GREATER**LONDON**AUTHORITY

[redacted]
(By email)

Our Ref: MGLA080721-7858

30 July 2021

Dear [redacted]

Thank you for your request for information which the Greater London Authority (GLA) received on 8 July 2021. Your request has been considered under the Environmental Information Regulations (EIR) 2004.

You requested:

> *I am currently investigating the provision of swimming pools within the UK. If possible I would please like to access the report, 'The London Lido Report', commissioned in 2014 by Boris Johnson. I believe the report was in response to the idea of a floating pool on the River Thames.*

Our response:

Please find attached the information we hold within the scope of your request – a copy of *Phase One Report To Greater London Authority - The London Lido - A New Floating Pool For The River Thames* (2 June 2014) and appendices.

Please note that some of the content falls under the exception to disclose in Regulation 12 (5)(e) (confidentiality of commercial or industrial information) of the EIR:

- Chapter 5 – Fundraising
- Appendix 2 and 3 - Production Budget & Timeline
- Appendix 4 – Fundraising Strategy – Potential targets
- Appendix 5 – London Lido Funding Pyramid

Applying the four-stage test from *Bristol City Council v Information Commissioner and Portland and Brunswick Squares Association (EA/2010/0012, 24 May 2010)*:

1. The information is commercial or industrial in nature.

The redacted information the report details:

- Chapter 5 – Fundraising
- Appendix 2 and 3 - Production Budget & Timeline
- Appendix 4 – Fundraising Strategy – Potential targets
- Appendix 5 – London Lido Funding Pyramid

The information can therefore be considered as commercial or industrial in nature.

2. Confidentiality is provided by law.

The information is covered by the common law obligation of confidentiality, the information is not trivial in nature, nor is it in the public domain. Artichoke provided the redacted information to the GLA on the expectation and understanding that they would be held in confidence. The redacted Information is therefore to be protected by confidentiality provided by law.

3. The confidentiality is protecting a legitimate economic interest.

The fundraising strategy (and appendices) were developed by Artichoke as a guide to the GLA on potential sources of funding for the project. Such sources, and the relationships they describe, result from years of close strategic development with partners and lie at the heart of their business. Any new project they embark on requires Artichoke to build commercial and statutory partnerships with external third parties and these relationships are sensitive and privileged

4. The confidentiality would be adversely affected by disclosure.

Disclosure of the information would inevitably harm the confidential nature of it and therefore the exemption at Regulation 12(5)(e) is engaged in respect of disclosure of the redacted information.

- Public interest

Regulation 12(5)(e) constitutes a qualified exemption from our duty to disclose information under the EIR, and consideration must be given as to whether the public interest favouring disclosure of the information covered by this exemption outweighs the public interest considerations favouring maintaining the exemption and withholding the information.

The GLA acknowledges that there is a public interest in the feasibility of a floating lido in London and a specific public interest in the transparency of the GLA's achievement in delivering Mayoral commitments. However, it is not in the public interest to prejudice the commercial interests of third parties. We find that the public interest is therefore balanced in favour of non-disclosure of the redacted information because of the harm its release would cause.

Please note that some names of members of staff are exempt from disclosure under Regulation 13 (Personal information) of the EIR. Information that identifies specific employees constitutes as personal data which is defined by Article 4(1) of the General Data Protection Regulation (GDPR) to mean any information relating to an identified or identifiable living individual. It is considered that disclosure of this information would contravene the first data protection principle under Article 5(1) of GDPR which states that Personal data must be processed lawfully, fairly and in a transparent manner in relation to the data subject

If you have any further questions relating to this matter, please contact me, quoting the reference MGLA080721-7858.

Yours sincerely

[redacted]
Information Governance Officer

If you are unhappy with the way the GLA has handled your request, you may complain using the GLA's FOI complaints and internal review procedure, available at:
https://www.london.gov.uk/about-us/governance-and-spending/sharing-our-information/freedom-information

PHASE ONE REPORT TO
GREATER LONDON AUTHORITY

THE LONDON LIDO
A NEW FLOATING POOL FOR THE RIVER THAMES

2 JUNE 2014

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1 EXECUTIVE SUMMARY

Artichoke has been engaged by the Mayor's Office to undertake a comprehensive study into the feasibility of creating the London Lido – a floating swimming pool in the Thames. We have consulted widely and found that the idea meets with general enthusiasm. Although there have been other proposals for a floating pool, this initiative is seen as timely and welcome.

There have been several previous proposals for a floating pool, but each has started from the point of view of an architect's or designer's concept; in our view none has succeeded because they have not taken into account either the considerable natural forces of the Thames which militate against such a project, nor the working environment of the river that sees much of the useable space dedicated to commercial activity. Artichoke has taken an opposite approach, consulting on what and where is feasible, before embarking on a design process that could meet the constraints and challenges that the project faces.

The 7m tidal variation in height of the Thames twice a day differentiates London conditions from those of other cities across the world that have successfully installed a floating pool, and is one of the main reasons why previous proposals for a London Lido have not progressed beyond the concept phase. In addition, the combination of environmental and heritage legislation together with high level river usage significantly reduces the number of sites available for the Lido.

The Thames is currently undergoing the largest number of concurrent riverside development projects in living memory, together with plans for the Thames Tideway Tunnel. The Thames is very much a working river.

Artichoke's research indicates that there are no more than six possible locations for a Lido of any significant size along the Thames between Battersea Park and Greenwich Peninsula. These are:

- Battersea Power Station
- Gabriel's Wharf
- Pool of London (City Hall)
- Greenwich Pier
- Royal Docks
- Greenwich Peninsula

We have examined these six locations in detail and ranked them according to criteria outlined in detail in the report:

- Permitting authorities and their concerns
- Timescale for development
- Logistical & engineering opportunities
- Borough need for swimming provision
- Tourism & visitor potential
- Current uses of the Thames in these locations
- Fundraising potential

We began our research on the assumption that the London Lido would be solely a Mayoral initiative. However, of the six sites that we have examined, three sit within an existing area of substantial commercial development and each developer has plans – more or less advanced – to include a floating pool in the facilities that their site will offer. These are The Royal Docks, Greenwich Peninsula and Battersea Power Station.

Of the remaining three possibilities, one is technically challenging (Gabriel's Wharf); one faces opposition from statutory authorities, most notably the PLA, because of the impact it would have on other operations at that point in the river (Greenwich Pier); and the remaining site (Pool of London/City Hall) currently has no identified financial partner. If a partner can be found quickly, then this site could join the first three as a possible contender for delivering the London Lido by the summer of 2016. If a full-scale independent fundraising campaign is required, we estimate that this would add an additional 18 – 24 months to the process, leading to delivery in 2018.

Our research is based on the premise that the London Lido would be a fixed structure, anchored in one location. There is little opportunity for such a facility to move between sites, since all bridges west of Tower Bridge are too low for the Lido to pass beneath, although it could conceivably move from the Docks to the Pool of London.

The Lido will focus attention directly onto the river and provide a high profile opportunity to address many of the priorities outlined in the River Action Plan, including, in particular, potential for tying in with the pier development plans. Its ultimate success is dependent on the proximity of good transport links. For example, there could be mutual benefit to wider strategic priorities for London if tied in with plans for expansion of the Barclays Cycle Hire scheme and development of the river network.

As a sporting and leisure facility, rather than a tourist attraction, the Lido has the potential to provide additional pool space in areas of aquatic deprivation, in particular in Southwark, Newham and Greenwich. There is some tension between the Lido as a provider of local recreational swimming opportunities and as a tourist and visitor destination. The chosen location is key to determining who the likely users might be. This, in turn, will affect operating partnerships and the preferred management model. It should be noted that evidence from London and other international comparators suggests that lidos almost always run at a loss, with their operating costs subsidised by other commercial activities.

This report attempts to draw together the in-depth research that has been carried out in order to present a number of choices informed by the many different perspectives and interest groups that will have a bearing on the final outcome. A matrix of our conclusions, ranking the possible sites, can be found on page 42 and a summary of the next steps follows Section 12 (Conclusions & Recommendations). We are presenting these options in the hope that we can further advance this project and that London can play host to a world-class iconic facility that will help cement its position as an imaginative place for visitors and residents alike to work and play.

2 INTRODUCTION

Artichoke has been engaged by the Mayor's Office to undertake a comprehensive study into the feasibility of creating the London Lido—a floating swimming pool for the Thames—to be operational by the summer of 2016. We have consulted widely over both the practicability of such a venture and the support that it is likely to receive from key stakeholders. The results of this consultation are found in the report that follows.

A floating swimming pool is not a unique or even a contemporary idea: as far back as 1875 the Victoria Embankment played host to a huge building that housed a 135′ x 25′ floating pool for a ten year period; in New York, the Floating Lady (a converted ocean-going barge) has been sited at various locations, providing leisure swimming for the city over a number of years; cities as far afield as Istanbul, Vienna and Antwerp all have pools that operate throughout the year, combining summer swimming with winter ice-rinks. However – and it is a big however - none of these cities have rivers with the extreme tidal variation of the Thames.

London, too, has had proposals over the years ranging from an Olympic-size pool at Gabriel's Wharf to the current ideas from Studio Octopi. Each of the London proposals has been generated as concepts by firms of architects, none of whom seem to have engaged at an early stage with the Port of London Authority and existing river users. We have come to realise that it is only through understanding the river as a working environment with its own very particular powerful forces that it is possible to begin to address the crucial questions of location, design and engineering.

From Teddington Lock to the Thames Estuary the tidal range on the Thames varies between 5m (16ft) and 7m (24ft) between high and low watermark. The river is effectively divided into three channels: deep water in the centre which is the shipping channel; an area to either side of varying width in which the water level fluctuates with the tide but never dries out; an area at the river's edge where water levels decrease to the extent that banks and beaches are exposed at low tide. In order to accommodate a floating structure of sufficient size to house London's iconic pool, we have examined all possible locations between Battersea Park and Greenwich Peninsula in consultation with the Port of London Authority.

Together we have been seeking a site that would allow the pool to remain afloat at low tide, while at the same time still providing public access. It is imperative that the pool should not encroach on the shipping channel; neither can it sit at the bankside edge (and effectively beach at low tide) to avoid damaging protected river habitats. We are therefore looking for an area in the middle channel sufficiently wide to accommodate the proposed structure that also provides convenient bankside access for the public, with potential support from its local authority and/or active developers. Through this exercise we quickly arrived at the conclusion that an Olympic-size pool was not possible being too wide and long. Besides the daunting nature of a pool of this size for anyone but the most experienced swimmers, the topology of the river would not accommodate it. Advice from the Amateur Swimming Association suggests that a 25m pool would allow for both leisure swimming and competitions, and this is the option that we have pursued. If it were decided not to use the pool for any competitive or training purposes, the pool size could be made larger or smaller, although it is unlikely that given the limitations on the total vessel size, that the ratio of pool to leisure space would allow for a significant increase in water capacity.

This is one example of the way in which we have tried to resolve the complex issues that surround this project. Our approach has been to consult widely and to consider every question that the project has thrown up. We have had discussions with organisations ranging from the PLA, local authority planners, developers, architects/designers, the Amateur Swimming Association, pool operators and environmentalists. Besides the critical question of physical location, other issues we have considered range from determining local political support, via the possibility of sources of substantial funding for such a project, to questions of financial viability, timing, other proposed uses for the river, management models and the need for swimming provision in any given borough. Tensions have emerged, for example, between the idea of the London Lido as a welcome addition to swimming provision in any local borough and its positioning as an iconic visitor attraction adding to London's rich tourism offer.

The result of these discussions has been a relatively small number of realistic options—each with its own advantages and disadvantages—which we present here as a matrix of choices. Our consultation has emerged with two very strong conclusions—there is almost universal support for the idea of a floating pool in London, but that providing it will be neither cheap nor straightforward.

The report starts with a detailed examination of the river followed by design and engineering considerations; options for fundraising; how it integrates into strategic planning for London; case studies of the selected locations; and an examination of existing Lidos in other countries before moving on to the concluding section and recommendations for the next phase.

Figure 1: Cover image River Thames - Source: www.guardian.com

3 PARAMETERS GOVERNING SITE AND OPERATION

There are numerous examples of contemporary and historical river-based floating Lidos in the world's leading cities, providing opportunities for residents and visitors to swim in iconic locations at the core of the urban infrastructure. As prosperous cities were developed around the transport and trade potential offered by a river, which was navigable to the sea, so the introduction of a leisure based Lido onto the river in the modern city landscape celebrates the very heart and lifeblood of the city itself.

Determining potential locations for the Lido requires a close examination of the following conditions:

- Size of vessel required
- Speed restrictions on a given stretch of river
- Relative calmness of water
- River usage and permissions for leisure and commercial vessel activity
- Access to the site and the ability to either construct the vessel in an adjacent location or the potential to tow the vessel into position along the river
- Height and width restrictions resulting from bridge construction and navigation restrictions between the bridges

This first section examines the feasibility of a Thames based Lido through a study of the river, from Hammersmith to Newham, looking in detail at:

- **River topography;**
- **River users and their impact on the Lido's location;**
- **Environmental and heritage considerations and the level of permissions that will be required to position it in the water;**
- **The organisations that govern it, including PLA, Coastal Concordat and Marine Management Organisation;**
- **The development projects that impact on its banks and shipping lanes;**
- **Local planning requirements**

From this information, we seek to identify what impact these factors will have on locations selected.

3.1 River topography including depth and tidal flow

From Teddington Lock in the West to the mouth of the Thames Estuary in the East the tidal range on the macrotidal River Thames varies between 5m and 7m (24ft) between high and low water mark. This is in contrast to other existing Lido cities where there is typically a much smaller tidal difference. The range is dependent on whether there is a neap or spring tide and further impacted by the funnelling effect that is created by the water coming from the estuary and being constrained by the Thames Embankment.

This significant change in water levels twice a day has a bearing on the positioning of the London Lido, which would need to remain afloat at low tide unless significant and costly ground work could take place. This would include sheet piling, dredging and the building of a flat level base on the riverbed (campshed). Close consultation with the PLA and the study of Thames hydrographic charts, tide tables and occupied/ unoccupied sites have been crucial in determining a location where there is sufficient water depth to accommodate the Lido draught (a minimum depth of 2m) when the tide falls to it lowest point. The tide therefore has been an important determining factor in the choice of location and helped very quickly to narrow down the viability of available sites along the river.

3.2 River Users and Operators

The tidal Thames is the UK's busiest inland waterway and second biggest port, accommodating 20,000 ship movements, 200,000 leisure craft trips and 50 sporting events each year.[1] The River is policed by the Marine Policing Unit, part of The Metropolitan Police and covered by the Royal National Lifeboat Institution's (RNLI) Tower Lifeboat as the dedicated Search and Rescue resource for Central London.

To find a suitable location in the river for the Lido it has been necessary to identify a site where navigation lanes would not be impeded; where there are no other vessels moored and where it would not obstruct pier access, future construction projects or access to any river buildings, jetties or other facilities.

The construction, towing and final positioning of the Lido also needs to be scheduled to fit around the river's other uses which, in addition to the daily transportation of passengers and spoil from development sites (see changing infrastructure in 3.5), includes goods, which according to the PLA and Department for Transport, totalled over five million tonnes in 2013, equating to 60% of all goods lifted on the UK's inland waterway network.[2]

Records of people swimming in the Thames date back to the late 1800s. However, with nearly 400 rescues being recorded by the RNLI in 2013[3] and deaths as a result of swimmers being overpowered by strong tides or as a result of collisions with waterborne vessels, the public has being strongly dissuaded from swimming in the Thames in recent years. A new byelaw introduced by the Department of Transport in 2012 does not ban swimming in the Thames but instead controls swimming in the busiest part.[4] The London Lido would make it possible for people to swim in the busiest waters, enjoying the experience in safety.

3.3 Natural Environmental Considerations

The River Thames has designations that cover environmental and legal matters and are regulated by a number of key authorities. The successful delivery of the London Lido would rely on close consultation and compliance with the regulations set out by these organisations.

3.3.1 Marine Management Organisation (MMO)

The Marine Management Organisation was established following the Marine and Coastal Access Act 2009 to promote the UK government's vision for clean, safe and biologically diverse oceans and seas. One of its delegated responsibilities is to prepare marine plans for English inshore and offshore waters, including the River Thames, which sits within its South East region. The MMO works closely with local authority planners to oversee planning issues and to ensure each borough, 17 of which in London are classed as riparian (riverside) boroughs, acts on its marine planning responsibilities under the marine plans and in accordance with the Marine Policy Statement (MPS). The MMO has a duty to take decisions on proposed developments in each marine plan area and to monitor and review these on a regular basis. A local

[1] http://www.pla.co.uk/Safety/Swimming-in-the-Tidal-Thames
[2] http://www.pla.co.uk/Port-Trade/Moving-freight-by-water-on-the-River-Thames
[3] http://www.standard.co.uk/news/london/record-numbers-of-people-plucked-from-thames-by-rnli-last-year-9300630.html
[4] http://www.pla.co.uk/Safety/Swimming-in-the-Tidal-Thames

planning authority will work to these plans and will defer to the MMO and EA in any decision making, so thorough consultation with these agencies will be essential.

3.3.2 Environment Agency (EA)

The Environment Agency (EA) is an executive non-departmental public body of the Department for Environment, Food & Rural Affairs working to protect and improve the UK's environment. Its particular responsibilities include flood and coastal risk management; water quality and resources; inland river, estuary, and harbour navigations; and conservation and ecology. The EA works closely with the MMO, PLA and local authorities to manage the use of resources, manage flood risk and protect and improve water, land and biodiversity. The EA will be consulted by the Local Authority throughout the planning process so will require detailed information in order to advise on and permit the planned works to go ahead.

3.3.3 Port of London Authority (PLA)

The Port of London Act 1968 gives powers to the Port of London Authority as a Statutory Harbour Authority. The PLA, which safeguards the navigation of the river, is also a competent authority under the Conservation (Natural Habitats &c.) Regulations 1994 and the Countryside and Rights of Way Act 2000. It is therefore a requirement for the PLA to ensure continuing compliance with environmental legislation (including the relevant EC Directives) and to take the environment into account in its actions and decisions. The majority of this legislation refers to designated areas in the outer estuary but there are considerations within the individual sites this report focuses on which fall under the Port of London's jurisdiction and are therefore covered by various acts and legislation.

The PLA's environmental duties under the Harbours Act 1964 specifically have regard to:

- the conservation of the natural beauty of the countryside and of flora, fauna and geological or physiographical features of interest;
- the desirability of preserving for the public any freedom of access to places of natural beauty; and
- the desirability of maintaining the availability to the public of any facility for visiting or inspecting any building, site or object of archaeological, architectural or historic interest.

The PLA also has to take into account EIA Directive (97/11/EC) in its activities. The EIA Directive requires an Environmental Impact Assessment of certain projects, which Artichoke has been advised by the PLA, MMO and EA would be necessary for the London Lido.[5]

An EIA will assess compliance with the Flood Defence Act; that there is no negative impact on any designated Biodiversity Action Plans (see below), and therefore on the fish and birds that rely on this vital resource for their existence and presence on the Thames; that the archaeological impact of any piling or fixings which may be required is considered and that the river walls are not undermined in any way. The survey will also cover the use of and introduction of materials into the watercourse and any other requirements that may be necessary during the construction and operational phases.

[5] EIA http://www.pla.co.uk/Environment/Environmental-Legislative-Context

3.3.4 Local Planning Authority (LPA)

The Local Planning Authority (LPA) in each London Borough is responsible for overseeing planning approval for any proposal, working closely with the guidelines set down by the MMO and EA.

Some of the LPAs have written Biodiversity Action Plans (BAPs), which include provision for 'enhancing' Mud BAP habitats. The tidal Thames is recognised by Local Authorities who have designated Sites of Importance for Nature Conservation (SINC). This designation is non-statutory but is included in local plan planning policies. Information is given per site under Case Studies, section 5. Conversations with the LPAs would commence at Phase Two.

3.4 Built environment including historic monuments

At any given point on the river it is possible to view thousands of years of architectural and maritime history. Battersea Power Station; the Houses of Parliament; St Paul's Cathedral; HMS President; the Tower of London, Tower Bridge and the Old Royal Naval College are just a few examples. As a result there are a large number of historical and cultural factors that need to be considered in the siting of the London Lido. These include proximity to World Heritage Sites, Scheduled Ancient Monuments and Listed Buildings.

Significant London views and vistas are also protected as part of the London Plan, the Mayor of London's strategic plan for the city which takes an integrated approach to development across the capital and which London Boroughs need to base their local plans on. The London View Management Framework, which protects views that define the city's character and heritage, was established to manage the impact of development on important panoramas and river prospects (broad views along the river) as a key part of the London Plan.[6] Management plans are in place for each of the most significant river prospects and these would need to be considered carefully to ensure compliance with the London Plan before an application for planning consent was made.

3.5 Changing Infrastructure

When considering not only the timescale for building, transporting and installing the Lido but also the experience the public will have of swimming in the location once opened, it has been essential to survey the wide range of development projects taking place along the river. Each one affects the final choice of location, as each has its own requirements which impact on daily river use; from the temporary relocation of moorings, to increased barge activity for removing spoil where major building work is underway, and for structures to be floated down the Thames.

These major infrastructure projects include:

- Thames Tideway Tunnel: the new super sewer for London with preliminary construction due to start in 2016 and end in 2021 with completion set for 2023. Consent for works on river construction sites include constructing temporary replacement piers, introducing new structures and increased freight activity on the watercourse.
- Nine Elms on the Southbank: (works already underway with staggered delivery until 2020) a 482 acre development over 29 sites from Lambeth Bridge to

6 http://www.london.gov.uk/priorities/planning/supplementary-planning-guidance/view-management

Chelsea Bridge which includes an extension of the Northern Line to create two new tube stations, a pedestrian/cycling bridge across to St George's Square on the North Bank, 18,000 new homes, a new Thames River bus pier and over 6.5m sq.ft of commercial space and other social infrastructure.

- Thomas Heatherwick's Garden Bridge: (works planned from 2015-2017 pending consultation) a new pedestrian bridge for London that is planned to stretch from Temple Station on the north bank to Queen's Walk on the South Bank near to Gabriel's Wharf.
- River Piers Network: planned expansion of the passenger piers network to encourage greater use of the river and to extend reach to include new developments. Plans for up to ten new piers are in discussion, with Battersea Power Station, Plantation Wharf and Enderby Wharf fully funded and with planning permission granted, due for completion by 2020.[7]
- Greenwich Borough: development plans for Greenwich Peninsula, Eltham, Charlton and Woolwich which, intended for completion in 2027, include riverfront development (Enderby Wharf pier – see above), commercial and residential developments and an extension of the DLR.
- Royal Docks Development Plans: a new business district for London including commercial and residential developments, waterfront developments, Crossrail and river crossing/access improvements including a possible ferry service at Gallions Reach (planned for 2017).
- Crossrail: the Thames Tunnel does not impact directly on the river. Crossrail however has made a commitment, agreed with the PLA, to use barges and ships to move 5 million tonnes of excavated materials along the river to other parts of London for use in landscaping projects.

3.6 Licenses and Permissions

Artichoke has been advised that the permissions process, when it comes to obtaining the necessary licences and agreements for locating the structure in the Thames, can take between six to nine months to complete from the date of submission. Known permissions that will be required to date include:

3.6.1 PLA

The PLA will want to see that all statutory requirements set down by the MMO, EA and EH are adhered to and that the proposal does not impact on the safety of other river users or navigable sections of the river. They will issue guidance on working on or adjacent to the river and will need to grant consent for the following works if required:

- River works licence or temporary consent
- Dredging licence
- Estates Consent
- Vessel Licensing (a non-propelled permanently moored barge is not a vessel and would not need classification as such)

The PLA makes it clear that works which are proposed for the Thames should have a river related use and that the river should not be regarded or used as an extension of developable land. When it comes to planning applications made for the river the PLA will have regard to the proposed works' compliance with plans for the development of the area. [8]

[7] River Action Plan

8 http://www.pla.co.uk

The PLA will continue to advise Artichoke on whether the following supplementary information may be required for the to enable a full assessment of proposed works:

- Navigation Risk Assessment
- Hydrodynamic Modelling Study
- Operational Review
- Operational Environmental Management Plan
- Mooring study

3.6.2 Coastal Concordat

The regulatory system for coastal developments is a complex one involving a substantial number of regulatory bodies, which include the MMO and EA. The Coastal Concordat has been established to simplify the process by providing a single point of entry for any planning applications. The aim of the concordat is to reduce the duplication of evidence requirements and to streamline the regulatory process as far as possible.

When an application for consent, licence or permission for the Lido is made to either the local planning authority, Marine Management Organisation or Environment Agency, the organisation approached will become the single point of entry to the regulatory system. They will then advise on all consents, licences or permissions from other bodies as relevant.

The MMO has advised Artichoke that the initial approach would be to submit a screening request to them and to the EA, supported by an initial report outlining in summary, what the work involves and proposes in terms of size, positioning, fixing method etc. They would offer advice based on the information supplied before inviting a formal application.

The EA has advised Artichoke that its preference would be to site the Lido in the Royal Docks as the impact of natural habitats and flood defences would be far less than in the main river. If the River were chosen as the preferred option then the Lido would need to undergo a number of assessments, surveys and applications for licences, all of which can be applied for concurrently, including:

- Marine Licence – for encroachment into the watercourse (13 weeks).
- Flood Wall Defence Survey – to ensure the flood walls are not undermined (8 weeks).
- Environmental Impact Assessment (EIA) – see PLA above (13 weeks).
- Compliance with the Water Framework Directive for protecting ecosystems.

The Environment Agency has offered to give feedback on the proposed sites.

3.6.3 English Heritage

The final siting of the Lido will determine the permissions required from English Heritage but it might be necessary to apply for consent for a number of the following:

- Scheduled Ancient Monument Consent (SAM)
- Listed Building Consent: if the work affects the character or appearance as a building of special architectural or historic interest (application for consent is through the Local Planning Authority)
- World Heritage Site Consent: where it is felt that the proposal may have an impact on the integrity, authenticity and significance of a World Heritage Site or its setting

An archaeological survey and landscape assessment may also be required as part of an EIA, particularly if sheet piling, or any works that might undermine the riverbed or river walls, are required.

Artichoke has had initial conversations with English Heritage who are aware of the proposal and would like to be involved in high-level advisory meetings going forward.

3.6.4 Local Planning Authority

The London Lido would need planning permission from the London Borough where the development is proposed to take place. Permission would also be required for electricity, water, access to the river walls and any other public utilities supplied from land.

The planning authority will consult with all of the agencies listed above in the planning process so consistent consultation with all parties is required throughout. Consultation would also take place with travel and transport operators to ensure compliance with transport strategies for the area.

Key issues arising

The 7m tidal variation of the Thames twice a day is the most significant consideration and is one of the main reasons why previous proposals for a London Lido have not progressed beyond the concept phase.

The process of installation and the permissions required to successfully locate the Lido will vary according to the specific requirements of the site selected.

The permissions required to locate the Lido will take 6 months to a year from the date of submission of the relevant documentation.

It will be important to establish a close working relationship with the permitting bodies from an early stage and to maintain close communication throughout to ensure the best possible advice and support.

The combination of environmental and heritage legislation together with high level river usage significantly reduces the number of sites available for the Lido.

The Thames is currently undergoing the largest number of concurrent riverside development projects in living memory. It will be important to keep abreast of these plans to ensure there is no conflict with the building, transportation and installation of the Lido and that the potential of any management and/or financial relationships can be maximised.

4 DESIGN AND ENGINEERING

The following section focuses on the design and engineering considerations for a tidal and non-tidal floating Lido and considers a bespoke structure versus a converted barge in order to present the widest possible range of options. It includes:

- **the size and location of vessel;**
- **construction and mooring methods;**
- **access for pedestrians;**
- **sustainable environmentally friendly engineering;**
- **filtration and water treatment;**
- **servicing, operation and maintenance strategies;**
- **incoming services and any additional permissions required.**

4.1 Size of vessel

The size of the pool and the arrangement of the associated spaces will depend on whether the pool is considered to be a competition or a leisure facility. A competition pool would consist of 8 lanes, making the plan dimensions 17m wide x 25m long. Allowing for 3m circulation space on either side, the overall width would be 23m. Ideally this would be 1.8m deep, however a minimum depth of 1.35m would make it suitable for any competition.

If the pool is to be considered as a leisure facility, the principle differences in layout would be:

- Increased circulation space adjacent to pool, wider pool surrounds
- Increased pool time duration for bathers
- Additional pool water treatment
- Additional catering facilities
- Higher water temperatures
- Shallower pool (0.9m - 1.2m)
- Water features/flumes/rides

A pool could be provided which caters for both competition and leisure use, by including a moving floor. Alternatively a depth of 1.2m would allow some competitive swimming, and would not be excessively deep for leisure use.

This study is based on a 25m wide vessel, with a 1.2m deep pool.

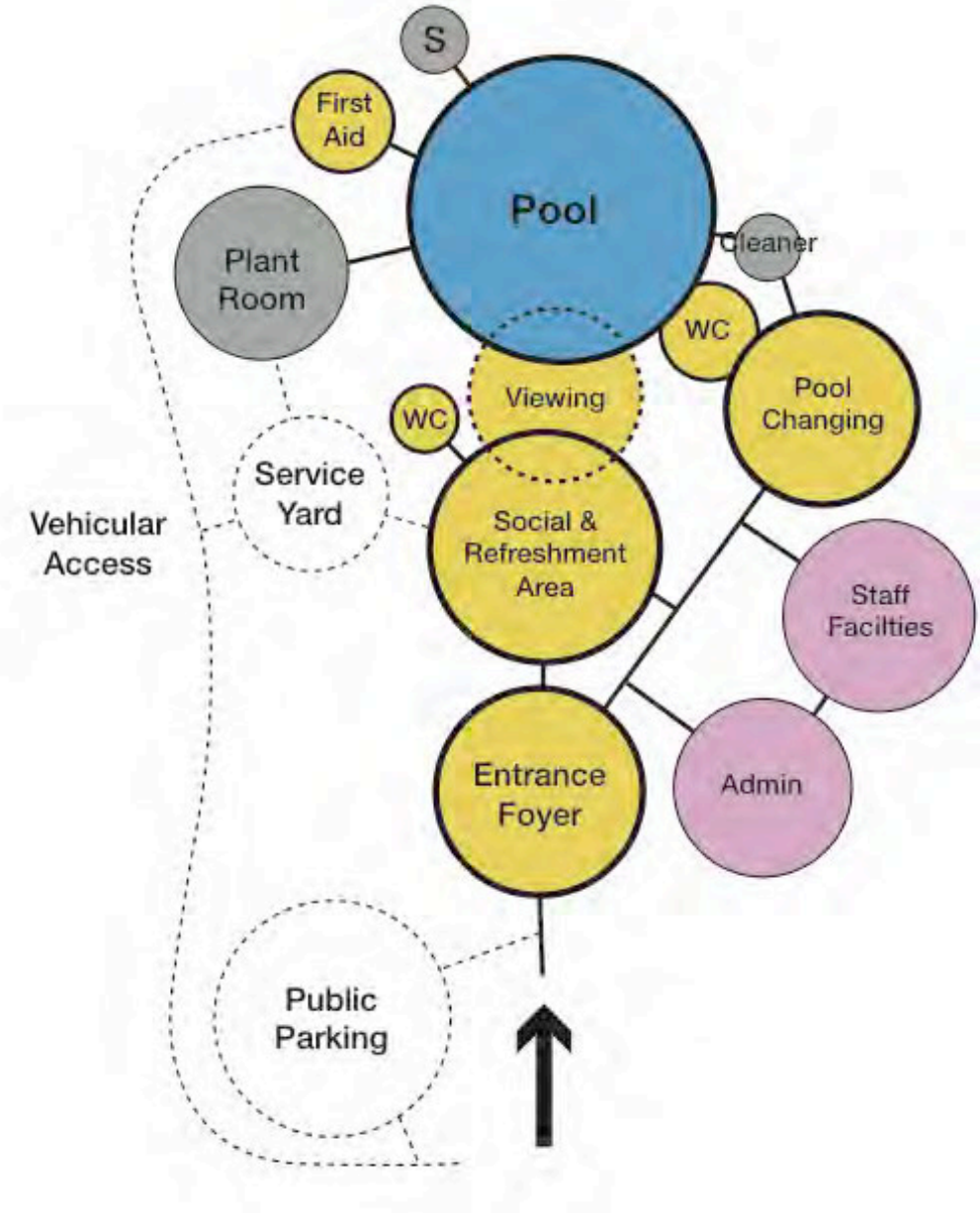
In a conventional pool, the way that a building footprint is subdivided into different areas is well defined, with plant space occupying at least 40% of the area of the pool.

The differences between a traditional pool complex and the Lido are:

- Some of the support facilities may be shore based
- More space will be required for both ballast and attenuation tanks
- Space may be required to allow other vessels to moor along side, and for embarking/disembarking
- Some of the plant could be located in the hull of the vessel

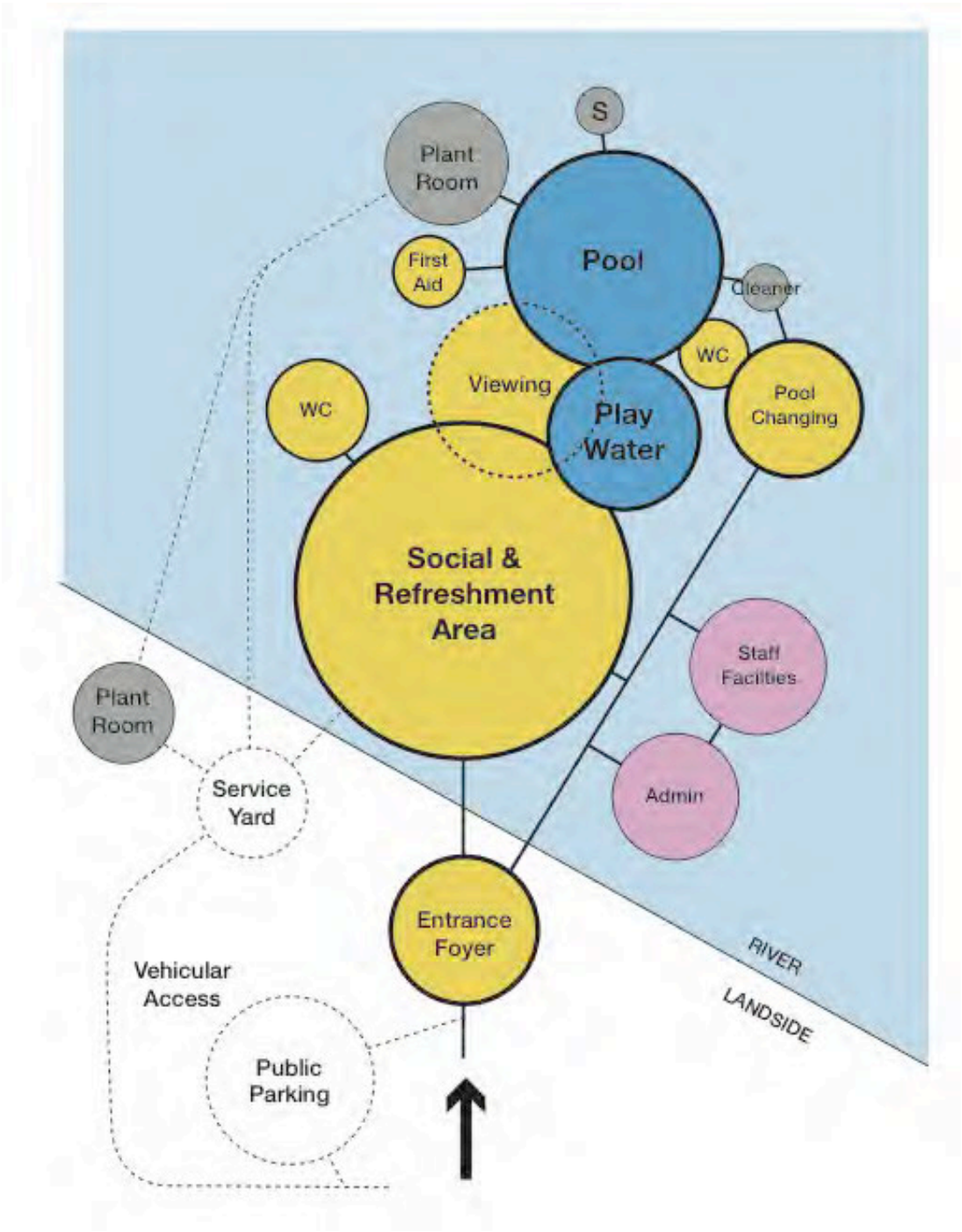
The interdependency of the areas associated with a typical pool complex is shown over:

Relationship between main areas of typical pool



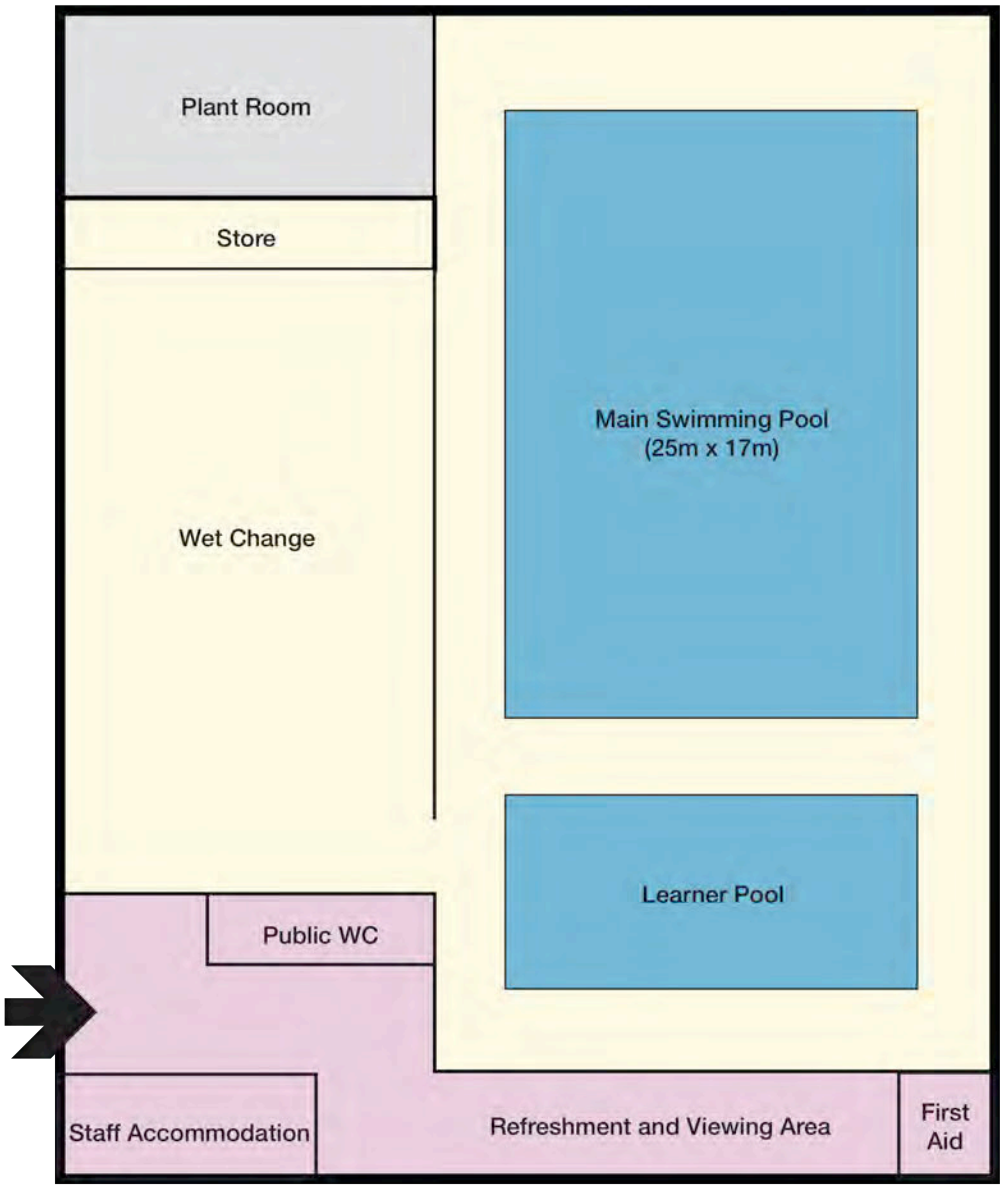
Possible alternative arrangement for a floating lido is shown below, taking some of the facilities off the vessel onto the shore.

Relationship between main areas of Lido proposal



A conventional pool layout is given below. The adjacent diagram shows how these spaces could be converted into a linear arrangement.

Generic standard arrangement



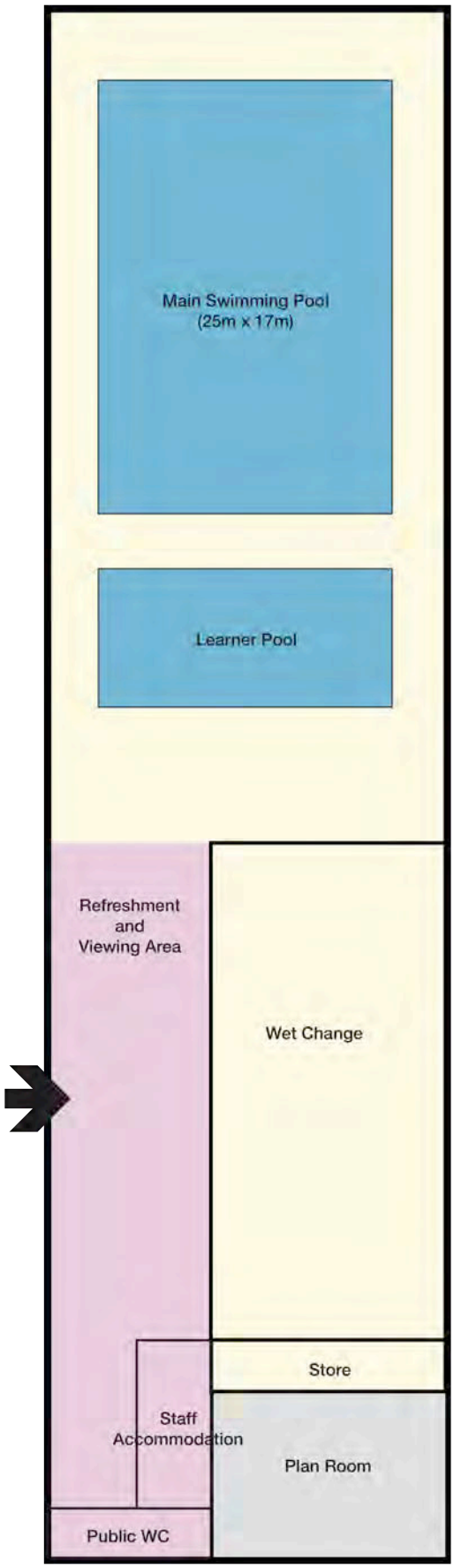
Generic linear arrangement

The linear arrangement as shown is around 100m long to accommodate these spaces. Some of the spaces would need to be located on upper decks, or reduced in area, to reduce the length of the vessel to a more practical size of around 70m.

The capacity of the space will depend on how the areas are managed. A competition pool could accommodate a maximum of 1 person per 3 sqm, whereas the capacity of a leisure pool would be greater.

It is likely that most of the space below deck will contain plant or ballast tanks

There may be an upper deck to provide additional catering and leisure facilities, and a retractable or seasonal roof over the pool could also be incorporated.



4.2 Sustainable Environmental Engineering

Swimming pools use high levels of energy. In order to substantiate the most suitable provision for the Lido, the provisions to and requirements of a 'typical' indoor public leisure pool are to be challenged and assessed in relation to their spatial requirements, carbon emissions, capital costs and operating costs. For example:

- Is the pool to be heated, if yes can the water temperatures be reduced?
- What pool water quality is required? (see filtration and water treatment)
- How is pool water heat loss to be reduced, particularly in the evenings? (covers, storage etc.)
- Should the pool and surrounding area be enclosed?
- Can the pool and surrounding area be naturally ventilated (if enclosed)?
- Can the shower/changing areas be private but 'natural' e.g. unheated/open top?

Further (more general) considerations for all areas include.

- How the heated areas can be well insulated and made air tight
- How to achieve efficient low energy/carbon heating, without gas e.g. water or air source heat pumps etc.
- Heat recovery/heat rejection
- How the use of natural light and natural ventilation can be maximised
- How water usage can be controlled and reduced
- The pumping of pool water should be reduced to meet the requirement for water quality (at any particular time)
- The extent, use and control of electric lighting, particularly externally.
- How to achieve on-site energy generation e.g. CHP, PV, solar thermal hot water, wind etc.
- Tidal stream generators fixed to hull are worth considering, although unlikely to be cost effective

A servicing and energy strategy should be developed during the concept design stages. This would challenge and assess all options, allowing informed decisions to be made in relation to their 'value', including their practicality and viability.

Every effort should be made to minimise the servicing of ancillary/support spaces. This would reduce the required plant space and energy demand.

4.3 Filtration and Water Treatment

The quality of the pool water is of critical importance. This is affected by the pool type, shape and size, the bathers using it (cleanliness, usage patterns and numbers), the water source, the pool water temperature and the strategy for ongoing operation and maintenance. Pollution from and cross infection between bathers must be considered. These and the general requirements of pool water treatment are generally considered by the code of practice developed by the PWTAG (pool water treatment advisory group).

The concept design should challenge the more 'typical' conventions and design guidance plus offer alternative water filtration and treatment proposals. This is to include an assessment of the Thames river water being used as the water source. Proposals are to outline differing levels of water quality and the associated 'risks' that these would relay to the users and materials coming into contact with the water. The

risks are to be outlined against the perceived advantages, in particular reduced spatial requirements, capital cost and operation costs (energy and maintenance). Comparisons should be made to scenarios with which the public are familiar such as bathing in rivers, lakes, ponds and the sea. The proposals are to allow an informed answer to the question of, 'what constitutes acceptable water quality for a Lido'. In particular for the open air pool, the treatment is to consider the control of algaecides and effect of sun cream.

Level deck water systems are the most effective in removing contaminants from the water surfaces. Utilising a level deck system on the 'floating Lido' introduces significant challenges in relation to the control of water. The concept designs shall propose how this can be overcome/managed.

4.4 Servicing Strategy

Incoming Services and Related Considerations

The concept design is to propose a strategy for providing incoming utility services, in conjunction with on-site energy generation.

The proposals must relate to the infrastructure available in the local area. It is anticipated that the **river path** will contain limited infrastructure, or at least limited **available capacity**. It is also anticipated that the Utility companies will only provide metered supplies **on land** and that **private services** will route to and from the Lido.

As such the concept design proposals are to integrate the required utility equipment and meter housings and the service routes to/from these. The proposals must consider land ownership and wayleaves (consent for carrying out works on private land).

Routing across to the Lido shall consist of discrete but accessible fixings to the access/walkway **pontoon** structure. The use of suitable materials and flexible fittings will allow for the tidal movement of the structure. These are envisaged to include:

- Foul water drainage
- Comms (data and telephone, unless the sole use of mobile devices is considered appropriate)
- Water
- Power
- Deliveries for associated uses, e.g. café
- Refuse disposal

Figure 2: Services on an existing pontoon bridge in the Thames

- It is anticipated that gas will not be provided/utilised, although this is subject to the overarching energy strategy and considerations in relation to heat source, CHP (Combined Heat & Power) generators etc.

- It is preferable for the drainage to be a continuous connection (to reduce the need for holding tanks). Discussions should be progressed with Thames Water to agree the classification and consent for the disposal of the foul water. An on-board sump and pumping system is envisaged, discharging into the local (on land) Thames sewer. The pump selection shall consider the variation in tides and levels to ensure continuous pumping is achievable. Vacuum drainage is likely to be advantageous for the sanitary ware.

- The electrical services installation shall ensure suitable and safe earthing and bonding is achieved, in accordance with the requirements of the supply authority and BS7671. This is to include the connection of a lightning protection system.

- The concept design should consider the provision of emergency/back up power.

- The proximity to local fire hydrants must be considered ensuring adequate fire fighting can be achieved.

4.5 Operation and Maintenance

Providing adequate, accessible plant space is critical to ensuring that the engineering systems can be suitably operated and maintained. Locating the plant rooms in close proximity to the areas that they serve reduces installation and operational costs, including energy/carbon.

The public access onto the Lido must also provide suitable space and adequate surfaces for delivery of equipment and plant and all associated materials and treatment chemicals taking into consideration the variance caused by tide times and the effect that this will have on any deliveries that will require 'trolley' movement. This is to include the initial installation and the replacement of all items of equipment/plant.

Some particular considerations that should be addressed within the concept design proposals are:

- The efficiency of the plant space below deck is likely to be considerably affected by the layout of the hull structure
- How is access achieved to the below deck levels?
- How is plant room heat rejection/temperature control achieved below deck?
- Specific requirements for chemicals (ventilation, bunding etc.)
- Limiting public access

4.6 Construction of the vessel

The Lido could be a bespoke structure, which would enable the layout to be designed efficiently; alternatively an existing vessel could be converted.

The proposed dimensions of the Lido are wider and shallower than a typical self-propelled sea-going ship or barge. For example, North Sea barges have drafts typically

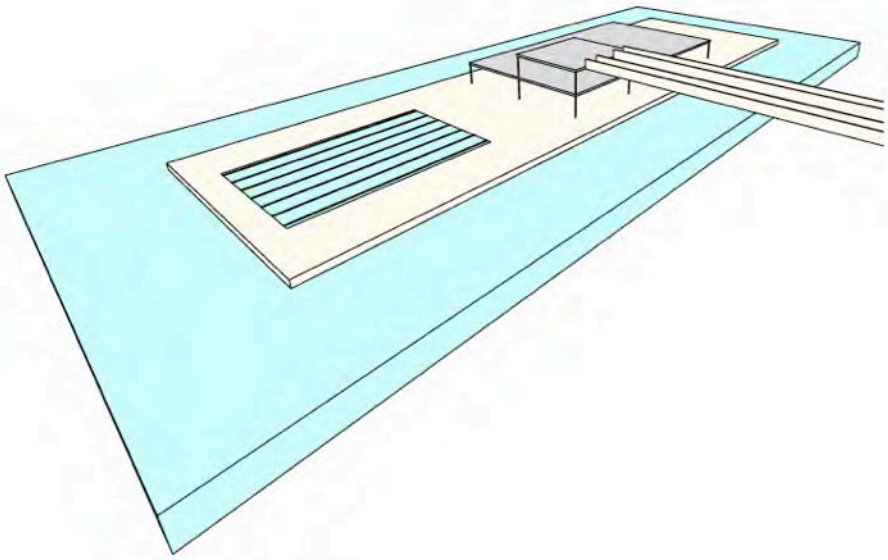
greater than 4m. River barges or pontoons/working platforms would be more suitable. There are vessels available for sale in Europe, in locations such as Turkey, Holland and Belgium.

Some barges are designed to transport fluids or granular material, for example "Hopper" barges, and incorporate tanks which could be modified to accommodate a pool. It is unlikely that the vessel will be found with a tank of these proportions, since the tanks are typically 8 to 10 m wide, so some major strengthening and modification will be required to the structure. The barges are typically steel framed, made with truss sections or stiffened ribs. Watertight bulkheads are provided to ensure stability in the event of a breach to the hull plating. Alternatively, more than one barge could be used to provide the area required (for example, the catering facilities and sitting out areas could be on a separate vessel).

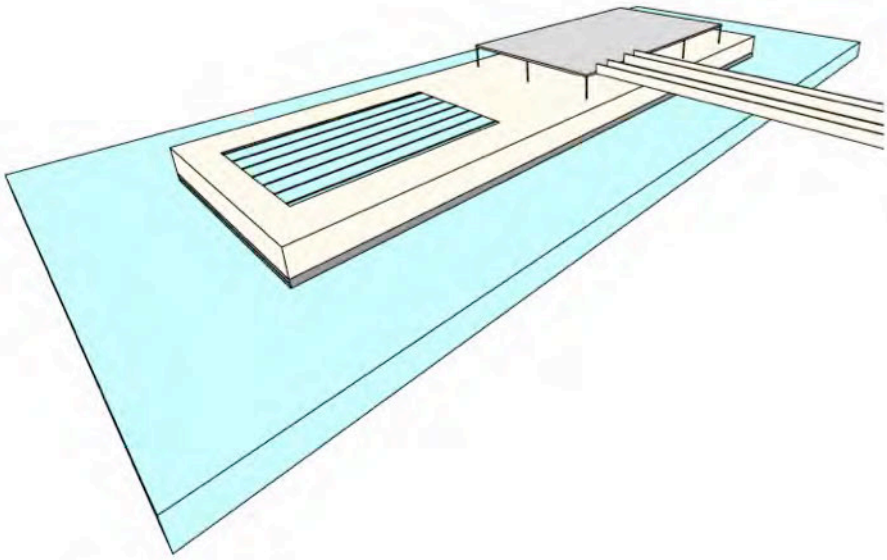
The introduction of new superstructure will alter the trim of the hull which will need to be re-assessed. Alternatively it may be easier to modify a flat decked vessel by building the pool above the deck and creating a raised superstructure and surround. These would either be pontoons that have been commissioned for a particular project, or a flat decked vessel designed for transporting deck mounted cargo. **Details of a barge currently for sale in Europe are included in Appendix I.**

Figure 3: Existing barge to convert

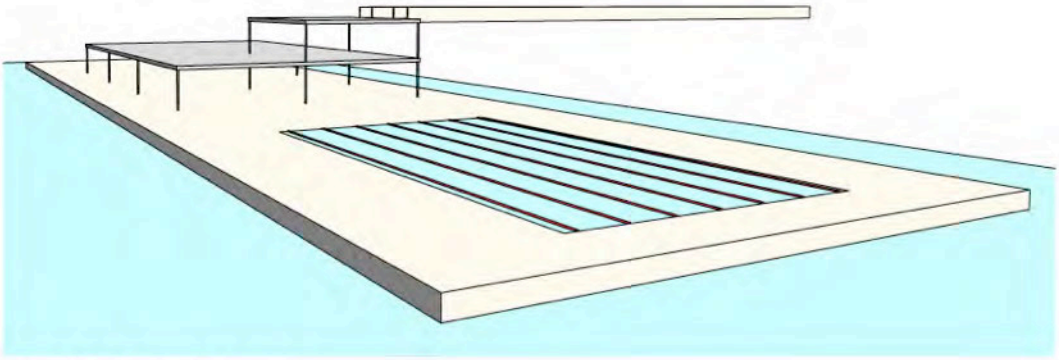
This would have less effect on the integrity of the hull. If this approach were taken, the freeboard and therefore pool surround could be several metres above the river level. Although this would be advantageous in terms of access, it would provide a different "Floating Lido" experience. See 14 for massing diagrams of bespoke and conversion options.



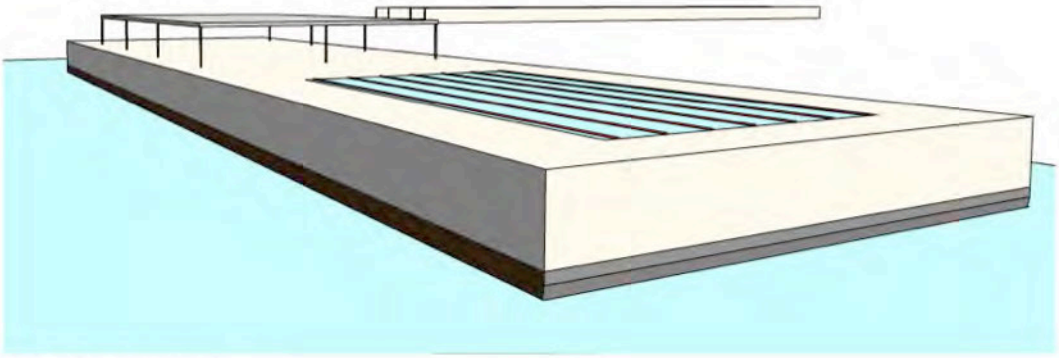
80 x 25m bespoke barge



70 x 22m existing barge



80 x 25m bespoke barge



70 x 22m existing barge

It would be harder to incorporate below deck plant routes and access, and additional plant space would be required above deck. The vessel is likely to be larger and have a deeper draft, in order to provide the areas required.

The conversion of an existing barge may compromise the spatial planning and aesthetics.

A bespoke solution would be preferable in terms of layout and functionality.

It is envisaged that, whichever procurement route is followed, the Lido would be towed to its destination and would not be self-propelled. If modified or constructed overseas, it may need to be shipped to the Thames. The superstructure and plant could be constructed from modular components and added to the vessel whilst in a dock, prior to being towed to the final destination. If the Lido were to be located upstream of London Bridge then air draft becomes a consideration (the distance between the highest point on the vessel and the underside of the bridge arch to enable the vessel to pass underneath).

See Appendices II & III for production budget and timeline.

4.7 Permissions required

- A non-propelled permanently moored barge is not a vessel and does not need classification as such
- It would not need to be on the Small Ship Register (SSR) or have Lloyds Classification
- The Riparian Land Owner needs to grant permission for access to river wall and utilities
- The PLA control the water from high to low water marks and own most of the riverbed
- The Environment Agency control the river from the river wall to 16m in from the wall and would need access for inspection of flood defences
- A river works licence would be required from the PLA
- Navigational and hydrodynamic risk assessments identifying any change to the local river flows would be required
- A dredging licence if dredging is necessary

Designing the mooring and associated civil engineering works, and obtaining permissions will take a minimum of 6-12 months.

If the Lido is located in a Dock area, it is understood that PLA and MMO permissions would not be required, although The Royal Docks Management Authority would need to give consent.

4.8 Technical Issues related to a river location

Given the size and draft of the vessel, locations upriver of Tower Bridge present a more complex challenge. In order for the vessel to remain floating at all points of tide, the boat would need to be moored in a minimum of 2m of water. There are very few locations outside the shipping channel, which is also bordered by two 15m wide mooring exclusion zones, that would be suitable or available for a vessel of this size to moor.

It would be possible to put the lido in an area shallower than its draft by allowing it to ground at low tide with significant sections of the hull being visible for up to 3 hours out of every 12 hours. A flat level base would be required on which the Lido would sit and this base would be formed by sheet piling, dredging, then back filling. This base would need to be rigid enough to prevent any differential settlement once the boat had grounded, and it would need to be regularly maintained and dredged to ensure that it was always completely level.

The forming of such a base will have additional cost and programme implications. Therefore the two options for locating the lido are either in a dock, or on the river in, if possible, more than 2m of water. The latter option may still require some dredging.

The speed limit in the Thames reduces from 30 knots to 12 knots at Tower Bridge. As a result the wave height downriver from Tower Bridge can be significantly higher, which will need to be taken into account during the design of the Lido, although with the proposed size of the Lido, barge wave disturbance is unlikely to be a major issue.

The length and width of the vessel would be limited if a location upstream of London Bridge were considered, due to more restricted access under the bridges. The dimensions of the vessel would be limited to approximately 70m x 20m.

Daylighting studies will also need to carried out to ensure that the Lido is not shaded by adjacent buildings.

4.9 Mooring

The vessel could be moored either using mooring dolphins, piles or radial arms. Dolphins are piled platforms, often with raking piles, which are capable of taking larger transverse loads than single piles.

Figure 4: Dolphin at Rotherhithe

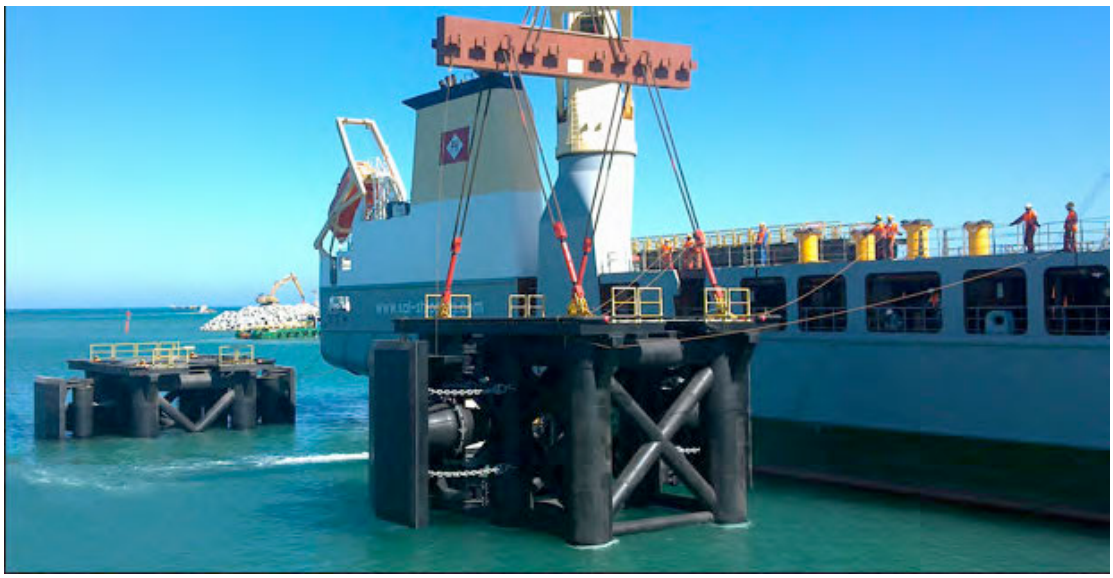


Figure 5: Dolphin designed for large lateral loads

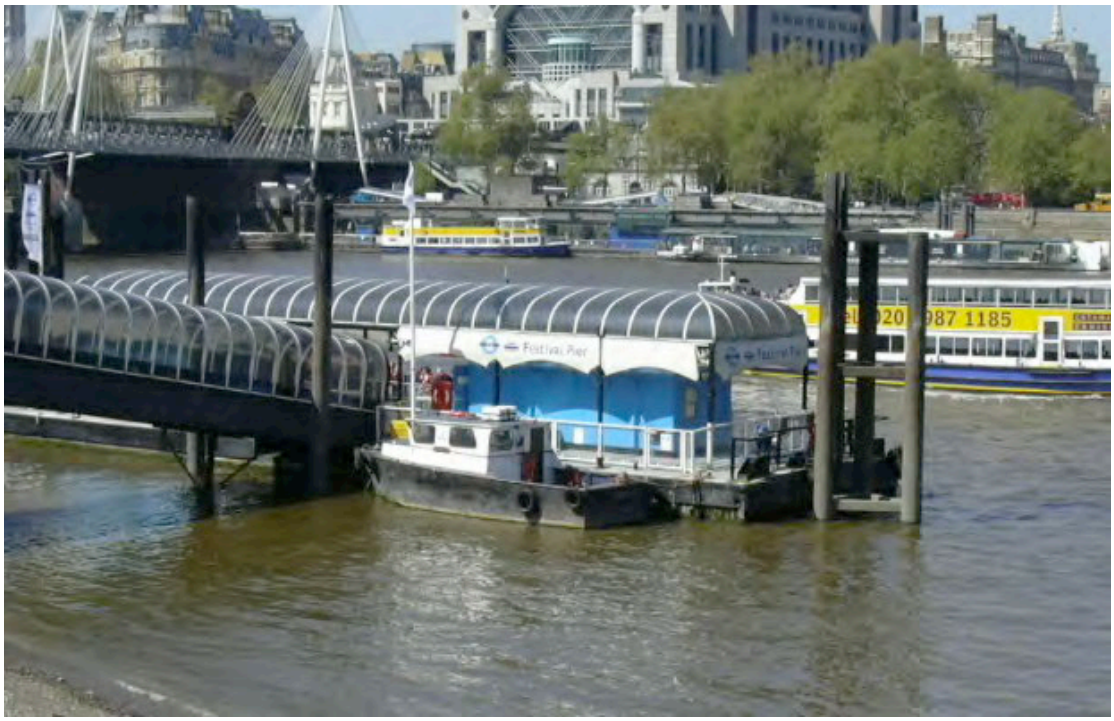


Figure 6: Mooring piles and dolphins at Festival Pier

Because of the large tidal fluctuations, the piles/dolphins are very prominent at low tide. To reduce the visual impact, the piles could be set back and radial arms connected between the piles and the vessel. Millbank Pier is a good example of this approach:

Figure 7: Radial Arms at Millbank Pier

The piles would be in the order of 20-30m long and made of steel, probably driven from a barge or temporary working platform on jacks.

4.10 Pedestrian Access

Pedestrian access onto the vessel will be via pontoon bridges. For the tidal locations, the pontoons will have to accommodate regular tidal fluctuations of 6.7m and more on extreme events. Tidal fluctuations for three different locations are given below:

	Mean High Water Springs	Mean Low Water Springs	Difference
HMS Belfast	7.08	0.42	6.66
Greenwich Pier	7.13	0.45	6.68
Battersea Pier	6.21	0.13	6.08

In order to maintain a maximum gradient of 1 in 12 on the access link at all points of tide, the pontoon will need to be between 40m and 80m long, depending on the height of the freeboard and superstructure.

Taking the Pool of London as an example, if the vessel is approx 40m away from the river wall in order to float in sufficiently deep water, options for ramp angles and access points are given on the diagrams below:

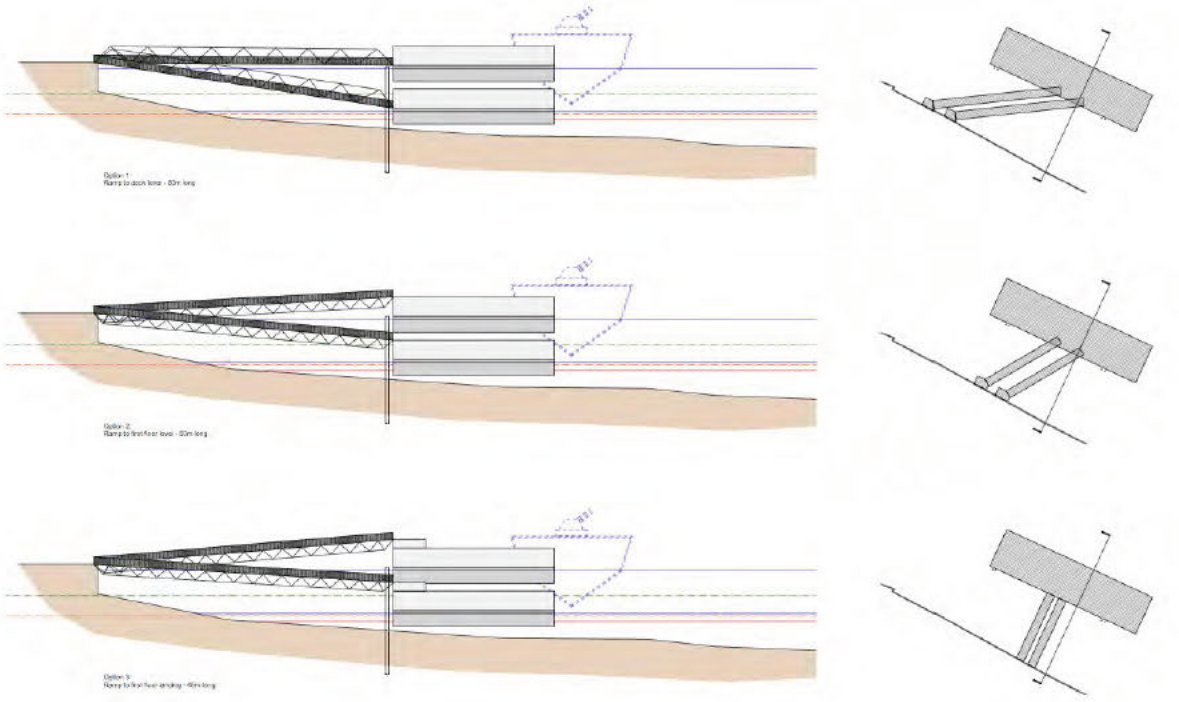


Figure 8: Ramp Options

It may also be possible to incorporate landing facilities for the river bus or for other craft into the design of the Lido.

Key issues arising

The dimensions of the structure are determined by the width of river available outside of the main shipping channel.

The likely size of the vessel will be around 70m x 20m incorporating an 8 lane 25m pool.

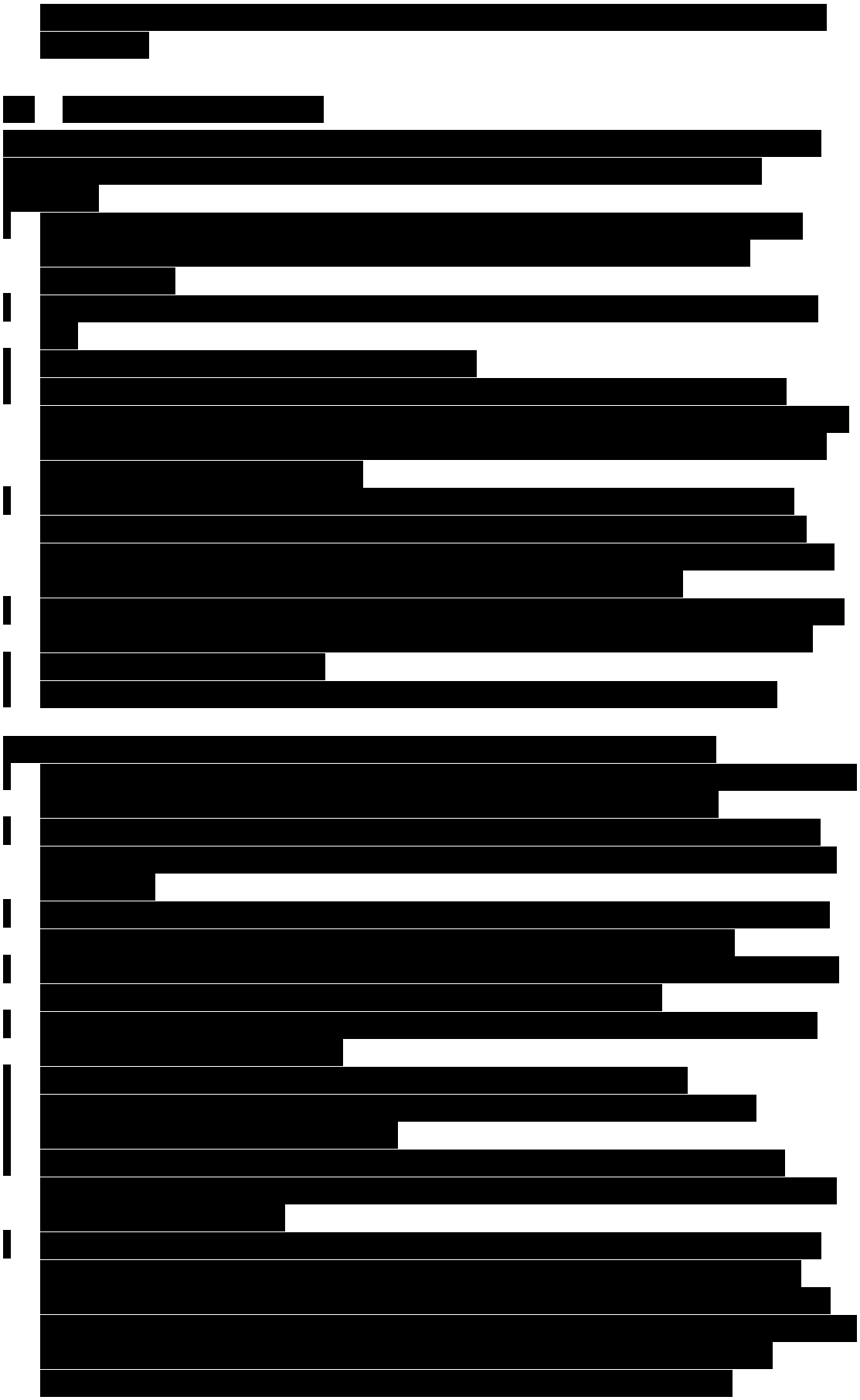
The vessel needs to have sufficient water to float at all stages of the tide.

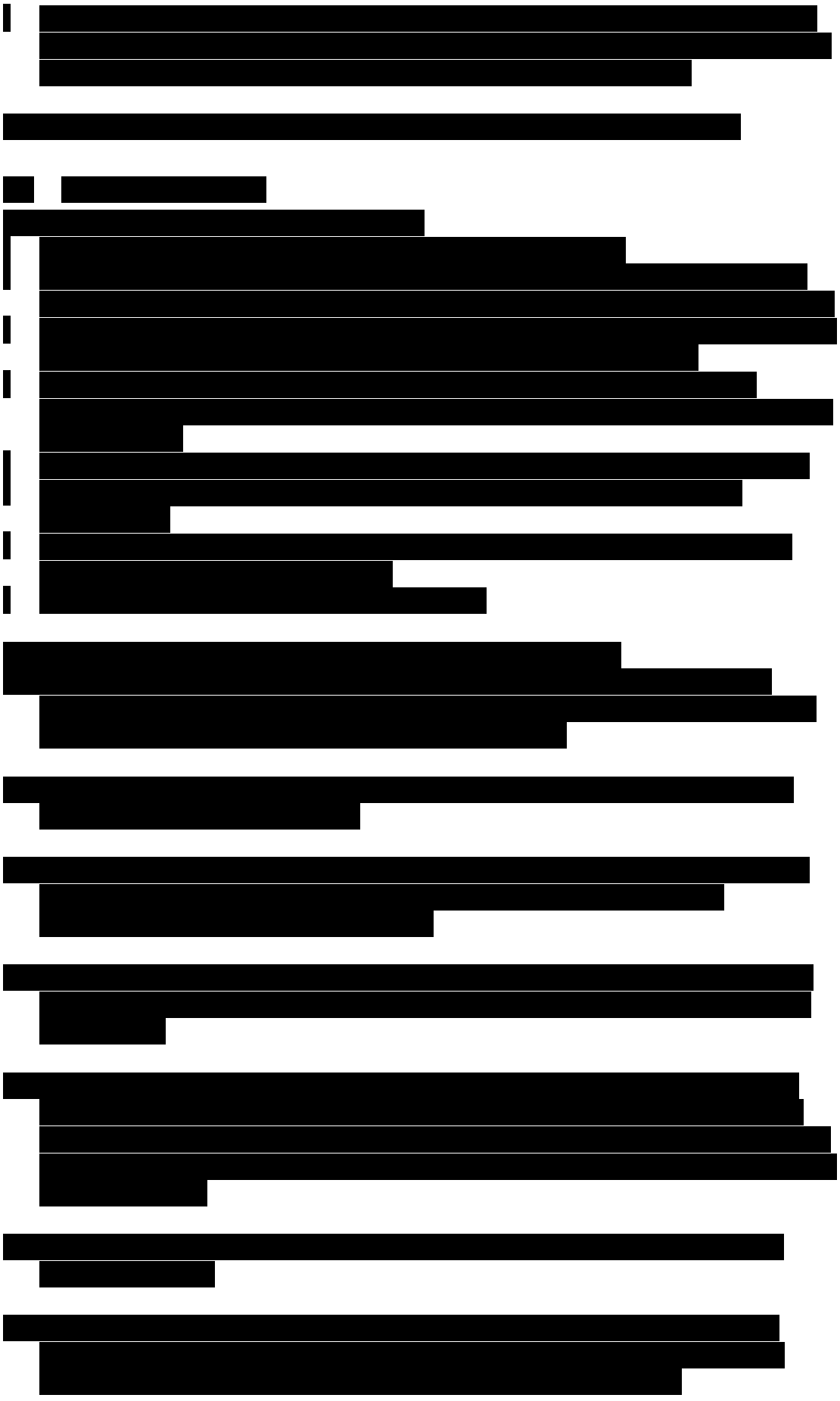
The tidal variation on the river means that the vessel needs to be moored using dolphins, piles or radial arms. Locating the vessel in the Royal Docks, with minimal tidal fluctuation, obviates the need for piling.

The arrangement of the space/facilities is dependent on how much of the infrastructure can be accommodated on the adjacent land.

There is an option to convert an existing barge, along the lines of many European examples, or create a bespoke structure. The bespoke vessel is preferable as it gives greater flexibility in terms of spatial planning and aesthetics and is marginally cheaper.

5 FUNDRAISING





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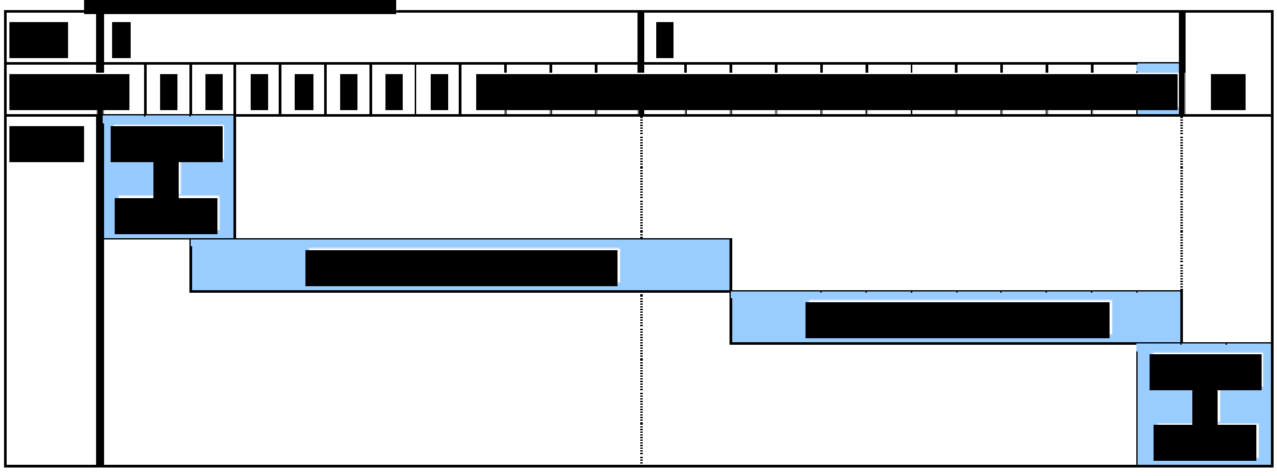

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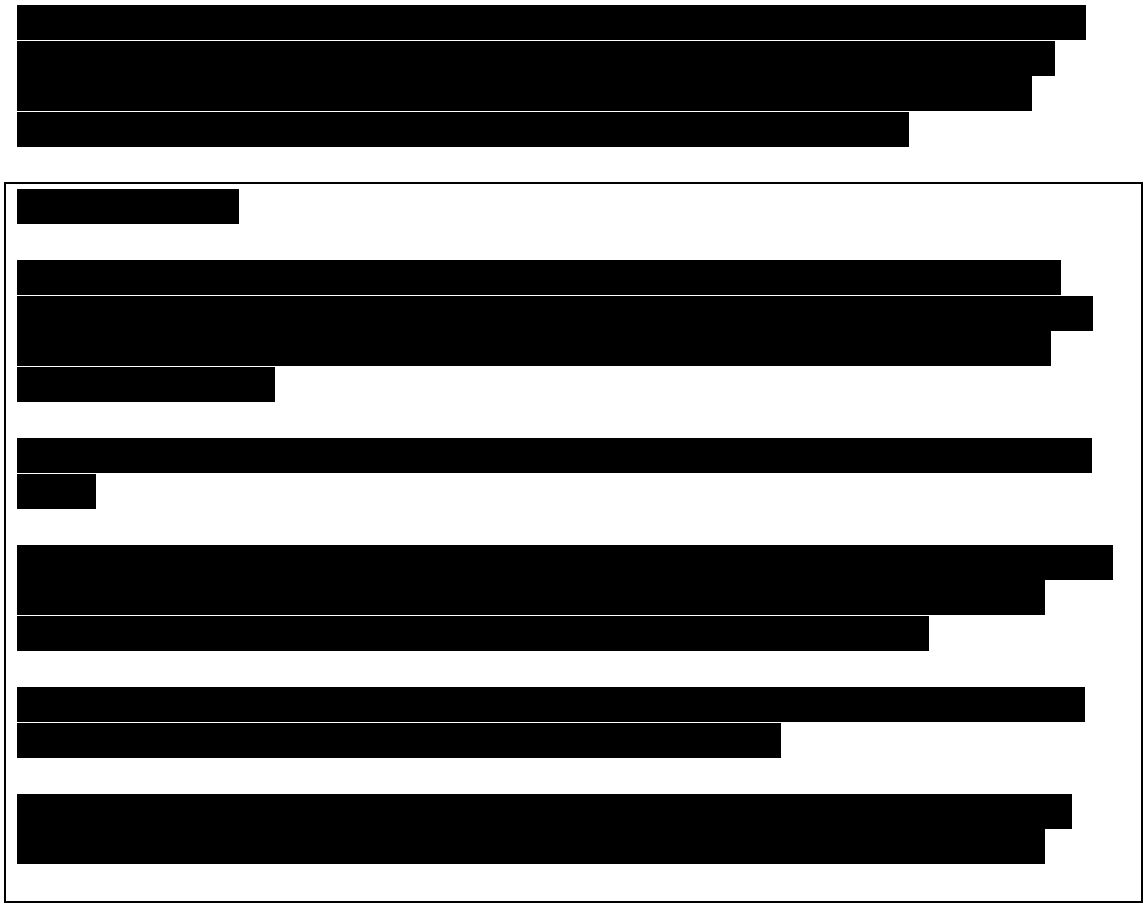


6 INTEGRATION INTO KEY STRATEGIES

The introduction of the Lido into the Thames places the new facility at the heart of several key strategies governing river operation and use and also London-wide and borough-specific priorities for health and the development of swimming.

The following section examines the contribution the Lido would make to these priorities and identifies which locations would make a greater strategic contribution to the development of:

- **The River Action Plan for the Thames**
- **Local health and wellbeing strategies**
- **Sport England and GLA swimming pool provision**
- **The level of sporting activity within a given catchment area**

6.1 Priorities for the River

In 2013 the Mayor of London (GLA) and Transport for London (TfL) published a joint River Action Plan for the Thames. This strategic plan looked to build on the success of river use during the 2012 Games, not only as a location for major events but in transporting passengers, with a view to cementing its position and prominence at the heart of the city.

In line with the targets set out in the report to get more people using and visiting the River Thames (12 million passenger journeys a year by 2020[9]) the London Lido would be a major contributing factor in the following ways:

- by locating the Lido close to a pier visitors could use the river boats to travel to and from the facility, enhancing the value of the specific pier and of the Thames as a destination;
- to work with London & Partners and other visitor agencies to provide incentives for people to travel by river to visit the Lido. For example, discounted entry when using an Oyster card or a day's package combining a visit to the Lido with a trip down the Thames and glass of wine;
- to offer advice to users when booking tickets to travel to the Lido using the river services;
- to work closely with the River Concordat to ensure the Lido is fully integrated into strategic plans for the river;
- potential for shared ticketing facilities if integrated into an existing pier;
- potential for enhancing the visibility of a pier as a fully integrated access point for passengers to the Lido with separate queuing arrangements and the potential to incorporate other facilities;
- encouragement to boat operators to run more services/special offers;
- inviting the Lido artist/architect to explore opportunities the pier might bring as part of the Lido design;
- to link in with wider sponsorship and advertising campaigns for the river.

Other services that would be of mutual benefit to the positioning of the Lido and wider strategic priorities for London include:

- Expansion of the Barclays Cycle Hire scheme to include a docking station in the vicinity of the London Lido
- Integration with borough cycling grids to ensure good and safe access for cyclists

[9] River Action Plan, 2013

- Good interchange with Underground, DLR, rail and buses with clear signage
- Working with TfL to explore coach pick-up and set-down stops nearby[10]
- To explore the potential for paying for a ticket to use the Lido using the 'wave and pay' scheme

6.2 Local Borough Health and Wellbeing Strategies

Joint strategic needs assessments (JSNAs) analyse the health needs of populations to inform and guide commissioning of health, wellbeing and social care services within local authority areas. Under the Health and Social Care Act 2012, local authorities and Clinical Commissioning Groups have equal and joint responsibilities to prepare JSNAs through local Health and Wellbeing Boards. London Sport analyses these assessments to inform physical activity priorities for individual boroughs.

The catchment area for community use of a swimming pool is typically 1 mile or 20 minutes walk.[11] Taking the catchment area and Sport England's analysis of the JSNAs into consideration provides an illustration of the contribution the Lido would provide to the health and wellbeing of populations within selected sites. For the purpose of this report Artichoke has studied JSNAs from the potential borough sites, together with the respective borough's Sport and Physical Activity strategies.

6.3 Sport England

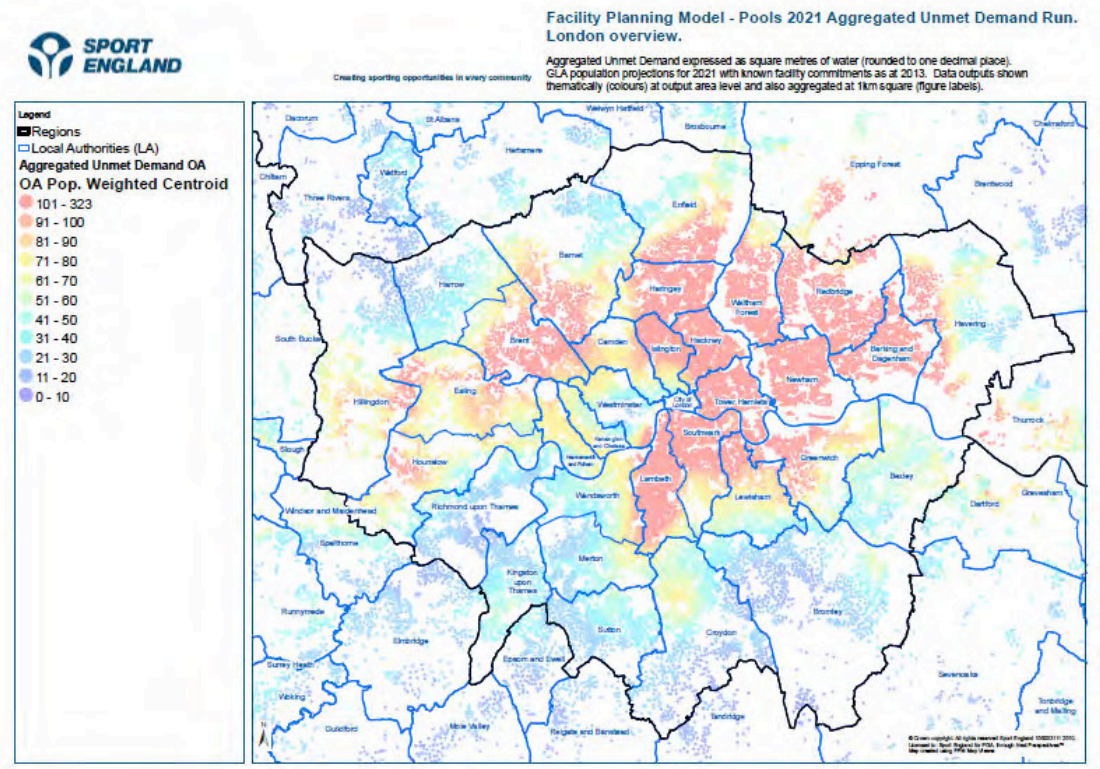
Across London there are 273 indoor swimming pool sites and 12 outdoor pools and swimming ponds. The GLA and Sport England undertook joint research in 2010 to determine the areas of London where demand for swimming pools outstrips supply. The research, which takes into consideration predicted population changes up to 2021, concentrates on indoor pools but gives a useful indication as to whether the location of a lido in a particular area will contribute to the provision of swimming opportunities in locations of aquatic deprivation. Whilst across London there was a broad balance between demand and supply, three key sub areas, the East, Central London and North London demonstrated a significant disparity between supply and demand.

These findings are highlighted in the following illustrative map: the areas in red showing the areas where demand for pools is least well met.

(see Appendix VI for larger scale versions of the maps)

[10] ibid

[11] Strategic Planning for Sports Facilities in London GLA 2010



From this we can see that areas lacking in pool provision are largely concentrated towards the east of the capital. Half of the twelve riparian boroughs in the area of study between Greenwich and Hammersmith demonstrate a current lack of pool provision relative to demand. These areas are: Lambeth, Southwark, Lewisham (although only having a small river frontage) Tower Hamlets, Greenwich and Newham. Whilst the appeal of the Lido would be beyond that of a typical public pool, attracting visitors and locals alike, strategic programming and pricing of the Lido with opportunities for local community use would enable the facility to contribute to the wider aims of the GLA and Sport England to increase pool provision in areas of current deprivation.

In addition to the strategy around facilities development, it is useful to determine the current estimated levels of mid level sports participation in the proposed postcode areas. From this we can examine whether locating the Lido in any of the feasible locations will provide an opportunity to increase low levels of participation in a given area. This study is demonstrated in the individual case studies (see section 7), through a series of postcode specific charts.

In order to increase participation from across the priority areas in any given location, the future Lido should link into existing strategic networks in the local areas. These networks, as identified by London Sport include: Community Sport and Physical Activity Networks (CSPAN) - 1 per borough; The London Physical Activity for Health network; and the London disability forum convened by Interactive. In addition to these, communication with the London Leisure Providers Forum and Senior Leisure Officers will ensure the Lido is considered within ongoing strategy around provision and operation.

6.4 Amateur Swimming Association (ASA)

The ASA, established in 1869, was the first governing body of swimming to be established in the world and remains the English national body for swimming, diving, synchronised and open water swimming and water polo. Artichoke's consultation with the ASA has informed several factors, including pool design. Competitive swimming requires a 25m or 50m pool with 6-8 lanes.

Future programming in consultation with the ASA will increase the Lido's contribution to the three key objectives of the ASA:

- More people learning to swim
- More people swimming regularly
- More medals on the world stage

Schools are required to deliver swimming lessons at either key stage 1 or key stage 2. The ability to swim 25m unaided is part of the National Curriculum for Key Stage 2[12] however many London schools are failing to deliver this objective. The Mobile Pools project, Make a Splash, funded by the Mayor's office has demonstrated a desire by schools to increase opportunities for children to learn to swim, where suitable pool provision is available. Since 2011, Make a Splash pools have been deployed in 24 locations, teaching 22,000 people to swim, 80% of whom are from non white backgrounds. The project is delivered in partnership with the ASA who provide swimming coaches and coaching training. A Lido partnership with the ASA would enable more children in the catchment area of the Lido to access quality swimming lessons in a high profile environment. This in turn would provide a lever for commercial sponsorship and additional trust funding. School use, in the context of a tourist attraction, would however require careful programming and communication to the wider public to ensure clarity of vision and customer satisfaction.

Club swimming in London is very popular with 123 ASA affiliated clubs in operation and anecdotally a large demand for additional pool space for club training. Clubs typically operate early in the morning from 5.30-7.30am or late evening with adult-only masters clubs from 7-10 pm. Use of the Lido could be reserved for club swimming at the beginning and end of the day, extending the operating hours of the facility and providing a high profile boost to British competitive swimming. However it is worth noting that as a visitor attraction, there is likely to be tension between the programming of the pool for club and community use and its status as a world class tourist attraction.

Key issues arising

The Lido focuses attention directly onto the river and provides a high profile opportunity to address many of the priorities outlined in the River Action Plan, including, in particular, potential for tying in with the pier development plans.

The success of the Lido is dependent on the proximity of the attraction to good and various transport links. This could be of mutual benefit to wider strategic priorities for London if tied in with plans for expansion of the Barclays Cycle Hire scheme and development of the river network.

[12] Statutory guidance National Curriculum in England: physical education programmes of study Key stage 2 Swimming and water safety.

As a sporting and leisure facility, the Lido has the potential to provide additional pool space in areas of aquatic deprivation, in particular in Southwark, Newham and Greenwich.

The Lido provides a high profile opportunity to increase participation levels in the selected Borough as well as adding to the range of training facilities available across the Capital.

7 CASE STUDIES OF SELECTED SITES

A rigorous analysis of the factors outlined in sections 3-6 of this report, in consultation with the agencies referred to, has narrowed down potential sites to the only locations feasible for the mooring of the Lido. The sites presented here, with the exception of Greenwich, were deemed viable by both Artichoke and the PLA as they met the following essential criteria:

- **Adequate depth and width of channel**
- **Access to riverbank**
- **Demonstrable levels of stakeholder support**

A number of sites which initially met the criteria in terms of depth or width of channel, were considered but were subsequently ruled out following consultation and further research. These included:

- Chrysanthemum Pier, Victoria Embankment, due to the planned relocation of the pier as part of the Thames Tideway Tunnel development (2016 onwards)
- Battersea Park, which has sufficient width of channel, but not sufficient depth.

The sites all sit along the south bank of the river with the exception of the Royal Docks. They are: Battersea Power Station, Gabriel's Wharf, Pool of London, Greenwich Pier, Royal Victoria Dock and Greenwich Peninsula. See image below for geographical spread.

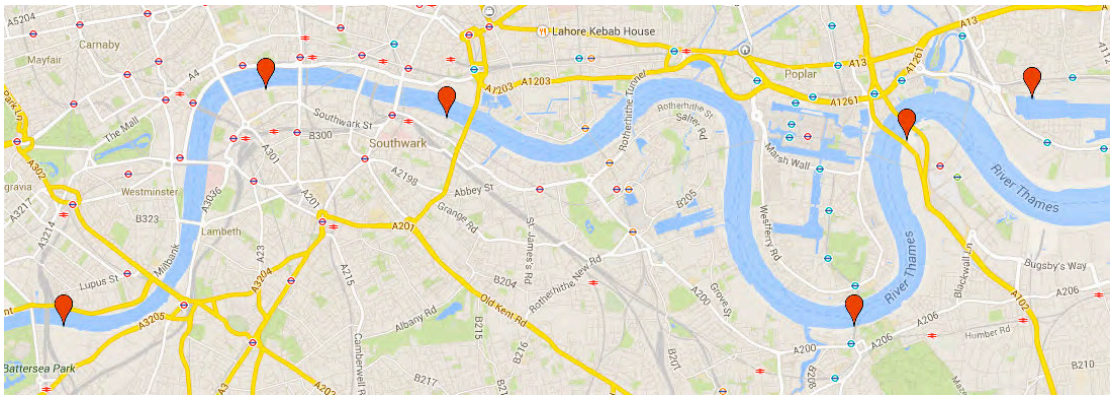


Figure 9: Overview of viable sites - Source: Google Maps

Once the key factors had been determined the six sites were further tested against the following measures to ensure the greatest possible impact:

- **Potential for fundraising**
- **Increasing participation and meeting need for increased pool provision**
- **Proximity to other attractions and potential to be an iconic visitor destination**
- **Has adjacent land to extend provision and for construction**
- **Proximity to Central London and good transport links**
- **Is not impacted by local development projects**
- **Is a calm stretch of water with a speed limit below 20 knots**
- **Meets the 2015/16 ideal delivery timescale**

The outcome of this testing is visible in the following table. Each site has its strengths and weaknesses. Green indicates a positive contribution or low level of concern, amber identifies a medium contribution or medium level of concern, whereas red identifies a site where level of concerns are high or where opposition is likely.

SITE MATRIX- LIKLIHOOD OF SUCCESS **KEY:** 1-2 Low concern; 3-4 Medium concern; 5-6 High Concern	**Royal Victoria Dock**	**Greenwich Pier**	**Greenwich Peninsular**	**Pool of London**	**Gabriel's Wharf**	**Battersea Power Station**
PERMISSIONS						
Natural environmental concerns	1	6	3	5	5	3
Built environment concerns (Heritage)	1	6	1	6	3	3
PLA objections	1	5	3	1	2	4
TIMESCALE						
Ability to meet 2015/16 ideal timescale	1	5	3	3	4	2
BOROUGH NEED						
Meets need for increased pool provision	3	3	3	2	2	4
Meet access needs of local community	2	3	3	3	4	2
Priority to increase participation	2	3	3	3	4	2
Level of local stakeholder support	1	2	2	4	4	1
ENGINEERING & CONSTRUCTION						
Tidal impact	1	5	5	5	6	5
Adequate depth	1	2	2	1	6	4
TOURISM/VISITOR POTENTIAL						
Potential for iconic visitor destination	4	1	2	1	1	2
Proximity to other attractions	3	1	1	1	1	3
Use of adjacent land to extend provision	1	2	2	5	3	2
Proximity to Central London	4	3	3	1	1	3
Transport Links	2	2	1	1	2	2
Touristic iconic view of London	4	1	2	1	2	2
RIVER USAGE						
No impact of local development on site	3	3	4	1	4	6
Calm stretch of water	1	6	5	5	3	3
Brownfield site for Lido construction	1	3	3	6	5	3
Speed limit below 20 knots	1	5	5	3	3	1
FUNDRAISING						
Cash potential link to development	1	4	2	4	4	1
Additional fundraising potential	1	4	3	3	4	3
TOTAL	**40**	**75**	**61**	**65**	**73**	**61**
RESULTING ORDER OF PREFERENCE	**1st**	**6th**	**2nd/3rd**	**4th**	**5th**	**2nd/3rd**

CONCLUSIONS FROM SITE MATRIX

FIRST: From the above analysis alone it is possible to determine that Royal Docks is the most viable of the six locations as it has the lowest number of concerns relating to the natural and built environment, impact of the tide and available land for building and locating facilities. It also has high fundraising potential linked to the existing development work taking place and the Section 106 agreement in the area and sits well with the timescale for the planned floating village.

JOINT SECOND/THIRD: Greenwich Peninsula is a strong location. It is an Opportunity Area for London and will be subject to significant development over the next few years. The Lido could turn a pier in need of development into a visitor destination and increase the connection between the O2 and the river walkway. There is strong support from owners AEG, who have the potential to assist with sponsorship through brokering naming rights for the new facility. The direct link to the Thames Clipper service, owned by AEG, is a further positive factor to increase its reputation as a visitor destination, although in the past the O2 has struggled to attract daytime visitors. It should be noted that the PLA is yet to give feedback on the proposed location.

JOINT SECOND/THIRD: Battersea Power Station is an equally viable option with an ability to meet the 2016 deadline as a result of the development work already taking place at Nine Elms. Close consultation would be needed with the BPS Development Company but it scores highly as an iconic visitor destination. The concerns in this area relate to the transport links not being available for up to four years after the delivery of the Lido and the impact of the wider Nine Elms development and the volume of spoil that will need to pass by the Lido in barges away from the construction sites.

FOURTH: The Pool of London has particular appeal as it falls within the Central London area. Concerns in this area are mainly related to the site being very close to a World Heritage Site and Scheduled Ancient Monument. Close consultation with English Heritage and the Environment Agency will be important to secure permission for this location. The fundraising potential is also untested. A degree of commitment would be required up front to ensure it could be built to meet the summer 2016 timescale.

FIFTH: Gabriel's Wharf provides an excellent location in terms of proximity to London and other high profile visitor destinations such as the South Bank. It is however likely to be cost prohibitive as it will require the most work to be carried out to accommodate the vessel in the riverbed as the tide falls to a very low point in this area. With plans already underway to build a pool in an adjacent development and clashes with the construction work required for the Garden Bridge (also due for 2016) it raises a number of concerns that would need to be adequately addressed before proceeding.

SIXTH: Greenwich Pier is an excellent location for positioning the Lido in terms of its attractiveness as a destination and its link to transport and other facilities. Greenwich Council is keen to host the Lido in the Borough with potential for the pier to be refurbished to become a fully integrated facility, including an access point to the Lido. The PLA however has raised some concerns over positioning it next to the pier due to the high volume of river traffic in that area. Permissions would also be very complicated due to the adjacent World Heritage site and close consultation with English Heritage would be required.

CASE STUDIES - INTRODUCTION
To ensure the fullest possible analysis of the potential of each location, each site has been further broken down into a study of the following:

- **General context and opportunities provided by the location**
- **Transport links**
- **Environmental considerations**
- **Sports strategy**
- **Opportunities as a visitor destination**
- **Level of borough/stakeholder support**
- **Engineering solutions with feedback from the PLA**

7.1 BATTERSEA

Borough: Wandsworth
Postcode: SW8 5BN

Context

Over the next 10 years, the riverside between Chelsea and Vauxhall bridges will be the focus of large scale regeneration, incorporating three major schemes: Battersea Power Station, the US Embassy and Nine Elms developments. The development plans include residential, retail and restaurants as well as new parks and gardens, with an increase in population of around 30,000 people. The Northern Line extension will provide two additional stations at Battersea Power Station and Nine Elms, increasing access to the area and linking it to the tube network for the first time.

As previously identified, the developments in the area will have a large impact on the river usage over the next few years with additional barges carrying spoil and materials and the relocation of moorings to accommodate the additional river traffic.

Battersea Park

Artichoke initially investigated the potential to site the Lido alongside Battersea Park as an extension to the park activities, with the potential to locate additional supporting facilities on the riverbank. The PLA identified a potential site between the pagoda and Albert Bridge, although this would require dredging to provide sufficient depth.

Figure 10: Waterfront at Battersea Park at low spring tide

Battersea Power Station

After 30 years of disuse, Battersea Power Station is now the centre of a major development, with Phase 1 Circus West welcoming its first residents in 2016 and Phase 2 completing in 2018. As part of Phase 1, a new riverfront park will be developed in front of the Power Station, providing riverside access and the focus for large-scale outdoor events. The river frontage of Battersea Power Station has deep-water access via coal dock, with its two iconic cranes, previously used for unloading the river cargos of coal to fire the power station. The development plans for Battersea Power Station include plans to develop the jetty, and incorporating a Lido into this development is high on the list of priorities.

Figure 11: Battersea Power Station (BPS) Master plan - Source: BPS Development Co.

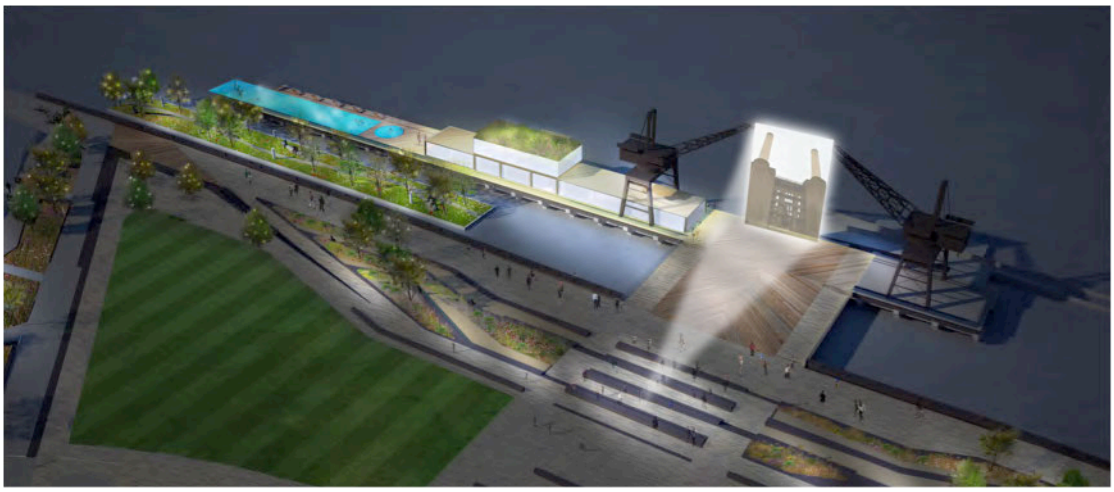


Figure 12: Battersea Power Station jetty development - Source: BPS Development Co.

Transport Links

Underground and rail stations:
Battersea Park (mainline station)
Queenstown Road (mainline station)

Buses: 19, 44, 49, 137, 156, 239, 319, 344, 345, 452
River services: Cadogan Pier – RB6

Barclays Cycle Hire (Current)
Ethelburga Estate, Battersea Park - 29 spaces
Prince of Wales Drive, Battersea Park - 20 spaces
Battersea Park Road, Nine Elms – 27 spaces
Thessaly Road North, Nine Elms- 27 spaces

Car Parking: Pay and Display parking available within Battersea Park

Future transport links
In the next ten years this will be further enhanced by the current transport upgrade package for Nine Elms (2016-2020), which includes:

- 2 new Northern line Tube stations (Battersea & Nine Elms)
- 2 new riverbus piers
- A new bridge across the Thames (cycling and pedestrians)
- £45 million capacity upgrade to Vauxhall Tube Station
- Upgrades to Vauxhall, Battersea Park and Queenstown Road rail stations
- Improved London bus services
- A new network of cycling routes and footpaths
- Major road network upgrade

Environmental Considerations

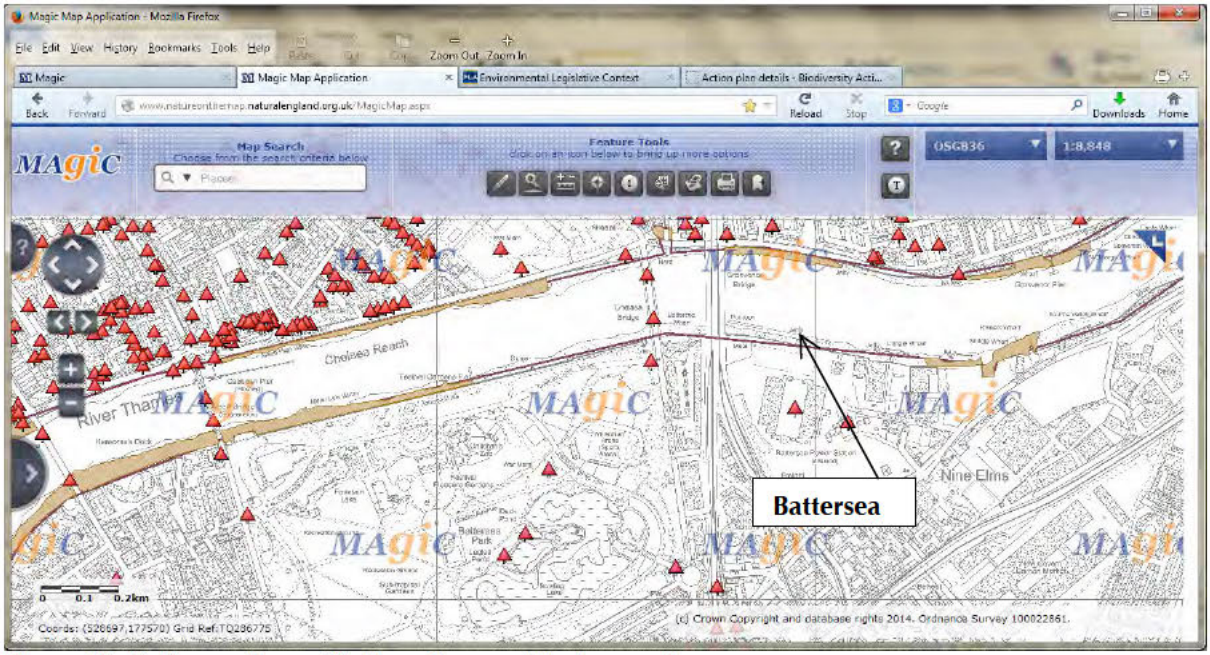


Figure 13: Battersea Power Station - Source: Magic.gov.uk

This part of the tidal Thames where Battersea is situated has been designated as regional/London **non-statutory Sites of Importance for Nature Conservation** due to the important intertidal mud and shingle habitat found at low tide (Wandsworth- Places for Wildlife[13]). This legislation attempts to protect the best sites in London and provide local areas for access to nature. There are three categories: metropolitan, borough or local importance. Battersea is a **Site of Metropolitan Importance** within this category.

Sports Strategy

As identified in the GLA research, Wandsworth has a generally good level of pool provision. However, the following map indicates a low number of pools in the Battersea Power Station area and an estimated medium level of physical activity.

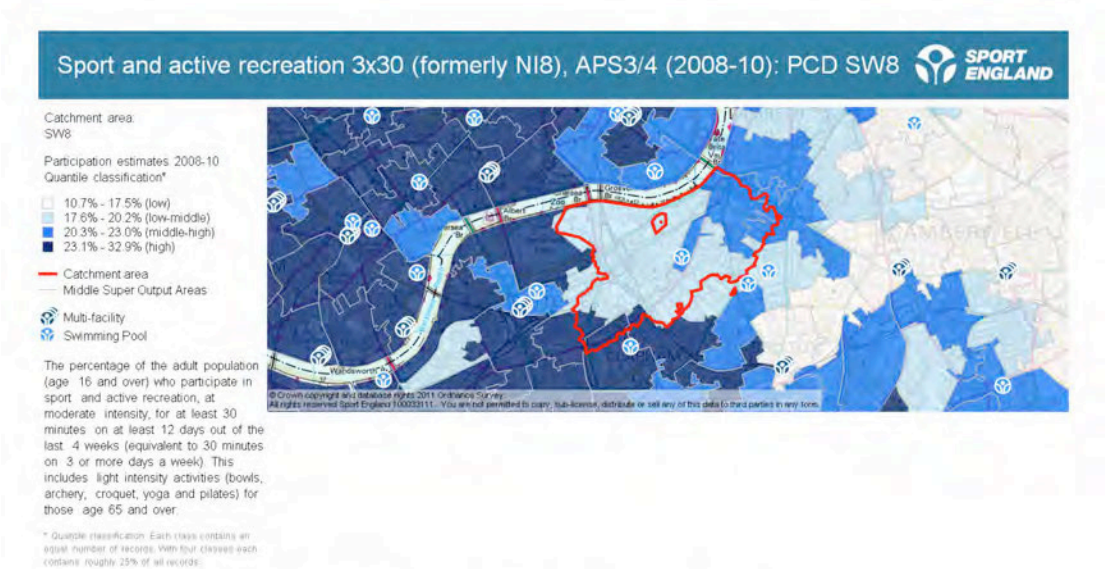


Figure 14: Wandsworth - Source: Sport England

The JSNA and resulting Physical Activity strategy for Wandsworth indicate that particular priorities for the borough include working with leisure providers to increase exercise opportunities for older residents to increase mobility and protect against coronary heart disease.

Opportunities as a visitor destination

Whilst Battersea Park has long provided a focus for riverside leisure activities for residents from both sides of the river, with a programme of public events and visitor facilities, the new developments which incorporate leisure and retail offers, as well as significant public spaces along the riverfront will greatly enhance the appeal of Battersea as a visitor destination for Londoners and tourists. The finished development of Battersea Power Station will incorporate 200 unique shops and 60 restaurants and a new space for arts and culture. The river frontage has views of central London, across the bend in the river and it is easy to imagine that it will continue to develop as an area that is increasingly visited by tourists and Londoners alike.

[13] http://www.wandsworth.gov.uk/downloads/file/417/sites_with_designations_protection_for_biodiversity_in_wandsworth

Figure 15: Battersea Power Station - Source: BPS Development Co.

Stakeholder Support

Artichoke has met with David Twohig, Head of Design and Placemaking at Battersea Power Station to discuss the plans for development of the jetty. The Development Company is very interested in being part of further discussions to incorporate GLA plans for a Lido into their existing scheme. The wider scheme involves the wish to create a floating park extension to link Battersea Power Station with Battersea Park under Chelsea Bridge. A competition seeking concepts for this scheme, including the potential for a Lido, was due to be launched in early June. However, following Artichoke's consultation and the awareness of the GLA timescale, Battersea Power Station have postponed the competition for two months, to enable any future discussions arising from this report to take place.

Conversations with planning, arts and regeneration staff at Wandsworth Council have been positive. The London Lido is a project they would welcome with regards to creating a unique cultural experience and offer for people in the borough. The elected Councillor for the borough, Councillor Ravi Govindia, is particularly interested in projects that enhance the identity and character of an area, benefit the local community and show excellence in design and has expressed his interest in being part of the conversations going forward.

Advice from the PLA

Whilst the PLA previously identified a site off Battersea Park, they have subsequently expressed reservations about this site, given the width of channel and the size of vessel required.

In relation to Battersea Power Station, the PLA reservations expressed were largely in relation to the amount of additional commercial river traffic due to the developments and excavations. Concerns were expressed over the size of a vessel moored to Coal Dock. If however the Lido is incorporated into the fabric of the redeveloped jetty at Coal Dock, as illustrated in Battersea Power Station's renderings (see figure 12 above), this could alleviate any issues around size.

Pros	Cons
• Technically feasible site with adequate depth and calm water	• Some resistance from PLA
• Support from stakeholders, in particular BPS and Wandsworth Council	• Not in Central London
• Opportunity to integrate into plans for jetty and foreshore development	• High level of construction and development in the area for next 10 years
• Potential management through BPS	• Barges carrying spoil away from the site might detract from the experience
• Available jetty space adjacent to facility	• Transport links not in place in time (anticipated 2016-2020)
• Potential to add to local pool provision – meets community need	
• Potential capital funds linked to development	
• Deliverable by 2016 as part of the BPS development	
• Opportunity to link to high profile events and cultural activity planned for BPS	

7.2 GABRIEL'S WHARF

Borough: Lambeth
Postcode: SE1 9PP

Context
Formed over 30 years ago, Coin Street Community Builders (CSCB) has been largely responsible for the regeneration of 13 acres of derelict land on the Southbank. Gabriel's Wharf, the first development by CSCB, opened in 1987 and heralded the rebirth of the South Bank. Originally a series of old garages, Gabriel's Wharf is a thriving riverside destination and home to a collection of design shops, cafés, restaurants and bars.

The stretch of river adjacent to Bernie Spain gardens was the site of a previous proposal by Lifschutz Davidson Sandilands for a floating Lido, which was never realised. Gabriel's Wharf was identified as a possible location by the PLA due to the width of available channel and calm water. However Artichoke's research demonstrates that the engineering required to realise a Lido in this location is extremely costly due to the relatively shallow water.

There are also two other local developments that will have a bearing on the operation of the Lido in this location. The Doon Street development, which is adjacent to Gabriel's Wharf, has plans for a mixed development including dance studios for Rambert and a public swimming pool to be managed by Greenwich Leisure Ltd (GLL). Whilst there could be a possibility for the Lido to be run in conjunction with the new pool by GLL if the markets for the two facilities were deemed to be sufficiently distinct, the Doon Street facility would inevitably have a bearing on the programming of the Lido in this location.

The Garden Bridge is also planned to link to the South Bank very close to the proposed location. Whilst this will eventually provide an excellent link between the two attractions and a positive connection for the Lido, any overlap between the construction period for the bridge and the operation of the Lido is likely to be less appealing for visitors.

Transport Links

Underground and rail stations:
Southwark (Jubilee Line)
Blackfriars (Circle and District lines and mainline station)
Waterloo (Jubilee, Northern, Bakerloo lines and mainline station)

Buses: The RV1 and 381 bus runs from London Bridge to Waterloo
River Services: Blackfriars Millennium Pier – River Bus RB1 and RB6

Barclays Cycle Hire
- Milroy Walk, South Bank - 29 spaces
- Colombo Street, Southwark - 15 spaces

Car Parking (5 minutes walk)
- Cornwall Road car park: Underground and open 24 hours
- Doon Street car park: Street level [entrance on Upper Ground opposite the National Theatre]

Environmental Considerations

Figure 16: Gabriel's Wharf - Source: Magic.gov.uk

The south side of the shore at Gabriel's Wharf is a **Mud BAP** area as identified in the London Biodiversity Partnership[14] where the "Tidal Thames" is identified as a Habitat Action Plan. Lambeth BAP 2005[15] identifies intertidal mud as a key semi-natural habitat and raises the issue of maintenance dredging and its effect on intertidal mud and river flows. Shingle is also considered important for feeding areas for fish. According to the Biodiversity Action Reporting System[16] no actions have been reported for this type of habitat so this habitat cannot be considered a high priority.

Blackfriars Bridge and Waterloo Bridge are **listed buildings** within 200m of the proposals. There are no listed buildings on the south shore.

Sports Strategy

The SE1 postcode area demonstrates relatively high levels of estimated sports participation, as demonstrated in the chart below. Lambeth is also lacking in pool provision according to the GLA and Sport England's research. However given the proximity to the proposed new public pool at Doon Street, it is likely that the Lido would primarily be marketed as a tourist destination, in order to differentiate the two facilities and their respective markets.

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[14] London Biodiversity Partnership http://www.lbp.org.uk/londonhabspp.html Tidal Thames

[15] Lambeth BAP 2005 http://moderngov.lambeth.gov.uk/Data/Executive%20%28replaced%20by%20the%20Cabinet%20on%2024-05-06%29/20051010/Agenda/Report%20-%20Item%203b%20-%2010-2005.pdf

[16] Biodiversity Action Reporting System http://ukbars.defra.gov.uk/archive/plans/lbap_complete_plan.asp?X={B7374AD6-6F39-48EF-B9CA-9CCE7120A861}&LBAP={5215DDB3-A164-46E3-A8E3-C8858A6F54AC}

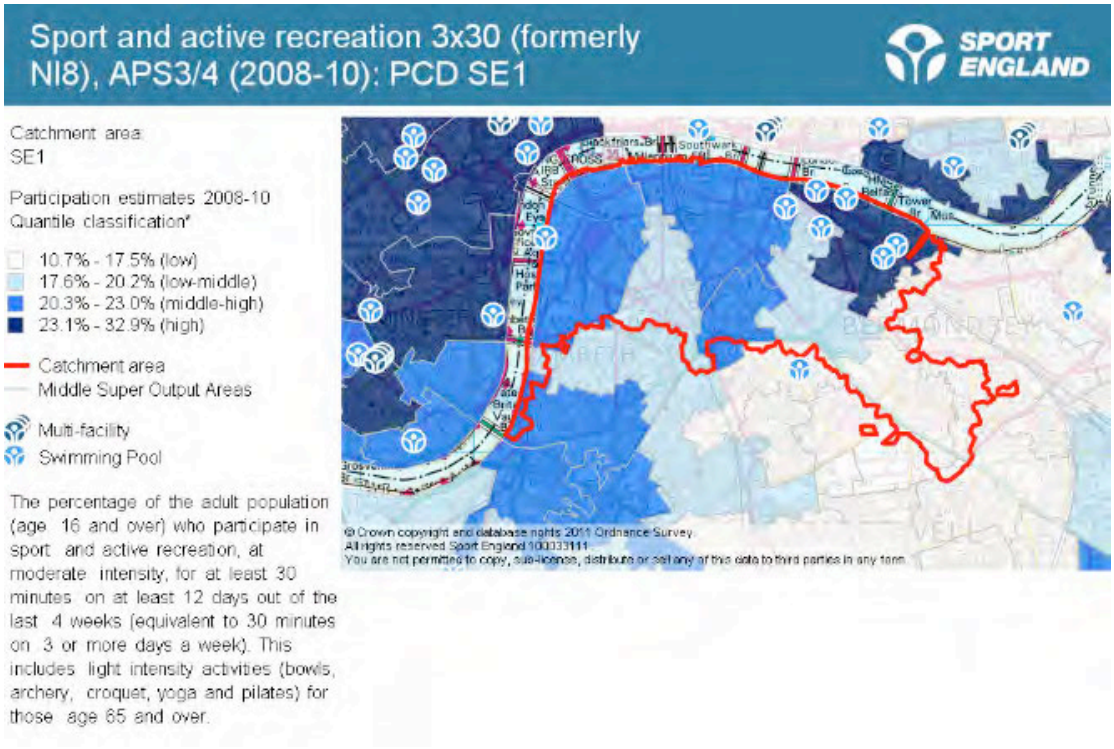

Figure 17: Lambeth - Source: Sports England

Opportunities as a visitor destination

The close proximity of the Gabriel's Wharf site to the South Bank makes it an attractive location as it is within easy walking distance of cultural institutions such as Royal Festival Hall, Hayward Gallery, Oxo Tower and National Theatre.

Pros	Cons
• PLA supportive	• Lack of deep water, Lido unable to float at all stages of the tide
• Central London location in the heart of existing cultural destination	• Expensive marine engineering required to enable Lido to ground at low tide
• High international tourist footfall	• Pool integrated into current Doon Street proposals
• Site of a previous Lido concept, likely strong local support	• Likely environmental concerns
	• Proximity to Garden Bridge construction zone (intended for delivery in 2016)

7.3 POOL OF LONDON

Borough: Southwark
Postcode: SE1 2AA

Context

The Pool of London, the stretch of water in front of City Hall, is one of London's oldest docks with cargoes from all over the world historically arriving to the area laden with food spices and precious goods to be delivered to the Tower of London. The area became very popular with tourists as a result. Steamers were used to bring people to the area from the east of London and in 1934 Tower Beach was created on the mud flats beneath the Tower of London, which between 1934 and 1939 was used by over half a million people.

"During the 1960s the Pool of London started to lose its importance as an international port. Many reasons have been given for the decline of the docks such as the disbanding of the Empire and labour disputes, but the main reason was the arrival of modern ferries and container ships that demanded deeper water berths."[17]

The area fell into disrepair until the boom of the 1980s when developers started buying up land around the Pool of London and the area was developed into a major business and leisure district. In 1996, the Pool of London Partnership (PLP) was formed to encourage a more strategic approach to the development of the area, which included introducing new transport links (see below), bringing the GLA to its current location, and once again establishing the Pool of London as a visitor destination.[18]

Investment opportunities might be available with two high-profile developers in close proximity to the site: Irvine Sellar (The Shard) and Berkley Homes (Potters Field development). An approach should be considered as part of the second stage.

Transport Links

Underground and rail stations:
London Bridge (Jubilee and Northern lines and mainline station)
Tower Hill (Circle and District lines)
Tower Gateway (Docklands Light Railway)

Buses: 42, 47, 78, 381, RV1

River services:
St Katharine's Pier
London Bridge City Pier & Tower Millennium Pier – RB1

Barclays Cycle Hire
Tooley Street, Bermondsey - 10 spaces
Curlew Street, Shad Thames - 10 spaces

Car Parking: None available in close proximity

[17] http://www.discoverlondonbridge.co.uk
[18] ibid

Environmental Considerations

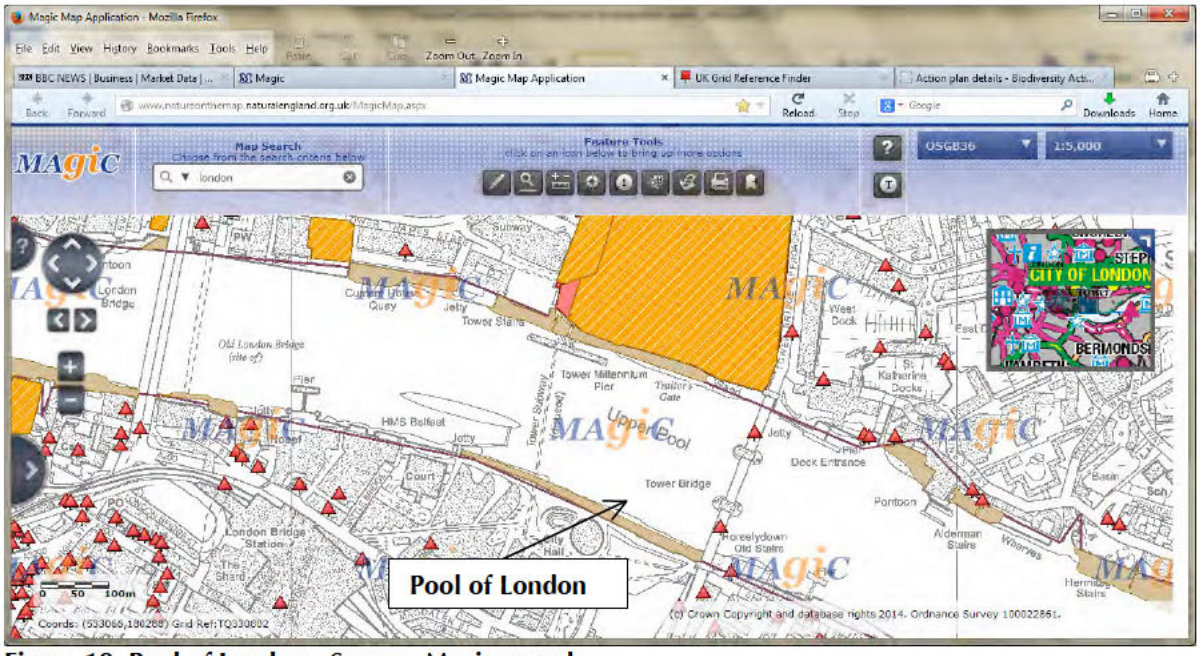

Figure 18: Pool of London - Source: Magic.gov.uk

Southwark BAP 2006-2010[19] recognises intertidal mud as an important habitat and has the objective of 'increasing niche habitat along banks'. The south shore of the Thames is part of the **Mud BAP area**.

Within 200m of the proposed site there is the statutory designation of **Scheduled Ancient Monument** and **World Heritage Site** of Tower of London. Consideration should be given on the setting of the proposal as it will have some minimal aesthetic impact on the SAM and some cultural impact on the WHS. Apart from Tower Bridge there are no listed buildings close to the south shore.

The north shore here is part of the **Objective 2** area for stimulating economic activity but the south side of the Pool of London is not.

Sports Strategy

The chart below shows the current estimated activity levels for the postcode area around City Hall and HMS Belfast, indicating a high level of participation and several swimming pools in the area. This information is in contrast to the borough-wide research into swimming pool provision in Southwark which indicates a significant level of aquatic deprivation.

[19] Southwark BAP 2006-2010
https://www.southwark.gov.uk/downloads/download/1782/southwark_biodiversity_action_plan_2006-2010

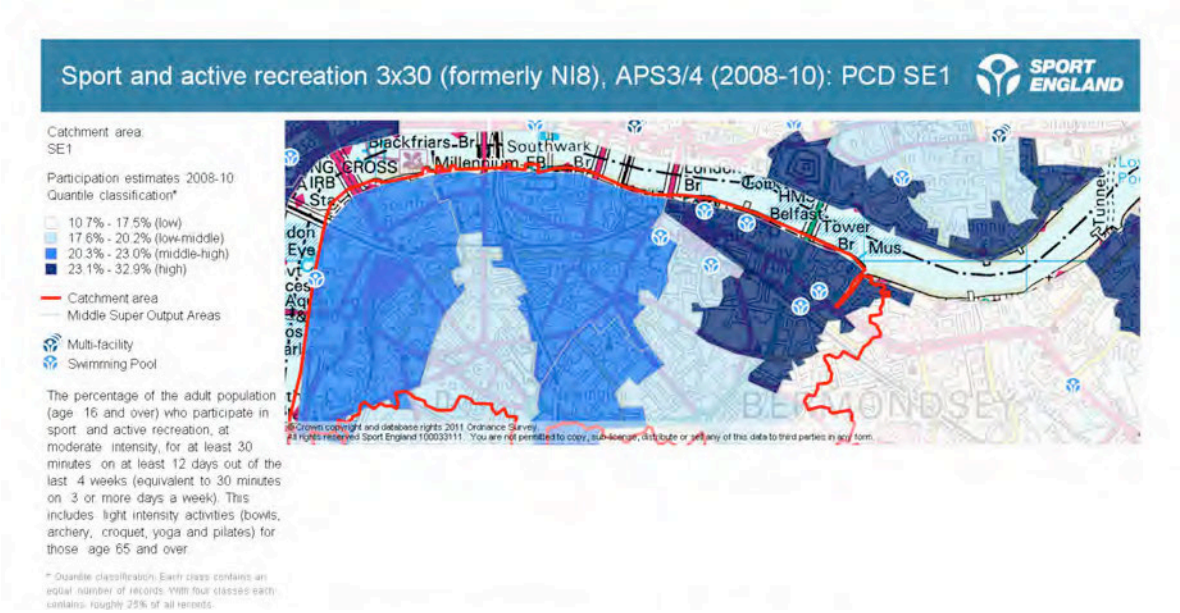

Figure 19: Southwark - Source: Sport England

Southwark's JSNA highlights that 80% of the population is under the age of fifty with a large proportion aged between 20 and 45. However In 2009/10, Southwark had the highest rates nationally for obesity for Reception Year pupils (5-6 year olds) at 14.7% and second highest for Year 6 (10-12 year olds) at 26%. Over three quarters of Southwark's schools have higher than the national average rates for obese and overweight children (Reception and Year 6). Physical activity strategies are focused around reducing the obesity amongst children through increased physical activity. The introduction of the Lido into Southwark could therefore provide a high-profile addition to pool provision and encourage more children to be physically active.

Opportunities as a visitor destination

The area around City Hall is a striking visitor destination with views across to the World Heritage site of the Tower of London and adjacent to Tower Bridge and HMS Belfast. It is located within easy walking distance of Borough Market, to the City across Tower Bridge and to the Shard. The Queen's Walk is already a popular destination with tourists who regularly visit City Hall and is well positioned with a number of chain restaurants and cafes within 5 minutes walk. The area, a popular filming location, for festivals and performances at The Scoop, and with significant views would provide a magnificent situation for the Lido drawing attention back to a historically rich stretch of the Thames.

Stakeholder Support

The area around Tower Bridge was identified as having potential in an initial meeting with Paul Cowell and Matthew Hill from Southwark Borough Council. The main issue identified was the availability of land in close proximity to the Lido in order to facilitate visitor access and waiting. A briefing paper was submitted to senior members of the borough council by Paul Cowell to raise awareness of the potential of the location for the Lido prior to the submission of this report.

Advice was sought from More London Estates who referred Artichoke to St Martin's Property as the owners of the riverbank walkway. James Cockerton from St Martin's Property indicated that any permission would need the approval of the largely

conservative board of St Martin's who have as yet not been directly consulted about the proposals.

Engineering and Advice from the PLA

A potential location adjacent to the HMS Belfast is shown below, overlaid onto PLA chart 318. This would involve the relocation of some existing moorings. From discussions with the PLA, the Lido would need to be moved slightly upstream and inland from the location shown.

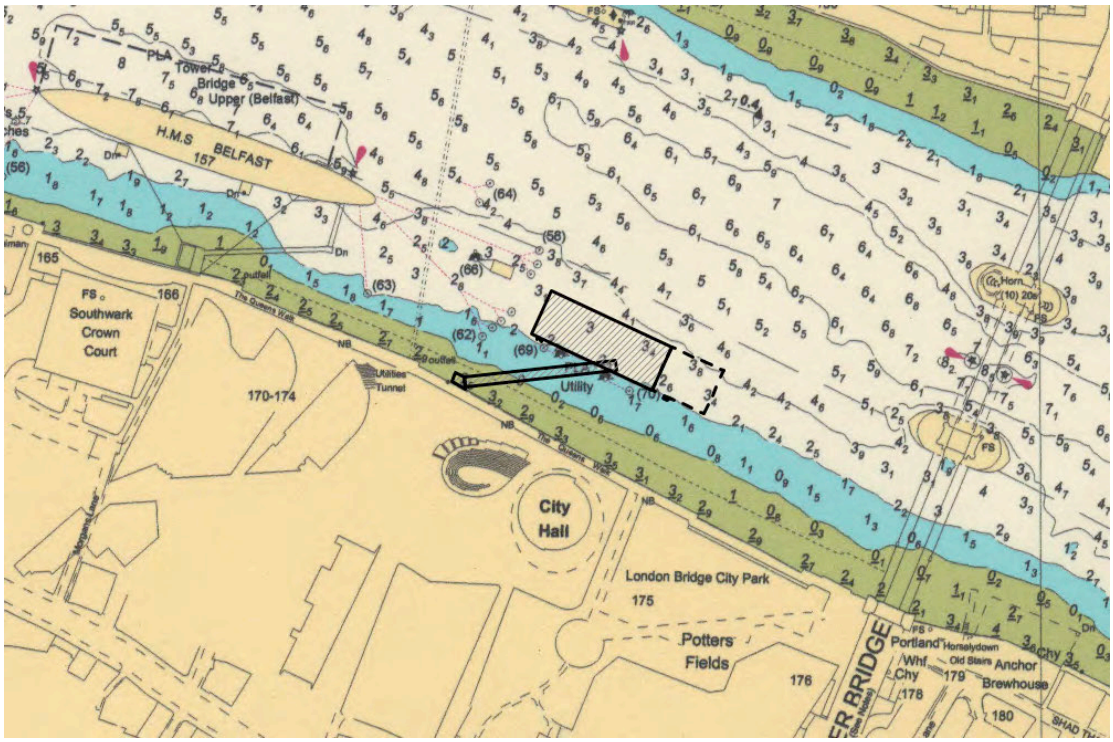

Figure 20: Pool of London proposed positioning

Pros	Cons
• High profile location in Central London, close to Mayor's office	• Approval needed from the board of St Martin's to gain access via the river walk
• Excellent transport links	• Part of a protected habitat, requiring further discussion with the Local Authority and EA
• Proximity to significant tourist destinations and iconic views	• Located opposite a World Heritage Site. Close consultation needed with English Heritage.
• Potential to link with cultural activities at the Scoop	
• Support from the PLA	
• Wonderful resource for Southwark schoolchildren	
• Can meet the 2016 deadline, providing funding is in place	
• Falls within the 12 knot speed limit	

7.4 GREENWICH PIER

Borough: Royal Borough of Greenwich
Postcode: SE10 9HT

Context

Greenwich is undergoing a significant period of development with a number of major regeneration projects underway in different parts of the borough. Plans, intended for completion in 2027, include Greenwich Peninsula, Eltham, Charlton and Woolwich with riverfront development taking place at Enderby Wharf pier and at Greenwich Pier where the siting of the Lido is proposed.

Transport Links

Greenwich is a popular destination with Londoners and visitors alike and has good travel connections, particularly by boat and using the Greenwich foot tunnel, popular with both pedestrians and cyclists.

Underground and rail stations:

Cutty Sark (DLR) & Greenwich Station & Maze Hill Station (mainline rail)

Buses: 177, 180, 188, 199, 286, 386,
River services: Greenwich Pier – RB1; City Cruises; TRS

Barclays Cycle Hire

Saunders Ness Road, Cubitt Town - 32 spaces
Stebondale Street, Cubitt Town – 28 spaces

Car Parking

Parking in Greenwich is limited with off-street pay-and-display car parks in Greenwich Park (250 spaces, maximum 4 hours), Park Row and Burney Street.

Environmental Considerations

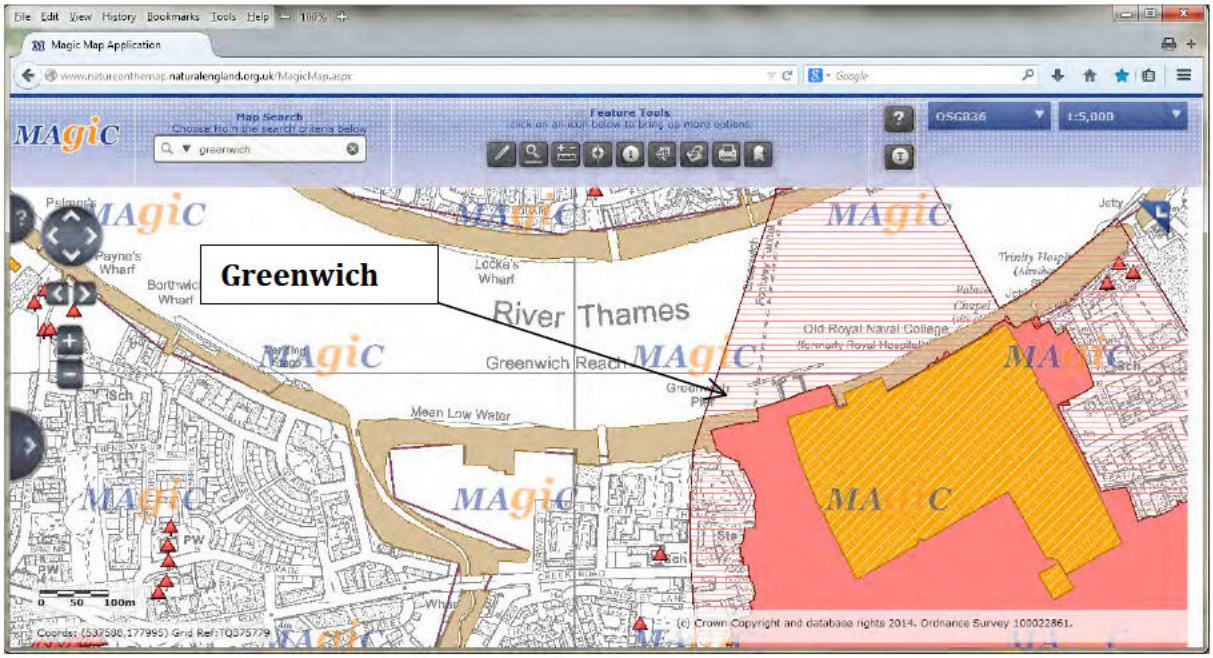

Figure 21: Greenwich Pier - Source: Magic.gov.uk

The Greenwich site is dominated by the **World Heritage Site** of the Old Naval Hospital. The 'buffer zone' of the WHS also extends beyond the limit of the site itself as UNESCO tries to protect the setting of the Old Naval Hospital from inappropriate development. The aesthetics of any Lido design will have to take into account the WHS.

The Old Naval Hospital is also a **Scheduled Ancient Monument** and there are seven **listed buildings** within 100m to the east of the Greenwich Jetty. English Heritage, the statutory organisation tasked with managing historic buildings will need to be consulted so they are content the development will not damage the SAM and listed building status.

The River Thames and tidal tributaries are **Sites of Metropolitan Importance** for Nature Conservation. Greenwich has the longest river frontage of any borough in London and will encourage good practice 'As part of their **planning permission** the developers have developed a landscape master plan, which they linked to their **ecological master plan**. The Council will encourage any new developments bordering the tidal Thames to follow this example'- Greenwich BAP 2010 (7).

The most important designations for Greenwich that need to be considered are the WHS and SAM legislation but wildlife consideration need to sustainable for the longer term if planning permission is to be achieved.

Sports Strategy

The following chart in which participation is shaded dark blue (high) to white (low) show the current levels of active participation in the postcode areas.[20] This indicates that there is currently a medium to high level of existing sports participation within this postcode area.

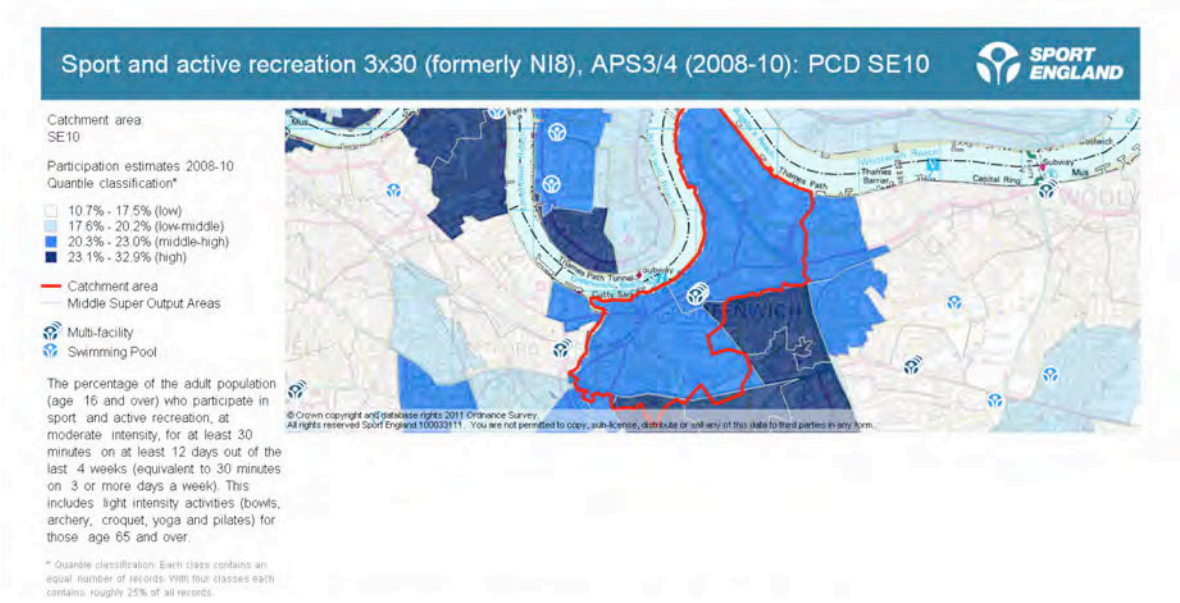

Figure 22: Greenwich - Source: Sport England

[20] Estimates of participation are based on data from Sport England's Active People Survey 3 (Oct 2008-Oct 2009) and Survey 4 (Oct 2009-Oct 2010). These participation estimates are combined with other data sources available at the area level (heath indicators, socioeconomic status etc.) through a 3-stage statistical modelling process to provide small area estimates of participation. Source: Active People Interactive tool http://sae.sportengland.org/maps.aspx

Opportunities as a visitor destination
As a visitor destination Greenwich is a perfect location. The Lido would be positioned within walking distance of a number of high-profile tourist destinations, enhancing an already busy and dynamic part of London, which includes a World Heritage site; the National Maritime Museum, Queen's House, the Old Royal Naval College, Greenwich Market, the Cutty Sark and the Royal Observatory in Greenwich Park.

The site is also very close to the O2 arena, Emirates Air Line, the Royal Arsenal, Woolwich, Charlton House and Eltham Palace, making the location appealing as a destination and opens up the potential for combined tourism offers and day-out appeal.

Stakeholder Support
Greenwich Council is very interested in the proposal to position the Lido close to Greenwich Pier and has expressed an interest in working closely with the GLA to make this possible should the proposal to position it in the borough go ahead. During consultation the Council referred to past plans for locating a Lido in the exact same position, which had not been able to proceed further due to the lack of available funding. They are however looking at plans to develop the river walkway next to the pier to make it more attractive to visitors. If this development work were to take place in conjunction with the installation of the Lido, then the area could be developed to provide not only access to the Lido but an ideal area for positioning some of the pool facilities on land. A number of chain restaurants have already appeared in this area since 2012 as part plans in time for the Games. Representatives from the Executive team at the Council commented on the potential of the Lido to be a tremendous visitor attraction and facility for the wider borough and that they would like to be part of ongoing conversations.

Figure 23: Greenwich Pier - Source: www.simplonpc.co.uk/CityCruises3

Engineering
A drawing has not yet been produced in this location as it requires a conversation with the PLA before progressing further but Beckett Rankine Marine Engineers has confirmed that the necessary width and depth of water is present and that Lido could be accommodated providing it meets environmental and historical legislation.

PLA Advice
The PLA has voiced concern at locating the Lido close to Greenwich Pier owing to it being a heavily trafficked passenger pier accessed by a number of boat operators. This is in contrast however to Greenwich Council which is interested in renovating the pier with multiple purposes including a connection to the Lido. This also ties in closely with the River Action Plan where one of the priorities is to refurbish piers and enhance pier visibility. As the stretch of river at Greenwich Pier falls within the 30 knot speed limit the waters could be quite choppy from existing boat activity. The PLA has not looked in detail at how the Lido might be attached to a different section of the pier or at the pier being redeveloped especially and it is widely felt that this would be a conversation worth having if the location considered a priority.

Pros	**Cons**
• Iconic visitor destination	• Falls outside of the Central London area
• Excellent transport links	• Busy section of waterway, used by a number of river service operators
• Support from Greenwich Council	• Falls within the 30 knot speed limit
• Proximity to other visitor destinations	• Does not currently have PLA support
• River is deep enough to accommodate the vessel	• Requires more investment than some of the other sites in order to redevelop the pier as part of the delivery
• Potential tie in with other large scale development works in the Borough	• Site of Metropolitan Importance for nature conservation and would require permission from the EA
• Opportunity to rebuild Greenwich Pier	• Significant site of historical interest as both a World Heritage Site and Scheduled Ancient Monument. Requires close consultation with English Heritage.
• Links with development plans for the land next to the pier	
• Potential to integrate facilities on land into the design	
• Potential to meet the 2016 deadline	

7.5 GREENWICH PENINSULA

Borough: Royal Borough of Greenwich
Postcode: SE10 0DX

Context
Greenwich Peninsula is undergoing a period of redevelopment, which will have an impact on the daytime footfall in and around the O2, including a 450 bed hotel due to open in 2015 and a revised retail offer, opening in 2017.

Transport Links

Underground and rail stations:
North Greenwich Station on Jubilee line.
Charlton mainline station 26 minute walk or connected to North Greenwich by bus routes 161, 472 or 486.

Buses: 108, 129, 132, 161, 188, 422, 472 or 486 to North Greenwich

River services: North Greenwich pier - Thames Clippers River Bus Express to Canary Wharf, London Bridge and Waterloo.

Emirates Air Line: Emirates Air Line cable car between Greenwich Peninsula and the Royal Docks.

Barclays Cycle Hire (Current)
No Barclays Cycle hire but 500 cycle racks in car parks and adjacent to North Greenwich Station.

Car Parking
4 car parks providing a total of 2,000 spaces, 8 minutes walk from the O2 arena.

Environmental Considerations

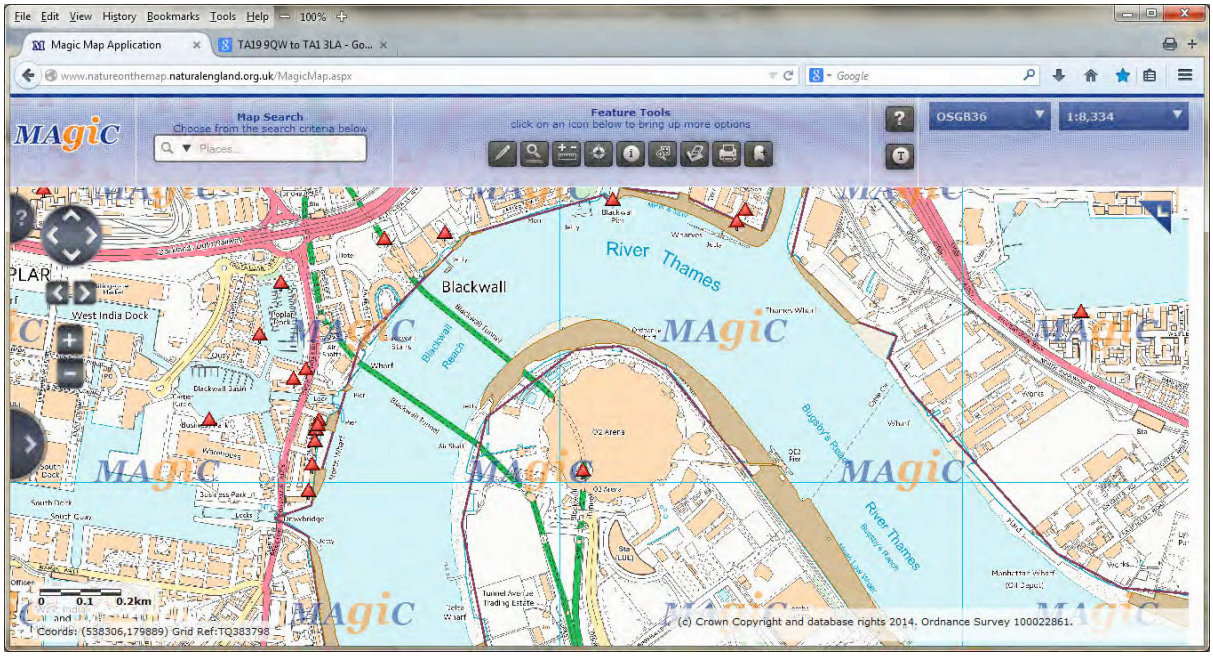

Figure 24: Greenwich Peninsula - Source: Magic.gov.uk

Greenwich Peninsula does not appear to have any World Heritage Sites, Scheduled Monuments or Listed Buildings compared to other stretches of the River Thames.

As with Greenwich Pier, the River Thames and tidal tributaries are **Sites of Metropolitan Importance** for Nature Conservation. Greenwich has the longest river frontage of any borough in London and will encourage good practice 'As part of their **planning permission** the developers have developed a landscape master plan, which they linked to their **ecological master plan**. The Council will encourage any new developments bordering the tidal Thames to follow this example'- Greenwich BAP 2010[21].

Depending on the final siting of the Lido it may or may not fall within the designated **Mudflat BAP Priority Habitat** but considering the planning policy of the local borough council it would be prudent to give due diligence to any proposals on or adjacent to the Thames.

The north shore opposite the proposed site is subject to **Objective 2** funding.

Sports Strategy
See Greenwich Pier (section 7.4) above.

Opportunities as a visitor destination
In addition to the information contained in section 7.4, the peninsula is a busy night time destination for arena concerts and unique events. Historically the area has struggled to attract daytime visitors with lower than anticipated visitor numbers for the British Music Experience, in particular. To counteract this AEG is developing its offer as a daytime destination, with a new retail area and activity to increase connections between with river walkway and the interior of the dome.

The area is subject to significant development including significant residential accommodation, and two further hotels as part of the Night Dragon Development. The ownership of Thames Clippers by AEG will further increase opportunities for swimming packages including river transport.

Stakeholder Support
Artichoke met with Alistair Wood, Senior Vice President, Real Estate and Development to discuss the potential of locating the Lido in the AEG owned sections of the peninsula. There was a high level of interest expressed from AEG, who wish to be involved in future discussions. AEG indicated that it could help with capital costs through brokering naming rights for the new facility, together with potential investment from developers.

Engineering / PLA Advice
In discussions with AEG, the preferred location is alongside a currently disused pier. Given the depth of the water in this location, it would be necessary to dredge the area. We have submitted the sketch below to the PLA and area awaiting their detailed comments.

[21] http://www.royalgreenwich.gov.uk/downloads/file/539/biodiversity_action_plan_mar_2010

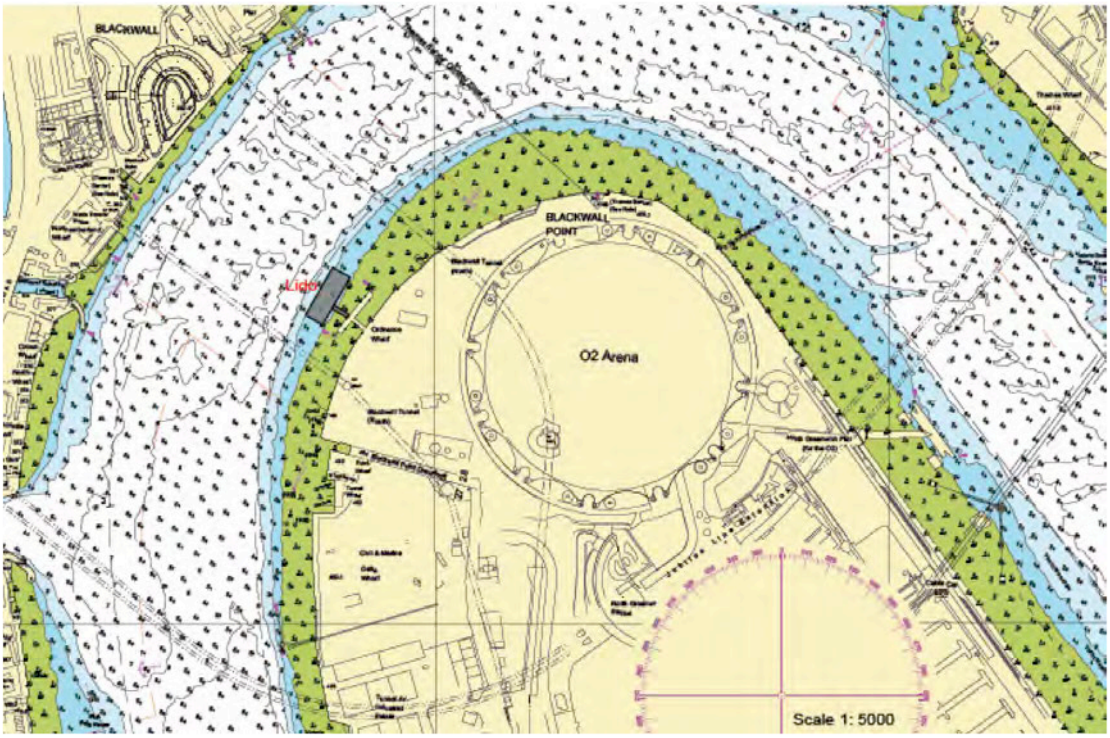

Figure 25: Greenwich Peninsula location

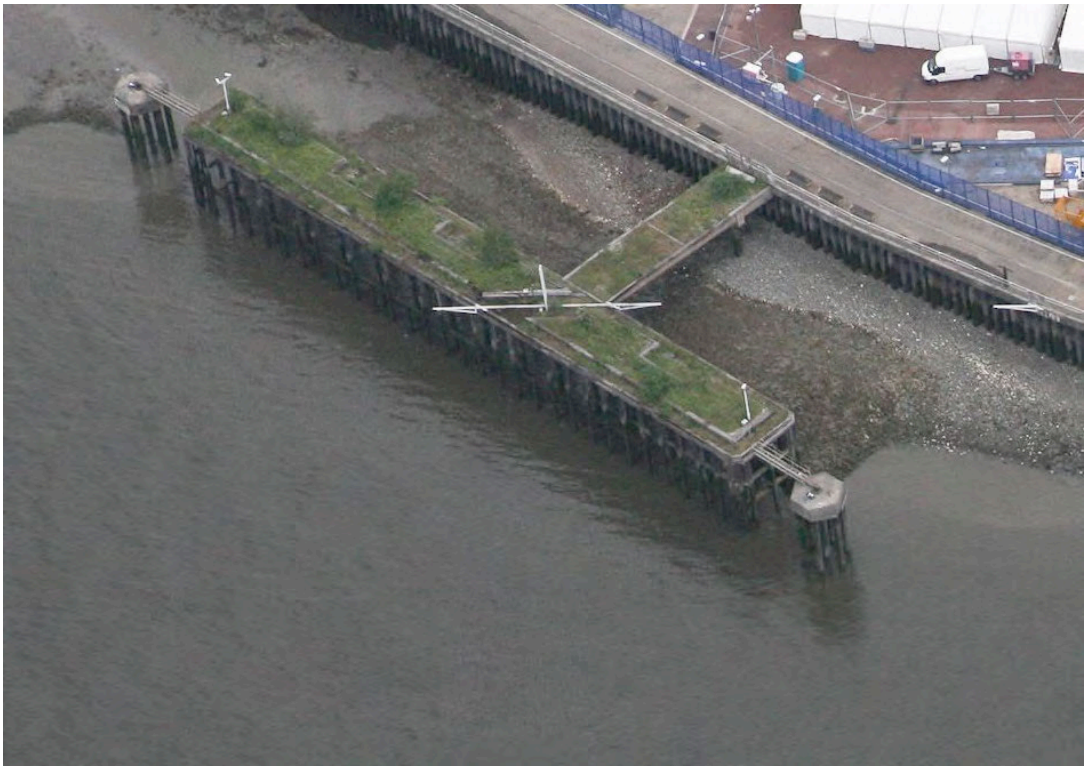
Figure 26: Designated pier for redevelopment

Pros	Cons
• Strong support from stakeholders including AEG	• Outside central London
• Likely to be good case for funding and sponsorship	• Previous difficulty in attracting day time visitors to the area
• Excellent integration with Clipper service, owned by AEG	• Some dredging required.
• Links with development plans for the land next to the pier	• Currently no PLA endorsement
• Potential to redeveloped pier into the design	
• Support from Greenwich Borough Council	
• Opportunity Area in Mayor's London Plan	

7.6 ROYAL VICTORIA DOCK

Borough: Newham
Postcode: E16 1GB

Context

"London's Royal Docks, historically the throbbing arteries of UK trade and commerce, present a huge opportunity which I'm determined to capitalise on. My vision is to develop a world class international business district, creating local jobs and growth and strengthening trade between east and west."

Mayor of London Boris Johnson

The Royal Docks, including the water and parts of the Dock wall are managed and maintained by the Royal Docks Management Authority Limited (RoDMA). RoDMA was an organisation created by the London Dockland Development Corporation approximately 18 years ago and has the responsibility for the water and dock assets under a 225 year lease. RoDMA has developed a masterplan for the water in conjunction with the GLA and is a partner on a number of projects including the Royal Victoria Dock and Albert Island.

The arrival of the Emirates Air Line cable car and Siemens Crystal building offer a new focus for Royal Victoria Dock, further highlighted by the plans to create a residential floating village on the western end of the dock incorporating a range of bars, restaurants and leisure spaces.

Figure 27: Emirates Airline - Source: www.homesandproperty.co.uk

The area around the Royal Docks has a relatively small residential population, with plans for up to 10,000 homes, but the dockside and its future developments will serve other neighbouring areas including Beckton and Canning town to the north and Greenwhich and Woolwich to the south. In order to increase visitors to the Docks, Newham recently developed a summertime beach facility which proved very popular with local people.

Transport Links

Underground and rail stations:
Canning Town (Jubilee Line and DLR)
North Greenwich (Jubilee Line)
Royal Victoria (DLR)
Custom House (DLR)

Buses: Local buses from Royal Victoria DLR station

Emirates Air Line
Emirates Royal Docks - Greenwich Peninsular

Car Parking
The Royal Victoria Car Park offers 750 parking spaces a five minute walk away and is located behind the Crowne Plaza Hotel on Western Gateway.

By Air
The Royal Dock is within five minutes by taxi of London City Airport which serves over 30 destinations across the UK, Europe and the USA, with connections to the rest of the world through major European hubs.

Environmental Considerations

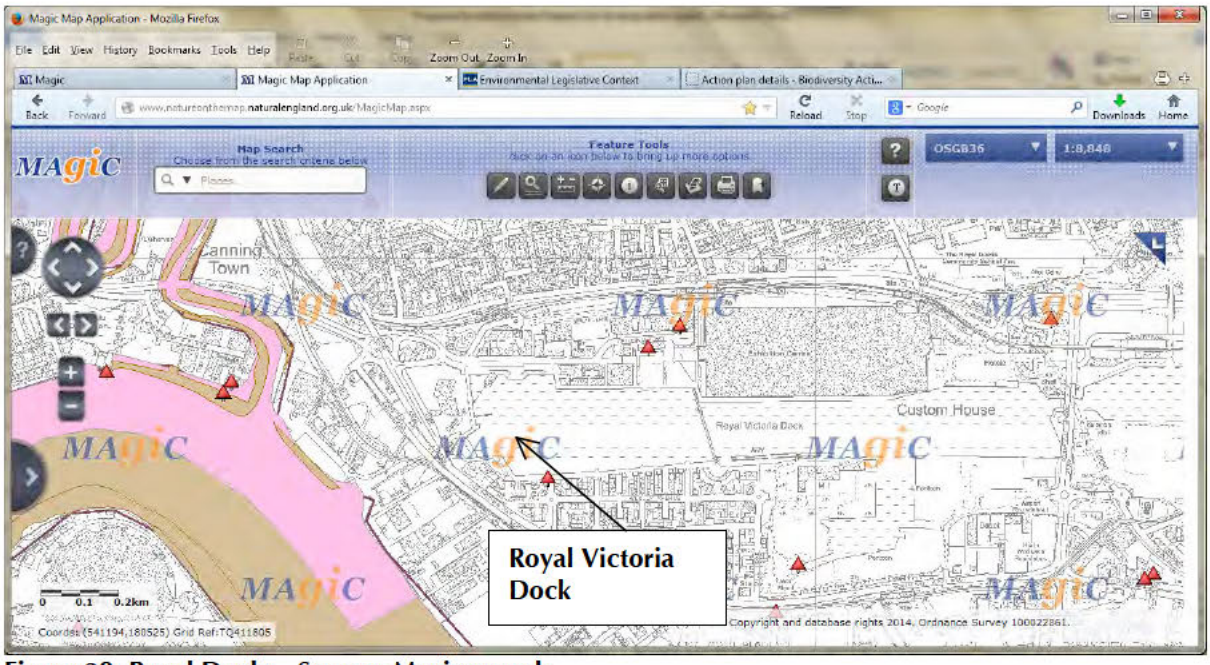

Figure 28: Royal Docks - Source: Magic.gov.uk

The Royal Victoria Dock is permanently full with water so does not have either the foreshore environmental designations or substrates to consider.

However, the Stotherd and Pitt Cranes on the north and south sides of the dock are **listed buildings** and any proposal should take this into consideration.

This area of London is subject to **Objective 2** funding.

Sports Strategy

Newham has the country's highest birth rate and the population around the Royal Docks is particularly young. Levels of sports participation as indicated in the following map are relatively low and the inclusion of a Lido in this area could help to increase activity levels.

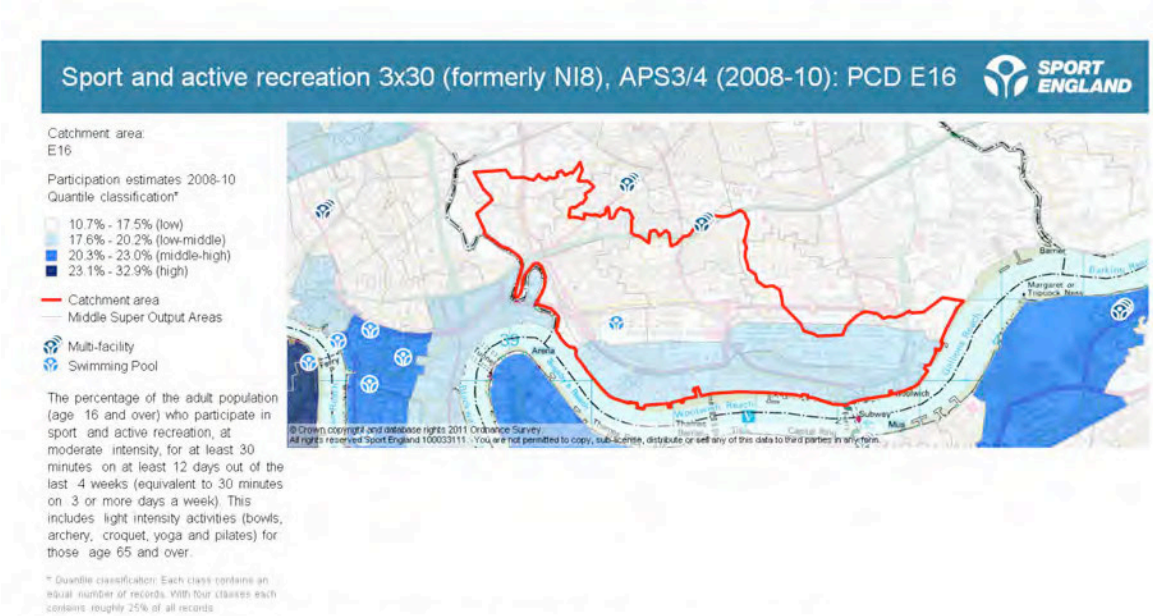

Figure 29: Newham - Source: Sport England

The current level of pool provision in Newham as identified in the GLA Sport England research in 2010, demonstrated a balance between supply and need. However half of all swimming pool provision in Newham is within the Aquatic Centre, so unbalances the findings. Taking this facility out of the equation, Newham is in need of more pool provision, as indicated by the map in section 6, page 34.

Opportunities as a visitor destination

According to London and Partners, Royal Docks is currently perceived by international tourists as being outside London, although this is changing and perceptions will further alter with the increased visitors to the former Olympic sites in the Queen Elizabeth Park and the interest around the planned floating village. The site is well served by hotels with the development of around ten hotels over the last twelve years. The Mayor's priorities for the Royal Docks include developing visitor attractions that will create a thriving visitor and tourist economy. The addition of the Emirates cable care and the arrival of Crossrail will continue to increase visitors to the area.

Royal Victoria Docks has a growing reputation for water based or inspired activities. The summertime beach will open for its second season in 2014, offering the opportunity for visitors and locals to sunbathe and play on the sand. Alongside it Wakeup Docklands, offers wakeboarding and paddle-boarding sessions. The users of the beach and Wakeup Docklands are mainly local people or London residents, the Lido could complement the current offer in providing an attraction to draw international tourists to this unique location.

Given the current low levels of independent international tourism to the docks, locating the Lido in the Royal Docks would require an initial business model which relied on a largely local and London visitor market. This market could be expanded with packages offering river transport, cable car rides and food and beverage.

Stakeholder Support
Artichoke held a joint meeting with members of the Newham Regeneration team together with planners from the GLA to discuss the opportunities provided by incorporating the Lido facility within the docks development. There was strong support for the facility at officer level, a meeting with the Head of Regeneration to further determine borough support is currently being sought. Subsequent meetings with Mike Luddy, Managing Director of RoDMA, identified a potential site for the Lido outside the Crowne Plaza hotel and indicated a high level of support for the proposal either independently or integrated within the future Floating Village development. As the decision around the developer for the floating village is not expected until June, consultation with the developer is not possible until stage 2.

Engineering
Locating the vessel in the Royal Docks significantly simplifies both access and mooring. The proposed location in the docks is shown below:

Figure 30: Royal Dock location

Mooring in a dock would be significantly easier, as the vessel would be connected directly to the quay using conventional mooring lines.

The Royal Docks is non tidal, although the water level fluctuates by up to 800mm.

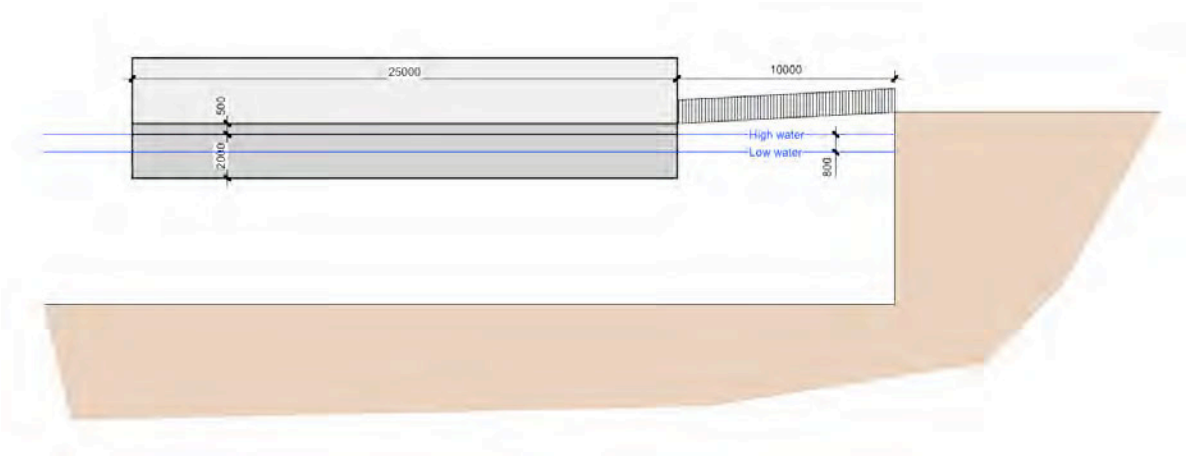

Figure 31: Access link to Lido in the Royal Docks

It is accessed via a lock and a relatively narrow passage of water, which limits the size of the vessel to 200m long by 25m wide. The docks are a minimum of 8m deep, so a vessel with a deeper draft could also be used in this location.

PLA Advice
The Royal Docks sits outside the jurisdiction of the PLA.

Fundraising
The area has been subject to many major developments over recent years, with significant additional developments in the pipeline including an expansion of City Airport. It is possible that the Lido could be part financed by monies coming from Section 106 agreements linked to past or future development contracts.

Pros	Cons
• Technically feasible site with adequate depth, calm water and no need for piling	• Not on the River Thames itself
• Support from stakeholders in particular RoDMA	• Outside Central London and not currently a tourist destination
• Opportunity to integrate into floating village	• Likely lower profile given further distance from Central London
• Fewer permissions required	• Lack of iconic London views or surrounding context
• Available land adjacent to facility	
• Potential to add to local pool provision	
• Potential capital funds linked to development	
• Would have profile as only international tourist attraction in the docks	

Summary of the environmental, legal and historic considerations relating to each site

Table 1: Environmental & Legal compliance required – Y (Yes)/N (No)

No.	Locations	Statutory Harbour Authority Act 1968 Port of London	Mud BAP Habitat	Sites of Importance for Nature-SINC- non statutory	Marine Management Organisation plan areas- the intertidal river	Proposed Marine Conservation Zone
1	Battersea	Y	Y	Y	Y	Y
2	Gabriel's Wharf	Y	Y	N	Y	Y
3	Pool of London	Y	Y	Y	Y	Y
4	Greenwich Pier	Y	Y	Y	Y	Y
5	Greenwich Peninsula	Y	TBC	Y	Y	Y
6	Royal Victoria Dock	N	N	N	TBC	N

Table 2: Historical, Cultural & Economic compliance required – Y (Yes)/N (No)

No.	Locations	World Heritage Sites within 200m	Scheduled Ancient Monuments adjacent	Listed Buildings adjacent	Objective 2 funding
1	Battersea	N	N	Y	N
2	Gabriel's Wharf	N	N	Y	N
3	Pool of London	Y	Y	Y	N
4	Greenwich Pier	Y	Y	Y	N
5	Greenwich Peninsula	N	N	N	N
6	Royal Victoria Dock	N	N	Y	Y

8 MANAGEMENT MODELS

The following section sets out the management options for the Lido. It will be important to make a decision on the best model for the Lido as soon as possible to support both the fundraising and delivery process and to ensure that the right partners are in place. The earlier a leisure operator, for example, is engaged the more involved they can be in the process to ensure that all operational systems are in place in good time.

The range of potential structures for the future governance, management and operation of the Lido will depend in part on the site selected and the range of stakeholders involved in its creation and location. Given the unique nature of the Lido, and the cost involved in running a pool, it is likely that the Lido will occupy a market position which is primarily a visitor attraction but which can provide opportunities to enhance local swimming provision through programmed sessions and a pricing structure with discounts for local residents. Broadly speaking, in terms of ownership and governance, the Lido is likely to be owned and governed by either:

1. A private commercial company linked to a developer or other commercial enterprise, such as Merlin Entertainments or a commercial operator in the model of the London Eye or other commercial attractions;

2. A charitable trust, formed for the development and ongoing management of the Lido;

3. Direct ownership by GLA, local borough or other public body with either direct or contracted management.

The opportunities that would accrue from the varied approaches and the disadvantages of the three options can be summarised as follows:

8.1 Private Commercial Company

Opportunities

- Access to private sources of investment for creation, to support future developments and to underpin the management of a new facility;
- Links to a commercial operator will assist the Lido's ability to position itself strongly from the outset amongst the current London visitor market;
- Able to link facility directly to commercial opportunities offered by the context of the location;
- The interrelationship between the new facility and the development in which it sits will drive future integration of surrounding commercial infrastructure, including the retail and food and beverage offer;
- Commercial astuteness will ensure the ongoing success of the facility and high levels of visitor satisfaction.

Barriers to success

- Drive to make commercial success may drive local community out of the plans through higher pricing or programming which does not benefit community use;
- Links to existing attractions may weaken the uniqueness of the Lido and its cultural potential;
- Commercial targets with low operating capacity may mean that the Lido is pushed too hard in attempt to recoup investment and secure profit.

Commercial Management case study: Edf Energy London Eye
Whilst there are significant differences between the Eye and the management of the proposed Lido, there are useful comparisons to be made in terms of positioning the Lido as a contemporary waterside tourist attraction, the likely opening hours, significant maintenance required, the relationship between the attraction and landowners and the continuous timed session operation. An examination of the Eye's operating model gives an indication of the level of commercial potential offered by the Lido, although it should be recognised that the smaller capacity and the extended time-scale required for swimming and changing will mean that the maximum daily visitor numbers are likely to be around one tenth of those of the Eye.

Originally owned by British Airways and Marks Barfield (the lead architects) the London Eye is now owned wholly by Merlin Entertainments and currently under a 3 year sponsorship deal with EDF energy. It is located in Jubilee Gardens under 25 year lease agreement with South Bank Centre who are the landowners

Opened in 2000 and originally set up as a temporary addition to London's cultural attractions, it has become the most popular paid tourist attraction in London. It welcomes 10,000 visitors per day, in a ride with 32 capsules each with 25 person capacity. It is open 364 days of the year, summer 10.00 -21.30, 10.00 -20.00 in winter.

2014 ticket prices start at £19.95 for a standard 30 minute ride in capsule plus 4D cinema experience. Special experience tickets cost up to £48 for 2 rotations with champagne tasting.

It employs over 300 people in three broad areas:
- Commercial Operations
- Ride
- Hospitality

Merlin Entertainment invests significantly in the development and maintenance of the attraction and training and development of staff. The Eye is able to draw on the significant experience of a company skilled at delivering an excellent customer experience, enabling them to successfully up-sell the experience of the Eye to further increase revenue.

8.2 Charitable Trust

Opportunities
- An opportunity to attract public funding from other sources.
- The opportunity to get discretionary rate relief.
- A closer relationship with the local community.
- A clear arms length relationship between the GLA and the Lido.
- Freedom to integrate closely with existing socially based strategies such as health and wellbeing and sports strategies.
- Independence and flexibility to diversify.

Barriers to success
- Depending on the location selected, a trust may not be able to survive in a competitive visitor and leisure market.
- Likely to be more reliant on subsidy.

- Less financially secure and harder to raise capital.
- Lido may suffer from poor positioning in relation to other commercial ventures in the locality.
- Timescale to establish new trust and recruit board if none already in existence.

Charitable Trust case study: Somerset House Trust
Somerset House as a Trust provides a useful governance model as one of London's major art and cultural destinations and as organiser/manager of one of London's most famous and impressive ice rinks.

Somerset House Trust was established to conserve its beautiful 18th century surroundings and to develop the open spaces around it for public use. In addition to a rich programme of contemporary art and design exhibitions, literature, film, music and fashion events, it also hosts a number of outdoor events in its central courtyard area.

The Edmond J. Safra Fountain Court, which is set in the very heart of the buildings that make up Somerset House and which connects to the Strand to the north and the Victoria Embankment to the south, was a development priority for the Trust and is used very successfully throughout the year to host concerts, film screenings and the ice rink during the Christmas and New Year period.

Somerset House Ice Rink is a significant undertaking for the Trust. As London's oldest and most prestigious ice rink, the Trust works hard to uphold its established 14 year reputation. The Trust does this by:

- working with the same high quality trusted ice contractor every year;
- having constant office based employees who are responsible for the planning and delivery of the rink as a key part of their responsibilities;
- recruiting an ice supervisor and duty manager who are managed in-house;
- recruiting and training all 80 ice rink employees in-house;
- franchising the catering arrangements out to their trusted caterer;
- running 5 days of open sessions before the ice rink opens to the public to test the experience and to ensure that the ice and all related facilities are operating effectively;
- actively seeking sponsorship;
- enhancing the skating offer by offering specially programmed sessions – exclusive sponsor events, club nights, skating sessions for children, a skate school and early and late openings;
- retaining a core number of hours daily for Londoners and tourists;
- providing a food and drink offer onsite;
- positioning all facilities – toilets, changing cubicles etc. – in close proximity to the ice rink to create a complete experience for visitors.

The ice rink attracts 105,000 visitors on average over the three month period that it is in operation with up to 200 people per hour able to skate during the public open sessions. Operating the ice rink in-house is beneficial as it enables the Trust to retain control over the quality of delivery and to invest in staff training and management but at the same time, places pressure on the core team to ensure its success on top of managing other Somerset House activities. Without sponsorship the ice rink just breaks even on ticket sales so catering, special events, ticket offers, links into visitor offers for tourists in addition to actively seeking principal sponsors are crucial to its success and to ensuring it stands out in a very competitive market as one of many ice rinks now available during the winter season.

8.3 Direct Ownership by public body with contracted leisure services

Opportunities

- Initial speed of decision making and coherence of approach.
- Ability to integrate facility directly into local or capital-wide strategy.
- Access to a variety of public funds.
- Joined up approach and co-ordination with existing London infrastructure.
- Joined up approach with other local initiatives to increase benefit to local residents.
- Value for money increased with contracted management

Barriers to success

- In-house management may not be cost effective.
- Lack of specialist knowledge.
- Likely to need to employ separate trust or commercial management to run the facility.
- Integration into other borough facilities may lose special nature of new attraction.
- Timescale for budgets leading to short term investment decisions.
- Susceptible to budget cuts.

Case Study: Greenwich Leisure Ltd. (GLL)

In the majority of cases in London where ownership of a pool comes under a local authority, the operation and management of the facility is contracted out to a leisure provider. One of the main providers in London is GLL, a charitable social enterprise that was set up by Greenwich Council to find new ways of running leisure centres for the community. GLL manages 146 facilities - just over half of all pool facilities across London - making them the largest pool operator providing access to quality community leisure and fitness facilities at affordable prices across the capital.

Operating as a charitable social enterprise means that any profit is invested back into running the facilities, training staff and in subsidising classes/the price of admission.

Excluding library facilities, which form part of their portfolio, they have a reported 40 million visitors per year across all facilities, 73,000 of which are learning to swim. London Fields Lido alone attracts 100,000 users a year.

When GLL takes over the contract for a pool the company focus on meeting the needs of the local community as far as possible. Swimming schedules therefore vary from pool to pool depending, for example, on other existing provision across the borough, community demographics, income levels and access to swimming classes for local schoolchildren. For example, women-only sessions are offered where communities have a large Muslim population.

GLL manages a particular facility depending on the nature of the contract they have with the local authority. In some cases the client (LA) retains all maintenance, cleaning and overheads such as utilities, with GLL contracted to provide leisure services only. In other cases they are contracted to either manage all elements; to manage a selection of the above; or in some instances, to pay the Local Authority a fee to run the facility on their behalf.

The political balance in a given area can also impact on the nature of the services that GLL provides. Priorities can be very different when it comes to the number of facilities

available, the level of spending and therefore commitment to leisure provision in a borough.

Economy of scale also means that a local authority can benefit from working with GLL in other ways. Running 146 facilities means that the company's operational efficiency is greater, leading to fewer contracts and lower costs across wider services, such as cleaning and maintenance, all of which contributes to greater investment in the pool itself.

Experience shows that outdoor pools in general do not make a profit and can struggle to break even on ticket sales alone. Where this is the case a wider portfolio of services/GLL-managed pools can offset the costs of the facility across a borough and through services such as a good quality gym facility or café/bar where income is more easily guaranteed.

Case Study: Tooting Bec Lido
The Tooting Bec Lido provides an interesting and perhaps unique example of a mixed management model. A three way contractual relationship exists between Wandsworth Council, Places for People Leisure (www.placesforpeopleleisure.org) and the South London Swimming Club (SLSC), to manage the lido.

Wandsworth Council owns the land with Tooting Common and manages maintenance contracts. Places for People Leisure manage leisure operations during the summer season (May to September) and SLSC, a local members' club operating out of the Lido, looks after the Lido out of season (SLSC pays £60k a year out of membership fees to Wandsworth Council for exclusive use from September to May). The group's membership fee has also been invested into refurbishment works, which will ensure its longevity for years to come.

This clever contractual arrangement ensures that the Lido is occupied at all times throughout the year and earns Wandsworth Council income to maintain the facility and keep costs down.

9 LEARNING FROM OTHER LIDOS

See Audit of Floating Swimming Pools (Appendix VII)

The selection featured below is representative of some of the best existing European lidos and designs in the delivery phase, both internationally and in London. Each case study provides an interesting example of design, commissioning process, engineering considerations and choice of location but also the partnerships that enabled them to be realised, including how they were funded, how they operate on a day-to-day basis, facilities and alternative uses. Key facts have been drawn from each example with a final summary of points which could usefully inform decision making about the London Lido.

9.1 HISTORIC

Charing Cross Swimming Baths, London (1875)

Designer/Architect: Floating Swimming Baths Company Ltd.
Source: Institution of Mechanical Engineers

Figure 32: Charing Cross Baths - Source: Illustrated London News 1875

Overview

In 1875 the Floating Swimming Baths Company Ltd. unveiled its first floating swimming pool in the River Thames. The floating iron glass and wood swimming baths adjoined the Victoria Embankment next to Hungerford Bridge and was designed to draw its water from the Thames, which it also cleaned and heated. A set of minutes, taken from the Institution of Mechanical Engineers proceedings in 1875, records the many challenges the engineers encountered and tests they carried out to overcome them, most of which are not dissimilar to the challenges faced by a modern day lido designed to withstand the tidal forces of the Thames and provide a safe environment for swimming.

Key facts

- The swimming bath was intended to be the first in a series of floating baths along the River Thames.
- The swimming pool drew its water from the Thames.
- Thames Iron and Shipbuilding Company constructed the hull.
- Two arched girders connecting the box girders that formed the hull provided raised bridges and diving platforms.
- The structure included fountains for supplying filtered water to the pool. At low tide these recycled the water to avoid introducing dirty water from the riverbed.
- The baths featured a restaurant, changing cubicles and pay office.
- Cocks and filters took the water directly from the River, cleaning away mud and other matter but retaining its natural salts.[22]
- The bath when full contained 150,000 gallons of water and could be filled in 6 hours.
- During winter months the water was frozen over to create a skating rink and perennial attraction for the Thames.[23]
- The floating swimming baths/glaciarium was scrapped in 1885 after a failed attempt to sell the baths.
- The swimming baths were bolted to the embankment wall via cast iron guides.
- The water and dressing rooms were heated using an apparatus that was itself heated from the machinery room. It was only heated from May – October.

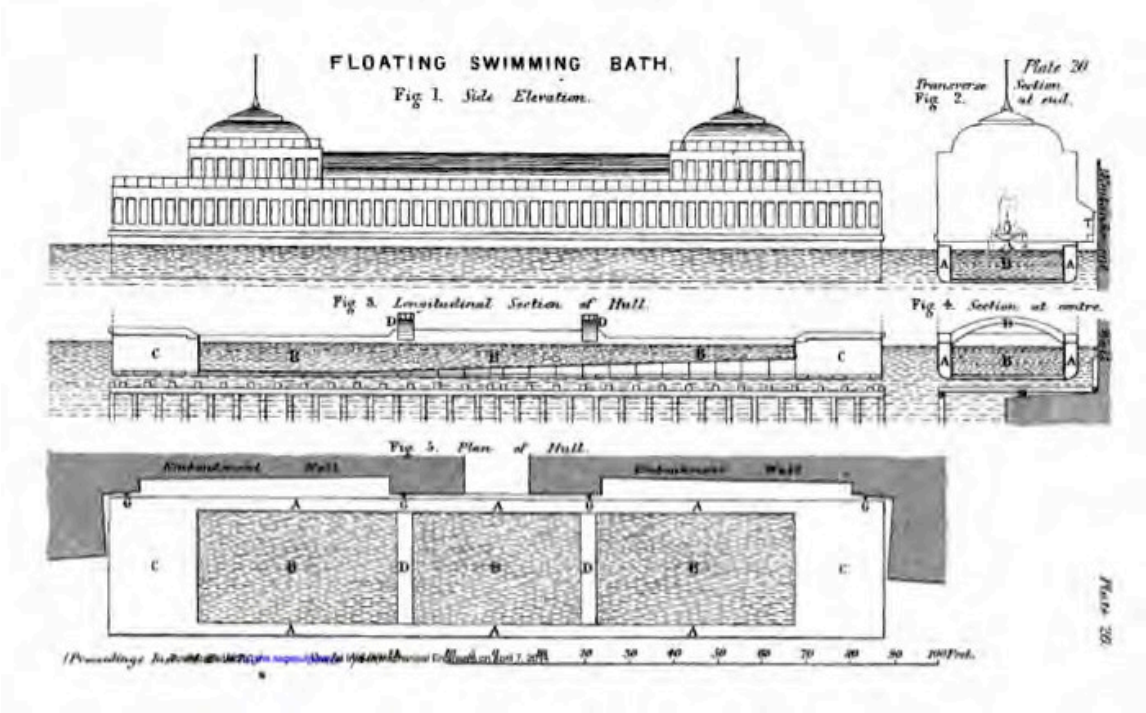

Figure 33: Floating Swimming Bath elevations - Source: Institution of Mechanical Engineers

[22] *Illustrated London News*, 17 July 1875
[23] *The Times*, 20 December 1876

9.2 CONTEMPORARY

Badeschiff Berlin, Germany (2004)

Artist/Architects: Susanne Lorenz; AMP Architects; Gil Wilk
Website: www.arena-berlin.de/portfolio/badeschiff/

Figure 34: Badeschiff Berlin - Source: www.arena-berlin.de/portfolio/badeschiff/

Overview
Badeschiff Berlin situated in the East Harbour of the River Spree, constructed from a 30 year old river cargo container, was inspired by the history of Berlin's river which, as early as 1906, housed eleven swimming areas for men and women. Berlin artist Lorenz was interested in reconnecting Berliners with an aspect of their river which has been lost over the years due to high levels of pollution, making it no longer possible for people to swim in the Spree.[24]

The project formed part of a larger exhibition sponsored by the City Art Project Association to examine connections people have with the urban environment. Event production company Arena Berlin manage the pool as part of their wider portfolio of facilities, which includes a theatre and nightclubs close by, and were responsible for finding 80 per cent of the costs which enabled Badeschiff's to be built.[25]

At the entrance to the pool there is a bar, covered dance pavilion with DJs, wooden decks with sun loungers and hammocks, table tennis and football facilities.

[24] http://www.dw.de/a-pool-with-a-view/a-1302942-1
[25] ibid

Key Facts

- The vessel is positioned in a non-tidal river.
- The fresh water is slightly chlorinated and heated to 24 degrees Celsius.
- The flexibly anchored wooden access bridge doubles up as a sun terrace.
- The pool was intended to be mobile, each year anchoring in a different place, but a destination was chosen as close as possible to its operating company which has provided the Badeschiff with a permanent home.
- The toilets are located on land inside two converted shipping containers, which sit one on top of the other.

Learning for London

The pool was built as a temporary installation for 5 years but has proved so popular that it has now become a permanent feature.

The pool was designed to sit as close to the river level as possible to blend the two water sources together to create the visual impression of swimming in the Spree.

During the winter the pool and decking areas are covered over to create a winter spa with saunas, a covered heated pool and bar area.

Badboot Antwerp, Belgium (2012)

Commissioner: Municipality of Antwerp
Designers/Architects: SCULP(IT) Architecten
Website: www.badboot.be

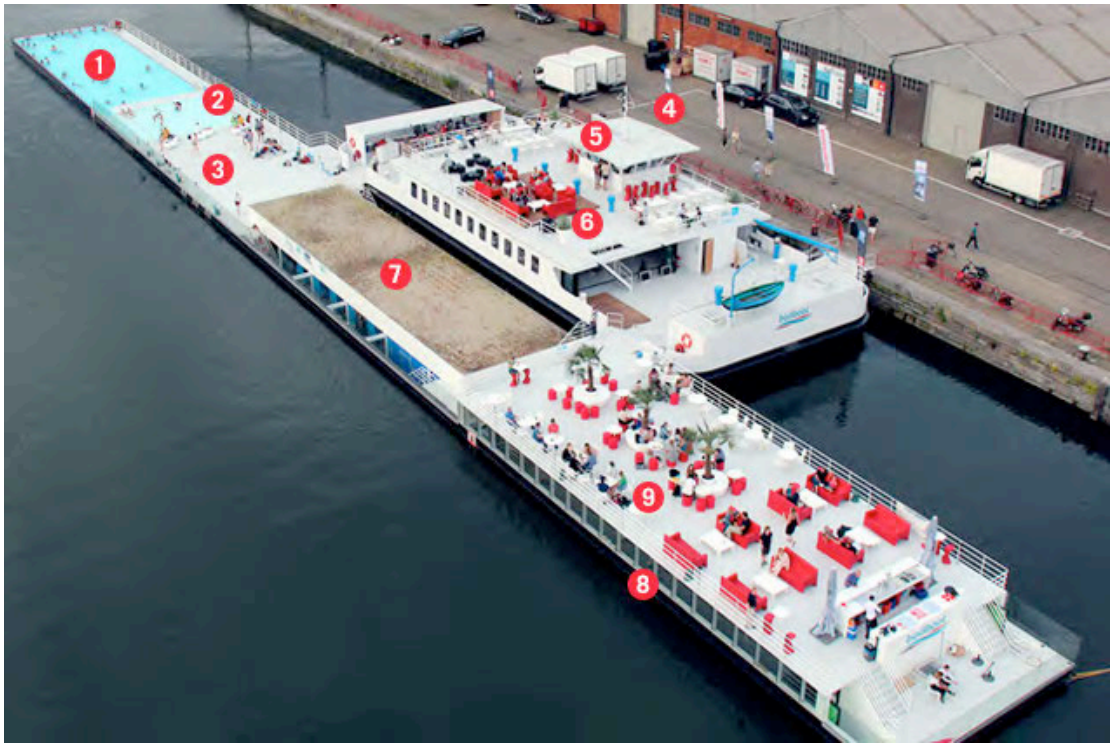

Figure 35: Badboot Antwerp - Source: www.badboot.be/#pagina/grondplan/

Overview
Badboot Antwerp is one of Europe's largest open-air floating swimming pools. Antwerp had only two outdoor public swimming facilities and so a competition was launched by the Municipality of Antwerp to provide a new outdoor facility for the city. The entire vessel can accommodate up to 600 people across all facilities, which include a 40m pool, two events venues, a restaurant, cocktail bar, decks and terraces.

Intended to be in situ for ten years, there is now interest, subject to review, in it being a permanent facility. Badboot was designed to be mobile so that it can be easily moved/relocated.

Construction Timeline
- February: construction began.
- April: completion of the first 60 metres of the boat.
- June: completion of the second section followed by welding the two sections together and launch into the water.
- July: laying the floors and fitting out the interior.
- August: arrival of the Badboot in the Port of Antwerp, ready for the opening.[26]

Key Facts
- The river is a constant depth of 13.1m with only a small amount of variation, ideal for large ships and floating structures.
- A large section (connecting the shore to the longer strip) was adapted from a 1960s ferry.
- A built-in reed bed water purification system cleans the water (point 7 on the image) and thermal insulation in a buffering hold under the pool helps to prevent evaporation and to keep the water warm when it's not in use saving both water and energy.
- The entire length of the boat is 120m making it one of the biggest outdoor leisure facilities in the world[27].
- The vessel is constructed from 100% Antwerp steel.
- The only condition of the commission was the size of the vessel and the need to incorporate a swimming pool. The architects had creative freedom with all other elements.[28]
- Leading Belgian leisure pool specialists acted as consultants throughout the construction process.

Learning for London
The pool is covered over and operates as an ice rink during the winter season.

The financing of this million-euro project was managed by a group of private investors.

With the funds committed from the outset, construction of the vessel took 6 months from start to finish.

[26]http://www.bustler.net/index.php/article/badboot_lido_coming_to_antwerp_this_summer/
[27] http://www.designrulz.com/outdoor-design/2012/05/badboot-by-sculpit-foating-openair-swimming-pool-in-antwerp-belgium/
[28] http://www.bustler.net/index.php/article/badboot_lido_coming_to_antwerp_this_summer/

9.3 IN DEVELOPMENT

+POOL New York, USA (2016)

Founders: Playlab inc. & Family New York
Engineers: Arup
Website: www.pluspool.org

Figure 36: +POOL New York - Source: www.pluspool.org

Overview
+POOL is an initiative to build a floating, water-filtering pool for New York City. Not yet made the pool is intended to be an icon for the city and originated from a desire to clean up the city's rivers. The unique design will filter the river water leaving clean, safe, and swimmable river water. It is designed as four pools to accommodate a wide variety of users, incorporating a laps pool, children's pool, lounge pool and sports pool. Each of the four pools is intended to operate independently, combining to form an Olympic sized swimming pool when connected together. The hope is that the pool will filter over 500,000 gallons of river water daily, making a measurable contribution towards cleaning the city's waterways.

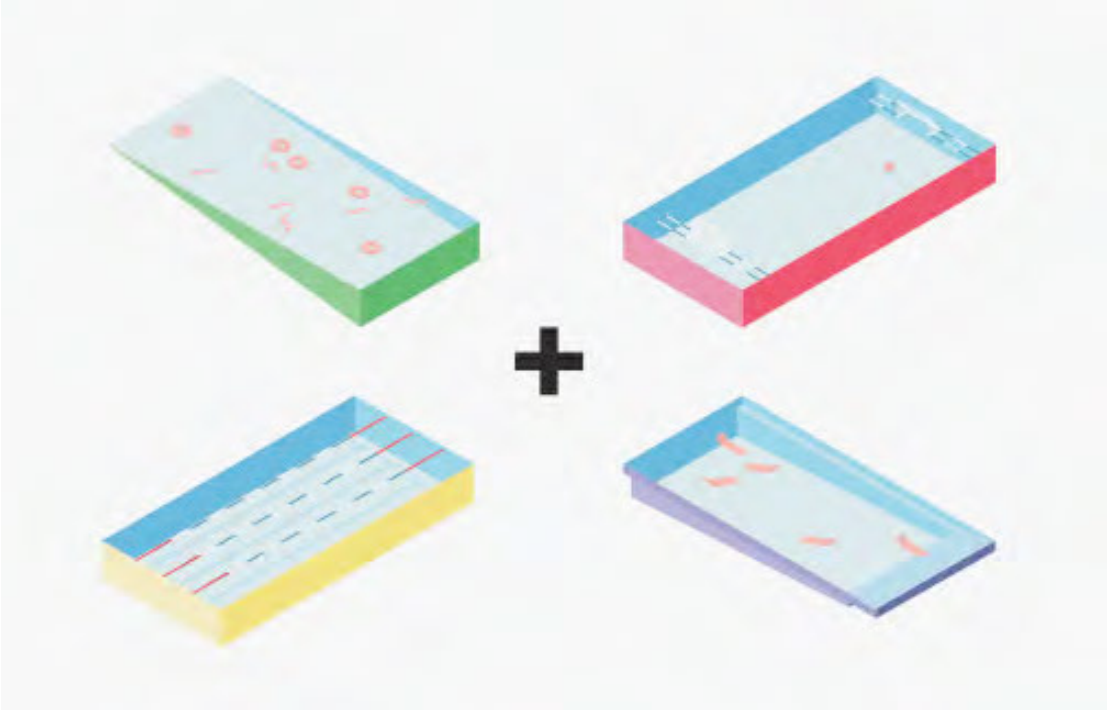

Figure 37: +POOL New York - Source: www.pluspool.org

Timeline

2010 – idea was formed and supported pro-bono by Arup Engineering
2011 - successful kickstarter fundraising campaign was launched raising $41k
2012 - first water quality tests were carried out using 3 layers of filtration
2013/14 – test lab is now in place in the East River to test the filtration systems
2014 – partnership established with Google Drive to develop a live app that will enable swimmers to check water quality on a daily basis before swimming
2014 – testing, fundraising and securing permissions continues
2015 – fabrication of +POOL
2016 - +POOL opens to the public

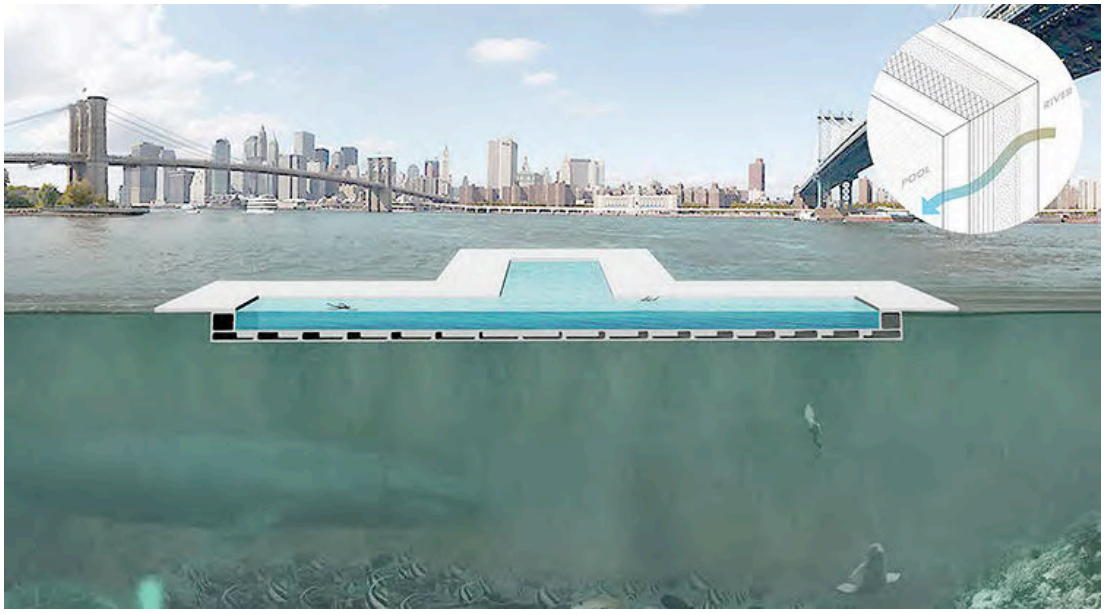

Figure 38: +POOL New York - Source: www.pluspool.org

Key Facts

- Filtration system for filtering river water for safe swimming
- Free, online system developed with Google for monitoring water quality and safety.
- Cape Town, South Africa and Sydney, Australia have approached +POOL to deliver water-filtering facilities for their cities post 2016.
- Built to be a permanent facility that benefits/improves the environment
- Unique fundraising ideas. To date almost $350,000 has been raised for the project through the sale of named sponsored tiles which will decorate the pool once built, allowing everyone to own a small part of the final pool.
- A successful Kickstarter campaign not only raised $41,000 in six days but generated overwhelming evidence that people wanted to see the project realised and in-kind support from organisations to get the idea off the ground all of which has contributed significantly to advocacy, profile and enabled them to pay for the first water filtration tests.
- The 4-pool design was a direct response to community need and demographics – creating an offer for the widest possible audience with facilities catering to all needs and abilities.
- They will charge $4 to swim to ensure the pool is accessible and affordable to as many people as possible
- They are working with naval architects to design a hydraulic system that allows for the rise and fall of the tide (8-12ft), storm surges and passing river traffic.
- Capital investment is currently being sought for the project.
- The founders are talking to Asphalt Green about managing leisure operations once complete. The founders would not be involved in the day-to-day running of the facility but would sit on the board to continue to be involved in decision-making.
- The pool will not be heated.
- All pool infrastructure and amenities (back office systems, changing rooms, showers, toilets, café/restaurant etc.) will be located on land and housed in a specially designed building.

Learning for London

Projected delivery costs: $15 million.

+POOL will be set up as a not-for-profit organisation to ensure it has a recognised status for fundraising, project management and legacy.

State supporters were sought early in the process to raise profile and support advocacy.

All financial planning is based on the pool operating during the summer season (180 days every year). Out of season they are exploring making the pool available for private hires, weddings and filming.

In addition to the 3 founding partners, 9 engineers and architects, supported by a further 10 advisors are working together to make the project a reality.

9.4 EXISTING PROPOSALS FOR LONDON

Thames Baths, London, UK (-2023)

Architects: Studio Octopi
Landscape Architects: Jonathan Cook
Engineering: Civic Engineers
Website: http://thamesbaths.com

Figure 39: Thames Baths, Studio Octopi - Source: http://thamesbaths.com

Overview
The Thames Baths Project came out of an open call for ideas as part of the 'London As It Could Be Now' programme, developed by The Architecture Foundation with Rogers Stirk Harbour + Partners and the Royal Academy of Arts.

Architects Studio Octopi were selected as one of five groups to work up new visions for the River Thames looking at ways of connecting Londoners to the river. The final proposals were exhibited at the Royal Academy of Arts in September 2013.

Studio Octopi's design, which is inspired by the cleanliness that it is hoped the supersewer will bring when it's completed in 2023 and by the popularity of wild swimming across the capital, proposes the reintroduction of swimming in the River Thames in as natural and safe an environment as possible.

The design, which features a 25m pool, plunge pool and a series of fixed "rock pools" in the river water, is currently focused on London's Blackfriars Bridge but the team is exploring the potential of alternative locations including King Edward Memorial Park Foreshore in Shadwell.

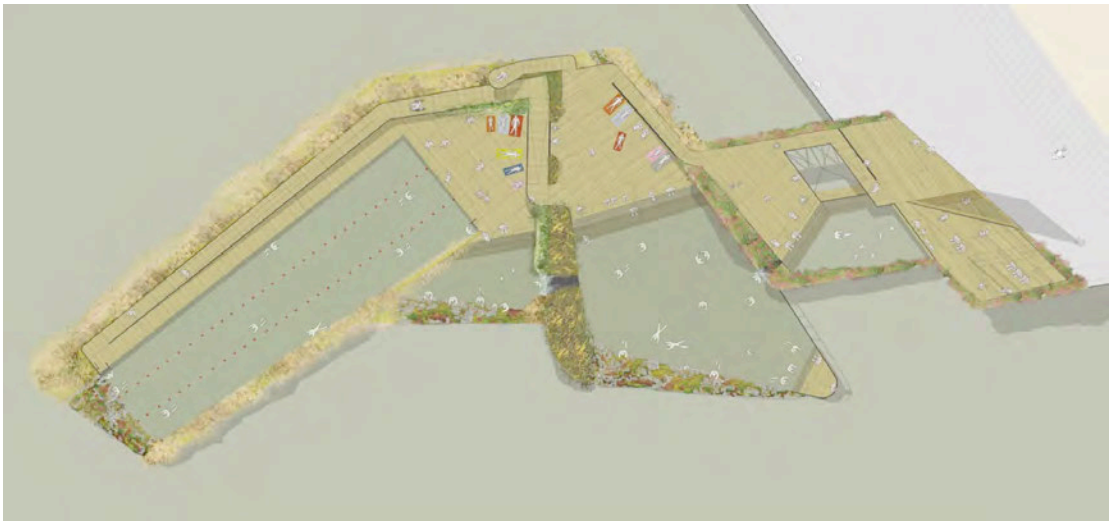

Figure 40: Thames Baths, Studio Octopi - Source: http://thamesbaths.com

Key Facts

- The pools are intended not only for swimmers but to encourage plant growth and provide a habitat for fish and birds.
- Swimmers will swim in natural, untreated river water within framed areas to stop them being buffeted by currents and passing river traffic.
- Small steel channels in the riverbed extending just below the high water mark will support the fixed pools.
- One adjoining structure, restrained using fixed posts, is intended to float so that it is free to rise and fall with the tide.
- The idea is supported by Tracey Emin and other arts and sports ambassadors.
- Studio Octopi is in the process of seeking capital investment for the project.
- Press coverage to date has been good with articles in the Guardian, Time Out, and Daily Mail amongst others, generating profile and interest in the project.
- London Design Festival is focusing on Urban Swimming as part of the 2014 festival.
- Studio Octopi is focusing on sites that line the route of the super sewer.
- The relationship between the river and riverbank is an important feature.

Learning for London

The Thames Baths is a viable alternative option for building a Lido for London although it should be noted that the concept, which was intended for after completion of the super sewer, does not currently include any plans for the filtration of the water. The idea draws on the growing popularity of wild swimming, has endorsement from a range of high profile individuals, is making progress with finding/securing investors, has support from the public with a good press profile and considers the environmental impact of building such a facility in the Thames.

Consultation with the PLA is still required and the delivery timeframe outlined, as it does rely on the ability to swim in clean river water, but it does provide an interesting alternative for drawing attention to the Thames as a safe place to swim and would be worth further exploration if the Mayor preferred to endorse an existing project.

10 OPERATING CONSIDERATIONS

This report is based on the viability and technical delivery of a floating Lido for the River Thames. Where possible, recommendations for operational use have been made but a full report will need to follow once a choice has been made about design and location. Suggestions are based on consultation with leisure providers but a comprehensive business plan would be required as part of Phase Two when facilities have been determined and a full business case can be made. The following section looks at the operating considerations required as part of the Phase Two brief as well as advice from London & Partners on how to position the Lido as a high-profile tourist destination.

10.1 Facilities required for operation

A pool in an urban environment cannot be isolated from the level of services and facilities required to operate the venue and deliver a safe and enjoyable experience for visitors and swimmers. Any facility needs to incorporate the following essential requirements:

10.1.1 Visitor Services:

- Disabled access
- Ticket purchase and entry control
- Changing rooms - these could be interior or exterior cubicles
- Toilets
- Showers for pre- and post-swimming
- Lockers for belongings and clothing
- First Aid area

10.1.2 Staff Management and Operation:

- Staff office and welfare area
- Lifeguard positions
- Storage for pool equipment and supplies
- Safe storage for chemicals
- Security

10.1.3 Other:

Additional facilities can be included to increase revenue, manage queues and wait times and enhance the visitor experience:

- Café or restaurant
- Bar area
- Family friendly extensions to the swimming experience, such as fountains or splash park
- Sun deck
- Games area
- Sales point for swimwear and merchandise
- Bike storage

The basic size of the pool is determined on one hand by the opportunities offered by the particular location in terms of channel width and depth, level of activity on the river, and on the other the size of vessel that can be safely accommodated into the existing river activity. In some locations it may be possible to position some of the operating and ancillary facilities on the adjoining riverbank, thus increasing the ratio of the swimming area within the given vessel. However, given the degree to which the built environment already reaches the riverside in the majority of central London and

the need to position facilities adjacent to the pool for comfort and safety of visitors, it is likely that the vessel would need to be largely self-contained.

10.2 River bank activity and restrictions

In envisaging the future operation of the pool, it is impossible to separate the proposed floating facility from the existing riverbank activity and the nature of the built environment on any given stretch of river. A visit to the London Lido will be influenced not only by the experience on the vessel but also access to the site whether by foot, cycle or public transport; the architecture of the surrounding buildings; proximity to heritage or iconic London views; and the atmosphere of the adjacent riverside activity.

In determining possible sites for the Lido, the location needs to offer not only the right river conditions but also a relationship between the floating facility and the shore-based activity that surrounds it. For example, a stretch of river with the appropriate depth and width of channel becomes less appealing and indeed logistically impossible if it is bordered by one of the main arterial routes through London.

10.3 Capacity and operating hours

As with any public facility the capacity of the pool is determined by its size and depth and the nature of the activity undertaken. The Sport England standard calculation for un-programmed recreational swimming advises a minimum of 3 sq m per person, which gives a typical 25m 8 lane pool a swimming capacity of 142 people at any one time. Even with the additional capacity from an added deck and leisure areas, it is likely that the pool would be limited to a relatively small number of swimmers at any one time and therefore a system of timed sessions would be needed to manage access to the facility and manage visitor expectations.

This system is comparable to the ice rink at Somerset House, which has an operating capacity of 200 people at any one time. Sessions on the rink are timed to last an hour, with 15 minutes clearance between each session. The Lido's programme could be structured around a similar programme. The use of leisure areas surrounding the pool as waiting areas for swimmers, perhaps with additional activities such as beach volleyball, would ensure a longer time on the vessel whilst ensuring an efficient change over between one session and the next.

The majority of outdoor pools in London operate from dawn to dusk. Typically 6am to 8pm in summer and 6am to 4pm between September and April, where the facility operates year round. Pools operate a mixture of programmed sessions including those reserved for swimming clubs, which typically rent lanes from 6am to 7.30am and sessions for junior lessons which operate as after school clubs.

Depending on the location of the Lido, it is likely to have significant appeal as a tourist attraction, which will inform its pricing structure as well as its programme. The potential for the Lido to act as a tourist destination, suggests that the opening hours of the London Lido may extend to 9.30 or 10pm in peak summer months, with sunset and moonlight swimming having particular appeal. It would be feasible to programme regular sessions at the beginning of the day for regular club swimmers to increase the use of the facility by local communities but there is likely to be conflicting interest in the later evening sessions, between club training, and the commercial potential of the tourist or visitor market.

10.4 An iconic visitor attraction and contemporary tourist destination

The artist-designed London Lido will be the first floating pool on the Thames for over 150 years. As such, it will be viewed as much an iconic visitor attraction as an addition to London's network of swimming pools. It is therefore important to consider it within the range of visitor attractions currently on offer as well as its future contribution to any swimming or health related strategy. In its first season, it will attract a high level of press and media attention, its success in future years will depend on a number of factors including:

- Location
- Accessibility
- Visitor experience including wait time and ticketing
- Weather
- Successful marketing (to travel operators)
- Perceived value for money

The advice from London & Partners is that whilst the mainstream London visitor market is dominated by visits to heritage attractions, there are an increasing number of repeat visitors who are looking for something different. The location selected for the Lido will have a large bearing on the likely future visitor market for the pool. Iconic central London locations will provide the greatest draw for the international tourist market. Areas such as the Royal Docks are perceived by visitors to be far out of London and so if the Lido is to be located in the Docks the market is likely to be more London-centric. However with careful programming of half-day packages with river transport and something else to do in the area, it would be possible to draw visitors further afield.

Careful attention to operational details will both increase bookings, revenue and customer satisfaction, areas suggested include:

- Selling timed slots but with a certain number reserved for on the day sales
- the ability to book with international credit cards
- Creating packages involving more than one experience, perhaps with food or transport.
- Ability to buy swimming costume on site
- Up-selling the experience with additional services including fast track entrance, delivery of swimming things to hotel, inclusion of commemorative towel and sunset drinks package.

The ability to charge a premium price for entrance, a typical pool entrance is under £5 whereas a visitor attraction charges up to £20, rests on the ability to manage the visitors and create an overall experience, which exceeds expectations. London & Partners cited the London Eye as an attraction which is able to charge a premium price because people feel they are getting an exceptional experience, through the high level of customer management and attention to detail. Although in the case of the Lido it will be desirable to incorporate a reduced entrance fee to encourage local use.

The pool is also likely to appeal to corporate events and will attract brand activation stunts and film shoots which can boost revenue, but need careful programming so as not to interrupt the visitor experience.

Case Study: Thermae Bath Spa

The combination of pool and visitor attraction and the balance of measures required to facilitate a timed visit are well illustrated at Thermae Bath Spa. The spa opened in 2007 and is the only spa in the UK using natural thermal waters, featuring four thermal baths, including an open-air rooftop pool and a range of spa treatments and packages. Run by YTL hotels, the Spa employs over 170 staff and welcomes around 200,000 visitors a year.

Tickets for a 2 hour spa session start at £27. Towels and robes can be hired from reception for an additional £9. The facility offers many packages, including a 3 hour twilight for two offer at £80 per couple featuring a 3 hour spa session, towel and robe package plus one dish and one drink in the restaurant.

The spa is open from 9am to 9.30pm. Tickets cannot be booked in advance except for groups of 8 people or more. Visitors often queue for an hour or more before gaining admittance with reviews citing many instances of perceived overcrowding. Visitors are given a smart wristband, which gives entry into the spa, to the lockers and records any items ordered in the restaurant. On exit, the wristband is scanned to produce a bill for payment of any outstanding items including £6 per hour for any extra time spent in the spa. Reductions are available for local residents.

This study does not examine in detail the potential for the pool to operate as an ice rink or other facility in the winter months. However, following the example of some of the European models, consideration should be given as to whether operating in a winter mode, with a non-swimming offer, is cost effective and makes an additional contribution to the range of leisure facilities along the Thames.

11 PHASE TWO

11.1 Expertise/Professional engagement at Phase Two

During Phase Two it will be necessary to engage a Hydrologist/Hydrodynamic Engineer to ensure that the protection of the watercourse when introducing the vessel to the determined area. Placing a structure in the river will naturally change the way the water moves around that object. It will be important to perform a hydrodynamical analysis of the structure to minimise the impact on moving substrates, such as mud, sand, stone and pebbles to ensure that there is no negative impact on the natural ecology of the riverbed. The extent to which this will be necessary will be defined by the choice of construction method and on whether the structure touches the riverbed at low tide.

To ensure all statutory environmental regulations are met, as outlined in section 3.6, it may be necessary to engage the services of an environmental consultant specialising in river and marine environments who can advise and to work closely with the EA, MMO, PLA and local planning authority at Phase Two. Kenneth Pye Associates Ltd. (www.kpal.co.uk) come highly recommended as providers of specialist geomorphological and sedimentological advice and services.

Other contractors/specialist advisors might include:

- Naval Architects/Engineers
- Marine Engineers
- Swimming Pool Specialists/Architects
- Leisure Operators

11.2 Artist brief/process

An internationally renowned artist or architect will be engaged to design the pool. The process will be managed as part of a high profile commissioning programme set-up specially and co-ordinated by Artichoke and the GLA. Artists will be asked to respond to the brief to create a design which incorporates the fixed technical parameters outlined in the engineering section of this report. Ideally the competition would be launched following a decision on the location. This would ensure that the design is able to draw on the unique siting that the area affords, incorporating features relevant to the location and leaving the artists creative space to imagine a design that not only enhances London's magnificent river but sits beautifully and sympathetically amidst the iconic architectural and historical vistas visible in that particular location. Choosing one location is not essential but it would be preferable to avoid a generic design as far as possible.

The commissioning process would take 3 months from the launch date, allowing time for proposals to be submitted and reviewed, a short-list to be drawn up, for interviews to take place and to enable a second submission stage if required.

See Appendix VIII for a draft design brief

Expertise of Panel Members

A high-profile panel would be assembled to assess short-listed applications and to interview applicants prior to the final decision and announcement of the winner. Artichoke envisages an expert panel made up of high-profile professionals from across

the arts sector covering design, visual arts and architecture and including representatives from others sectors able to advise on green design, accessibility, finance, legislation, production/engineering and use of the pool as a sporting facility. The panel will be an important part of the design and delivery process as they will not only bring their unique specialisms and expertise to the project but will form an invaluable group of respected ambassadors who can speak and advocate on behalf of the Lido; can help to broker partnerships across different industries; help to unlock potential sources of funding; and to develop a unique selling point (USP) for the Lido in London.

Draft Timeline for discussion

- Commissioning opportunity advertised
- Deadline for stage 1 applications (6 weeks)
- Panel meets to survey the longlist of applications and to shortlist (the number will depend on the quality of work)
- Site visits with Technical Staff where appropriate
- Interviews take place and winner chosen
- Development period working closely with engineers and professional team
- Engineering and Delivery phase
- PR & press campaign

Draft judging criteria

- Artistic quality and vision
- How the idea enhances/draws attention to the River Thames
- Technical feasibility: of the idea within the time/budget allocated
- Use of sustainable/green technologies
- Financial feasibility
- Impact: visibility and audience appeal

A suggested long list for Artists/Architects to create the overlay design includes:

Artists

- Ron Arad
- Richard Wilson
- Antony Gormley
- Tracey Emin
- Thomas Heatherwick

Architects

- Sir Jeremy Dixon (Dixon Jones)
- Haworth Tompkins Architects
- Marks Barfield Architects
- Piers Gough
- Studio Octopi
- Bjarke Ingels Group (BIG) Architects

12 CONCLUSIONS & RECOMMENDATIONS

In this report Artichoke has consulted widely with agencies, organisations and individuals who have an interest in seeing a successful Lido project realised in the Thames. Our research has taken us from possibilities as far afield as Battersea in the West to the Royal Docks in the East. We have considered options ranging from independently commissioned and managed facilities to a visitor attraction as part of a contemporary development site.

Refining these studies down to what seems practicable, we have concluded that there are six possible solutions:

- Battersea Power Station
- Gabriel's Wharf
- Pool of London (City Hall)
- Greenwich Pier
- Royal Docks
- Greenwich Peninsular

Each presents a location that could house the substantial structure that will be necessary to provide adequate swimming lanes, support facilities and visitor amenities, free of encroachment on the River's crucial shipping channel. Each (see Matrix page 42) has its own advantages and disadvantages.

The Mayor's Office/GLA is invited to consider the results of this consultation and to further refine the options that are offered here. Below is a summary of the recommendations included in the body of the report.

12.1 Critical Factors

The successful delivery of a floating Lido for London rests on the initial identification of a site which meets three key criteria:

- Adequate depth and width of channel
- Access to riverbank
- Demonstrable levels of stakeholder support

Artichoke's research and consultation indicates that amongst the sites with at least 2m depth at all tides, which are deemed feasible for the location for a floating Lido, there is no site which fits all the criteria for a facility in terms of timescale, balance of visitor attraction and community access and Thames based location in Central London.

12.2 Timescale including fundraising

The schedule for physically producing a river-based Lido from the point of commissioning indicates a likely timeframe of 18 months to 2 years for design, build and securing permissions. This places the earliest opening date of the new facility in summer 2016. This could be significantly longer in an area where heritage and environmental considerations increase the length of time to secure permissions from all the relevant authorities.

This 2-year timeframe assumes that the capital finance for the construction is in place at the point of commission. In this regard, Royal Docks, Battersea Power Station and Greenwich Peninsula, where the construction of the Lido might be able to be part financed by monies from developers or section 106 agreements, have particular appeal. **If a fundraising campaign were required to raise the capital, the timeframe would need to be extended by a further two years.**

The only location, which might facilitate a quicker opening date from an engineering perspective due to the non-tidal nature of the site, constant depth and less restrictive permissions process, is the Royal Docks.

12.3 Location

Three locations were initially identified in Central London: Greenwich Pier, Pool of London and Gabriel's Wharf. Gabriel's Wharf does not appear feasible due to the additional expense of the engineering solutions required to mitigate the shallow water, and the potential clash between the construction of the Garden Bridge and the operation of the Lido in a similar location.

The two remaining viable locations in Central London, Greenwich Pier and Pool of London, are both likely to raise concerns from Heritage and Environmental agencies, which may necessitate extra time to secure permissions. If these concerns are satisfied, the Central London locations are likely to be the most successful in positioning the Lido as a visitor attraction, although this may in turn further restrict access for local communities.

Both Central London sites still require detailed consideration in terms of a link between the floating facility and the adjacent bank, and in the case of the Pool of London, it seems possible that there will be a degree of opposition from the landowners of the river walkway.

The engineering structures required to facilitate the sites in Central London are more complicated and costly than Battersea, Greenwich Peninsula or Royal Docks and this will again add time and cost to the project's delivery. In addition to this, the higher speed limit on the stretch of river at Greenwich, and the increased river traffic around Tower Bridge will cause additional turbulence around the Lido, possibly to the detriment of the visitor experience, although this requires further testing.

This, together with the summary considerations in the Matrix on page 42, suggests that the three most favourable sites are Royal Docks, Greenwich Peninsula and Battersea Power Station. The fact that these sites are also linked directly to current developments and therefore potential sources of funding, as well as being iconic sites and Opportunity Areas for the Mayor of London with regards to regeneration and investment, makes their case stronger still.

12.4 Engineering and Design

Considering structural designs for a future Lido raises a number of questions, namely

- Is the pool to be used as a competition or leisure facility?
- Is the pool to be heated, if yes can the water temperatures be reduced?
- How is pool water heat loss to be reduced, particularly in the evenings?
- Should the pool and surrounding area be enclosed?
- Can the pool and surrounding area be naturally ventilated if enclosed?

- Can the shower/changing areas be private but natural e.g. unheated/open top?
- What constitutes acceptable water quality for a Lido?

The consultation suggests that the recommended size is a 25 metre pool, of 6 to 8 lanes with a minimum depth of 1.2m which provides opportunities for the facility to be used for competitive swimming and training in addition to leisure use. The inclusion of a moving floor, with the ability to vary the depth, increases the flexibility for the pool to be used as a competitive facility whilst also enabling access for people who are not confident swimmers. In order to fit into the available locations, the Lido should be incorporated into a vessel which is approximately 70m x 25m.

The concept design should:

- challenge the more 'typical' conventions and design guidance plus offer alternative water filtration and treatment proposals;
- include an assessment of the Thames river water being used as the water source;
- propose a strategy for providing incoming utility services and on site energy generation;
- integrate the required utility equipment and meter housings and the service routes to/from these;
- consider the provision of emergency/back up power;
- explore options for the drainage to be a continuous connection, reducing the need for holding tanks

12.5 Visitor attraction versus community facility

The advice received from all parties is that conventional swimming pools, both indoor and outdoor, struggle to break even. The low capacity of swimmers in contrast with the high level of staffing and maintenance required to operate a safe facility, means that ancillary facilities such as café, gym and sauna often subsidise the low income received directly from swimming. Given the likely interest in the Lido as a visitor attraction, the business plan should explore a mixed model, where the Lido's status as a tourist attraction and the unique quality of experience and level of service received enable the price to be above that of a typical leisure pool.

However this positioning should not be at the exclusion of local residents and priority groups. Consideration should be given to programming to increase opportunities for swimming lessons and swimming training. Pricing structures including discounts for local residents and priority groups can further increase the potential for this mixed model.

The location of the Lido has a direct bearing on its potential as a tourist attraction, but consideration of the facility in the context of other local attractions and the packaging of the Lido with other unique experiences including river transport, waterside dining and magical moments for example sunset or moonlight swimming will increase its attractiveness to visitors.

Next steps

Draw up a business plan focusing on the operational delivery of the Lido, including management, opening times, staffing and running costs and considering the unique offer /facilities available, alternative use, hires etc. and the impact on the ticket price as a result.

Continue consultation with key agencies.

Engage professionals with expertise to support the process moving forward.

Decide on the preferred engineering method and location.

Launch design competition.

Decide on fundraising strategy and identify committed partners/funding where possible.

Outline communications strategy and campaign, including key aims and targets.

Further develop green approaches to design, filtration and power.

Secure permissions for locating facilities on adjoining land, if appropriate.

Begin permissions process, where appropriate.

Establish Lido Trust/Company for fundraising, profile raising, advocacy etc.

Decide on preferred governance model and engage operational partner, if appropriate.

Continue conversations with London & Partners and ALVA (Association of London Visitor Attractions) with regards to modelling the Lido as an iconic visitor destination for London.

See Appendix IX for a list of everyone consulted in the preparation of this report.

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BLUESEABROKERS
BSB

Tel: 0034 669 70 65 31 - Emails: info@blueseabrokers.net - admin@blueseabrokers.net
Web: www.blueseabrokers. net - Skype: blueseabrokers

750-BSB 70M X 22M FLAT TOP DECK BARGE FOR SALE OR CHARTER
- FROM DIRECT OWNERS -

GENERAL

Built (year and place)	2010, Netherlands
Hull material	Steel
Flag	European
Class	BV unrestricted navigation
Type	Flat top Ro-Ro pontoon
Next DD	May 2015
Last class SS	Dec 2011

CARGO CAPACITIES

Cargo Deck Area	1134 sq. M
Deck Strength	20t per sq. M

OTHER DETAILS

Bow & Stern Shape: Spoon bow & raked stern

PRINCIPLE DIMENSIONS

Length Overall	70,05 m
Breadth	22,05 m
Freeboard min	0,932 m
Draught max	3,083 m
Draught empty	0,68 m
Net Tonnage	487 T
Gross Tonnage	1624 T
DWT at summer draft	3550 T

NAVIGATION AND COMMUNICATION EQUIPMENT

N/A

MACHINERY & PROPULSION

N/A

ACCOMMODATION

N/A

CARGO EQUIPMENT

Anchors	Emergency anchor at stern	Panama locks	5,3 at the bow and 2 at the stern
Safety EQC	Side railings & 4 x lifebuoys with emergency line	Towing rig	Yes, for up to 50t BP
Deck winches	Not equipped	Ro-Ro attachments	Recess to bow for ramps
Remarks	Suitable for 2 spuds, diam. 915 mm	Emergency tow rig	Yes, for up to 50t BP
Ballasting system	Not equipped	Mooring lines	4 x 60 m diam. 48 mm
Smit brackets	4,4 at the bow up to 50t BP	Navigation lights	3 x Mc Dermott Solar Powered
No. of ballast tanks	36 with manhole access		

LOCATION NORTH EUROPE

ASKING PRICE 2,5 MIO EUROS "AS IS, WHERE IS" BASIS

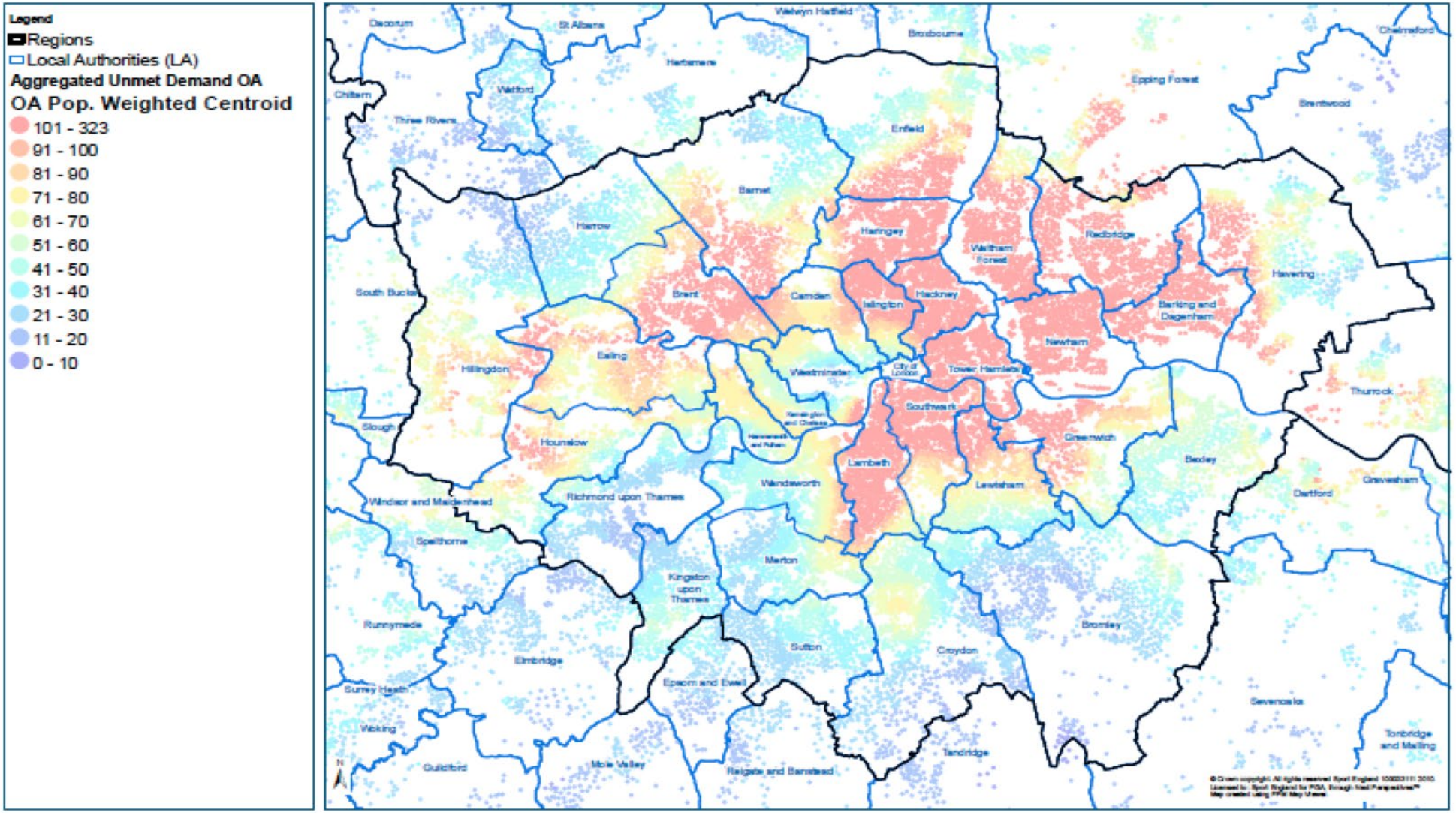
Appendix VI a

SPORT ENGLAND

Creating sporting opportunities in every community

Facility Planning Model - Pools 2021 Aggregated Unmet Demand Run. London overview.

Aggregated Unmet Demand expressed as square metres of water (rounded to one decimal place). GLA population projections for 2021 with known facility commitments as at 2013. Data outputs shown thematically (colours) at output area level and also aggregated at 1km square (figure labels).



Appendix VI b

Sport and active recreation 3x30 (formerly NI8), APS3/4 (2008-10): PCD SW8

SPORT ENGLAND

Catchment area:
SW8

Participation estimates 2008-10
Quantile classification*

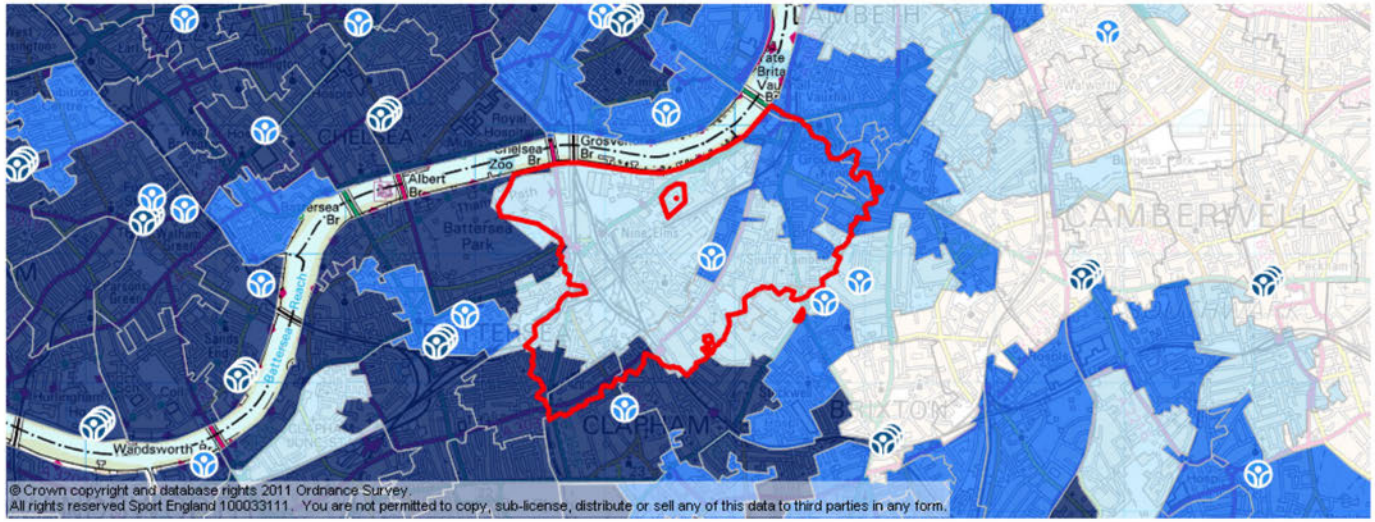
- 10.7% - 17.5% (low)
- 17.6% - 20.2% (low-middle)
- 20.3% - 23.0% (middle-high)
- 23.1% - 32.9% (high)

- Catchment area
- Middle Super Output Areas

- Multi-facility
- Swimming Pool

The percentage of the adult population (age 16 and over) who participate in sport and active recreation, at moderate intensity, for at least 30 minutes on at least 12 days out of the last 4 weeks (equivalent to 30 minutes on 3 or more days a week). This includes light intensity activities (bowls, archery, croquet, yoga and pilates) for those age 65 and over.

* Quantile classification: Each class contains an equal number of records. With four classes each contains roughly 25% of all records.



Appendix VI c

Sport and active recreation 3x30 (formerly NI8), APS3/4 (2008-10): PCD SE1

SPORT ENGLAND

Catchment area:
SE1

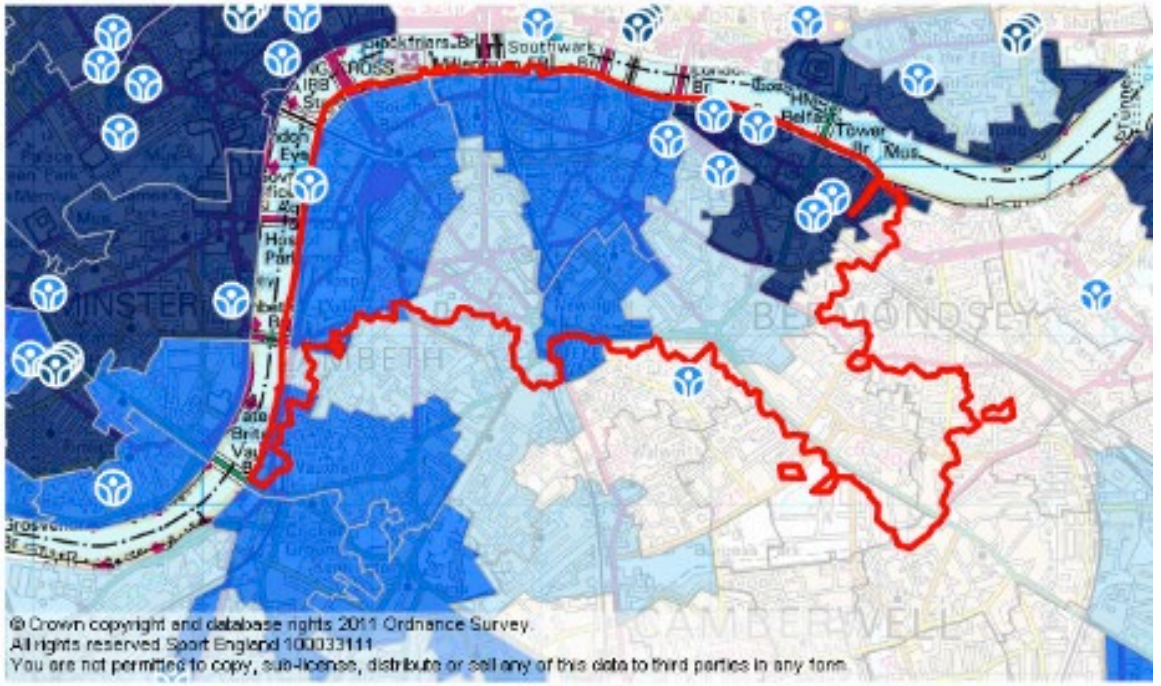
Participation estimates 2008-10
Quantile classification*

- 10.7% - 17.5% (low)
- 17.6% - 20.2% (low-middle)
- 20.3% - 23.0% (middle-high)
- 23.1% - 32.9% (high)

- Catchment area
- Middle Super Output Areas

- Multi-facility
- Swimming Pool

The percentage of the adult population (age 16 and over) who participate in sport and active recreation, at moderate intensity, for at least 30 minutes on at least 12 days out of the last 4 weeks (equivalent to 30 minutes on 3 or more days a week). This includes light intensity activities (bowls, archery, croquet, yoga and pilates) for those age 65 and over.



Appendix VI d

Sport and active recreation 3x30 (formerly NI8), APS3/4 (2008-10): PCD SE1

SPORT ENGLAND

Catchment area:
SE1

Participation estimates 2008-10
Quantile classification*

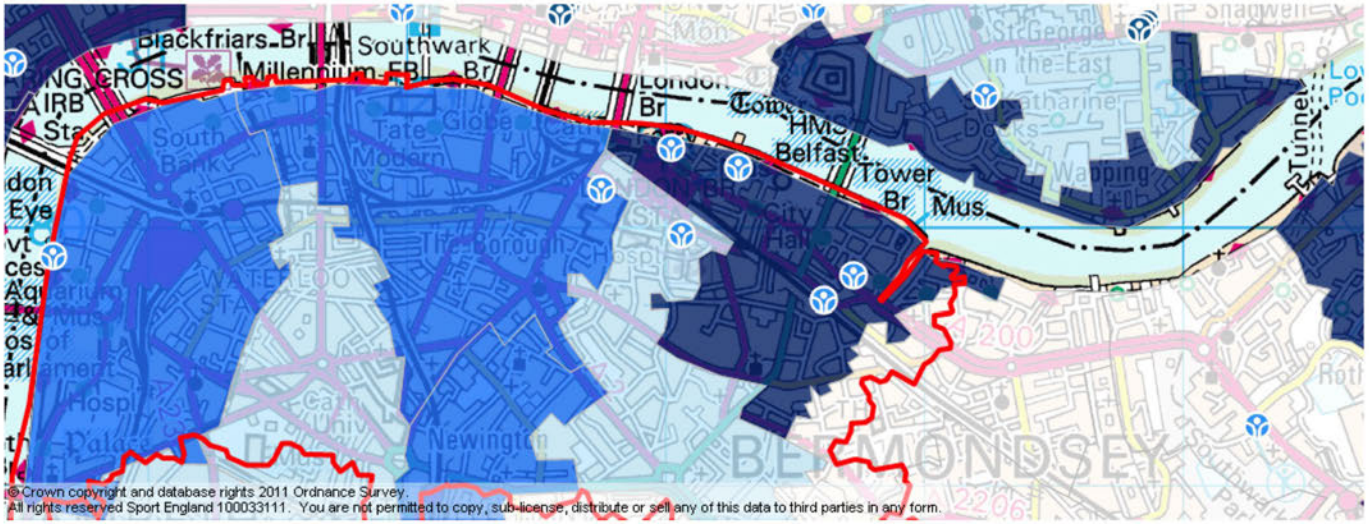
- 10.7% - 17.5% (low)
- 17.6% - 20.2% (low-middle)
- 20.3% - 23.0% (middle-high)
- 23.1% - 32.9% (high)

- Catchment area
- Middle Super Output Areas

- Multi-facility
- Swimming Pool

The percentage of the adult population (age 16 and over) who participate in sport and active recreation, at moderate intensity, for at least 30 minutes on at least 12 days out of the last 4 weeks (equivalent to 30 minutes on 3 or more days a week). This includes light intensity activities (bowls, archery, croquet, yoga and pilates) for those age 65 and over.

* Quantile classification: Each class contains an equal number of records. With four classes each contains roughly 25% of all records.



Appendix VI e

Sport and active recreation 3x30 (formerly NI8), APS3/4 (2008-10): PCD SE10

SPORT ENGLAND

Catchment area:
SE10

Participation estimates 2008-10
Quantile classification*

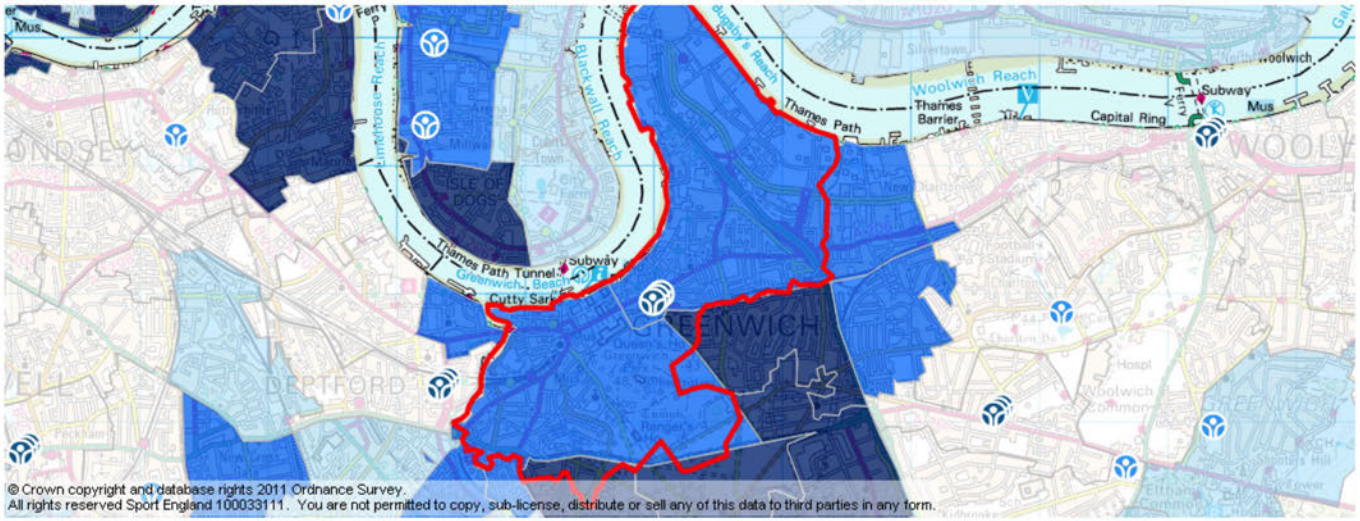
- 10.7% - 17.5% (low)
- 17.6% - 20.2% (low-middle)
- 20.3% - 23.0% (middle-high)
- 23.1% - 32.9% (high)

- Catchment area
- Middle Super Output Areas

- Multi-facility
- Swimming Pool

The percentage of the adult population (age 16 and over) who participate in sport and active recreation, at moderate intensity, for at least 30 minutes on at least 12 days out of the last 4 weeks (equivalent to 30 minutes on 3 or more days a week). This includes light intensity activities (bowls, archery, croquet, yoga and pilates) for those age 65 and over.

* Quantile classification: Each class contains an equal number of records. With four classes each contains roughly 25% of all records.



Appendix VI f

Sport and active recreation 3x30 (formerly NI8), APS3/4 (2008-10): PCD E16

SPORT ENGLAND

Catchment area:
E16

Participation estimates 2008-10
Quantile classification*

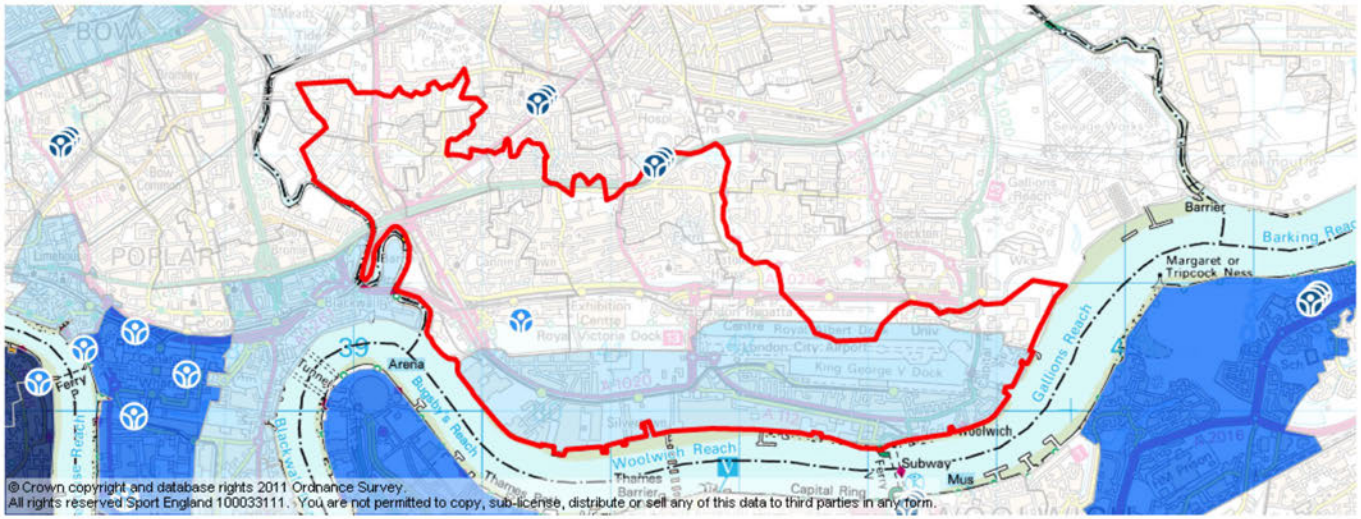
- 10.7% - 17.5% (low)
- 17.6% - 20.2% (low-middle)
- 20.3% - 23.0% (middle-high)
- 23.1% - 32.9% (high)

- Catchment area
- Middle Super Output Areas

- Multi-facility
- Swimming Pool

The percentage of the adult population (age 16 and over) who participate in sport and active recreation, at moderate intensity, for at least 30 minutes on at least 12 days out of the last 4 weeks (equivalent to 30 minutes on 3 or more days a week). This includes light intensity activities (bowls, archery, croquet, yoga and pilates) for those age 65 and over.

* Quantile classification: Each class contains an equal number of records. With four classes each contains roughly 25% of all records.



Audit and review the effectiveness of other floating pools (realised and unrealised)

REALISED						**DESIGN**									**OPERATIONS**				
No	**Name**	**City**	**Country**	**URL**	**River**	**River conditions**	**Artist/Architect**	**Client/Commissioners/Funders**	**Year realised**	**Pool Size**	**Capacity for swimmers**	**Engineering**	**Mobile/Fixe**	**Temp/Perm**	**Water Source**	**Heated**	**Operational model**	**Uses**	**Facilities - adjacent land**	**Facilities onboard**	**Operating Hours**
1	Badeschiff	Berlin	Germany	www.arena-berlin.de/portfolio/badeschiff/	Spree	Non-tidal. High levels of pollution.	Artist Susanne Lorenz; Architects AMP	Sponsored by City Art Project Association. 80% of funding provided by Glass House Theatre and other entertainment venues in Berlin.	2004	32.5m x 8.2m x 2m	60 in pool but capacity for more on the perimeter benches	Converted river cargo container	Fixed	Temporary initially but now permanent due to popularity	Fresh Water	Yes	Managed by event production company Arena Berlin as part of a wider portfolio of spaces.	Summer - open air pool. Winter - covered sauna. Other activities include yoga, massages, dancing, table-based sports.	Faux beach, hammocks, covered pavillion for DJs/dancing, bar, toilets. Attached to the barge by a flexibly anchored wooden footbridge.	Pool only with access to land by decked walkway. Decking used for sunbathing.	8am - midnight
2	Badboot	Antwerp	Belgium	www.badboot.be	Scheldt	A constant depth of 13.1m is possible with 5.2m variation making it a good river for large ships and floating structures.	SCULP(IT)	Winner of a contest held by the Municipality of Antwerp to provide another outdoor facility for the city. Badboot Vastgoed bvba is a group of private investors who managed the financing of this million euro project.	2012	40m (L)	The entire structure can accommodate up to 600 people across all facilities.	A large section is adapted from a 1960s ferry. Built by shipbuilders HSS. The long section that houses the pool was specially constructed and attached to the ferry.	Mobile	10 years initially with interest in it being permanent subject to review.	Fresh Water	Yes. An onboard reed bed water purification system and hold to prevent evaporation and keep the water warm.	Co-owner Philip De Prest is managing director of V-Zit bvba, the organisation that launched the Badboot jointly with the City of Antwerp. Specialist leisure facility operating advice was provided by Belgian pool specialist S&R.	Swimming during the summer season. Ice rink during winter.	Everything included on board.	Two events venues, a restaurant, cocktail bar, decks and terraces.	Standard hours: 12pm-6pm increasing to 11-8pm during warmer periods.
3	+POOL	New York	USA	www.pluspool.org	East River	Large storm surge potential. River flow changes twice a day with an 8-12ft drop.	Founding partners PlayLab & Family New York; Architect Wesley Leforce	Founding partners with support from Arup and other engineering and technical partners.	Planned for 2016	Olympic Length 164ft	Max capacity at any one time: 481. Per day: 2886. Per season: 311,688.	Custom built. Working closely with Arup and Persak & Wurmfeld, Yacht Designers & Naval Architects.	Fixed with the capacity to be mobile.	Permanent - permissions pending.	Filtered river Water	No	+POOL is in conversation with Asphalt Green about being Leisure Providers. If successful the founders would sit on the board to ensure their involvement/input into the ongoing running/profile of the pool.	Swimming only during summer season but they are exploring the potential for hires to supplement income from ticket sales e.g. photos shoots, weddings, corporate hires etc.	Land based permanent structure housing toilets, showers, café facilities, box office and back office areas.	Lifeguarding facilities, loungers, deck chairs.	7am-7pm but options for late night swimming are being explored.
4	Havnebadet	Copenhagen	Denmark	http://kulturogfritid.kk.dk/havnebadet-islands-brygge	Copenhagen Harbour	The harbour water is very clean complying with the EU Bathing Water Quality Directive. Water quality is constantly monitored and reported daily online in case of sewage spills caused by bad weather.	JDS Architects & Bjarke Ingels Group	Commissioned by Copenhagen City Council and The Danish Foundation for Culture and Sports Facilities	2002	86m x 8m	600	Blended plate, pontoons and wooden decking	Fixed to the adjacent land	Permanent	Harbour Water	No	Managed by leisure operators Team Bade, part of Denmark's Culture & recreation department.	Summer season: June-August. Used for swimming, diving and leisure. Out of season it is used for concerts and events as well as winter swimming	Toilets 100m from the pool. No changing facilities.	Lifeguarding, exercise pool, 2 children's pools, diving tower with 5m, 3m, and 1m platforms, fresh water showers. A new extension in 2013 will accommodate saunas and thermal baths.	Mon-Fri: 7am-8pm; Sat/Sun: 11am-8pm
5	Floating Pool Lady	Brooklyn	USA	www.floatingpool.org	East River	Minimal tide. Polluted. High storm potential.	Jonathan Kirschenfeld Associates; C.R. Cushing & Company	The Neptune Foundation; Brooklyn Bridge Park Development Corporation	2007	25m	170	Converted cargo ship	Mobile	Long-term	Fresh Water	Yes	Managed by the New York City Parks Department	Summer season only: June-Sept.	Linked to city beach on shore for ball games, beach chairs, parasols and food/drinks.	Lockers, toilets, showers, spray pool and snack bar.	11am-3pm; 4pm-7pm
6	Josephine Baker	Paris	France	www.carilis.fr/centre/piscine-josephine-baker	Siene	Water quality similar to the Thames with overflowing sewers during bad weather. The average water depth is 9.5m. This is controlled by a canal system and reservoirs to ensure the depth is tightly controlled.	Robert de Busni, Sequana Architecture	Public building project/competition to build a new facility as part of Paris Plage.	2006	25m x 10m with 50m2 spray pool	350 across all swimming facilities	The pool is a bespoke steel and glass structure kept afloat by twenty metal floats. The platform measures 90m x 20m.	Constructed in its location but can be moved if necessary.	Long-term	River Water. The water is purified, used and drained as cleaner water back into the river.	Yes	Operated by Leisure Management company Carilis Groupe.	Operates all year round with a roof that can be opened and closed.	Everything included on board.	Two swimming pools, solarium, a childrens pool, large fitness/gym area, café/bar, back offices, sauna, steam rooms, spas and jacuzzi.	7am - 9pm generally with daily variation and separate times during holiday periods
7	Badeschiff Wien	Vienna	Austria	www.badeschiff.at	Danube Canal	Still water conditions. Protected by a lock system to prevet flooding from the nearby Danube.	Built by the team behind Badeschiff Berlin and floated to Vienna.	Mr. Gerold Ecker, chief executive of Expedit Handels- und Gastronomiebetriebs GmbH in Vienna (Retail & Catering company)	2006	6m x 30m	60-100	Constructed from two cargo barges linked together.	Fixed	Long-term	Fresh Water	Yes	€1 million turnover. The facility is paid for by the successful restaurant, concert series, nightclub and other cultural activities which are programmed onboard.	Summer season only: May-Sept	Terrace on quayside	Sun deck; underwater nightclub for 100 people; 140 seater restaurant. Showers and changing cubicles.	Standard hours: 8am-6pm increasing to 8am-10pm during June, July & August

Design Competition – Draft Briefing for Artists/Architects/Design Studios

Introduction & Approach

London exists because of the River Thames. As far back in the history of the city as one looks, the river has been central to trade, transport and daily life. Now, in the 21st century, London's citizens have become divorced from this vital life force; most people crossing from North to South or *vice versa* do so underground, with no sense of the mighty waters rising and falling above them. But imagine if Londoners could be reintroduced to their river, not just to stare at it in awe, but actually to touch it, smell it and feel it all around them? The London Lido proposes just that – a way to swim in the river safely with all the health and leisure benefits this might bring. The London Lido will be a great new asset in the capital's huge range of attractions. Complementing the Mayor's plans for a reinvention of the river through the River Action Plan and the proposed Garden Bridge, the London Lido will provide an invitation for citizens, visitors and tourists alike to enjoy the city's greatest hidden asset.

Artichoke, specialists in producing ambitious arts events in the public realm, has been commissioned by the GLA to carry out a feasibility study looking into how to deliver this extraordinary new landmark and floating attraction for London.

As an integral part of this process Artichoke is inviting tenders from internationally renowned artists/architects to design a beautiful world-class floating lido for the River Thames, an iconic structure that will capture people's imaginations and allow Londoners to swim once more in the Thames.

The chosen artist will work closely with Artichoke and a team of experts to develop and deliver a lido for London that:

- Is visionary – has an extraordinary and bold yet deliverable artistic idea at its core
- Demonstrates ambition and innovation
- Is accessible and inclusive for Londoners
- Enhances London's magnificent river and sits beautifully amidst its iconic architectural and historical vistas.

The purpose-built structure will need to allow for all kinds of uses:

- General leisure swimming both day & night in all seasons
- Swimming lessons for learners and school children
- Eating, drinking and relaxation
- Opportunities for corporate entertaining
- Cultural events and commissions
- Sporting competitions

Team of Experts

The following organisations are leading on the delivery of the lido with a specific focus on engineering, locations, permissions, finance, management and community integration and will be in place to support the delivery of the lido from design through to implementation:

- GLA Culture Team: strengthening London's position as a world cultural capital
- Artichoke: specialists in producing ambitious arts events in the public realm
- Unusual Rigging: world leaders in engineering, design and consultancy
- Momentum Engineering: industry leaders in structural and design engineering
- Woo Architects: multi discipline design collaborative

The successful delivery of the London Lido will depend on the support of a variety of agencies across the capital. Artichoke is working closely with the Mayor of London and high-

level representatives from the Greater London Authority (GLA); Port of London Authority (PLA); Transport for London (TFL); and Chief Executives from the London Borough in which the lido will be moored.

Specification & Requirements for the London Lido:

- To create a beautiful iconic structure that is sympathetic to its location/connection with the river
- To be 100% carbon neutral – this is an important feature of the design and should be expressed through the materials used and the application of environmentally friendly techniques for cleaning and heating the water and approaches to filtration, engineering, facilities and other provision.
- To find a creative solution for integrating changing rooms, toilets, shower rooms, lockers and other useful facilities into the final design. Whether these will be located on the riverside, built into the Lido superstructure or attached via a second floating structure is still to be determined but creative approaches to this would be welcomed.
- To be fully accessible for everyone to enjoy
- To incorporate catering facilities – bar/café/restaurant
- To have the capacity/flexibility to accommodate cultural events
- To be aimed at Londoners but to form an attractive part of the offer to visit London as a major cultural destination.
- To focus on swimming but to consider incorporating some form of terrace area for relaxation.
- To include storage facilities for multi-use.
- To include an option of being covered in winter and open air during the summer, with potential for a different use during winter months e.g. an ice rink.
- To be sized accordingly to the structural engineering plans
- To accommodate a maximum of 150 swimmers in the pool at any one time and up to 600 across all facilities

Keywords/ideas

- The river as a playground for people to explore the wonders of the city
- 2000 years of riparian history providing a stunning vista of London's past and present
- Positioning the river as an integral part of London life

Organisation (in Alphabetical Order)	Name	Position
AEG	[redacted]	Senior Vice President, Real Estate Manager
Amateur Swimming Association (ASA)		Divisional Business Manager, London & East
Architecture Foundation		Deputy Director
AW Ecology		Director
Battersea Power Station		Head of Design and Placemaking
		Design & Placemaking Manager
Beckett Rankine (Marine Engineers)		Director
Coin Street Community Builders (CSCB)	[redacted]	Executive Director
English Heritage		Team Leader, London
Environment Agency		Deputy Director London
		Waterways Operations Manager
		Planning Advisor - North London
Floating Pool Lady, Brooklyn		Executive Director of the Brooklyn Bridge Park Conservancy (1999-2009)
GLA		Sports Policy Officer and Mobile Pools Project Lead
	Justine Simons	Head of Culture
	[redacted]	Principal Development Manager
		Development Manager
Greenwich Council	[redacted]	Senior Cultural Strategy Officer
		Assistant Chief Executive, Communications and Community Engagement
Greenwhich Leisure Ltd		Senior Sports Manager
Hampstead Ponds		Head of Operations
Lido Love		Leisure and Events Manager
London & Partners		Producer/Co-organiser
London Fields Lido		Project Manager Major Events
London Sport		General Manager
Max Fordham (M&E Engineers)		Partnership Manager
Merlin Entertainment		Engineering Team Leader
Marine Management Organisation		Senior Creative Director
Momentum Engineering		Senior Marine Licensing Manager
Newham Council		Director
		Regeneration Manager
		Senior Area Programme Manager
		Head of Regeneration
Nine Elms		Nine Elms Programme Director
Oasis Sports Centre		General Manager
PLA		Chief Executive
		Director of Planning & Environment
		Harbour Master
Plus Pool New York		Founding Partner
Royal Docks Management Authority (RoDMA)		Managing Director
Somerset House		Head of Live Events
South London Swimming Club		
Southwark Council		Head of Events and Film
		Public Realm Programme Manager
St Martins Property		Asset Manager
Studio Octopi		Director
Thames Festival		Production Manager
Unusual Rigging		Director
Wandsworth Arts Festival		Arts Partnership Manager
Wandsworth Council		Arts Partnership Manager
		Leader of Wandsworth Council
		Area Planning Group Leader
		Head of Parks and Leisure Services
Woo Architects		Director
Woo Architects		Director