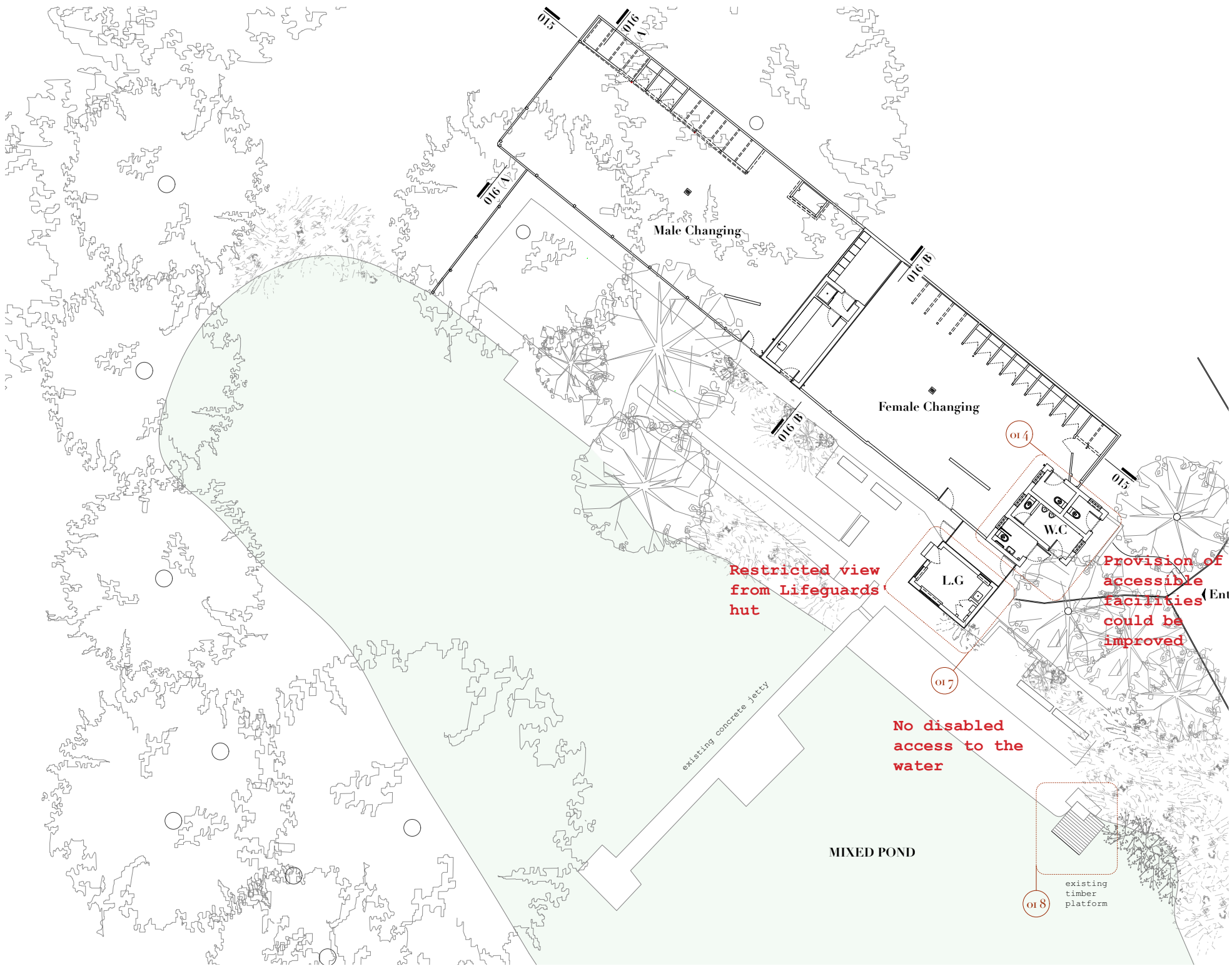


### 5.03 MIXED POND - Constraints & Opportunities

Following an 'Accessibility improvement appraisal' undertaken by the Access Consultant (IDACS) and site visits by the Design Team, the following access constraints on the site have been identified:

- The existing changing and showering areas are split into male and female. There are no specific changing or showering facilities provided for disabled people in either
- There are two existing WCs available for female swimmers and one WC and two urinals for male swimmers. There is also a single accessible WC; however the provision of accessible WCs could be improved
- The only access to the water is via a concrete jetty, which does not provide access for disabled swimmers
- The lifeguards' hut is located adjacent to the water's edge with a single window

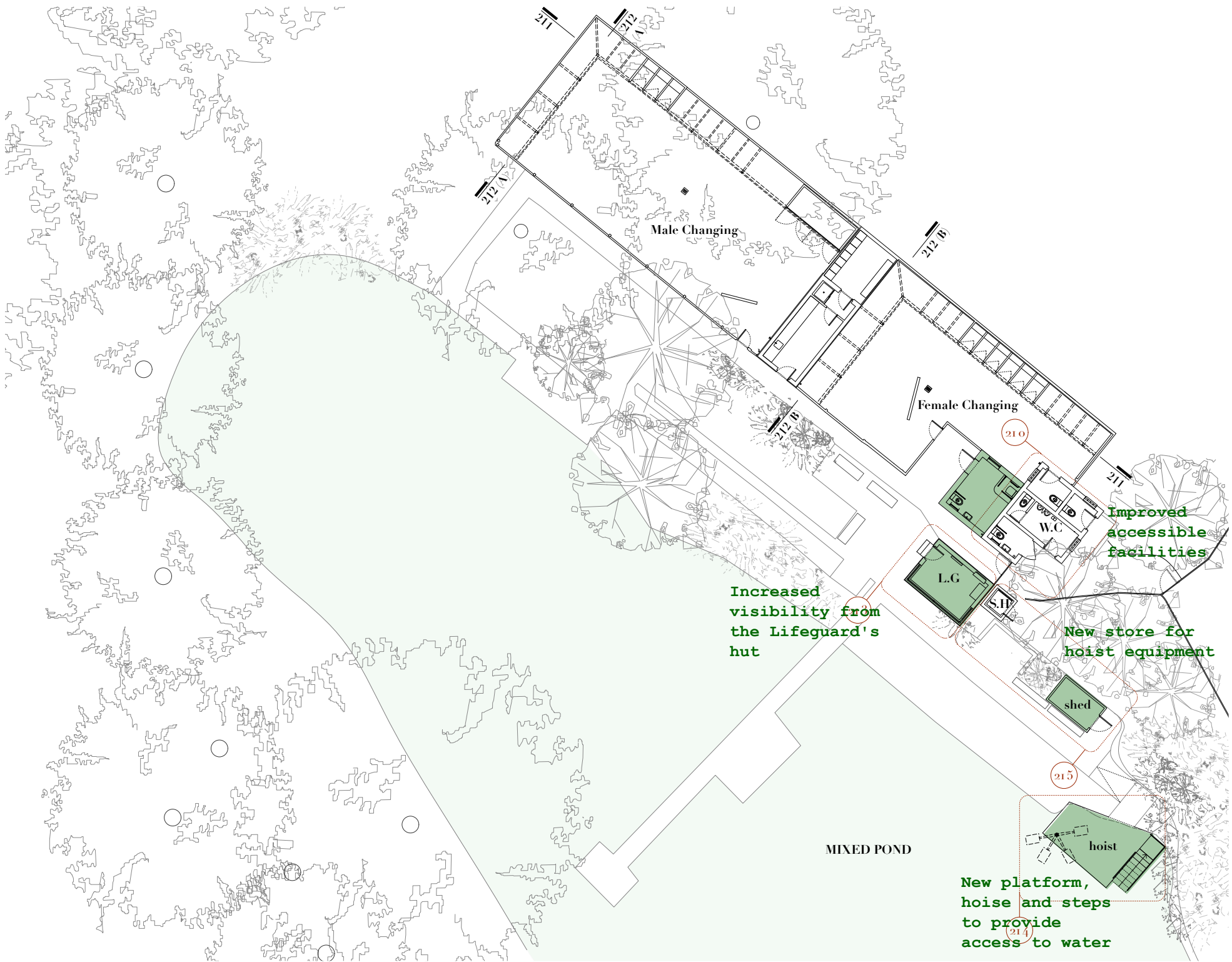


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Mixed Pond - Existing Plan

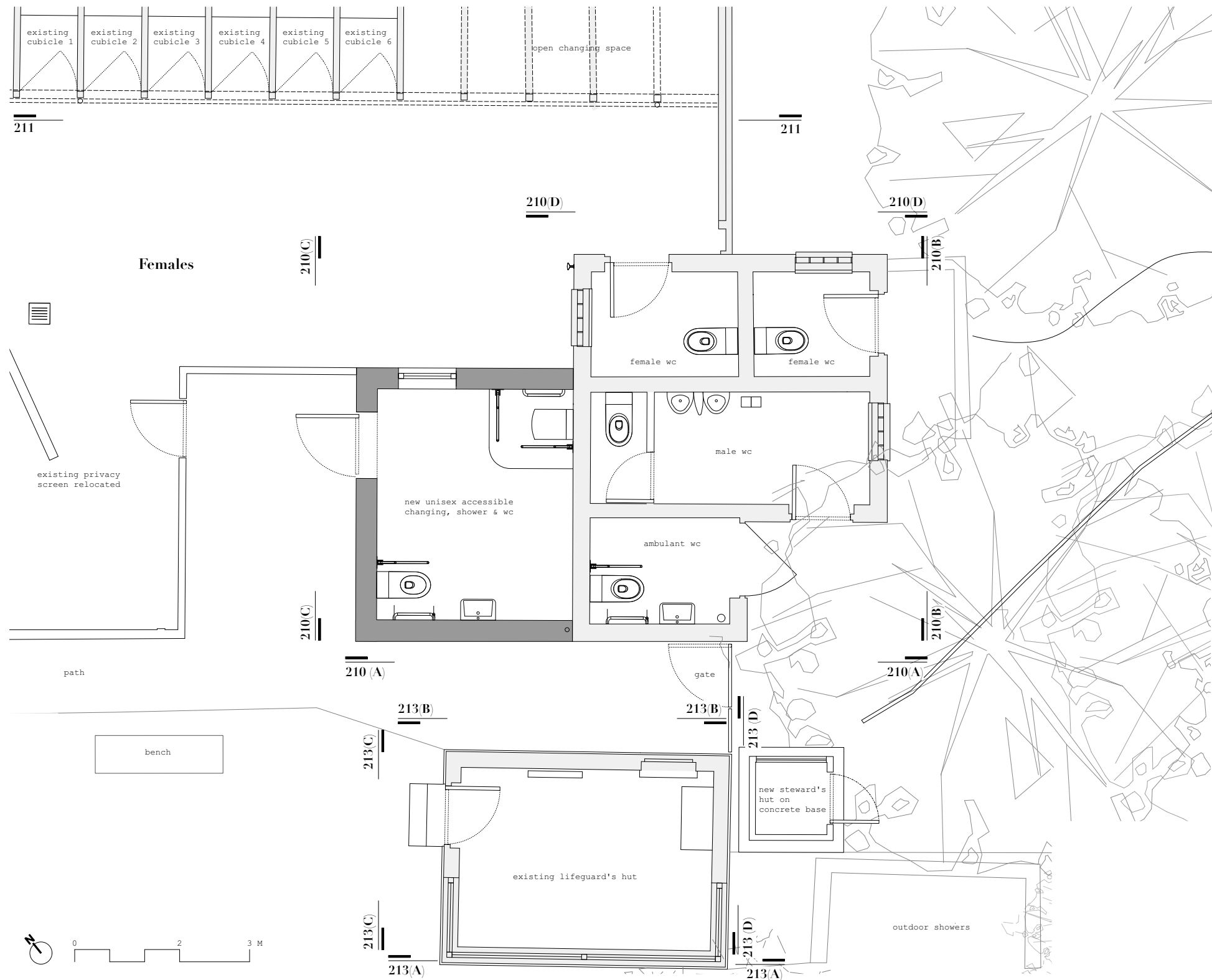
### 5.04 MIXED POND - Opportunities

Working alongside the Access Consultant, the following opportunities have been identified, in order to make the facilities more accessible:

- Creating wheelchair and ambulant accessible changing, showering and toilet facilities by extending the existing WC block
- Creating wheelchair access to the water via a new ramp to new platform with new hoist
- Creating ambulant access to the water via a set of new steps
- Increasing visibility from the lifeguards' hut with an enlarged window



Mixed Pond - Proposed Plan

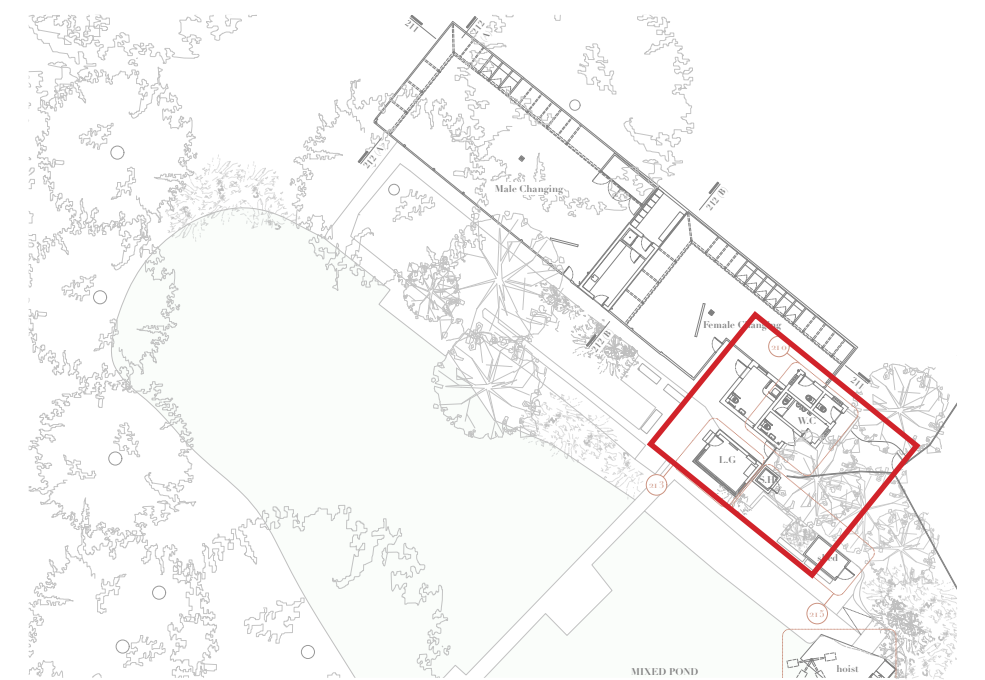


Plan proposal for the new accessible facilities at the Mixed Pond

### 5.05 MIXED POND - Proposed Uses

The new facilities will be provided in an extension to the existing buildings. The following will be provided:

- A new unisex accessible changing, shower and WC



Key:

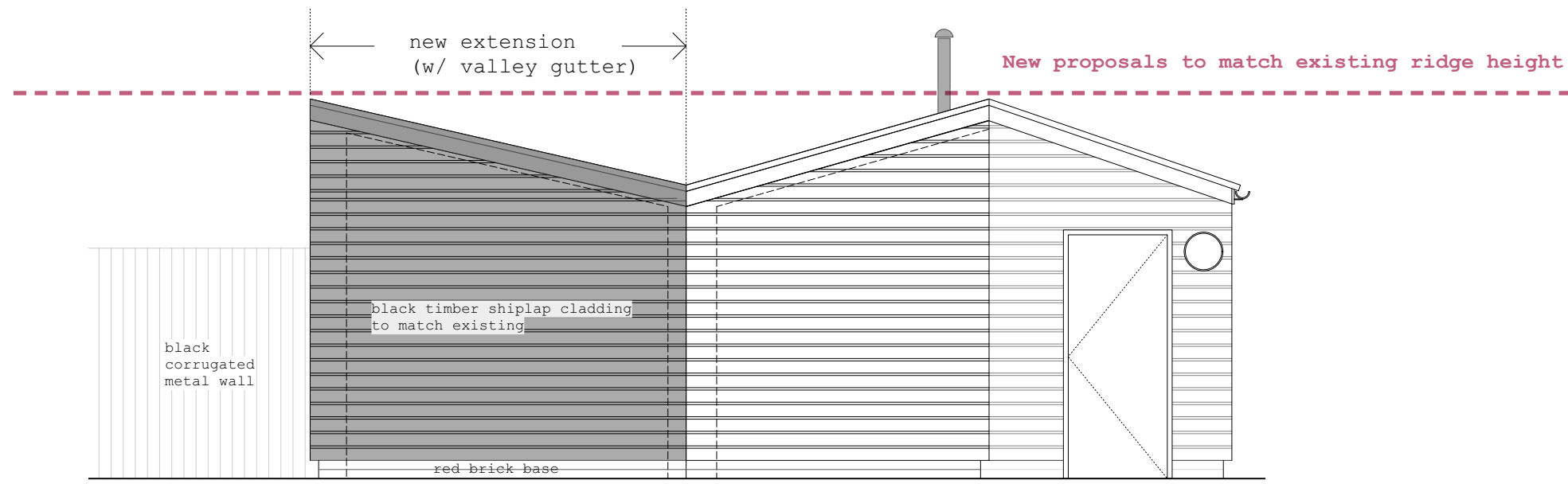


**5.06 MIXED POND - Scale & Massing**

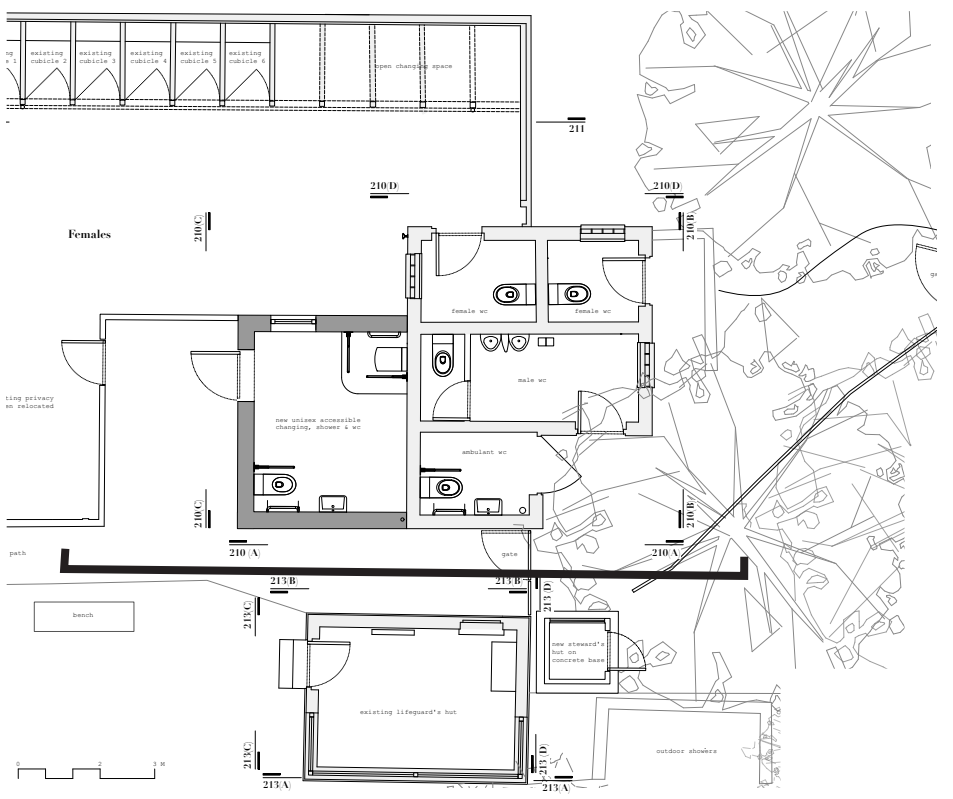
The new facilities are to be housed in a single-storey extension to the existing WC block.

The roof of the new building will be no higher than that of the existing block.

The new building is expressed as a simple double-pitched volume, picking up on the existing eaves and ridge levels of the existing block.



Proposed south elevation of the new pavilion showing its roof being no higher than the existing building



Key:

**5.07 MIXED POND - Appearance and Materials**

The materials for the new building elements are to match the existing structures on site:

The external walls of the extension to the WCs building are to be clad in black horizontal shiplap timber to match existing.

Like the existing WCs and Lifeguard's buildings, the new extension will have a base of red bricks, possibly reclaimed.

The roof to the new extension and the new overhangs in the changing compounds are to be black corrugated metal.

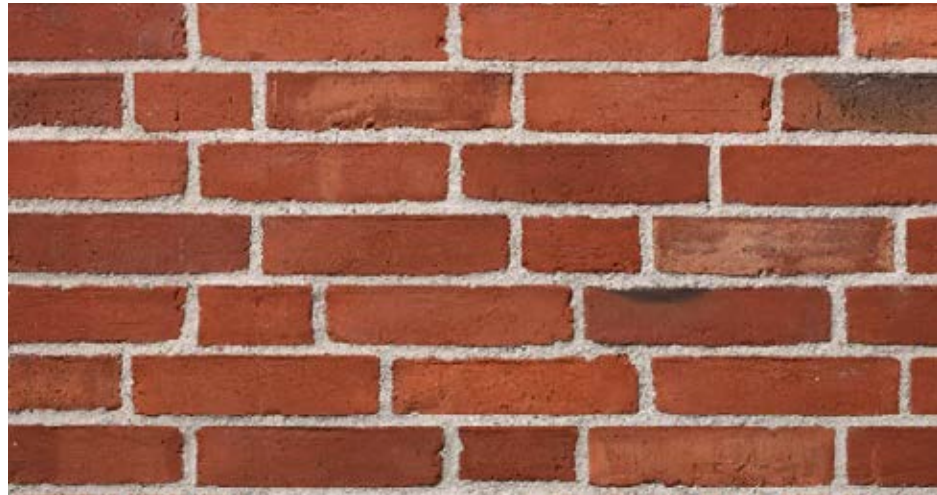
The new platform for the pool lift (hoist) is to be surfaced with a bare foot friendly metal grating mesh.



Black shiplap timber cladding for external walls



Black corrugated steel for the roofs



Red bricks for the base of the extension



Barefoot-friendly metal grating mesh floor

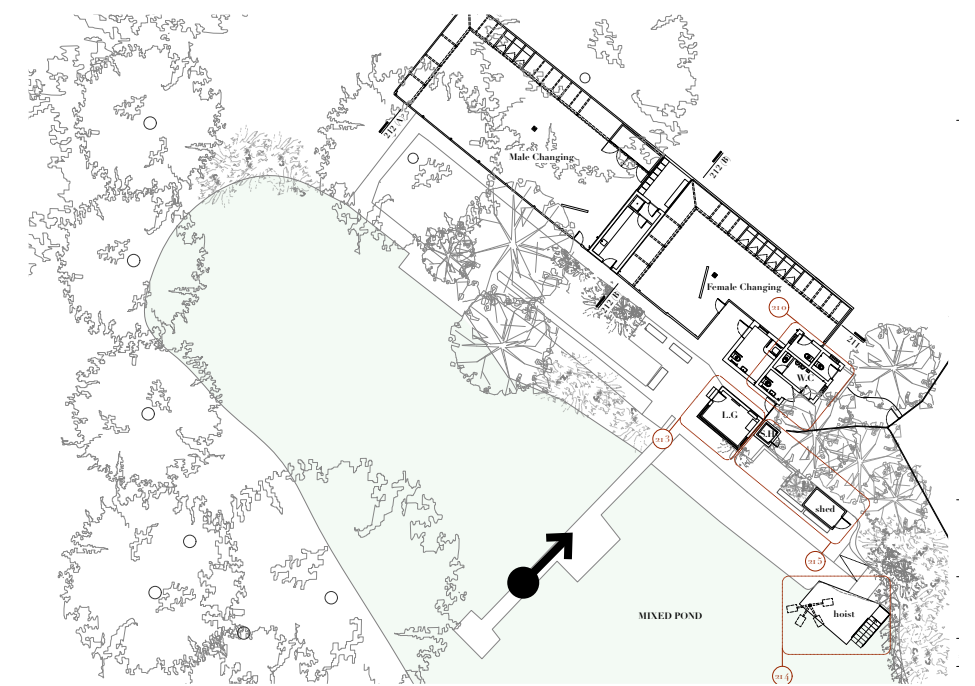




Existing view

### 5.08 MIXED POND - Existing View

The view to the left is from the existing concrete jetty looking towards the lifeguards' hut.



Key:

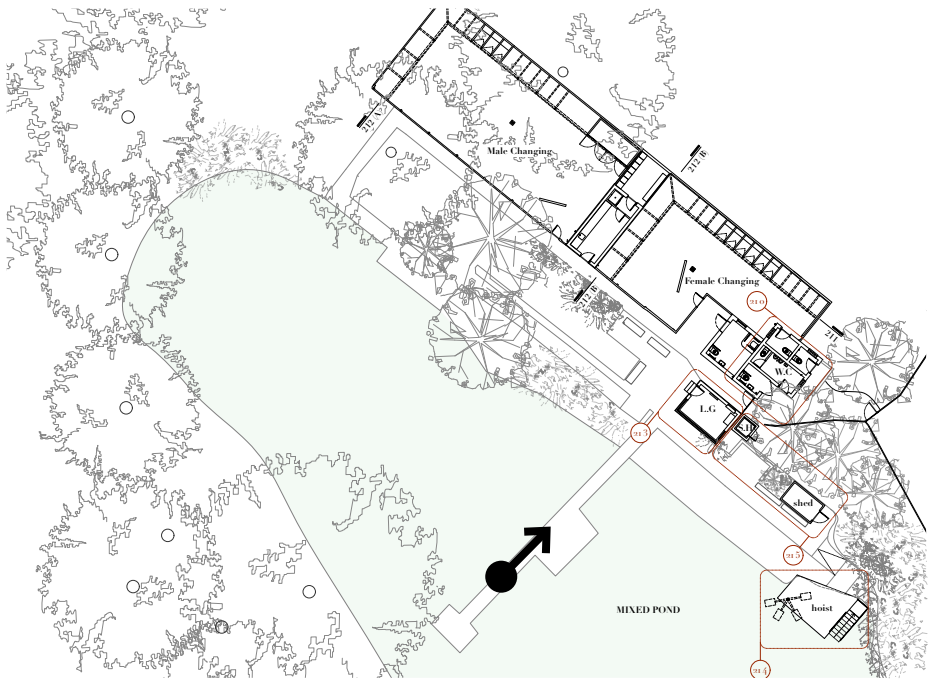


5.09 MIXED POND - Proposed View

The view to the left is an artist's impression of what the new bathing facilities will look like.



Proposed view



Key:

**6.00 KENWOOD LADIES' POND**

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**6.01 LADIES' POND - Existing Site**

The Kenwood Ladies' Pond (TQ275869) is situated to the eastern side of the Heath, and to the south-east of the Kenwood estate.



Aerial photo of Kenwood Ladies' Bathing Pond



Aerial photo of Hampstead Heath





1.Existing low gate & fence at the rear



2.Existing changing & Lifeguards' buildings (west)



3.Existing timber clad buildings (east)

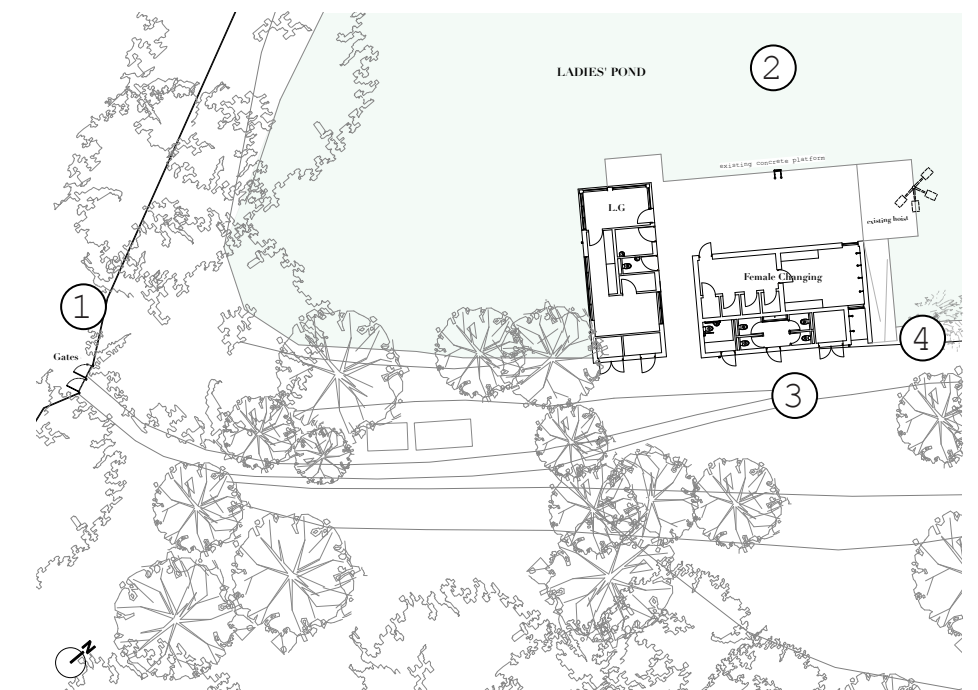


4.Existing ramped access to a concrete platform with/ a hoist for access into the water

## 6.02 LADIES' POND - Existing Buildings

The existing buildings and structures on the site are as follows:

- a box sat in a galvanised steel car trailer serving as a mobile cabin for the Steward
- recent new-build construction to create female changing facilities, including accessible facilities
- separate lifeguards' and staff facilities



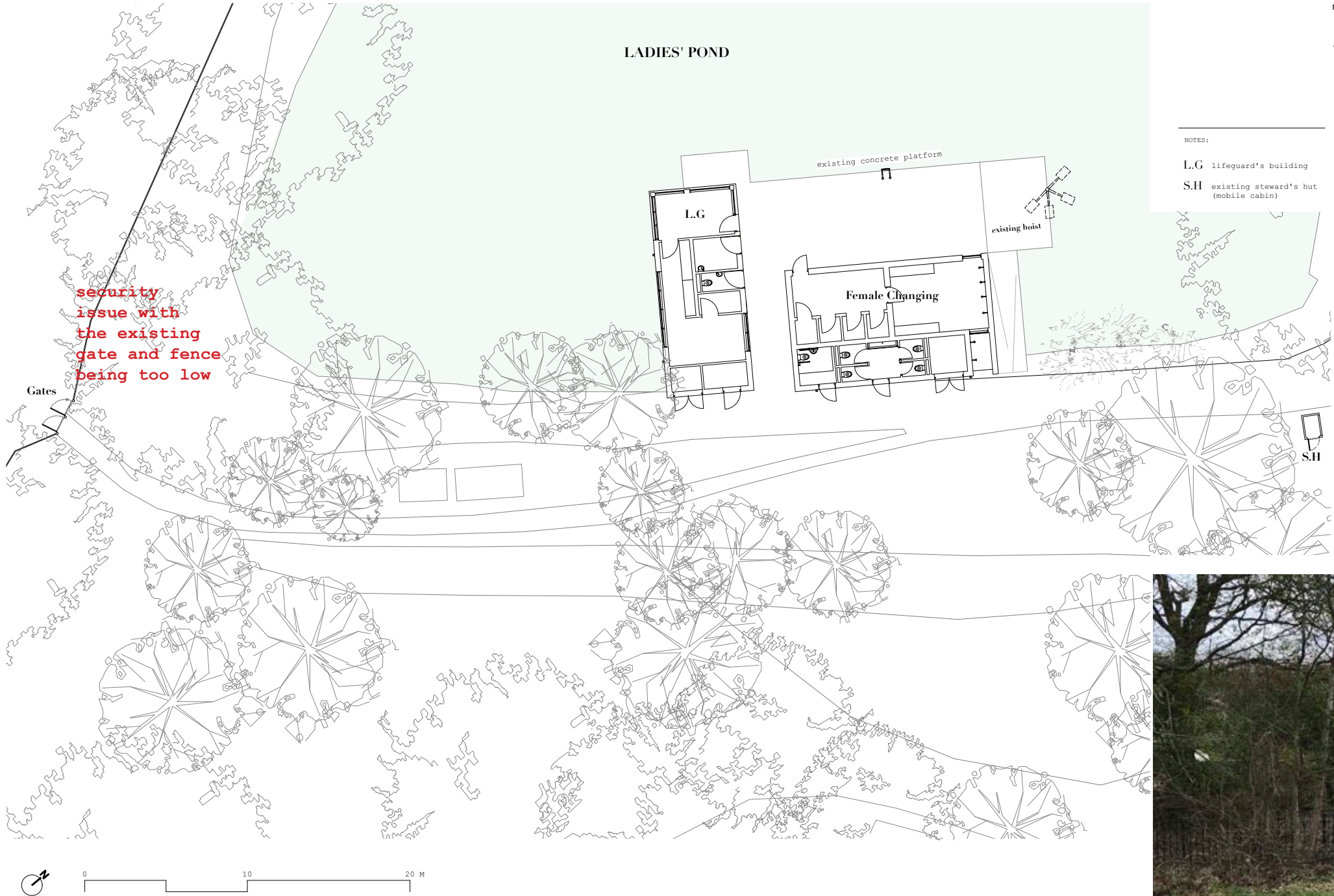
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### 6.03 LADIES' POND - Constraints

The following constraints have been identified at the Ladies' Pond.

- the existing gate and fence at the rear of the site is not high enough and does not provide adequate security to the site



Ladies' Pond - Existing Plan

Ladies' Pond - temporary measures to increase security



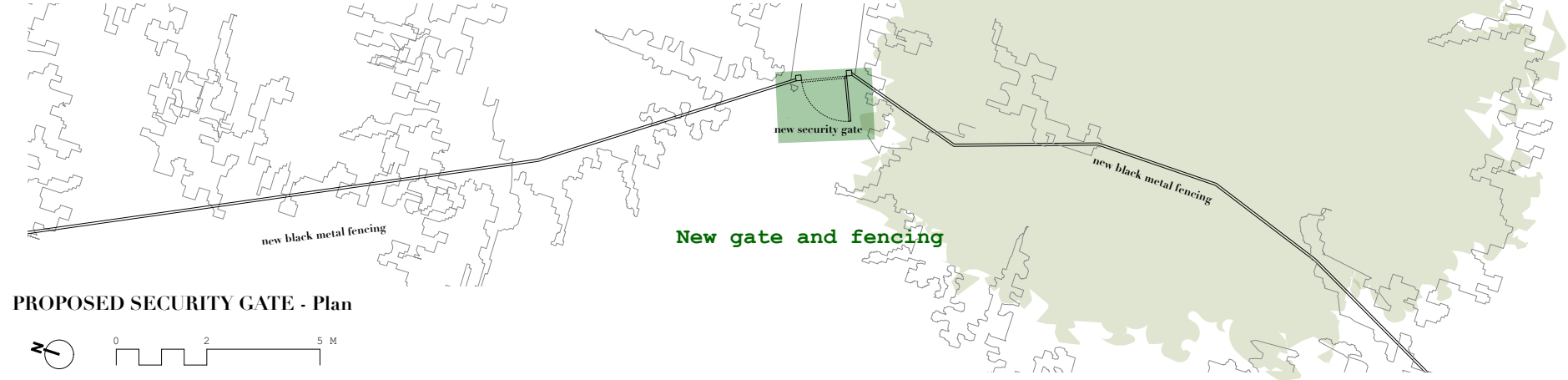
### 6.04 LADIES' POND - Proposals

The following works are proposed at the Ladies' Pond:

- New gate and fencing at the rear of the site to improve security
- New black timber shed on new concrete slab for Steward at the main entrance

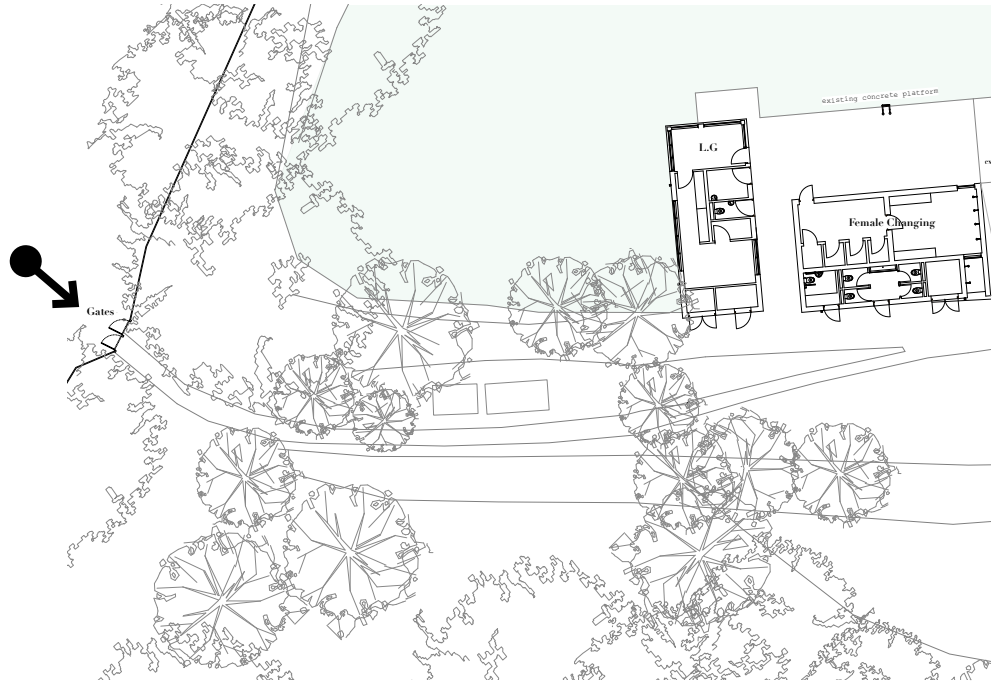


**PROPOSED SECURITY GATE - WEST**  
Elevation



**PROPOSED SECURITY GATE - Plan**

Ladies' Pond - Proposed Plan



Key:



## **7.00 INCLUSIVE ACCESS**

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### 1.0 Introduction

This section of the DAS has been prepared by the projects appointed Access Consultants, IDACS (UK) Ltd.

Overall this section of the DAS is concerned with inclusive access. The structure of this section includes:

- Policy and technical context for inclusive design on the project
- Accessibility and inclusive design within the proposals

### 2.0 Policy and technical context for inclusive design on the project

#### 2.1 National Planning Policy context for inclusive design

The National Planning Policy Framework (NPPF) sets out a number of clauses relevant to the delivery of an inclusive environment. Below we have set out some extracts with the most relevant words and phrases emboldened.

“92. Planning policies and decisions should aim to achieve healthy, **inclusive** and safe places which:

a) **promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other** – for example through mixed-use developments, strong neighbourhood centres, street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, and active street frontages;

b) are **safe and accessible**, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion – for example through the use of clear and legible pedestrian routes, and high quality public space, which encourage the active and continual use of public areas; and

130. Planning policies and decisions should ensure that developments:

f) create **places that are safe, inclusive and accessible** and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience. “

#### 2.2 The London Plan policy context for inclusive design

The London Plan includes Policy D5 on inclusive design, keys elements of which include:

“**B** Development proposal should achieve the highest standards of accessible and inclusive design. They should:

- 1) be designed taking into account London’s diverse population
- 2) provide high quality people focused spaces that are designed to facilitate social interaction and inclusion

3) be convenient and welcoming with no disabling barriers, providing independent access without additional undue effort, separation or special treatment

4) be able to be entered, used and exited safely, easily and with dignity for all”

#### 2.3 Camden’s Planning Policy context for inclusive design

In developing Camden’s Local Plan the NPPF and London Plan requirements are reflected and built on within Policy C6, Access for All, which states:

“The Council will seek to promote fair access and **remove the barriers that prevent everyone from accessing facilities and opportunities.**

We will:

- a. expect all buildings and places to meet the highest practicable standards of accessible and inclusive design so they can be used safely, easily and with dignity by all;
- b. expect facilities to be located in the most accessible parts of the borough;
- c. expect spaces, routes and facilities between buildings to be designed to be fully accessible;
- d. encourage accessible public transport; and
- e. secure car parking for disabled people. The Council will seek to ensure that development meets the principles of lifetime neighbourhoods”

Camden’s Local Plan Policy is supported by the ‘Access for all’ CPG publication which amplifies its policy, encouraging adoption of high standards and removal of barriers to access.

#### 2.4 Guidance and standards used to influence the proposals

The context for the project is unique. The ponds are relatively unique, allowing people to swim in natural setting. There is no specific guidance applicable directly to outdoor swimming in a natural setting, however the following guidance and standards have been considered by the design team and the project Access Consultant when formulating the proposals:

- *Accessible sports facilities*. Sport England. 2010
- The Building Regulations, Approved Document M: *Access to and use of buildings, volume 2: buildings other than dwellings March 2015.*
- BS8300:20018, *Design of an accessible and inclusive built environment – Part 1 External Environment – Code of practice.*
- BS8300:20018, *Design of an accessible and inclusive built environment – Part 2 Buildings – Code of practice.*



### 3.0 Accessibility and inclusive design within the proposals

#### 3.1 The Mixed pond

In this section we outline how the proposals will deliver a step change in the accessibility of the mixed pond.

At present, the mixed pond does not have an accessible shower or changing facility. It does have an accessible toilet, though this is not in line with current standards and expectations. Access to the water is limited to steps. As a public service, the client is aware of their obligations under the Equality Act 2010 and is seeking to make adjustments to address this major barrier.

The new facilities are placed adjacent existing WC's, ensuring drainage connections are available, but also to provide proximity to the water and the adjacent lifeguards building so that assistance and support is available when needed.

The proposals include a new fully self-contained wheelchair accessible facility, providing WC, shower and changing bench within one room for maximum convenience of users. This provision is the minimum required provision under Sport England's guidance. This facility will provide for a wide range of users including wheelchair users, people with assistance dogs and ambulant disabled people.

A step free path is available from the proposed location, leading to the water's edge. This path will be extended further with ramps and slopes to a new jetty where a fixed hoist will be provided to assist users in obtaining access to the water.

#### 3.2 The Men's pond

In this section we outline how the proposals will deliver a step change in the accessibility of the Men's pond.

At present, the Men's pond does not have any accessible toilet, accessible shower or changing facility. Access to the water is limited by steps and steep paths. As a public service, the client is aware of their obligations under the Equality Act 2010 and is seeking to make adjustments to address this major barrier.

The new facilities are placed close to the water, for convenient access to the water and adjacent the lifeguards building to ensure assistance and support is available if needed.

The proposals include a new fully self-contained wheelchair accessible facility, providing WC, shower and changing bench within one room for maximum convenience of users. This provision is the minimum required provision under Sport England's guidance. This facility will provide for a wide range of users including wheelchair users, people with assistance dogs and ambulant disabled people. To add capacity, alongside this provision a separate ambulant accessible WC and shower is provided. This is expected to provide for disabled people who are still generally ambulant but need additional support when showering and using the toilet.

The proposals include space for a range of specialist hoist fixings and space where a wheelchair users may wish to leave their own device, within sight whilst swimming. The space also allow for assistance dogs to be tethered whilst users swim if needed, or perhaps

for a disabled person to sunbathe for a while before changing. Lockers are provided for people to leave items such as mobility aids or prosthetic limbs.

In order to get into the water, two options are included within the proposals, stepped and hoisted access. From the deck of the new facilities, a new stair will be provided complete with handrails. The stair will be designed with 300mm goings to allow users to stand fully on one step at a time. This is intended to provide a more direct and less strenuous means of access into and out of the ponds for ambulant disabled people. For wheelchair users, people who cannot use the stairs or just require hoisted access to the water, the existing footpaths will be altered to form ramps leading down to the existing concrete jetty where a new hoisting system will be provided. The hoist will have a range of attachment options to maximise the options available to users.

### 4.0 Conclusions

The project is fundamentally about improving access to the swimming available at the ponds. It addresses a significant shortfall in provision and offers the potential to make the facilities available to new users, providing a very unique offer for disabled people who are currently unable to use the facility due to a lack of facilities.

The proposals have been influenced by current best practice and advice from a specialist member of the National Register of Access Consultants. Engagement has also been used to inform the development of the project. In our view the proposals meet with the relevant planning policy requirements and are aligned to Camden's Policy C6.

## 8.00 CONSULTATION

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## 8.01 CONSULTATION

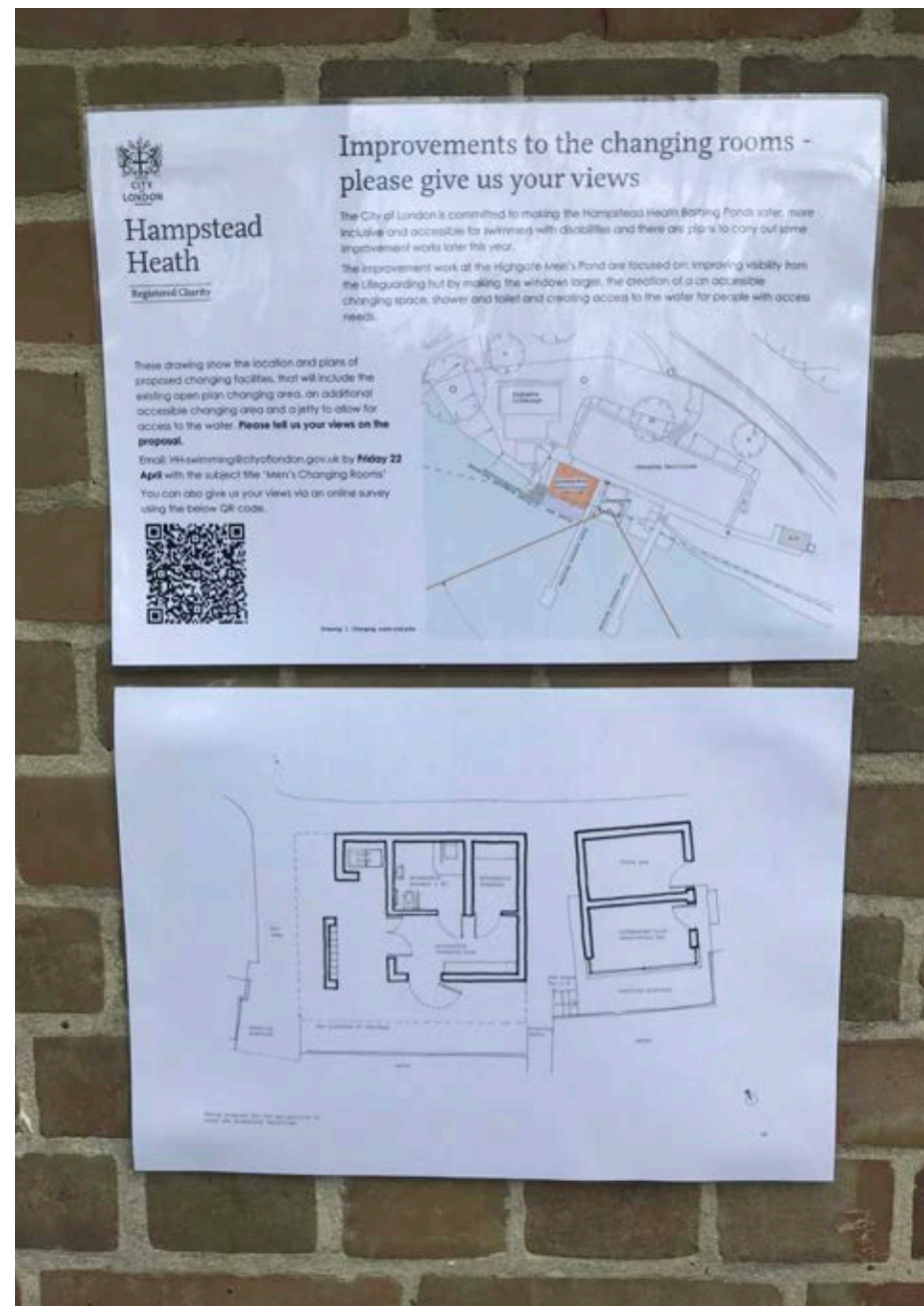
Members and stakeholders, including the user groups at the bathing ponds have been consulted on this project. They have heard reports at the two statutory Committees - the Hampstead Heath Management Committee and the Hampstead Heath Consultative Committee.

The swimming associations have been kept up to date by officers and were invited to a face-to-face engagement exercise on 5<sup>th</sup> May 2022, where the plans were discussed in detail and comments they made went on to influence the design. Following this engagement with the three swimming associations, modifications were made to the plans:

At the Mixed Pond, the layout was revised with less cubicles and instead, more overhangs to protect clothes left on benches and pegs.

At the Men's Pond, the footprint of the new building was decreased by reducing the width of the semi-outdoor space whilst retaining accessibility. An element of colour and reference to nature was introduced by cladding the screen in green textured tiles.

At the Ladies' Pond, further options were drawn to address the needs of visually-impaired swimmers. The importance of individual cubicles was highlighted in order to keep their clothes separate from those of other swimmers to aid re-finding them after bathing.



An online survey was sent to a mailing list of swimmers - nearly 20,000 email addresses in total - at the beginning of April 2022. Nearly 2000 people responded to the survey with a vast majority in support of the plans to make the Ponds more accessible.

## **9.00 SUSTAINABILITY**

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## 9.01 Services & Sustainability

### Key Principles

- the emphasis will be on reducing energy demand as per the Mayor of London's energy hierarchy - Use less energy (be lean), Supply energy efficiently (be clean) and Use renewable energy (be green)

- the first step will be to achieve an efficient building fabric to reduce energy demand by using U-values in excess of the Part L minimum requirements and setting air-tightness targets for the new buildings

- using recycled material where possible

- specification of efficient engineering systems

- specification of high efficiency low-energy lighting with controls

- providing mechanical ventilation with heat recovery

- sub-metering the different energy uses to allow an understanding of the power usage to inform the management or future provision of renewables

### Energy

- the energy use on the sites will be for heating, ventilation, hot water and electricity (lighting, small power)
- hot water and heating will be electrical
- there will be no gas on the sites

### Renewable technologies

The following renewable technologies were investigated for use at the sites, but discounted for the following reasons:

- air source heat pumps - acoustic issues and not enough demand to be efficient
- ground source heat pumps - ecology issues and not enough demand to be efficient
- photovoltaics - not enough roof area and south-facing roof slopes on public view
- solar thermal collectors- not enough roof area and all roofs on public view
- wind turbines - not suitable for aesthetic reasons and disruptive to ecology



**10.00 ECOLOGY & ARBORICULTURE**

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## 10.01 Ecology and Arboriculture

### Ecology

An 'Preliminary Ecological Assessment' (PEA) has been produced by The City of London Ecologist for Hampstead Heath.

The PEA covers the proposals at the Men's and Mixed Ponds as the works at the Ladies' Pond are limited in scope.

The sites are deemed to be of 'low to moderate ecological value' and there is expected to be 'no impact on protected habitats or species'. The proposals will seek to achieve net gain for biodiversity through compensatory habitat creation on the Heath.

### Arboriculture

An 'Arboricultural Impact Assessment' has been produced by the Hampstead Heath Trees Management Officer. The document contains tree survey schedules and root protection areas and covers the 14no. trees at the Men's, Mixed and Ladies' Ponds.

All trees are to be retained. The proposals are assessed as having "No impact" to the vast majority of trees on site and 3no. trees are identified as needing an 'Arboricultural Method Statement' in order to facilitate works in their vicinity.



Figure 2: Mixed Bathing Pond proposed access ramp and outbuildings.

2.6 The City of London ecologist undertook an initial site walkover on 29<sup>th</sup> March 2022 with members of the surveyor's team and a subsequent survey on 27<sup>th</sup> April 2022. It should also be noted that the ecologist has visited this site on numerous occasions in preceding years. Features within the site boundary as well as features immediately bordering it were recorded. Any fauna using the area were noted as well as habitats suitable for statutory protected species were identified where present.

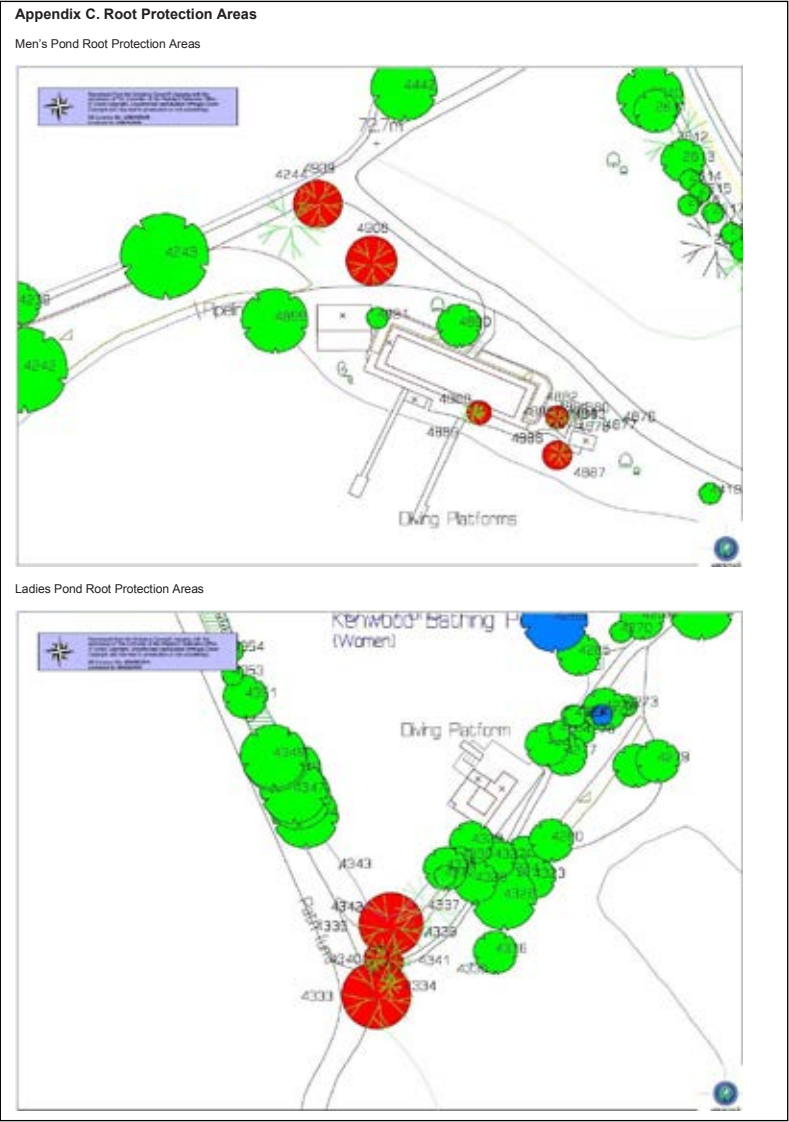
### 3.0 Site descriptions

3.1 Two sites were surveyed as part of the appraisal. The Men's Bathing Pond and the Mixed Bathing Pond, both located within Hampstead Heath, a large area of open green space covering 320 hectares of North London.

#### 3.2 Men's Bathing Pond:

- The site comprises of a small area of scrub covering an area of approximately 50m<sup>2</sup> within an enclosed compound known as the Men's Bathing Pond situated towards the south-east of Hampstead Heath within the London Borough of Camden. The Men's Bathing Pond is an area purposed for open water swimming with changing facilities, toilets, and swimming jetties. It is a heavily used amenity space. Grid Reference TQ27855 86576.
- Flora species on site largely consist of the introduced shrub snowberry (*Symphoricarpos albus*) intermixed with blackthorn scrub. Species on site have been coppiced so that most of the vegetation is at a height of height of c.15cm. Low growing ivy and bramble form the ground flora along with a fringe of pendulous

Preliminary Ecological Assessment  
Extract



Arboricultural Impact Assessment  
Extract

Both of the above full reports accompany this planning application.

## 11.00 STRUCTURAL

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## **11.01 Structural**

A Structural Strategy has been developed in conjunction with Momentum Structural Engineers who have looked at the existing and proposed structures and concluded the following:

### **Existing structures**

The existing structures appear to be in suitable conditions for reuse. Minor repair work and maintenance is required to ensure future longevity and to avoid further damage occurring.

### **Proposed structures**

Screw pile foundations have been found to be the most suitable option for supporting any new structures in or near the ponds. This includes the pavilion structure and jetties or platforms on the water.

The proposed pavilion and jetties have been designed as lightweight timber and steel structures to suit ease of fabrication, installation, future maintenance and demountability, whilst minimising embodied carbon.

## 11.02 Site Condition and Existing Structures

### Introduction

Momentum have been working with Zoe Polya-Vitry Architects to develop outline design proposals for a refurbishment of the structures at Hampstead bathing ponds. This includes the Mens, Ladies and Mixed bathing ponds.

The work continues on from the 'Ponds Project' in 2015, which involved major works to extend, refurbish and construct the bathing ponds and associated dam. One of the main aims is to improve disability access to the Mens and Mixed ponds, including installing specialist hoists.

The following report outlines our observations from site during a site visit carried out on 14/01/22, along with commentary on the current Stage 3 proposals and our conclusions and recommendations for subsequent work.

### Site conditions and existing structures

The following background information was available when producing this report. It is not intended for this information to be reproduced in its entirety, but information relevant to the structural solutions has been highlighted.

- Site photos taken by Momentum
- 2015 Ponds Project supporting documents submitted to Camden Council including planning drawings and design packs for each outdoor pond produced by Atkins.
- Ponds architectural option drawings provided by Zoe Polya-Vitry

This information has been further developed by a desk top study and site inspection carried out on 14/01/22

#### Site History

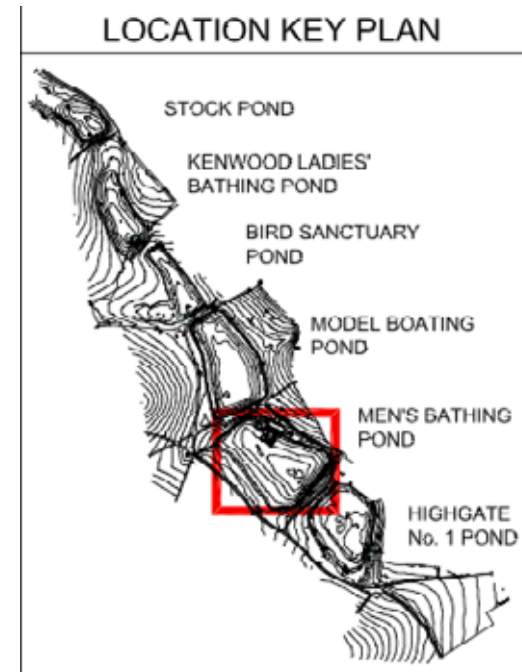
Hampstead Heath ponds, in which the Mixed bathing pond is situated, are a historical feature of the landscape. Highgate bathing ponds include the two single sex bathing ponds and are former 17th century reservoirs. Parliament Hill Lido (constructed in 1938) is also included in refurbishment works. The ponds were first converted into swimming areas in the 1890s to 1920s with timber sheds and platforms.

In 2015 the 'Ponds Project' involved major construction works to replace dams and refurbish the ponds to some extent.

#### Existing Geology

All ponds are expected to have a base layer of London Clay. Further investigation is require to determine the surrounding geology and hydrology.

#### Mens Pond

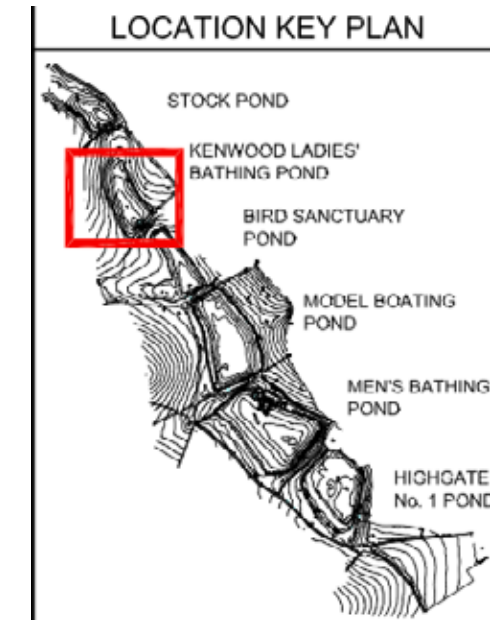


Existing structures consist of:

- Loadbearing masonry with timber roof structures forming changing room and toilet blocks.
- Loadbearing masonry with timber roof structures forming a lifeguards block.
- Various original reinforced concrete piers and jetties
- More recently installed steel jetties on posts.

The structures appear to be in reasonable condition given their age. There are signs of damp on the toilet block masonry that may be the cause of damage to the bricks. The concrete forming the jetties appears to be in reasonable condition, with no obvious signs of reinforcement corrosion or spalling. It was not possible to inspect the underside or undertake waterline due to access limitations.

#### Ladies Pond



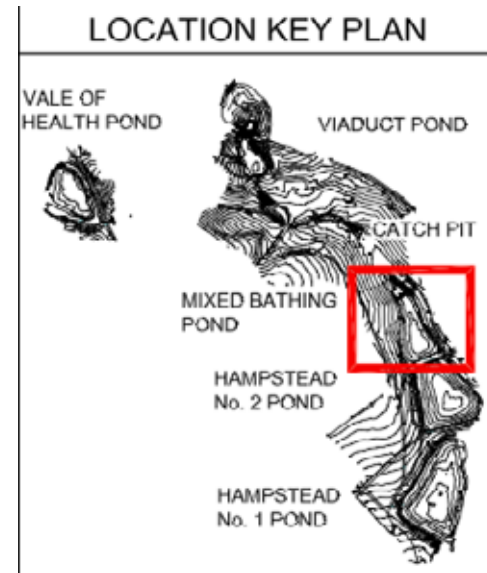
Existing structures consist of:

- Loadbearing timber structures forming changing rooms, toilets and a lifeguards block.
- Reinforced concrete piers and jetties that provide access to the ponds and also appear to be the foundations of the timber structure.

The structures appear to be in reasonable condition given their age. There are signs of water damage to the cladding that is likely to be due to the external showers being located adjacent to the cladding with no protection. The concrete forming the jetties appears to be in reasonable condition, if roughly cast, with no obvious signs of reinforcement corrosion or spalling. It was not possible to inspect the underside or undertake waterline due to access limitations.



### Mixed Pond



Existing structures consist of:

- Loadbearing masonry with timber roof structures forming changing room and toilet blocks.
- Loadbearing masonry with timber roof structures forming a lifeguards block.
- Timber wall and roof structures forming a lifeguards locker room.
- Various original reinforced concrete piers and jetties.
- A more recently installed timber jetty.

The structures appear to be in reasonable condition given their age. The lifeguards locker room is of poor construction and lacks insulation. The concrete forming the jetties appears to be in reasonable condition with no obvious signs of reinforcement corrosion or spalling. It was not possible to inspect the underside or undertake waterline due to access limitations.

### Proposed structural alterations

Some of the key issues include the following:

- Consideration has been given to the environmental and hydrological issues of constructing on and adjacent to a publicly used watercourse. The new structures and alterations have been designed based on the access limitations of the sites, particularly where they are adjacent to water.
- The new structures have been designed to be as unobtrusive as possible, and removable in the future should that be required. In order to make the structures as adaptable and demountable as possible screw piles, timber and steel will be used. The connections between elements will be designed for disassembly and reuse.
- Typically, new structures will be supported off screw piles. Screw piles can be installed from a temporary moving pontoon, thus avoiding the need for draining the ponds or installing temporary caissons. Screw piles will be installed vertically, with cross bracing across piles to provide lateral stability. To prevent corrosion the piles will be stainless steel or have marine specification galvanising. Assuming the screw piles are driven into London Clay a loading of about 60-80kN is feasible, which is sufficient to support the proposed structures.
- Refurbishment of existing structures. Existing structures to be repaired where required to ensure their lifespan is increased as far as practically possible. This includes repairs to roofing, gutters and brickwork to avoid water ingress.

### Mens Pond

The proposals include the following:

- Widening the windows of lifeguards building to improved visibility. In order to widen the existing opening around the corners a new steel frame will be installed. It is proposed to retain the existing timber roof structure as far as possible. The new columns will support cantilevering steel beams which will support the existing timber roof along the eaves. Further opening up works will be required to ascertain the existing structural details as this will inform the final configuration of the new steel frame. The contractor will need to develop temporary propping and sequencing to suit the proposed works.
- New pavilion structure. A new accessible WC structure will be constructed adjacent to the ponds. The proposals are to support a galvanised steel subframe off screw piles. This subframe will in turn support a steel superstructure which will be stabilised with vertical bracing and moment frames. Part of the steel frame will cantilever out at the corner to create a column free area. The flooring, walls and roof will then be formed in timber stud walling and rafters. At the front of the structure exposed tapered timber rafters will cantilever out from the steel edge beam.
- New jetty and ramp structure. New ramp structures will be installed over the water. A regular system of parallel galvanised steel beams supporting open mesh flooring will be used. Handrails will be attached to the edge beams where required.

### Mixed Pond

The proposals include the following:

- Widening the windows of lifeguards building to improved visibility. In order to widen the existing opening around the corners a new steel frame will be installed. It is proposed to retain the existing timber roof structure as far as possible. The new columns will support cantilevering steel beams which will support the existing timber roof along the eaves. Further opening up works will be required to ascertain the existing structural details as this will inform the final configuration of the new steel frame. The contractor will need to develop temporary propping and sequencing to suit the proposed works.
- New toilet extension structure. A new accessible WC structure will be constructed adjacent to the existing WC. Given the existing foundations and relatively light loads it is proposed to construct the extension on a ground bearing RC slab structure rather than on screw piles. Superstructure will be timber framed with timber studs and rafters.
- New jetty and ramp structure. New ramp structures will be installed over the water. A regular system of parallel galvanised steel beams supporting open mesh flooring will be used. Handrails will be attached to the edge beams where required.



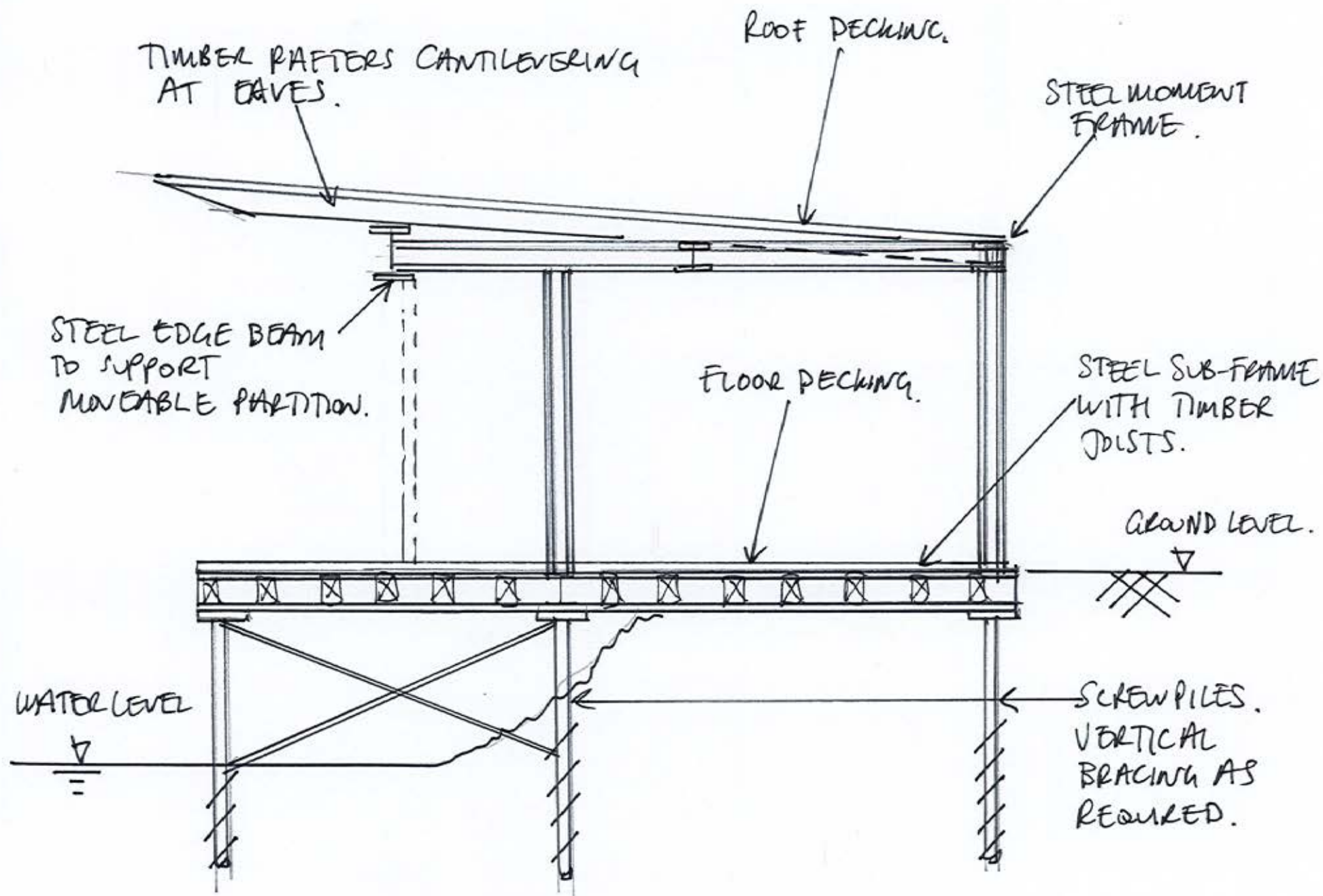


#### 11.04 Structural Section

The drawing to the left, by Momentum Engineering, shows the structural proposals for the new pavilion at the Mens' Pond.

A steel sub-frame with timber joists and floor decking sits on screw piles to form the floor.

A simple steel moment frame forms the main volume of the building with timber rafters and roof decking to form the pitched roof.



Sketch section of structural strategy for Mens' Pond pavilion

## **12.00 COMPUTER GENERATED IMAGES**

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12.01 MEN'S POND - From south side of bathing pond





12.02 MEN'S POND - From concrete jetty - open





12.03 MEN'S POND - From concrete jetty - closed





12.04 MEN'S POND - From new facilities





12.05 MIXED POND - From south side of pond





12.06 MIXED POND - From concrete jetty





## 13.00 SUMMARY

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### 13.01 Summary

The aim of the project has been to improve accessibility at the bathing ponds on Hampstead Heath:

#### **Highgate Men's Bathing Pond**

New changing, showering and WC facilities will be provided for wheelchair and ambulant disabled swimmers and new access provided into the water for them.

#### **Hampstead Mixed Bathing Pond**

Existing facilities will be extended to provide changing, showering and WC facilities for wheelchair and ambulant disabled swimmers and new access provided into the water for them.

#### **Kenwood Ladies' Bathing Pond**

The works at the Ladies' Pond have been restricted to security modifications as accessible facilities are already provided.

The improvements to the accessibility at the bathing ponds will be delivered whilst ensuring the minimum impact to the existing facilities, the ecology of the sites and usage of the ponds.