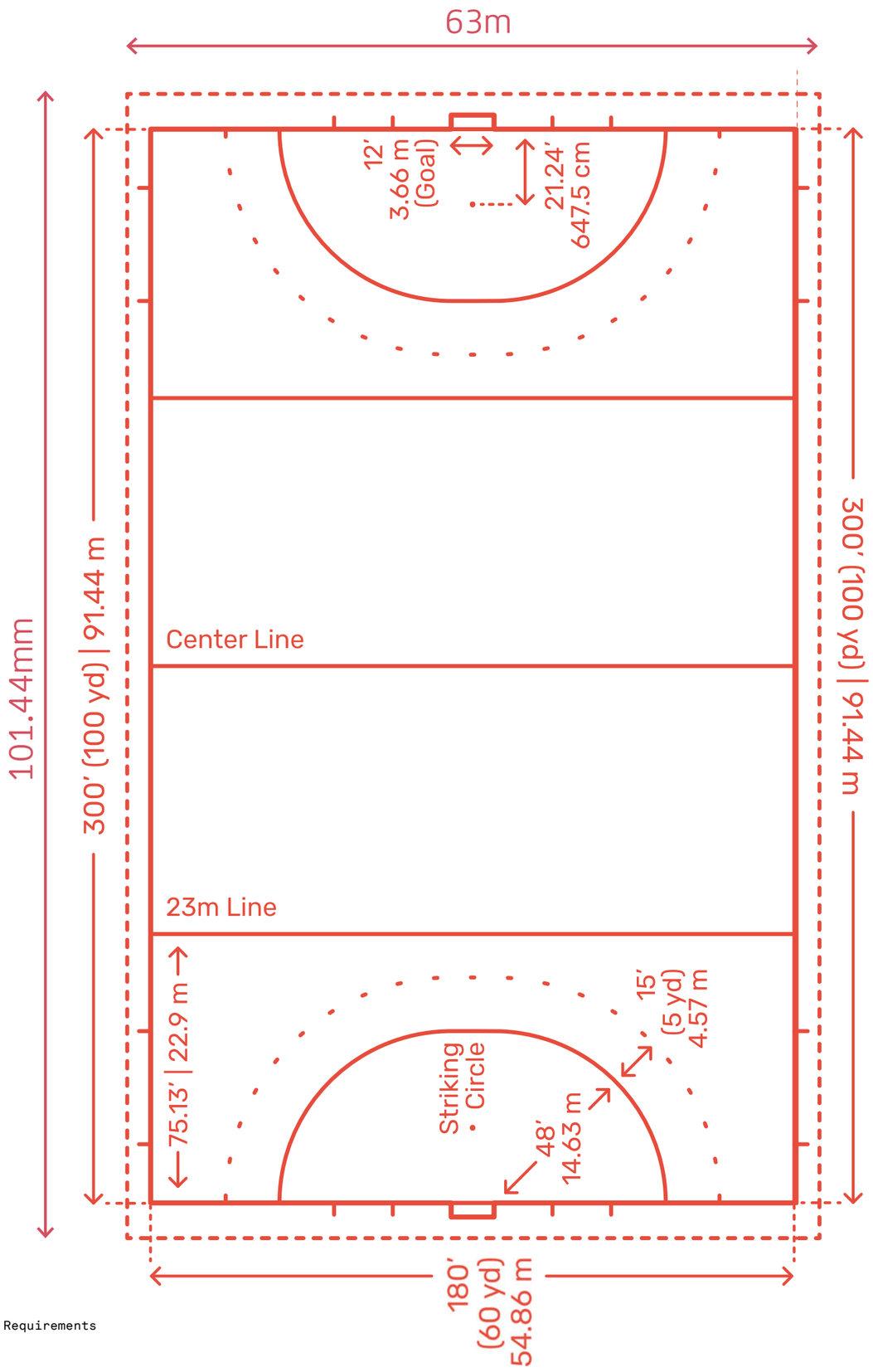
A series of large warehouses historically encircled the basin. Only one of these remains and is located to the south east corner of the site, having been refurbished to accommodate a fitness suite.

The multi-purpose external pitch has been located above the footprint of the historic basin as illustrated on the adjacent diagram.

The feasibility study for the John Orwell site has principally focused on retaining the pitch in this location and explored the available site options for a new leisure centre facility on site. These comprise of new build options to Sites 1 and 2 and refurbishment / new build hybrid options for Site 3. All options seek to retain the historic warehouse to be either repurposed or refurbished.

A site investigation is to be commissioned to understand the ground conditions in each location, particularly as all three site options bound the former basin footprint. Further surveys will also need to be carried out to confirm ground conditions, including any possible soil contamination, etc, which may be likely considering the former use of the site.

John Orwell Hockey Pitch Location Plan



Hockey Pitch Baseline Dimension Requirements

2.0 SITE ANALYSIS
JOHN ORWELL

EXTERNAL PITCH

The external multi-use pitch on the John Orwell site forms a major constraint in terms of the amount of available land to develop the new leisure centre. The pitch is currently used for a range of sports including Hockey, 5 / 9 /11 a side football, as well as rugby use.

The design team explored whether there was any scope to reduce the footprint of the pitch whilst maintaining the baseline performance requirements in order to assist with maximising the amount of leisure centre facilities. However, this was not viable as the pitch is already the minimum size required.

OPPORTUNITIES

1. New leisure centre which will provide leisure and health facilities that meet the Council's objectives for health and wellbeing, as set out in the Tower Hamlets Vision, and opportunities to provide new homes which will help to meet the borough's housing target.

2. Improve the impact of the arrival point into the site and create an activated gateway into the building.

3. Activate the public realm facing onto Vaughan Way and Scandrett Street

4. Create outward looking views onto the Hockey pitch from within the leisure centre to create engagement between internal and external sport activities.

5. Refurbish / Repurpose the existing former warehouse building to provide enhanced / diversified facilities.

6. Potential to create pedestrian route across the site to further engage / encourage participation

7. Opportunity to create river side views from within the leisure centre

John Orwell Site Opportunities

John Orwell Site Constraints

CONSTRAINTS

1. **Former Wapping Basin Ground Conditions**
   Site Investigation required to ascertain any further constraints on site option studies.

   Will inform foundations solution e.g. Piling

2. **Locally listed Warehouse + Listed Wall**
   Warehouse to be retained if possible
   Boundary wall must be retained

3. **Proximity to surrounding residential**
   Will impact upon ability / desire to construct new build elements adjacent and will impact upon height and massing

4. **Proximity to St John's Church**
   Influence of scale and massing of proposals

5. **Children's Play Area**
   To be retained

6. **Parking**
   Required parking numbers to be defined. No increased provision requirement foreseen.

7. **Proposed Building Heights**
   Sensitivity of surrounding context. No current guidance within SPD on maximum building heights within the site.

3.0 CLIENT'S BRIEF

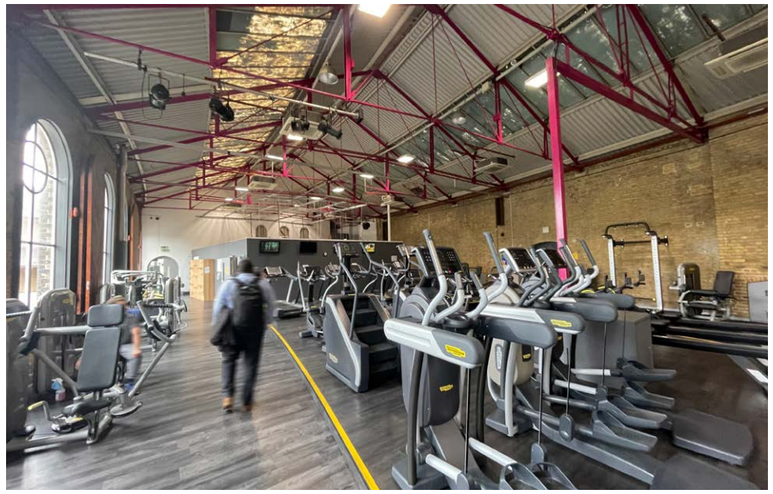
EXISTING JOHN ORWELL LEISURE CENTRE

The existing John Orwell Leisure Centre building is comprised of an existing repurposed docklands warehouse which was constructed in the 1890s and a 1980s sports hall with ancillary accommodation.

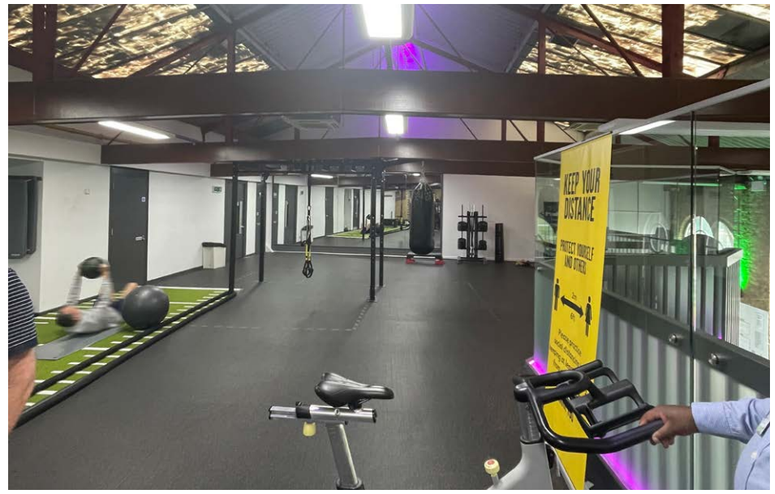
An analysis was carried out on the existing building to identify the current provision and scale of spaces. The existing facilities are as follows:

- 55+ Station Fitness Suite
- Mezzanine Level Functional Training Area
- Multipurpose Studio
- 4 Court Sports Hall
- Reception and entrance Foyer (inc.. Sales area)
- Staff areas and offices

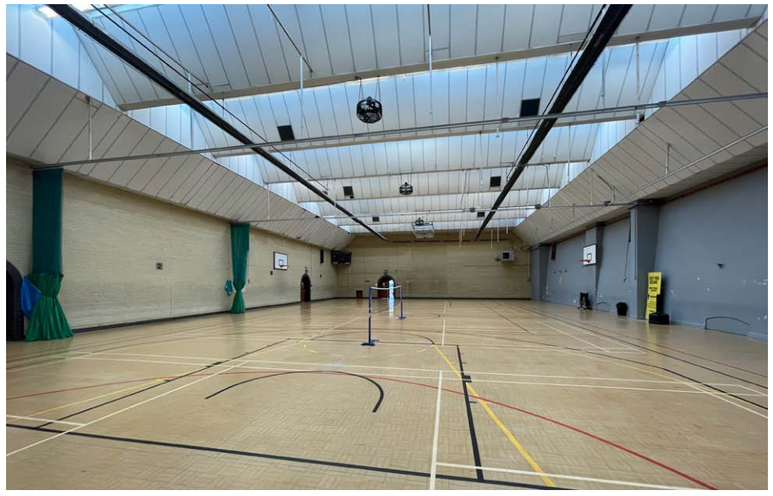
Options to refurbish and demolish the 1980s element of the existing building have been explored as part of this feasibility study. In all options, the original 1890s warehouse is retained and either repurposed or refurbished. All options are based upon providing a single facility with co-located wet and dry facilities on one site to meet the Council's new requirements which are outlined over the following pages, and to provide a state of the art new leisure centre which aligns with current Sport England guidance (with the exception of options which retain the 1980s Sports Hall element) which will be able to attract more users in the local area to participate in sport.



Existing Fitness Gym

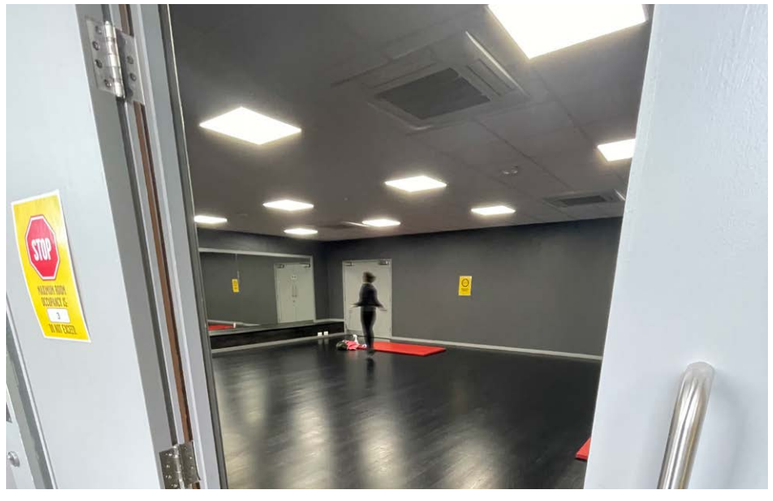


Existing Functional Training

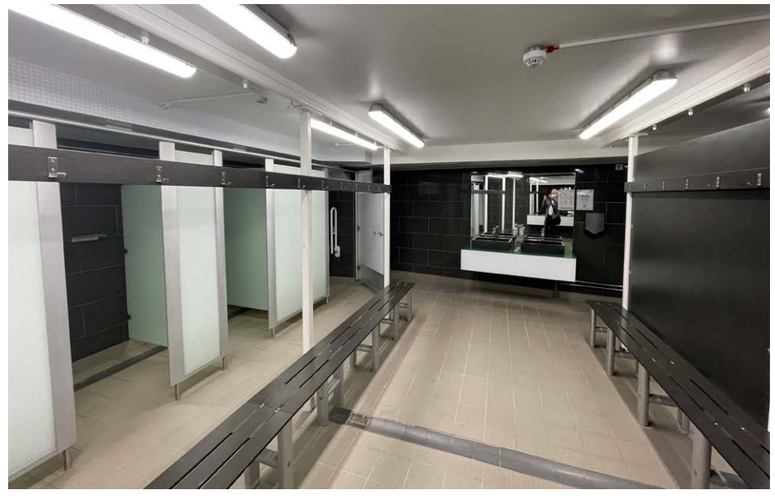


Existing Sports Hall

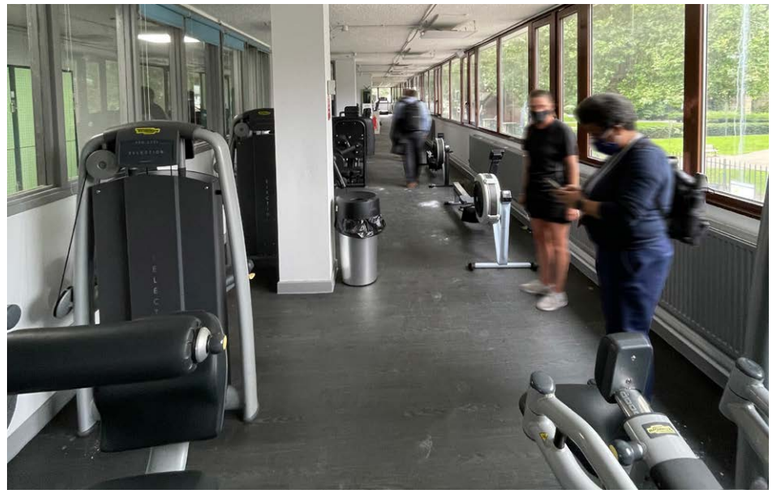
Existing Reception



Existing Studio

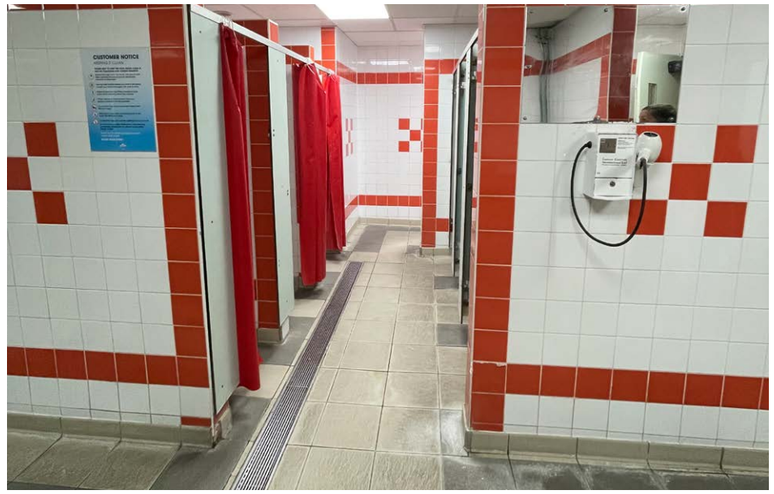


Existing Changing Room

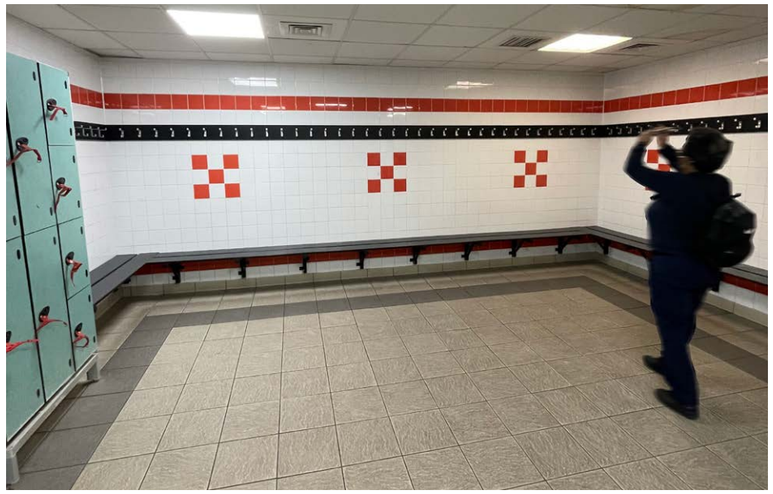


Existing Fitness Area

Existing 33.3m Swimming Pool (Image Pre Building Closure)



Existing Changing (Showers)



Existing Changing Room

Existing Reception

Existing Training Pool

3.0 CLIENT'S BRIEF

EXISTING ST. GEORGE'S LEISURE CENTRE

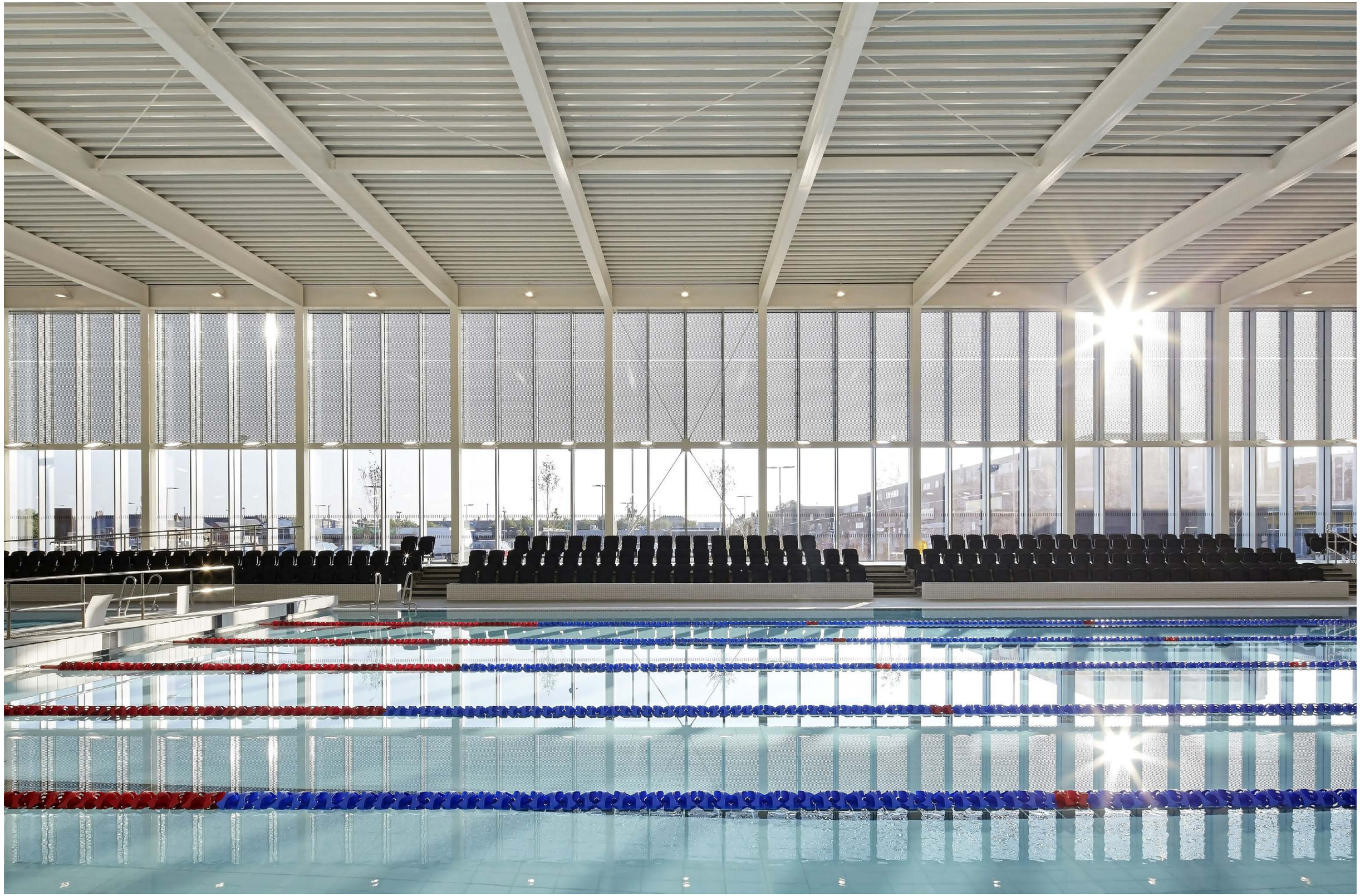
The existing St. George's Leisure Centre building was constructed in the 1960s and was in need of modernisation even before the most recent surveys highlighted further issues. The building has been closed since early 2020 due to the Covid19 pandemic and has not been reopened.

An analysis was carried out on the existing building to identify the current provision and scale of spaces. The existing facilities are as follows:

- 33.3m 6 lane pool
- Training Pool
- Wet and dry changing
- 33 station fitness suite
- Reception and entrance Foyer (inc.. Sales area)
- Crèche
- Soft Play
- Staff areas and offices

A series of surveys have already been undertaken to assess the viability of refurbishing the existing building. These have concluded that an investment of c. £13.5M would be required to bring the building back to a state where it would be safe to reopen, but only for a period of five years, before the building would need to be demolished and replaced. It is estimated that it would cost a further £10m to extend its life for up to 20 years, although this is subject to further investigation.

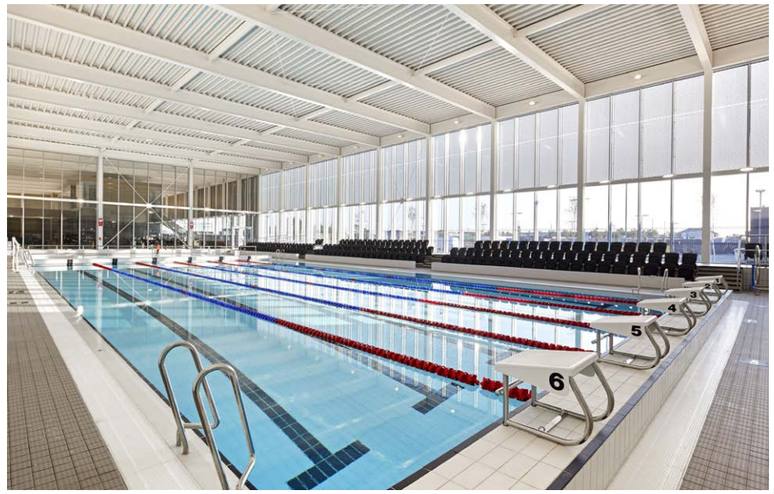
An option to demolish and replace the leisure centre with an expanded, co-located wet and dry facility has been explored as part of this feasibility study. A second option looks at the feasibility of demolishing the existing building, relocating the leisure centre to a combined facility on the John Orwell site, and redeveloping the St George's site for residential use.



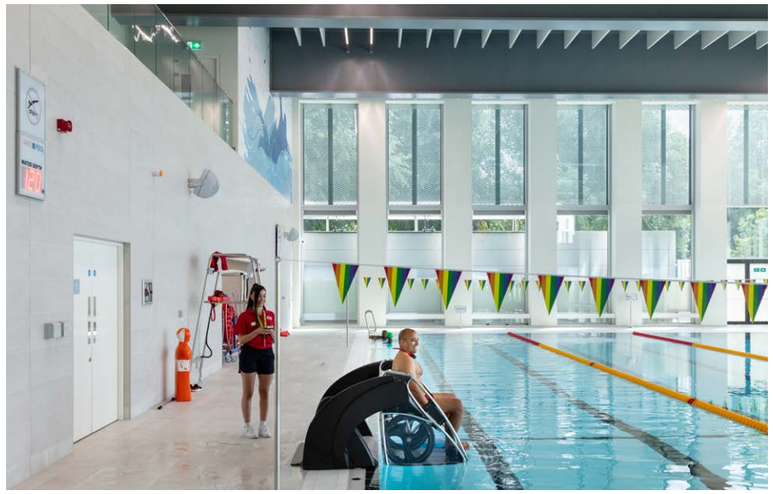
Precedent - Hebburn Central Leisure Centre, Hebburn.

Precedent - Britannia Leisure Centre, Hackney, Sports Hall

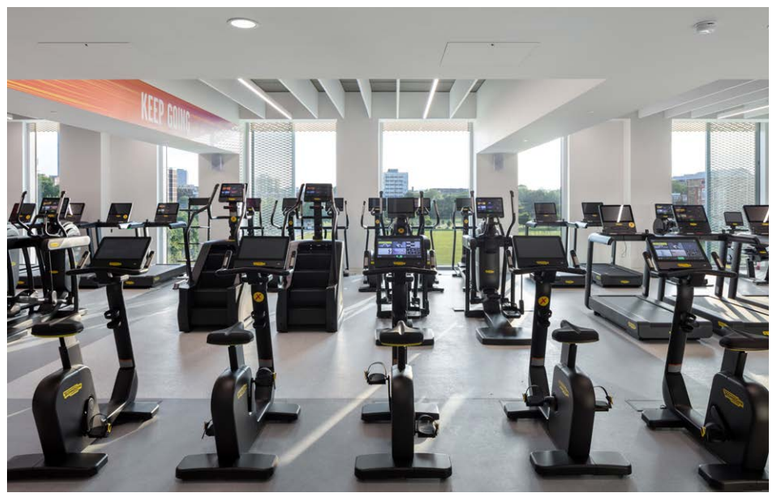
Precedent - Britannia Leisure Centre, Hackney, Reception



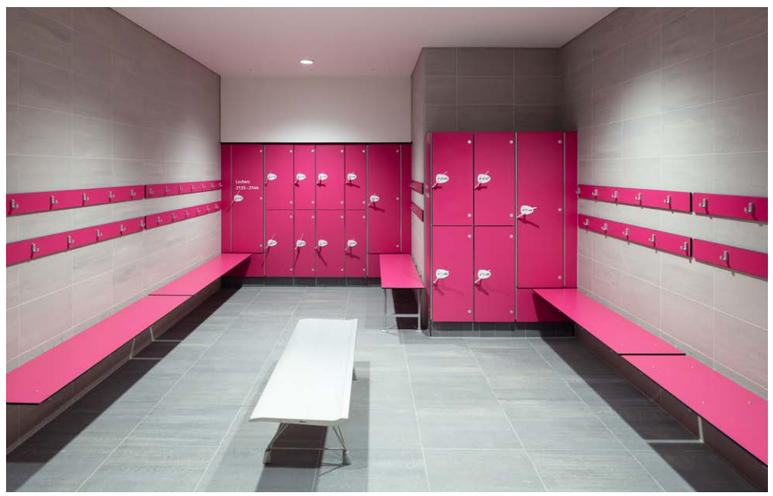
Precedent - Hebburn Central 25m Pool



Precedent - Britannia Leisure Centre, Hackney, 25m Pool



Precedent - Britannia Leisure Centre, Hackney, Fitness Suite



Precedent - Britannia Leisure Centre, Hackney, Dry Changing Room

3.0 CLIENT'S BRIEF

SUMMARY OF BRIEF

The Council requested several options to be developed based upon the following

St. George's Site

— Refurbishment
— Demolition and New Build

John Orwell Site

— Refurbishment and Extension
— Demolish and New Build

All options need to provide modernised facilities with co-location of wet and dry accommodation on one site. Options which explore the potential for residential elements of development on both sites have also been explored.

Leisure Strategy 2017-2027

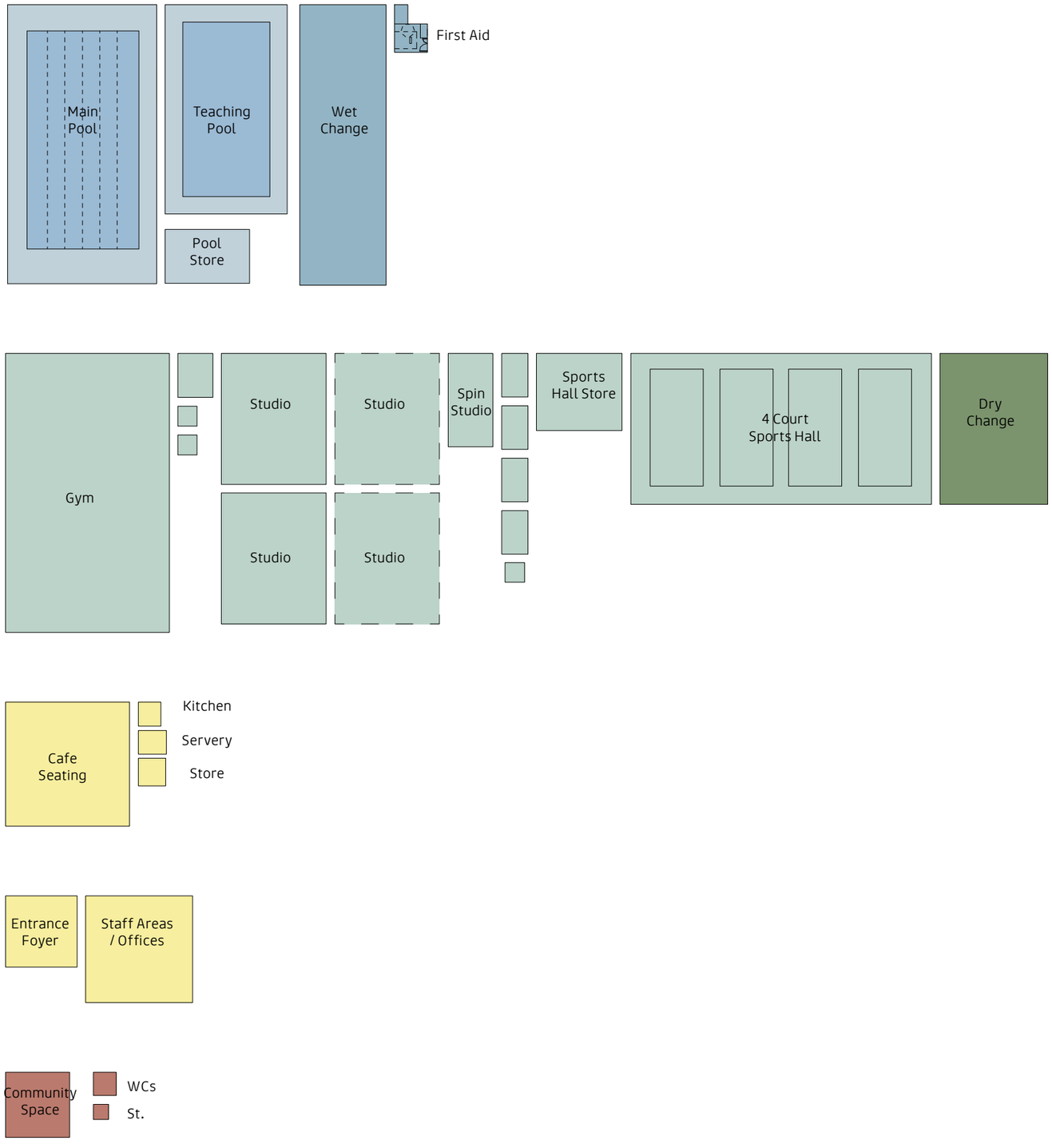
This feasibility study has been considered in conjunction with the Indoor *Facilities Strategy for the London Borough of Tower Hamlets 2017-2027* document (2017) and has been developed in collaboration with a stakeholder team from the London Borough of Tower Hamlets Council. The current provision across both the John Orwell and St. George's sites are built around unconventional and economically inefficient layouts. However, provision developed as part of the feasibility study is focused on a single co-located community health and wellbeing hub, which would deliver:

— 25m 6 lane swimming pool with movable floor
— Large training pool (with a moveable floor) 16m x 13m
— Fitness suite (100 - 150 stations with functional area depending on design option)
— Dedicated spin studio – minimum 20 bikes
— Group fitness studios (number of studios varies between options)
— Four badminton court sized sports hall
— Wet, dry and dedicated fitness changing rooms
— Cafeteria
— Range of office space and meeting rooms

The following pages outlines the current brief, which the options in Section 4.0 of this report have been based on. There is some deviation in the achieved accommodation between the developed design options as a result of available site or as a result of refurbishment/new-build physical conditions. A full accommodation schedule has been provided for each feasibility option to allow comparison.

(Adjacent Images show similar new facilities designed by FaulknerBrowns Architects)

Precedent - Britannia Leisure Centre, Hackney. Image Showing Building Entrance.



Diagrammatic Brief - Accommodation Sizes to be tested

3.0 CLIENT'S BRIEF

Target Areas

Wet Sport Areas

— 25m 6 lane swimming pool (with a moveable floor)	540m²
— 16 x 13m teaching pool (with a moveable floor)	360m²
— Pool Store	60m²
— Wet changing area	300m²
— First aid room	15m²

Dry Sport Areas

— 100-150 station fitness suite	530-880m²
— 1-3 multipurpose fitness studios	3 x 120m²
— 20 station (minimum) spin studio 120m²	
— 4 badminton court sports hall	690m²
— Dry sports storage	70m²
— Dry changing area	300m²

Catering Areas

— Café, kitchen and servery	220m²

Reception / Admin Areas

— Reception and entrance foyer (inc. Sales area)	150m²
— Staff areas and offices 150m²	150m²

Community / Play Areas

— Community Room	50m²

The following section analyses several options for the proposed new leisure centre across both site. The leisure centre in each option has been based on the areas listed above unless site constraints have prevented this. A full accommodation schedule has been provided for each feasibility option to allow comparison.

4.0 OPTIONS APPRAISAL
ST GEORGE'S CARBON REVIEW

ST GEORGE'S CARBON REVIEW

There is no existing methodology to assess the carbon impact of the refurbishment vs new-build of leisure centres based upon energy use and embodied carbon over the building's lifecycle, and there are many parameters unknown at this stage which influence how successful the refurbishment of the existing St. George's building could be in terms of carbon reduction over the lifetime of the building.

However, based upon our experience and a series of assumptions / available metrics we are able to build a high level picture of the likely impact of both approaches.

Operational Energy Use

The CIBSE *Energy Use in Sports and Recreation Buildings* Energy Consumption Guide provides simple energy use benchmarks based upon different sport centre typologies, including dry, wet and combined leisure centres. These benchmarks are used in Display Energy Certificates (DEC) and are evidenced in the DEC ratings that have already been produced for the St. George's and John Orwell Leisure Centres - shown on the opposite page.

These show that St. George's Leisure Centre, as combined wet and dry facility, achieves a total annual energy use of 572 kWh/m2/year. This sits between the CIBSE 760 kWh/m2/year 'Typical' and 360 kWh/m2/year 'Good' ratings. We believe that to move towards 360 kWh/m2/year would require wholesale replacement of existing building services systems to optimise energy efficiency, and a significant refurbishment / replacement of the existing fabric to minimise heat loss / gain through the building envelope and therefore heating / cooling requirements. This is challenging and could still not guarantee achieving 360 kWh/m2/year.

In comparison, we are designing new leisure centres to a target of 200 kWh/m2/year energy use, which is a significant reduction over 360 kWh/m2/year across the life cycle of the building.

Embodied Energy

The RIBA has developed voluntary performance targets for embodied carbon. This defines an assumed new build kgCO2e/m2 rate for new build buildings as 1400kgCo2e/m2.

Recent high level work on the Woolwich Leisure Centre project in the London Borough of Greenwich has identified that the building frame constitutes approximately 500kgCo2e/m2 out of this 1400kgCo2e/m2 figure. The remaining 900kgCo2e/m2 comprises the building envelope.

For an existing building to achieve the 360 kWh/m2/year energy use target, we would assume that the existing building would need to be stripped back to the structural frame, and building envelope replaced, in order to achieve the thermal fabric requirements that would support a 360 kWh/m2/year energy use target. This would still in theory, save 500kgCo2e/m2 by retaining the existing structure.

However, we know that the St. George's building structure is in need of various levels of replacement / reinforcement / remedial works, so we have assumed a reduced new build figure of 250kgCo2e/m2 to address these issues, combined with 900KgCO2e/m2 to replace the building fabric.

LIFE CYCLE CARBON IMPACT

Based upon these high level metrics, we can illustrate over life of the building that the new-build option would have a lower combined energy and embodied energy impact compared to refurbishing the existing building over a notional 60 year period, and based upon a fully electric energy use on a largely de-carbonised grid by 2050.

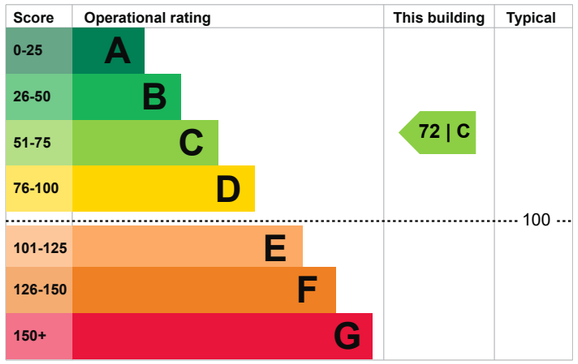
This high level analysis has determined that the refurbished and new-build options would achieve the following combined energy and embodied carbon per m2 ratings:

Refurbishment Option - **2,330Kg CO2e/m2**

New Build Option - **2,060Kg CO2e/m2**

As outlined above, these figures are indicative only and based around a series of assumptions and on the limited data and metrics available at this time. A further detailed study would need to be commissioned to interrogate this in detail.

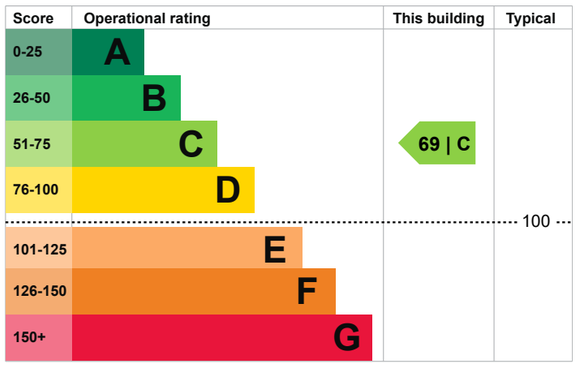
EXISTING
Display Energy Certificates



ST. GEORGE'S

This building's energy use

Energy use	Electricity	Other fuels	Total
Annual energy use (kWh/m2/year)	**103**	**469**	**572**
Typical energy use (kWh/m2/year)	178	559	737
Energy from renewables	0%	0%	0%



JOHN ORWELL (DRY ONLY)

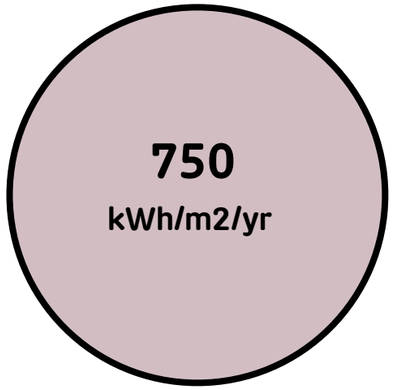
This building's energy use

Energy use	Electricity	Other fuels	Total
Annual energy use (kWh/m2/year)	**112**	**167**	**279**
Typical energy use (kWh/m2/year)	127	343	470
Energy from renewables	0%	0%	0%

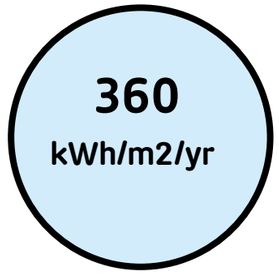
WHOLE LIFE CARBON ANALYSIS
High Level Analysis of Refurbishment / New Build Approach

60 YEAR
LIFE

WET + DRY LEISURE
Energy Use



CIBSE
Typical



CIBSE
Good

Britannia
Design

NEW BUILD
Wet and Dry

Operational

Target operational energy use 200kWh/m2/yr
Approx carbon emissions 660KgCO2e/m2
Assuming all electric building and grid largely decarbonised by 2050

Embodied

Frame: 500KgCO2e/m2 — Assumed figure based upon analysis of Woolwich Leisure Centre
Remaining: 900KgCO2e/m2
Total 1400kgCo2e/m2 — Total kgCo2e/m2 defined by RIBA Climate Challenge 2: Non-Domestic

Combined

Operational + Embodied = 660 + 1400 = **2,060 kgCO2e/m2**

REFURB
Wet and Dry

Assumes best case building fabric can be upgraded to achieve 360 kWh/m2*yr

Operational

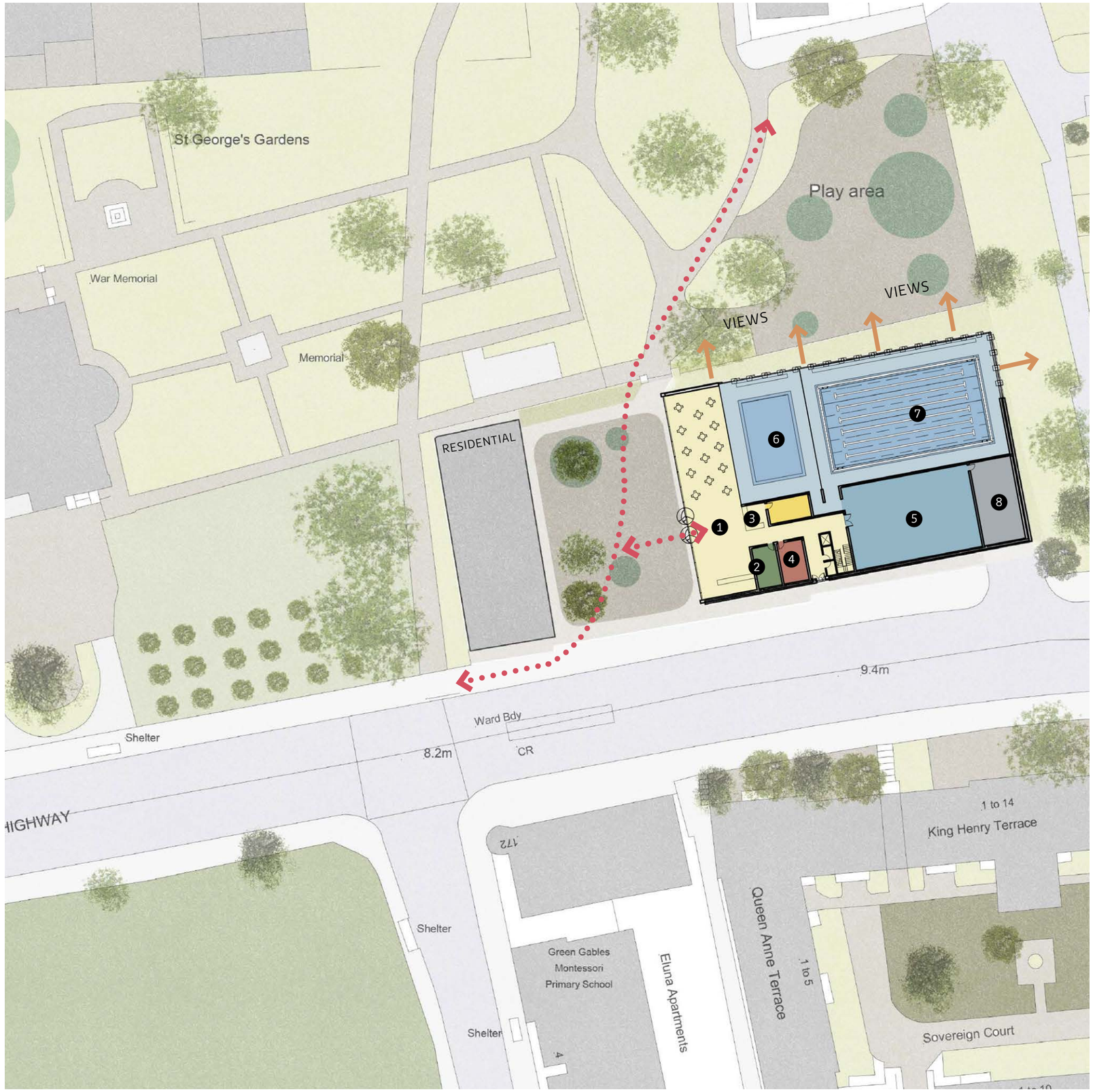
Target operational energy use 360kWh/m2/yr
Approx carbon emissions 1180KgCO2e/m2
Assuming all electric building and grid largely decarbonised by 2050

Embodied

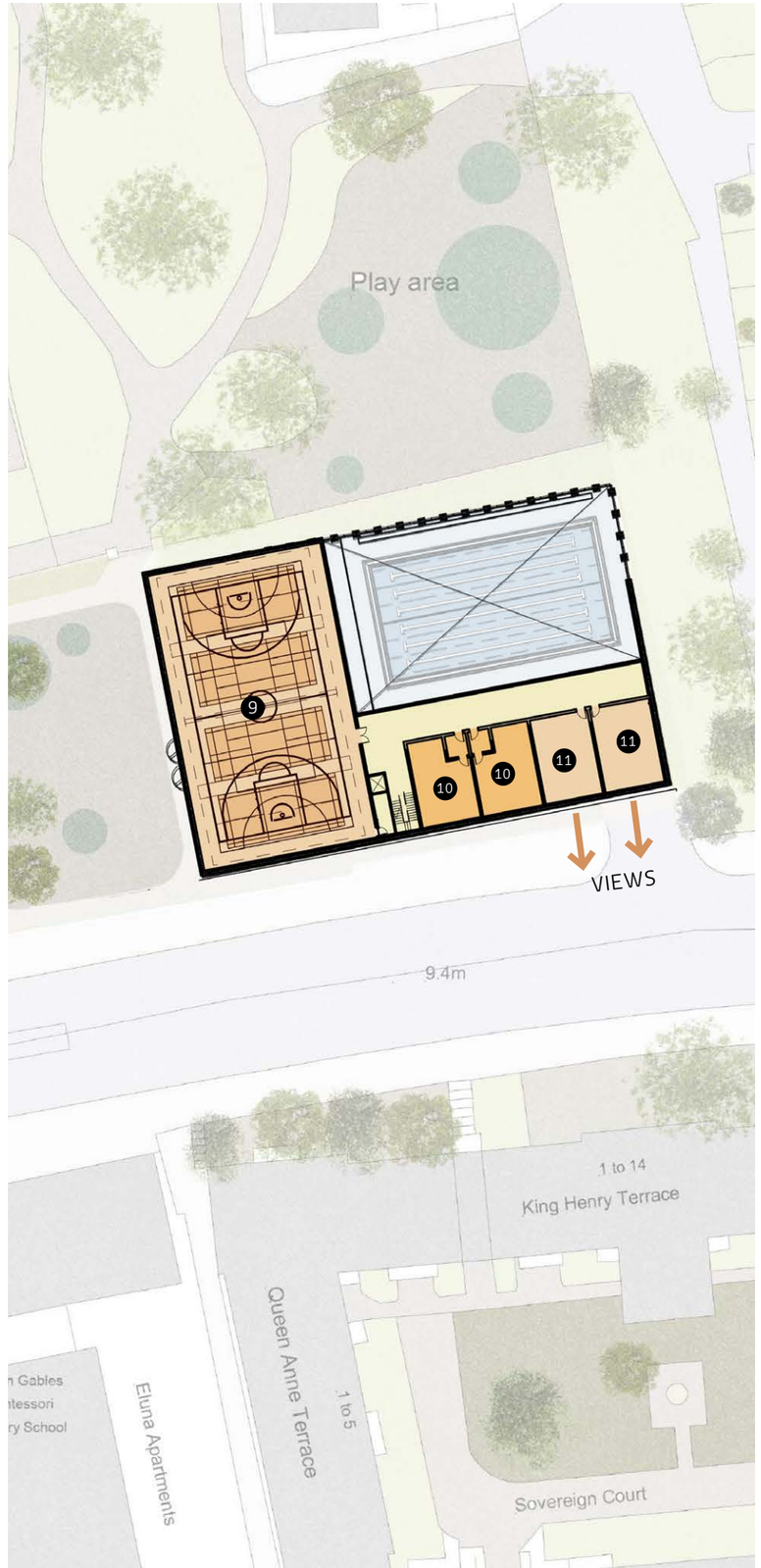
Frame: 250KgCO2e/m2 — Assumes building stripped back to frame. However, remedial works to repair frame are required, so a reduced frame kgCo2e/m2 compared to new build assumed.
Remaining: 900KgCO2e/m2
Total 1150KgCO2e/m2

Combined

Operational + Embodied = 1180 + 1150 = **2,330 kgCO2e/m2**



Ground Floor Plan



First Floor Plan

N

Second Floor Plan

1 ENTRANCE
2 RECEPTION
3 CAFE SERVERY
4 COMMUNITY ROOM
5 WET CHANGE
6 TRAINING POOL
7 6 LANE 25M POOL
8 PLANT
9 SPORTS HALL
10 DRY CHANGE
11 STUDIO
12 FITNESS SUITE

Level		Area m2
Basement		
	Water Filtration Plant Room	400
Ground Floor	Ground Floor	
	Café	200
	Servery	30
	Kitchen	25
	Reception	85
	Admin	25
	Staff Room	20
	IT	20
	Foyer	85
	W/Cs (inc changing places facility)	90
	Bin Store	35
	Plant Room (Substation)	25
	Store Room	10
	Wet Change (inc group change)	300
	Pool Store	60
	6 lane pool 13m x 25m + pool surround	540
	Teaching pool 13m x 16m + pool surround	360
	Soft Play	100
	Creche	80
Upper Floors		
	Studio 1	70
	Studio 2	70
	Studio Stores	35
	General Store	20
	Dry Change	130
	W/Cs	50
	4 Court sports hall 34.5m x 20m	690
	Sports hall stores	70
	Fitness suite	650
	GIA Footprint	**4275**
	Circulation at 10%	428
	Air Handling Plant at 10%	428
	Total GIA	**5130**

Accommodation Schedule

4.0 OPTIONS APPRAISAL
ST GEORGE'S LEISURE OPTION

ST GEORGE'S OPTION 1

This option is based upon full demolition of the existing building and a new build replacement.

A vertically stacked approach enables a reduced footprint and the ability to create an entrance plaza and new threshold into St. George's Gardens, as well as a pedestrian connection north to Cable Street.

The entrance and cafe have been positioned to the west to face onto the new public plaza but also faces onto the A1203 Highway and public realm to create transparency into the building. The training pool faces into the cafe to provide spectator opportunities, but also faces north into St. George's Gardens to create a pleasant outlook for swimmers. The 25m pool sits adjacent to the training pool and also faces north into the park. Wet change is located to the south parallel to the A1203 and acts as a buffer to the road.

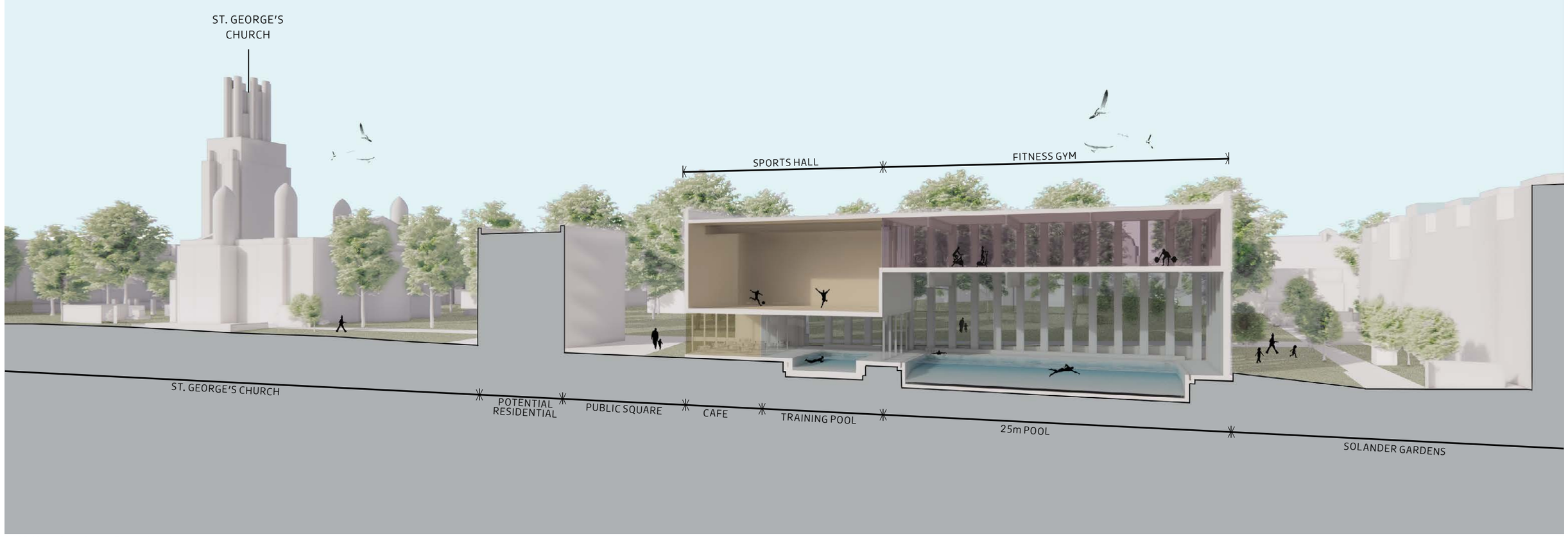
A four court sports hall is located above the cafe and training pool at first floor level. The 25m pool is a double height volume and views from first floor into the pool are provided from the internal circulation routes. Dry changing is positioned to the south, alongside the multi-purpose studios, which create opportunities for animation to the south.

The 150 station fitness suite is located above the 25m pool volume with views to the north across St. George's Gardens, providing a further level of active facade, with great views for users.

The compact but vertically stacked nature of the leisure centre footprint also creates the opportunity to develop a small quantum of residential build. This is indicatively shown to the west side of the leisure centre, creating further definition to the new public plaza space.

St Georges - Option 1				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher 4100sqm
Building Area	5130	£18,981,000	£20,007,000	£21,033,000
Demolition and site prep		£300,000	£400,000	£500,000
External Works		£615,600	£795,150	£959,310
Total Building		**£19,896,600**	**£21,202,150**	**£22,492,310**
Contingency / Design Reserve 10%		£1,989,660	£2,120,215	£2,249,231
Total Construction Budget		**£21,886,260**	**£23,322,365**	**£24,741,541**

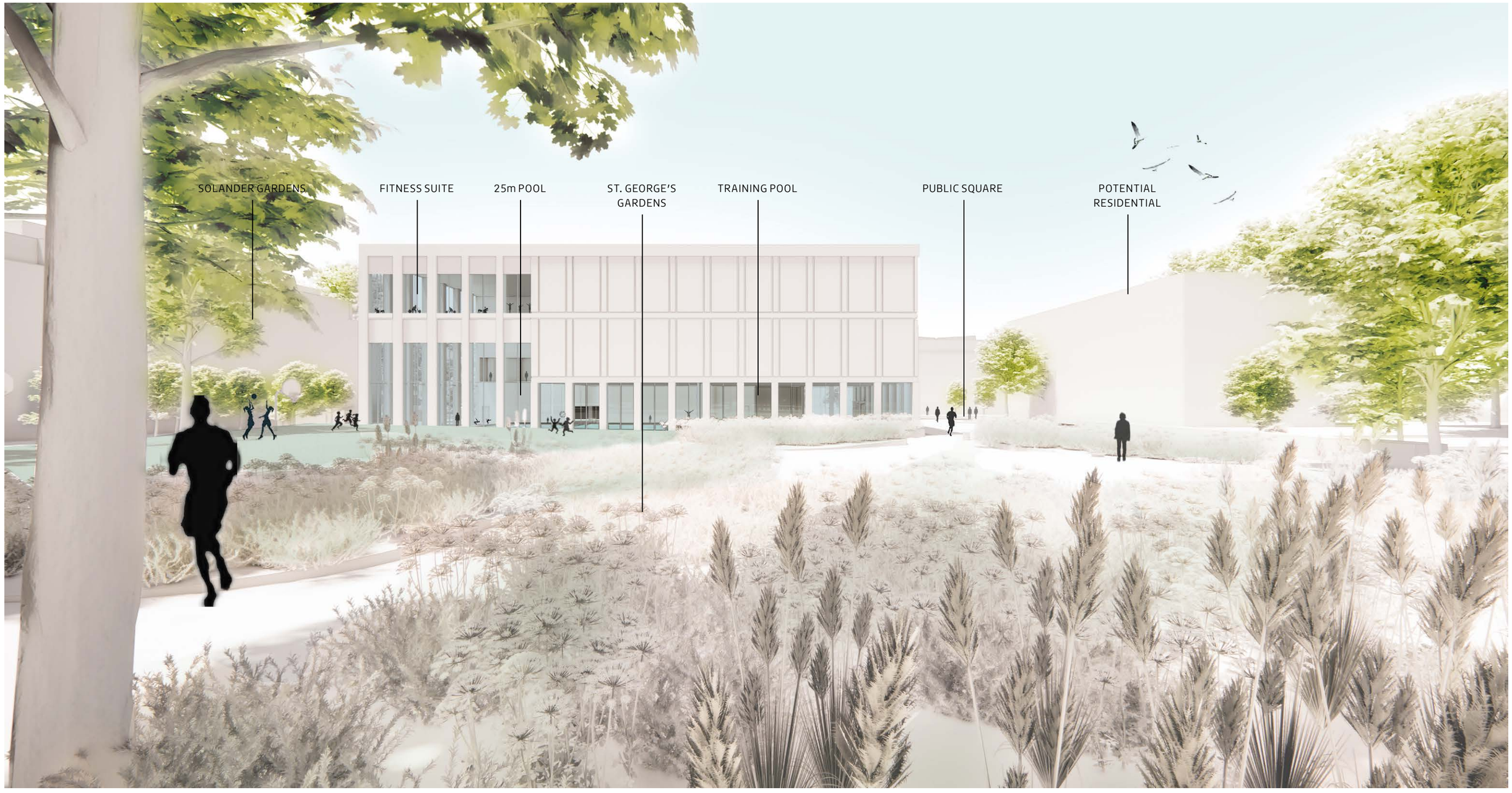
High Level Net Construction Cost Schedule



Building Section (East-West)

Building Section (North-South)

4.0 OPTIONS APPRAISAL
ST GEORGE'S LEISURE OPTION



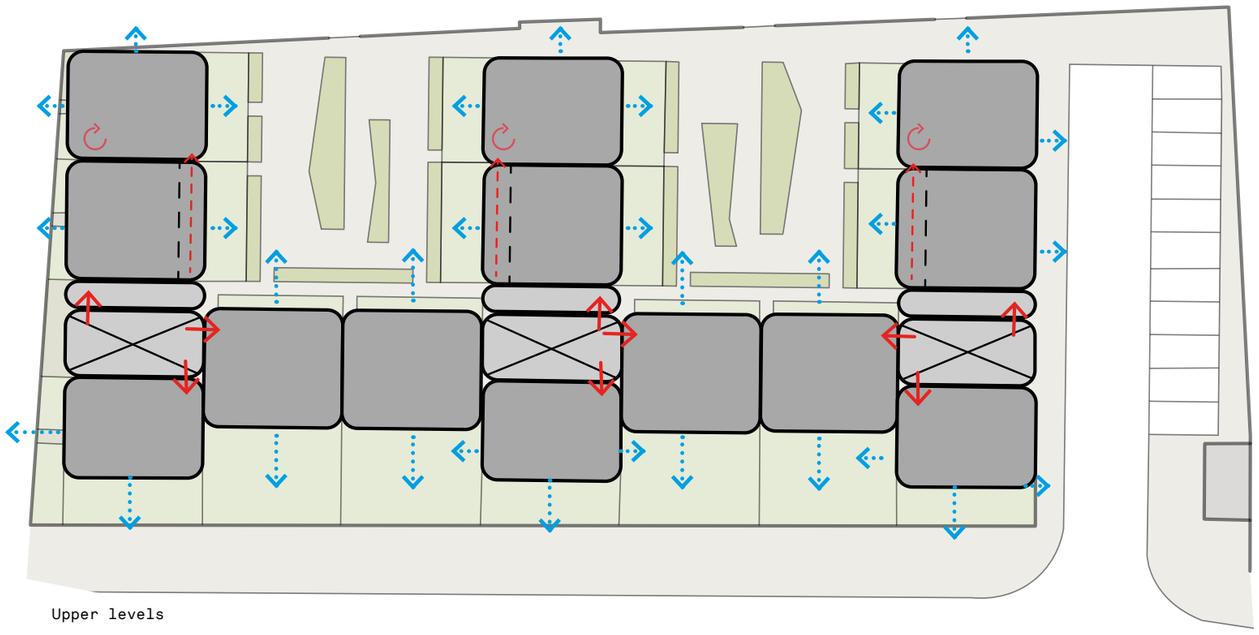
Indicative Massing of New Build Leisure Centre from St. George's Gardens

Indicative Massing of New Build Leisure Centre from A1203 Highway

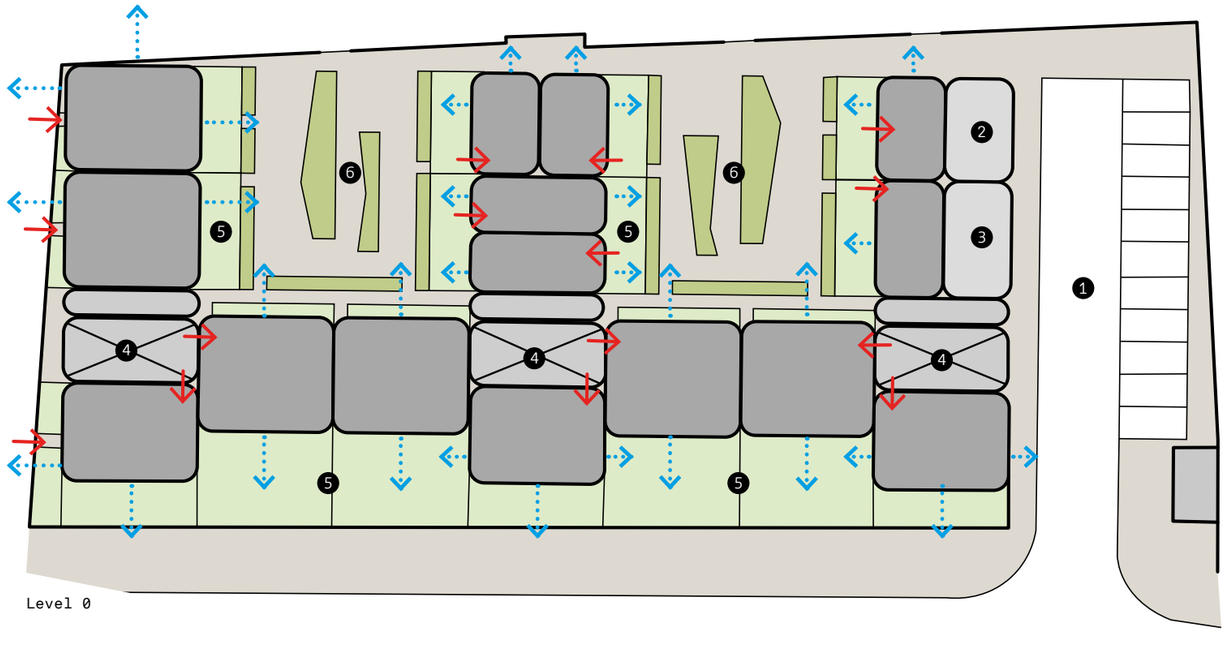
Level 0 Floor Plan

1 CAR PARK
2 PLANT ROOM
3 BICYCLE STORE
4 CORE
5 PRIVATE GARDEN
6 COMMUNAL GARDEN

VIEW
ACCESS
POSSIBLE ACCESS ROUTE
INTERNAL VERTICAL CIRCULATION (TOWNHOUSE)

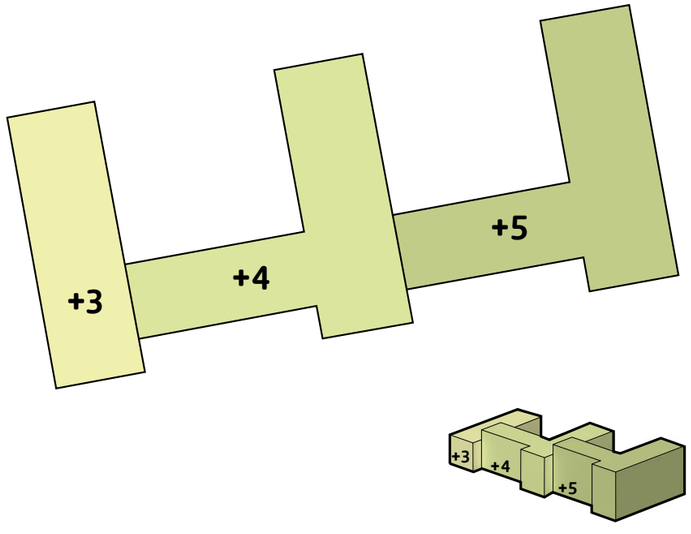


Upper levels



Level 0

+X Number of Building Storeys



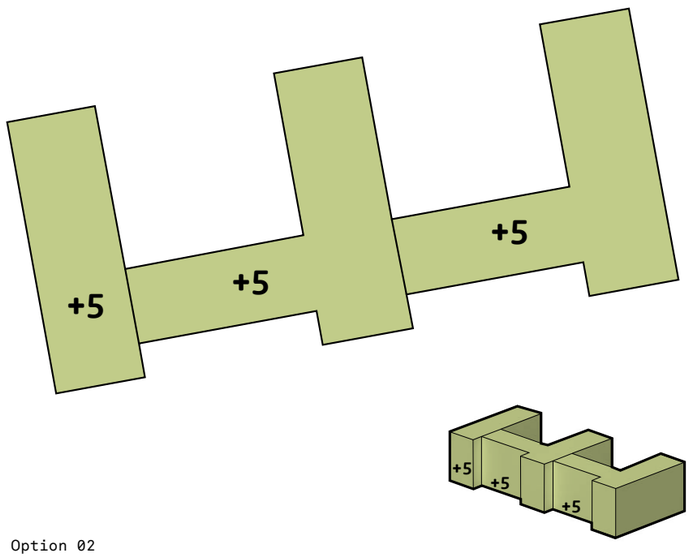
Option 01

Option 1 (67 Apartments)

Level	GIA Area (m2)	Net Area (m2)
Level 00	1,255	900
Level 01	1,255	1,030
Level 02	1,255	1,030
Level 03	1255	1,030
Level 04	1,085	870
Level 05	690	550
Total	**6,795**	**5,410**

High Level Net Construction Budget

Element	Area (m2)	£/m2	Cost
Building	6,795	£2,975	£20,215,125
Demolition	-	-	£300,000
External Works	-	-	£1,053,225
Total	-	-	£21,568,350



Option 02

Option 2 (78 Apartments)

Level	GIA Area (m2)	Net Area (m2)
Level 00	1,255	900
Level 01	1,255	1,030
Level 02	1,255	1,030
Level 03	1,255	1,030
Level 04	1,255	1,030
Level 05	1,255	1,030
Total	**7,350**	**6,050**

High Level Net Construction Budget

Element	Area (m2)	£/m2	Cost
Building	7,350	£2,975	£21,866,250
Demolition	-	-	£300,000
External Works	-	-	£1,053,225
Total	-	-	£23,219,475

4.0 OPTIONS APPRAISAL
ST GEORGE'S RESIDENTIAL OPTION

ST GEORGE'S RESIDENTIAL OPTION

An option to demolish the existing leisure centre and redevelop the site as residential as been explored, based upon the assumption of facilities moving to the John Orwell site. The development of residential on the site could be used to help cross fund the capital cost of the new leisure centre.

The plans opposite illustrate one possible approach, based around a courtyard arrangement, creating two clusters of homes centred around communal gardens which also have an access route into St. George's Gardens. The arrangement is based upon creating homes which all have dual aspect views, and providing private gardens to all ground floor units.

A car park has been maintained to the east of the site alongside service access for refuse delivery and plant room access.

The arrangement affords the ability to have front doors to each unit at ground floor level as well as the inclusion of townhouse and duplex units.

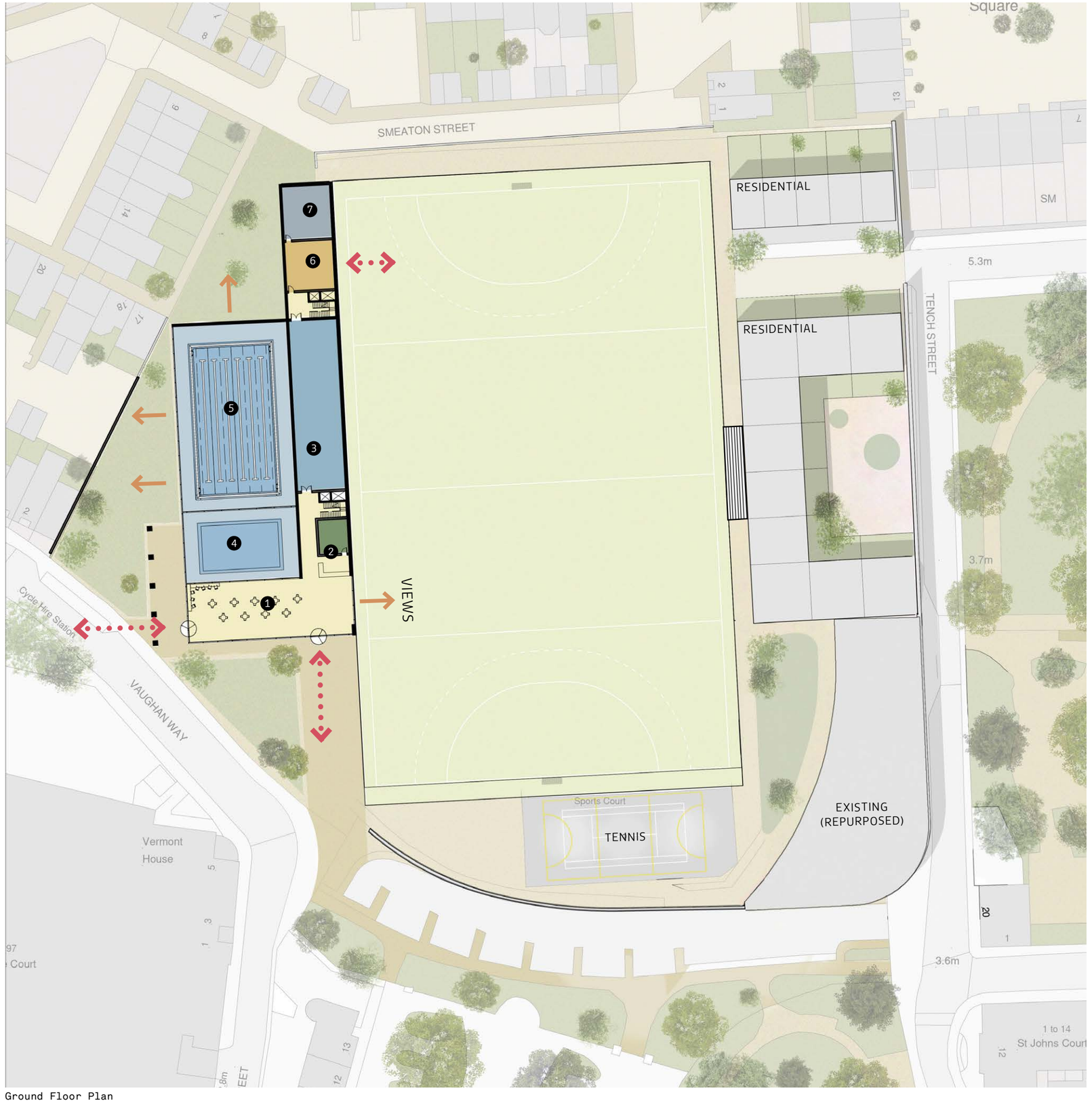
The diagrams opposite illustrate the design principles of the arrangement, and identifies dual / tri-aspect units, access points, circulation zones, private and communal gardens, and plant / refuse areas.

The adjacent massing diagrams explore two option of scale for the residential building which will result in two different levels of quantum. Option 1 incorporates a sequence of steps in height from 3 storeys to the west and five storeys to the east, providing a more transition in scale down towards St. George's church, providing 67 units. Option 2 looks at maintaining a five storey development to tie in with the datum height of the adjacent Solander Gardens apartment building, and provides 78 units.

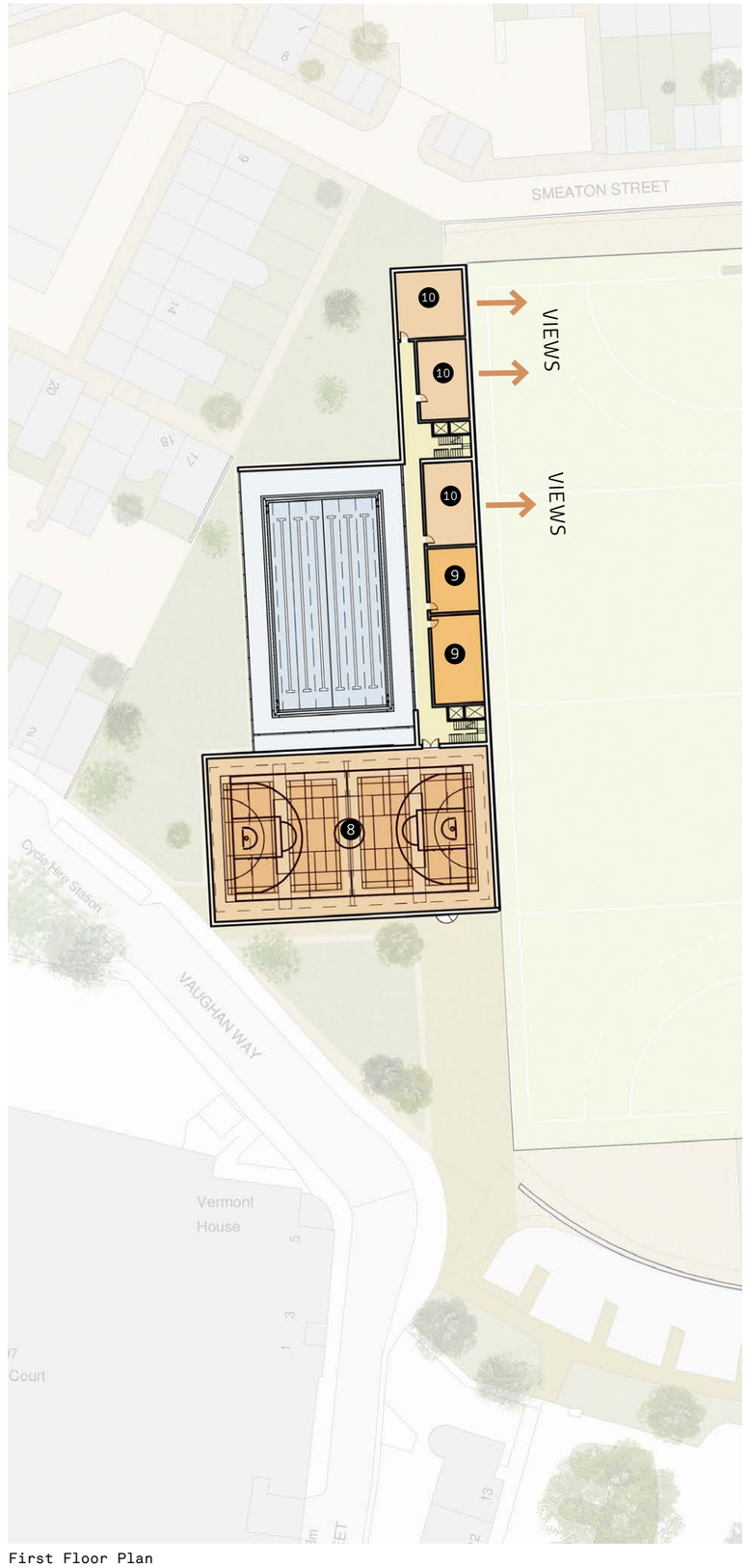
Area and high level construction budget schedules have been prepared for each option and are summarised as follows:

Residential Option 1 (67 Units)
Area 5,410m²
Net Construction Cost £21,568,350

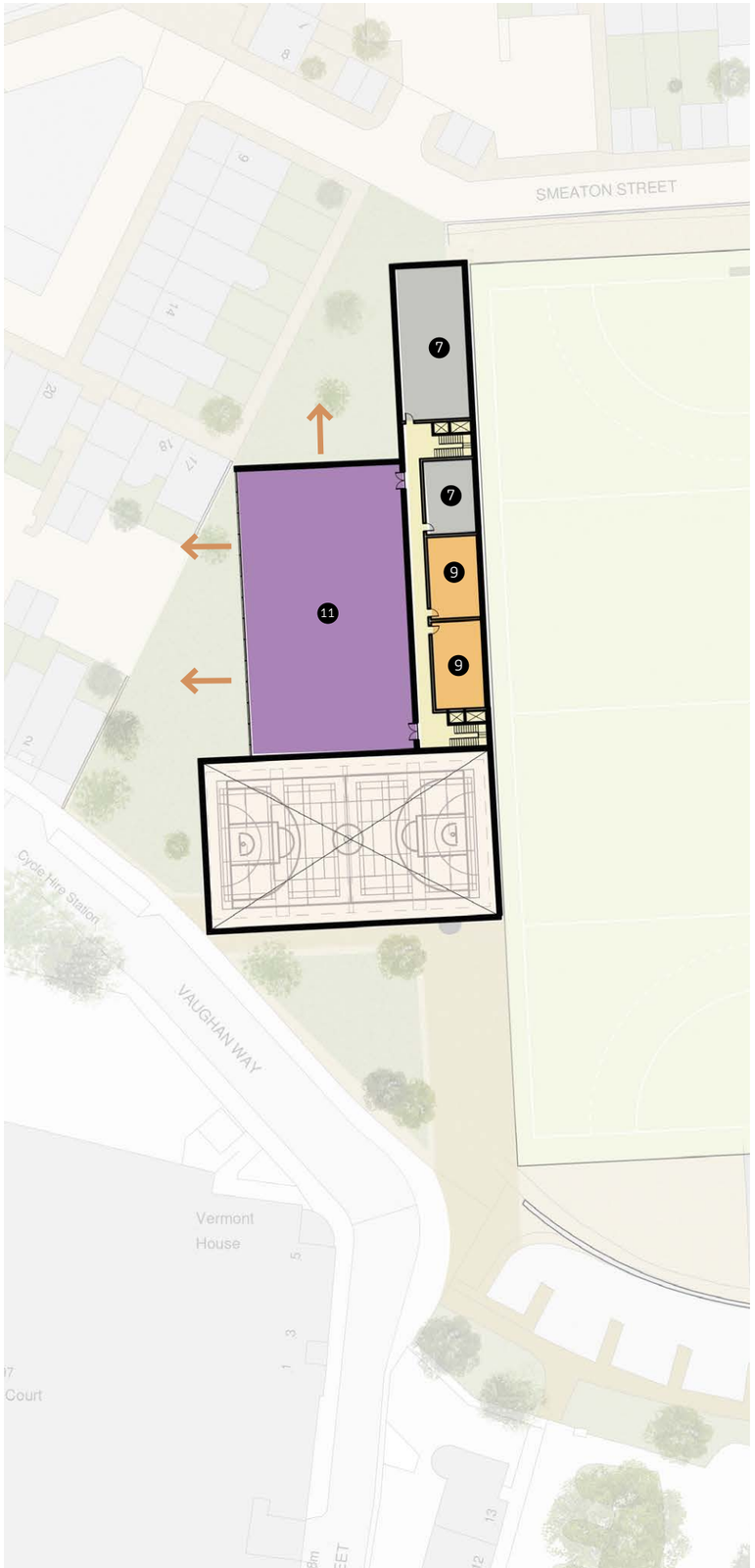
Residential Option 2 (78 Units)
Area 6,050m²
Net Construction Cost £23,219,475



Ground Floor Plan



First Floor Plan



Second Floor Plan

1 ENTRANCE
2 RECEPTION / CAFE
3 WET CHANGE
4 TRAINING POOL
5 6 LANE 25M POOL
6 OUTDOOR CHANGE
7 PLANT
8 SPORTS HALL
9 DRY CHANGING
10 STUDIO
11 FITNESS SUITE

Level		Area m2
Basement		
	Water Filtration Plant Room	400
Ground Floor	Ground Floor	
	Café	150
	Servery	30
	Kitchen	40
	Reception	70
	Admin	20
	Staff Room	30
	IT	10
	Foyer	150
	W/Cs (inc changing places facility)	90
	Bin Store	35
	Plant Room (Substation)	25
	Store Room	10
	Wet Change (inc group change)	300
	Pool Store	60
	6 lane pool 13m x 25m + pool surround	540
	Teaching pool 13m x 16m + pool surround	360
	Soft Play	120
	Creche	100
	Outdoor pitch changing	68
	Outdoor pitch spectator seating	42
Upper Floors		
	Studio 1	65
	Studio 2	60
	Studio 3	60
	Studio Stores	35
	General Store	20
	Dry Change	230
	W/Cs	50
	4 Court sports hall 34.5m x 20m	690
	Sports hall stores	70
	Fitness suite	650
	GIA Footprint	**4580**
	Circulation at 10%	458
	Air Handling Plant at 10%	458
	Total GIA	**5496**

Accommodation Schedule

4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 1 OPTION 1

SITE 1 OPTION 1

The building is orientated as a linear block running north-south and parallel to the western edge of the hockey pitch.

The entrance and cafe spaces are positioned to the south of the building and provide a focal point on arrival from Vaughan Way. The 4 court sports hall is located above and creates a sheltered threshold into the new leisure centre.

Upon arrival into the building, users will have views directly into the training pool from the cafe, which provides parents with the ability to spectate as their children learn to swim, whilst enjoying a cup of coffee.

The 25m pool is located to the north of the training pool. There is potential for the pools to be divided by a glazed wall (which the option to visually screen using blinds when privacy is required). The pools both have outward aspect to a new landscaped area to the west. Changing facilities are located to the east and run parallel with the pools.

Dry sport facilities are located at first floor level. The sports hall is stacked above the cafe and training pool, whilst the 25m pool has a double height volume and can be viewed from the first floor circulation gallery.

A series of changing rooms and multi-purpose studios are configured as a linear block to the east, stacked above the ground floor wet changing facilities.

The 150 station fitness gym is located at second floor level, with dedicated changing rooms located adjacent.

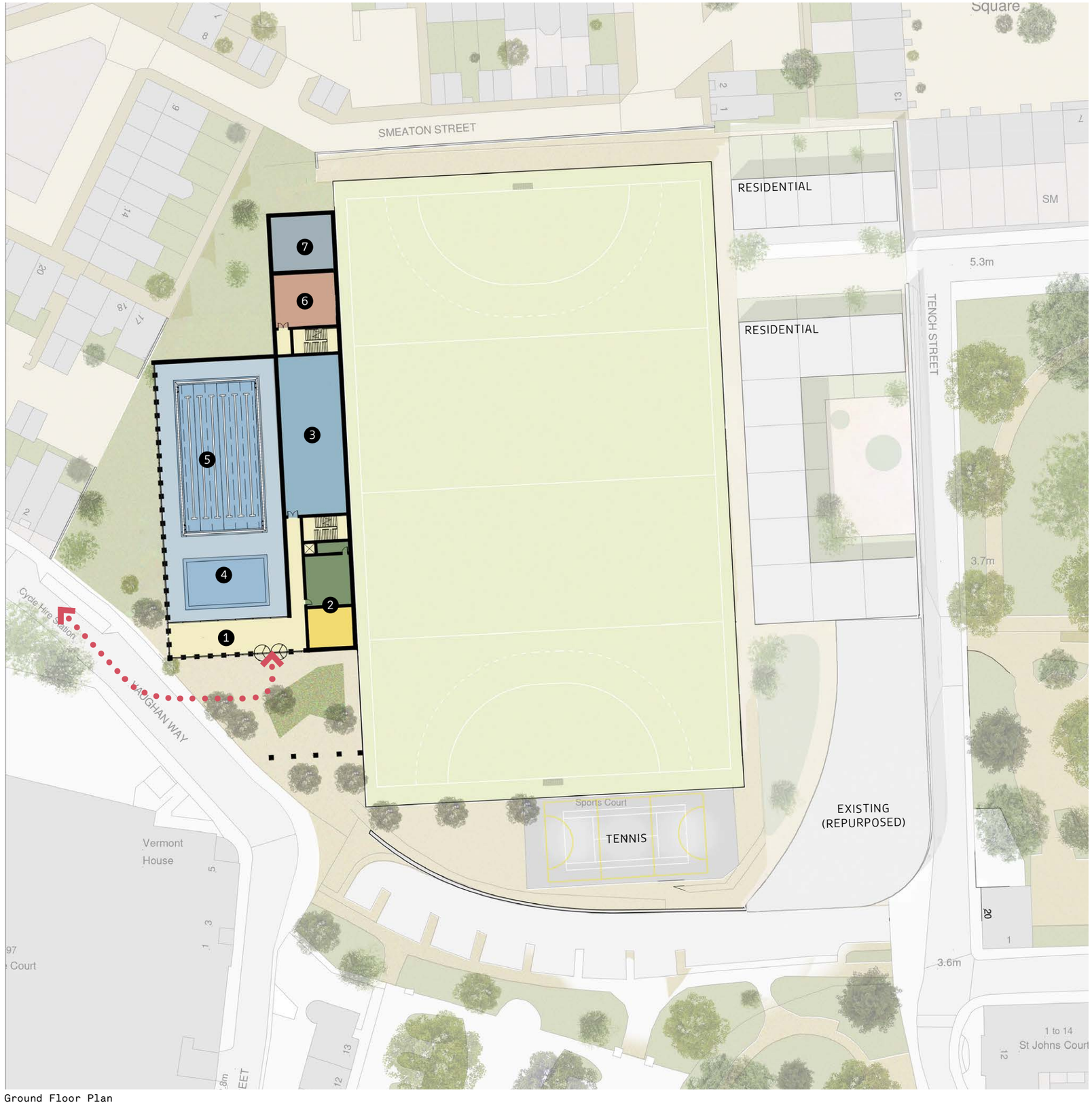
The key challenge with Site 1 is the proximity to the adjacent residential buildings. The stacked nature of the design option is necessary in order to accommodate the brief with the tight site area. As a result the building massing become large and will likely be a challenge from a planning approval standpoint due to its proximity. The layout of the building also results in leisure centre functions overlooking the residential homes and vice versa which may cause privacy, as well as light spill concerns.

The ground floor plan opposite also illustrates the opportunity to use part of the site for a small quantum of residential development, or for other development opportunities.

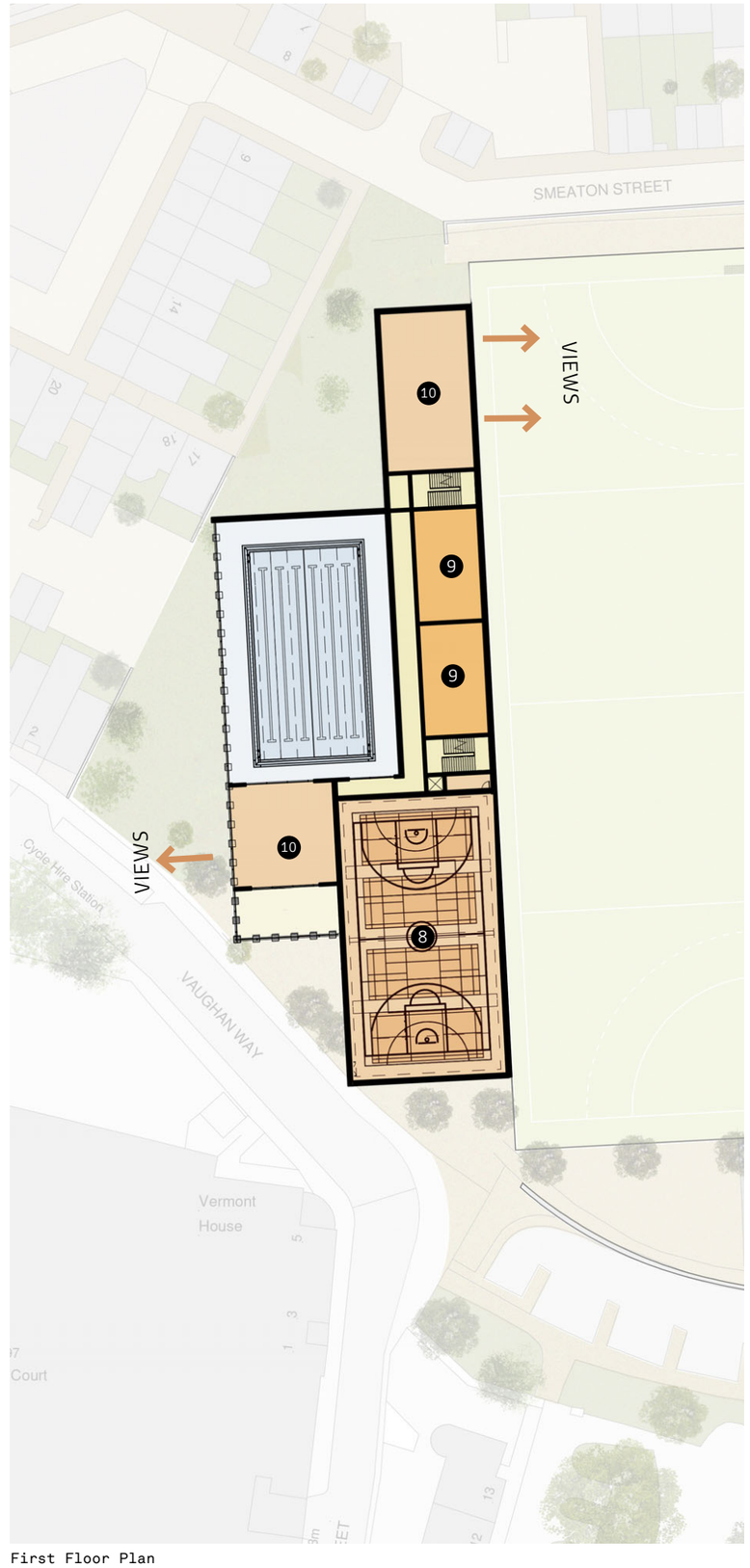
It is proposed that the historic warehouse building that currently accommodates the John Orwell Leisure Centre fitness suite is repurposed with a complimentary community function to sit alongside the leisure centre.

Site 1 - Design Option O1				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5496	£20,335,200	£21,434,400	£22,533,600
External Works		£659,520	£851,880	£1,027,752
Total Building		**£20,994,720**	**£22,286,280**	**£23,561,352**
Contingency / Design Reserve 10%		£2,099,472	£2,228,628	£2,356,135
Total Construction Budget		**£23,094,192**	**£24,514,908**	**£25,917,487**

High Level Net Construction Cost Schedule



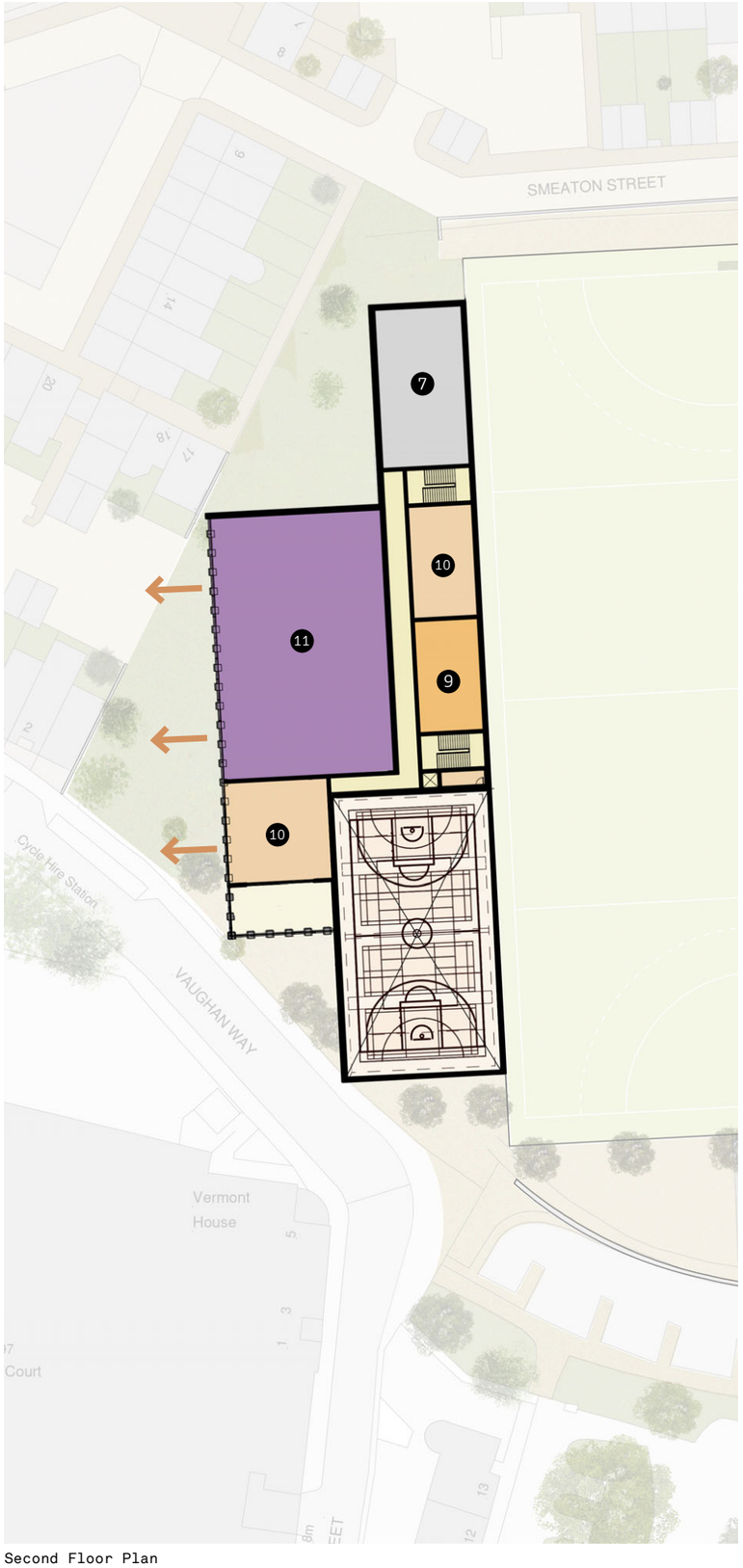
Ground Floor Plan



First Floor Plan

N

4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 1 OPTION 2



Second Floor Plan

1 ENTRANCE
2 RECEPTION / CAFE
3 WET CHANGE
4 TRAINING POOL
5 6 LANE 25M POOL
6 OUTDOOR CHANGE
7 PLANT
8 SPORTS HALL
9 DRY CHANGING
10 STUDIO
11 FITNESS SUITE

Level		Area m2
Basement		
	Water Filtration Plant Room	400
Ground Floor	Ground Floor	
	Café	80
	Servery	30
	Kitchen	20
	Reception	40
	Admin	10
	Staff Room	20
	IT	10
	Foyer	100
	W/Cs (inc changing places facility)	90
	Bin Store	35
	Plant Room (Substation)	25
	Store Room	10
	Wet Change (inc group change)	290
	Pool Store	60
	6 lane pool 13m x 25m + pool surround	540
	Teaching pool 13m x 16m + pool surround	360
	Soft Play	120
	Creche	100
	Outdoor pitch changing	81
	Outdoor pitch spectator seating	42
Upper Floors		
	Studio 1	200
	Studio 2	100
	Studio 3	150
	Spin Studio	124
	Studio Stores	35
	General Store	20
	Dry Change	300
	W/Cs	50
	4 Court sports hall 34.5m x 20m	690
	Sports hall stores	70
	Fitness suite	650
	GIA Footprint	**4852**
	Circulation at 10%	485
	Air Handling Plant at 10%	485
	Total GIA	**5822**

Accommodation Schedule

SITE 1 OPTION 2

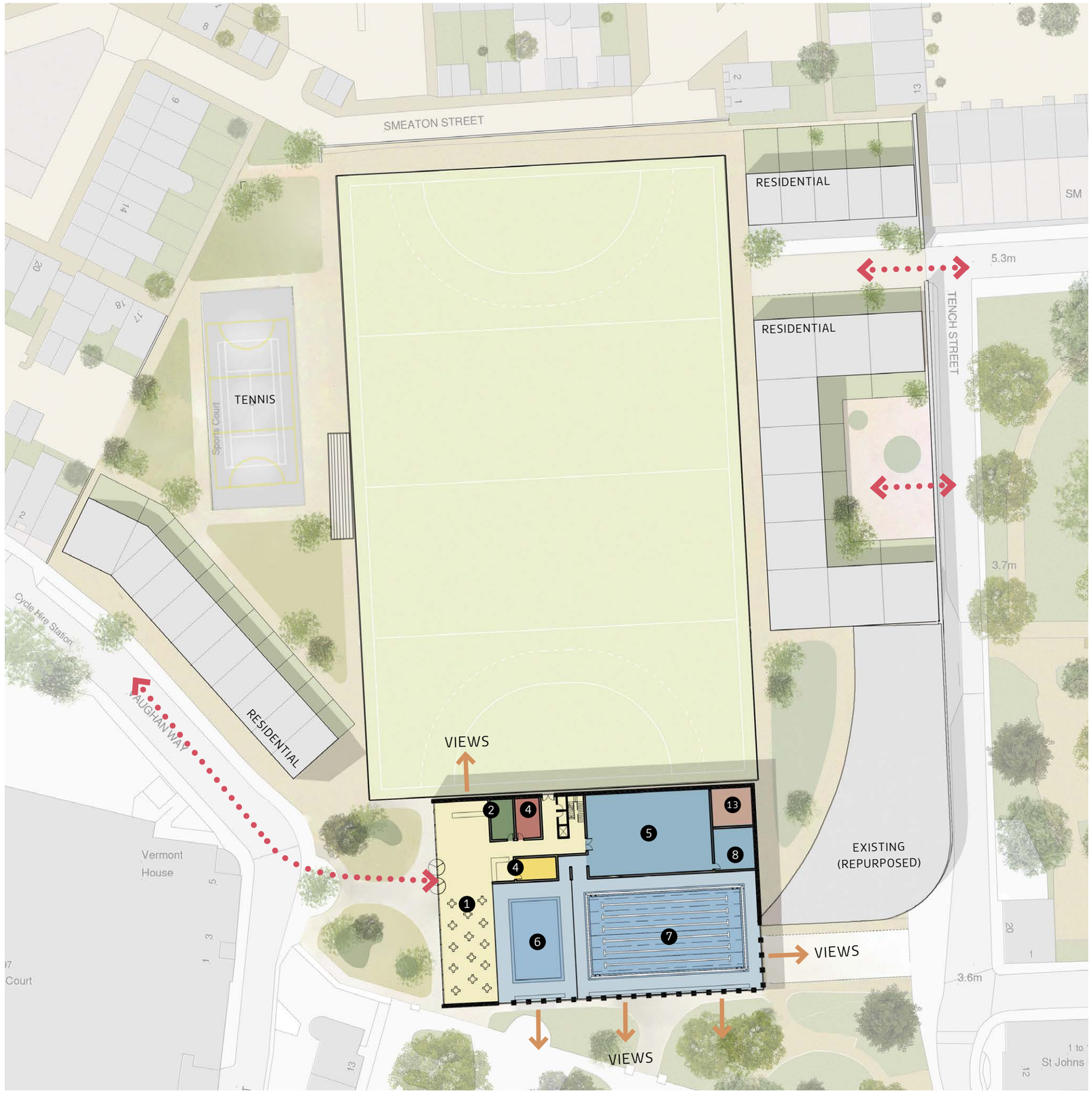
This open bears many similarities to Site 1 Option 1. In an attempt to alleviate the proximity to the adjacent residential properties the sports hall has been rotated by 90 degrees, which has allowed the building footprint to elongate and move south, which also allows additional facilities to be incorporated. However, this only has a marginal benefit in terms of massing proximity to the adjacent residential

This configuration allows the creation of a partial triple height space to the entrance / cafe which provides a more impressive arrival experience. This layout positions two of the multipurpose studios to overlook the cafe, which provides an additional layer of animation to both the cafe and the Vaughan Way approach.

Overall, this option provides an increased number of multipurpose studios which provides the leisure centre with additional flexibility.

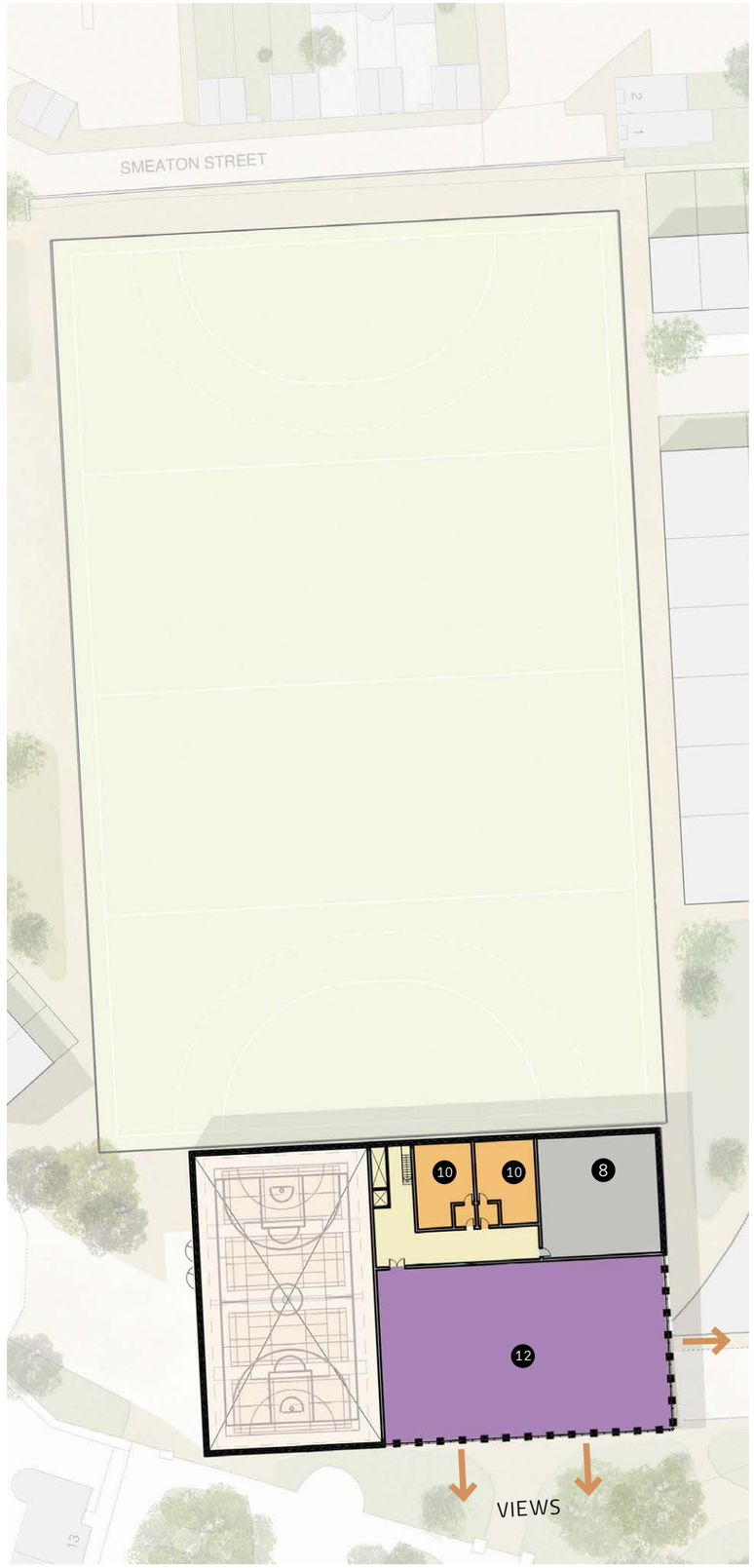
Site 1 - Design Option 02				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5822	£21,542,880	£22,707,360	£23,871,840
External Works		£698,688	£902,472	£1,088,789
Total Building		**£22,241,568**	**£23,609,832**	**£24,960,629**
Contingency / Design Reserve 10%		£2,224,157	£2,360,983	£2,496,063
Total Construction Budget		**£24,465,725**	**£25,970,815**	**£27,456,692**

High Level Net Construction Cost Schedule



Ground Floor Plan

First Floor Plan



Second Floor Plan

1 ENTRANCE
2 RECEPTION
3 CAFE SERVERY
4 COMMUNITY ROOM
5 WET CHANGE
6 TRAINING POOL
7 6 LANE 25M POOL
8 PLANT
9 SPORTS HALL
10 DRY CHANGE
11 STUDIO
12 FITNESS SUITE
13 EXTERNAL CHANGE

Level		Area m2
Basement		
	Water Filtration Plant Room	400
Ground Floor	Ground Floor	
	Café	200
	Servery	30
	Kitchen	25
	Reception	85
	Admin	25
	Staff Room	20
	IT	20
	Foyer	85
	W/Cs (inc changing places facility)	90
	Bin Store	35
	Plant Room (Substation)	25
	Store Room	10
	Wet Change (inc group change)	300
	Pool Store	60
	6 lane pool 13m x 25m + pool surround	540
	Teaching pool 13m x 16m + pool surround	360
	Soft Play	100
	Creche	80
Upper Floors		
	Studio 1	70
	Studio 2	70
	Studio Stores	35
	General Store	20
	Dry Change	130
	W/Cs	50
	4 Court sports hall 34.5m x 20m	690
	Sports hall stores	70
	Fitness suite	650
	GIA Footprint	**4275**
	Circulation at 10%	428
	Air Handling Plant at 10%	428
	Total GIA	**5130**

Accommodation Schedule

4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 2 OPTION 1

SITE 2 OPTION 1

The building is configured as more of a consolidated square-rectangular footprint when compared to the Site 1 options, and orientated east-west and parallel to the southern edge of the hockey pitch.

The entrance and cafe spaces are positioned to the west of the building and, similarly to the Site 1 options, provide a focal point on arrival from Vaughan Way. On entering the building, users will have views directly into the training pool from the cafe, which provides parents with the ability to spectate as their children learn to swim.

The 25m pool is located adjacent to the training pool. There is potential for the pools to be divided by a glazed wall. The pools both have outward aspect onto a new landscaped area to the south and west, which helps to animate this important public approach to the building. Changing facilities are located to the north and run parallel with the pools.

Dry sport facilities are located at first floor level. The sports hall is stacked above the cafe and training pool, whilst the 25m pool has a double height volume and can be viewed from the first floor circulation gallery.

A series of changing rooms and multi-purpose studios are configured as a linear block to the north, stacked above the ground floor wet changing facilities.

The 150 station fitness gym is located at second floor level, with dedicated changing rooms located adjacent.

The size of the building programme and resultant footprint would require a section of the existing southern boundary wall to be removed as well as the existing public car park to the south of the site.

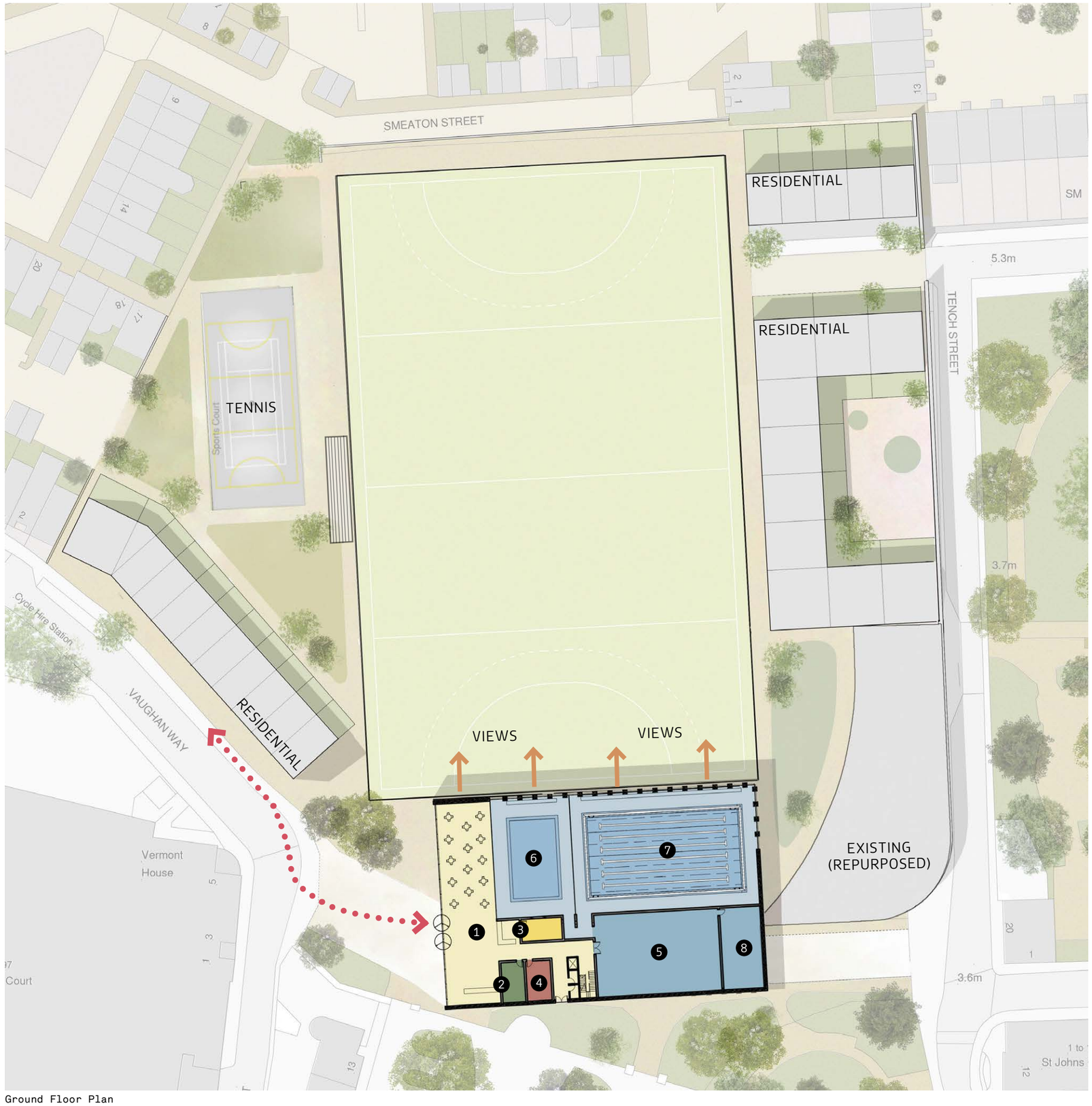
The key challenge with many of the Site 2 options is the proximity to the adjacent southern boundary wall to the Wapping Pierhead site, particularly to the south west corner. This option also has limited aspect to the hockey pitches at ground floor level, aside from the cafe, which could be considered a lost opportunity. However, animation and outlook is provided to the upper levels.

The ground floor plan opposite also illustrates the opportunity to use part of the site for a small quantum of residential development, or for other development opportunities.

It is proposed that the historic warehouse building that currently accommodates the John Orwell Leisure Centre fitness suite is repurposed with a complimentary community function to sit alongside the leisure centre.

Site 2 - Design Option O1 and 02				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5130	£18,981,888	£20,007,936	£21,033,984
Demolition and site prep		£200,000	£300,000	£400,000
External Works		£615,629	£795,187	£959,355
Total Building		**£19,797,517**	**£21,103,123**	**£22,393,339**
Contingency / Design Reserve 10%		£1,979,752	£2,110,312	£2,239,334
Total Construction Budget		**£21,777,268**	**£23,213,436**	**£24,632,673**

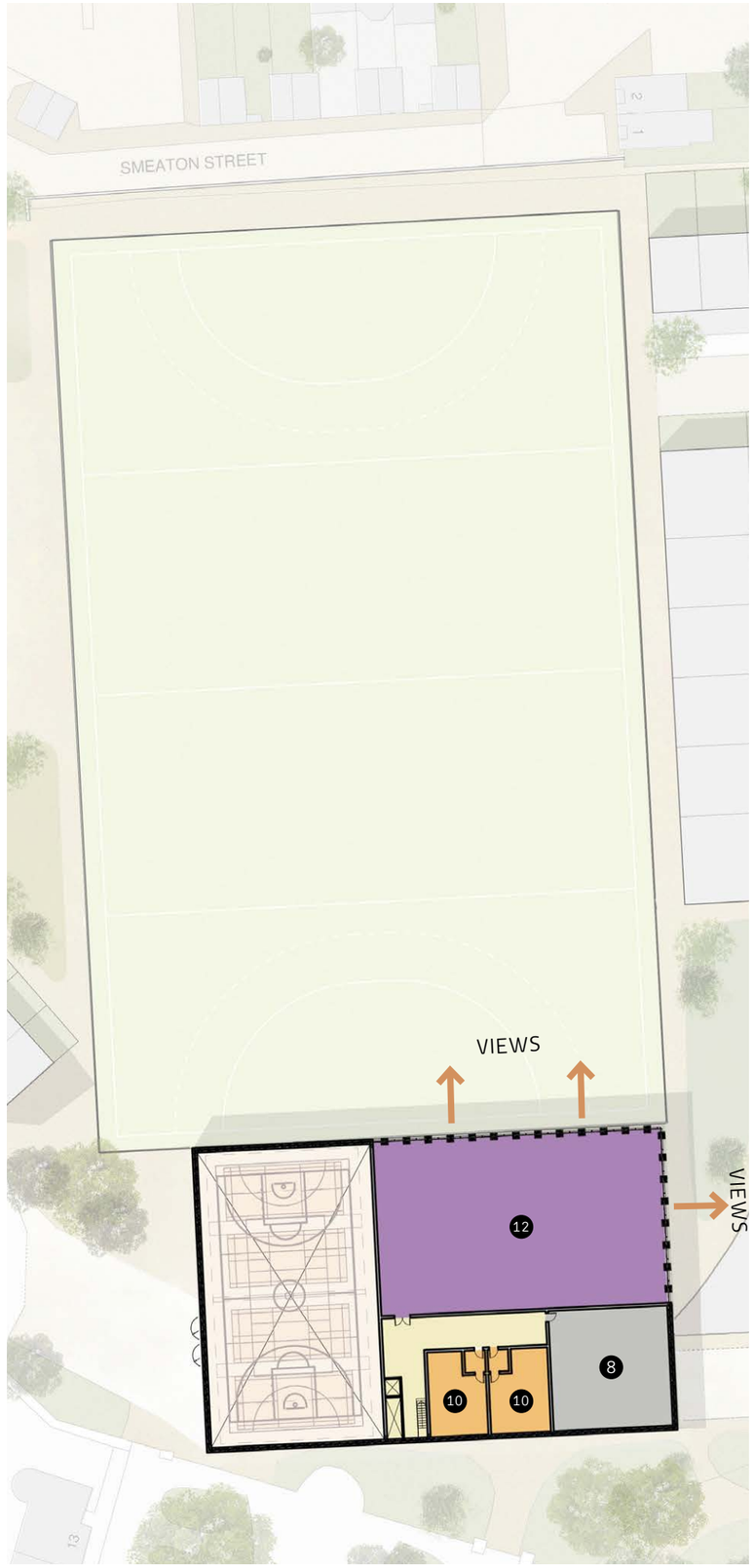
High Level Net Construction Cost Schedule



Ground Floor Plan

First Floor Plan

4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 2 OPTION 2



Second Floor Plan

1 ENTRANCE
2 RECEPTION
3 CAFE SERVERY
4 COMMUNITY ROOM
5 WET CHANGE
6 TRAINING POOL
7 6 LANE 25M POOL
8 PLANT
9 SPORTS HALL
10 DRY CHANGE
11 STUDIO
12 FITNESS SUITE

Level		Area m2
Basement		
	Water Filtration Plant Room	400
Ground Floor	Ground Floor	
	Café	200
	Servery	30
	Kitchen	25
	Reception	85
	Admin	25
	Staff Room	20
	IT	20
	Foyer	85
	W/Cs (inc changing places facility)	90
	Bin Store	35
	Plant Room (Substation)	25
	Store Room	10
	Wet Change (inc group change)	300
	Pool Store	60
	6 lane pool 13m x 25m + pool surround	540
	Teaching pool 13m x 16m + pool surround	360
	Soft Play	100
	Creche	80
Upper Floors		
	Studio 1	70
	Studio 2	70
	Studio Stores	35
	General Store	20
	Dry Change	130
	W/Cs	50
	4 Court sports hall 34.5m x 20m	690
	Sports hall stores	70
	Fitness suite	650
	GIA Footprint	**4275**
	Circulation at 10%	428
	Air Handling Plant at 10%	428
	Total GIA	**5130**

Accommodation Schedule

SITE 2 OPTION 2

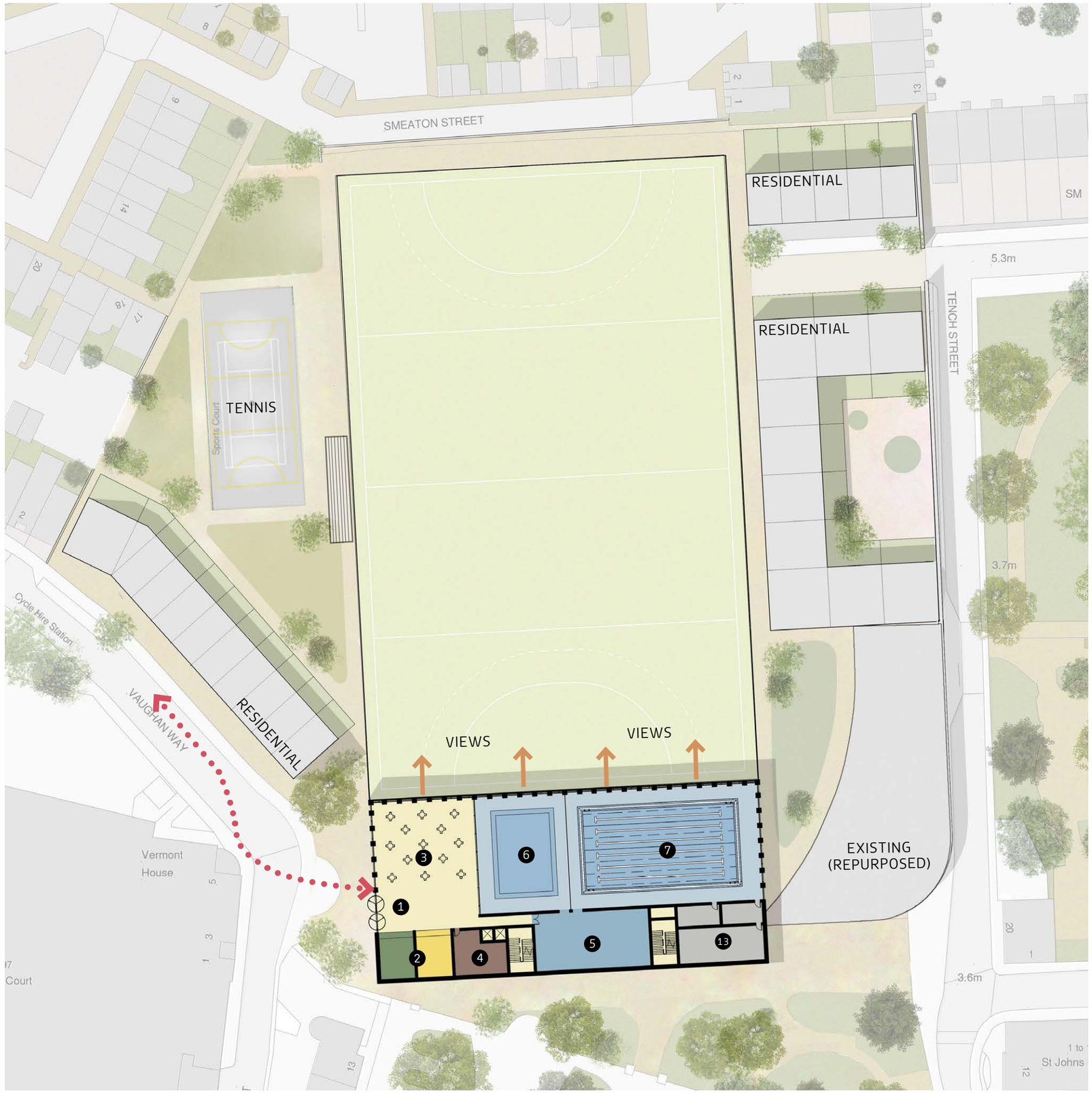
The building arrangement is similar to Site 2 Option 1, however, the accommodation is mirrored in plan to provide open aspect between the swimming pools and hockey pitch at ground floor level.

Conversely at first and second floor levels, the multi-purpose studios and fitness suite have a southerly aspect, with views back towards the riverside.

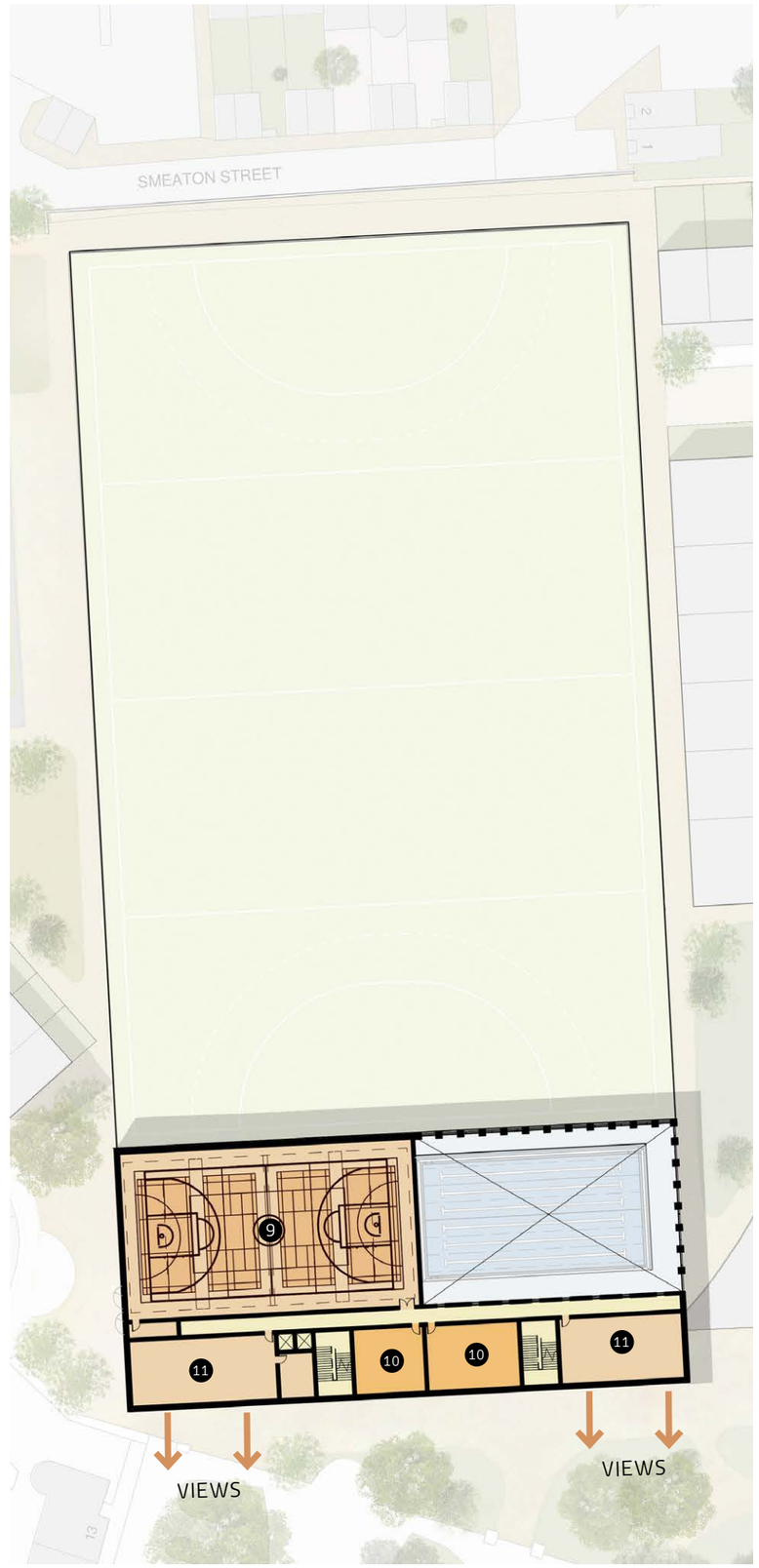
As with the preceding Site 2 Option 1, there are proximity concerns between the south-west corner of the building and the Wapping Pierhead development existing wall.

Site 2 - Design Option 01 and 02				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5130	£18,981,888	£20,007,936	£21,033,984
Demolition and site prep		£200,000	£300,000	£400,000
External Works		£615,629	£795,187	£959,355
Total Building		**£19,797,517**	**£21,103,123**	**£22,393,339**
Contingency / Design Reserve 10%		£1,979,752	£2,110,312	£2,239,334
Total Construction Budget		**£21,777,268**	**£23,213,436**	**£24,632,673**

High Level Net Construction Cost Schedule

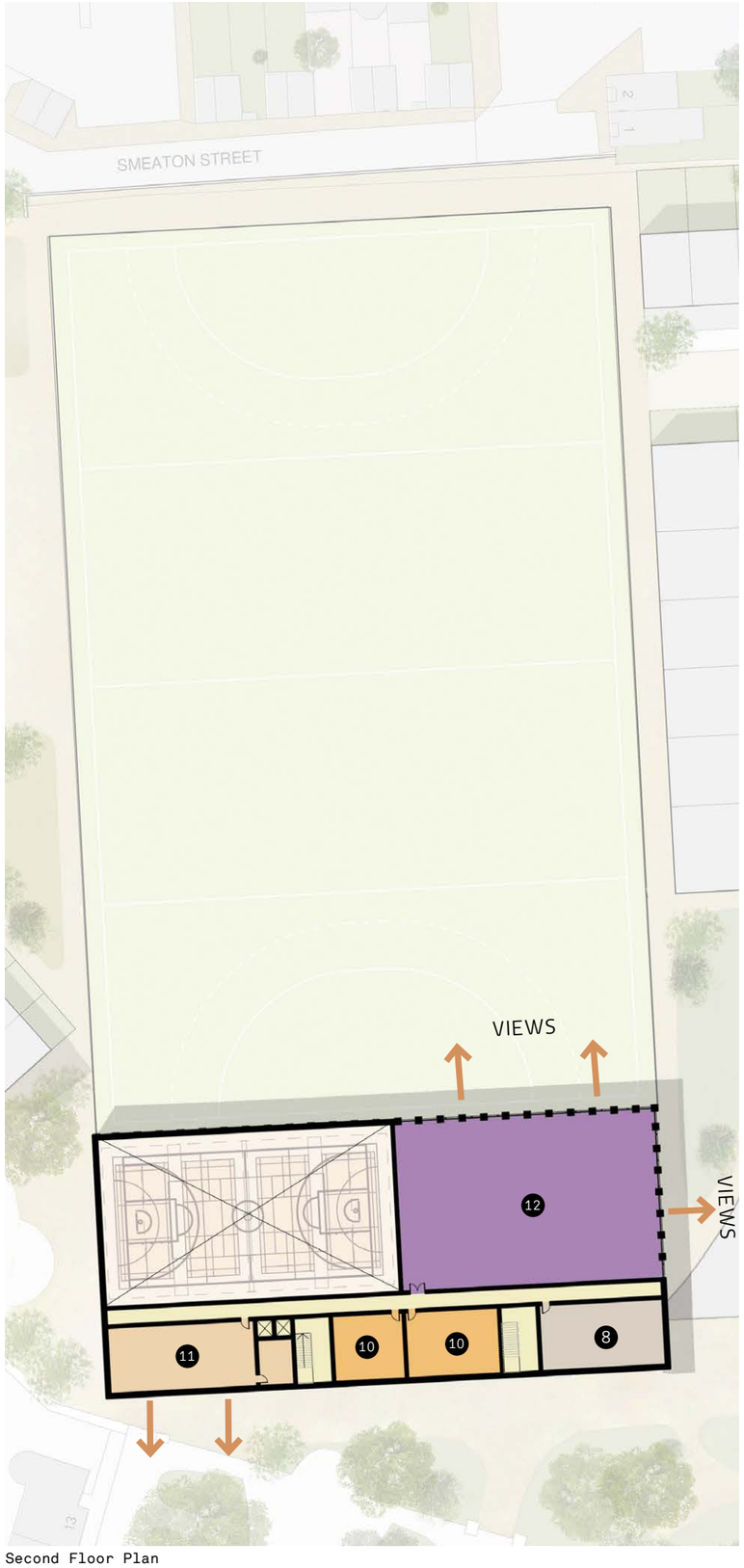


Ground Floor Plan



First Floor Plan

4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 2 OPTION 3



Second Floor Plan

1 ENTRANCE
2 RECEPTION
3 CAFE SERVERY
4 COMMUNITY ROOM
5 WET CHANGE
6 TRAINING POOL
7 6 LANE 25M POOL
8 PLANT
9 SPORTS HALL
10 DRY CHANGE
11 STUDIO
12 FITNESS SUITE

Level		Area m2
Basement		
	Water Filtration Plant Room	400
Ground Floor	Ground Floor	
	Café	300
	Servery	30
	Kitchen	45
	Reception	65
	Admin	20
	Staff Room	20
	IT	10
	Foyer	135
	W/Cs (inc changing places facility)	90
	Bin Store	35
	Plant Room (Substation)	25
	Store Room	10
	Wet Change (inc group change)	185
	Pool Store	60
	6 lane pool 13m x 25m + pool surround	540
	Teaching pool 13m x 16m + pool surround	360
	Soft Play	120
	Creche	100
Upper Floors		
	Studio 1	105
	Studio 2	112
	Spin Studio	105
	Studio Stores	35
	General Store	20
	Dry Change	300
	W/Cs	50
	4 Court sports hall 34.5m x 20m	690
	Sports hall stores	70
	Fitness suite	650
	GIA Footprint	**4687**
	Circulation at 10%	469
	Air Handling Plant at 10%	469
	Total GIA	**5624**

Accommodation Schedule

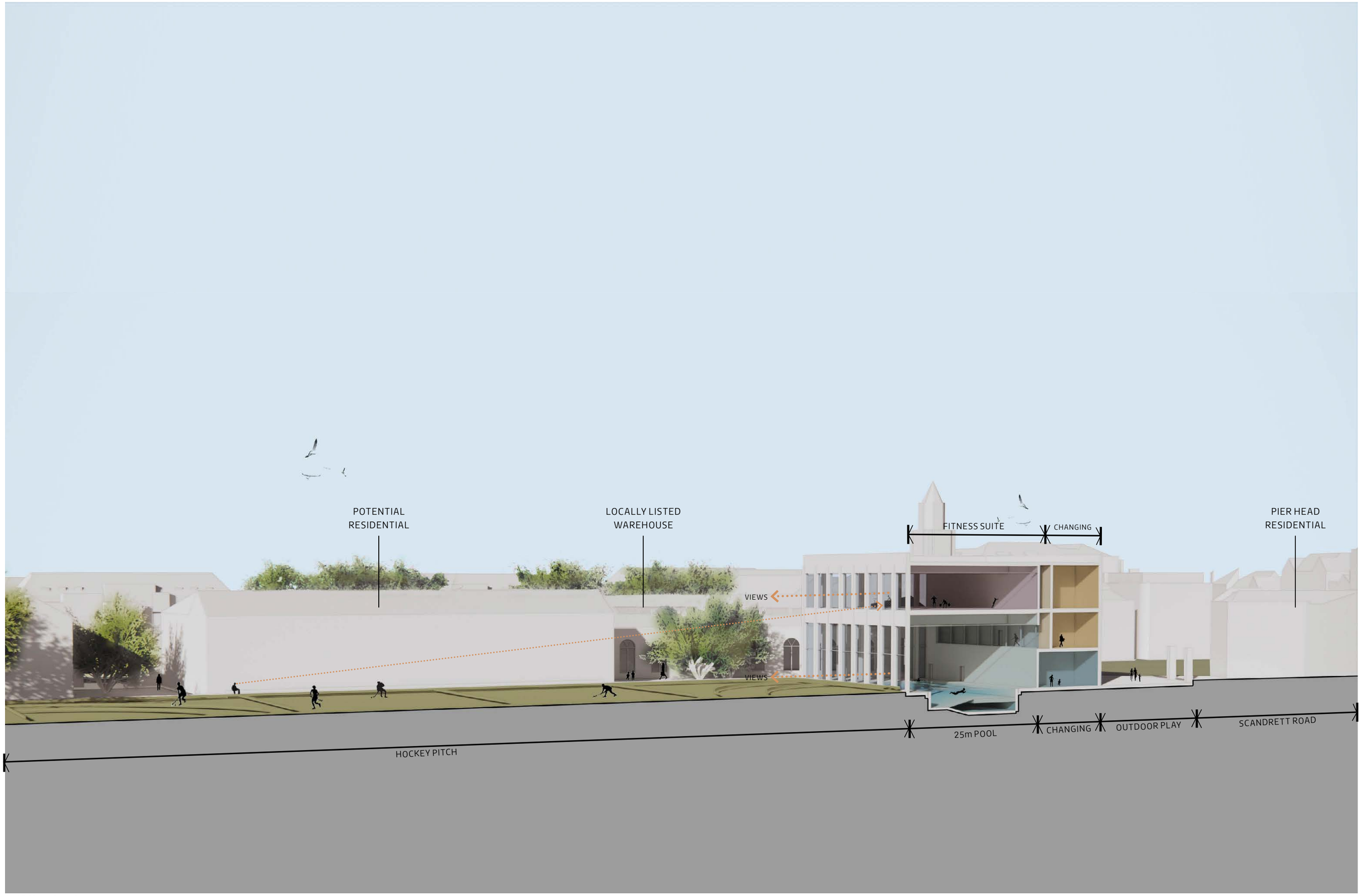
SITE 2 OPTION 3

In an attempt to alleviate the proximity to the southern boundary wall, the first floor sports hall has been rotated. This allows the building footprint width to narrow and for the building to elongate. The principles of the building arrangement otherwise remain similar to Site 2 Option 2.

Despite this approach, only a marginal increase in proximity has been achieved. However, a larger building area is created with an increased number of facilities.

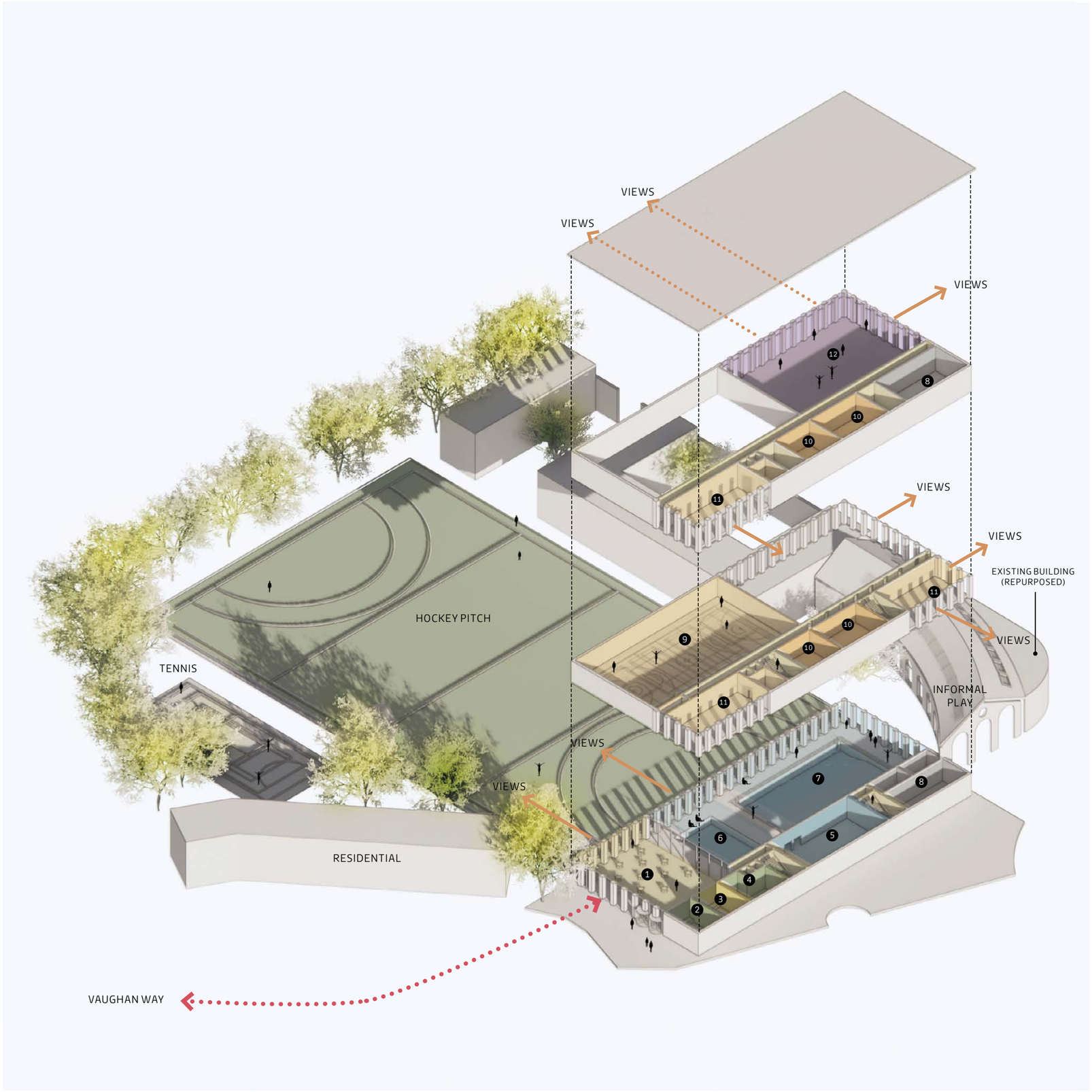
Site 2 - Design Option O3				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5624	£20,810,280	£21,935,160	£23,060,040
Demolition and site prep		£200,000	£300,000	£400,000
External Works		£674,928	£871,782	£1,051,763
Total Building		**£21,685,208**	**£23,106,942**	**£24,511,803**
Contingency / Design Reserve 10%		£2,168,521	£2,310,694	£2,451,180
Total Construction Budget		**£23,853,729**	**£25,417,636**	**£26,962,983**

High Level Net Construction Cost Schedule



Building Section

4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 2 OPTION 3



Exploded Axonometric Floor Plan

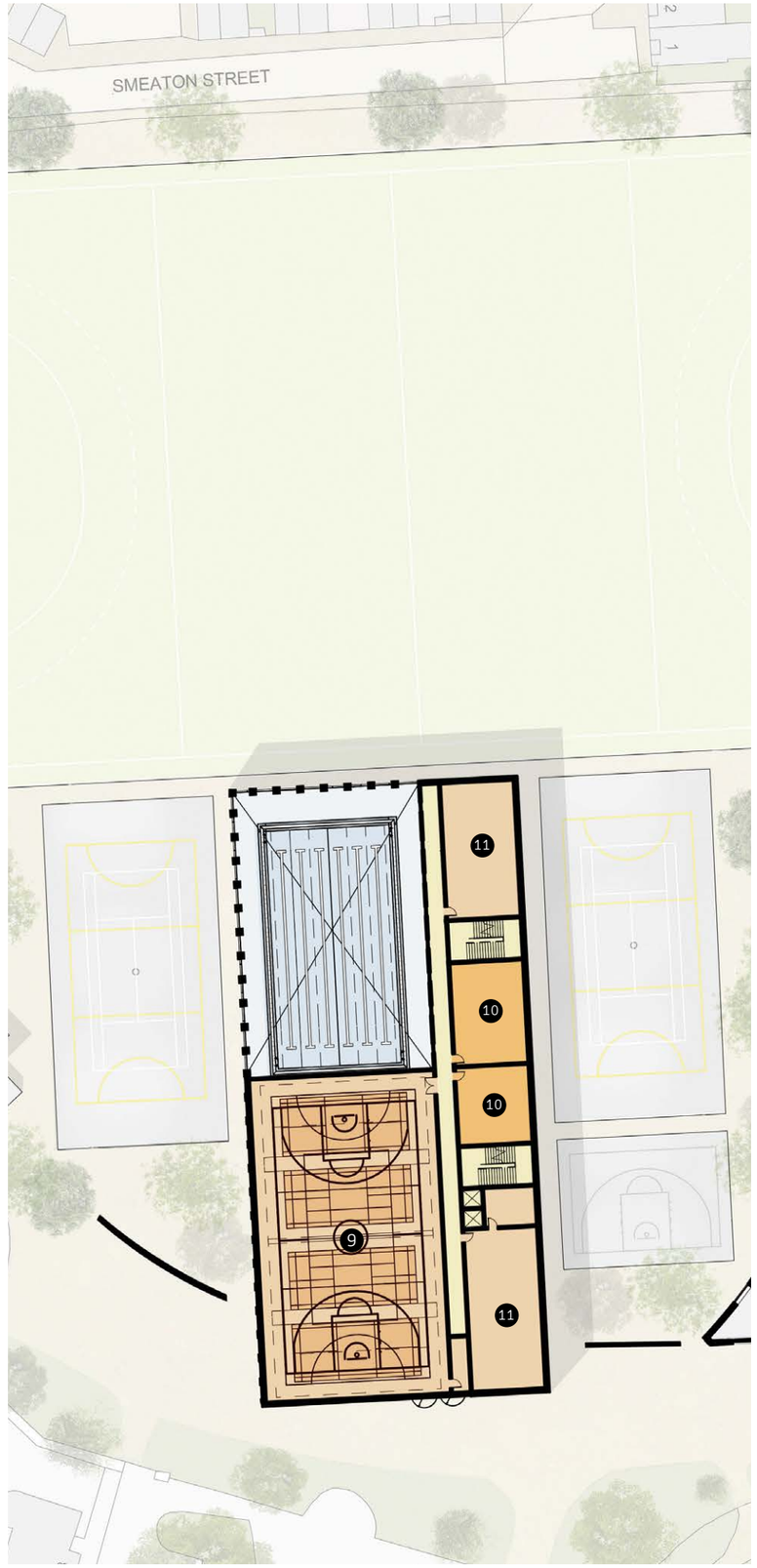
SITE 2 OPTION 3

The sectional elevation opposite illustrates the strong visual relationship the pools and fitness suite would have with the hockey pitch to the north, creating a dynamic relationship between in indoor and outdoor activities.

The adjacent exploded axonometric drawing, illustrates how the building is organised and accommodation stacked across all levels creating vantage points to all site orientations.

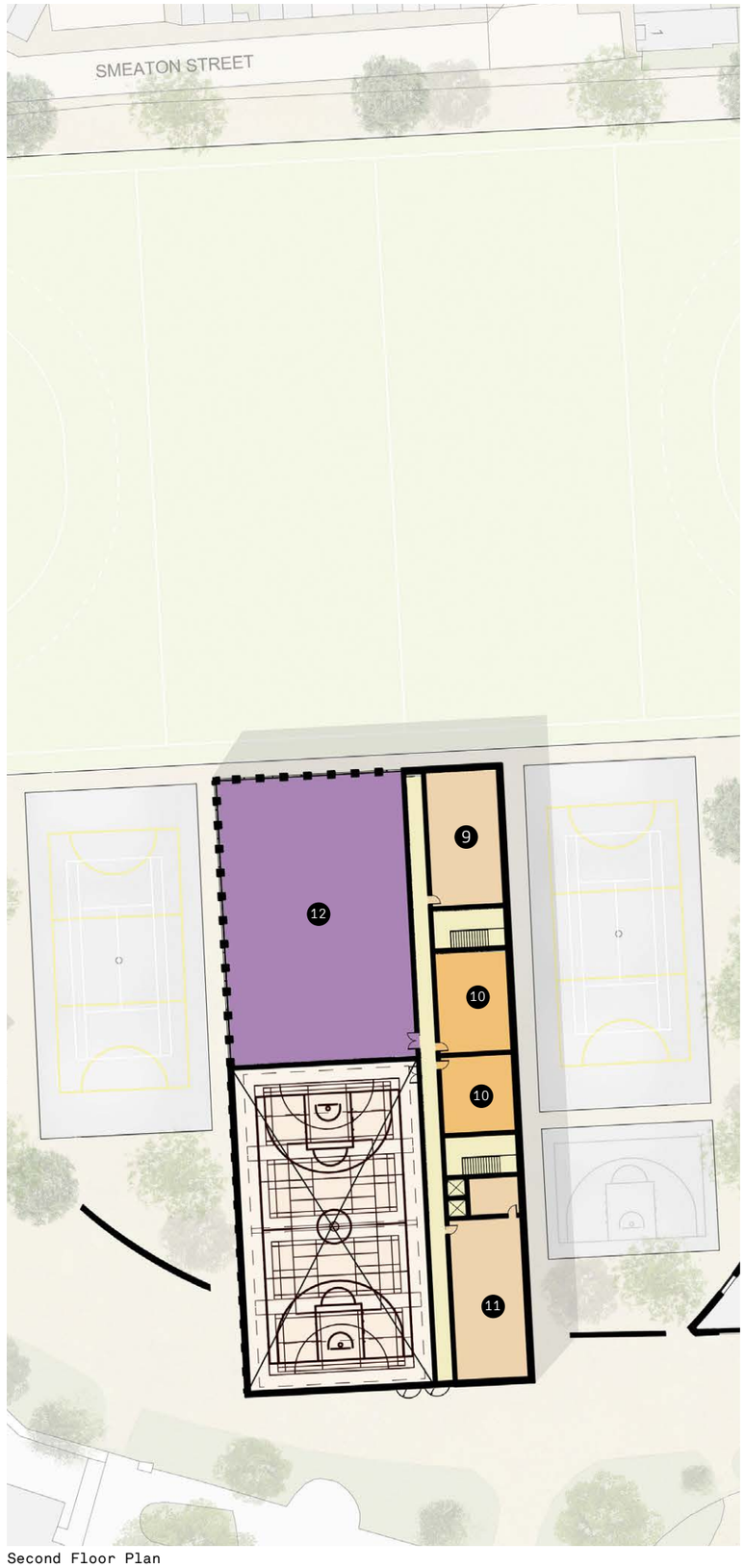
1 ENTRANCE
2 RECEPTION
3 CAFE SERVERY
4 EXTERNAL CHANGE
5 WET CHANGE
6 TRAINING POOL
7 6 LANE 25M POOL
8 PLANT
9 SPORTS HALL
10 DRY CHANGE
11 STUDIO
12 FITNESS SUITE

Ground Floor Plan



First Floor Plan

N



Second Floor Plan

1 ENTRANCE
2 RECEPTION
3 CAFE SERVERY
4 COMMUNITY ROOM
5 WET CHANGE
6 TRAINING POOL
7 6 LANE 25M POOL
8 PLANT
9 SPORTS HALL
10 DRY CHANGE
11 STUDIO
12 FITNESS SUITE

Level		Area m2
Basement		
	Water Filtration Plant Room	400
Ground Floor	Ground Floor	
	Café	300
	Servery	30
	Kitchen	45
	Reception	65
	Admin	20
	Staff Room	20
	IT	10
	Foyer	135
	W/Cs (inc changing places facility)	90
	Bin Store	35
	Plant Room (Substation)	25
	Store Room	10
	Wet Change (inc group change)	185
	Pool Store	60
	6 lane pool 13m x 25m + pool surround	540
	Teaching pool 13m x 16m + pool surround	360
	Soft Play	120
	Creche	100
Upper Floors		
	Studio 1	105
	Studio 2	112
	Spin Studio	105
	Studio Stores	35
	General Store	20
	Dry Change	300
	W/Cs	50
	4 Court sports hall 34.5m x 20m	690
	Sports hall stores	70
	Fitness suite	650
	GIA Footprint	**4687**
	Circulation at 10%	469
	Air Handling Plant at 10%	469
	Total GIA	**5624**

Accommodation Schedule

4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 2 OPTION 4

SITE 2 OPTION 4

This design option is a variation on the preceding Site 2 Option 3 approach, but rotates the building by 90 degrees to a north-south orientation, in order to alleviate the proximity to the Wapping Pierhead boundary wall. However, this approach would require the replacement of the existing hockey pitch, which would be reprovided and rotated to an east-west orientation.

This arrangement would also allow for the provision of additional external courts such as an additional tennis court (illustrated opposite), or a series of informal basketball practice courts.

The layout provides an improved relationship between the cafe and east / west approaches to the leisure centre, and has a southerly aspect onto Scandrett Street which would provide animation onto this important public thoroughfare. However, this approach would still require part of the existing site boundary wall to be demolished and would impact upon the existing parking provision.

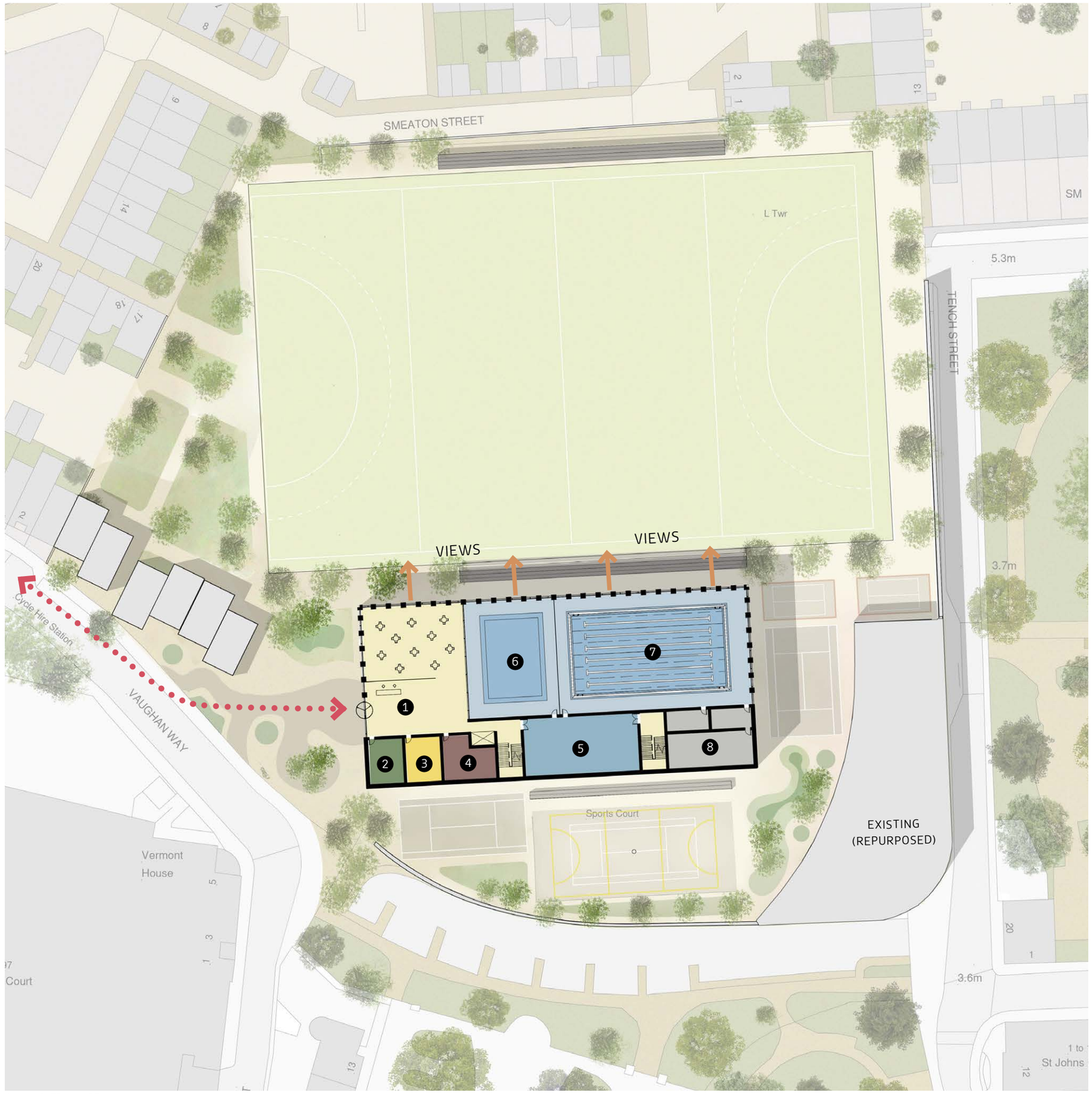
The external lighting associated with the rotated hockey pitch would require further review to ensure no adverse impacts on the adjacent residential buildings.

Site 2 - Design Option O4				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5624	£20,810,280	£21,935,160	£23,060,040
Demolition and site prep		£200,000	£300,000	£400,000
External Works		£674,928	£871,782	£1,051,763
External Pitches		£1,000,000	£1,200,000	£1,400,000
Total Building		**£22,685,208**	**£24,306,942**	**£25,911,803**
Contingency / Design Reserve 10%		£2,268,521	£2,430,694	£2,591,180
Total Construction Budget		**£24,953,729**	**£26,737,636**	**£28,502,983**

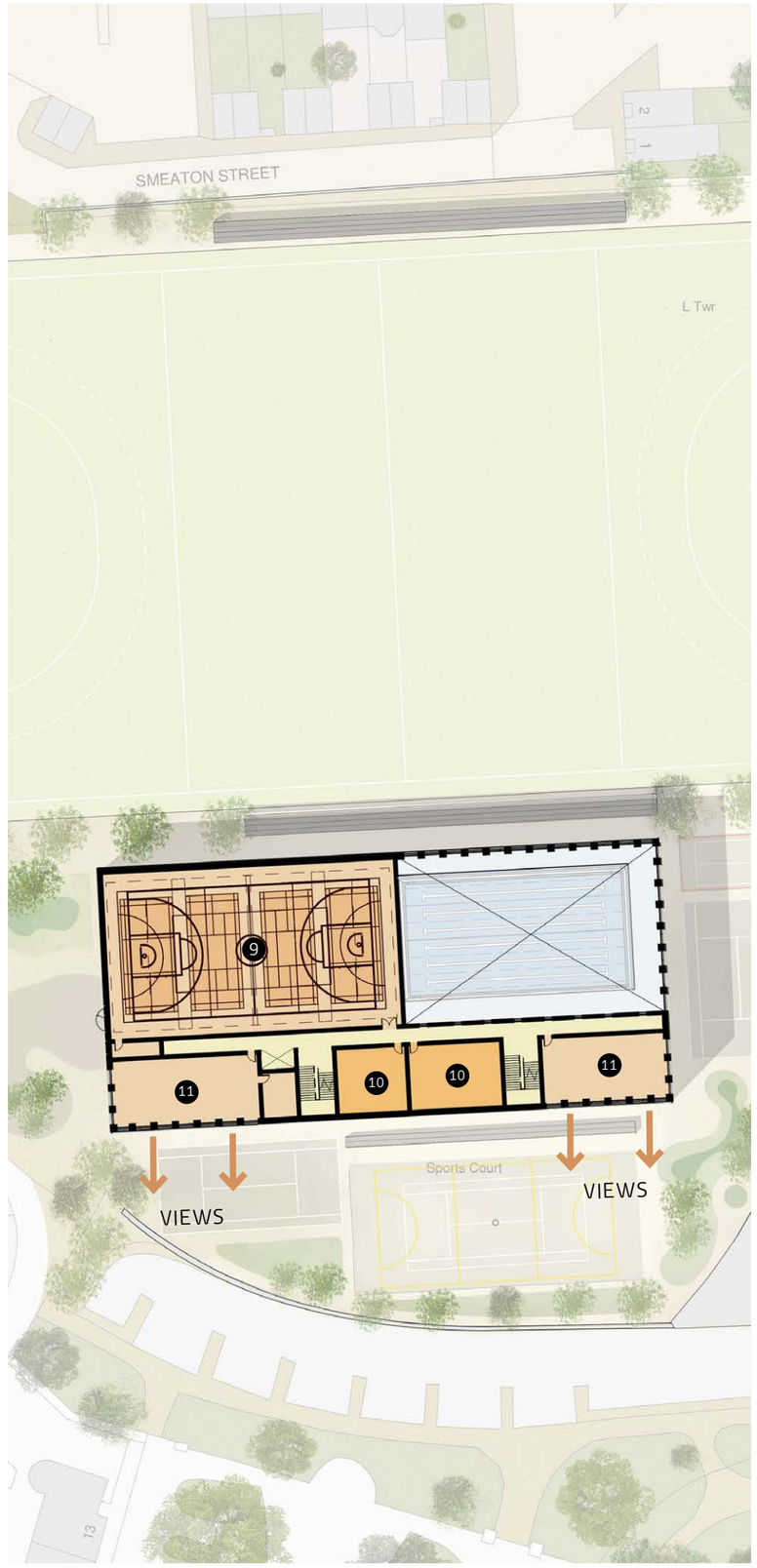
High Level Net Construction Cost Schedule

Building Section AA

Building Section BB

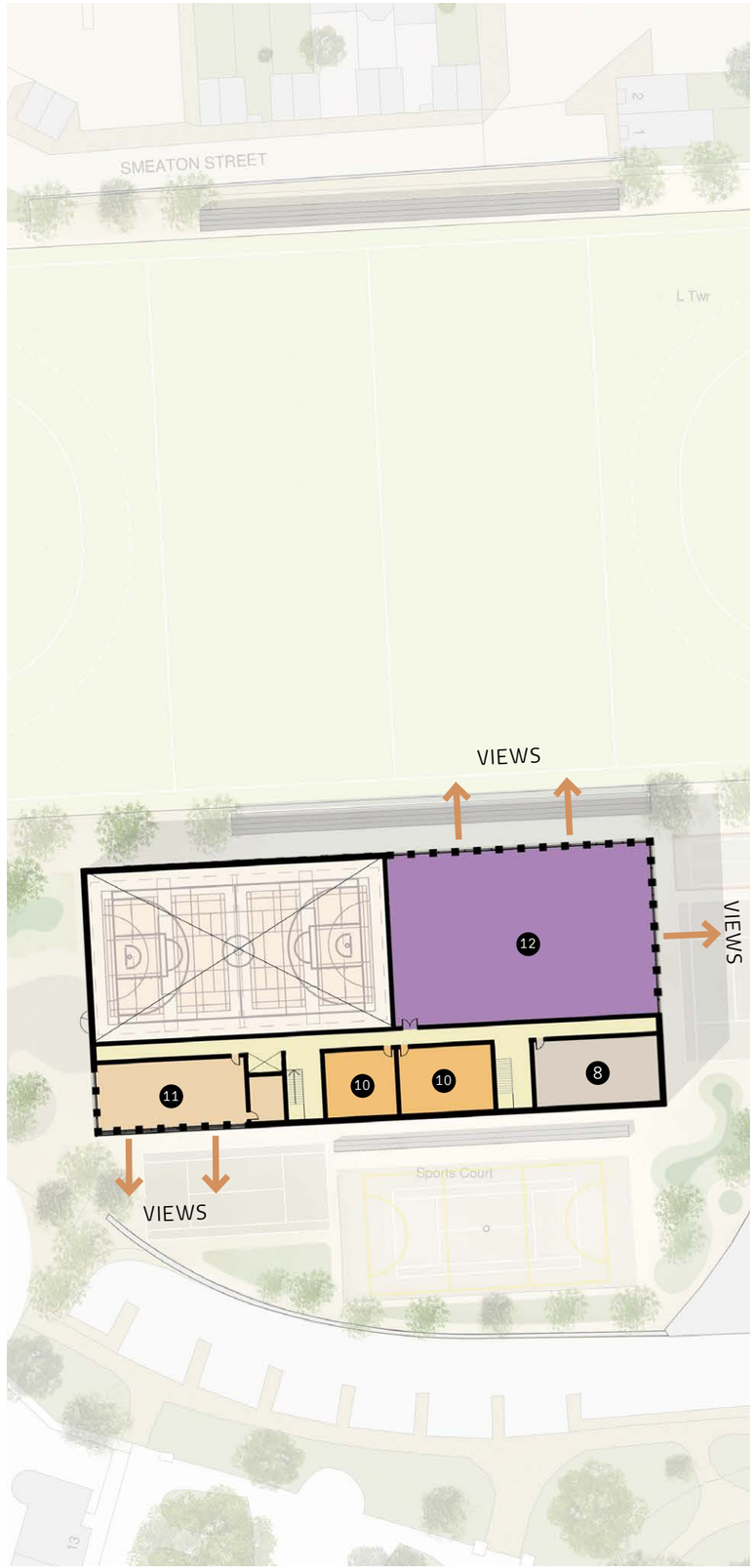


Ground Floor Plan



First Floor Plan

N



Second Floor Plan

1 ENTRANCE
2 RECEPTION
3 CAFE SERVERY
4 COMMUNITY ROOM
5 WET CHANGE
6 TRAINING POOL
7 6 LANE 25M POOL
8 PLANT
9 SPORTS HALL
10 DRY CHANGE
11 STUDIO
12 FITNESS SUITE

Level		Area m2
Basement		
	Water Filtration Plant Room	400
Ground Floor	Ground Floor	
	Café	300
	Servery	30
	Kitchen	45
	Reception	65
	Admin	20
	Staff Room	20
	IT	10
	Foyer	135
	W/Cs (inc changing places facility)	90
	Bin Store	35
	Plant Room (Substation)	25
	Store Room	10
	Wet Change (inc group change)	185
	Pool Store	60
	6 lane pool 13m x 25m + pool surround	540
	Teaching pool 13m x 16m + pool surround	360
	Soft Play	120
	Creche	100
	Outdoor pitch spectator seating	100
Upper Floors		
	Studio 1	105
	Studio 2	112
	Spin Studio	105
	Studio Stores	35
	General Store	20
	Dry Change	300
	W/Cs	50
	4 Court sports hall 34.5m x 20m	690
	Sports hall stores	70
	Fitness suite 150 stations	650
	GIA Footprint	**4787**
	Circulation at 10%	479
	Air Handling Plant at 10%	479
	Total GIA	**5744**

Accommodation Schedule

4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 2 OPTION 5

SITE 1 OPTION 5

This option is a variation of Site 2 Option 3. However, as with Site 2 Option 4, the hockey pitch is reorientated. The east-west orientation of the building footprint enables the entire building to be located to the north of the existing southern boundary wall, which retains this interesting heritage item but also leaves the southern car park unaffected.

The organisation of this site approach is efficient and also enables the provision of additional external practice courts for informal play.

The entrance and cafe spaces are positioned to the west of the building and provide a focal point on arrival from Vaughan Way with outlook onto the hockey pitch to the north. Upon arrival into the building users will have views directly into the training pool from the cafe, which provides parents with the ability to spectate as their children learn to swim.

The 25m pool is located to the east of the training pool. There is potential for the pools to be divided by a glazed wall (which the option to pull down the blinds when privacy is required). The pools both have outward aspect onto the hockey pitch. Changing facilities are located to the south and run parallel with the pools.

Dry sport facilities are located at first floor level. The sports hall is stacked above the cafe and training pool, whilst the 25m pool has a double height volume and can be viewed from the first floor circulation gallery.

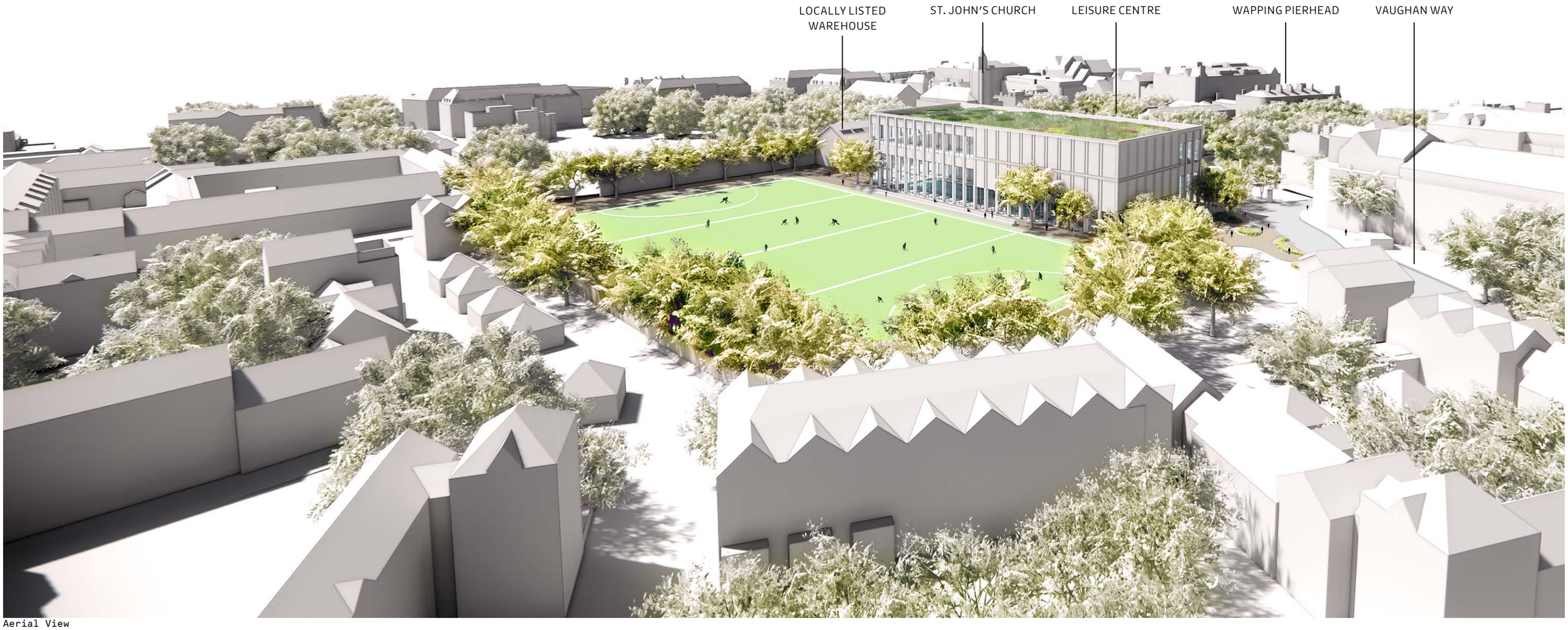
A series of changing rooms and multi-purpose studios are configured as a linear block to the south, stacked above the ground floor wet changing facilities.

The 150 station fitness gym is located at second floor level, with dedicated changing rooms located adjacent.

The external lighting associated with the rotated hockey pitch would require further review to ensure no adverse impacts on the adjacent residential buildings.

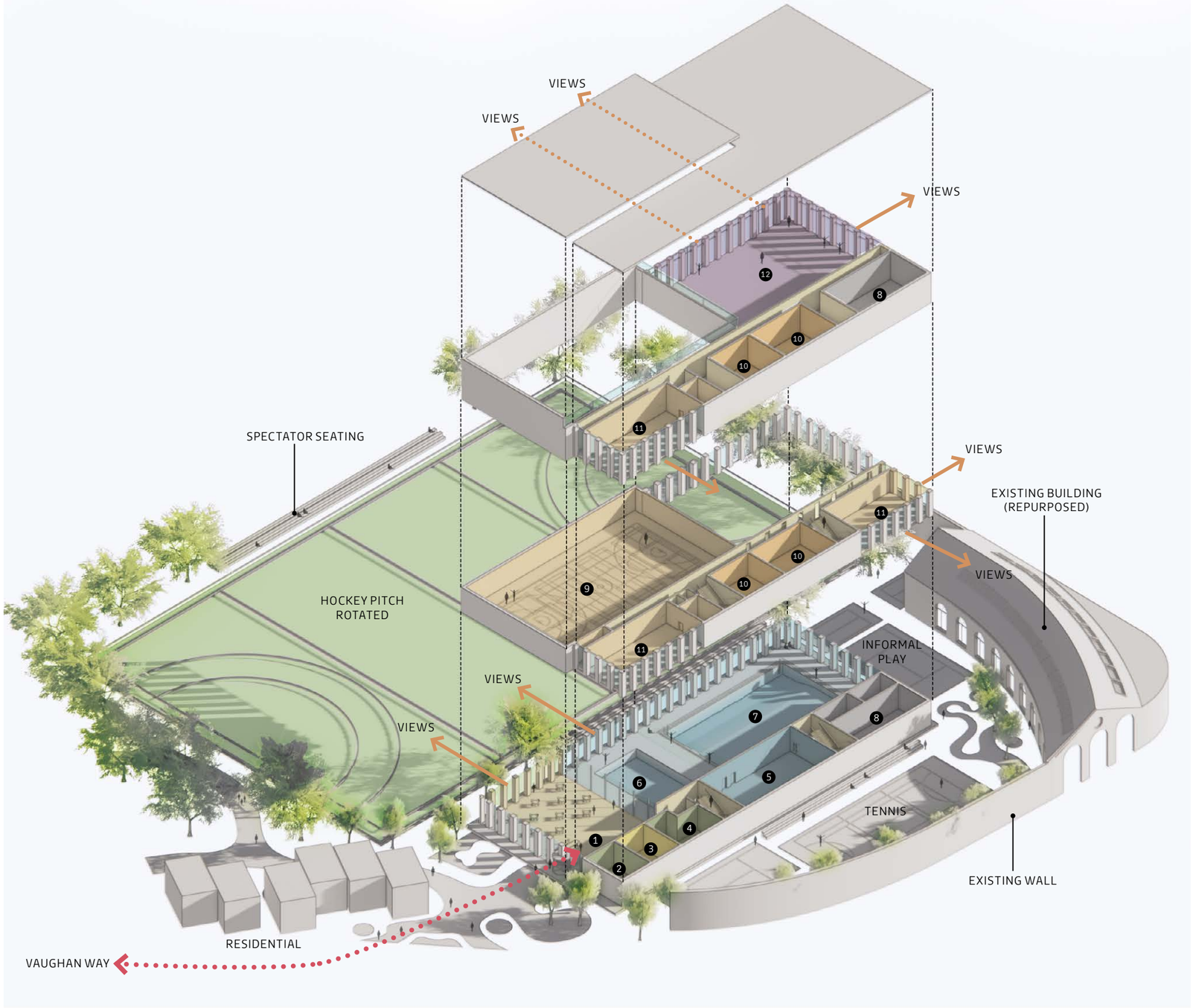
Site 2 - Design Option 05				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5744	£21,254,280	£22,403,160	£23,552,040
External Works		£689,328	£890,382	£1,074,203
External Pitches		£1,100,000	£1,300,000	£1,500,000
Total Building		**£23,043,608**	**£24,593,542**	**£26,126,243**
Contingency / Design Reserve 10%		£2,304,361	£2,459,354	£2,612,624
Total Construction Budget		**£25,347,969**	**£27,052,896**	**£28,738,867**

High Level Net Construction Cost Schedule


LOCALLY LISTED WAREHOUSE
ST. JOHN'S CHURCH
LEISURE CENTRE
WAPPING PIERHEAD
VAUGHAN WAY

Aerial View

4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 2 OPTION 5

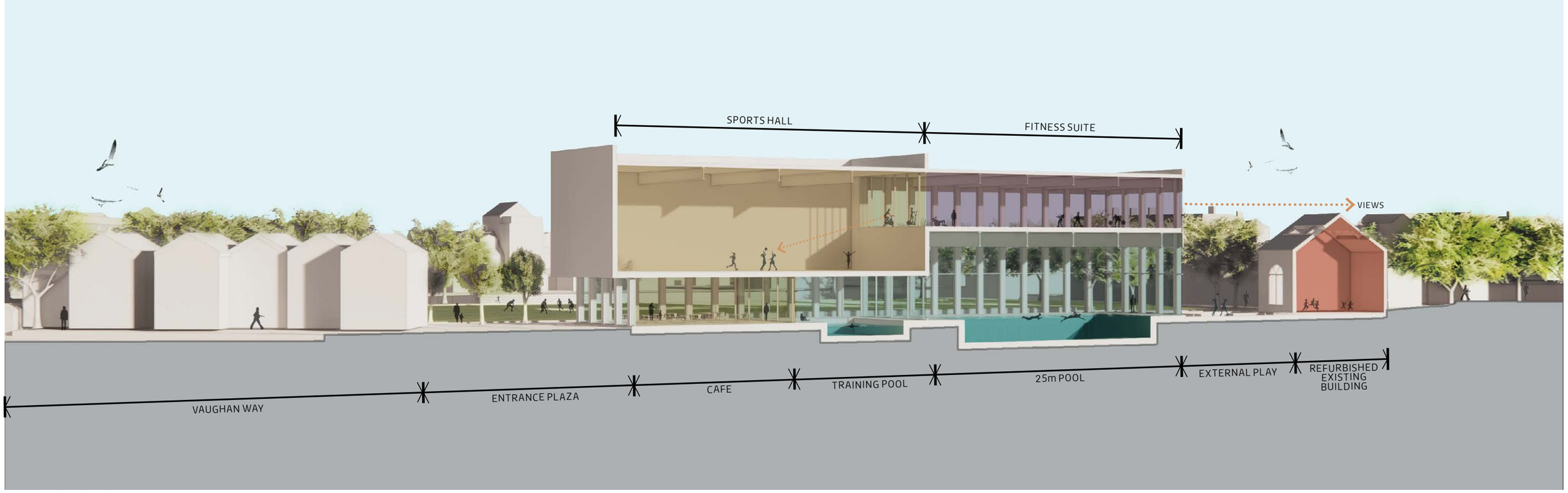


Exploded Axonometric Floor Plans

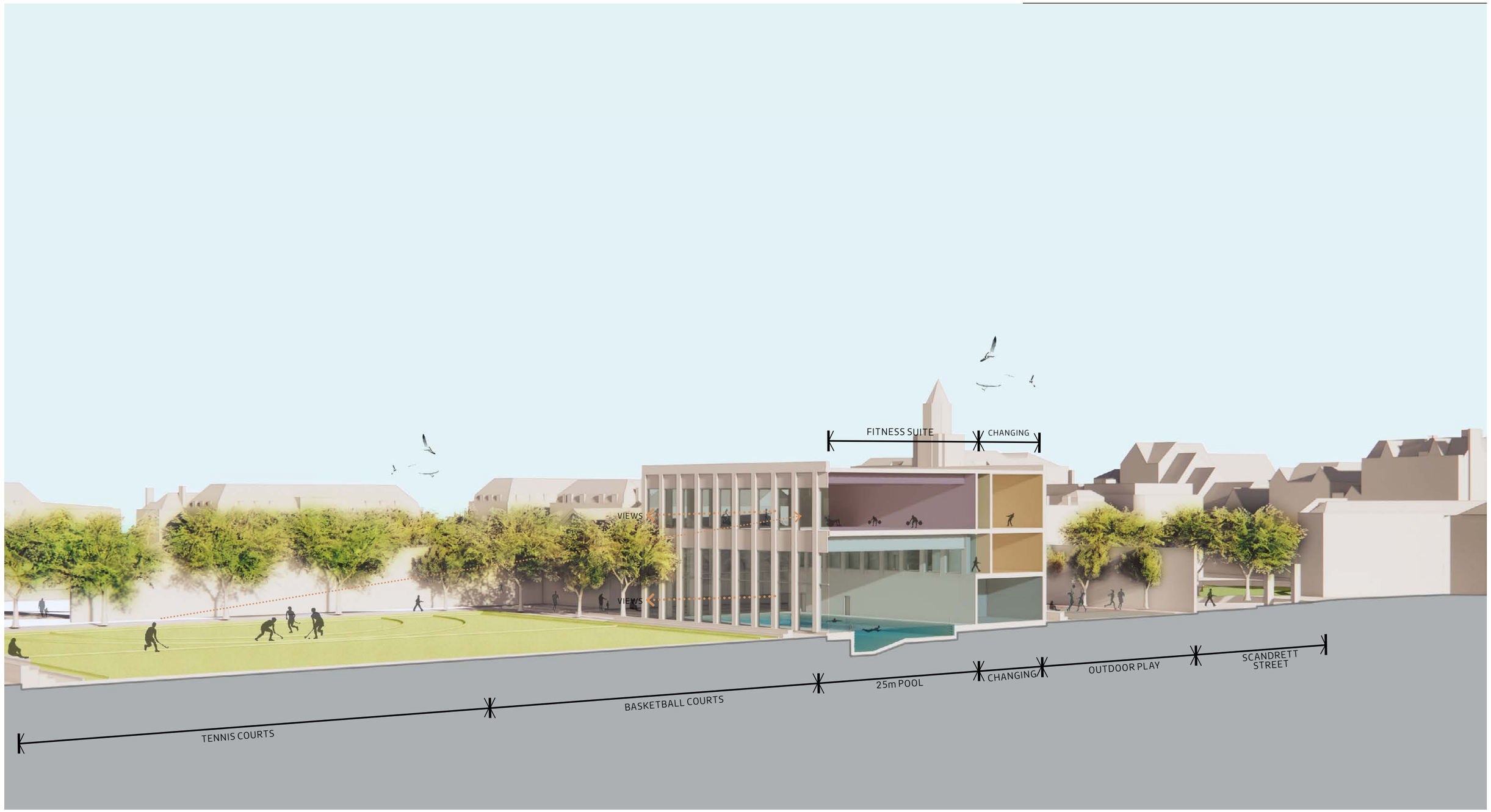
SITE 2 OPTION 5

The perspective image opposite illustrates the an indicative massing of the leisure centre and the strong visual relationship between the internal and external activity spaces. The pools and fitness suite overlook the hockey pitch to the north and creates the sense of a dynamic sports campus.

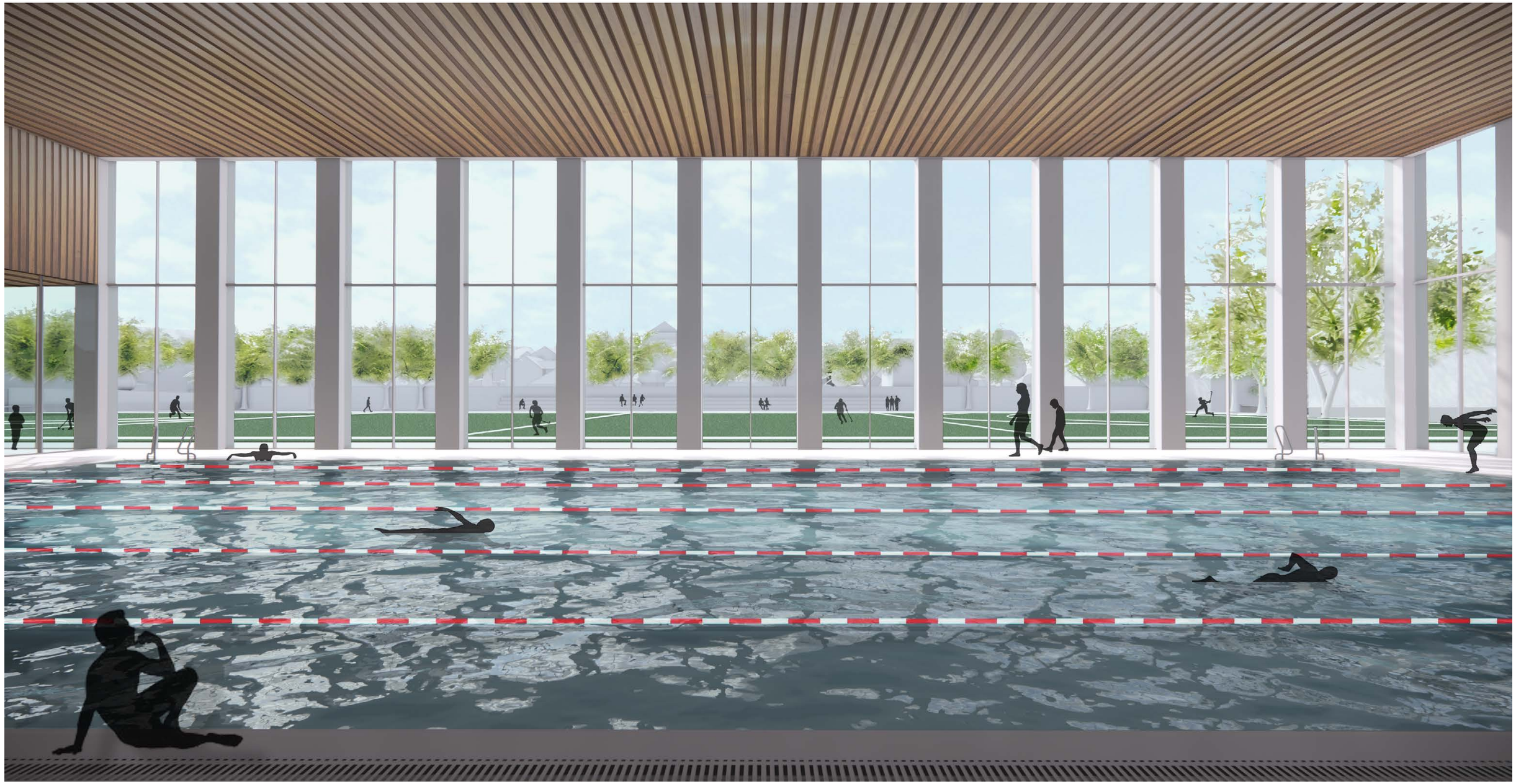
The adjacent exploded axonometric drawing, illustrates how the building is organised and accommodation stacked across all levels.



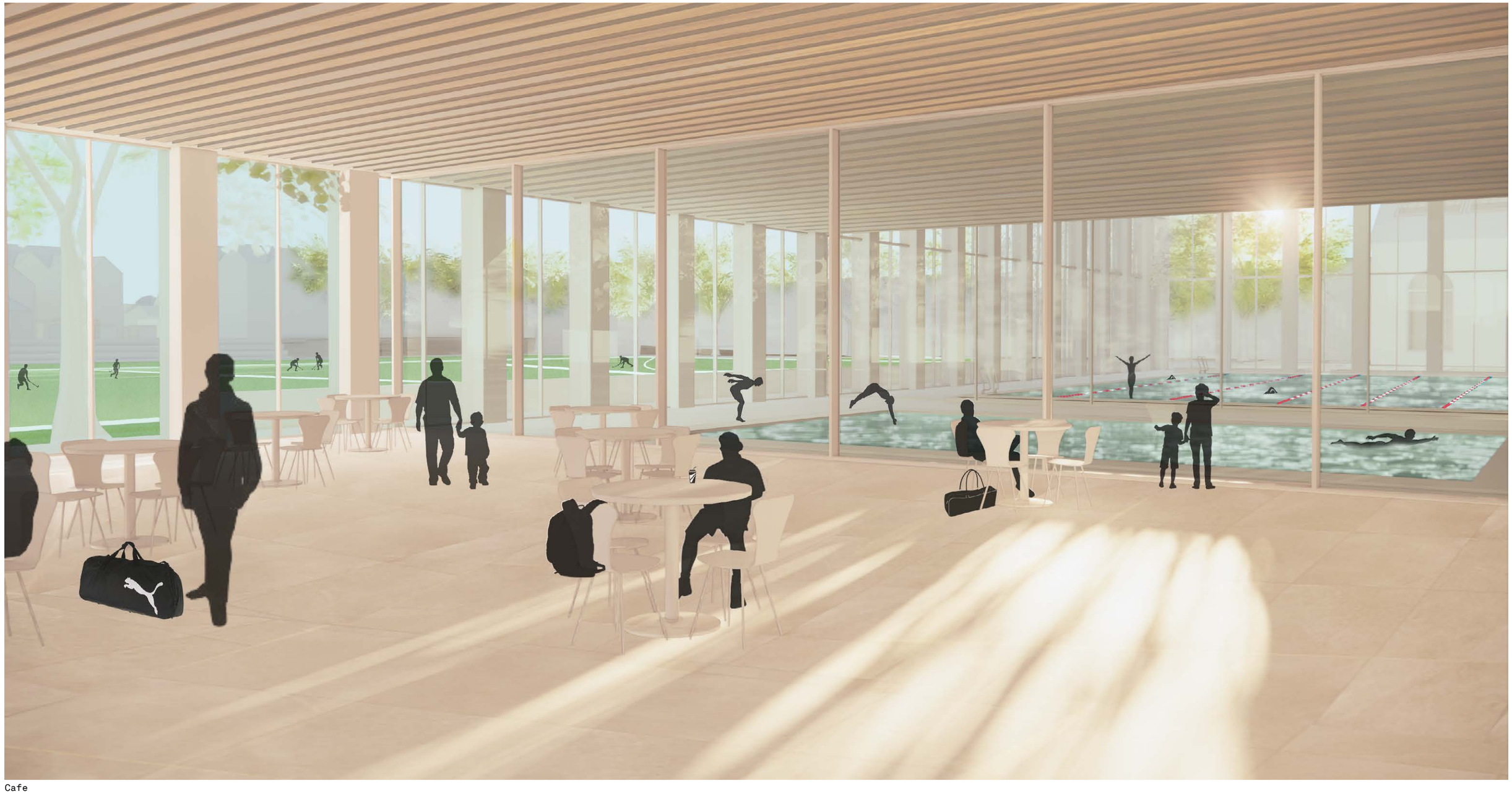
Building Section AA



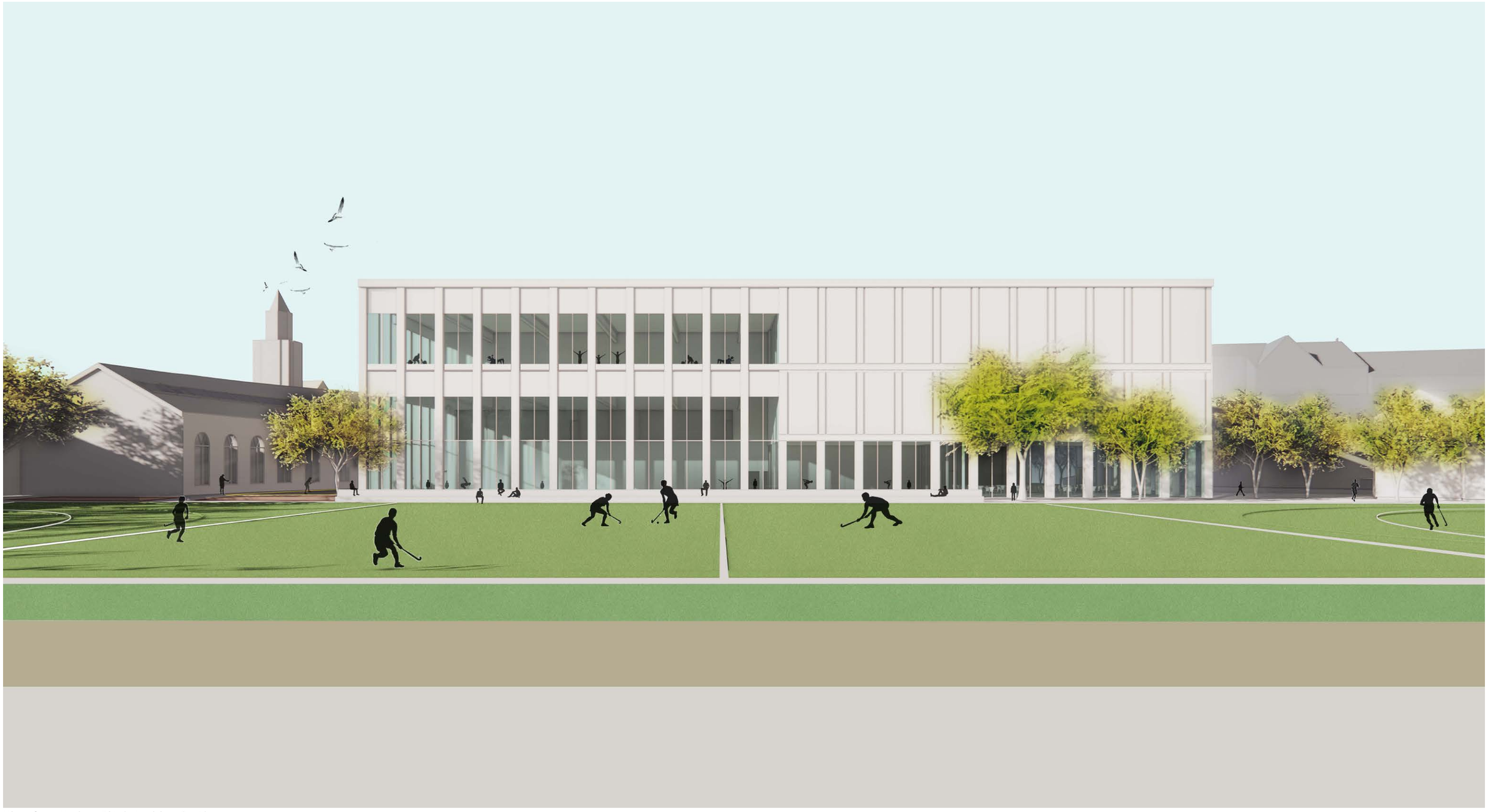
Building Section BB



25m Pool Looking Towards Hockey Pitch

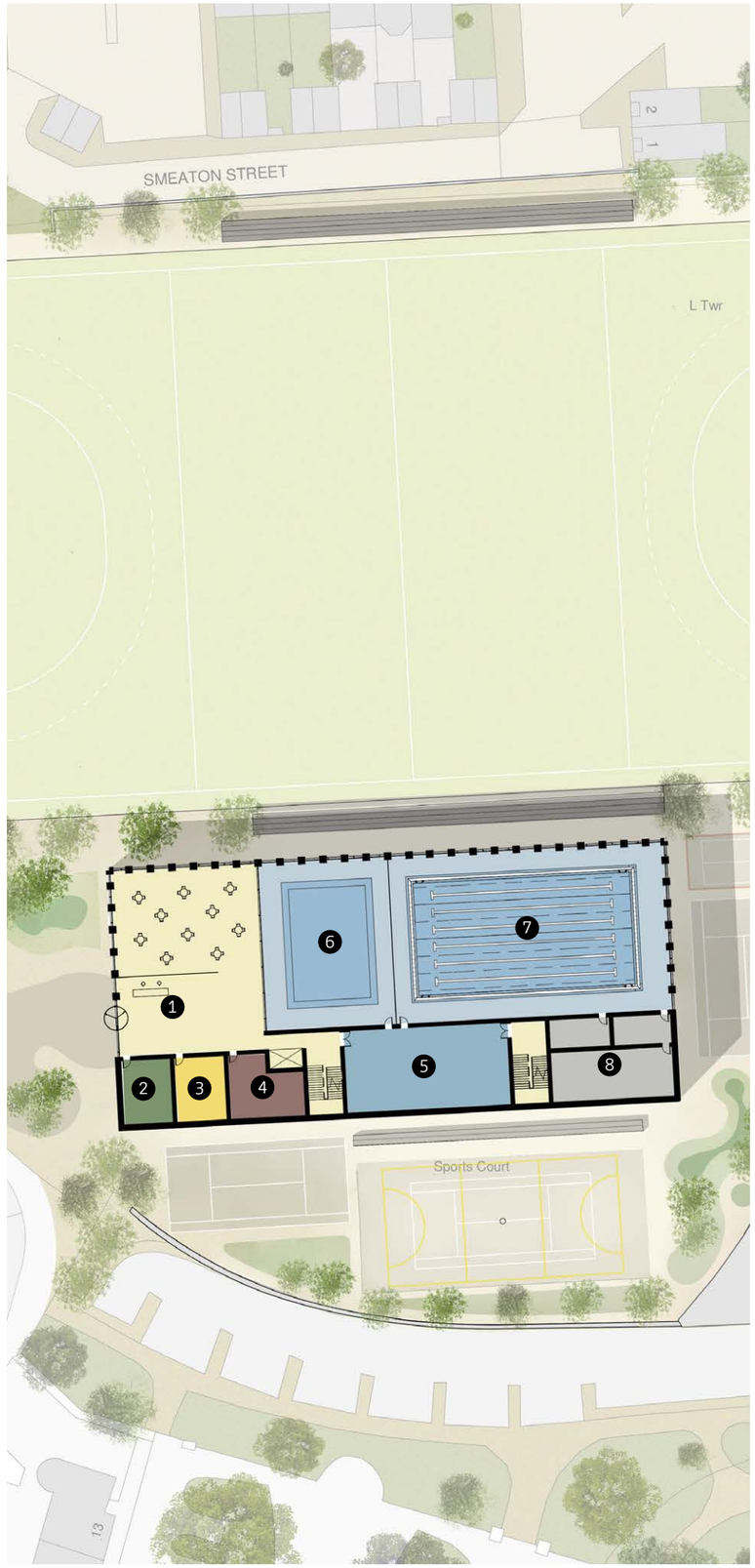


Cafe

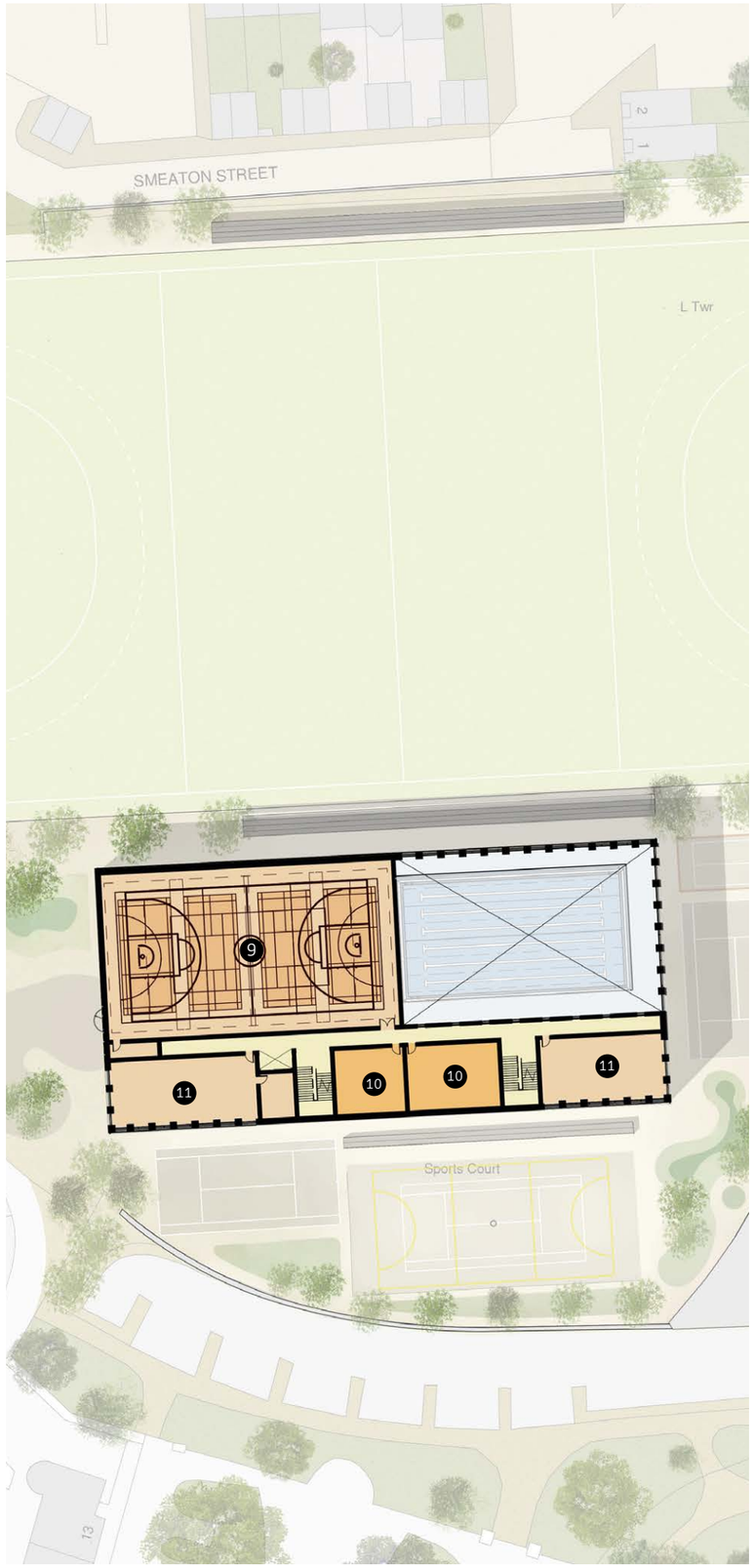


View from Hockey Pitch Looking South

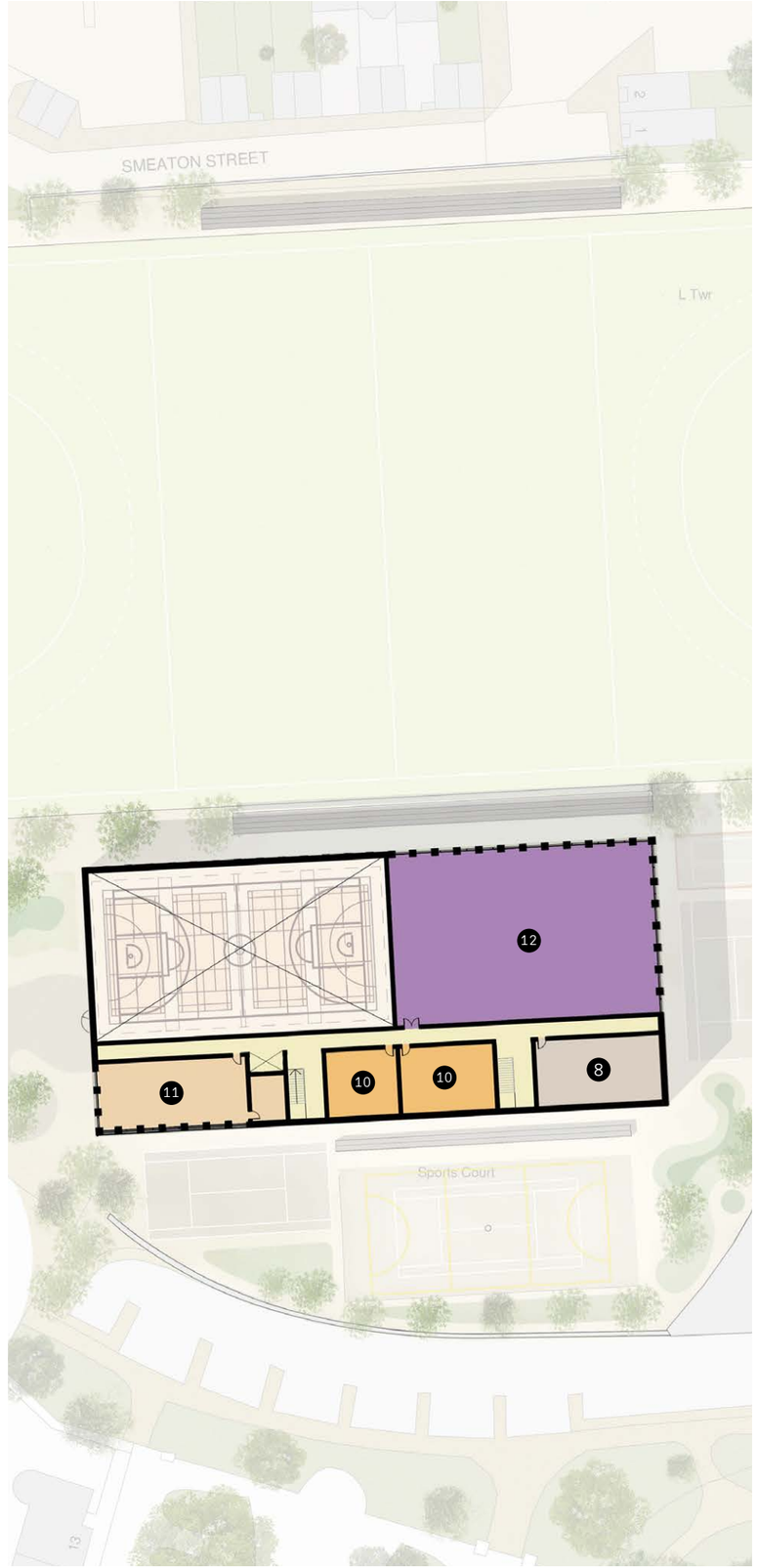
Fitness Suite Overlooking Hockey Pitch



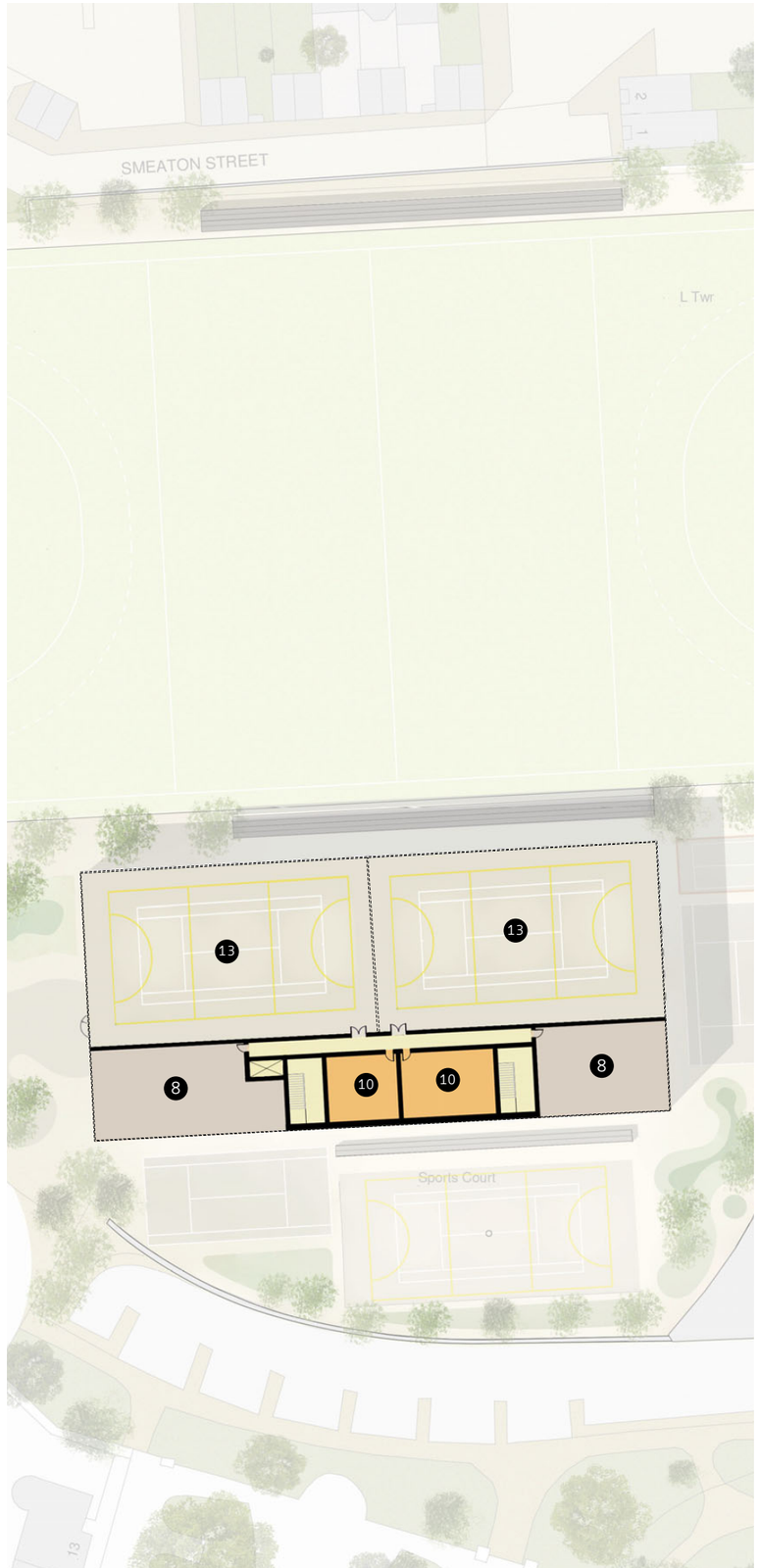
Ground Floor Plan



First Floor Plan



Second Floor Plan



Third Floor Plan

1 ENTRANCE
2 RECEPTION
3 CAFE SERVERY
4 COMMUNITY ROOM
5 WET CHANGE
6 TRAINING POOL
7 6 LANE 25M POOL
8 PLANT
9 SPORTS HALL
10 DRY CHANGE
11 STUDIO
12 FITNESS SUITE
13 ROOFTOP PITCHES

Level		Area m2
Basement		
	Water Filtration Plant Room	400
Ground Floor	Ground Floor	
	Café	300
	Servery	30
	Kitchen	45
	Reception	65
	Admin	20
	Staff Room	20
	IT	10
	Foyer	135
	W/Cs (inc changing places facility)	90
	Bin Store	35
	Plant Room (Substation)	25
	Store Room	10
	Wet Change (inc group change)	185
	Pool Store	60
	6 lane pool 13m x 25m + pool surround	540
	Teaching pool 13m x 16m + pool surround	360
	Soft Play	120
	Creche	100
	Outdoor pitch spectator seating	100
Upper Floors		
	Studio 1	105
	Studio 2	112
	Spin Studio	105
	Studio Stores	35
	General Store	20
	Dry Change	300
	W/Cs	50
	4 Court sports hall 34.5m x 20m	690
	Sports hall stores	70
	Fitness suite 150 stations	650
	Rooftop Pitches Changing Rooms	150
	GIA Footprint	**4937**
	Circulation at 10%	494
	Air Handling Plant at 10%	494
	Total GIA	**5924**
Rooftop Pitches	Level 03 (Not included in GIA)	
	Pitches	1400

Accommodation Schedule

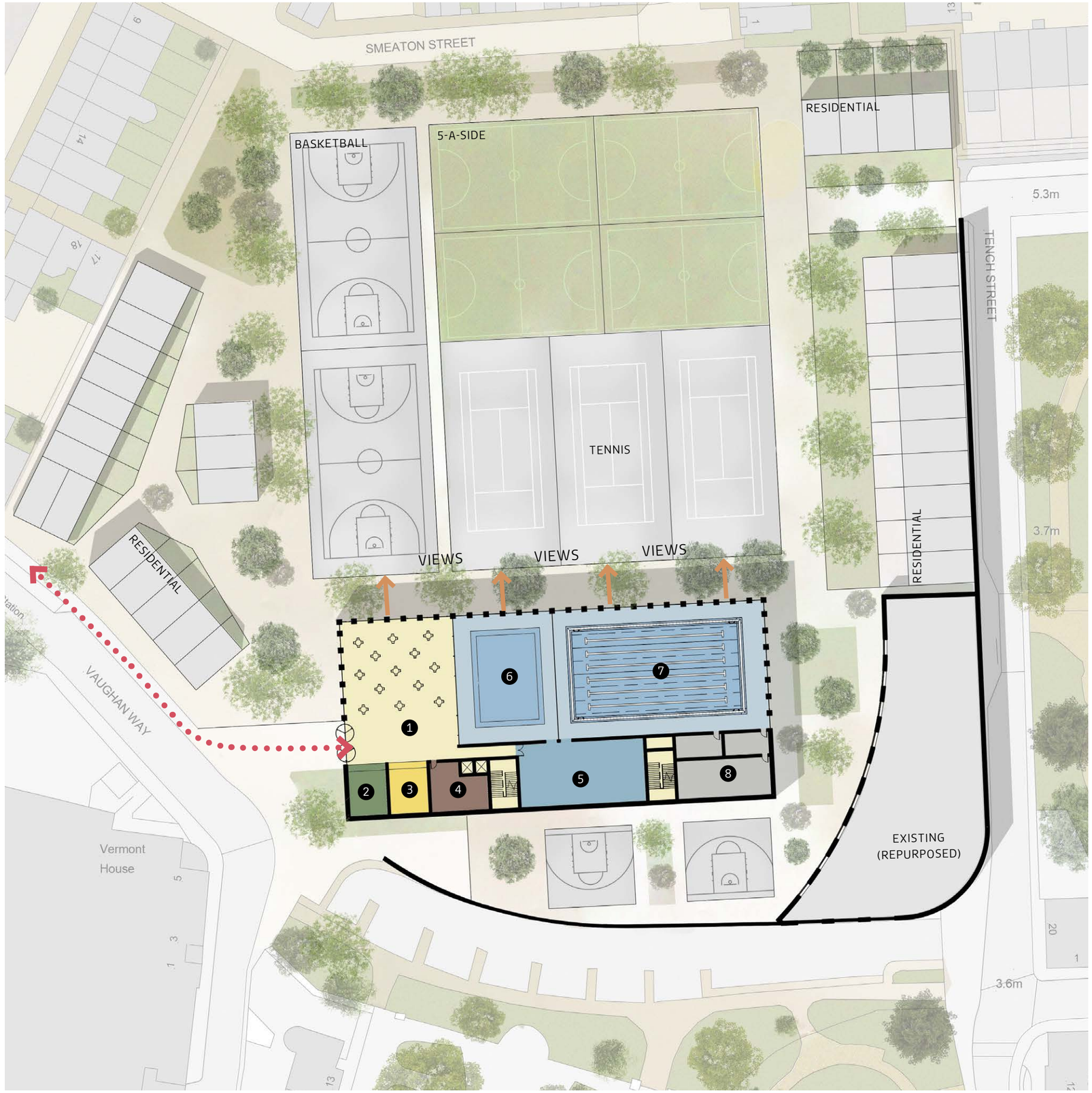
4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 2 OPTION 5B

SITE 2 OPTION 5B

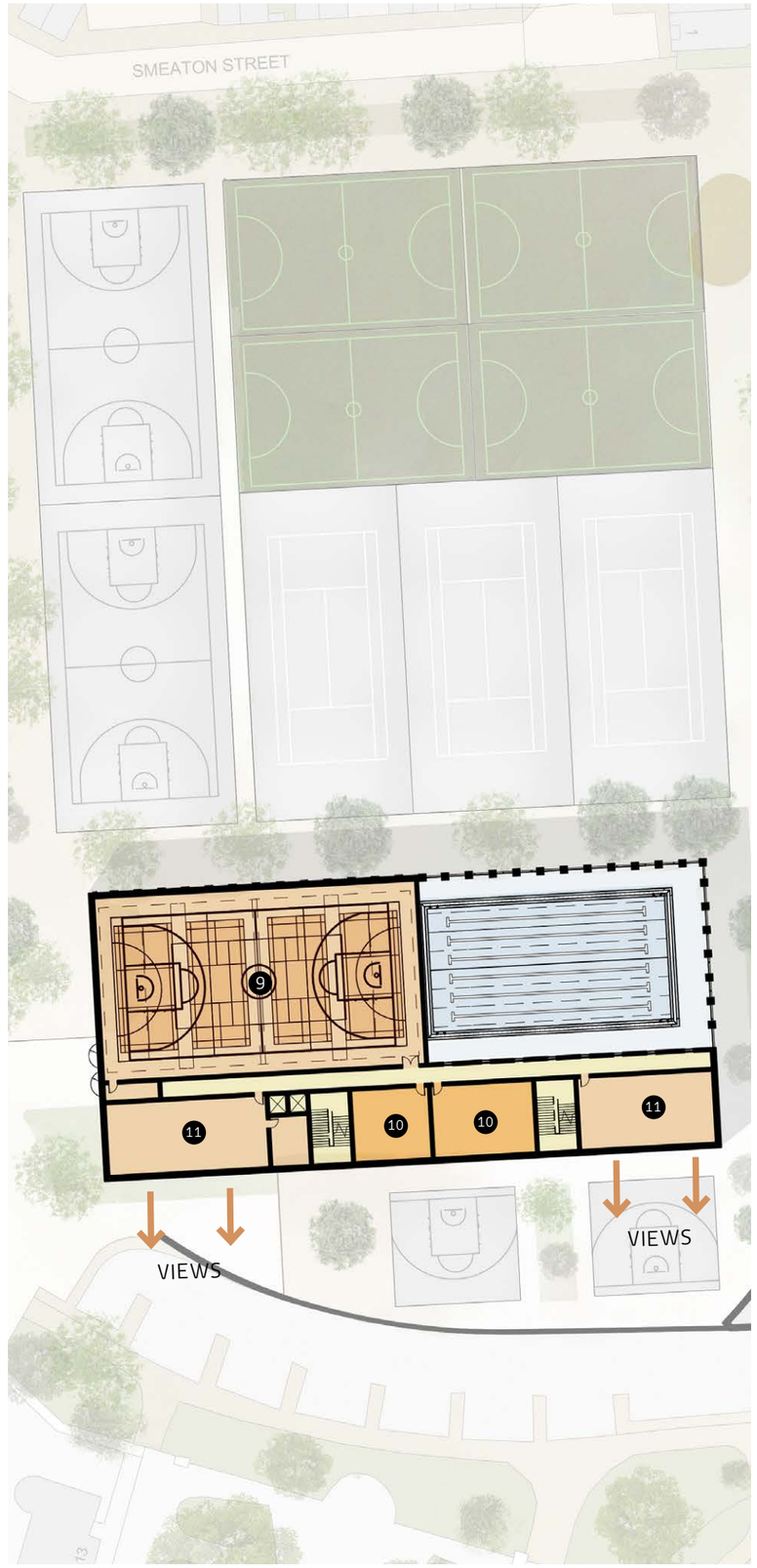
This variation on the preceding Site 2 Option 5B looks at incorporating rooftop pitches onto the leisure centre roof. This would provide the opportunity for a further level of diverse sports offer and income generation for the new leisure centre, as well as providing impressive views towards the riverside and city. It would increase the height of the building by another storey, however, this site configuration would provide the most sensitive approach to achieve this within the wider context.

Site 2 - Design Option O5b				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5924	£21,918,800	£23,103,600	£24,288,400
Rooftop Pitches Uplift		£500,000	£600,000	£700,000
External Works		£710,880	£918,220	£1,107,788
External Pitches		£1,100,000	£1,300,000	£1,500,000
Total Building		**£24,229,680**	**£25,921,820**	**£27,596,188**
Contingency / Design Reserve 10%		£2,422,968	£2,592,182	£2,759,619
Total Construction Budget		**£26,652,648**	**£28,514,002**	**£30,355,807**

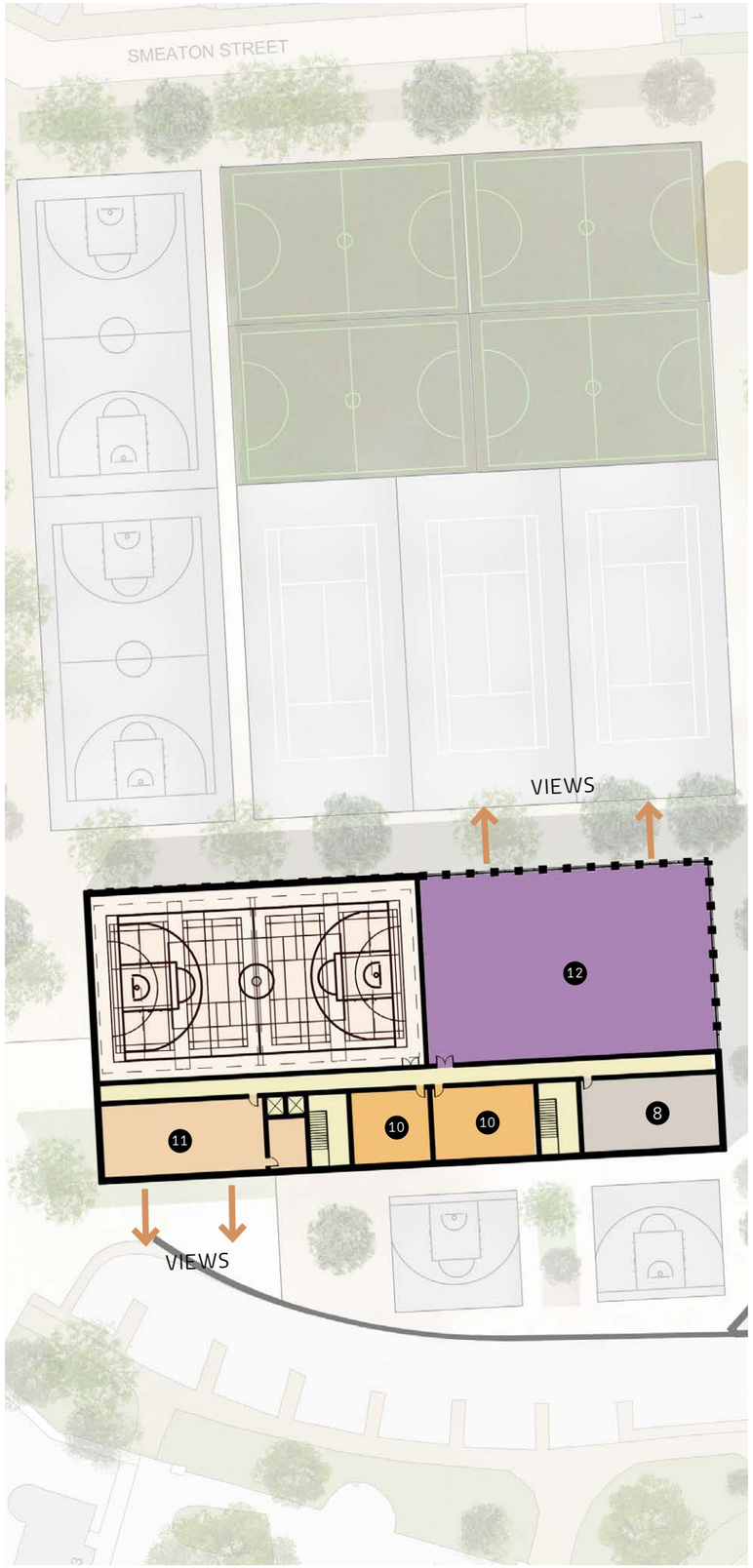
High Level Net Construction Cost Schedule



Ground Floor Plan



First Floor Plan



Second Floor Plan

1 ENTRANCE
2 RECEPTION
3 CAFE SERVERY
4 COMMUNITY ROOM
5 WET CHANGE
6 TRAINING POOL
7 6 LANE 25M POOL
8 PLANT
9 SPORTS HALL
10 DRY CHANGE
11 STUDIO
12 FITNESS SUITE

Level		Area m2
Basement		
	Water Filtration Plant Room	400
Ground Floor	Ground Floor	
	Café	300
	Servery	30
	Kitchen	45
	Reception	65
	Admin	20
	Staff Room	20
	IT	10
	Foyer	135
	W/Cs (inc changing places facility)	90
	Bin Store	35
	Plant Room (Substation)	25
	Store Room	10
	Wet Change (inc group change)	185
	Pool Store	60
	6 lane pool 13m x 25m + pool surround	540
	Teaching pool 13m x 16m + pool surround	360
	Soft Play	120
	Creche	100
	Outdoor pitch spectator seating	100
Upper Floors		
	Studio 1	105
	Studio 2	112
	Spin Studio	105
	Studio Stores	35
	General Store	20
	Dry Change	300
	W/Cs	50
	4 Court sports hall 34.5m x 20m	690
	Sports hall stores	70
	Fitness suite 150 stations	650
	GIA Footprint	**4787**
	Circulation at 10%	479
	Air Handling Plant at 10%	479
	Total GIA	**5744**

Accommodation Schedule

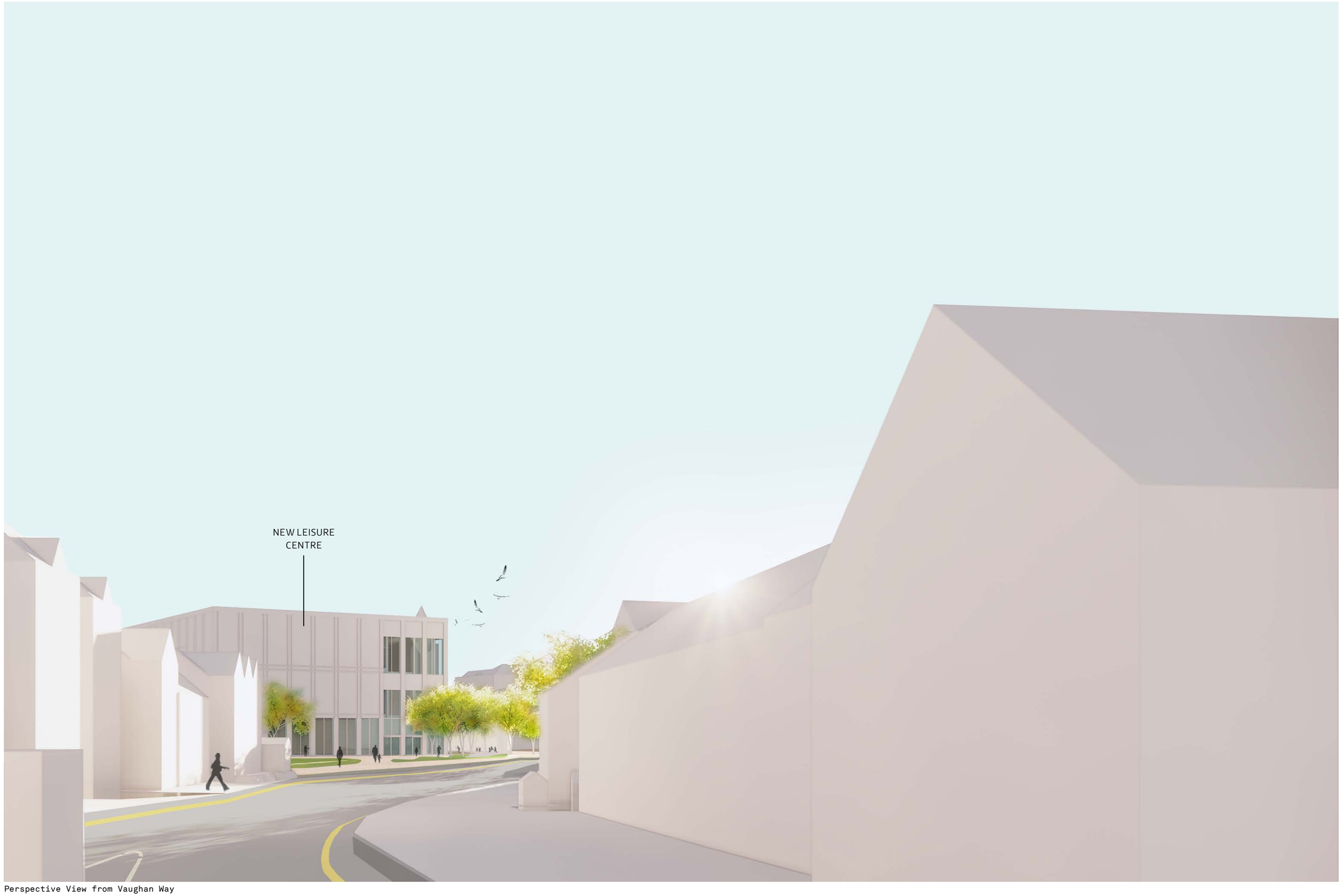
4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 2 OPTION 6

SITE 2 OPTION 6

This variation on the preceding Site 2 Option 5 explores the relocation of the hockey pitch to a new site in order to test the range of other external pitches in order to diversity the on site offer. The building plan arrangement remains the same as Site 2 Option 5.

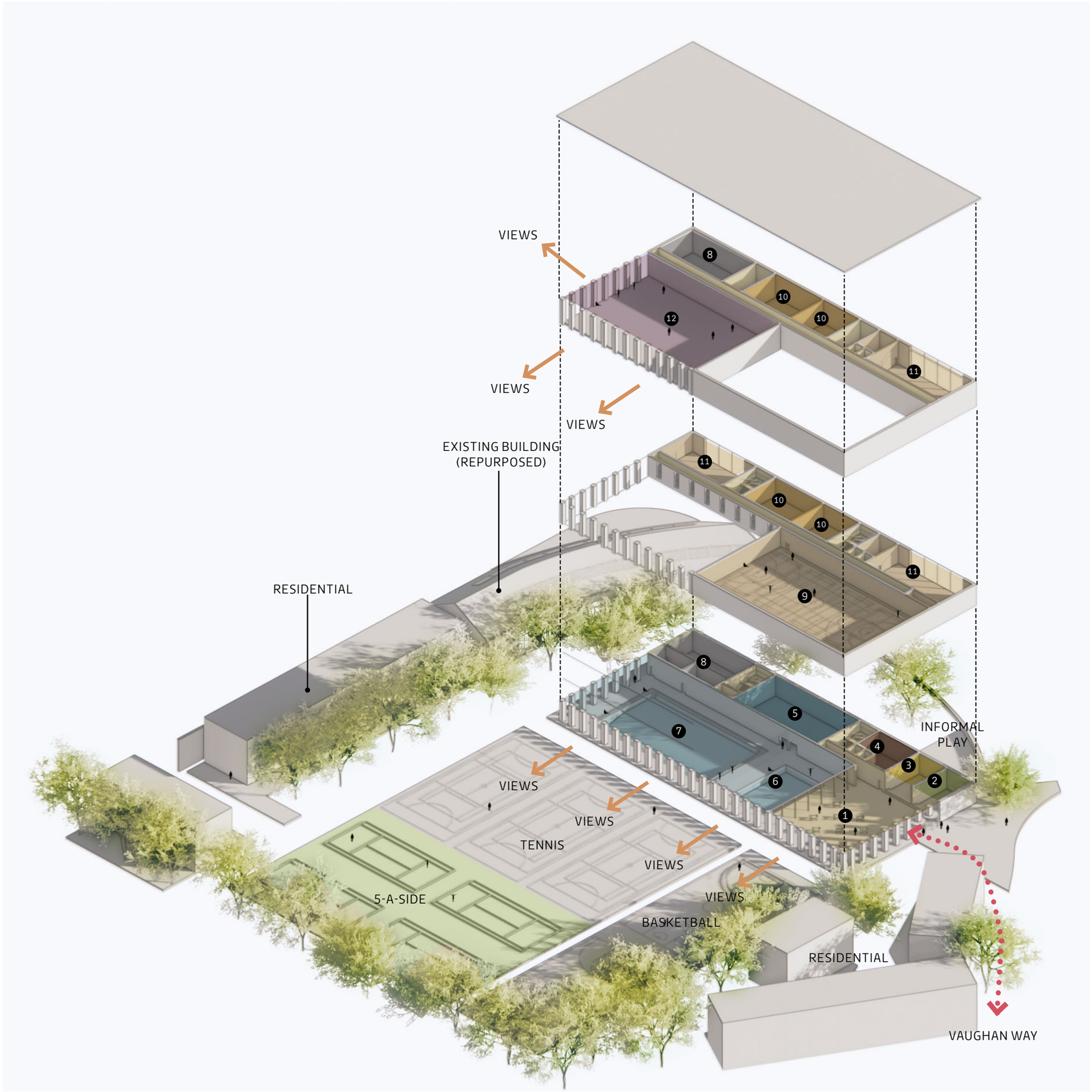
Site 2 - Design Option 06				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5744	£21,254,280	£22,403,160	£23,552,040
External Works		£689,328	£890,382	£1,074,203
External Pitches		£3,000,000	£3,200,000	£3,500,000
Total Building		**£24,943,608**	**£26,493,542**	**£28,126,243**
Contingency / Design Reserve 10%		£2,494,361	£2,649,354	£2,812,624
Total Construction Budget		**£27,437,969**	**£29,142,896**	**£30,938,867**

High Level Net Construction Cost Schedule



Perspective View from Vaughan Way

4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 2 OPTION 6



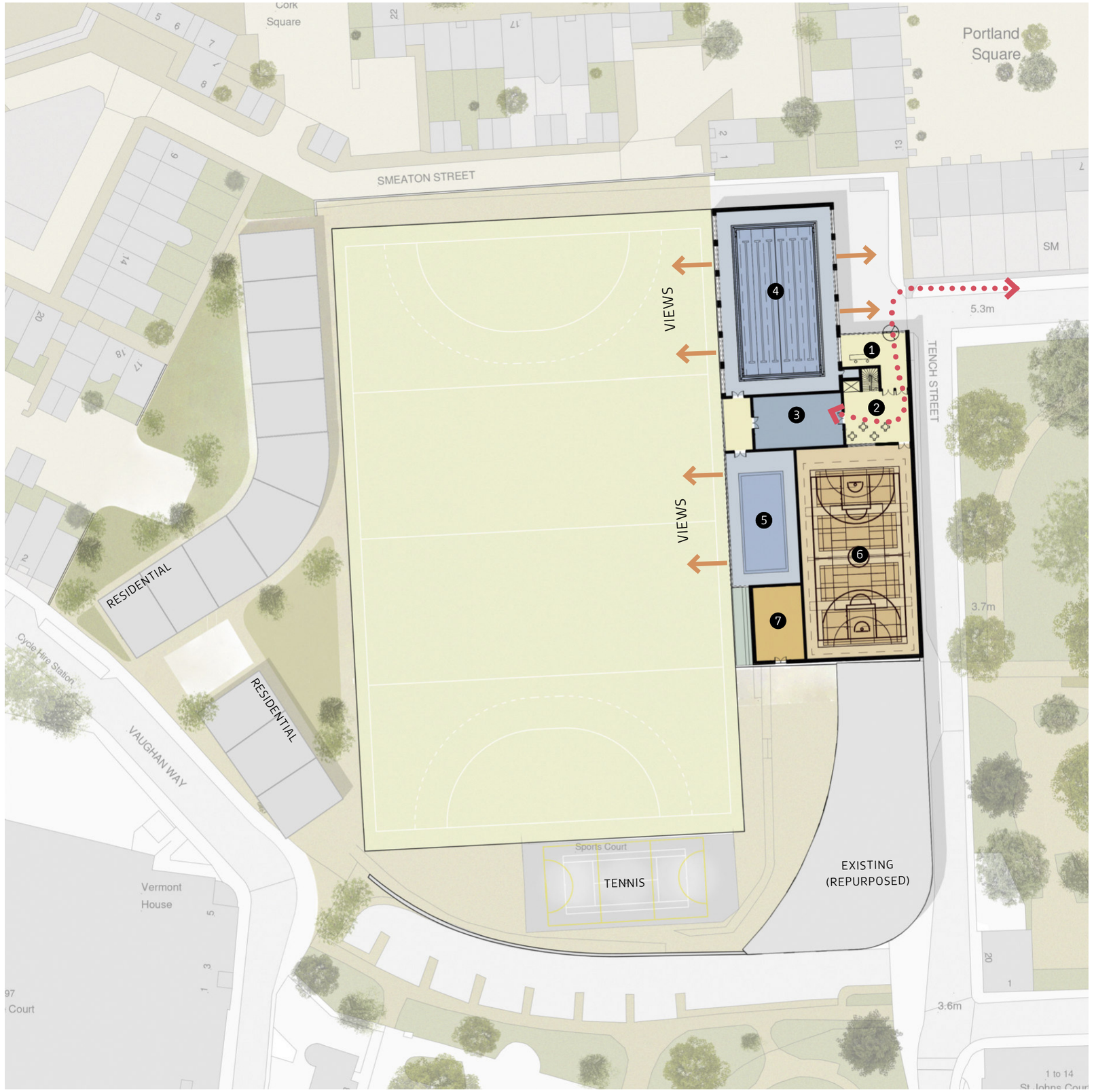
Exploded Axonometric Floor Plans

SITE 2 OPTION 6

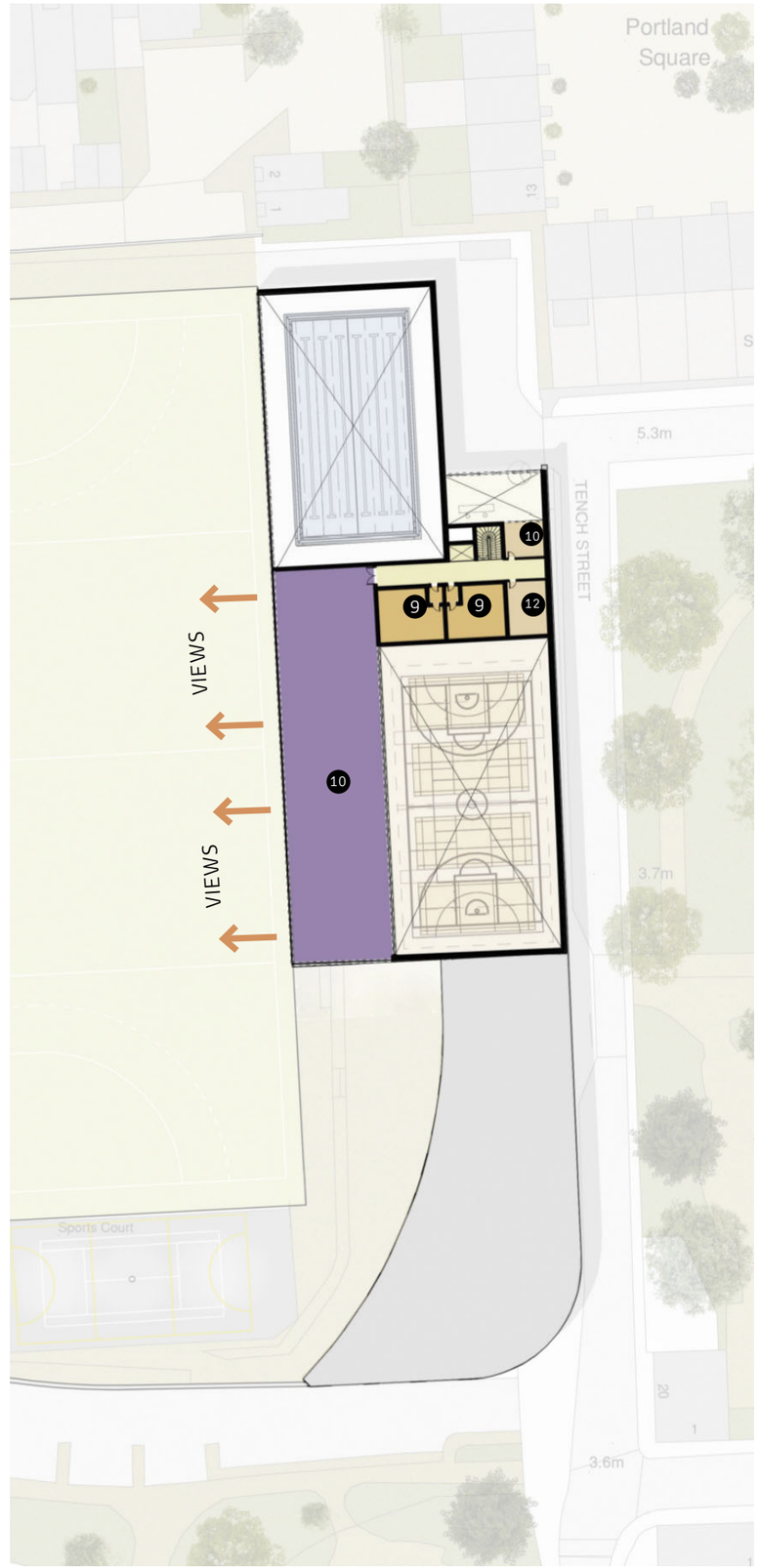
The perspective image opposite provides an illustration of the approach to the building via Vaughan Way, and shows the scale and massing of the proposals within its context from eye level. It is important that the building has a sense of activity when pedestrians navigate past the building to entice new users into the leisure centre to participate in sport and activity. Positioning cafe and double/triple height entrance atrium spaces on this important approach will help to facilitate this.

The adjacent exploded axonometric drawing, illustrates how the building is organised and accommodation stacked across all levels, and the resultant views and vantage points from within the building.

1 ENTRANCE
2 RECEPTION
3 CAFE SERVERY
4 EXTERNAL CHANGE
5 WET CHANGE
6 TRAINING POOL
7 6 LANE 25M POOL
8 PLANT
9 SPORTS HALL
10 DRY CHANGE
11 STUDIO
12 FITNESS SUITE



Ground Floor Plan



First Floor Plan

1 ENTRANCE
2 FOYER
3 WET CHANGE
4 6 LANE 25m POOL
5 TRAINING POOL
6 4 COURT SPORTS HALL
7 EXTERNAL CHANGING
8 CIRCULATION CORE
9 FITNESS SUITE
10 COMMUNITY ROOM
11 DRY CHANGING
12 STUDIO

Level		Area m2
Basement		
	Water Filtration Plant Room	400
Ground Floor	Ground Floor	
	Reception	65
	Admin	10
	Staff Room	20
	IT	10
	Foyer	100
	W/Cs (inc changing places facility)	90
	Bin Store	35
	Plant Room (Substation)	25
	Wet Change (inc group change)	138
	Pool Store	10
	6 lane pool 13m x 25m + pool surround	540
	Teaching pool 13m x 16m + pool surround	360
	Outdoor pitch changing	100
	Outdoor pitch spectator seating	40
Upper Floors		
	Studio 1	65
	Dry Change	95
	W/Cs	20
	4 Court sports hall Existing	700
	Fitness suite	530
	GIA Footprint	**3353**
	Circulation at 10%	335
	Air Handling Plant at 10%	335
	Total GIA	**4024**

Accommodation Schedule

Site 3 - Design Option 01				
		Construction Budgets		
		Lower £4100sqm	Mid point £4400sqm	Higher (4700sqm
Building Area	4024	£16,496,760	£17,703,840	£18,910,920
Demolition and site prep		£200,000	£300,000	£400,000
External Works		£482,832	£623,658	£752,413
Total Building		**£17,179,592**	**£18,627,498**	**£20,063,333**
Contingency / Design Reserve 10%		£1,717,959	£1,862,750	£2,006,333
Allowance for phased construction 15%		£2,576,939	£2,794,125	£3,009,500
Total Construction Budget		**£21,474,490**	**£23,284,373**	**£25,079,167**

High Level Net Construction Cost Schedule

4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 3 OPTION 1

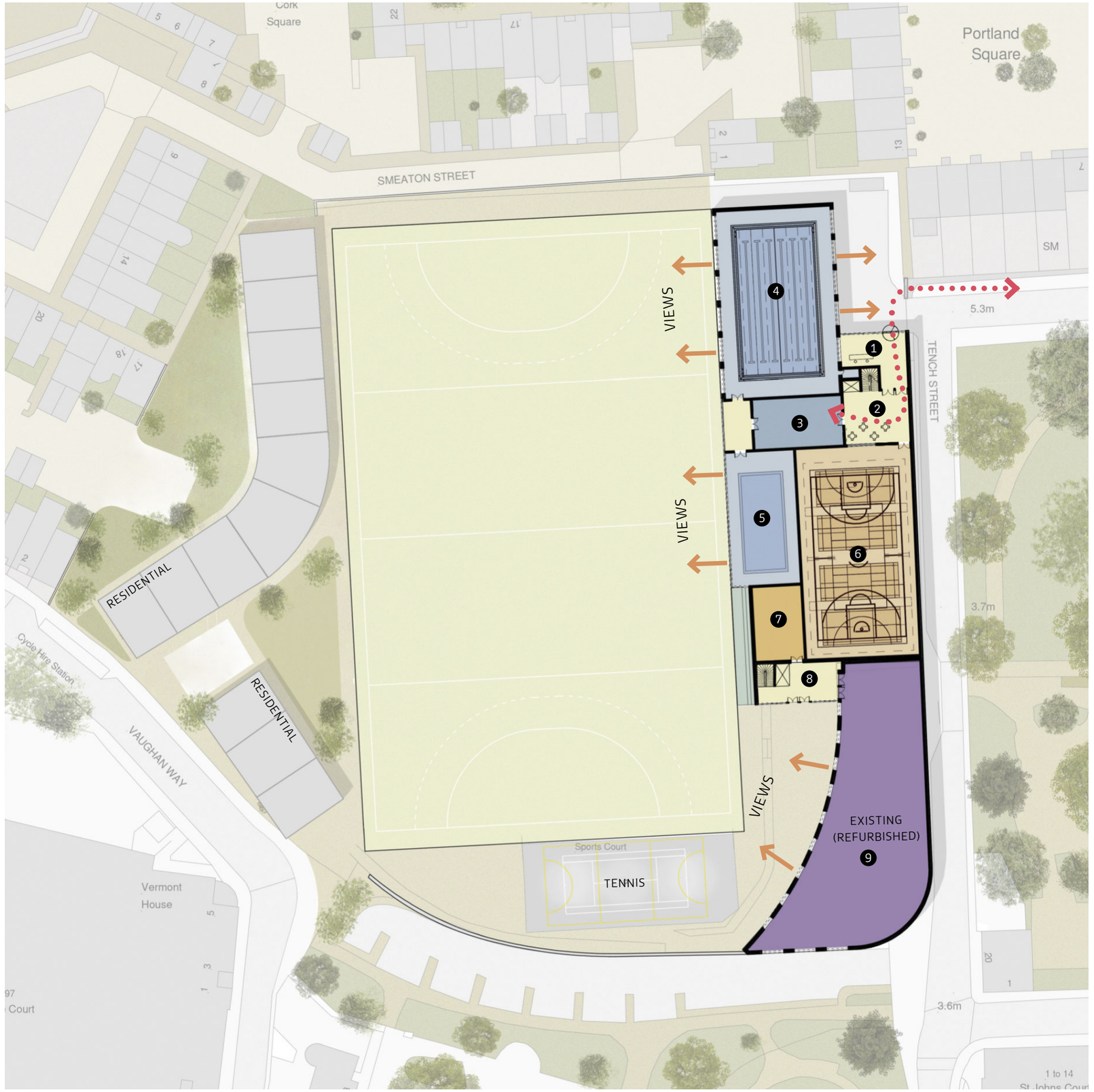
SITE 3 OPTION 1

Site 3 Option 1 is based upon the refurbishment of the existing John Orwell sports hall with a new build extension to provide a 25m 6 lane swimming pool, training pool, and fitness suite accommodation. The existing former warehouse building is re-purposed for another function, which could also be community related, such as soft play or a crèche.

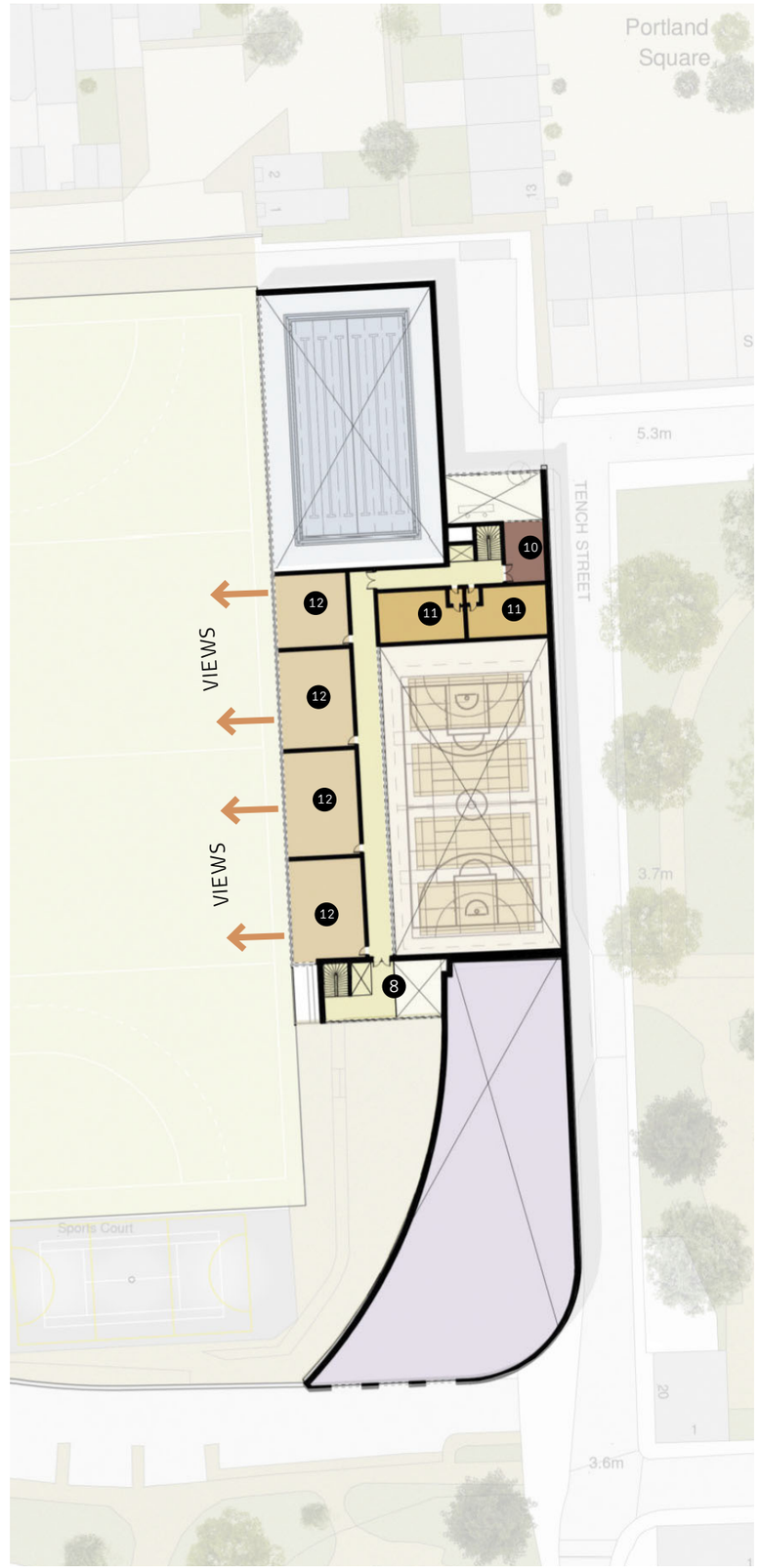
The constraint of the hockey pitch to the west creates a significant challenge to accommodate the full brief. The entrance and cafe spaces are positioned to the north east corner of the site. At ground floor, this leads users towards the wet changing areas and then onwards to either the training pool to the south or 25m pool to the north which both have good external aspect onto the hockey pitch to the west. Some externally accessed 'dirty' change serving the hockey pitch is provided to the south alongside replacement spectator seating.

The compact nature of the available footprint results in the provision of a reduced fitness suite and multi-purpose studio offer at first floor level with associated dry changing.

Overall, this option provides the smallest additional building area of all design options, with a compromised quantum of changing accommodation. The refurbished sports hall would not be compliant with modern Sport England standards and this will compromise the flexibility of the hall to accommodate the widest range of activities.



Ground Floor Plan



First Floor Plan

N

1 ENTRANCE
2 FOYER
3 WET CHANGE
4 6 LANE 25m POOL
5 TRAINING POOL
6 4 COURT SPORTS HALL
7 EXTERNAL CHANGING
8 CIRCULATION CORE
9 FITNESS SUITE
10 COMMUNITY ROOM
11 DRY CHANGING
12 STUDIO

Level		Area m2
Basement		
	Water Filtration Plant Room	400
Ground Floor	Ground Floor	
	Reception	65
	Admin	10
	Staff Room	20
	IT	10
	Foyer	100
	W/Cs (inc changing places facility)	90
	Bin Store	35
	Plant Room (Substation)	25
	Wet Change (inc group change)	138
	Pool Store	10
	6 lane pool 13m x 25m + pool surround	540
	Teaching pool 13m x 16m + pool surround	360
	Outdoor pitch changing	100
	Outdoor pitch spectator seating	40
	Second Foyer	50
	Refurbished Fitness	880
Upper Floors		
	Studio 1	75
	Studio 2	100
	Studio 3	110
	Spin Studio	100
	Studio Stores	35
	General Store	20
	Dry Change	125
	W/Cs	50
	4 Court sports hall Existing	700
	GIA Footprint	**4188**
	Circulation at 10%	419
	Air Handling Plant at 10%	419
	Total GIA	**5026**

Accommodation Schedule

Site 3 - Design Option 02				
		Construction Budgets		
		Lower £4100sqm	Mid point £4400sqm	Higher (4700sqm
Building Area	5026	£20,604,960	£22,112,640	£23,620,320
Demolition and site prep		£200,000	£300,000	£400,000
External Works		£603,072	£778,968	£939,787
Total Building		**£21,408,032**	**£23,191,608**	**£24,960,107**
Contingency / Design Reserve 10%		£2,140,803	£2,319,161	£2,496,011
Allowance for phased construction 15%		£3,211,205	£3,478,741	£3,744,016
Total Construction Budget		**£26,760,040**	**£28,989,510**	**£31,200,134**

High Level Net Construction Cost Schedule

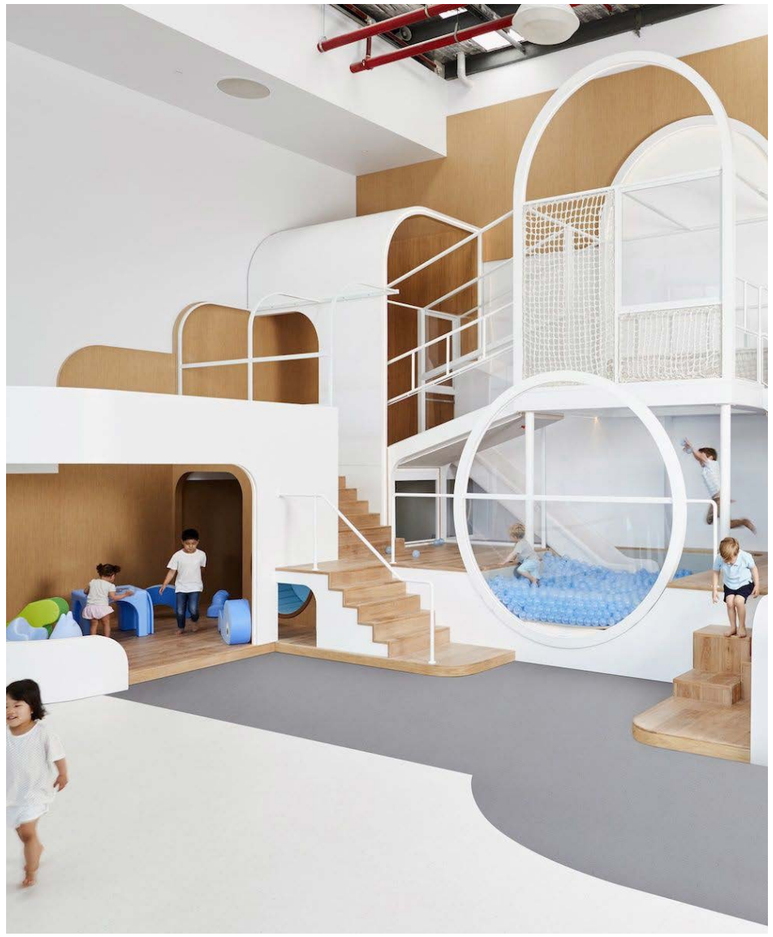
4.0 OPTIONS APPRAISAL
JOHN ORWELL SITE 3 OPTION 2

SITE 3 OPTION 2

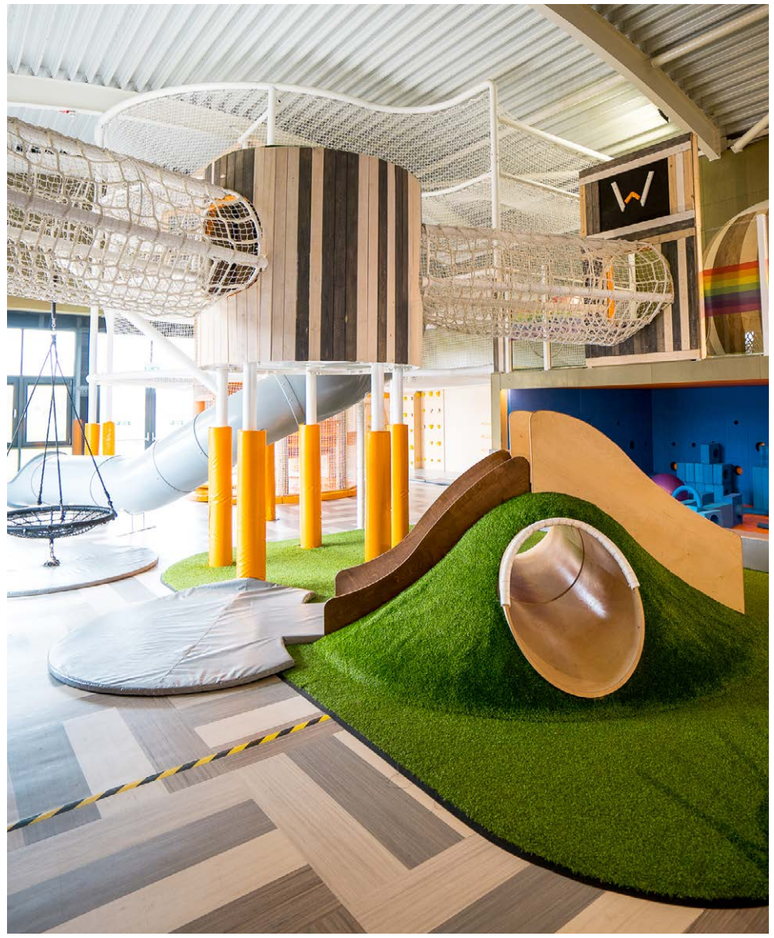
This option is an enhanced version of the previous arrangement. The layout retains the existing fitness suite in its current location, which in turn allows for the introduction of four multi-purpose studios which helps to strengthen the offer of the leisure centre.

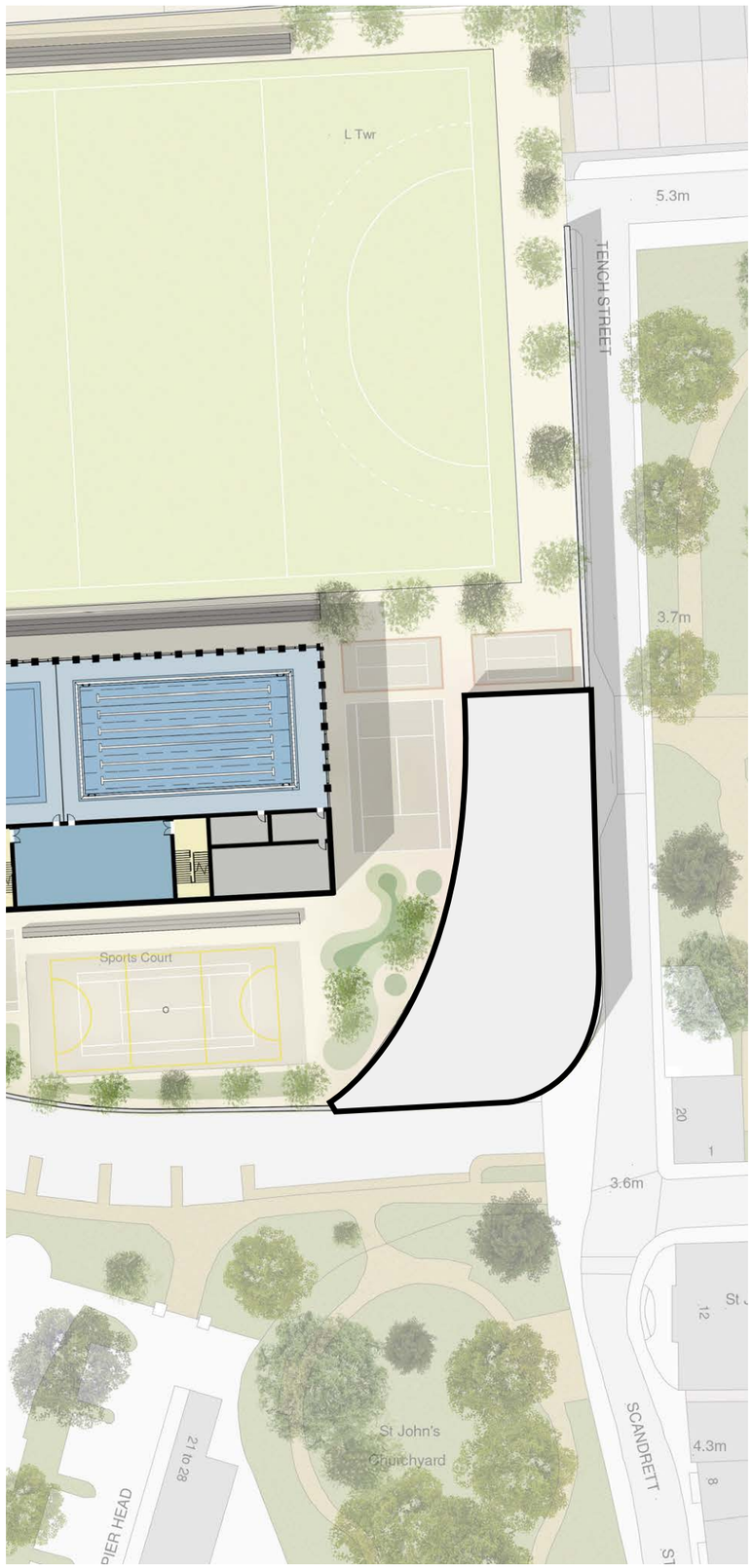
However, the circulation route from entrance to the fitness suite is compromised and requires users to go up to first floor level to then return to ground floor level in order to access the fitness suite. This creates a convoluted journey that would also require the building to double up on lift and accommodation stair provisions.

Whilst providing an overall increase in facilities compared to Site 3 Option 1, this option still provides a compromised quantum of changing accommodation and does not solve the issues associated with refurbishing the sports hall.



Precedent Images - Soft Play and Crèche





4.0 OPTIONS APPRAISAL
JOHN ORWELL
LISTED BUILDING RETENTION

EXISTING HISTORIC BUILDING

All of the design options for the John Orwell site seek to retain the historic former docklands warehouse building.

Where this is not directly linked to new building proposals (with the exception of Site 3 Option 2) there is potential to repurpose this building to accommodate another function.

This could be a community or leisure focused function that compliments the new leisure centre such as a crèche or softplay. Some examples, opposite illustrate some precedent images of functions that could be accommodated with the repurposed building.

SITE 01

Site 1 - Design Option O1				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5496	£20,335,200	£21,434,400	£22,533,600
External Works		£659,520	£851,880	£1,027,752
Total Building		**£20,994,720**	**£22,286,280**	**£23,561,352**
Contingency / Design Reserve 10%		£2,099,472	£2,228,628	£2,356,135
Total Construction Budget		**£23,094,192**	**£24,514,908**	**£25,917,487**

Site 1 - Design Option O2				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5822	£21,542,880	£22,707,360	£23,871,840
External Works		£698,688	£902,472	£1,088,789
Total Building		**£22,241,568**	**£23,609,832**	**£24,960,629**
Contingency / Design Reserve 10%		£2,224,157	£2,360,983	£2,496,063
Total Construction Budget		**£24,465,725**	**£25,970,815**	**£27,456,692**

SITE 02

Site 2 - Design Option O1 and 02				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5130	£18,981,888	£20,007,936	£21,033,984
Demolition and site prep		£200,000	£300,000	£400,000
External Works		£615,629	£795,187	£959,355
Total Building		**£19,797,517**	**£21,103,123**	**£22,393,339**
Contingency / Design Reserve 10%		£1,979,752	£2,110,312	£2,239,334
Total Construction Budget		**£21,777,268**	**£23,213,436**	**£24,632,673**

Site 2 - Design Option O3				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5624	£20,810,280	£21,935,160	£23,060,040
Demolition and site prep		£200,000	£300,000	£400,000
External Works		£674,928	£871,782	£1,051,763
Total Building		**£21,685,208**	**£23,106,942**	**£24,511,803**
Contingency / Design Reserve 10%		£2,168,521	£2,310,694	£2,451,180
Total Construction Budget		**£23,853,729**	**£25,417,636**	**£26,962,983**

Site 2 - Design Option O4				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5624	£20,810,280	£21,935,160	£23,060,040
Demolition and site prep		£200,000	£300,000	£400,000
External Works		£674,928	£871,782	£1,051,763
External Pitches		£1,000,000	£1,200,000	£1,400,000
Total Building		**£22,685,208**	**£24,306,942**	**£25,911,803**
Contingency / Design Reserve 10%		£2,268,521	£2,430,694	£2,591,180
Total Construction Budget		**£24,953,729**	**£26,737,636**	**£28,502,983**

Site 2 - Design Option O5				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5744	£21,254,280	£22,403,160	£23,552,040
External Works		£689,328	£890,382	£1,074,203
External Pitches		£1,100,000	£1,300,000	£1,500,000
Total Building		**£23,043,608**	**£24,593,542**	**£26,126,243**
Contingency / Design Reserve 10%		£2,304,361	£2,459,354	£2,612,624
Total Construction Budget		**£25,347,969**	**£27,052,896**	**£28,738,867**

Site 2 - Design Option O5b				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5924	£21,918,800	£23,103,600	£24,288,400
Rooftop Pitches Uplift		£500,000	£600,000	£700,000
External Works		£710,880	£918,220	£1,107,788
External Pitches		£1,100,000	£1,300,000	£1,500,000
Total Building		**£24,229,680**	**£25,921,820**	**£27,596,188**
Contingency / Design Reserve 10%		£2,422,968	£2,592,182	£2,759,619
Total Construction Budget		**£26,652,648**	**£28,514,002**	**£30,355,807**

SITE 02

Site 2 - Design Option O6				
		Construction Budgets		
		Lower £3700sqm	Mid point £3900sqm	Higher (4100sqm
Building Area	5744	£21,254,280	£22,403,160	£23,552,040
External Works		£689,328	£890,382	£1,074,203
External Pitches		£3,000,000	£3,200,000	£3,500,000
Total Building		**£24,943,608**	**£26,493,542**	**£28,126,243**
Contingency / Design Reserve 10%		£2,494,361	£2,649,354	£2,812,624
Total Construction Budget		**£27,437,969**	**£29,142,896**	**£30,938,867**

SITE 03

Site 3 - Design Option O1				
		Construction Budgets		
		Lower £4100sqm	Mid point £4400sqm	Higher (4700sqm
Building Area	4024	£16,496,760	£17,703,840	£18,910,920
Demolition and site prep		£200,000	£300,000	£400,000
External Works		£482,832	£623,658	£752,413
Total Building		**£17,179,592**	**£18,627,498**	**£20,063,333**
Contingency / Design Reserve 10%		£1,717,959	£1,862,750	£2,006,333
Allowance for phased construction 15%		£2,576,939	£2,794,125	£3,009,500
Total Construction Budget		**£21,474,490**	**£23,284,373**	**£25,079,167**

Site 3 - Design Option O2				
		Construction Budgets		
		Lower £4100sqm	Mid point £4400sqm	Higher (4700sqm
Building Area	5026	£20,604,960	£22,112,640	£23,620,320
Demolition and site prep		£200,000	£300,000	£400,000
External Works		£603,072	£778,968	£939,787
Total Building		**£21,408,032**	**£23,191,608**	**£24,960,107**
Contingency / Design Reserve 10%		£2,140,803	£2,319,161	£2,496,011
Allowance for phased construction 15%		£3,211,205	£3,478,741	£3,744,016
Total Construction Budget		**£26,760,040**	**£28,989,510**	**£31,200,134**

4.0 OPTIONS APPRAISAL
JOHN ORWELL
COMPARATIVE COST + AREA ANALYSIS

5.1 SUMMARY OF OPTIONS

The adjacent tables summarise the GIA areas and high level net construction budgets for each design option. The high level net construction budgets are based upon a range of typical m2 rates based upon the GIA figure, and include a lower, mid point, and higher rate to provide a cost range. These have been benchmarked against other similar leisure centres recently developed in London. A summary of the GIA areas and net construction cost, using the mid cost rate, is provided below:

Site 1 Option 1
Leisure centre Area 5,496m²
Cost (mid point) £24,514,908

Site 1 Option 2
Leisure centre Area 5,822m²
Cost (mid point) £25,970,815

Site 2 Option 1
Leisure centre Area 5,130m²
Cost (mid point) £23,213,436

Site 2 Option 2
Leisure centre Area 5,130m²
Cost (mid point) £23,213,436

Site 2 Option 3
Leisure centre Area 5,624m²
Cost (mid point) £25,417,636

Site 2 Option 4
Leisure centre Area 5,624m²
Cost (mid point) £26,737,636

Site 2 Option 5
Leisure centre Area 5,744m²
Cost (mid point) £27,052,896

Site 2 Option 5b
Leisure centre Area 5,924m²
Rooftop pitches 1,400m²
Cost (mid point) £28,514,002

Site 2 Option 6
Leisure centre Area 5,744m²
Cost (mid point) £29,142,896

Site 3 Option 1
Leisure centre Area 4,024 m²
Cost (mid point) £23,284,373

Site 3 Option 2
Leisure centre Area 5,026m²
Cost (mid point) £28,989,510

Precedent - Hebburn Central

5.0 COST APPRAISAL

JOHN ORWELL SITE OPTIONS	
Site 1 Option 1 Leisure centre Area Net Cost (mid point)	 5,496m² £24,514,908
Site 1 Option 2 Leisure centre Area Net Cost (mid point)	 5,822m² £25,970,815
Site 2 Option 1 + 2 Leisure centre Area Net Cost (mid point)	 5,130m² £23,213,436
Site 2 Option 3 Leisure centre Area Net Cost (mid point)	 5,624m² £25,417,636
Site 2 Option 4 Leisure centre Area Net Cost (mid point)	 5,624m² £26,737,636
Site 2 Option 5 Leisure centre Area Net Cost (mid point)	 5,744m² £27,052,896
Site 2 Option 5b Leisure centre Area Rooftop pitches Net Cost (mid point)	 5,924m² 1,400m² £28,514,002
Site 2 Option 6 Leisure centre Area Net Cost (mid point)	 5,744m² £29,142,896
Site 3 Option 1 Leisure centre Area Net Cost (mid point)	 4,024 m² £23,284,373
Site 3 Option 2 Leisure centre Area Net Cost (mid point)	 5,026m² £28,989,510

ST. GEORGE'S SITE OPTIONS	
Option 1 Leisure centre Area Net Cost (mid point)	 5,130m² £23,322,365

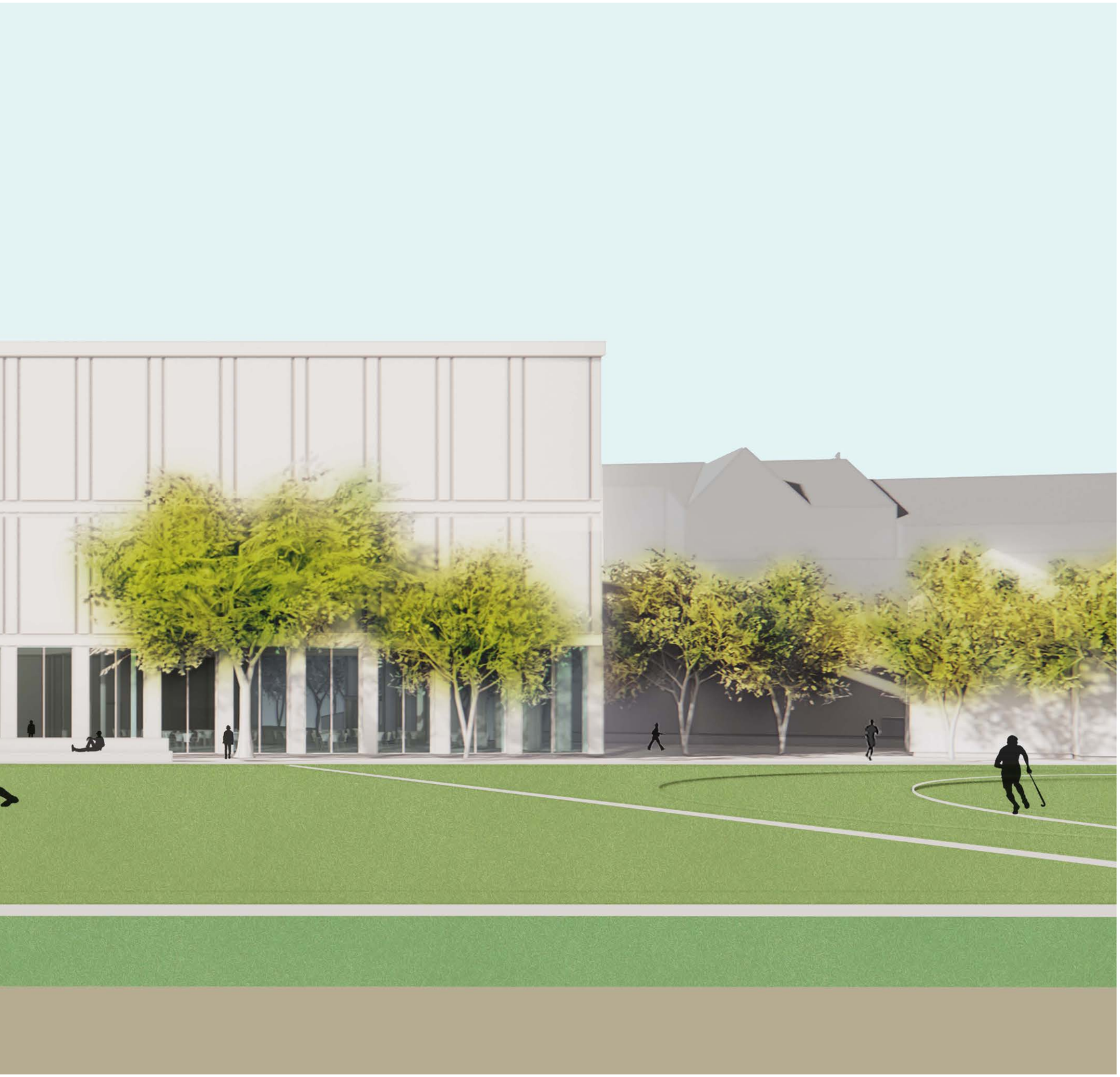
COST APPRAISAL

A high level summary of the construction cost for each of the options in the report has been provided opposite. These are based upon cost per square meter rates from comparable recent leisure centres in London. A more detailed cost analysis needs to be undertaken by a cost consultant in order to refine these based upon the latest market information.

As can be seen from this summary, the costs for the options that have been developed in this report vary from approximately £23M to £28M (based upon mid point cost figures). John Orwell Site 3 options factor in higher building rates associated with the refurbishment works.

John Orwell Site 1 Option 2, Site 2 Option 5/5b provide the largest quantum of facilities within their respective sites and as a result have the largest construction costs associated at £26M, £27/28.5M. Site 3 Option 1 provides less building area than the new build options and has a construction cost of £23M respectively. Note: Site 2 Option 6 has a higher construction cost than Site 2 Option 5 due to the removal of the existing hockey pitch and extensive provision of new external playing pitches. However, it has been assumed at this time that the hockey pitch should be retained on site.

Site 2 Option 5 - Concept Massing View



6.0 NEXT STEPS

PREFERRED DESIGN OPTION

John Orwell Site 1 Option 2 and Site 2 Option 5/5b provide the most new facilities with the least detrimental impact upon the wider site. However, the proximity of Site 1 Option 2 to the surrounding residential neighbourhood is a concern and would likely pose significant challenges from a planning approvals standpoint. The proximity to the boundary also limits views from within the leisure centre towards the west and does not make the most of the site's potential. Site 2 Option 5/5b does not impact the southern boundary wall or existing public car park to Scandrett Street unlike most Site 2 options. It does, however, require the reprovision and reorientation of the existing hockey pitch.

Site 3 Option 1 is the most advantageous of the Site 3 options, however, the building layout is highly compromised in terms of facilities that comply with modern Sport England standards, changing provision quantum, and general efficiency of circulation through the building.

The increased quantum of facilities results in Site 1 Option 2 and Site 2 Option 5/5b as having the highest net construction cost of the options explored on this sites, at £26M and £27/28.5M respectively. Site 3 Option 1 provides less building area but has high net construction costs due to the nature of the building as part refurbishment / part new build, with higher construction rates per m2.

St. George's new build leisure centre is not recommended as it would provide less facilities overall. The synergy of having all facilities co-located alongside the external hockey pitch is also less advantageous. The development of St. George's as residential would also have the potential to generate income through land sale or rent as a means to help cross-fund a new leisure centre on the John Orwell site.

In consideration of the above, the options assessed within the business case modelling are recommended in the following order:

1. Site 2 Option 5/5b
2. Site 1 Option 2
3. Site 3 Option 1

DELIVERY

Once the options are refined, a more detailed analysis of different methods of delivering the proposals in this report is required, including options for delivering any residential component.

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