

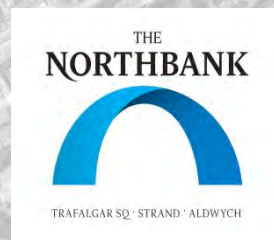


Northbank BID Green Infrastructure Audit

Prepared by LUC
June 2014



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Northbank BID Green Infrastructure Audit

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Executive Summary

In December 2013, Northbank BID commissioned LUC to undertake an audit of green infrastructure (GI) in the area. This report summarises the findings of the audit, and makes recommendations for enhancing green space and delivering additional green features in the area.

Greening has the potential to deliver many environmental benefits to the Northbank area, creating a more attractive working and living environment. Headline findings of the audit include:

Existing Green Infrastructure

The Northbank BID area covers 51.5 hectares, and includes **2.75 hectares of existing parks and other green space (Fig. 2.1)**. This includes Victoria Embankment Gardens, Savoy Chapel Gardens, Temple Gardens, St Mary le Strand Gardens and the Royal Courts of Justice Gardens. There are **many mature trees within the area**, particularly along the Victoria Embankment and Aldwych, 60% of which are Plane trees. There are **10 buildings which have green roofs** on part of the roof surface (Fig. 3.4). There are no green walls in the area at present.

The area suffers from **poor air quality (Fig. 2.2)**, particularly along Strand, Aldwych and Victoria Embankment. The area is also **prone to localised flooding** during periods of heavy rainfall (Fig. 2.3), including around Somerset House and the Adelphi.

Potential for greening

The audit has identified potential to **enhance 3.4 ha of existing green space**, and **create 0.6 ha of new green space**. It has also identified significant potential for building-mounted green features, including green walls, plus 45 flat or partially flat roofs without obstructions, that may be suitable for green roof installation.

Priority projects

The priority projects for Northbank are outlined in **Table 0.1**, and are shown in **Figure 3.1**. These eleven projects include two sites of existing green space which have potential for enhancement, plus nine sites where new green features could be created.

Table 0.1: Priority projects

Project	Summary	Cost	Ref.
Embankment Station	Green roof and living wall at this key gateway location	£30-50k	43 & 44
Victoria Embankment Gardens	Enhance gardens to deliver people, wildlife and cultural improvements	£50k+	1 & 18
Savoy Gardens	Open up this attractive green space to the public during daylight	<£10k	45
Strand	Planters and new planting around St Mary le Strand and St Clement Danes Churches	£10-30k	7, 15, 19, 20
Temple Station	Temporary greening through planting and seating	<£10k	38
Hungerford Railway Bridge	Specialised planters to be installed at elevated position on the buttresses	£10-30k	42
Victoria Embankment and Cycle Cross Route	Integrate additional green features alongside new cycle route	£50k+	1
Street trees	Various opportunities for	Varies	Various

	additional street tree planting		
Junction of Strand / William IV Street	Create a small new green space for people and wildlife	£30-50k	3
Junction of Strand / Southampton Street	Enhance existing tree planting with planters and seating	£10-30k	5
Green walls along the Strand	Install modular green walls at various locations near Strand	Varies	Various

Quick wins

The GI audit has identified a number of 'quick win' projects, which we anticipate could be delivered in the short term, without the need for further feasibility, permit/consent or detailed design input. These are:

- Green wall at Strand Underground Station building (13)
- Victoria Embankment Gardens (Temple Section) (18)
- Enhanced planting the National Gallery (31)
- Space on Northumberland Avenue, opposite the Sherlock Holmes pub (36)
- Green wall at Waterloo Bridge Victoria Embankment exit (41)
- Queen's Chapel of the Savoy Gardens (45)

1 Introduction

Introduction

1.1 In December 2013, the Northbank BID commissioned LUC to undertake an audit of green infrastructure (GI) in the area. The study area comprised the Northbank BID area, as shown on **Figure 1.1**. The study included a desk-based and site audit of the area, to identify existing and potential green features. These green features include:

- Green spaces, including parks and gardens, street trees and planters
- Green roofs
- Green walls.

1.2 The study will support the Northbank BID in delivering environmental enhancements in the area and to help address current environmental issues, such as poor air quality and localised flooding. These enhancements will improve the attractiveness of the area for business, residents and visitors.

1.3 The BID identified the following priorities for new green features in the area:

- Visibility – highly visible features
- Deliverability – including potential for short term enhancements
- Overall enhancement – particularly for pedestrians and cyclists.

Why green Northbank?

1.4 This study reflects the Northbank BID's recognition of the various benefits of increasing green infrastructure in the study area. In

cities across the UK, companies have begun to recognise the value offered by green infrastructure. In cities across the UK, companies have begun to recognise the value of green infrastructure. For example, Rubens Hotel in Victoria has successfully installed a large green wall, and John Lewis also has plans to deliver one of London's first rain gardens at its HQ in Victoria, as well as celebrating its 150 anniversary at Oxford Street by installing a roof garden.¹

1.5 The Northbank area has relatively little green infrastructure. Green infrastructure is an essential part of creating more comfortable and 'liveable' urban environments in the face of climate change. In the case of Northbank, well-considered green infrastructure can also be used to complement and set off the significant architectural and historical assets of the area – a contribution to sense of place and experience.

1.6 There are plans to redevelop Arundel Street, plus adjacent development of the proposed Garden Bridge as proposed by Thomas Heatherwick and Arup, with construction proposed for 2016. The aim of the Garden Bridge is to improve connectivity between the North and South Banks, improve economic activity, provide a popular tourist destination and enhance flood storage and biodiversity. This will be complemented by the Cycle Cross Route, which is planned to run along the Victoria Embankment, creating a safe cycling environment and bringing large numbers of cycle commuters and visitors along the Northbank on a daily basis. Although the Transport for London (TfL) image above does not include new green features, Northbank BID is keen to work with TfL and others to incorporate green elements to this exciting scheme.

1.7 Recently, a proposal for the North Bank Waterfront Park was submitted to the London High Line Green Infrastructure ideas competition. This proposes to unlock the potential of the riverside

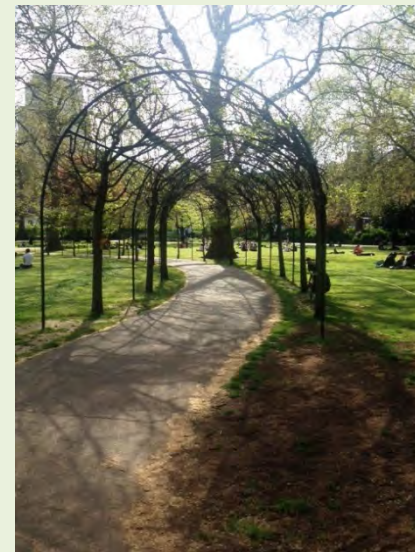
¹ Victoria BID Website. Available at: <<http://www.victoriabid.co.uk/news-and-press/first-rain-garden-approved-for-victoria/>> [Accessed March 2014]

1.8 area, suggesting features including an open-air cinema, beaches, a lido and green walls and roofs on buildings and bridges.²



Credit: TFL

Transport for London visualisation of Cycle Cross Route along Victoria Embankment



Trees provide shade to control urban temperatures

² New London Landscape Website 'High Line For London' shortlisted ideas. Available at: <<http://www.newlondonlandscape.org/project/235/north-bank-waterfront-park>> [Accessed March 2014]

What will greening do?

- 1.9 A study by Exeter University recently demonstrated that the benefits of living near a green space included improvements to mental health which continue for at least three years after moving to the area.³ Even small green spaces can provide an opportunity for relaxation and quiet reflection, away from the bustle of London's streets. Larger spaces have the additional benefit of providing a venue for activities including exercise, sports and a range of events.
- 1.10 The UK Climate Impact Projections indicate that London is likely to experience hotter, drier summers and warmer, wetter winters. In addition, climate change models suggest that increased variability and unpredictability in the weather will be the result of predicted climate change. The observed effects of these climatic changes in central London include:
- Surface water flooding during periods of heavy rain;
 - Urban heat island effects increasing temperatures during warm periods;
 - Wind tunnel effects combined with dry spells, which create excessive dust;
 - Drought conditions leading to water shortages and affecting existing parks and gardens;
 - Warm weather which exacerbates air pollution.
- 1.11 Unless mitigated, the impacts for businesses of these climatic changes could include disrupted travel as a result of flash flooding, increased costs of cooling business premises and potential health impacts for employees.

Meeting BID objectives

- 1.12 Green infrastructure will help to deliver the Northbank BID's 'Cleaner and Greener' initiative. It will also help meet many of the BID's other objectives, including:

- Assisting with way finding and signage;
- Encouraging more footfall in the area and dwell time;
- Capturing the large numbers of tourists that pass through, to stay in the area;
- Promote a better trading environment
- Facilitating local benefit for residents, visitors and employees within Northbank.

- 1.13 Increased GI could help address the following local environmental issues. This includes:

- **Localised flood risk and drainage issues.** This is partly caused by a lack of green space to absorb water during periods of heavy rainfall.
- **Poor air quality.** The air quality in and around this part of London is amongst the worst in the UK. Trees and other well-positioned green spaces can help alleviate the health impacts of this by dispersing and absorbing pollutants, reducing the effects on people.
- **Wildlife deficiencies.** This part of London is identified as deficient in wildlife in the All London Green Grid. Enhancing existing green spaces and investing in new habitats such as green walls, green roofs and tree avenues can help to make space for urban wildlife.

- 1.14 Delivery of these opportunities will also help to meet the following objectives:

- **Reduce carbon emissions** through insulation of buildings and moderating temperature, thereby reducing the need for air conditioning and heating;
- **Introduce exciting and inspiring green infrastructure solutions** – these could include green walls and roofs, rain gardens, urban orchards and wildlife experiences for children and adults alike;
- **Increase the appeal of Northbank** to businesses and visitors, through improving viewpoints and enhancing the

³ Alcock, I. et al 9 December 2013. *Longitudinal Effects on Mental Health of Moving to Greener and Less Green Urban Areas*, Journal of Environmental Science and Technology.

environment, creating green oases where people can escape traffic noise and pollution;

- **Encourage sustainable travel** through creating a more pleasant environment for pedestrians and cyclists.



Pockets of open spaces and garden squares create space in the city for people and wildlife.

Context

- 1.15 London Charing Cross Station is an important Gateway to London, with over 38 million people passing through in 2012-2013. Whilst there are many UK attractions within walking distance of London Charing Cross Station, including Trafalgar Square, the National Gallery, Somerset House and the numerous theatres. The Northbank is also home to a huge range of important London institutions including LSE and Kings College, The Savoy and Corinthia, the Queen's bank Coutts, corporate offices such as PWC and Shell, and restaurant The Delaunay, all of which are partners in the Northbank BID.
- 1.16 Northbank is one of the cultural heartlands of London and offers a thriving commercial community.

Mayoral initiatives

- 1.17 The Mayor's London Plan and his Climate Change Adaptation Strategy calls for the protection, promotion, and management of London's green infrastructure – its green and open spaces, river corridors and greenways, green roofs and street trees - in order to deliver a range of benefits including:
- Increased access to open space and contact with nature;
 - Adaptation to the impacts of climate change;
 - Sustainable travel connections and promotion of cycling and walking;
 - Healthier living;
 - Sustainable food growing;
 - Enhanced destinations and streetscape supporting the visitor economy and commercial footfall;
 - Promotion of green skills and sustainable approaches to design, management and maintenance.
- 1.18 Northbank lies within Green Grid Area 12 (Central London), as defined in the Mayor's recently published All London Green Grid Supplementary Planning Guidance (March 2012). The Draft SPG

highlights the importance of “delivering GI benefits in relation to surface water flood management, mitigating the urban heat island effect and increasing access to open space”.

Westminster

1.19 The study area lies within the City of Westminster, and the policies and priorities of the City Council have influenced the identification of opportunities. The majority of the area is situated within the Thames Policy Area. Westminster’s Core Strategy includes the following commitments in relation to open space and green infrastructure (policies CS34 – Open Space and CS37 – Green Infrastructure):

- Protect and enhance Westminster’s open space network, and work to develop further connections between open spaces;
- Address active play space deficiency;
- Secure contributions to improving the quality, ecological value and accessibility of local public open spaces and delivering new open spaces from under-used land;
- Biodiversity and green infrastructure will be protected and enhanced... and opportunities to extend and create new wildlife habitat as part of development will be maximised.

The Blue Ribbon Network

1.20 Westminster’s Core Strategy includes the following commitments in relation to the Blue Ribbon Network (policy CS36 Westminster’s Blue Ribbon Network).

- 1.21 “The Blue Ribbon Network will be protected and improved by:
- Enhancing biodiversity and waterside habitats;
 - Protecting and enhancing the character, appearance, heritage and landscape value of the Blue Ribbon Network and its setting; and
 - Enhancing the linear qualities of the Blue Ribbon Network, particularly in relation to heritage, landscape and views, biodiversity, and modes of sustainable transport;
 - and, where it is consistent with these priorities;

- Improving access for pedestrians and cyclists, use for leisure, sport and education especially for local communities; and
- Water-based transport.

1.22 Development alongside the Blue Ribbon Network must address the waterside, with a focus on enhancing the waterside location and improving access to and enjoyment of the waterfront.”

London View Management Framework

1.23 The Northbank BID area is included in The London View Management Framework which is part of the Mayor’s strategy to preserve London’s character and built heritage. It highlights the “policy framework for managing the impact of development on key panoramas, river prospects and townscape views”.⁴

GI in Northbank

Existing greening initiatives in Northbank

1.24 Consultation with partners of the Northbank BID has highlighted a number of existing initiatives already underway in the area. These include:

1.25 **Northbank BID:** The BID is already engaged in a number of greening initiatives in the area. This includes:

- Proposed construction of the Garden Bridge at the southern end of Arundel Street.
- Proposed installation of a green roof on Embankment Underground Station.
- Potential for a green roof at the Adelphi Theatre.
- Proposed green roof at the Savoy Pier.
- Cycle Cross Route proposed for the Victoria Embankment.

⁴ GLA Website. Available at: <<http://www.london.gov.uk/priorities/planning/supplementary-planning-guidance/view-management>> [Accessed 13 March 2014]

- 1.26 Northbank BID has also developed a Public Realm Strategy for the area, and the recommendations of this study have informed this GI audit.
- 1.27 Ongoing and planned regeneration in the area will influence the timescales for some GI delivery, and means that opportunities on specific streets such as Villiers Street and Arundel Street are best delivered alongside other regeneration.

Study Approach

- 1.28 The study included several key elements:
 - **A desk-based study**, using Geographical Information Systems (GIS) and aerial photography to map existing GI assets. This included an audit of flat roofs to highlight potential for green roof installation and the terrestrial GI resource (including trees based on tree location data supplied by Westminster City Council and TfL) and opportunities, together with an identification of existing management issues and high level management options for tree stock.
 - **The development of a GIS-linked database**, which enables records of all existing and potential GI assets to be linked to a map.
 - **Consultation with local businesses and stakeholders** to identify any existing GI initiatives which are underway, and their aspirations for their part of the study area.
 - **Ground truthing/site audit** to confirm the accuracy of the mapped data. The ground-truthing exercise also enabled the gathering of more detailed information on the current quality and quantity of GI and potential opportunities to enhance GI in the study area.
 - **A walking workshop** to discuss potential opportunities to the steering group and key partners, and highlight any priorities or barriers.
 - **Report compilation** to highlight the key opportunities in the area and more specifically:


- Key strategic and thematic opportunities to enhance or increase the GI resource.
- Identification of opportunities to retrofit GI in areas of high flood risk as defined in the Westminster Flood Strategy.
- Indicative scoring of GI opportunities and outline costs to inform prioritisation for delivery.
- Broad guidance on the potential feasibility of delivering GI, surface water drainage and urban flood management features, green roofs and walls within the study area.
- Accurate GIS mapping linked to a database, which could be readily updated in the future.



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Figure 1.1

Study Area

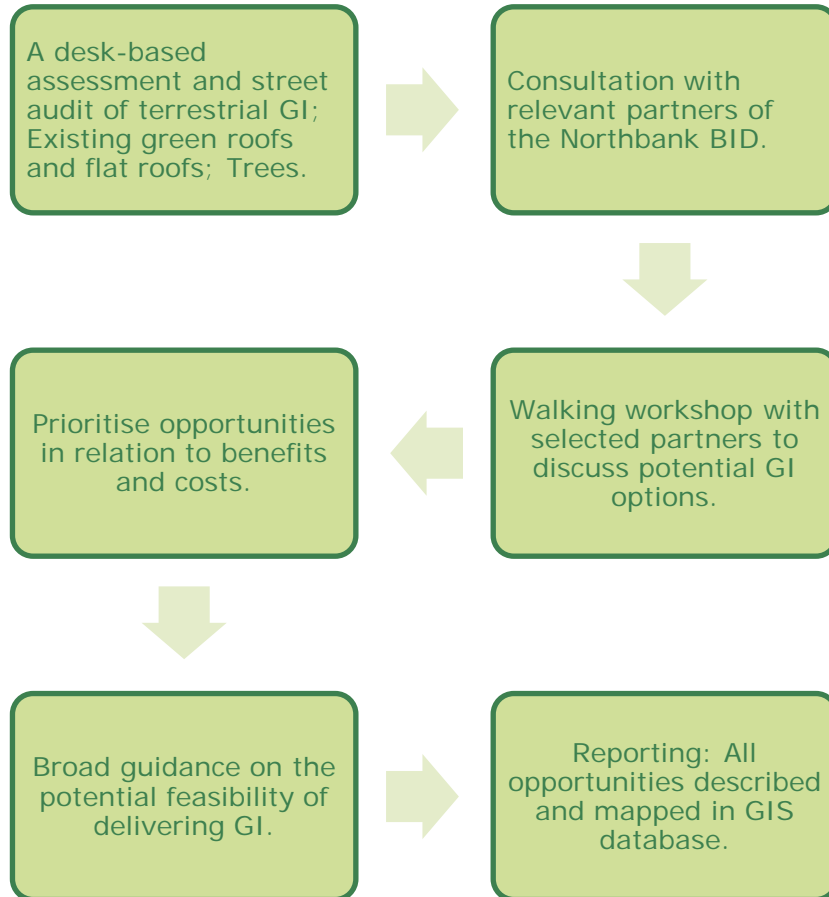
 Northbank

Map Scale @ A3:1:4,500



1.29 The GI audit process comprised a number of elements, to ensure that all existing assets and potential opportunities were identified. The process is outlined in **Figure 1.2** below:

Figure 1.2: Audit approach



Man relaxing outside the National Gallery



Even small green spaces can attract wildlife

2 Environmental Context & GI Audit Results

Study area

- 2.1 The study area is located in the City of Westminster in central London, shown in **Figure 1.1**; the Northbank BID site covers an area of around 50 hectares (0.5 km²). Existing green spaces are indicated in **Figure 2.1**.

Character and evolution of the area

- 2.2 The evolution of the Northbank area centred on the Strand, the ancient processional route between the cities of London and Westminster. The river was historically the focus for a series of palaces of Royalty and the nobility, and this legacy has continued to shape the character and form of the area to this day (Somerset House, Savoy, Adelphi, last remnants of York House).
- 2.3 In contrast, the areas to the north of the Strand were medieval slums on the city fringe; a number of these survived the Great Fire and into the early 20th century before being swept away by the monumental urban development at Aldwych. The development at Aldwych reflected a large scale pattern of grand civic schemes in the area in the late 19th and early 20th centuries, notably along the Victoria Embankment, which was a key part of the 19th century public health and transport infrastructure initiative. This changed forever the riverside character of the area and the functional and visual relationship of remaining historic palaces and legacy buildings, to the river. As such the area is not only incredibly rich in historic and architectural assets, but also one of a dynamic and ever changing character, and of considerable ambition. This continues to the present day, with such proposals as Heatherwick's Garden Bridge and the Cycle Cross Route proposed for the Victoria Embankment. The Northbank Public Realm Study (2014) proposes

to remove the bund at the north and west of the Gardens to provide level access and enhanced views into the garden. The future of Victoria Embankment Gardens could be an exciting urban park, a transformation such as that witnessed at Bryant Park, New York (image overleaf).

- 2.4 A more detailed portrait of the area's character and historical evolution is presented in **Appendix 2**. In 2014 the Strand incorporates little green infrastructure as can be seen in the image overleaf. Further detail on character areas are highlighted in **Appendix 3: Supporting information from Northbank Public Realm Study**.



Victoria Embankment c. 1890⁵

Wildlife and biodiversity

- 2.5 Despite the dense urban character of the study area, there are a few sites with significant biodiversity value (see **Figure 2.1**). The sections of Victoria Embankment Gardens within BID area are

⁵ Old UK Photos in High Resolution, 2014. *London Thames Embankment c. 1890*. (image online). Available at: <http://www.oldukphotos.com/london_famous_landmarks_page2.htm> [Accessed 13 March 2014]

designated as a Site of Importance for Nature Conservation (SINC) for their contribution to wildlife at a local level. The Gardens also provide an important green space in the London context. The Victoria Embankment Gardens Management Plan 2008-2013⁶ highlights there is further potential for further native wildlife friendly planting. The Northbank BID area is also interspersed with attractive historic squares and smaller gardens such as the nationally important and iconic Trafalgar Square, and on a much smaller scale the Savoy Churchyard, which offer important pockets of sanctuary for a range of wildlife, particularly birds and insects.

2.6 The north eastern part of the study area is categorised in Westminster's Core Strategy as an 'area of wildlife deficiency'.



Bryant Park, New York: sensitive restoration of original design plus enhanced permeability created a far more vibrant space.

Open space, recreation and 'greenways'

2.7 The study area comprises of two parks and gardens and two squares as shown in **Figure 2.1: Existing Green Infrastructure**. Although there are a number of large parks and open spaces within the wider area, the combination of residents, employees and visitors to the area means that there is heavy use of green spaces and pressure on the existing open space resource. Further details on the existing open spaces are highlighted in **Appendix 3: Supporting information from Northbank Public Realm Study**.

2.8 **Figure 2.1** identifies the Transport for London (TFL) Greenways which bisect the Northbank BID area across Northumberland Avenue in the south western portion connecting Trafalgar Square and Pall Mall in the north and the South Bank. These routes are designed for safe leisure including cycling and walking so their continued urban greening is desirable.

⁶ City of Westminster, 2008. *Victoria Embankment Gardens Management Plan 2008-2013* [pdf] City of Westminster. Available at: <http://transact.westminster.gov.uk/docstores/publications_store/Victoria%20Embankment%20Gardens%20Management%20Plan.pdf> [Accessed 12 March 2014].



The Strand in 2014

Climate change adaptation

- 2.9 Situated close to the heart of London, Northbank is vulnerable to a range of climate change impacts, particularly urban heat island effects, wind tunnels and localised surface water flooding.
- 2.10 Evidence indicates that the urban heat island effect can result in ambient temperatures in central London being up to 10^{oC} higher than in the surrounding countryside.⁷ A study in Toronto, Canada indicated that during the summer months, the temperature on standard roofs exceeded 40^{oC} on over 44% of days, the temperature on green roofs never exceeded 40^{oC}, and only

exceeded 30^{oC} on 3% of days.⁸ There are a number of green roofs already installed in the area; however these represent a tiny percentage of the total area with potential to be greened. Opportunities to reduce urban heat island, wind tunnel and surface water flooding effects should be prioritised, in order to create a more comfortable and climate-proofed environment for residents and workers. Trees and green spaces also contribute to the dispersion and absorption of air pollutants.

Air quality

- 2.11 Parts of the study area which suffer from particularly poor air quality, are shown in **Figure 2.2: Air Quality**. Nitrogen dioxide (NO₂) is a key indicator of poorer air quality, caused mainly by traffic. It can be seen that the key transport routes including Aldwych, Kingsway, Strand, Waterloo Bridge, Northumberland Avenue and Victoria Embankment has higher annual predicted Nitrogen dioxide levels so their greening could help alleviate the concentration of pollutants in the air.

Air quality funding

- 2.12 In February 2013 the Mayor launched the Air Quality Fund to help improve air quality in London. *“The fund will provide match-funding for boroughs and partners that produce innovative new schemes and projects designed to improve air quality. £6 million of funding will be initially available from 2013/14 to 2015/16, with the expectation this will continue to £20 million over the next 10 years. In order to access the Mayor’s Air Quality Fund boroughs will need to apply to become Cleaner Air Boroughs”.*⁹

⁷ GLA Website. Available at: <<http://www.london.gov.uk/lccp/ourclimate/overheating.jsp>> [Accessed 22 January 2014]

⁸ Dunnett, N. and Kingsbury, N. (2005) *Planting Green Roofs and Living Walls*.

⁹ GLA Website. Available at: <<https://www.london.gov.uk/priorities/environment/clearing-londons-air/mayors-air-quality-fund>> [Accessed 20 February 2014]



Green roofs can be integrated with solar panels

Flood risk

- 2.13 **Figure 2.3** shows that some areas have a higher flood risk, including the southern section of Kingsway, the vicinity of Somerset House, Ivy Bridge Lane and Savoy Place near The Adelphi. This is due in part to the concentration of the built structures and the amount of hard standing. The extent of hard surfaces in London and other urban areas means that during periods of heavy rainfall, surface water flooding can be an issue. This can damage property but can also affect the transport and economy in parts of London. This is exacerbated if heavy rainfall follows a period of low rainfall, as experienced by much of the UK in April 2012 and December 2013, when areas of Greater London experienced localised surface water flooding.
- 2.14 Trees provide a range of important climate change adaptation functions within an urban environment, including flood alleviation through water absorption, and local climate amelioration through cooling the air, providing shade and shelter from strong winds.
- 2.15 These functions are maximised when the trees are relatively mature, and when they are given adequate soil for rooting space. Most trees require an average of 1 to 2 cubic feet of soil volume for every square foot of tree crown area. Many urban trees

outside of parks are only allotted limited growing space, and this can mean that they do not reach full maturity or fulfil their potential.¹⁰

Drain London funding

- 2.16 Flood risk modelling through Drain London is currently being used to inform the delivery of a number of projects to demonstrate how surface water can be managed in a more sustainable way. This includes increasing green infrastructure and permeability in the city through programmes like Greening the BIDs. The GLA has used Drain London funding (originally from DEFRA) to support green infrastructure audits in central London Business Improvement Districts (BIDs). Applications of between £5,000 and £10,000 will be encouraged to assist in the implementation of projects. Grants will generally provide a minimum of 33% of the total project costs identified.

Pocket Parks Programme

- 2.17 Pocket parks are part of the Mayor's London's Great Outdoors, a programme which aims to enhance streets and squares across London. Pocket parks are defined as small areas of inviting public space (less than 0.4 hectares).¹¹ Grants of between £5,000 and £20,000 are available with a 100% match funding requirement; further details are provided in the Groundwork/Transform guidance note.

Existing green infrastructure

- 2.18 There is relatively little formal green space within the study area at present as shown in **Figure 2.1**, comprising 2.6 hectares (a little over 5%) of the total 50 hectares within the study area. All of the squares and gardens in the study area are under 1 hectare with the exception of Victoria Embankment Gardens which is 2.4ha. Our audit also identified 11 small green features with potential for enhancement, and these are highlighted in **Figure 2.1**.

¹⁰ Casey Trees (2008) *Tree Space Design: Growing the tree out of the box*.

¹¹ Groundwork/Transform, 2014. *Transform – Pocket parks Guidance Note* [pdf] Available at: <https://www.london.gov.uk/sites/default/files/Transform_PP_guidance_2014_v1_0.pdf> [Accessed 20 February 2014]

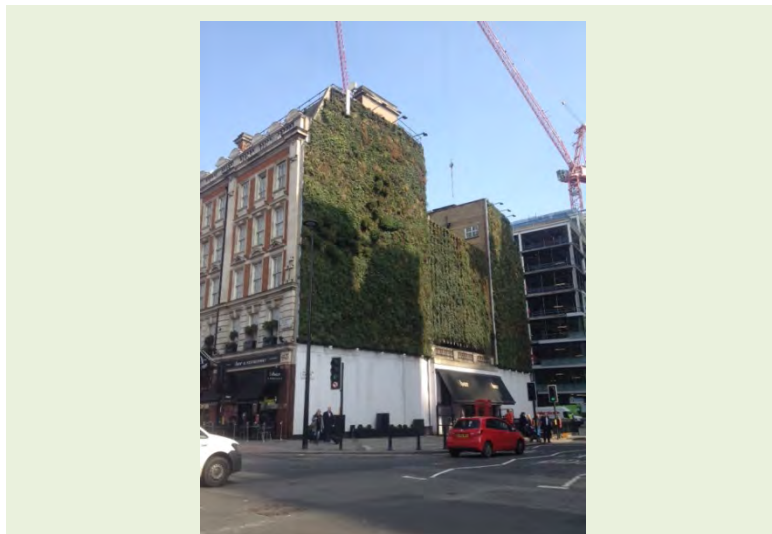
Green roofs and gardens

2.19 There is little data available on existing green roofs within the study area. **Figure 3.4: Green and Flat Roofs** identifies the existing green roofs, the larger roofs being a green roof (in part) on the following sites:

- The Adelphi
- No. 80, Strand
- The Savoy Theatre

Green walls

2.20 There are no green walls within the study area although situated to the south west alongside Green Park on Piccadilly there is one of the tallest green walls in London at the Athenaeum Hotel (image below).



Green walls can alleviate flood risk

Terrestrial green infrastructure

2.21 Throughout the study area and the vicinity there is a good range of smaller scale seasonal greening including hanging baskets, climbers, tubs and planters (images below) by local residents and

businesses. This should be encouraged in an uncluttered fashion for its cumulative green infrastructure benefits to the study area, large areas of which have little or no vegetation, as shown in **Figure 2.4: Vegetation Cover**.



Trees

2.22 **Figure 2.6: Public Realm Trees** details the public realm trees within the study area. Data on trees within the study area

indicates that there are 579 recorded trees, both street trees and those within parks and grounds in the public realm. This data has been extracted from the Westminster City Council Ezytreev tree management database. The data for the locations of the TfL trees along Victoria Embankment were supplied by John Parker (Transport for London (Central) Tree Officer).

2.23 Half of the trees have been inspected in 2013 and the other half was last inspected in 2010. It is possible therefore that the data provided on trees may not reflect all new recent street tree planting and all tree removals that have taken place around the study area. Our audit identified twelve trees that have been removed. There is currently no information on tree canopy size or age groups but there are a large proportion of trees which support a canopy of more than 10m particularly within the vicinity of the historic squares and gardens. Tree canopies are generally smaller along the more intimate streets such as Southampton Street as shown in **Figure 2.4**. This is likely to reflect the limited root space provided when planting trees. The current benefits of tree cover are therefore limited in these areas. **Table 2.1** below highlights seven species which form the majority (78%) of tree species found within the study area based upon the tree survey data supplied and on-site findings.

Tree spp.	Northbank BID – Tree No. TOTAL	%
Plane	348	60
Cherry	28	5
Maple	27	5
Holly	13	2
Privet	13	2
Oak	12	2
Maidenhair Tree	10	2

Table 2.1: Common tree species with number and % within study area



Trees create shade and shelter, but need to be managed appropriately.

- 2.24 Various streets throughout the study area had a good range of street tree planting. **Figure 2.4** details those sites with tree vegetation cover which appear to be centred on key historic boulevards and gardens notably Aldwych, Kingsway, Victoria Embankment and Victoria Embankment Gardens. There are fewer trees given the size of the area in the proximity of the Strand, Somerset House and Trafalgar Square.
- 2.25 Westminster City Council's Westminster Way – Public realm strategy 2011¹² highlights the context of the tree planting within the area. Victoria Embankment and Victoria Embankment Gardens are deemed as areas for enhanced planting potential whereas for the majority of the Northbank area tree planting should be

¹² Westminster City Council, 2011. *Westminster Way – Public realm strategy – Design principles and practice – Supplementary Planning Document* [pdf] Westminster City Council. Available at: http://transact.westminster.gov.uk/docstores/publications_store/Westminster_Way_Public_Realm_Strategy_Adopted_September_2011.pdf [Accessed 22 January 2014].

pursued in moderation as there are few areas suitable for further street planting.

Tree anomalies

- 2.26 The ground-truthing exercise identified that there were a number of roads where the tree data supplied did not reflect the trees identified on site. These are listed below, and their removal has been reflected in the figures in **Table 2.1**.
- Arundel Street – Six trees on the eastern side have been removed, possibly to aid the adjacent development.
 - Strand – Two trees have been removed outside no. 191, Strand at the Arundel Street junction.
 - Kingsway – Two trees appear not be present along the east side of Kingsway.

Tree pits/suitable locations

- 2.27 **Figure 2.6** identifies those potential tree planting locations still deemed suitable for tree planting after the on-site survey. Kingsway is one principal site which is deemed suitable for planting trees.

Heritage and Townscape

- 2.28 The study area is located within the central area of Greater London adjoining the ancient City of London. Located within the City of Westminster there is an interesting juxtaposition of old and new buildings and features. The designated heritage assets are identified in **Figure 2.5: Cultural heritage**.

Listed structures

- 2.29 The predominant features of the Northbank BID area include the following Grade I Listed structures of exceptional/international significance; Somerset House (image below), Royal Courts of Justice, Saint Mary-le-Strand Church, Saint Clement Danes Church and The National Gallery. There is a wide distribution of important historic buildings with 18 Grade I listed structures of exceptional interest, 35 at Grade II* of more than special interest and 137 at Grade II of national importance. These listed buildings are shown

in **Figure 2.5**. There are also a number of unlisted buildings of merit throughout the area.



Grade I Listed Somerset House

2.30 Today, the historic parts of the study area remain in contrast with a range of newer buildings, creating a diverse and interesting townscape. Therefore when carrying out the audit it was necessary to consider the options of installing green infrastructure features so as to avoid damaging the individual sensitive historic character of buildings within the street scene. This can be achieved through low level and sympathetic installations which are not out of scale and do not interfere with historic viewpoints or alter the historic fabric of listed buildings. Listed building consent to the fabric of the building and/or planning permission will be required in the case of alterations to listed buildings and its curtilage.

Conservation areas

2.31 There are four conservation areas which combine to cover the whole of the Northbank area. The GI opportunities identified have been selected as they can enhance the character of these conservation areas, and should not negatively affect the wider

setting, viewpoints and character of the conservation area (described below). In terms of the listed buildings within these areas, it's important not to alter their historic fabric where feasible.

2.32 Because many of the trees are within conservation areas and subject to Tree Preservation Orders, all future tree works can only be carried out with permission from the City Council.

2.33 The four conservation areas include:

- **Adelphi** - The Adelphi takes its name from the 18th century development of residential terraces by the Adam brothers (of which parts still survive) and is located immediately to the south of the Strand.¹³
- **Covent Garden** – The north western sections of the area encompass the southern parts of the Covent Garden conservation area. Covent Garden forms the area north of the ancient processional route of the Strand which supplied food for Westminster Abbey, succeeded by the later fruit, vegetable and flower market for which the area became famous.
- **Savoy** – This occupies the site of the medieval Savoy Palace and neighbouring riverside palaces, most of which were only lost to 19th century development, and Rennie's Waterloo Bridge of 1817, itself replaced by Gilbert Scott's design in the 1930s.
- **Strand** - this area is centred on the formal urban layouts of Aldwych and Kingsway. The area also includes a considerable amount of important ancient built fabric, such as Somerset House and other notable buildings such as G.E. Street's Royal Courts of Justice.

2.34 The Northbank BID area is included in The London View Management Framework. Key Metropolitan views are views towards the river front from Waterloo Bridge and the Hungerford Bridge. There are a number of local views throughout the area but there are no protected vistas.

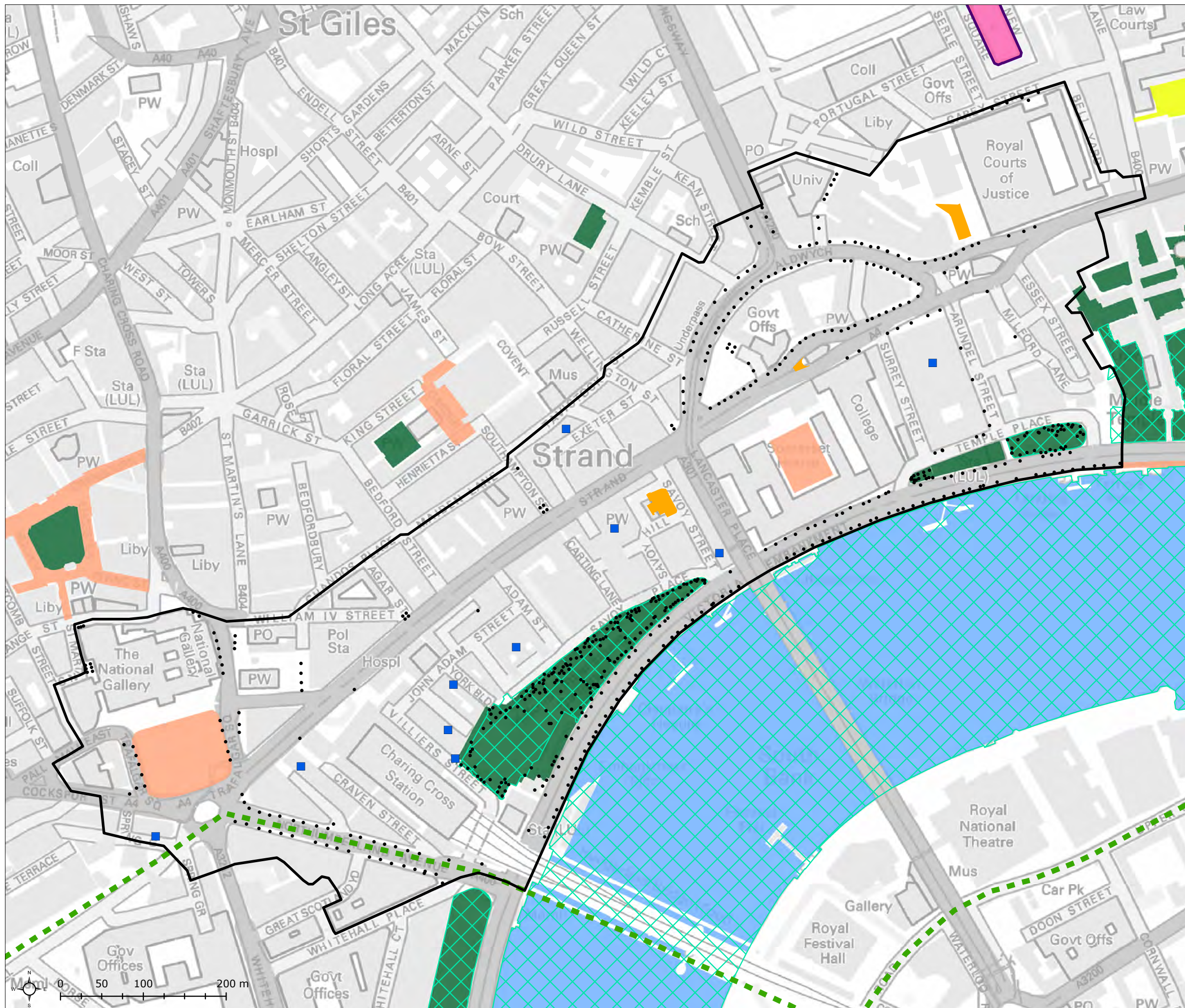
¹³ City of Westminster, 2003. *Adelphi Conservation Area Audit 31*. Available at: <http://transact.westminster.gov.uk/docstores/publications_store/Adelphi%20CAA%20SPG.pdf> [Accessed 27 February 2014].

Register of Parks and Gardens of Special Historic Interest in England

- 2.35 Victoria Embankment Gardens (image below) is publicly accessible and contains many listed structures. It is included as Grade II* on English Heritage's Register of Parks and Gardens of Special Historic Interest in England. The implications of this designation are outlined in **Section 3** but essentially English Heritage and the Garden History Society will require statutory input in to any proposals to the gardens. It is of national importance partly due to the associations with Bazalgette's large civil engineering project that included the reclaiming of riverside for sewers, highway access and underground railway tunnels in the 1860s. The formal design of the gardens was created by Alexander McKenzie and the site has since been popular for erecting memorials and the York House Water Gate (c. 1626).



Grade II* Listed Victoria Embankment Gardens



Northbank Green Infrastructure Audit

Figure 2.1

Existing Terrestrial GI Assets

- Northbank
 - Existing green roofs
 - TfL Greenways
 - Public realm trees
 - London Square
 - Site of Importance for Nature Conservation
 - Existing green open space identified during audit*
- GiGL open space by PPG17 category**
- Amenity
 - Civic spaces
 - Green corridors
 - Other
 - Parks and gardens

*Not identified in GiGL mapping

Map Scale @ A3:1:4,500





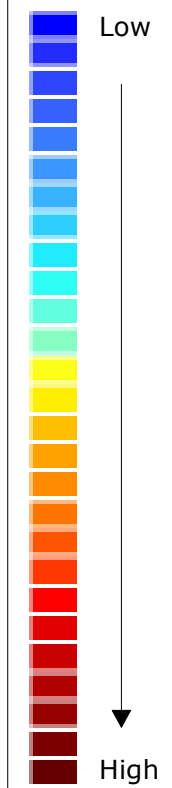
Northbank Green Infrastructure Audit

Figure 2.2

Annual Nitrogen Predicted for 2015

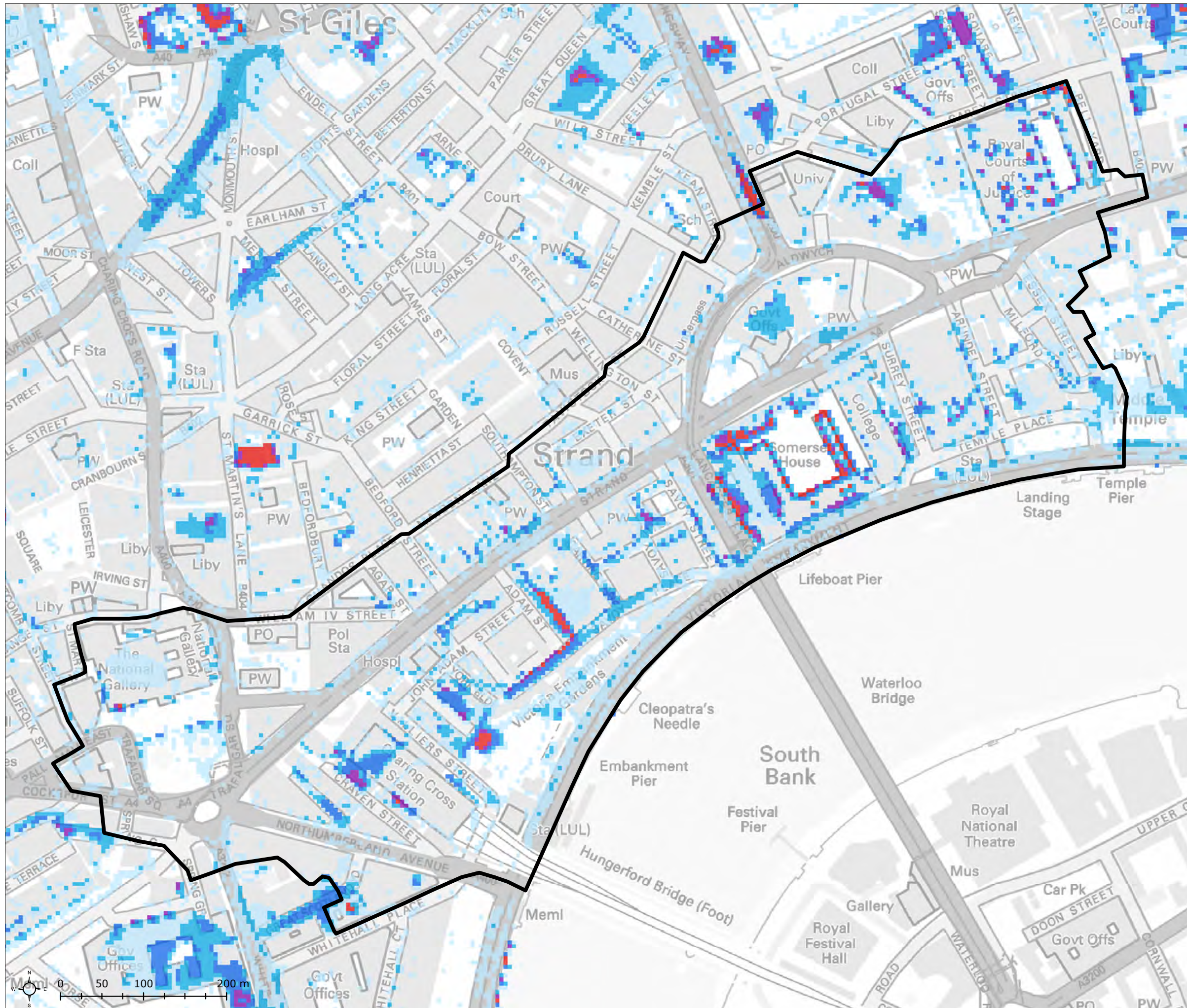
Northbank

NO2 annual mean 2015



Map Scale @ A3:1:4,500





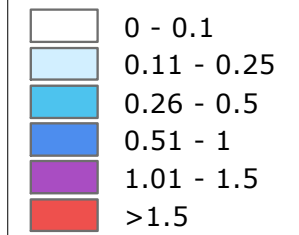
Northbank Green
Infrastructure Audit

Figure 2.3

Flood Risk Assessment
(Drain London)

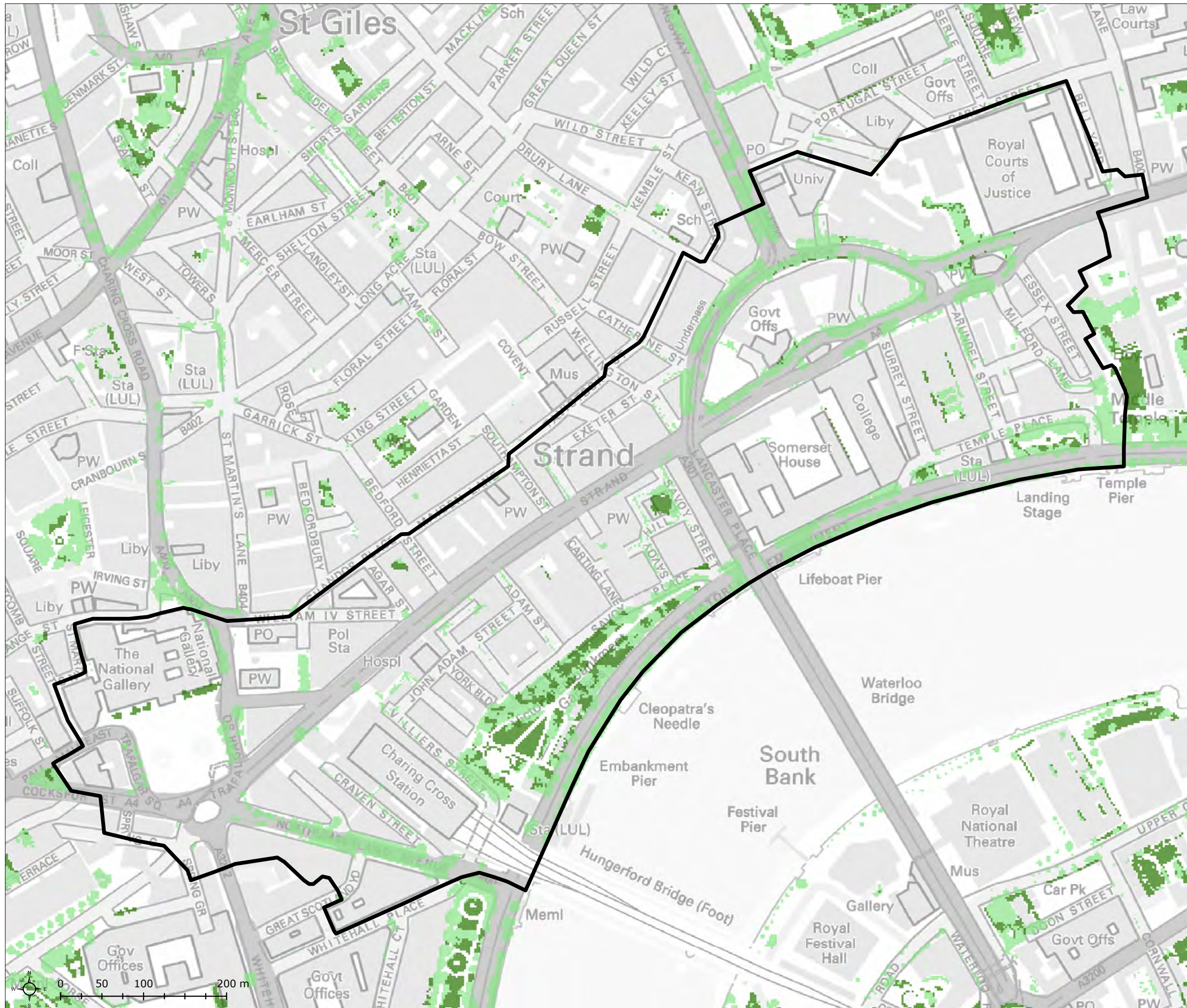
Northbank

100cc flood depth (m)



Map Scale @ A3:1:4,500








Northbank Green Infrastructure Audit

Figure 2.4

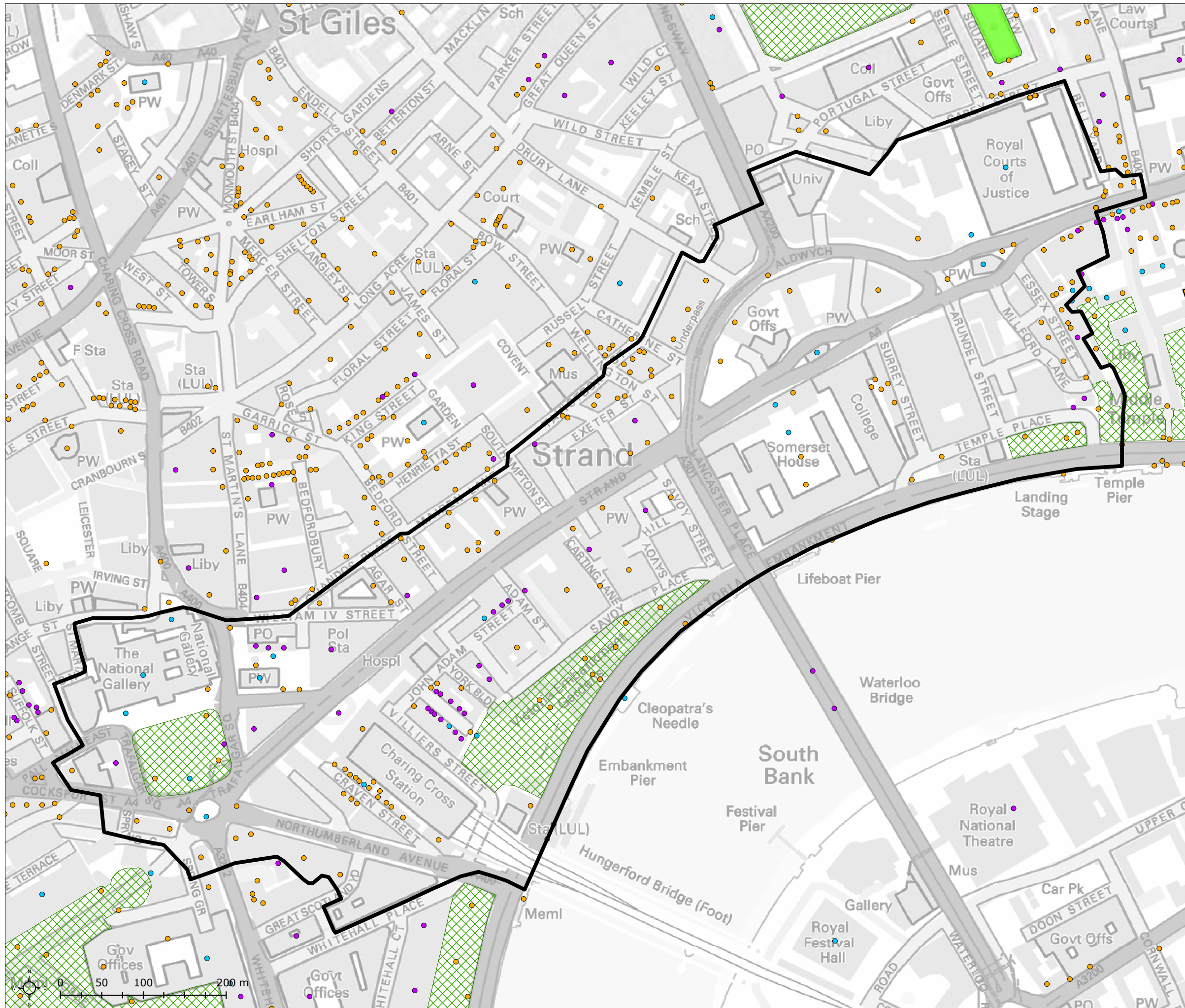
Vegetation Cover

-  Northbank
-  Trees
-  Low lying vegetation (<2.5m above ground level)

Vegetation cover data produced by The GeoInformation Group for the GLA

Map Scale @ A3:1:4,500












Northbank Green Infrastructure Audit

Figure 2.5

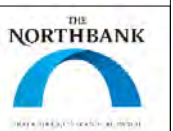
Designated Heritage Assets

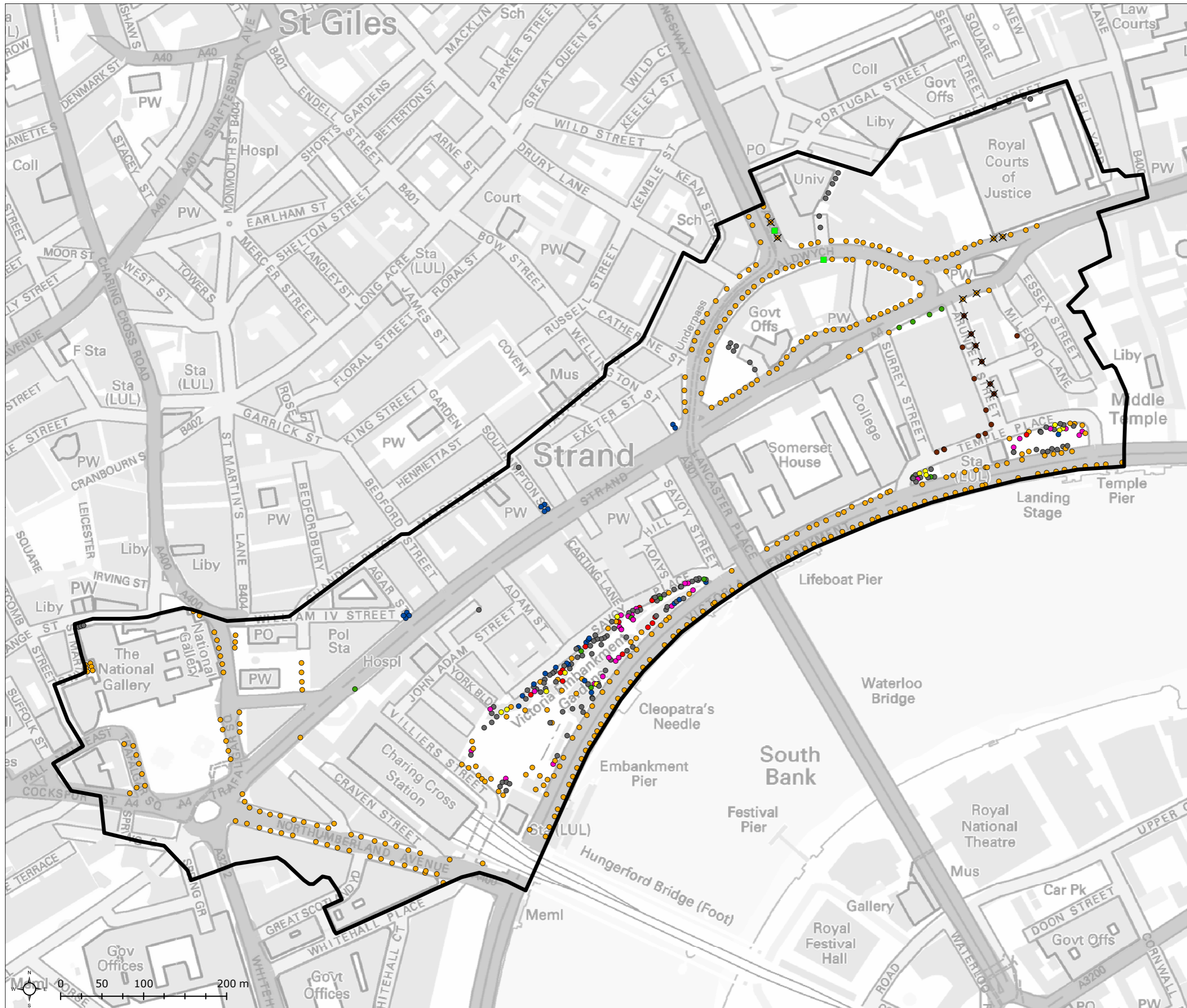
-  Northbank
-  Registered Park and Gardens
-  Scheduled Monuments
-  London Square

Listed Building grade

-  I
-  II
-  II*

Map Scale @ A3:1:4,500





Northbank Green Infrastructure Audit

Figure 2.6

Public Realm Trees

Northbank

Common name

- Plane
- Cherry
- Maple
- Maidenhair Tree
- Holly
- Privet
- Oak
- Other
- Vacant tree pit
- × Trees that have been removed

Map Scale @ A3:1:4,500



3 Key Opportunities

- 3.1 This section of the report outlines the key opportunities for green infrastructure within the Northbank area (figure reference in brackets). These have been prioritised as a result of consultation with the BID, as well as an informal review of the potential benefits that will be delivered.
- 3.2 The opportunities listed below are considered to be deliverable in the short term, are highly visible within the Northbank area, and will help to enhance the experience of pedestrians and cyclists visiting and passing through Northbank.
- 3.3 The GI opportunities by type are identified in **Figure 3.1** and **Figure 3.2** indicates the anticipated ease of deliverability for each opportunity. Useful information from the Northbank Public Realm Study on 'lost spaces' and 'key spaces' which have the potential to be restored to enhance the public realm is provided in **Appendix 3**.

Key opportunities in Northbank

- 3.4 The following sites have been identified as priorities for delivering GI improvements in Northbank (further details follow):
- Embankment Station
 - Victoria Embankment Gardens
 - Savoy Gardens
 - Strand
 - Temple Station
 - Hungerford Railway Bridge
 - Victoria Embankment and Cycle Cross Route
- Street trees
 - Junction of Strand/William IV Street
 - Junction of Strand/Southampton Street
 - Green walls along the Strand
- Embankment Station (43 and 44)**
- 3.5 Embankment Station is a key gateway to Northbank, which is currently undergoing refurbishment. The opportunity for greening at this location would provide a positive visual impact to those in the bustling and historic Villiers Street or the elevated footway which connects Charing Cross Station and Victoria Embankment.
- 3.6 There is potential to create a green wall along the northern elevation of the foundations to the Hungerford Bridge adjacent to Embankment Station. This will enhance the appearance of the area and create a more welcoming approach. The plant species will have to be shade tolerant. The living wall could reflect the floristic diversity of the nearby Victoria Embankment Gardens. Key partners may include Transport for London, adjacent businesses and Westminster Council.
- 3.7 There is also potential for installing a green roof on Embankment Station, which is predominately flat. The treatment of the roof would need to respond to the building and its scale and to emphasise connections between the new proposed green wall and Victoria Embankment Gardens. There would be visual benefits in terms of screening the equipment located on the roof, and encouraging wildlife with nectar rich planting such as lavender.
- 3.8 Structural surveys and engineer support would be required to assess the feasibility and scale of proposed works in implementing sufficient foundations for planting.

Victoria Embankment Gardens (1 and 18)

- 3.9 Victoria Embankment Gardens is a Grade II* Registered Park and Garden of Special Historic in England and is at the heart of the Northbank area. There is a need to reinforce the gardens heritage in a number of ways which will benefit both the users of the garden and its wildlife. A conservation management plan and accompanying management and maintenance plan would help to secure its preservation, conservation and ongoing management. A useful comparable case study would be the restoration of Russell Square by LUC. Set in the heart of Bloomsbury, the square was originally designed by Humphry Repton in 1801 for the 5th Duke of Bedford. Today the square is Grade II listed and included on the English Heritage Register of Historic Parks & Gardens. Further details of the project and the nearby Gordon and Woburn Square Gardens are provided in **Appendix 4**.
- 3.10 There is an opportunity to level the southern entrance to improve connectivity, access (including disabled access) and visual appearance; there could also be access points from the north, with some improvements to the eastern entrance. Gates and railings could be in a more cohesive and welcoming style. Improving and increasing groundcover planting could reduce weeds and water loss and enhance appearance. There is an opportunity to cut back leggy shrubs to a more compact and balanced form (predominately non-native dominant evergreen varieties) which currently darken the gardens and obscure views between the gardens and adjacent historic buildings. Nectar rich native shrub varieties should be planted and more natural corners could be created with long grass and dead wood in more informal and secluded areas to encourage biodiversity. The turf is currently experiencing wear and some waterlogging so renovation/reseeding are suggested.
- 3.11 The proposed café extension and refurbishment could provide further opportunity for small scale greening in terms of planters and green trellis/screening for visual improvement. An image of the open formal park in 2014 is shown below and suitable plant species which could complement its historic design and benefit wildlife follow.



A view across the formal lawns towards Charing Cross Station and the York House Water Gate

Proposed additional plant varieties for Victoria Embankment Gardens that are beneficial for wildlife and/or native

- *Dryopteris filix-mas* (native)
- *Carex elata* 'Aurea' (native)
- *Achillea millefolium* (native)
- *Campanula glomerata* 'Superba' (native)
- *Digitalis purpurea* 'Alba' (native)
- *Euphorbia amygdaloides* var *robbiae* (native)
- *Helleborus argutifolius* (native)
- *Iris foetidissima* (native)
- *Cornus sanguinea* 'Midwinter Fire' (native)
- *Rosa canina* (native)
- *Sambucus nigra* 'Black Lace' (native)
- *Viburnum opulus* 'Compactum' (native)
- *Waldsteinia ternata*
- *Hedera helix* 'White Ripple'
- *Lonicera periclymenum* 'Serotina'
- *Deschampsia cespitosa* 'Bronzeschleier'
- *Acanthus hungaricus*
- *Aquilegia vulgaris* alba
- *Penstemon* 'Apple Blossom'
- *Sedum telephium* 'Purple Emperor'

- 3.12 The Garden History Society and English Heritage should be engaged in this opportunity, due to being a Grade II* registered landscape. Other potential partners include The Association of Gardens Trusts, the London Parks and Gardens Trusts and the local Neighbourhood Forum. Potential constraints include the site being a registered park and garden and the tube network beneath.

Savoy Chapel Gardens (45)

- 3.13 Savoy Chapel Gardens is a small, well managed green space adjoining the Savoy Chapel, on Savoy Street. It is currently not accessible for the public, although there is some visual access through the gates. Opening this space for public access during daylight hours would create an appealing green space for use by employees, residents and visitors to the area, within easy reach of Strand, an area which lacks green spaces for people. Small adaptations to the management of the gardens could also enhance its value to wildlife, through a planting palette comprising nectar rich and native plants. The site is managed by the Duchy of Lancaster.



Queen's Chapel of the Savoy
Gardens

Strand

3.14 Key opportunities identified by the audit are as follows:

- There is potential for additional planting to enhance the setting of the two listed churches of the Strand (St Mary le Strand (G19) and St Clement Danes (G20)). This complements the proposals outlined in the Northbank Public Realm Study.
- Arundel Street/Strand junction (7) could be enhanced with low level splay shrub planting at wide footway junctions and adjacent to the toilet to enhance appearance and improve flood storage.
- Site 15 has potential for groups of new formal planters to the central reservation, to enhance visual amenity whilst still maintaining safe pedestrian flow. Subject to longer term discussion with TfL, a review of the vehicular space needed along the Strand corridor may however be a more effective way to secure urban greening with a review of the edge/interface between the traffic lanes and the pavement (potential focus for tree planting which would benefit pedestrians). This could also link to consideration of more generous planting to the two churches of the Strand, to emphasise their role as visual set pieces, and to create calmer and more serene spaces around them, befitting their architecture.
- Planters could be utilised adjacent to shop and building fronts in a proposed consistent palette of Northbank 'blue', white and silver with seasonal interest through bedding plants. These would not obstruct free flow of pedestrian movement and would be located in appropriate wider sections of footway to enhance the visual appeal and attract pollinators.





Planters with a consistent colour palette could be installed by businesses along Strand, as well as new trees.

3.15 Some seasonal plant varieties for use along the Strand are suggested below.

Proposed seasonal bedding plant varieties for the Strand

Spring/Summer

Ageratum 'Blue Champion'

Lobelia 'Cambridge Blue'

Cineraria 'Silver Dust'

Lobelia 'Riviera Midnight Blue'

Petunia 'Dark Blue'

Bacopa 'Blue Topia'

Bacopia 'Snowtopia'

Nemesia 'Nuvo Blue'

Nemesia 'Nuvo White'

Salvia 'Victoria Blue'

Nepeta glechoma hederacea

Lavandula augustifolia 'Hidcote Blue'

Autumn/Winter

Pansy Matrix White Blotch

Blue Polyanthus

White Polyanthus

Pansy Matrix True Blue

White Cyclamen

Bellis (white)

Euonymus 'Emerald 'n' Gold'

Ornamental Cabbages and Kale

Temple Station (38)

- 3.16 The Temple Station terrace will become an increasingly high profile focal point for the area of Northbank with the adjacent Garden Bridge proposals.
- 3.17 Prior to the implementation of the Garden Bridge there could be an opportunity for temporary greening in the form of planters on the terrace. Public benches integrated with planters and low maintenance groundcover and shrubs could be used to provide multi-functional benefits for seating, wildlife encouragement and visual improvement.
- 3.18 Transport for London and nearby Somerset House could be key partners alongside the local Neighbourhood Forum. Structural surveys and conservation architect input may be required depending on the scale of proposals.

Hungerford Railway Bridge (42)

- 3.19 The 19th century bridge foundations including the original brick pile buttresses of Brunel's footbridge are still in use, and are an important historical asset within the Northbank area. The site forms a key gateway to the area which currently suffers from poor air quality.
- 3.20 In addition to interpretation for visitors about the Brunel foundations, the Bridge could be sympathetically greened and brightened on its western-facing wall. Elevated planters could provide the opportunity for ornamental colourful shade resistant trailing plants such as ornamental Ivy alongside artistic lighting installations. The extent of urban greening should be limited to complement the formal classical architecture of the original Brunel bridge and to interpret its original footprint/width. Green wall planting would enhance the appearance of the wall. There would also be some degree of absorbance of pollutants.
- 3.21 Charing Cross Hotel, Network Rail and Transport for London could be key partners alongside the adjacent businesses. The shade and access to services may create some restrictions.

Victoria Embankment and Cycle Cross Route (1)

- 3.22 Victoria Embankment is a major feature within the Northbank area. For more than three centuries a plaque on Trafalgar Square has marked the traditional centre point of London from which all distances to the capital are measured but new mapping has now revealed that the capital's central point is situated approximately 900 metres to the east on a pavement on the Victoria Embankment next to the Thames near Somerset House.¹⁴ Useful information from the Northbank Public Realm Study on 'key spaces spaces: The Victoria Embankment' provides a review of ways to enhance the public realm within this vicinity in **Appendix 3**.
- 3.23 The area currently suffers from deteriorating benches and plinths. Northbank BID should engage TfL to ensure that additional green features are incorporated in detailed design of the new Cycle Cross Route. One approach could include installation of planters to the rear and sides of the elevated benches along Victoria Embankment, subject to conforming to the Equality Act and disability access for seating. There are also some areas of empty hard standing (currently litter prone) adjacent to Waterloo Bridge between rows of embankment walling. Planting at these locations would enhance the visual appearance and improve flood storage of the area which is currently lacking in colour and opportunities for reducing the hard standing. A variety of colourful bedding plants or less maintenance intensive/drought tolerant plants could be used at these locations.
- 3.24 At the junction with Temple Place (site 17) there is the opportunity to create low shrub bed visibility splay shrub planting (e.g. *Euonymus fortunei* 'silver queen') which could help improve appearance and increase flood storage in an area susceptible to flash flooding.
- 3.25 Restrictions could include the presence of services/utilities and the requirement for disabled access to proposed seating improvements.

¹⁴ London Evening Standard Website. Available at: <http://www.standard.co.uk/news/london/londons-real-centre-point-is-next-to-bench-on-the-victoria-embankment-by-the-thames-9381800.html> [Accessed 30 May 2014]

Street trees

3.26 Principal street tree opportunities identified by the audit are as follows:

- **Strand/William IV Street (3) and Strand/Southampton Street (5)** – existing tree pits could have further topping up with gravel or suitable mulch to prevent collection of litter between grille.
- **Intermittent tree planting along the Strand** to improve urban biodiversity and to enhance the visual appearance of the streetscape (14).
- **Exeter Street** – opportunities for some tree planting (small scale) along the western section of Exeter Street (east side of road) to enhance the visual link with the Strand, improve flood storage and encourage biodiversity (21).
- **William IV Street** – the audit has identified potential for some small scale tree planting along the northern side of the road to enhance its visual appearance and line/direct views towards the National Portrait Gallery (33).
- **John Adam Street, within the Adelphi** – potential scope for some small scale tree planting in more generous areas of the footway to help promote these side streets as attractive walking routes and to frame/guide views to the very fine surviving listed 18th century Adam buildings (part of their famous Adelphi scheme) at the eastern end of John Adam Street (27).
- **Aldwych** – enhancement of tree pits and their surfaces to improve visual cohesion and enhance their formal appearance/presentation (8).
- **Catherine Street** – potential for some tree planting (small scale) along wide north side of road alongside the Novello Theatre to encourage biodiversity and enhance the street's visual appearance (22).
- **Kingsway** – replacement of trees in empty pits (with appropriate larger grade tree stock) to enhance visual continuity and connectivity, plus shading and cooling (23).

Pocket Park at junction of William IV Street/Strand (3)

- 3.27 There is potential to create a small green space at the large area of paved space outside the Zimbabwean Embassy on the corner of the Strand and William VI Street. This is located in a part of the Northbank where there are very few spaces in which pedestrians can escape the noise and bustle of the Strand. Installation of planting and well-designed seating at this location could create a green space for people to spend time in, whilst also increasing habitat for pollinating insects and birds.
- 3.28 Public benches with integrated planters would provide an opportunity for planting shrubs whilst preventing potential damage at ground level due to the relatively high levels of foot fall in the area. Planting could comprise low level shrub planting to complement the existing trees. Scented, low maintenance and nectar rich varieties of plant could be used such as Thyme and Lavender. These would also encourage wildlife in to the area. Planting beds should be within the ground if feasible, to help with rainwater drainage during periods of heavy rainfall.
- 3.29 Any feature would need to be carefully designed to not create a barrier to the heavy footfall in this area, in discussion with TfL and Westminster Council. Other feasibility considerations include underground utilities.

Pocket Park at junction of Southampton Street and Strand (5)

- 3.30 This wide paved junction has potential for streetscape enhancements to create a small green feature just off the Strand. This is part of a key route between the main gateway to the area at Embankment and Charing Cross stations, and Covent Garden. These routes are a priority for public realm improvements to enable visitors to navigate more easily between the two. The benefits of creating a green feature here include enhanced visitor experience, and creation of habitat for pollinators and bird species.



Credit: London Borough of Camden



Credit: Cycle streets

3.31 The design of this site should protect the strategic view down Carting Lane to the Thames, and planting should not obstruct this view. There is currently a row of cycle racks at this location, which could be relocated, possibly through replacement of a car parking space on the highway as recommended by Sustrans¹⁵ and practiced in Cambridge (see image opposite). In addition, some London Boroughs, including Camden have been trialling planters which double up as cycle racks (see image opposite). Transport for London (TfL) and Westminster Council should be engaged in developing this opportunity .

Green walls along the Strand

3.32 There are several opportunities to create green walls within the Northbank, including on large buildings along the Strand. Green walls can have a dramatic and visible greening effect, and have the added advantage of screening unattractive buildings, whilst they can also provide habitats for wildlife. However, to be a sustainable greening feature it is also important that a watering system is employed that does not rely on mains water, for example using rainfall runoff (and thereby potentially reducing surface flooding), or using waste water such as from refrigeration units.

3.33 There is potential to install a number of green walls along this stretch of the Strand, which are designed to complement each other, creating continuity and re-branding the Strand as a green street. Key buildings include:

- 22 Strand (28 on map)
- 112 Strand (25 on map)
- Lyceum Theatre/ Burleigh Street (10)
- York Place (2 and 28)
- Corner of Savoy Street (25)
- The old Strand Underground Station Building (13)

¹⁵ Sustrans Website. Available at: http://www.sustrans.org.uk/sites/default/files/images/files/scotland/legacy_2014/Legacy-2014%20Cycle-Parking-Guidelines.pdf [Accessed May 2014]

3.34 The selection of specific building to support a series of green walls should be informed by the Northbank Public Realm Study in relation to improving legibility of the streetscape here, and green walls could be used as indicators to the primary/upgraded routes through this part of the study area. Building owners should be engaged to assess their interest in this opportunity, and structural assessments of all buildings should be completed to inform feasibility.

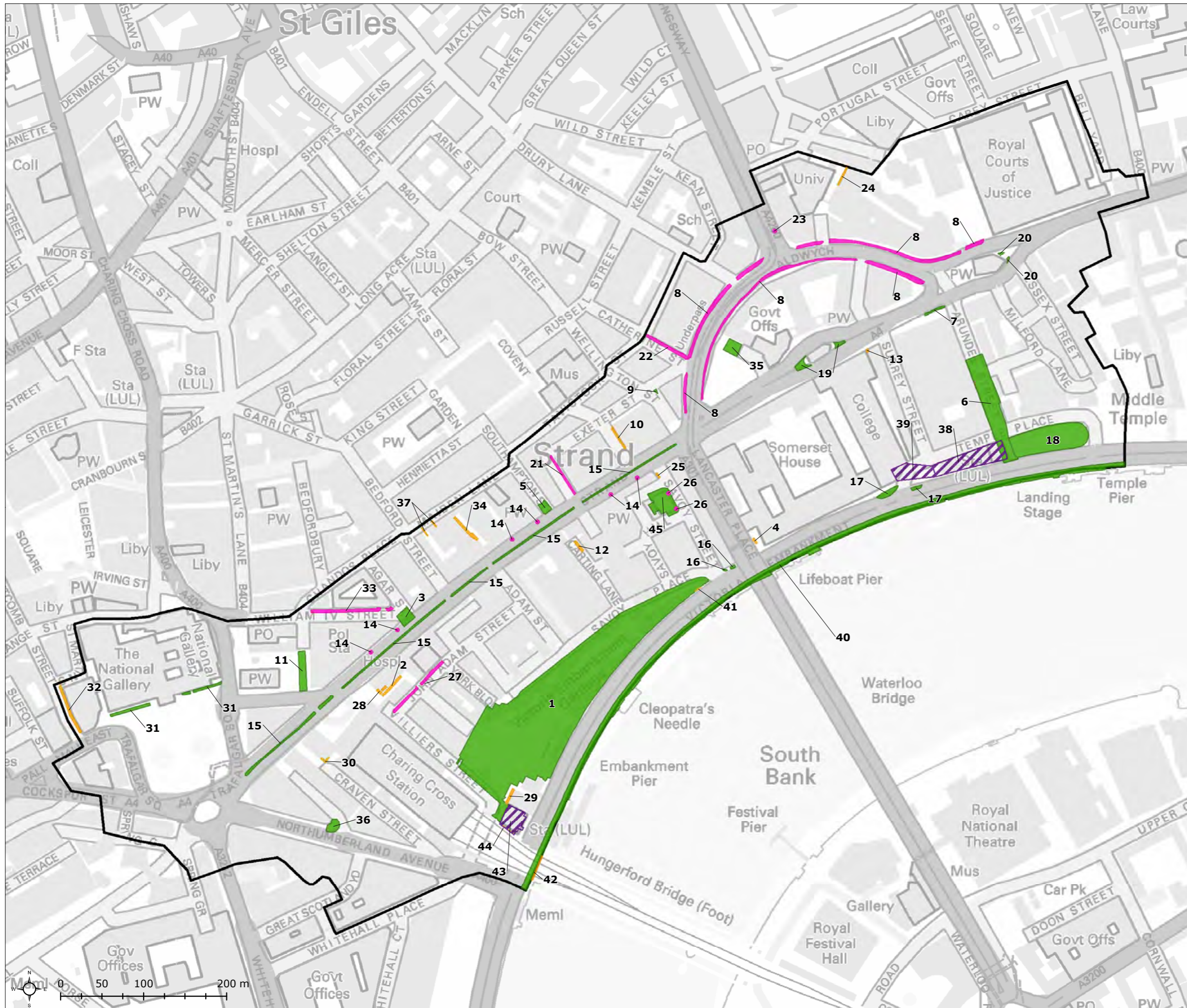


Attractive green wall created for the Chelsea Fringe 2014

3.35 The most economical way of achieving a green wall is with climbing plants, which could cost approximately £50 per m²; whilst the alternative is to install a 'modular green wall', where plug plants are established within a vertical growing system. The latter is a more expensive option with a more immediate effect, and costs approximately £400 per m². Important considerations when planning green walls are the aspect (north-facing walls need less maintenance and use less water than south-facing walls) and having a nearby water source, preferably harvested greywater or rainwater. For modular systems it is important to confirm with a structural engineer that the wall can support the weight and take any necessary fixings.

Green roofs

3.36 The audit included a desk-based audit of the roofs within the study area, the findings of which are outlined in **Figure 3.3**. The purpose of this audit was to highlight where existing green (or partially green) roofs are located, and to identify which roofs are flat, and therefore have potential for green roof installation. This data can be used to by the BID to consult with building owners, who might have an interested in green roof installation. These buildings can then be visited by a structural engineer, who can provide detailed guidance on the potential for green roof installation, the type of green roof that the building could support, and any potential challenges.



Northbank Green Infrastructure Audit

Figure 3.1

GI Opportunities - Type of Opportunity

- Northbank
- Type of opportunity**
- Ground-level
- Tree-related
- Green walls
- Roof-level

Map Scale @ A3:1:4,500





Northbank Green Infrastructure Audit

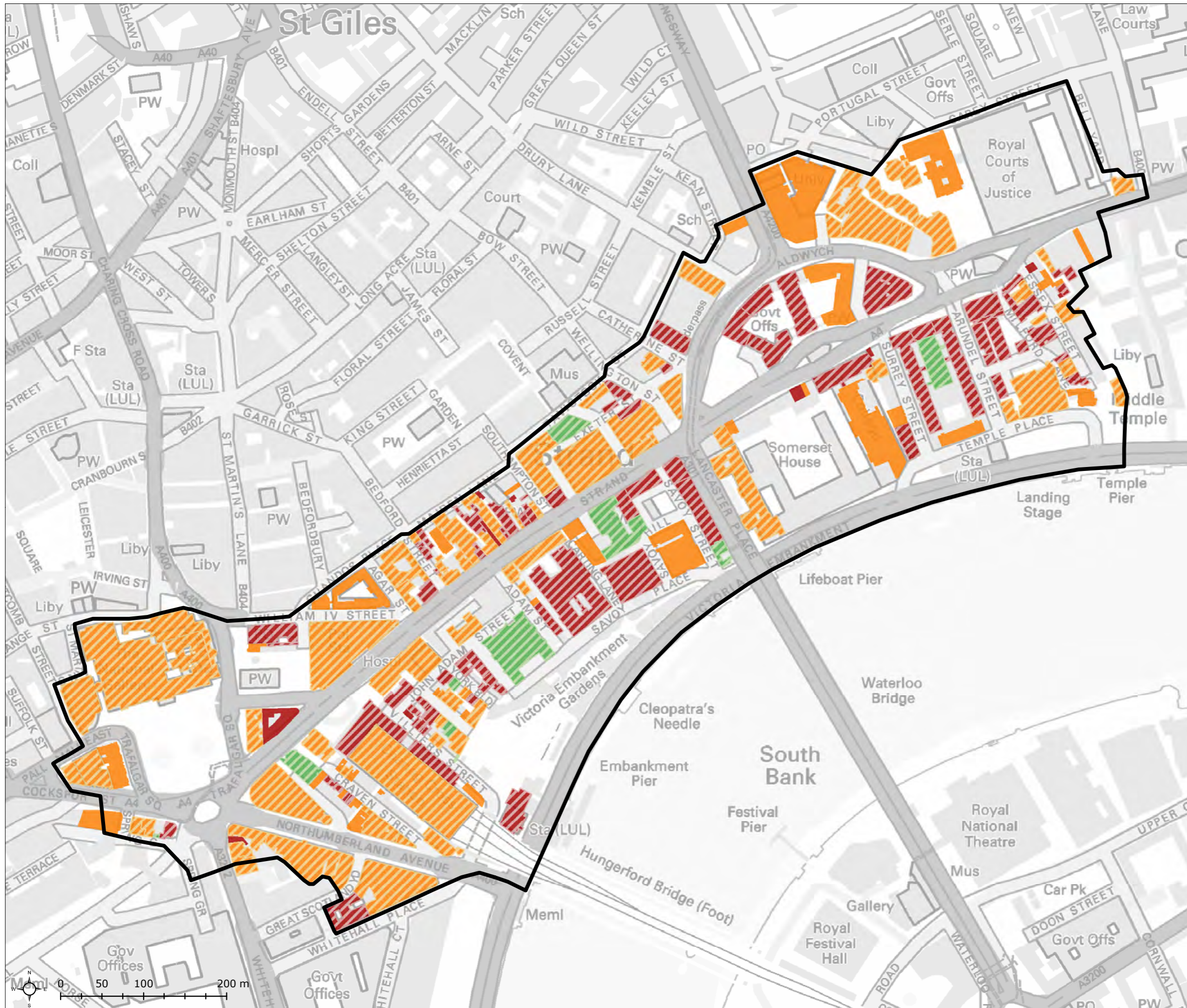
Figure 3.2

GI Opportunities - Ease of Delivery

- Northbank
- Easy/quick win
- Moderate
- Challenging

Map Scale @ A3:1:4,500











Northbank Green
Infrastructure Audit

Figure 3.3

Flat Roofs in Northbank

-  Northbank
-  Flat roof
-  Flat roof with obstructions
-  Partial flat roof
-  Partial flat roof with obstructions
-  Existing green roof (part only)

Map Scale @ A3:1:4,500



4 Next Steps

Consultation

- 4.1 Consultation has already commenced, and a range of key stakeholders have been engaged in this consultation process. To date, this includes Westminster Council, plus a number of local businesses. Communication with these key stakeholders should continue, and potential project partners should be identified. In order to take forward the priority GI projects, it will be important to consult the following additional groups and organisations:
- Residents and building occupiers – design of the green features.
 - Local schools and youth groups – engage in delivery of key opportunities.
 - Transport for London– consult on all opportunities affecting pavements and roads.
 - Westminster Council – continue to consult on all opportunities.

Additional surveys

- 4.2 For many of the identified opportunities, additional surveys will be required to determine the feasibility of delivering the opportunity at the site. For ground-level opportunities, Westminster Council should be engaged in this process, as they will hold data on underground utilities, land ownership and other issues. For some terrestrial proposals, surveys should be undertaken to identify the presence of soil or substrate under the existing hard surface, as well as any underground infrastructure. This will help to prioritise opportunities further, as some may be more easily delivered due

to the presence of appropriate soil/substrate, and absence of any underground infrastructure.

- 4.3 For building-related opportunities, such as green walls and roofs, a structural engineer should be engaged to provide an assessment of the additional loading that the structure can support. Westminster City Council should also be consulted on the potential requirement for planning permission for green wall and roof proposals and for listed building consent (where appropriate). Other important considerations when planning green walls are the aspect (north-facing walls need less maintenance and use less water than south-facing walls) and having a nearby water source, preferably harvested grey water or rainwater. For modular systems it is important to confirm with a structural engineer that the wall can support the weight and take any necessary fixings. It is also important that the living wall is separated from the structure by a waterproof barrier.

Design

- 4.4 Many of the smaller terrestrial proposals can be delivered without the need for design input from specialists. For the larger features however, design advice should be sought. Appropriate types of design guidance include:
- Planting advice, including species which are beneficial to wildlife. The Council may be able to provide this expertise in-house.
 - Horticultural/landscape expertise will be important for most features, in order to ensure that an appropriate suite of species is identified for the conditions.
 - Townscape assessment and design plans to ensure continuity with existing streetscape enhancement proposals.
 - Independent environmental consultants (as opposed to contractors and suppliers) should be consulted prior to installing green roofs, as they can advise on the creation and design based on the roof style and a range of environmental factors.

- 4.5 For the larger opportunities, such as roof gardens where public access is being introduced, and creation of new green spaces, it is also possible that planning permission may be required.
- 4.6 Anti-social behaviour can pose a threat to effective GI delivery. This should be considered in the design of all green features and associated street furniture. Maintaining visibility through or across a site is critical in this regard.

Delivery

- 4.7 Delivery of the priority GI opportunities should be coordinated by Northbank BID; however the project delivery may be taken on by project partners, including businesses, landowners, Westminster Council and TfL. It will be important to maintain contact with potential delivery partners, and partner with them in securing funding. It will also be invaluable to maintain the GI coordinator role to oversee the delivery of these GI opportunities, and to maximise the publicity associated with these projects. This approach has been very successful for the Victoria BID, where an Environment and Sustainability Manager has been in post for 3 years.
- 4.8 There are several existing funding sources to which Northbank BID could bid for funds, including the GLA's RE:LEAF fund, which is available from May 2014 and aims to fund 10,000 new trees in London; and the Clean Air Fund, which is designed to support investment that will improve London's air quality. Other funding mechanisms may be available for the delivery of community based environmental enhancements, including Lottery initiatives. Where enhancements will deliver direct benefits to specific companies, it may be appropriate for the BID to negotiate for the enhancement to be partly or wholly funded by these business partners. This will maximise the enhancements that can be delivered with other funding sources.

Quick wins

- 4.9 The audit identified a number of 'quick wins', where urban greening opportunities could be delivered quickly and easily,

without the need for further structural assessment, planning permission or significant investment. Many of these involve adapting the management of existing green spaces, and key opportunities include:

- Green wall at the Underground Strand Station building (13)
- Victoria Embankment Gardens (Temple Section) (18)
- Enhanced planting at the National Gallery (31)
- Space on Northumberland Avenue, opposite the Sherlock Holmes pub (36)
- Green wall at Waterloo Bridge Victoria Embankment exit (41)
- Queen's Chapel of the Savoy Gardens (45)

Climate adapted planting

- 4.10 The Met Office released a new report in March 2014, which supports the previous predictions from the UK Climate Impacts Programme (UKCIP) that the UK will experience hotter, drier summers, and warmer, wetter winters, as well as more 'extreme' weather events, such as the floods of February 2014, and June 2012.¹⁶ This unpredictable climate in the future highlights the need to design new green spaces to be adapted to extended periods of wet and dry weather. It is therefore important to ensure that the appropriate approach to planting is carried through to ensure that the cities green spaces are better adapted to the predicted effects of climate change. The information below summarises the key considerations:

Plant species

- Plant robust species and cultivars which can tolerate potential temperature and climatic extremes and increased use of parks.
- Plant a suite of both native and exotic species which are known to support London's wildlife (examples below).

¹⁶ Met Office Hadley Centre, March 2014. *Too hot, too cold, too wet, too dry - Drivers and impacts of seasonal weather in the UK* [pdf] Met Office Available at: <http://www.metoffice.gov.uk/media/pdf/4/8/Drivers_and_impacts_of_seasonal_weather_in_the_UK.pdf> [Accessed 22 January 2014]

Bee-friendly plants for Northbank

The plant species listed below are beneficial to pollinators, and suitable for use in Northbank:

- Aster (Aster spp.)
- Black-eyed Susan (Rudbeckia hirta or R. fulgida)
- Cinquefoil (Potentilla fruticosa)
- Echinacea (Echinacea purpurea)
- Escallonia (Escallonia spp.)
- Foxglove (Digitalis purpurea varieties, D. lutea, D. x mertonensis)
- French Marigold (Tagetes patula)
- Globe thistle (Echinops ritro)
- Sedum species
- Purple Verbena (Verbena bonariensis)
- Red valerian (Centranthus rubra)
- Russian Sage (Perovskia atriplicifolia)
- Soapwort (Spanoria officinalis)
- Sweet rocket (Hesperis matronalis)
- Teasel (Dipsacus fullonum)
- Tobacco plant (Nicotiana affinis)

- Promote planting designs and habitats which reflect the likely change in geographical range of some species.

- Plant trees and plants which are adapted to climatic change, particularly those deep-rooting species which can survive periods of drought, or species tolerant to waterlogging in areas liable to increased flooding.

Design of green features

- Where possible, incorporate natural water storage areas, such as swales/rain gardens, ponds and ditches within the urban context (image below).



Visualisation of a roadside swale or rain garden

- Include technologies such as rainwater harvesting and water-recycling to maximise water efficiency.
- Recognise the increasing value of large canopy trees to provide shading and evapo-transpirative cooling.

- Planting should be designed in keeping with the character of the park where possible, whilst maximising potential for biodiversity and contributing to the wider landscape character.

Management and Use

- Selection of species should take into account the predicted future climate and their management needs to negate the need for increased management costs.
- Maximise the potential for self-sustaining habitats (e.g. through structured planting with a canopy and under layer) to minimise soil moisture loss by frequent cultivation.
- Recognise that the growing season and the months during which parks are frequently used may extend into early spring and late autumn.
- Soils should be de-compacted to provide better infiltration of rainwater and reduce plant stress.

Maintenance and monitoring

- 4.11 Maintenance of the new GI features will be essential to ensure the provision of functions such as alleviation of surface water flooding, and also maintain their visual appearance. There should be a clear plan in place for maintenance prior to delivery, and the key partner organisations which will be responsible for maintaining the features should be agreed. As many of the identified opportunities are within the public realm, Westminster Council will have a key role to play in agreeing responsibility for management and maintenance. An 'adopt a feature' scheme could also be implemented, with local businesses and community groups encouraged to adopt and look after GI features installed within the vicinity as these features will provide local benefits. This could include, for example, watering street trees and planters, litter picking, and reporting any damage or vandalism.
- 4.12 In the case of green roofs and modular green walls, it is often advisable to recruit a specialist green roof/green wall maintenance contractor to undertake a maintenance check of the feature. This could take place on a yearly or twice yearly basis, and helps to ensure the plants are healthy and well maintained.
- 4.13 A monitoring approach should be agreed for the delivery of the identified opportunities. This should monitor the delivery of the GI features and the extent of green features across the BID. Monitoring will help inform priorities for future investment, and should seek to provide quantified information to enable the success and outputs of investment to be measured. Importantly this would require some baseline data against which to compare any changes. Monitoring the outputs will support the promotion of this innovative approach as an inspiring example of retrofitting GI into the inner city environment.

Appendix 1: GI Opportunity Proformas

Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths >1.5m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | | | | |
|-----------------------------|-------------------------------------|--|-------------------------------------|---------------------|-------------------------------------|
| Local park | <input type="checkbox"/> | Wetland/ standing water | <input type="checkbox"/> | Grass verge | <input checked="" type="checkbox"/> |
| Pocket park | <input type="checkbox"/> | Derelict building plot | <input type="checkbox"/> | Hedge | <input checked="" type="checkbox"/> |
| Garden or square | <input checked="" type="checkbox"/> | Highway infrastructure e.g. traffic island | <input type="checkbox"/> | Planter/ raised bed | <input checked="" type="checkbox"/> |
| Community garden/ Allotment | <input type="checkbox"/> | Street tree in pit | <input checked="" type="checkbox"/> | Green wall | <input type="checkbox"/> |
| Shrub plantings | <input checked="" type="checkbox"/> | Pavement or other hard surface | <input checked="" type="checkbox"/> | | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- | | |
|---|--|
| Mowing/grass cutting (please specify) <input checked="" type="checkbox"/> | Pruning or other tree maintenance <input checked="" type="checkbox"/> |
| Specify here: <input type="text" value="Amenity grass cut - 16 cuts approx."/> | No obvious signs of management <input type="checkbox"/> |
| | Appears unmanaged/overgrown <input type="checkbox"/> |
| | Productive use for food <input type="checkbox"/> |

Landcover / habitat types (tick box)

- | | | | |
|------------------------|-------------------------------------|---------------------|-------------------------------------|
| Amenity grassland | <input checked="" type="checkbox"/> | Building | <input checked="" type="checkbox"/> |
| Semi-natural grassland | <input type="checkbox"/> | Pavement/paved area | <input checked="" type="checkbox"/> |
| Woodland | <input type="checkbox"/> | Highway | <input type="checkbox"/> |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest levelling entrance to improve connectivity and visual appearance, there could also be further access points surrounding the perimeter to enter the site. Improving/increasing groundcover planting could reduce weeds and water loss and enhance appearance. Suggest cutting back leggy shrubs which obscure views (e.g. Cotoneaster) and consider planting nectar rich native shrub varieties. A more natural corner could be implemented with long grass and dead wood for biodiversity. The turf is currently experiencing wear and some waterlogging so renovation/reseeding suggested.

The proposed café extension and refurbishment could provide further opportunity for small scale greening in terms of planters and green trellis/screening for visual improvement.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Approximate cost (select one)

Any other notes/observations:

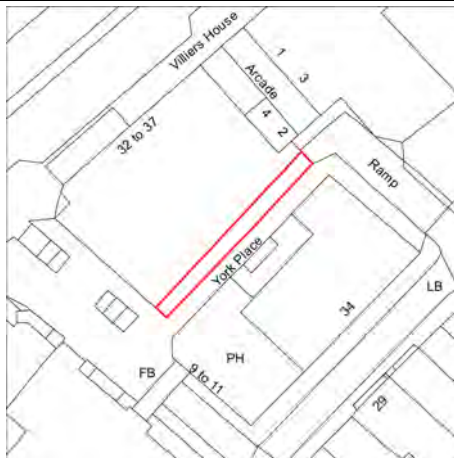
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.26 - 0.5m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|---|
| <input type="checkbox"/> Amenity grassland | <input checked="" type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input checked="" type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest creating a green wall to soften wall and footway and improve visual appearance. This can be enhanced with further lighting.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

Type: **Modular**

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Approximate cost (select one)

Any other notes/observations:

Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category:

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

<input type="checkbox"/> Local park	<input type="checkbox"/> Wetland/ standing water	<input type="checkbox"/> Grass verge
<input type="checkbox"/> Pocket park	<input type="checkbox"/> Derelict building plot	<input type="checkbox"/> Hedge
<input type="checkbox"/> Garden or square	<input type="checkbox"/> Highway infrastructure e.g. traffic island	<input type="checkbox"/> Planter/ raised bed
<input type="checkbox"/> Community garden/ Allotment	<input checked="" type="checkbox"/> Street tree in pit	<input type="checkbox"/> Green wall
<input type="checkbox"/> Shrub plantings	<input checked="" type="checkbox"/> Pavement or other hard surface	

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

Mowing/grass cutting (please specify)

Specify here:

Pruning or other tree maintenance

No obvious signs of management

Appears unmanaged/overgrown

Productive use for food

Landcover / habitat types (tick box)

<input type="checkbox"/> Amenity grassland	<input type="checkbox"/> Building
<input type="checkbox"/> Semi-natural grassland	<input checked="" type="checkbox"/> Pavement/paved area
<input type="checkbox"/> Woodland	<input type="checkbox"/> Highway

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Potential for creating low level shrub planting and Pocket Park environment to provide a space for relaxation, enhancing appearance and creating visual links along pivotal roads adjacent the Strand. Public benches with integrated planters would provide an opportunity for planting shrubs whilst preventing potential damage at ground level due to the relatively high levels of foot fall in the area. Scented, low maintenance and nectar rich varieties of plant could be used such as Thyme and Lavender. These would also encourage wildlife in to the area.

Create a new function / feature (tick box)

Wildflower meadow

Green wall (see below)

Street tree

Tree-(multiple)

Substantial window box

Shrub

Wetland features/rain gardens

Food growing: fruit trees/vegetables

Planters

Other

Other description:

Pocket Park

Green walls:

Aspect: North
East
South
West

Type: Modular

Potential area of greening:

Climbing plants:

Approx height (m):

Building owner/occupier:

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Underground services - water mains , gas, telecoms, sewers

Current uses , e.g. active use, transport infrastructure

Wayleaves (strip of land that allows access to underground service)

Listed buildings or other building constraints

Ease of delivery (select one)

Easy/quick win
Moderate
Challenging

Approximate cost (select one)

Less than £10k
£10-30k
£30-50k
More than £50k

Any other notes/observations:

Tree pits could have further topping up with gravel to prevent collection of litter between grille.

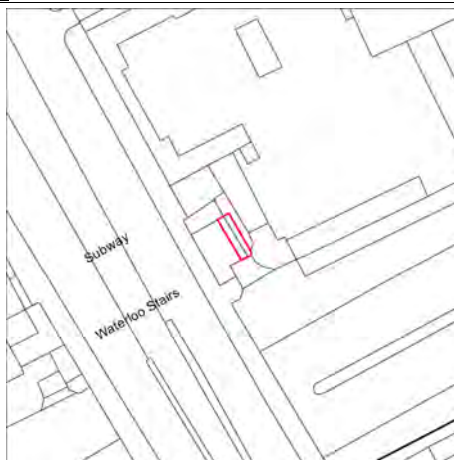
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 1.01 - 1.5m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|--|
| <input type="checkbox"/> Amenity grassland | <input checked="" type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Existing wall currently unattractive and with deterioration to paintwork. Suggest creating a green wall with planting stations to enhance appearance.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

8

Approx width (m):

8

Approx greening area: (sqm)

64

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

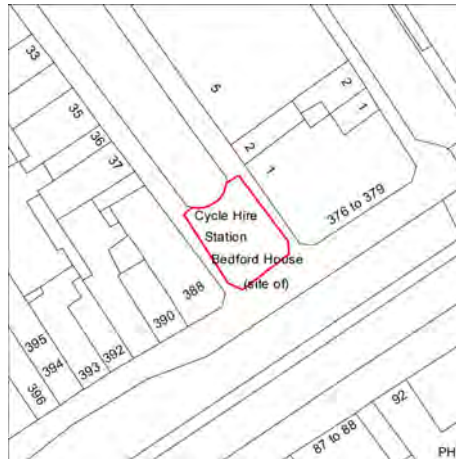
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input checked="" type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|---|
| <input type="checkbox"/> Amenity grassland | <input type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input checked="" type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Potential for creating low level shrub planting and Pocket Park environment to provide space for relaxation, enhancing appearance, flood storage and creating a visual link towards Victoria Embankment with Carting Lane opposite. Public benches with integrated planters would provide an opportunity for planting shrubs whilst preventing potential damage at ground level due to the relatively high levels of foot fall in the area which lead to Covent Garden. Scented, low maintenance and nectar rich varieties of plant could be used alongside more ornamental herbs (Purple Sage, Santolina) and vegetables (Red Stem Chard) to complement the adjacent café and market/retail culture. These would also encourage wildlife in to the area.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Pocket Park

Green walls:

Aspect:

North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

Tree pits could have further topping up with gravel to prevent collection of litter between grille.

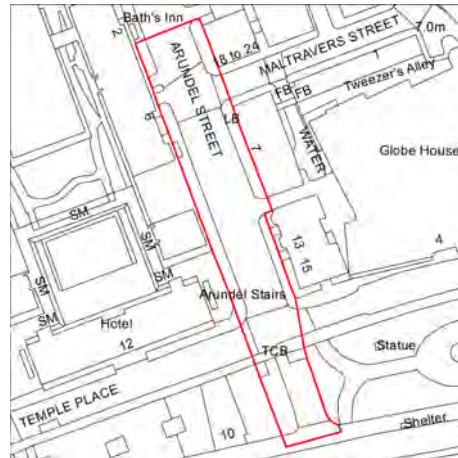
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 1.01 - 1.5m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input checked="" type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|---|
| <input type="checkbox"/> Amenity grassland | <input type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input checked="" type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input checked="" type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

The northern approach to the proposed Hetherwick Garden Bridge will be subject to detailed design development. This may provide an opportunity for integrating substantial greening features to integrate the bridge into the new streetscape, alongside the proposed Garden Bridge. Ideas could include formal tree avenues, more effective and enhanced use of the existing deck above Temple Station to visually connect the bridge along the embankment/enhance existing and proposed GI network. Due to the ongoing regeneration in this area, this is a longer term priority for the BID.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Approximate cost (select one)

Any other notes/observations:

Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category:

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

<input type="checkbox"/> Local park	<input type="checkbox"/> Wetland/ standing water	<input type="checkbox"/> Grass verge
<input type="checkbox"/> Pocket park	<input type="checkbox"/> Derelict building plot	<input type="checkbox"/> Hedge
<input type="checkbox"/> Garden or square	<input type="checkbox"/> Highway infrastructure e.g. traffic island	<input type="checkbox"/> Planter/ raised bed
<input type="checkbox"/> Community garden/ Allotment	<input type="checkbox"/> Street tree in pit	<input type="checkbox"/> Green wall
<input type="checkbox"/> Shrub plantings	<input checked="" type="checkbox"/> Pavement or other hard surface	

Condition of GI (select one)

Condition:

Current management (tick box)

Mowing/grass cutting (please specify)

Specify here:

Pruning or other tree maintenance

No obvious signs of management

Appears unmanaged/overgrown

Productive use for food

Landcover / habitat types (tick box)

<input type="checkbox"/> Amenity grassland	<input type="checkbox"/> Building
<input type="checkbox"/> Semi-natural grassland	<input checked="" type="checkbox"/> Pavement/paved area
<input type="checkbox"/> Woodland	<input type="checkbox"/> Highway

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest creating low level visibility splay shrub planting / ground cover plantings at wide footway junction and adjacent toilet to enhance appearance and improve flood storage.

Create a new function / feature (tick box)

Wildflower meadow

Green wall (see below)

Street tree

Tree-(multiple)

Substantial window box

Shrub

Wetland features/rain gardens

Food growing: fruit trees/vegetables

Planters

Other

Other description:

Green walls:

Aspect: North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win
Moderate
Challenging

Approximate cost (select one)

Less than £10k
£10-30k
£30-50k
More than £50k

Any other notes/observations:

Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.26 - 0.5m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input checked="" type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|---|
| <input type="checkbox"/> Amenity grassland | <input type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input checked="" type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest creating consistent tree pit surfaces with resin bonded aggregate (porous) or gravel with sufficient width and levels. This is to enhance appearance, tree health and path safety.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect: North
 East
 South
 West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

Current tree management to be assessed. Some tree pits have been tarmaced to the base of the tree which is generally not good practice and can adversely affect the health of the tree.

Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category:

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

<input type="checkbox"/> Local park	<input type="checkbox"/> Wetland/ standing water	<input type="checkbox"/> Grass verge
<input type="checkbox"/> Pocket park	<input type="checkbox"/> Derelict building plot	<input type="checkbox"/> Hedge
<input type="checkbox"/> Garden or square	<input type="checkbox"/> Highway infrastructure e.g. traffic island	<input type="checkbox"/> Planter/ raised bed
<input type="checkbox"/> Community garden/ Allotment	<input type="checkbox"/> Street tree in pit	<input type="checkbox"/> Green wall
<input type="checkbox"/> Shrub plantings	<input checked="" type="checkbox"/> Pavement or other hard surface	

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

Mowing/grass cutting (please specify)

Specify here:

Pruning or other tree maintenance

No obvious signs of management

Appears unmanaged/overgrown

Productive use for food

Landcover / habitat types (tick box)

<input type="checkbox"/> Amenity grassland	<input type="checkbox"/> Building
<input type="checkbox"/> Semi-natural grassland	<input checked="" type="checkbox"/> Pavement/paved area
<input type="checkbox"/> Woodland	<input type="checkbox"/> Highway

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest creating a pocket park area with level highway / footway surfaces and further shrub planting to enhance appearance and flood storage.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Pocket Park

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect: North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

Good pivotal viewpoints towards Waterloo Bridge, Strand, Aldwych and Exeter Street.

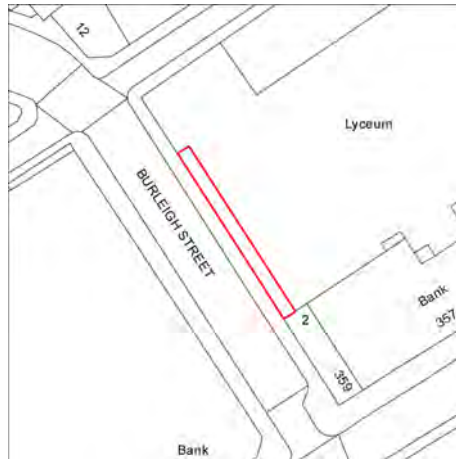
Northbank Green Infrastructure Audit

Site ID: 10 **Name/ location:** Lyceum Theatre/Burleigh Street

Survey date: 27/01/2014 **Surveyor:** S. West

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 200



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | | | | |
|-----------------------------|--------------------------|--|-------------------------------------|---------------------|--------------------------|
| Local park | <input type="checkbox"/> | Wetland/ standing water | <input type="checkbox"/> | Grass verge | <input type="checkbox"/> |
| Pocket park | <input type="checkbox"/> | Derelict building plot | <input type="checkbox"/> | Hedge | <input type="checkbox"/> |
| Garden or square | <input type="checkbox"/> | Highway infrastructure e.g. traffic island | <input type="checkbox"/> | Planter/ raised bed | <input type="checkbox"/> |
| Community garden/ Allotment | <input type="checkbox"/> | Street tree in pit | <input type="checkbox"/> | Green wall | <input type="checkbox"/> |
| Shrub plantings | <input type="checkbox"/> | Pavement or other hard surface | <input checked="" type="checkbox"/> | | |

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | | | |
|------------------------|--------------------------|---------------------|-------------------------------------|
| Amenity grassland | <input type="checkbox"/> | Building | <input checked="" type="checkbox"/> |
| Semi-natural grassland | <input type="checkbox"/> | Pavement/paved area | <input checked="" type="checkbox"/> |
| Woodland | <input type="checkbox"/> | Highway | <input type="checkbox"/> |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

Northbank Green Infrastructure Audit

Site ID: 11 **Name/ location:** Adelaide Street / Duncannon Street junction

Survey date: 27/01/2014 **Surveyor:** S. West

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 398



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | | | | |
|-----------------------------|--------------------------|--|-------------------------------------|---------------------|--------------------------|
| Local park | <input type="checkbox"/> | Wetland/ standing water | <input type="checkbox"/> | Grass verge | <input type="checkbox"/> |
| Pocket park | <input type="checkbox"/> | Derelict building plot | <input type="checkbox"/> | Hedge | <input type="checkbox"/> |
| Garden or square | <input type="checkbox"/> | Highway infrastructure e.g. traffic island | <input type="checkbox"/> | Planter/ raised bed | <input type="checkbox"/> |
| Community garden/ Allotment | <input type="checkbox"/> | Street tree in pit | <input checked="" type="checkbox"/> | Green wall | <input type="checkbox"/> |
| Shrub plantings | <input type="checkbox"/> | Pavement or other hard surface | <input checked="" type="checkbox"/> | | |

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | | | |
|------------------------|--------------------------|---------------------|-------------------------------------|
| Amenity grassland | <input type="checkbox"/> | Building | <input type="checkbox"/> |
| Semi-natural grassland | <input type="checkbox"/> | Pavement/paved area | <input checked="" type="checkbox"/> |
| Woodland | <input type="checkbox"/> | Highway | <input type="checkbox"/> |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Potential for creating low shrub planting and Pocket Park environment to provide a space for wildlife, relaxation, flood storage and creating visual links between architecture at Charing Cross and St-Martin-in-the-fields.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Pocket Park

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Approximate cost (select one)

Any other notes/observations:

Northbank Green Infrastructure Audit

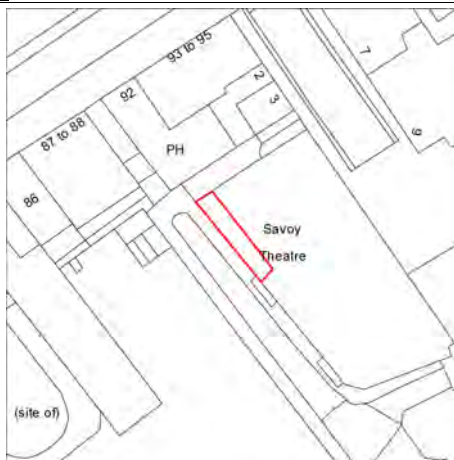
Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site:

Existing
Potential
Existing with potential for enhancement

Area of greening (sqm):



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.51 - 1m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition:

Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|---|
| <input type="checkbox"/> Amenity grassland | <input checked="" type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input checked="" type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

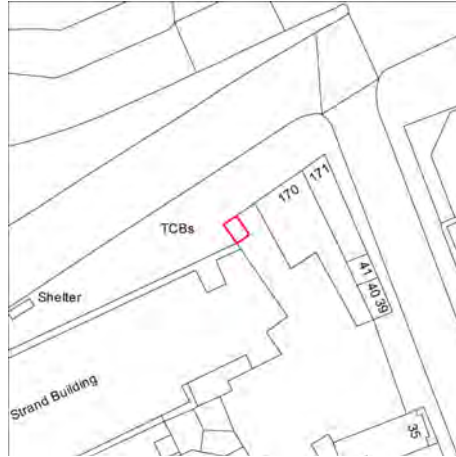
Northbank Green Infrastructure Audit

Site ID: 13 **Name/ location:** Strand Station building

Survey date: 27/01/2014 **Surveyor:** S. West

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 72



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Low risk

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

Local park <input type="checkbox"/>	Wetland/ standing water <input type="checkbox"/>	Grass verge <input type="checkbox"/>
Pocket park <input type="checkbox"/>	Derelict building plot <input type="checkbox"/>	Hedge <input type="checkbox"/>
Garden or square <input type="checkbox"/>	Highway infrastructure e.g. traffic island <input type="checkbox"/>	Planter/ raised bed <input type="checkbox"/>
Community garden/ Allotment <input type="checkbox"/>	Street tree in pit <input type="checkbox"/>	Green wall <input type="checkbox"/>
Shrub plantings <input type="checkbox"/>	Pavement or other hard surface <input checked="" type="checkbox"/>	

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

Mowing/grass cutting (please specify)

Specify here:

Pruning or other tree maintenance

No obvious signs of management

Appears unmanaged/overgrown

Productive use for food

Landcover / habitat types (tick box)

Amenity grassland <input type="checkbox"/>	Building <input checked="" type="checkbox"/>
Semi-natural grassland <input type="checkbox"/>	Pavement/paved area <input checked="" type="checkbox"/>
Woodland <input type="checkbox"/>	Highway <input type="checkbox"/>

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

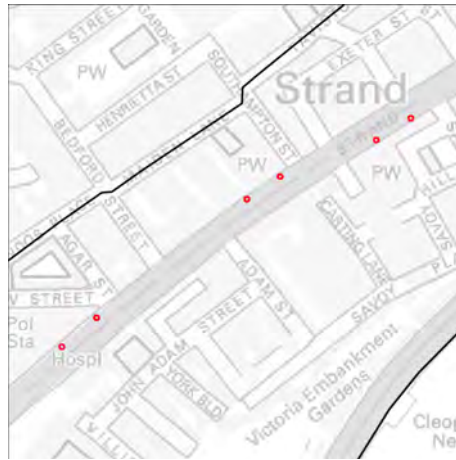
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.51 - 1m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|--|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input checked="" type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|---|
| <input type="checkbox"/> Amenity grassland | <input type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input checked="" type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest creating locations for small tree planting at either edge of intermittent laybys along Strand to improve appearance and encourage wildlife.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect: North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

Northbank Green Infrastructure Audit

Site ID: 15 **Name/ location:** Strand

Survey date: 27/01/2014 **Surveyor:** S. West

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 1211



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | | | | |
|-----------------------------|--------------------------|--|-------------------------------------|---------------------|--------------------------|
| Local park | <input type="checkbox"/> | Wetland/ standing water | <input type="checkbox"/> | Grass verge | <input type="checkbox"/> |
| Pocket park | <input type="checkbox"/> | Derelict building plot | <input type="checkbox"/> | Hedge | <input type="checkbox"/> |
| Garden or square | <input type="checkbox"/> | Highway infrastructure e.g. traffic island | <input checked="" type="checkbox"/> | Planter/ raised bed | <input type="checkbox"/> |
| Community garden/ Allotment | <input type="checkbox"/> | Street tree in pit | <input type="checkbox"/> | Green wall | <input type="checkbox"/> |
| Shrub plantings | <input type="checkbox"/> | Pavement or other hard surface | <input type="checkbox"/> | | |

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | | | |
|------------------------|--------------------------|---------------------|--------------------------|
| Amenity grassland | <input type="checkbox"/> | Building | <input type="checkbox"/> |
| Semi-natural grassland | <input type="checkbox"/> | Pavement/paved area | <input type="checkbox"/> |
| Woodland | <input type="checkbox"/> | Highway | <input type="checkbox"/> |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest positioning intermittent movable planters to prevent pedestrian crossing at inappropriate points along central reservation. These will also enhance appearance and encourage wildlife.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect: North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

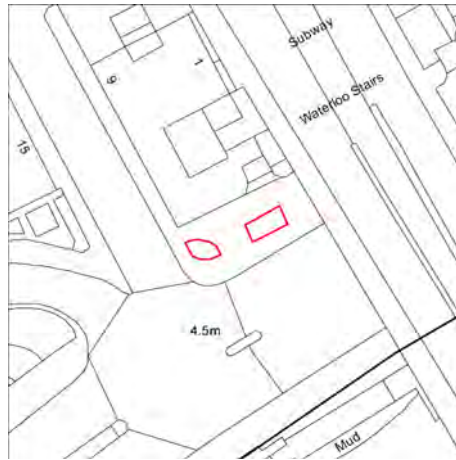
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|---|
| <input type="checkbox"/> Amenity grassland | <input type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input checked="" type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest creating low level visibility splay shrub planting / ground cover plantings at wide footway junction to enhance appearance and improve flood storage.

Create a new function / feature (tick box)

Wildflower meadow

Green wall (see below)

Street tree

Tree-(multiple)

Substantial window box

Shrub

Wetland features/rain gardens

Food growing: fruit trees/vegetables

Planters

Other

Other description:

Green walls:

Aspect: North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses , e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains , gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win
Moderate
Challenging

Approximate cost (select one)

Less than £10k
£10-30k
£30-50k
More than £50k

Any other notes/observations:

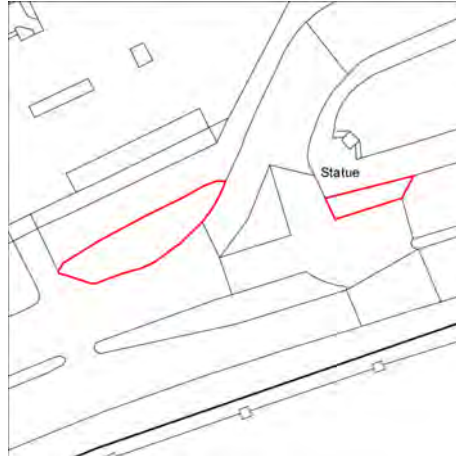
Northbank Green Infrastructure Audit

Site ID: 17 **Name/ location:** Victoria Embankment / Temple Place junction

Survey date: 27/01/2014 **Surveyor:** S. West

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 185



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | | | | |
|-----------------------------|--------------------------|--|-------------------------------------|---------------------|--------------------------|
| Local park | <input type="checkbox"/> | Wetland/ standing water | <input type="checkbox"/> | Grass verge | <input type="checkbox"/> |
| Pocket park | <input type="checkbox"/> | Derelict building plot | <input type="checkbox"/> | Hedge | <input type="checkbox"/> |
| Garden or square | <input type="checkbox"/> | Highway infrastructure e.g. traffic island | <input type="checkbox"/> | Planter/ raised bed | <input type="checkbox"/> |
| Community garden/ Allotment | <input type="checkbox"/> | Street tree in pit | <input type="checkbox"/> | Green wall | <input type="checkbox"/> |
| Shrub plantings | <input type="checkbox"/> | Pavement or other hard surface | <input checked="" type="checkbox"/> | | |

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | | | |
|------------------------|--------------------------|---------------------|-------------------------------------|
| Amenity grassland | <input type="checkbox"/> | Building | <input type="checkbox"/> |
| Semi-natural grassland | <input type="checkbox"/> | Pavement/paved area | <input checked="" type="checkbox"/> |
| Woodland | <input type="checkbox"/> | Highway | <input type="checkbox"/> |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest creating low level visibility splay shrub planting / ground cover plantings at wide footway junction to enhance appearance and improve flood storage.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect: North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

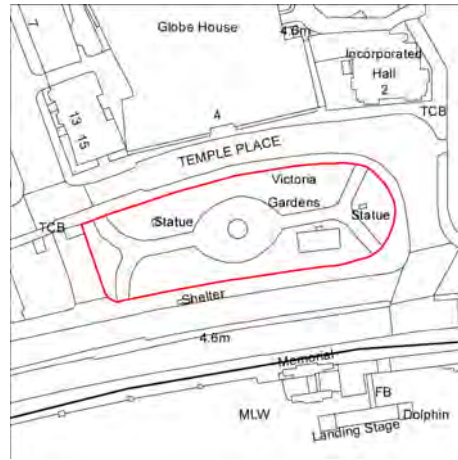
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input checked="" type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|--|
| <input checked="" type="checkbox"/> Amenity grassland | <input type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Create a new function / feature (tick box)

Wildflower meadow Green wall (see below) Street tree

Tree-(multiple) Substantial window box Shrub

Wetland features/rain gardens Food growing: fruit trees/vegetables Planters

Other Other description:

Green walls:

Aspect:

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses , e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains , gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Approximate cost (select one)

Any other notes/observations:

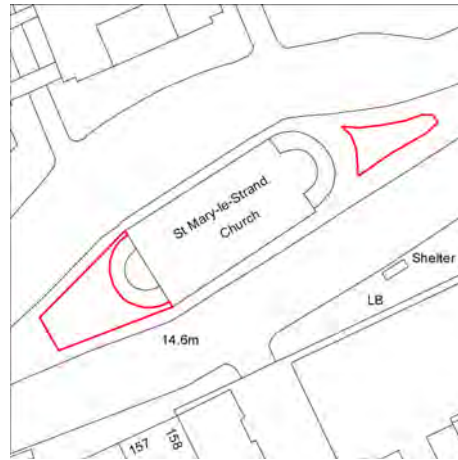
Northbank Green Infrastructure Audit

Site ID: 19 **Name/ location:** St Mary Le Strand

Survey date: 27/01/2014 **Surveyor:** S. West

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 180



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | | | | |
|-----------------------------|-------------------------------------|--|-------------------------------------|---------------------|--------------------------|
| Local park | <input type="checkbox"/> | Wetland/ standing water | <input type="checkbox"/> | Grass verge | <input type="checkbox"/> |
| Pocket park | <input type="checkbox"/> | Derelict building plot | <input type="checkbox"/> | Hedge | <input type="checkbox"/> |
| Garden or square | <input checked="" type="checkbox"/> | Highway infrastructure e.g. traffic island | <input checked="" type="checkbox"/> | Planter/ raised bed | <input type="checkbox"/> |
| Community garden/ Allotment | <input type="checkbox"/> | Street tree in pit | <input type="checkbox"/> | Green wall | <input type="checkbox"/> |
| Shrub plantings | <input type="checkbox"/> | Pavement or other hard surface | <input checked="" type="checkbox"/> | | |

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | | | |
|------------------------|--------------------------|---------------------|-------------------------------------|
| Amenity grassland | <input type="checkbox"/> | Building | <input checked="" type="checkbox"/> |
| Semi-natural grassland | <input type="checkbox"/> | Pavement/paved area | <input checked="" type="checkbox"/> |
| Woodland | <input type="checkbox"/> | Highway | <input type="checkbox"/> |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Approximate cost (select one)

Any other notes/observations:

Northbank Green Infrastructure Audit

Site ID: 20 **Name/ location:** St Clement Danes Church

Survey date: 27/01/2014 **Surveyor:** S. West

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 25



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Low risk

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

<input type="checkbox"/> Local park	<input type="checkbox"/> Wetland/ standing water	<input type="checkbox"/> Grass verge
<input type="checkbox"/> Pocket park	<input type="checkbox"/> Derelict building plot	<input type="checkbox"/> Hedge
<input type="checkbox"/> Garden or square	<input checked="" type="checkbox"/> Highway infrastructure e.g. traffic island	<input type="checkbox"/> Planter/ raised bed
<input type="checkbox"/> Community garden/ Allotment	<input checked="" type="checkbox"/> Street tree in pit	<input type="checkbox"/> Green wall
<input type="checkbox"/> Shrub plantings	<input checked="" type="checkbox"/> Pavement or other hard surface	

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

Mowing/grass cutting (please specify)

Specify here:

Pruning or other tree maintenance

No obvious signs of management

Appears unmanaged/overgrown

Productive use for food

Landcover / habitat types (tick box)

<input type="checkbox"/> Amenity grassland	<input checked="" type="checkbox"/> Building
<input type="checkbox"/> Semi-natural grassland	<input checked="" type="checkbox"/> Pavement/paved area
<input type="checkbox"/> Woodland	<input type="checkbox"/> Highway

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest creating surrounding low level pockets of planter shrub planting to emphasise church building, enhance appearance and improve flood storage.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect: North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

Mature trees too close to listed building. Ideally check impact on church structure and viewpoints.

Northbank Green Infrastructure Audit

Site ID: 21 **Name/ location:** Exeter Street

Survey date: 27/01/2014 **Surveyor:** S. West

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 122



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | | | | |
|-----------------------------|--------------------------|--|-------------------------------------|---------------------|--------------------------|
| Local park | <input type="checkbox"/> | Wetland/ standing water | <input type="checkbox"/> | Grass verge | <input type="checkbox"/> |
| Pocket park | <input type="checkbox"/> | Derelict building plot | <input type="checkbox"/> | Hedge | <input type="checkbox"/> |
| Garden or square | <input type="checkbox"/> | Highway infrastructure e.g. traffic island | <input type="checkbox"/> | Planter/ raised bed | <input type="checkbox"/> |
| Community garden/ Allotment | <input type="checkbox"/> | Street tree in pit | <input type="checkbox"/> | Green wall | <input type="checkbox"/> |
| Shrub plantings | <input type="checkbox"/> | Pavement or other hard surface | <input checked="" type="checkbox"/> | | |

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | | | |
|------------------------|--------------------------|---------------------|-------------------------------------|
| Amenity grassland | <input type="checkbox"/> | Building | <input type="checkbox"/> |
| Semi-natural grassland | <input type="checkbox"/> | Pavement/paved area | <input checked="" type="checkbox"/> |
| Woodland | <input type="checkbox"/> | Highway | <input type="checkbox"/> |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Small tree planting along Western section of Exeter Street (east side of road) to enhance visual link with the Strand, improve flood storage and encourage biodiversity.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other Other description:

Green wall (see below) Street tree

Substantial window box Shrub

Food growing: fruit trees/vegetables Planters

Green walls:

Aspect: North
 East
 South
 West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses , e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains , gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win
 Moderate
 Challenging

Approximate cost (select one)

Less than £10k
 £10-30k
 £30-50k
 More than £50k

Any other notes/observations:

Northbank Green Infrastructure Audit

Site ID: 22 **Name/ location:** Catherine Street

Survey date: 27/01/2014 **Surveyor:** S. West

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 191



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | | | | |
|-----------------------------|--------------------------|--|-------------------------------------|---------------------|--------------------------|
| Local park | <input type="checkbox"/> | Wetland/ standing water | <input type="checkbox"/> | Grass verge | <input type="checkbox"/> |
| Pocket park | <input type="checkbox"/> | Derelict building plot | <input type="checkbox"/> | Hedge | <input type="checkbox"/> |
| Garden or square | <input type="checkbox"/> | Highway infrastructure e.g. traffic island | <input type="checkbox"/> | Planter/ raised bed | <input type="checkbox"/> |
| Community garden/ Allotment | <input type="checkbox"/> | Street tree in pit | <input type="checkbox"/> | Green wall | <input type="checkbox"/> |
| Shrub plantings | <input type="checkbox"/> | Pavement or other hard surface | <input checked="" type="checkbox"/> | | |

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | | | |
|------------------------|--------------------------|---------------------|-------------------------------------|
| Amenity grassland | <input type="checkbox"/> | Building | <input type="checkbox"/> |
| Semi-natural grassland | <input type="checkbox"/> | Pavement/paved area | <input checked="" type="checkbox"/> |
| Woodland | <input type="checkbox"/> | Highway | <input type="checkbox"/> |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggested small tree planting along wide north side of road alongside the Novello theatre to encourage biodiversity and enhance appearance.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect: North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.51 - 1m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input checked="" type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|---|
| <input type="checkbox"/> Amenity grassland | <input type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input checked="" type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest planting replacement trees in empty tree pit locations to enhance appearance.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect: North
 East
 South
 West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

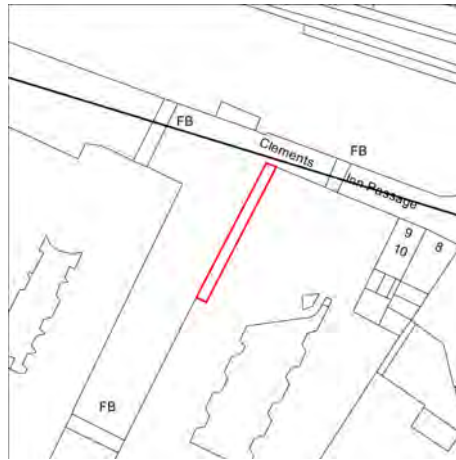
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category:

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

<input type="checkbox"/> Local park	<input type="checkbox"/> Wetland/ standing water	<input type="checkbox"/> Grass verge
<input type="checkbox"/> Pocket park	<input type="checkbox"/> Derelict building plot	<input type="checkbox"/> Hedge
<input type="checkbox"/> Garden or square	<input type="checkbox"/> Highway infrastructure e.g. traffic island	<input type="checkbox"/> Planter/ raised bed
<input type="checkbox"/> Community garden/ Allotment	<input type="checkbox"/> Street tree in pit	<input type="checkbox"/> Green wall
<input type="checkbox"/> Shrub plantings	<input checked="" type="checkbox"/> Pavement or other hard surface	

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

Mowing/grass cutting (please specify)

Specify here:

Pruning or other tree maintenance

No obvious signs of management

Appears unmanaged/overgrown

Productive use for food

Landcover / habitat types (tick box)

<input type="checkbox"/> Amenity grassland	<input checked="" type="checkbox"/> Building
<input type="checkbox"/> Semi-natural grassland	<input checked="" type="checkbox"/> Pavement/paved area
<input type="checkbox"/> Woodland	<input type="checkbox"/> Highway

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest creating green wall on 1960s / 70s building to cover existing wall surface to enhance appearance and encourage biodiversity.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

LSE

Potential area of greening:

Approx height (m):

8

Approx width (m):

20

Approx greening area: (sqm)

160

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

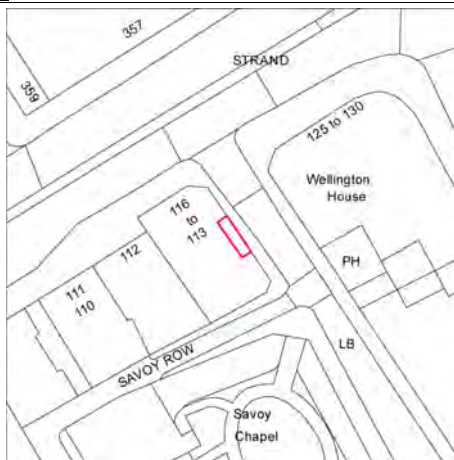
Northbank Green Infrastructure Audit

Site ID: 25 **Name/ location:** Savoy Street

Survey date: 27/01/2014 **Surveyor:** S. West

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 80



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Low risk

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

Local park <input type="checkbox"/>	Wetland/ standing water <input type="checkbox"/>	Grass verge <input type="checkbox"/>
Pocket park <input type="checkbox"/>	Derelict building plot <input type="checkbox"/>	Hedge <input type="checkbox"/>
Garden or square <input type="checkbox"/>	Highway infrastructure e.g. traffic island <input type="checkbox"/>	Planter/ raised bed <input type="checkbox"/>
Community garden/ Allotment <input type="checkbox"/>	Street tree in pit <input type="checkbox"/>	Green wall <input type="checkbox"/>
Shrub plantings <input type="checkbox"/>	Pavement or other hard surface <input checked="" type="checkbox"/>	

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

Mowing/grass cutting (please specify)

Specify here:

Pruning or other tree maintenance

No obvious signs of management

Appears unmanaged/overgrown

Productive use for food

Landcover / habitat types (tick box)

Amenity grassland <input type="checkbox"/>	Building <input checked="" type="checkbox"/>
Semi-natural grassland <input type="checkbox"/>	Pavement/paved area <input checked="" type="checkbox"/>
Woodland <input type="checkbox"/>	Highway <input type="checkbox"/>

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Approximate cost (select one)

Any other notes/observations:

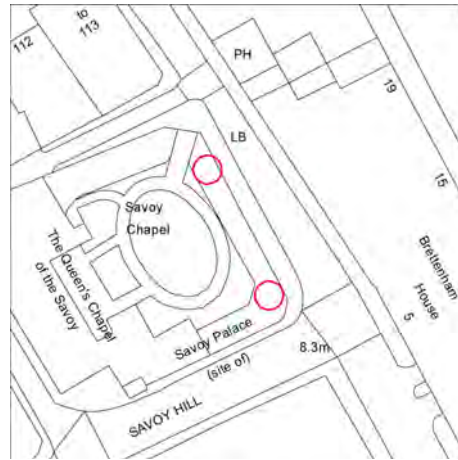
Northbank Green Infrastructure Audit

Site ID: 26 **Name/ location:** Queen's Chapel of the Savoy Gardens

Survey date: 27/01/2014 **Surveyor:** S. West

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 30



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Low risk

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

Local park	<input type="checkbox"/>	Wetland/ standing water	<input type="checkbox"/>	Grass verge	<input type="checkbox"/>
Pocket park	<input type="checkbox"/>	Derelict building plot	<input type="checkbox"/>	Hedge	<input type="checkbox"/>
Garden or square	<input checked="" type="checkbox"/>	Highway infrastructure e.g. traffic island	<input type="checkbox"/>	Planter/ raised bed	<input type="checkbox"/>
Community garden/ Allotment	<input type="checkbox"/>	Street tree in pit	<input type="checkbox"/>	Green wall	<input type="checkbox"/>
Shrub plantings	<input type="checkbox"/>	Pavement or other hard surface	<input type="checkbox"/>		

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

Mowing/grass cutting (please specify)
Specify here: Amenity - approx. 16 cuts

Pruning or other tree maintenance
No obvious signs of management
Appears unmanaged/overgrown
Productive use for food

Landcover / habitat types (tick box)

Amenity grassland	<input checked="" type="checkbox"/>	Building	<input type="checkbox"/>
Semi-natural grassland	<input type="checkbox"/>	Pavement/paved area	<input type="checkbox"/>
Woodland	<input type="checkbox"/>	Highway	<input type="checkbox"/>

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Remove Ivy from trees so that potential defects do not become obscured as they are situated close to the highway. Ivy should be removed outside of the bird nesting season (bird nesting season: March to July).

Create a new function / feature (tick box)

Wildflower meadow Green wall (see below) Street tree

Tree-(multiple) Substantial window box Shrub

Wetland features/rain gardens Food growing: fruit trees/vegetables Planters

Other Other description:

Green walls:

Aspect:

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses , e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains , gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Approximate cost (select one)

Any other notes/observations:

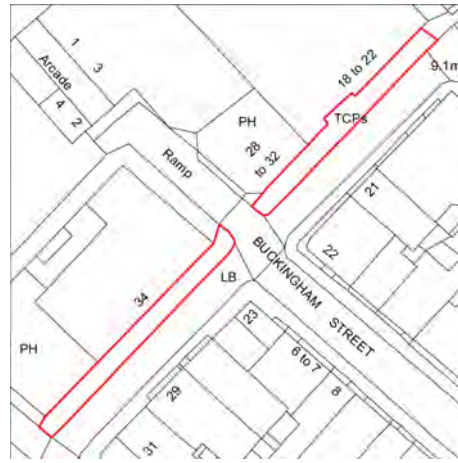
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.26 - 0.5m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance
- No obvious signs of management
- Appears unmanaged/overgrown
- Productive use for food

Landcover / habitat types (tick box)

- | | |
|---|---|
| <input type="checkbox"/> Amenity grassland | <input type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input checked="" type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Small tree planting suggested along wider footway section to enhance and frame views to Adams buildings from Villiers Street.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect: North
 East
 South
 West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win
Moderate
Challenging

Approximate cost (select one)

Less than £10k
£10-30k
£30-50k
More than £50k

Any other notes/observations:

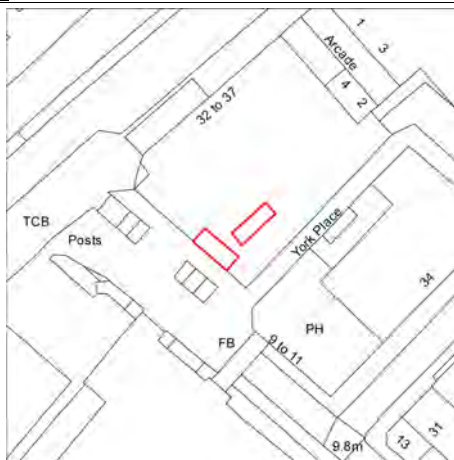
Northbank Green Infrastructure Audit

Site ID: 28 **Name/ location:** Villiers Street / Strand junction building

Survey date: 27/01/2014 **Surveyor:** S. West

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 384



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|--|
| <input type="checkbox"/> Amenity grassland | <input checked="" type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Create green wall to soften harsh building line (no. 32-37) and enhance appearance. This is highly visible along top end of Villiers Street. Due to the planned regeneration activities along Villiers Street, this is likely to be a longer term opportunity for the BID.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

Note - height and width has been doubled as on two faces of building close to each other.

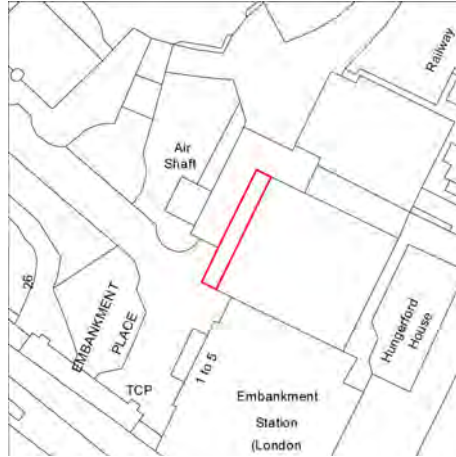
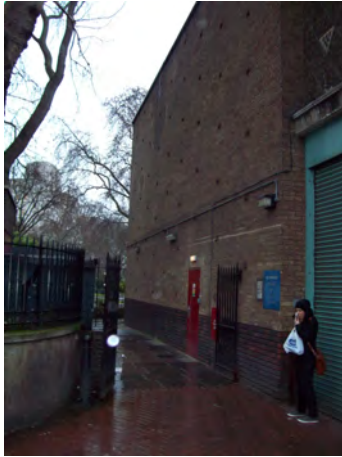
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|--|
| <input type="checkbox"/> Amenity grassland | <input checked="" type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest creating green wall on 1960s / 70s face of building to lead the eye when approaching station and enhance appearance.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

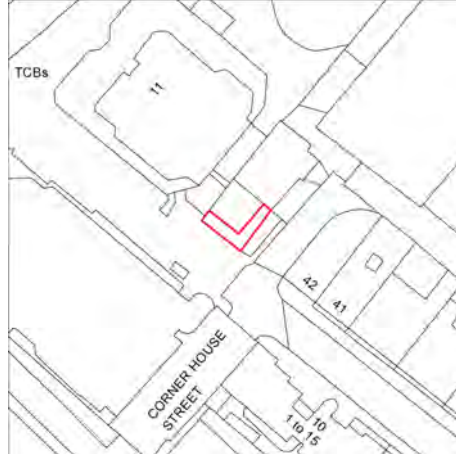
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.26 - 0.5m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|--|
| <input type="checkbox"/> Amenity grassland | <input checked="" type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest creating green wall to soften harsh building line (southern corner of no. 11), enhance appearance and encourage wildlife.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

Type: Modular

Climbing plants:

Building owner/occupier:

unknown

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

Any other notes/observations:

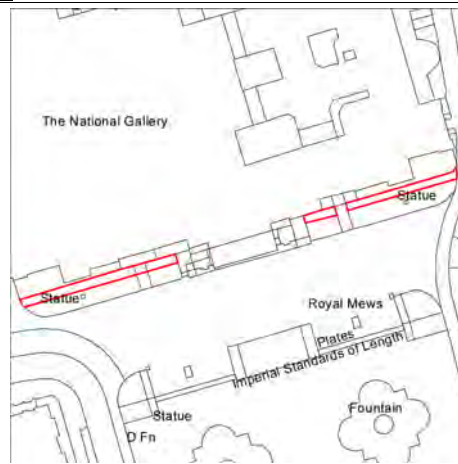
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category:

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input checked="" type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)** **Pruning or other tree maintenance**
- Specify here:** **No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|--|
| <input checked="" type="checkbox"/> Amenity grassland | <input type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Create a new function / feature (tick box)

Wildflower meadow Green wall (see below) Street tree

Tree-(multiple) Substantial window box Shrub

Wetland features/rain gardens Food growing: fruit trees/vegetables Planters

Other Other description:

Green walls:

Aspect:

Type: Modular
Climbing plants:

Building owner/occupier:

Potential area of greening:
Approx height (m):
Approx width (m):
Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility Underground services - water mains , gas, telecoms, sewers

Current uses , e.g. active use, transport infrastructure Wayleaves (strip of land that allows access to underground service)

Listed buildings or other building constraints

Ease of delivery (select one)

Easy/quick win
 Moderate
 Challenging

Approximate cost (select one)

Less than £10k
 £10-30k
 £30-50k
 More than £50k

Any other notes/observations:

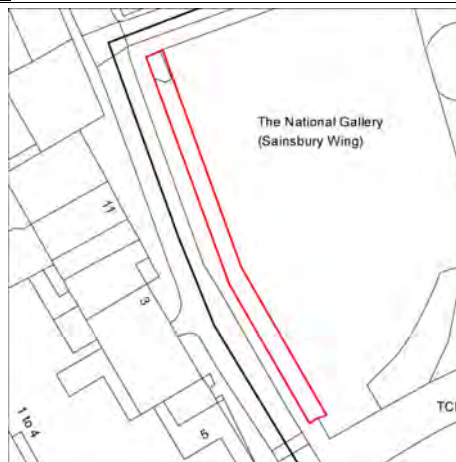
Northbank Green Infrastructure Audit

Site ID: 32 **Name/ location:** Whitecomb Street / side of The National Gallery building

Survey date: 27/01/2014 **Surveyor:** S. West

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 440



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.26 - 0.5m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|--|
| <input type="checkbox"/> Amenity grassland | <input checked="" type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Suggest creating a green wall on 1960s / 70s building to enhance appearance and encourage biodiversity.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

National Gallery

Potential area of greening:

Approx height (m):

8

Approx width (m):

55

Approx greening area: (sqm)

440

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win
Moderate
Challenging

Approximate cost (select one)

Less than £10k
£10-30k
£30-50k
More than £50k

Any other notes/observations:

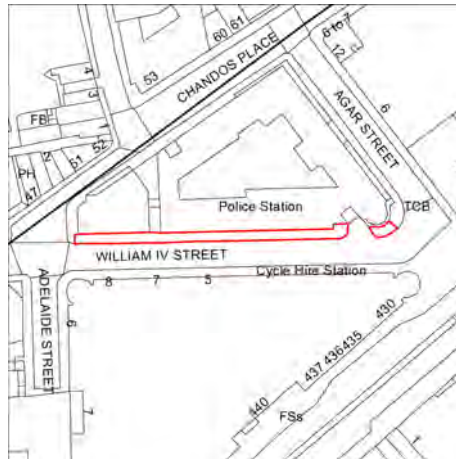
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.51 - 1m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|---|
| <input type="checkbox"/> Amenity grassland | <input type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input checked="" type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Small tree planting suggested along north side of road to enhance appearance and line views towards the National Portrait Gallery.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect: North
 East
 South
 West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win
Moderate
Challenging

Approximate cost (select one)

Less than £10k
£10-30k
£30-50k
More than £50k

Any other notes/observations:

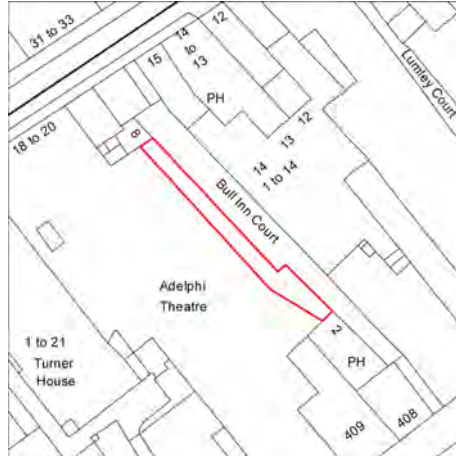
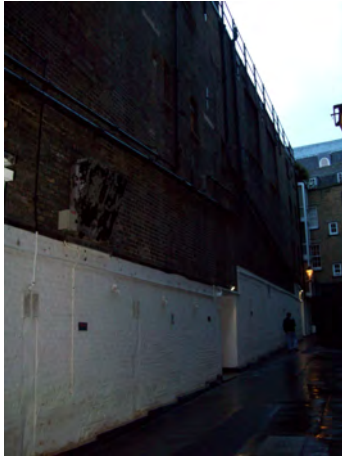
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance
- No obvious signs of management
- Appears unmanaged/overgrown
- Productive use for food

Landcover / habitat types (tick box)

- | | |
|---|--|
| <input type="checkbox"/> Amenity grassland | <input checked="" type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Approximate cost (select one)

Any other notes/observations:

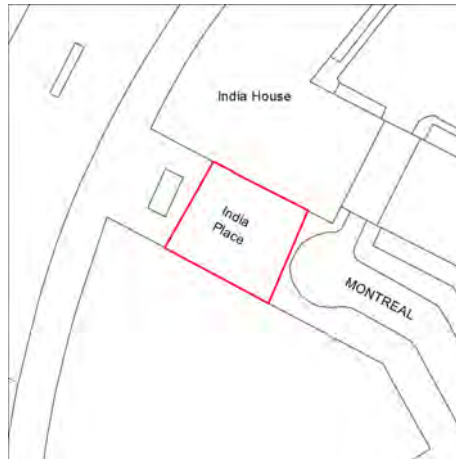
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.26 - 0.5m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input checked="" type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|---|
| <input type="checkbox"/> Amenity grassland | <input type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input checked="" type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Potential for creating low level shrub planting and Pocket Park environment to provide a space for relaxation, enhancing appearance, flood storage and creating visual links between the Strand, Somerset House and Aldwych.

Create a new function / feature (tick box)

Wildflower meadow

Green wall (see below)

Street tree

Tree-(multiple)

Substantial window box

Shrub

Wetland features/rain gardens

Food growing: fruit trees/vegetables

Planters

Other

Other description:

Pocket Park

Green walls:

Aspect: North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win
Moderate
Challenging

Approximate cost (select one)

Less than £10k
£10-30k
£30-50k
More than £50k

Any other notes/observations:

Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.51 - 1m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input checked="" type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance
- No obvious signs of management
- Appears unmanaged/overgrown
- Productive use for food

Landcover / habitat types (tick box)

- | | |
|---|---|
| <input type="checkbox"/> Amenity grassland | <input type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input checked="" type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Visual appearance and biodiversity, plus providing additional shading and microclimate - potential overspill space for the Sherlock Holmes Public House.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect: North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

Optimum location is inboard of the pavement on Northumberland Avenue and orientated most closely towards the Sherlock Holmes Public House (avoiding sight lines/any service issues and creating potential overspill space for the pub). Note proximity and access to Korean Cultural Centre within Grand Buildings adjacent. Location forms part of the historic curtilage and gardens of the Dukes of Northumberland's lost riverside palace, Northumberland House (demolished in 1875).

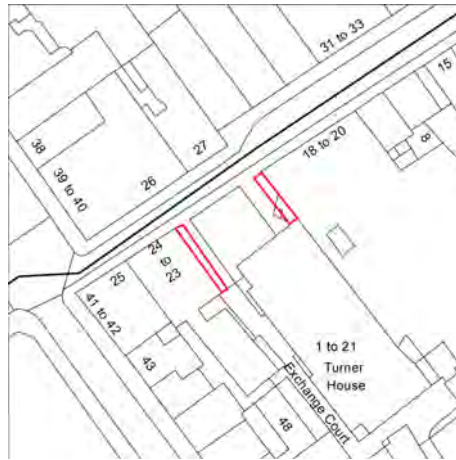
Northbank Green Infrastructure Audit

Site ID: 37 **Name/ location:** Exchange Court - to the east side of the Porter House pub forecourt and at the rear of the Adelphi Theatre

Survey date: 17/03/2014 **Surveyor:** AT

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 40



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | | | | |
|-----------------------------|--------------------------|--|-------------------------------------|---------------------|--------------------------|
| Local park | <input type="checkbox"/> | Wetland/ standing water | <input type="checkbox"/> | Grass verge | <input type="checkbox"/> |
| Pocket park | <input type="checkbox"/> | Derelict building plot | <input type="checkbox"/> | Hedge | <input type="checkbox"/> |
| Garden or square | <input type="checkbox"/> | Highway infrastructure e.g. traffic island | <input type="checkbox"/> | Planter/ raised bed | <input type="checkbox"/> |
| Community garden/ Allotment | <input type="checkbox"/> | Street tree in pit | <input type="checkbox"/> | Green wall | <input type="checkbox"/> |
| Shrub plantings | <input type="checkbox"/> | Pavement or other hard surface | <input checked="" type="checkbox"/> | | |

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:** N/A
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | | | |
|------------------------|--------------------------|---------------------|-------------------------------------|
| Amenity grassland | <input type="checkbox"/> | Building | <input type="checkbox"/> |
| Semi-natural grassland | <input type="checkbox"/> | Pavement/paved area | <input checked="" type="checkbox"/> |
| Woodland | <input type="checkbox"/> | Highway | <input type="checkbox"/> |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Visual appearance, shading and cooling, urban biodiversity

Create a new function / feature (tick box)

Wildflower meadow

Green wall (see below)

Street tree

Tree-(multiple)

Substantial window box

Shrub

Wetland features/rain gardens

Food growing: fruit trees/vegetables

Planters

Other Other description:

Green walls:

Aspect:

Type: Modular

Climbing plants:

Building owner/occupier:

Adelphi Theatre

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Approximate cost (select one)

Any other notes/observations:

Note constraints to planting locations in the form of the rear access to the Adelphi Theatre/stage door and access to Porter House pub's terrace.

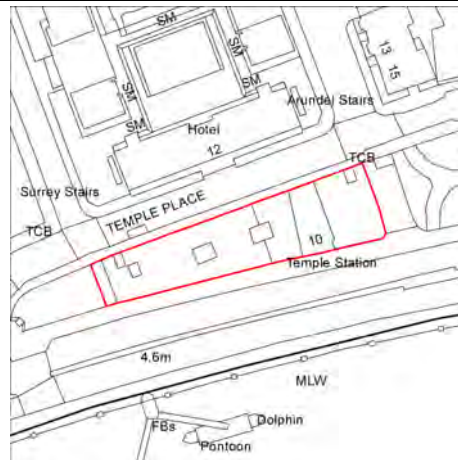
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.51 - 1m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance
- No obvious signs of management
- Appears unmanaged/overgrown
- Productive use for food

Landcover / habitat types (tick box)

- | | |
|---|---|
| <input type="checkbox"/> Amenity grassland | <input type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input checked="" type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Prior to the implementation of the green bridge there could be an opportunity for temporary greening in the form of planters on the terrace which would add quite a sculptural dimension to the roof if of sufficient scale and could be recycled elsewhere at a later stage if required. Public benches integrated with planters and low maintenance groundcover and shrubs could be used to provide multi-functional benefits for seating, wildlife encouragement and visual improvement.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green roof

Green walls:

Aspect: North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

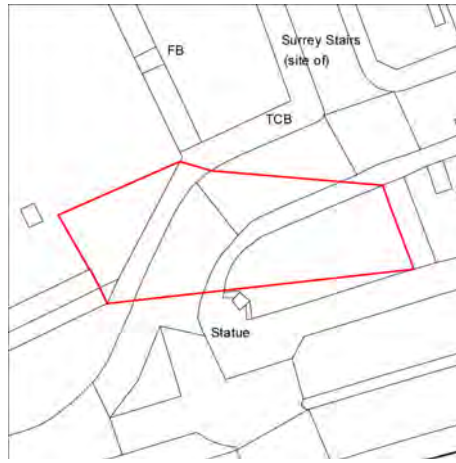
Northbank Green Infrastructure Audit

Site ID: 39 **Name/ location:** Somerset House terrace

Survey date: 13/05/2014 **Surveyor:** S. West & A. Tempany

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 814



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.51 - 1m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | | | | |
|-----------------------------|--------------------------|--|-------------------------------------|---------------------|--------------------------|
| Local park | <input type="checkbox"/> | Wetland/ standing water | <input type="checkbox"/> | Grass verge | <input type="checkbox"/> |
| Pocket park | <input type="checkbox"/> | Derelict building plot | <input type="checkbox"/> | Hedge | <input type="checkbox"/> |
| Garden or square | <input type="checkbox"/> | Highway infrastructure e.g. traffic island | <input type="checkbox"/> | Planter/ raised bed | <input type="checkbox"/> |
| Community garden/ Allotment | <input type="checkbox"/> | Street tree in pit | <input type="checkbox"/> | Green wall | <input type="checkbox"/> |
| Shrub plantings | <input type="checkbox"/> | Pavement or other hard surface | <input checked="" type="checkbox"/> | | |

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | | | |
|------------------------|--------------------------|---------------------|-------------------------------------|
| Amenity grassland | <input type="checkbox"/> | Building | <input checked="" type="checkbox"/> |
| Semi-natural grassland | <input type="checkbox"/> | Pavement/paved area | <input checked="" type="checkbox"/> |
| Woodland | <input type="checkbox"/> | Highway | <input type="checkbox"/> |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

There is potential for a complementary proposal to tie the Garden Bridge into the local urban GI network. This would comprise an inter-linking aerial connection between Somerset House terrace, Victoria Embankment Gardens (western end of temple section) and Temple Station terrace. There could be increased greening with planters within this connection to improve visual appearance and links. This is subject to necessary consents, consultation, investigations and design development.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Approximate cost (select one)

Any other notes/observations:

Northbank Green Infrastructure Audit

Site ID: 40 **Name/ location:** Victoria Embankment

Survey date: 13/05/2014 **Surveyor:** S. West & A. Tempny

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 6183



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Desk-based information

Highest surface water flood hazard category: Areas with depths 0.51 - 1m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | | | | |
|-----------------------------|--------------------------|--|-------------------------------------|---------------------|--------------------------|
| Local park | <input type="checkbox"/> | Wetland/ standing water | <input type="checkbox"/> | Grass verge | <input type="checkbox"/> |
| Pocket park | <input type="checkbox"/> | Derelict building plot | <input type="checkbox"/> | Hedge | <input type="checkbox"/> |
| Garden or square | <input type="checkbox"/> | Highway infrastructure e.g. traffic island | <input type="checkbox"/> | Planter/ raised bed | <input type="checkbox"/> |
| Community garden/ Allotment | <input type="checkbox"/> | Street tree in pit | <input checked="" type="checkbox"/> | Green wall | <input type="checkbox"/> |
| Shrub plantings | <input type="checkbox"/> | Pavement or other hard surface | <input checked="" type="checkbox"/> | | |

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | | | |
|------------------------|--------------------------|---------------------|-------------------------------------|
| Amenity grassland | <input type="checkbox"/> | Building | <input type="checkbox"/> |
| Semi-natural grassland | <input type="checkbox"/> | Pavement/paved area | <input checked="" type="checkbox"/> |
| Woodland | <input type="checkbox"/> | Highway | <input checked="" type="checkbox"/> |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Subject to the final design of Transport for London's Cycle Cross Route development there could be enhancement to terrestrial green infrastructure. An idea could include planter greening to the rear and sides of the elevated benches along the Victoria Embankment subject to conforming with Equality Act and disability access for seating. There are also some areas of empty hard standing (currently litter prone) adjacent to Waterloo Bridge between rows of embankment walling. Planting at these locations would enhance the visual appearance and improve flood storage of the area which is currently lacking in colour and opportunities for reducing the hard standing. A variety of colourful bedding plants or less maintenance intensive/drought tolerant plants could be used at these locations.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect: North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win
Moderate
Challenging

Approximate cost (select one)

Less than £10k
£10-30k
£30-50k
More than £50k

Any other notes/observations:

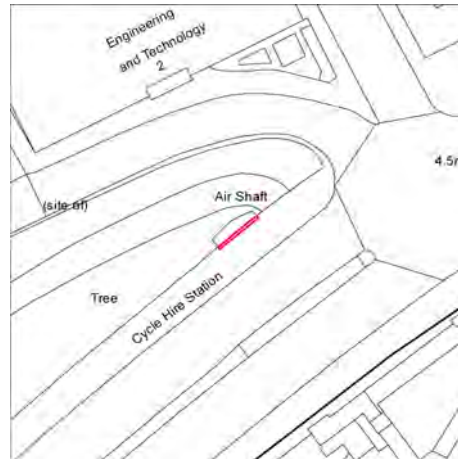
Northbank Green Infrastructure Audit

Site ID: 41 **Name/ location:** Wall at Waterloo Bridge Victoria Embankment exit

Survey date: 13/05/2014 **Surveyor:** S. West & A. Tempany

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 12



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Ordnance Survey 100032216 GLA

Desk-based information

- Highest surface water flood hazard category:** Low risk
- Are there any heritage features in or adjacent to the site:**
- Is the site within a GLA Area of Wildlife Deficiency:**
- Is the site a SINC**

Site category (tick box)

- | | | | | | |
|-----------------------------|--------------------------|--|-------------------------------------|---------------------|--------------------------|
| Local park | <input type="checkbox"/> | Wetland/ standing water | <input type="checkbox"/> | Grass verge | <input type="checkbox"/> |
| Pocket park | <input type="checkbox"/> | Derelict building plot | <input type="checkbox"/> | Hedge | <input type="checkbox"/> |
| Garden or square | <input type="checkbox"/> | Highway infrastructure e.g. traffic island | <input type="checkbox"/> | Planter/ raised bed | <input type="checkbox"/> |
| Community garden/ Allotment | <input type="checkbox"/> | Street tree in pit | <input type="checkbox"/> | Green wall | <input type="checkbox"/> |
| Shrub plantings | <input type="checkbox"/> | Pavement or other hard surface | <input checked="" type="checkbox"/> | | |

Condition of GI (select one)

- Condition:** Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | | | |
|------------------------|--------------------------|---------------------|-------------------------------------|
| Amenity grassland | <input type="checkbox"/> | Building | <input type="checkbox"/> |
| Semi-natural grassland | <input type="checkbox"/> | Pavement/paved area | <input checked="" type="checkbox"/> |
| Woodland | <input type="checkbox"/> | Highway | <input type="checkbox"/> |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

Opportunity to create a small green wall with climbers in raised planters to improve visual appearance and prevent graffiti at this susceptible location.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

unknown

Potential area of greening:

Approx height (m):

2

Approx width (m):

6

Approx greening area: (sqm)

12

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

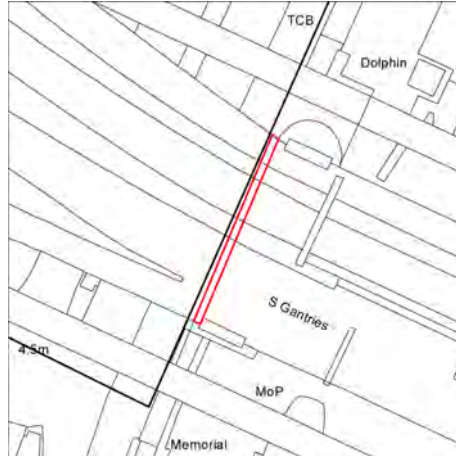
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category:

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

<input type="checkbox"/> Local park	<input type="checkbox"/> Wetland/ standing water	<input type="checkbox"/> Grass verge
<input type="checkbox"/> Pocket park	<input type="checkbox"/> Derelict building plot	<input type="checkbox"/> Hedge
<input type="checkbox"/> Garden or square	<input type="checkbox"/> Highway infrastructure e.g. traffic island	<input type="checkbox"/> Planter/ raised bed
<input type="checkbox"/> Community garden/ Allotment	<input type="checkbox"/> Street tree in pit	<input type="checkbox"/> Green wall
<input type="checkbox"/> Shrub plantings	<input checked="" type="checkbox"/> Pavement or other hard surface	

Condition of GI (select one)

Condition:
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

Mowing/grass cutting (please specify)

Specify here:

Pruning or other tree maintenance

No obvious signs of management

Appears unmanaged/overgrown

Productive use for food

Landcover / habitat types (tick box)

<input type="checkbox"/> Amenity grassland	<input checked="" type="checkbox"/> Building
<input type="checkbox"/> Semi-natural grassland	<input checked="" type="checkbox"/> Pavement/paved area
<input type="checkbox"/> Woodland	<input checked="" type="checkbox"/> Highway

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

The Brunel foundations to the Hungerford Bridge could be sympathetically greened and brightened on its western facing wall. Elevated planters could provide the opportunity for ornamental colourful shade resistant trailing plants alongside complimentary lighting. The extent of urban greening should be limited to complement the formal classical architecture of the Brunel bridge and to interpret its original footprint/width. Green wall planting would enhance the appearance of the current wall face which is marred by the current downpipe and wall markings.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

unknown

Potential area of greening:

Approx height (m):

5

Approx width (m):

12

Approx greening area: (sqm)

60

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win
Moderate
Challenging

Approximate cost (select one)

Less than £10k
£10-30k
£30-50k
More than £50k

Any other notes/observations:

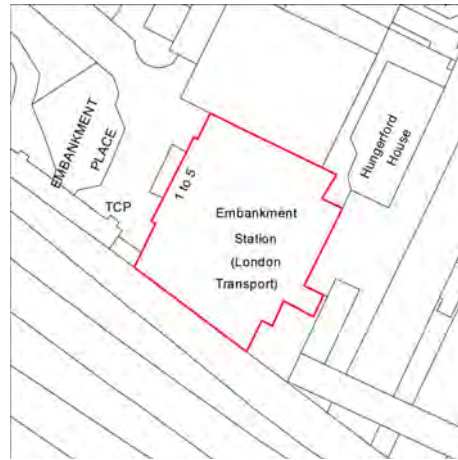
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|--|---|--|
| <input type="checkbox"/> Local park | <input type="checkbox"/> Wetland/ standing water | <input type="checkbox"/> Grass verge |
| <input type="checkbox"/> Pocket park | <input type="checkbox"/> Derelict building plot | <input type="checkbox"/> Hedge |
| <input type="checkbox"/> Garden or square | <input type="checkbox"/> Highway infrastructure e.g. traffic island | <input type="checkbox"/> Planter/ raised bed |
| <input type="checkbox"/> Community garden/ Allotment | <input type="checkbox"/> Street tree in pit | <input type="checkbox"/> Green wall |
| <input type="checkbox"/> Shrub plantings | <input checked="" type="checkbox"/> Pavement or other hard surface | |

Condition of GI (select one)

Condition: Good (signs of active management)
 Moderate (signs of limited management)
 Poor (few signs of management)

Current management (tick box)

- Mowing/grass cutting (please specify)**
- Specify here:**
- Pruning or other tree maintenance**
- No obvious signs of management**
- Appears unmanaged/overgrown**
- Productive use for food**

Landcover / habitat types (tick box)

- | | |
|---|--|
| <input type="checkbox"/> Amenity grassland | <input checked="" type="checkbox"/> Building |
| <input type="checkbox"/> Semi-natural grassland | <input type="checkbox"/> Pavement/paved area |
| <input type="checkbox"/> Woodland | <input type="checkbox"/> Highway |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

There is potential for installing a green roof at the Embankment Station location which is predominately flat. The treatment of the roof would need to respond to the building and its scale and to emphasise connections between the new proposed Living Wall and Victoria Embankment Gardens. There would be visual benefits in terms of obscuring from view some of the less attractive TfL roof equipment and encouraging wildlife with nectar rich planting such as lavender.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Green roof

Street tree

Shrub

Planters

Green walls:

Aspect: North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win
Moderate
Challenging

Approximate cost (select one)

Less than £10k
£10-30k
£30-50k
More than £50k

Any other notes/observations:

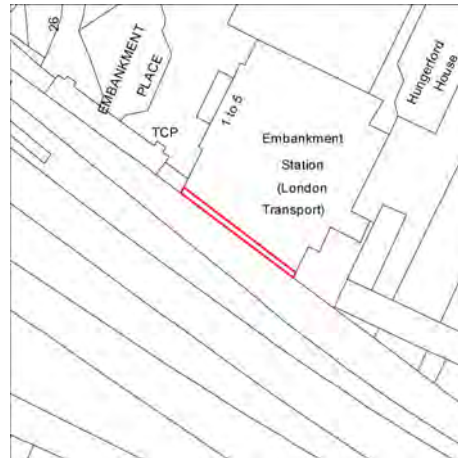
Northbank Green Infrastructure Audit

Site ID: **Name/ location:**

Survey date: **Surveyor:**

Type of site: Existing
 Potential
 Existing with potential for enhancement

Area of greening (sqm):



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Desk-based information

Highest surface water flood hazard category:

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

<input type="checkbox"/> Local park	<input type="checkbox"/> Wetland/ standing water	<input type="checkbox"/> Grass verge
<input type="checkbox"/> Pocket park	<input type="checkbox"/> Derelict building plot	<input type="checkbox"/> Hedge
<input type="checkbox"/> Garden or square	<input type="checkbox"/> Highway infrastructure e.g. traffic island	<input type="checkbox"/> Planter/ raised bed
<input type="checkbox"/> Community garden/ Allotment	<input type="checkbox"/> Street tree in pit	<input type="checkbox"/> Green wall
<input type="checkbox"/> Shrub plantings	<input checked="" type="checkbox"/> Pavement or other hard surface	

Condition of GI (select one)

Condition:

Current management (tick box)

Mowing/grass cutting (please specify)

Specify here:

Pruning or other tree maintenance

No obvious signs of management

Appears unmanaged/overgrown

Productive use for food

Landcover / habitat types (tick box)

<input type="checkbox"/> Amenity grassland	<input checked="" type="checkbox"/> Building
<input type="checkbox"/> Semi-natural grassland	<input type="checkbox"/> Pavement/paved area
<input type="checkbox"/> Woodland	<input type="checkbox"/> Highway

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement

Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

There is potential to create a living wall along the northern elevation of the foundations to the Hungerford Bridge adjacent to Embankment Station. This will enhance the appearance of the area and will be more welcoming on the approach to Embankment Station. The plant species will have to be fairly shade tolerant and may enhance opportunities for wildlife in the area. The living wall would reflect the floristic diversity of the nearby Victoria Embankment Gardens.

Create a new function / feature (tick box)

Wildflower meadow

Tree-(multiple)

Wetland features/rain gardens

Other

Other description:

Green wall (see below)

Substantial window box

Food growing: fruit trees/vegetables

Street tree

Shrub

Planters

Green walls:

Aspect:

North
East
South
West

Type: Modular

Climbing plants:

Building owner/occupier:

unknown

Potential area of greening:

Approx height (m):

6

Approx width (m):

20

Approx greening area: (sqm)

120

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses, e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains, gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Easy/quick win

Moderate

Challenging

Approximate cost (select one)

Less than £10k

£10-30k

£30-50k

More than £50k

Any other notes/observations:

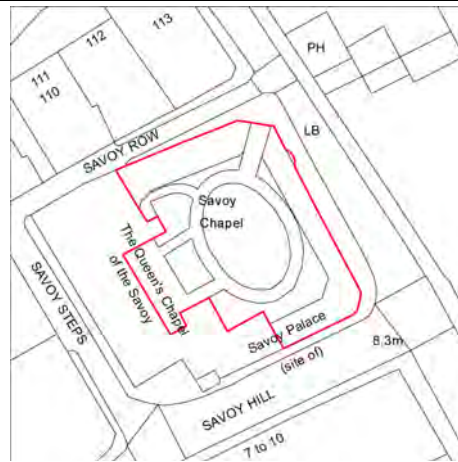
Northbank Green Infrastructure Audit

Site ID: 45 **Name/ location:** Queen's Chapel of the Savoy Gardens

Survey date: 13/05/2014 **Surveyor:** S. West & A. Tempny

Type of site: Existing
Potential
Existing with potential for enhancement

Area of greening (sqm): 824



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Ordnance Survey 100032216 GLA

Desk-based information

Highest surface water flood hazard category: Areas with depths 0.11 - 0.25m

Are there any heritage features in or adjacent to the site:

Is the site within a GLA Area of Wildlife Deficiency:

Is the site a SINC

Site category (tick box)

- | | | |
|---|--|---|
| Local park <input type="checkbox"/> | Wetland/ standing water <input type="checkbox"/> | Grass verge <input type="checkbox"/> |
| Pocket park <input type="checkbox"/> | Derelict building plot <input type="checkbox"/> | Hedge <input type="checkbox"/> |
| Garden or square <input checked="" type="checkbox"/> | Highway infrastructure e.g. traffic island <input type="checkbox"/> | Planter/ raised bed <input type="checkbox"/> |
| Community garden/ Allotment <input type="checkbox"/> | Street tree in pit <input type="checkbox"/> | Green wall <input type="checkbox"/> |
| Shrub plantings <input type="checkbox"/> | Pavement or other hard surface <input type="checkbox"/> | |

Condition of GI (select one)

Condition: Good (signs of active management)
Moderate (signs of limited management)
Poor (few signs of management)

Current management (tick box)

- | | |
|--|--|
| Mowing/grass cutting (please specify) <input checked="" type="checkbox"/> | Pruning or other tree maintenance <input checked="" type="checkbox"/> |
| Specify here: approx 16 cuts | No obvious signs of management <input type="checkbox"/> |
| | Appears unmanaged/overgrown <input type="checkbox"/> |
| | Productive use for food <input type="checkbox"/> |

Landcover / habitat types (tick box)

- | | |
|--|---|
| Amenity grassland <input checked="" type="checkbox"/> | Building <input type="checkbox"/> |
| Semi-natural grassland <input type="checkbox"/> | Pavement/paved area <input type="checkbox"/> |
| Woodland <input type="checkbox"/> | Highway <input type="checkbox"/> |

Northbank Green Infrastructure Audit

Scrub/shrubs (please indicate wildlife value)

Value:

Other (please specify):

Traffic island

Roof

Green space

Wall

Function

Primary function (insert "1" in box) / Secondary function (insert "2" in box)

Public use: informal recreation:

Public use: formal recreation:

Visual/amenity:

Wildlife:

Food growing/productive use:

Flood management/water storage:

Not in active use but managed:

Not in use/derelict:

Scope for enhancement Enhance existing function

Enhance existing function (please specify opportunities e.g. biodiversity, flood storage, visual appearance etc):

There could be further nectar rich and native planting to encourage wildlife. The gardens could also be opened to the public to provide passive recreation benefits and improve understanding of green and open space within the vicinity for locals and tourists.

Create a new function / feature (tick box)

Wildflower meadow Green wall (see below) Street tree

Tree-(multiple) Substantial window box Shrub

Wetland features/rain gardens Food growing: fruit trees/vegetables Planters

Other Other description:

Green walls:

Aspect:

Type: Modular

Climbing plants:

Building owner/occupier:

Potential area of greening:

Approx height (m):

Approx width (m):

Approx greening area: (sqm)

Barriers to delivery (tick box)

Isolated/ poor visibility

Current uses , e.g. active use, transport infrastructure

Listed buildings or other building constraints

Underground services - water mains , gas, telecoms, sewers

Wayleaves (strip of land that allows access to underground service)

Ease of delivery (select one)

Approximate cost (select one)

Any other notes/observations:

Appendix 2: Northbank's Historic Evolution

Historic evolution of the Northbank area

- 1.1 Any greening interventions must respond to Northbank's heritage assets, sense of place and time depth. This appendix describes the historic evolution and character of the Northbank area.
- 1.2 Northbank is located in the centre of London, formed in large part by the historic street of Strand, which formed the ancient processional route between the cities of London (commerce and trade) and Westminster (seat of Government – Royal and later elected). Due to its strategically important location between the two cities and the River Thames the area has long had cultural and social significance. From the Middle Ages it was chosen as the location for a series of large riverside palaces for Royalty, important courtiers and Princes of The Church. This was due not only to its proximity to the processional route but also because of its prospect and aspect, away from the medieval toil, din and stench of this 'greatest and most horrible of cities' (Ackroyd, P). Some of the greatest dynasties of the age were represented in these palatial riverside dwellings in the Tudor and Stuart eras: the Royal family at Whitehall; the Dukes of Northumberland at Northumberland House; Hungerford House and the later market; the Dukes of Buckingham at York House; the Bishops of Durham at Durham House; the Dukes of Savoy at Savoy Palace, and the Duchy of Lancaster, as well as the Dukes of Somerset and the Royal Family at Somerset Palace, later remodelled as Somerset House by William Chambers in the 1770s.



Above left: Trafalgar Square by Moonlight, 1865, with Northumberland House in the background. Above right: Northumberland House, Strand front, by Canaletto. Demolished 1875.

¹Pether H., Trafalgar Square by Moonlight, 1865. [jpeg - image online] Available at: http://commons.wikimedia.org/wiki/File:Trafalgar_Square_by_Moonlight,_c1865_MoL.jpg

²Northumberland House, Strand front, by Canaletto, 1752. [pdf - image online] Available at: <http://www.8northumberland.co.uk/files/history/Short-History-of-8-Northumberland-Avenue.pdf>

1.3 Such houses were positioned on prominent, elevated locations on the Thames gravel/valley terrace, well away from the hustle and bustle of London's streets, and with their principal frontages orientated towards the river – access was provided for Royal and court barges via a network of riverside stairs. These stairs are sometimes perpetuated in the surrounding street names as are the lost palaces themselves. The York House Water Gate, the sole surviving feature of the London seat of the Dukes of Buckingham, forms an imposing, curious Baroque/Rococo relic with the construction of Bazalgette's late 19th century Victoria Embankment having displaced it from the river. The great water gate at Somerset House is also visible, although again now cut off from the water.



Above left: The Watergate at Somerset House. Both features survive although now cut off from the river by The Embankment. Above right: The Watergate/stairs to York House.

³The Watergate at Somerset House. [image online] Available at: <http://www.somersetshouse.org.uk/history/since-the-18th-century>

⁴The Watergate/stairs to York House, c1237. [jpeg - image online] Available at: http://www.gardenvisit.com/garden/york_house_watergate_steps



Above: Panoramic view of the historic riverside palaces of the Strand and associated water gates/stairs (Wyngaerde, 1543)



Above: View of the Tudor Somerset House and associated river stairs

⁵ Panoramic view of the historic riverside palaces of the Strand and associated water gates/stairs (Wyngaerde, 1543) [jpeg - image online] Available at: http://www.ladyjanegrey.info/?page_id=5061

⁶ Tudor Somerset House. [jpeg - image online] Available at: <http://www.somersehouse.org.uk/history/the-tudor-palace>

1.4 This pattern of grand palatial dwellings with imposing riverside entrances was mirrored in later phases of urban evolution, such as when Whitehall was adapted for Government use or when Somerset House was rebuilt for institutional use in the 1770s. One of the grandest examples was when the Adam Brothers developed their monumental Adelphi scheme of townhouses on the ruins of Durham House (intended to be seen and experienced as a single composition, almost a mirror, on the opposing flank of the later Waterloo Bridge, and in a much lighter, more delicate form of the more severely formal Somerset House). The Adelphi perpetuated the duality of elegant, refined dwellings removed from an altogether more functional and workmanlike series of riverside wharves and dark undercrofts/warehouses. Remnants of this can still be seen in the shattered remains of the Georgian Adelphi (of which large parts above ground were destroyed for redevelopment in the 1930s) and its extant network of subterranean streets and vaults. Other great dwellings, such as Savoy Palace, were lost altogether – this stood on the approach to the later Waterloo Bridge although its medieval chapel and churchyard survive still and its name is perpetuated in the adjacent Savoy Hotel.



Above: The Adam Brothers' monumental Adelphi built from 1768-72 on the ruins of Durham House. This view before construction of Bazalgette's Embankment shows the contrast between the elegant townhouses and the workmanlike wharves and vaults below. Mostly demolished in 1937, although some parts still survive

⁷ The Adam Brothers' monumental Adelphi built from 1768-72 on the ruins of Durham House. [jpeg - image online] Available at: http://en.wikipedia.org/wiki/Adelphi,_London#mediaviewer/File:Adam_Brothers_Adelphi.jpg

1.5 The growth of London in the 19th century brought further changes in the form of transport infrastructure, civic space and sanitation, all of which had significant outward expression on the area's urban form and experience. Links to the southern bank of the river were provided first by Brunel's Hungerford Suspension Footbridge of the 1840s (later subsumed within the Charing Cross Rail Bridge when the London and Southern Railway terminus arrived in grand French Second Empire style at Charing Cross on the former site of Hungerford House/ Market in 1863).



Above left: Hungerford market, c1850, approached from Hungerford Bridge
Above right: Brunel's Hungerford Footbridge. Built in 1845 and replaced by the Charing Cross Railway Bridge in the 1860s, using the same buttresses.

1.6 A road bridge to link the Strand with south London, initially called Strand Bridge, later Waterloo Bridge, was built to an elegant classical design by John Rennie from 1810-17, providing an appropriate counterpart to Somerset House and the Adelphi. This bridge was however affected by scours resulting from the later (1831) removal and replacement of the medieval London Bridge downstream. Despite repairs being effected Rennie's Bridge began to crumble after World War One, and it was replaced with Gilbert Scott's present Portland stone clad box girder bridge with its five

⁸ Hungerford market, c1850. Engraving by "WHP" - Walford, Edward, Old and New London, 1878, Vol.3, p.133. [jpeg - image online] Available at: http://en.wikipedia.org/wiki/Hungerford_Market#mediaviewer/File:HungerfordMarket1850.jpg

⁹ Hungerford Suspension Bridge, London, c.1845
Isambard Kingdom Brunel .National Museum of Photography, Film & Television. [jpeg - image online] Available at: <http://designmuseum.org/design/isambard-kingdom-brunel>

simple arches in the 1930s, although its northern approach and parts of its northern abutments are still visible.



Above: The Embankment, c.1911, showing in the middle distance Rennie's fine Waterloo Bridge of 1817 and Somerset House beyond

1.7 Other aspects of the area's 19th century and indeed early 20th century evolution were borne out of the need to improve public health, access and circulation. Trafalgar Square and associated embassy developments whilst commemorating the nation's hero, provided the opportunity to address large scale slum clearance as did the much later development of Aldwych and Kingsway in the 1900s. The latter however swept away some of the few remaining medieval tenements and streetscapes in London.



Above: Pre Great Fire houses on Wych Street, demolished for the construction of Aldwych in the early 20th century

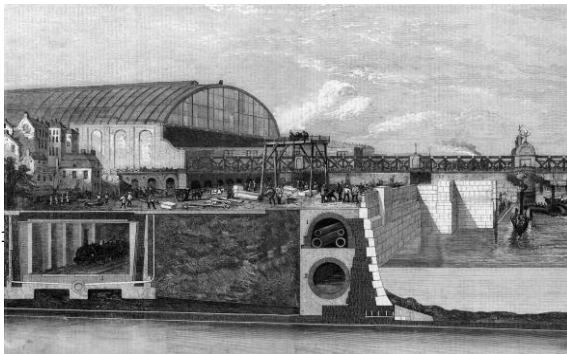
1.8 Joseph Bazalgette's great Victoria Embankment of the 1870s was the other major civic project amid typhoid and cholera epidemics in Victorian London. This effectively reclaimed much of the northern bank of the river for a major new sewer and for part of the early London Underground Network (Circle Line). It had the effect of displacing the historic riverside properties and their stairs from the waterfront, irrevocably changing this relationship, albeit compensated by new civic spaces – Embankment Gardens and a formal promenade along the new Embankment.

¹⁰ Old UK Photos in High Resolution, 2014. London Thames Embankment c. 1890. (image online). Available at: <http://www.oldukphotos.com/london_famous_landmarks_page2.htm> [Accessed 13 March 2014]

¹¹ Pre Great Fire houses on Wych Street. [jpeg - image online] Available at: <http://partleton.co.uk/Benjamin1839.htm>



Above: Bazalgette's Embankment under construction in the 1870s. Below: Schematic section through the Embankment, showing cut and cover tube line and sewer locations, reclaimed from the river



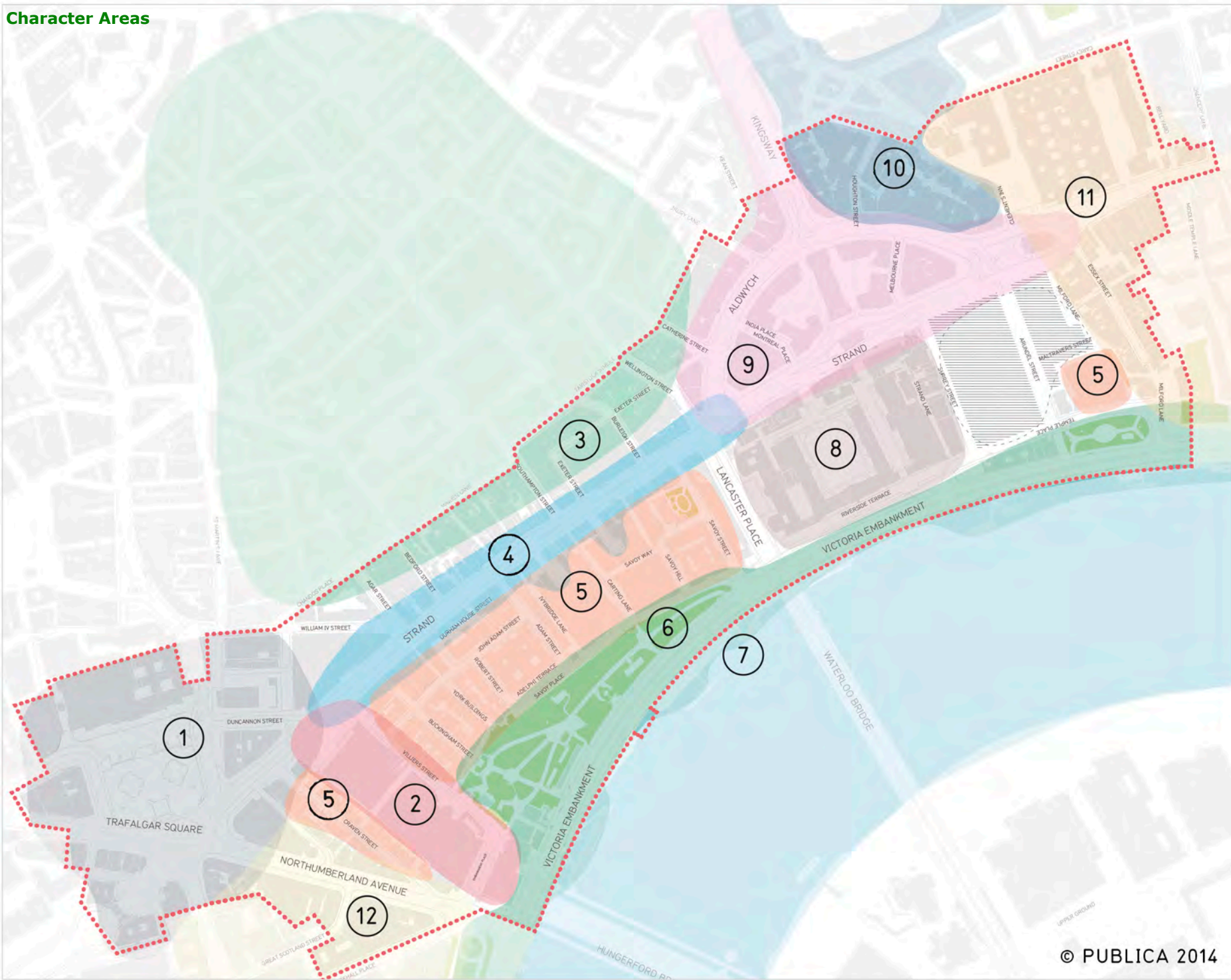
- 1.9 As such, what we see today at Northbank is a complex composite or palimpsest, multi layered townscape, with a considerable sense of richness and time depth. It is these factors which provide at once the most notable opportunity and significant constraint with regard to public realm enhancement in the BID area. Opportunities are provided by the formality and monumental character of the architecture, the need to showcase the area's significant distribution of grade I and II* listed buildings and to conserve and enhance important views such as from the South Bank. Constraints are provided not only by archaeology but also by the subterranean complexity of the infrastructure in the area. It is also clear that whilst the Northbank is firmly rooted in and respectful of its great past it is not static – certain parts are in a constant state of flux. New grand visions also echo the area's heritage, scale and the scope and ambition of previous patrons and designers who have shaped the area, as well as creating notable public realm opportunities. These include the proposed Garden Bridge at the foot of Arundel Street and the Cycle Cross Rail link (Embankment).

¹² Embankment Construction of the Thames Embankment ILN 1865. [jpeg- image online] Available at: http://en.wikipedia.org/wiki/Thames_Conservancy#mediaviewer/File:Embankment_Construction_of_the_Thames_Embankment_ILN_1865.jpg

¹³ Schematic section through the embankment 1970 ILN. [jpeg - image online] Available at: http://en.wikipedia.org/wiki/Victoria_Embankment#mediaviewer/File:Section_through_Victoria_Embankment.png

**Appendix 3: Supporting information from Northbank Public Realm Study
(Credit: Publica Associates, April 2014. Northbank BID – Public Realm
Study)**

Character Areas



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- | | | | |
|---|-----------------------------------|---|-------------------------------------|
| ① | Trafalgar Square | ⑦ | The River |
| ② | Villiers Street and Charing Cross | ⑧ | Somerset House and King's College |
| ③ | Routes to Covent Garden | ⑨ | Aldwych |
| ④ | Strand | ⑩ | LSE |
| ⑤ | Embankment Streets and Terraces | ⑪ | Temple and Royal Courts of Justice |
| ⑥ | The Victoria Embankment | ⑫ | Whitehall and Northumberland Avenue |

KEY SPACES: THE VICTORIA EMBANKMENT

THE EMBANKMENT

E1 WEST SECTION OF VICTORIA EMBANKMENT GARDENS (CATALYST PROJECT)

The Grade II* listed Victorian park built by Joseph Bazalgette between 1865-1870, is a tremendous asset to the Northbank but the current entrances to Victoria Embankment Gardens are confusing and there are problematic level changes on Villiers Street. Many steps make wheelchair access to the park difficult, and a number of railings and gates create an unwelcoming barrier. The arrangement of the gates pushes the majority of visitors alongside the Embankment Station signal/service building. If the gate frontage were to be re-designed as a whole, this issue would be diminished. It is unlikely that the functions within these TfL buildings can be moved, but their blank frontages could potentially be improved. The bandstand is an excellent amenity and an increasing rarity in London's parks, but the bandstand's material treatment is outdated and it presents a large rear façade to Villiers Street. A re-designed pavilion could be an excellent addition, continuing to use the deckchairs for concerts, whilst supporting or implementing a more vibrant programme of concerts and performances. Planted barriers overwhelm the space around the bandstand, and a granite plinth blocks the view to the York Watergate. This section of the park could be re-designed, to greatly improve the entrance to a listed London park whilst maintaining its separation from Villiers Street. There are a multitude of options for creating better connections between the gardens and Villiers Street and increasing access from the street. However, it is important that the gardens retain a calm character away from the bustle of Embankment station. The design brief should consider all aspects of use and amenity for both Villiers Street and the Gardens themselves. Across the western section of the Gardens, the pavement materials are outdated and in poor condition. Working with English Heritage, a new brief for this space is required before any further proposals are developed.

E2 THE 'BUND' AT VICTORIA EMBANKMENT GARDENS (CATALYST PROJECT)

The Gardens are currently disconnected from the lanes and alleys south of the Strand. Explore options with English Heritage for removal or part removal of the 'bund' along the north edge of the park, giving careful consideration to protection of mature trees and planting that are important to the character of the Gardens. The entrance to the Gardens from Savoy Place could be improved by removing existing brick planters, awkward level changes and blue handrails. Reconnecting the Gardens to the routes south of the Strand could act as a catalyst to improve north-south permeability between the Strand and the river.

E3 EAST ENTRANCE TO VICTORIA EMBANKMENT GARDENS

This edge of the park is currently disconnected from Savoy Street, and the entrance is not aligned with the pedestrian route along the Victoria Embankment. A more prominent entrance could be created at this edge of the park.

E4 TEMPLE STATION FORECOURT (QUICK WIN)

The area around Temple Station (and potentially the future Garden Bridge landing) is an underwhelming space, filled with clutter. However, the station forecourt could be a handsome space to wait and has a wonderful view. It is an elegantly proportioned space, with good local amenities, such as the fruit stall and newspaper stand. Any further proposals are dependent on design development of the Garden Bridge.

E4 TEMPLE GARDENS

These gardens are currently quiet and underused, but this is appropriate within the character of Middle Temple and the Inns of Court. A brief for these gardens will be required as part of the Garden Bridge proposals.

E4 TEMPLE PLACE (QUICK WIN)

Temple Place is an important taxi rank and has a Grade II listed cabman's shelter. There is a locked garden at the western edge of Temple Place. This currently creates a haven for biodiversity, but is overgrown and creates an unappealing frontage to the station building. Consider a brief to bring this garden back into the network of public spaces, alongside Garden Bridge proposals, and alongside improvements to crossings towards Arundel Street.

E5 RIVER PROMENADE (QUICK WIN)

The listed monuments along the Victoria Embankment are often overlooked, and undervalued, with litter collecting in niches along the river wall. The setting, lighting and explanation of these monuments could be improved to create a distinctive walking route.

E5 EMBANKMENT PIER (QUICK WIN)

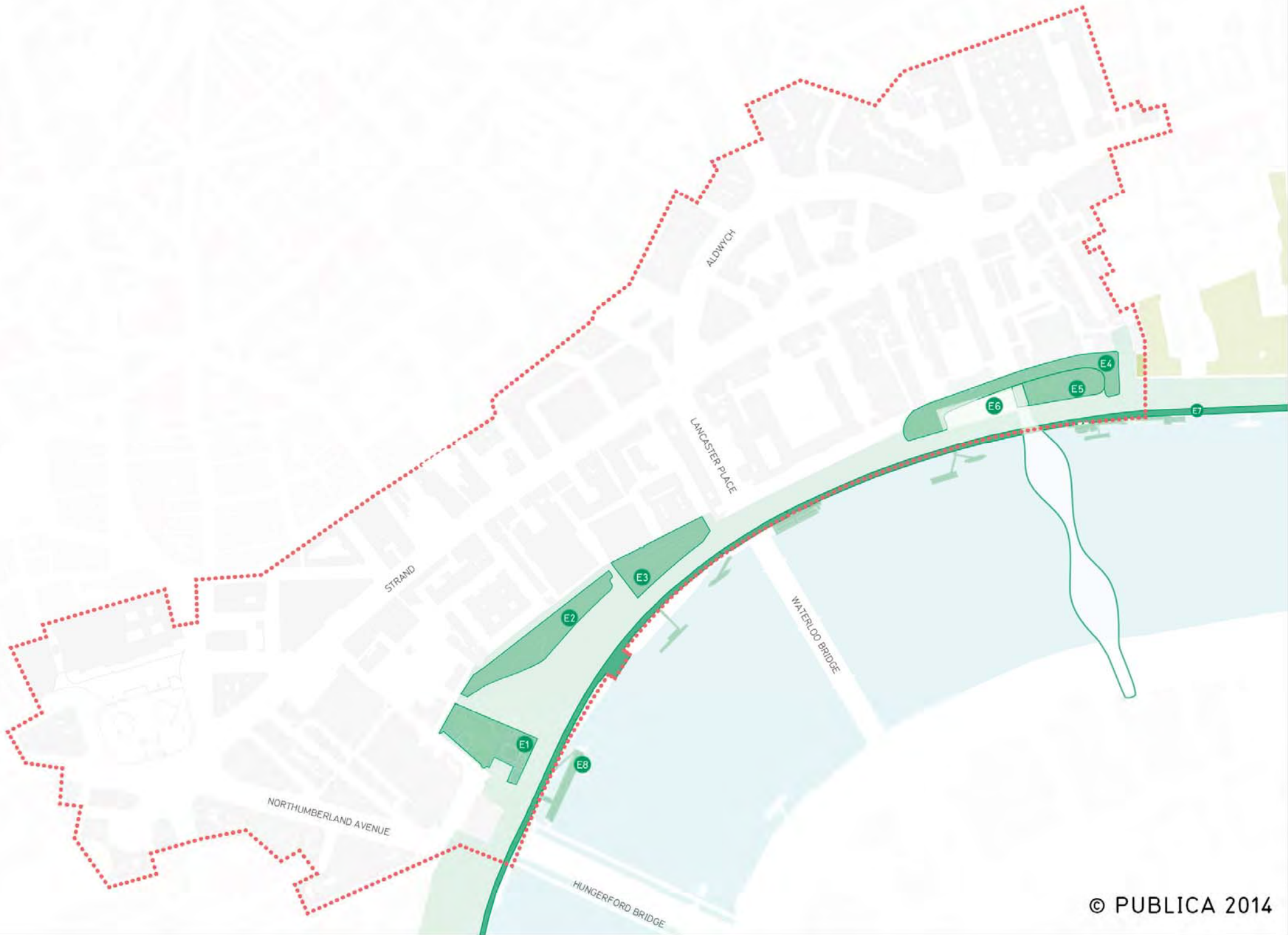
Embankment Pier is a fantastic asset to the area, providing a river gateway to some of London's most famous visitor destinations. River services are already the fastest growing form of transport in London, and the Mayor's River Action Plan, published in 2013, seeks to further increase passenger journeys on the Thames by expanding the pier network, improving the integration of piers and providing clearer, simpler information to prospective passengers. Embankment Pier is one of three key central London piers set to receive TfL investment for improvements and increased capacity.

This timely policy agenda offers a unique opportunity to re-think the identity, signage and connections to the pier, potentially unlocking benefits to the entire district.

A bold, ambitious approach is needed to improve and celebrate the pier's identity and presence, highlighting its position as a gateway to the area and more clearly separating commuter and tourist services. Furthermore, a de-cluttered pedestrian environment and improved crossings, signage, lighting and live travel information at street level would all improve the interchange experience and enhance wayfinding and connections to the Northbank area and beyond.

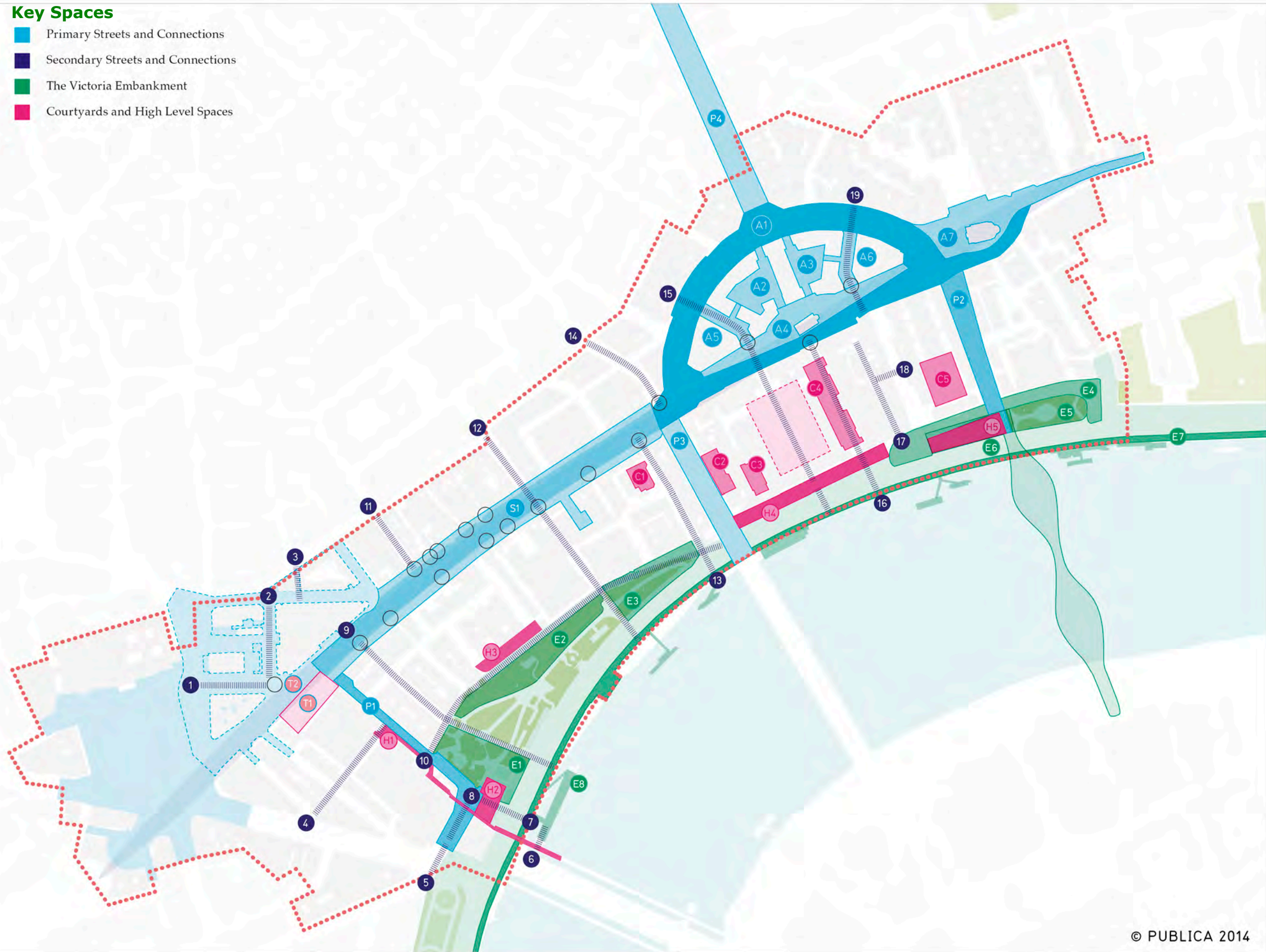
THE GARDEN BRIDGE (CATALYST PROJECT)

The proposed Garden Bridge will be an important catalyst project for the Northbank. It presents a number of opportunities, creating a new route to the South Bank and it will be a popular visitor attraction in itself. Consider the possible new flows of pedestrians along Arundel Street, around Temple Station and along the Victoria Embankment. Its impacts for spaces all around the landing should be considered by the BID.



Key Spaces

- Primary Streets and Connections
- Secondary Streets and Connections
- The Victoria Embankment
- Courtyards and High Level Spaces



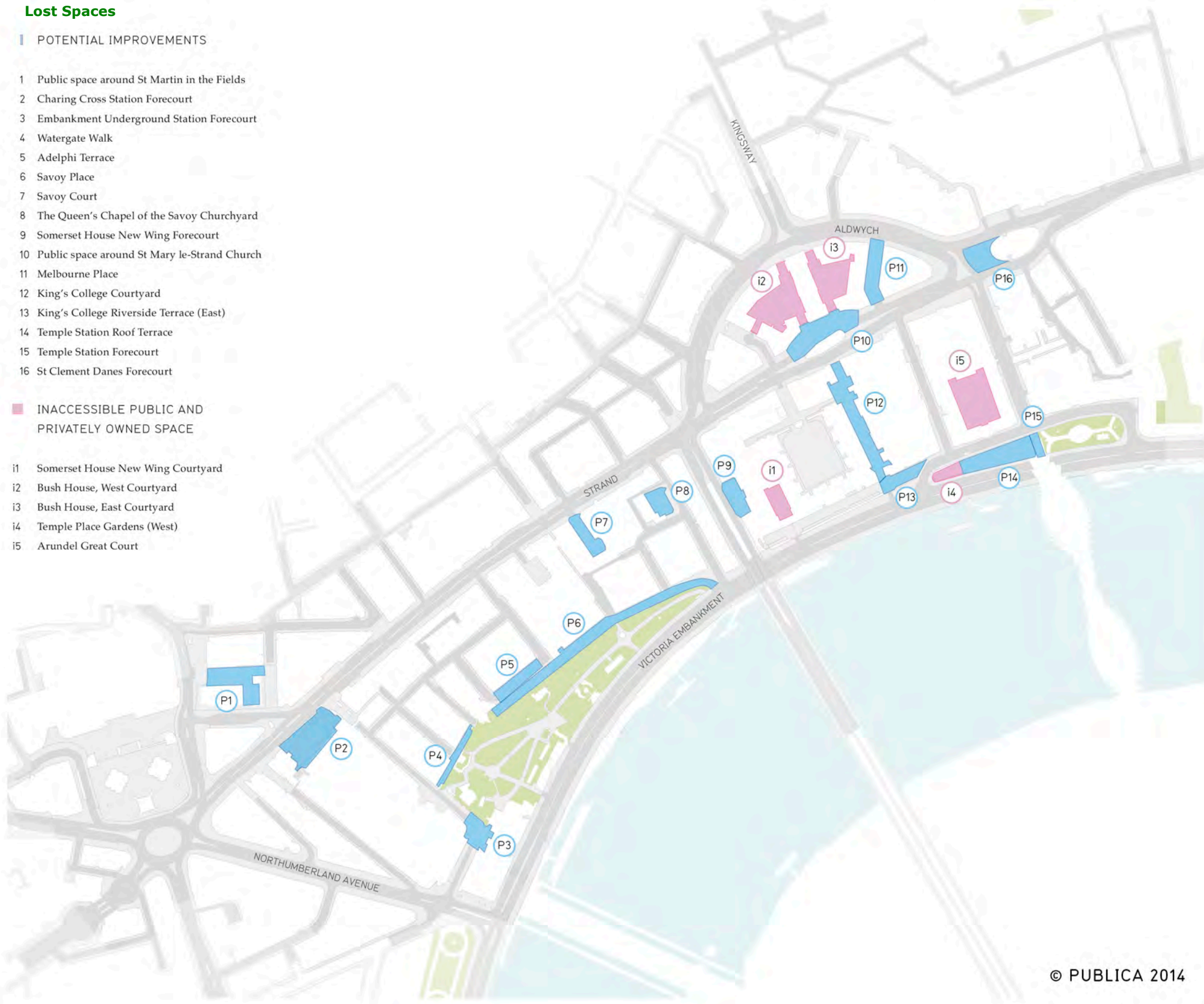
Lost Spaces

POTENTIAL IMPROVEMENTS

- 1 Public space around St Martin in the Fields
- 2 Charing Cross Station Forecourt
- 3 Embankment Underground Station Forecourt
- 4 Watergate Walk
- 5 Adelphi Terrace
- 6 Savoy Place
- 7 Savoy Court
- 8 The Queen's Chapel of the Savoy Churchyard
- 9 Somerset House New Wing Forecourt
- 10 Public space around St Mary le-Strand Church
- 11 Melbourne Place
- 12 King's College Courtyard
- 13 King's College Riverside Terrace (East)
- 14 Temple Station Roof Terrace
- 15 Temple Station Forecourt
- 16 St Clement Danes Forecourt

INACCESSIBLE PUBLIC AND PRIVATELY OWNED SPACE

- i1 Somerset House New Wing Courtyard
- i2 Bush House, West Courtyard
- i3 Bush House, East Courtyard
- i4 Temple Place Gardens (West)
- i5 Arundel Great Court



Open Spaces

GARDENS

- G1 Victoria Embankment Gardens
- G2 The Queen's Chapel of the Savoy Churchyard
- G3 Temple Place Gardens

CIVIC SPACE/MAJOR PUBLIC SPACE

- C1 Trafalgar Square
- C2 Somerset House

HARD LANDSCAPED OPEN SPACE

- H1 Public space around St Martin in the Fields
- H2 Charing Cross Station Forecourt
- H3 Somerset House New Wing Forecourt
- H4 King's College Courtyard
- H5 St Clement Danes Forecourt
- H6 Royal Courts of Justice Entrance

TERRACES/HIGH LEVEL SPACE

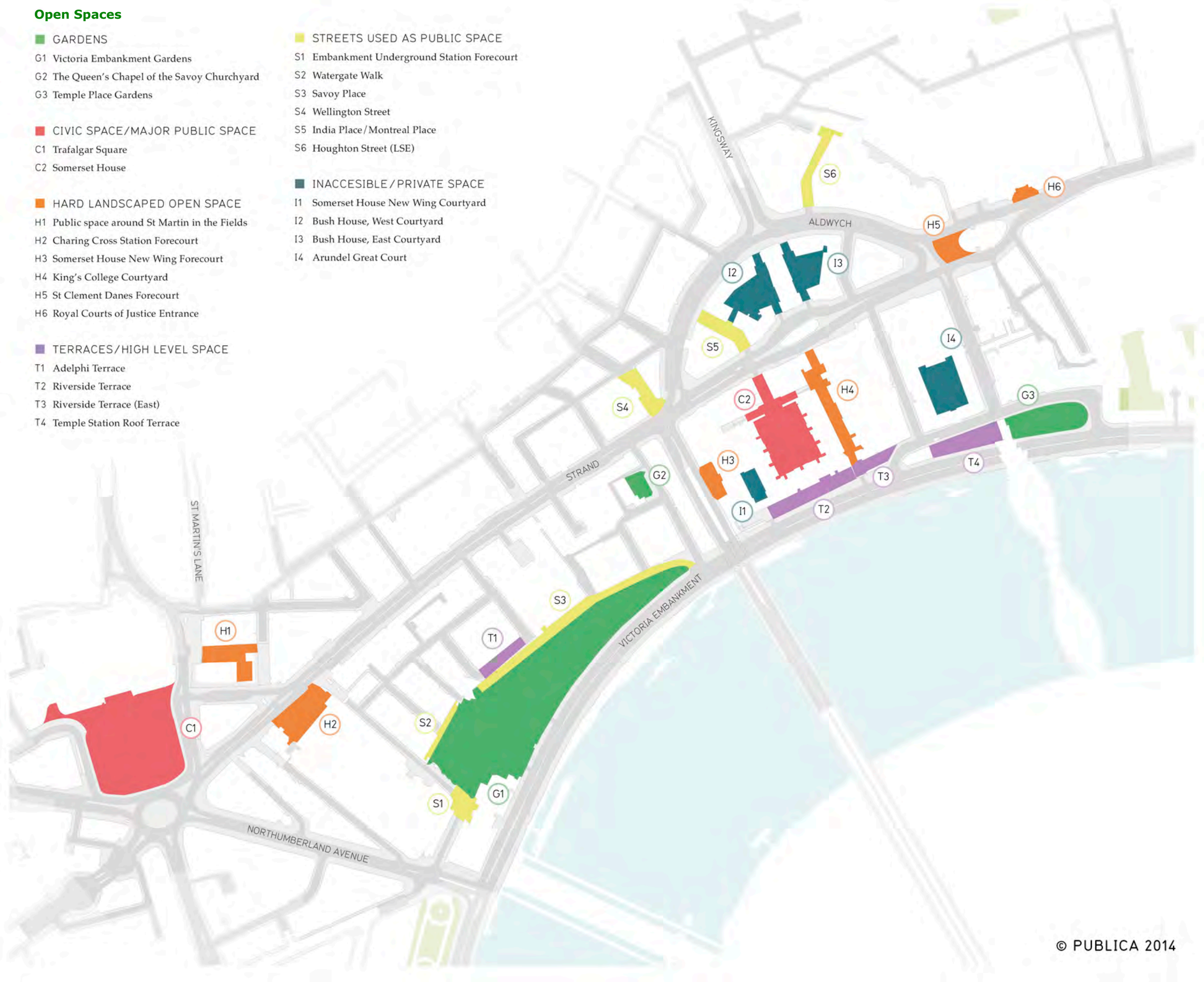
- T1 Adelphi Terrace
- T2 Riverside Terrace
- T3 Riverside Terrace (East)
- T4 Temple Station Roof Terrace

STREETS USED AS PUBLIC SPACE

- S1 Embankment Underground Station Forecourt
- S2 Watergate Walk
- S3 Savoy Place
- S4 Wellington Street
- S5 India Place/Montreal Place
- S6 Houghton Street (LSE)

INACCESSIBLE / PRIVATE SPACE

- I1 Somerset House New Wing Courtyard
- I2 Bush House, West Courtyard
- I3 Bush House, East Courtyard
- I4 Arundel Great Court



Appendix 4: Example Park Restoration Projects

Russell Square, London

Award-winning restoration scheme to recreate the centerpiece of Georgian Bloomsbury



www.landuse.co.uk



Prior to its restoration Russell Square was a lack-lustre garden square in poor condition that was attracting serious anti-social behaviour, especially after dark.

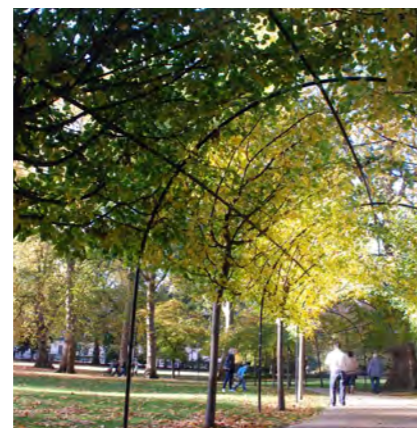
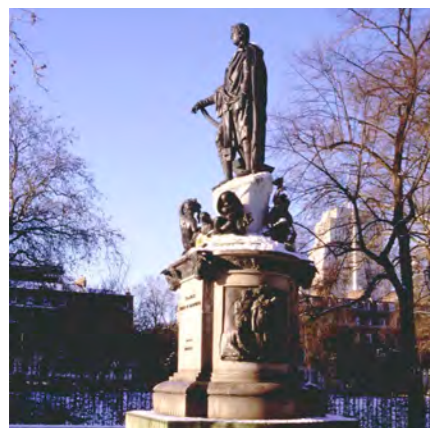
Set in the heart of Bloomsbury the square was originally designed by Humphry Repton in 1801 for the 5th Duke of Bedford. Today the square is Grade II listed and included on the English Heritage Register of Historic Parks & Gardens.

The completed works conserve and enhance the finest features, including restoration of the original 'horse-shoe' and serpentine paths, using archaeological trial pits to establish original alignments. Archive photographs enabled the boundary railing and gate designs to be faithfully reproduced, and the focal point of the square - a bronze statue of Sir Francis Russell, was also conserved.

Plant beds have been re-established according to Georgian planting principals and species were selected to conform as closely as possible to the original planting. A section of the original Lime tree cloister has also been re-introduced. A modern

elegant jet fountain replaces the 1950s water feature and animates the centre of the square.

The Square with its refurbished café has become an extremely popular destination for visitors and residents alike, providing an important refuge and green oasis within this dense urban setting. The site is used by millions of visitors every year.



Project information

Timescale: 1996 - 2002

Lead Consultant & Landscape Architect: LUC
Client: London Borough of Camden

Architect: Knox Bhavan Architects
Fountain Design: The Fountain Workshop
Quantity Surveyor: Kensalls

Approximate budget: £1.4m

Awards

Civic Trust Award (2004)
Camden Design Award (2004)
Georgian Group Winner (2004) BALI Award (2002)
CabeSpace 'Exemplar Project'
Green Flag Award status

Gordon & Woburn Square Gardens, London

The restoration of two Georgian Squares in the heart of Bloomsbury



www.landuse.co.uk



Gordon and Woburn Square Gardens form part of the extensive network of largely Georgian garden squares in Bloomsbury, although they were some of the later squares to be developed in the district.

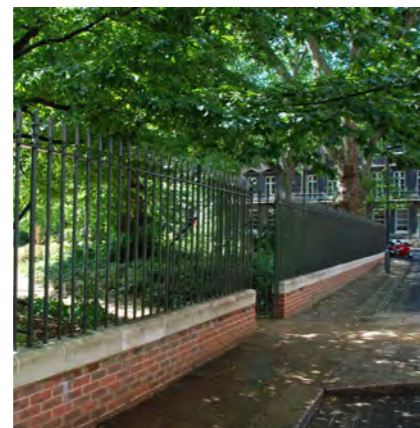
Improving access and safety were primary concerns for the re-design of the squares. Positions of entrances were moved, as required, to best relate to pedestrian crossing points on roads and main routes. All entrances and pathways are level and easily accessible.

As the informal, non-urban quality of the gardens was particularly appreciated by people during the consultation phase, the restoration works aimed to retain that feeling. Benches, which are replicas of an existing four-seater bench in Woburn Square, have been positioned informally throughout the gardens.

Planting features mixed beds of flowering perennials, shrubs and roses. The boundary shrub planting was reduced in height to improve

sightlines into and out of the squares. The western side of Gordon Square Garden has been maintained as a wildlife area for some years.

New facilities were also provided as part of the restoration including interpretation signage, and the small gardener's building was fitted out as a refreshment kiosk. Nearby, a section of path has been widened to form a small stage where lunchtime concerts are organised during summer.



Project information

Timescale: 2006 - 2007

Masterplanner, Lead Consultant & Landscape Architect: LUC
Client: London Borough of Camden

Project costs: £1m

Awards: Landscape Institute Award 2007