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## **Common Ground**

## A Green Infrastructure Audit of Clapham

Prepared by LUC with Engineering Design and Analysis September 2015



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## **1** Introduction

- 1.1 This report sets out the findings of an audit of the green infrastructure in the This Is Clapham Business Improvement District (BID), in south west London. The study area is shown on **Figure 1.1**.
- 1.2 For the purposes of this study, Green infrastructure (GI) includes:
  - Parks and public green spaces
  - Wildlife sites and habitats
  - Green corridors e.g. road and rail corridors
  - Public realm
  - Green roofs
  - Green walls
- 1.3 LUC was commissioned to carry out the audit by This Is Clapham, which is partnership of business and organisations based in the Clapham area. Engineering Design and Analysis provided structural engineering support.

## Study scope and objectives

- 1.4 The overarching aim of the audit is to identify and prioritise opportunities to increase green cover across the BID area. It is also an objective of the study to provide a brief evaluation of the overarching functional benefits of the existing functional benefits of the existing suite of green infrastructure.
- 1.5 The scope of the study was as follows:
  - Retain and enhance existing GI features;

- Identify opportunities for enhancement to improve the GI resource;
- Guidance on the potential and feasibility of delivering GI, urban flood management features, such as green roofs, green walls and rain gardens;
- Improve air quality and resistance to climate change;
- Identify opportunities for public realm improvements to create a vibrant and creative town centre and increase footfall, spend and dwell time.

## London context

- 1.6 The Mayor of London has a target to increase green cover across central London by 5% by 2030. Urban greening is a key element of the much broader Climate Change Adaptation Strategy, which encourages the use of planting, green roofs and walls, and other soft landscape features.
- 1.7 The Mayor also aims to ensure London's streets and open spaces are easy to use, attractive and resilient. Although renowned as a green city, parts of London are densely developed and green space is at a premium.

## Approach and method

1.8 The green infrastructure audit was informed by desk-based study, using Geographical Information System (GIS) and aerial photography to identify and record existing assets. This work was followed by a ground-truthing exercise to confirm the accuracy of the mapped data and gather more detailed information on existing green infrastructure features. Ground-truthing also enabled the identification of potential opportunities to enhance green infrastructure in the study area.

1.9 The key tasks undertaken as part of the study are summarised in **Table 1.1**.

#### Table 1-1: Approach and method followed

Task
1. Inception
2. Telephone consultation with key partners
3. Develop survey form and database
4. Desk-based analysis of GI assets and opportunities
5. "Ground-truthing"
6. Data-entry, digitising and analysis of opportunities
7. Walking workshop
8. Structural assessment of roofs
9. Prepare visualisations of priority opportunities
10. Prepare draft report
11. Progress meeting with steering group
12. Prepare final report

1.10 GIS datasets were provided by the Greater London Authority (GLA) for use during the study. This included information on trees and tree canopies.

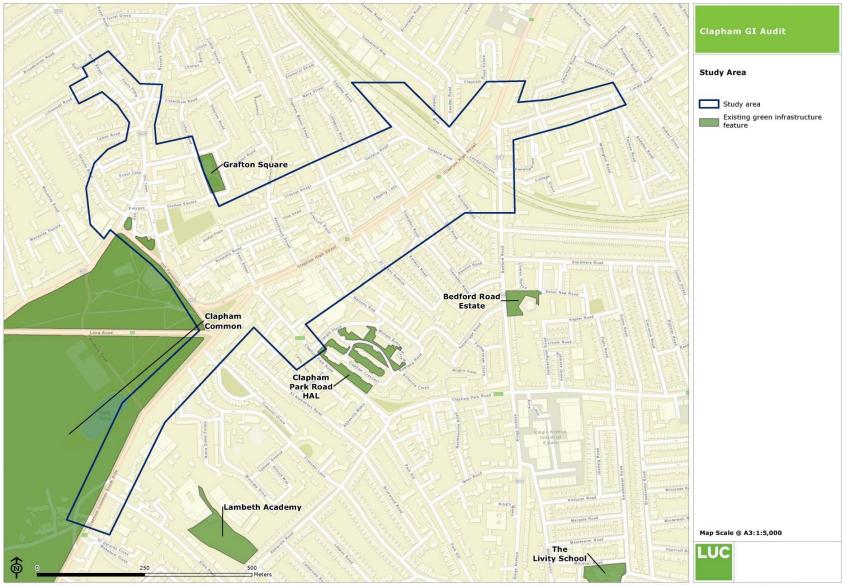
### **Caveats and limitations**

- 1.11 This a strategic audit of the green infrastructure features within This Is Clapham BID area. As such the following caveats apply:
  - Survey work took the form of an initial walkover appraisal to identify broad opportunities and to give initial consideration of constraints to implementation, based on visual inspection (indicative locations of underground services etc.).
  - Further detailed land and site surveys will be required to generate viable design proposals. This would also require liaison as appropriate with statutory undertakers, utilities providers and agencies.
  - Negotiations will also need to be carried out with landowners and operators, and should be undertaken in conjunction with

the aims and requirements of relevant partners operating in the area.

1.12 The delivery of any green infrastructure interventions should form part of a cohesive approach to provide a network of complementary and inter-linking measures. All interventions should be appropriately designed and constructed by skilled professionals.

## Figure 1-1: Study area



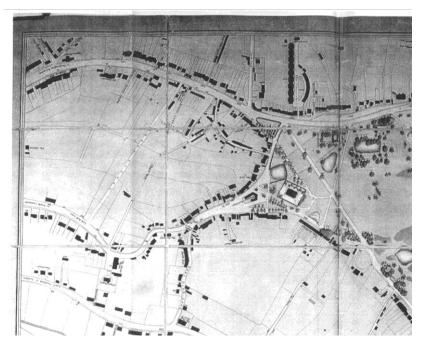
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# 2 Context and findings of the audit

## Character and evolution of the area

- 2.1 The 'This is Clapham BID' is focused around Clapham High Street and located within the London Borough of Lambeth, south west London. The borough is one of the most densely populated boroughs in London with population of around 303,000<sup>1</sup>. The BID area includes Clapham North and Clapham Common Underground Stations, Clapham high Street train station and the area known as Clapham Old Town.
- 2.2 The study area has a rich history with Clapham High Street originating from a diversion of the Roman military road which ran from London to Chichester. Large country houses appeared in the area during the late 17<sup>th</sup> century. The 1827 Plan reveals that much of the area was within agricultural use with large houses around the Common and the Old Town.
- 2.3 The establishment of the railways and the London Underground network led to a dramatic increase in population leading to the removal of the large houses and the construction of terrace housing. The framework of these streets can be seen in the 1908 Ordnance Survey Plans and has remained largely unchanged to this day. As result, the study area contains two Conservation Areas:
  - CA1 Clapham: This covers a significant portion of the study area, extending from North Street Mews to the north to Clapham Town and the properties lining the A3 to the south. Venn Street and Grafton Square also fall within the Character Area.

 CA33 Clapham Road: This extends northwards from Clapham North Underground Station and includes Landor Road, Clapham North Public House and St Bede's Church and Institute.



### **1827 Plan of Clapham**

- 2.4 There are also a significant number of properties and other built features within the area which are included on the National Heritage List for England. Perhaps most notably for this project:
  - Clapham High Street Rail Station (Grade II)
  - 49 Clapham High Street (Grade II)
  - Clock tower (Grade II)
  - Entrance building to Clapham Common Underground Station (Grade II)

<sup>&</sup>lt;sup>1</sup> http://www.londoncouncils.gov.uk/servoces/lept/boroughmap/lambeth

2.5 Today Clapham High Street supports local businesses to create a vibrant centre containing bars, shops and restaurants.

## Wildlife and biodiversity

- 2.6 Clapham Common is a major green space to the south west of the study area. Covering an area of 89 hectares, it provides a valuable oasis for wildlife supporting a broad range of habitats including grasslands, scrub, waterbodies and mature trees.
- 2.7 The recent works at Clapham Old Town has provided additional areas of shrub planting and trees which has increased the wildlife interest. However there are limited green spaces elsewhere within the BID area, with the majority supporting built development.
- 2.8 The green spaces associated with areas of social housing and the gardens of private housing are therefore of particular importance for wildlife and biodiversity. There are also a large number of significant mature trees within the study area, particularly along the boundary of Clapham Common and along Clapham High Street. Recent initiatives has sought to increase the quantity of trees within the area with a large of amount of tree planting being carried out in both residential streets and along Clapham High Street.

## Environmental and social context

## **Flood management**

- 2.9 **Figure 2.1** shows areas within the study area which fall outside flood risk zones (as identified by Drain London). The extent of hard surfaces may result in surface water flooding during periods of prolonged and heavy rainfall. In addition, large areas of surface water runoff could cause flooding downstream in surrounding areas. This can damage property but can also affect the transport and economy.
- 2.10 Overall the risk of flooding from surface water in the area is very low, with the Common acting a key source of drainage. The Environment Agency does however highlight one area around Clapham north where the risk is higher. Although surface flooding

was not reported as a significant issue within the local area by stakeholders, with an anticipated increase in rainfall brought by climate change combined with a lack of green space, it will be important that there is effective rainwater management.

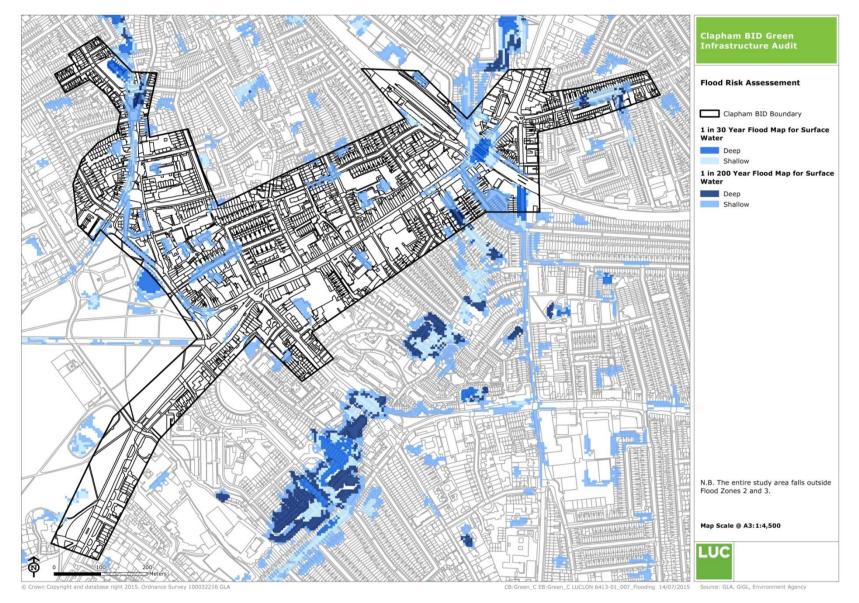
- 2.11 Green infrastructure interventions such as green roofs, rain gardens or planted filter strips, which can help prevent sewer overload and associated foul flooding either within the study area or downstream.
- 2.12 Trees also provide a range of important climate change adaptation functions within an urban environment, including flood alleviation and interruption through water absorption, and local climate amelioration through cooling air, providing shade and shelter from strong winds.
- 2.13 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 canopy area. Many urban trees outside of parks are only offered limited growing space, and this can mean that they do not reach full maturity or fulfil their potential.<sup>2</sup>

## Air quality

- 2.14 Clapham High Street is a key transport route in to Central London via the A3 and A24, and is also a TFL Red Route. As such it carries a high level of traffic throughout day. It has been identified as a high pollution location, particularly for N0x and particulate matter, both of which have adverse health effects. **Figure 2.2** shows the annual nitrogen predicted in 2015.
- 2.15 In 2013 the Mayor of London announced the Mayor's Air Quality Fund to help improve air quality in London. The fund aims to encourage local authorities and partners to develop innovative schemes to improve air quality.
- 2.16 Trees and green spaces can contribute significantly to the dispersion and absorption of air pollutants.

<sup>&</sup>lt;sup>2</sup> Casey Trees (2008) Tree Space Design: Growing the tree out of the box.

## Figure 2-1: Flood risk assessment







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CB:Green\_C EB:Green\_C LUCLON 6413-01\_008\_Air\_Quality 14/07/2015 Source: GLA, GIGL

## **Climate change adaptation**

- 2.17 Climate change is one of the greatest challenges facing communities throughout the world. The anticipated changes will have a significant impact on densely populated urban areas such as Clapham. The study area is vulnerable to a range of climate change impacts, particularly urban heat island effects and wind tunnels, as well as localised surface water flooding.
- 2.18 Research indicates the urban heat island effect can result in ambient temperatures in central London being 10 degrees centigrade higher than in the surrounding areas.<sup>3</sup> A study of Toronto, Canada indicated that during the summer months, the temperature on standards roofs extended 40 degrees centigrade on over 40% of days, and only exceeded 30 degrees centigrade on 3% of days.<sup>4</sup>
- 2.19 Opportunities to reduce urban heat island effects, wind tunnel and surface water flooding should be prioritised in order to create a more comfortable environment for workers and residents of This Is Clapham BID area.

# Recent green infrastructure initiatives and interventions

- 2.20 Over recent years there have been a number of green infrastructure projects delivered in the Clapham area by local businesses and residents. Interventions include (although are not restricted to):
  - **The Edible Bus Stop** a community gardening project initially involved in the creation of a pocket park on Landor Road, to the north of the BID area, and recently involved in plant and food growing within Clapham North Underground Station.

 Kendoa Road – a small pocket park created using raised wooden beds. Created and maintained by Father Nature, Social Enterprise working to provide community based sustainable urban gardening projects and events.



Kendoa Road Pocket Park

- Clapham Old Town and Venn Street extensive relandscaping of the Clapham Old Town streetscape associated with nearby development proposals, including creation of raised planting beds, street tree planting and installation of shared surfacing. Similar interventions on Venn Street created a new area of public realm, with restricted vehicle use and supporting the Venn Street market and opening opportunities for bars and restaurants to extend on to the pavement.
- Clapham Manor Estate Community Garden raised beds providing opportunities for community food growing, supported by Lambeth's Edible Living programme, the Clapham

<sup>&</sup>lt;sup>3</sup> GLA Website: https://www.london.gov.uk/lccp/ourclimate/overheating.jsp

<sup>&</sup>lt;sup>4</sup> Dunnett, N. and Kingsbury, N. (2005) Planting Green Roofs and Living Walls

Greenways Initiative funded by Transport for London and local community groups including Bandstand Beds (with a food growing project on Clapham Common) and Father Nature.

• A number of projects were also identified and delivered, including street tree planting, as part of the **Neighbourhood Enhancement Programme**.

#### Figure 2-3: Existing green infrastructure features



Community food growing in raised planters associated with surrounding residential properties.



The grass areas surrounding Clapham Common Underground Station are an extension of the Common.



Old Town has recently been enhanced to create a pocket park complete with shrub and tree planting.



Venn Street has been 'greened' through planting olive trees.

Wide grass verges line the A30.

Clapham Common is located to the south of the study area covering an area 88 hectares. The Common is owned by the London Borough of Lambeth with management guided by a Masterplan document.



Raised planters line Landor Road and contains sporadic shrub and trees.

Local businesses provide and maintain planters in front of their Planters on Clapham High Street. premises.



study area.

Trees have recently been planted along streets throughout the study area. Example of a cycle stand combined with a planter on Clapham Manor Road.

Window boxes on a Public House.

# **3** Key opportunities

- 3.1 The site audit identified 35 opportunities either to improve existing or provide new terrestrial green infrastructure features and green walls. In addition, opportunities for a number of green roofs have been identified.
- 3.2 When identifying opportunities for greening key issues for consideration included the current usage of spaces (importantly including areas of high footfall and activity), security and the nature of sub-surface constraints (e.g. services and wayleaves).
- 3.3 Green infrastructure interventions include the following:
  - Street tree planting
  - The removal of non-porous paving to be replaced with permeable paving or rain gardens
  - The addition of green walls and green roofs to existing structures
  - Pop-up community food growing linked to local business and community groups
- 3.4 This section of the report outlines the key opportunities for the enhancement of green infrastructure within the This Is Clapham BID area. Identifier codes for each opportunity are provided for ease of locating them on Figures 3.5 and 3.6 along with Table 3.2. Further details for each opportunity are provided within Appendix 1 3.

## Public realm

## **Street trees**

## Location

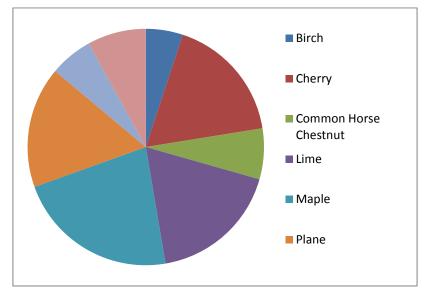
3.5 The presence of street trees in the BID area was assessed using GLA tree data. In addition the walkover survey identified a significant amount of recent tree planting not included in the GLA data, particularly around Clapham Old Town but also in many of the residential streets. The tree species recorded in the study area are listed in **Table 3.1** and **Figure 3.1**. The location of tree planting in the study area is shown in **Figure 3.2**.

#### Table 3-1: Tree species recorded within the study area

Trees	Total
Alder	1
Amelanchier	3
Ash	8
Beech	3
Birch	19
Cherry	65
Common Horse Chestnut	26
False Acacia	7
Hawthorn	2
Hazel	8
Holly	5
Hornbeam	12
Ligustrum	2
Lime	67
Maple (including A. campestre & platanoides)	83
Oak	3
Olive	5
Pear	4
Photinia	10
Plane	62
Poplar	1
Sorbus	22
Sweet Chestnut	1
Thorn	4
Tree of Heaven	10

Trees	Total
Unknown Broadleaf	30
Vacant tree pit	4

Figure 3-1: Most recorded species in study area



- 3.6 Many of the remaining streets without tree planting have little potential to increase planting due to the likely presence of underground services and narrow pavements. However there are a number of sites which offer potential to create home zones and traffic calming measures (such as pavement projections) which could incorporate larger grade street trees.
- 3.7 There may also be potential to increase planting along Clapham High Street. **Figure 3.2** identifies sections of Clapham High Street Road where there may be potential to provide new tree planting. However the locations will need to be selected carefully with consideration given to underground services, footfall, sightlines and CCTV.

## Selection of trees

- 3.8 Depending on size and habit, street trees can be particularly valuable in providing greening where space is limited provided appropriately designed tree pits can be provided. Consideration should be given to spaces and growing habitats appropriate to the surrounding environment and should be adaptable to urban situations e.g. potential for pollarding/ smaller cutting cycles to reduce crown extent, root ball sizes and therefore water demand.
- 3.9 The selection of trees should be taken carefully to ensure that the micro-climate enables the tree to reach their intended form but to also reflect the character of the surrounding area. It may therefore be appropriate to prepare a **Tree Strategy** for This Is Clapham BID area. This would ensure a coordinated approach to the selection and planting of street trees and enable the realisation of a long term vision for the area's trees and for replacement of existing stock as required.
- 3.10 Such a strategy should also include a specification for appropriate grades of tree and tree protection (guards, underground guying etc.) to withstand trafficking/ wear and tear associated with use of the public realm and provision for maintenance. It should also include consideration of natural surveillance and permeability.
- 3.11 The planting density of trees is wholly dependent on species selection as well as environmental factors e.g. the proposed location's microclimate and soil condition. Guidance should therefore be sought from specialist nurseries before selecting trees as well as reviewing guidance produced by organisations such as the Arboricultural Association. Likewise the cost of planting trees can also vary depending on species, planting specification and site conditions. As an indication, a tree planted into a hard surface which is free from obstructions, and staked may cost in the region of  $\pounds$ 500 to  $\pounds$ 1,000.
- 3.12 Large canopy trees provide the greatest benefits in terms of alleviating the heat island effect through the provision of shading. These mature trees also contribute significant flood alleviation functions. This can be particularly valuable in busy urban areas, providing shade and cooler environment, as well as visually

enhancing an area. In addition, trees filter air pollution which can be particularly useful along busy streets such as Clapham High Street. They also intercept and funnel rainwater, assisting infiltration of water to substrates at their base and provide habitat for wildlife.





Olive trees

Espalier trees

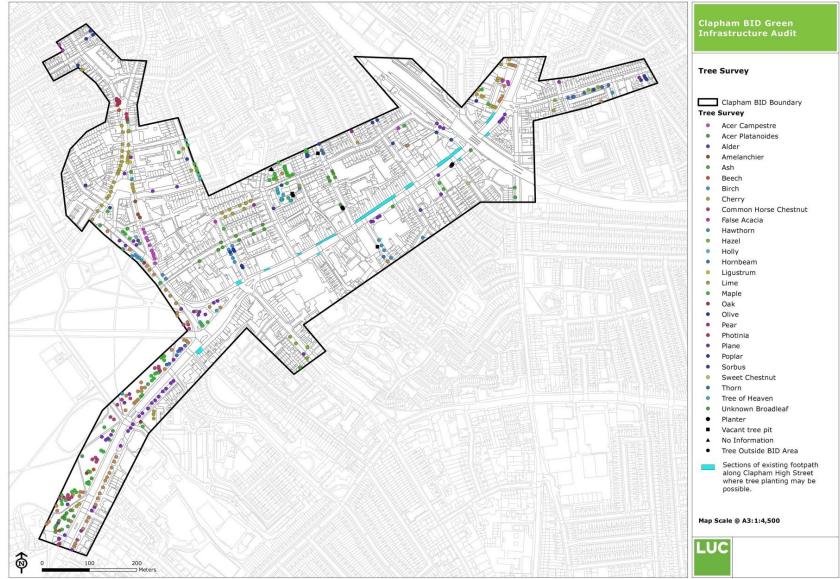




Photinia

London plane





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CB:Green\_C EB:Green\_C LUCLON 6413-01\_009\_Tree\_Survey\_Summary 14/07/2015 Source: GLA, GIGL

#### **Rain gardens**

- 3.13 A 'rain garden' is an area of green space which is designed to collect and absorb rainwater runoff from buildings and urban areas. These features can reduce flood risk and soil erosion in periods of heavy rainfall and collect and store water which could be used for irrigation of other features.
- 3.14 In addition to providing a water management situation in urban areas, rain gardens are also attractive to people and wildlife, and can be designated to trap and filter waterbourne pollutants.
- 3.15 Rain gardens tend to be 50 or 100mm deep and will have substrate depth of 200-300mm. They are planted with low maintenance vegetation that can withstand both waterlogging or drought for short periods. The soils are specifically designed to take pollutants out of the water and to be very porous. Once at capacity excess water is able to leave the feature and return to the wider drainage system. The water that is retained eventually infiltrates deep in to the soils or is evaporated in to the atmosphere. This process can also help to reduce local air temperatures.
- 3.16 Although the exact volume that rain gardens are able to remove from the drainage system is unknown gardens are able to be designed to capture the first 15mm of rainfall falling on the features, which in most events forms 95% of rainfall. This significantly decreases the pressure placed on the surface water drainage systems, particularly during intense summer storms when surface flooding can be severe.
- 3.17 There are a number of barriers to retrofitting such features into the urban realm.
  - Presence of underground services and street furniture, which can restrict the area available for rain gardens. Locations where this is less likely to be an issue have been identified, although further survey/ investigation would be required.
  - Rain gardens are a landscape feature that would need to be managed. Maintenance operations would include vegetation management/ replacement and litter picking.

- Features need to be integrated with existing drainage systems to enable them to intercept surface flow, as well as discharge excess water. Such features could also form part of a wider streetscape scheme such as integrating with areas of permeable paving. It may be appropriate to link these features to provide a chain of complementary interventions.
- Space is required to create these features and therefore these may not be appropriate in areas of high footfall.
- The features are sunken to enable the retention of water. However the depth of such features (typically 50-100mm) is relatively minor and the edges can be sensitively defined through use of planting and edge detailing.
- 3.18 A number of sites within potential for rain garden installation were identified within the BID area. This includes:
  - Voltaire Road (GI.05)
  - Clapham Manor Street (GI.16)
  - St Luke's Road (GI.12)

### Potential Rain Garden Locations in the Clapham BID Area





Voltaire Road (GI.05)

St Luke's Road (GI.12)



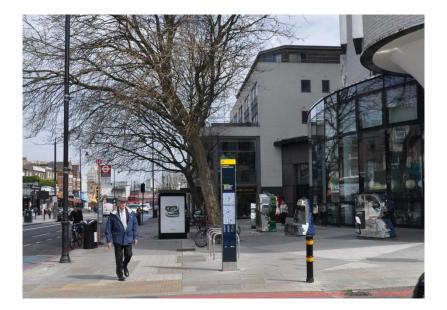
Example of a traffic calming measure providing increased infiltration with tree and herbaceous planting (Claylands Road, Lambeth)

### Other open space enhancements

- 3.19 A number of locations were identified for other greening opportunities, such as the enhancement of existing greenspace or where sufficient space existed for the creation of new pocket parks or 'pop-up' greening measures.
- 3.20 An area of existing greenspace immediately west of Clapham Common Underground station (GI.17) has been improved visually in recent years through the removal of dense scrub vegetation and railings, creating a more welcoming character including space for a new outdoor café area. However, the areas of amenity grassland created were poorly established and are subject to heavy footfall,

resulting in a relatively unattractive appearance. Any interventions to improve the attractiveness of this area, and make it more useable, would need to consider the constraints such as high footfall, underground services and restrictions associated with its designation as part of the Common, but there may be opportunities to create robust raised planters planted with appropriate shade tolerant species, perhaps incorporating facilities such as seating or bike racks, or this could provide an opportunity for pop-up events.

- 3.21 Locations were also identified with large areas of pavement with potential for greening, such as a triangle of pavement near the deep level air shelter south east of Clapham Common Underground station (GI.11) and an area outside the Clapham Library on the high street (GI.12). This later area is relatively cluttered with mature trees, a bus stop, street art and cycle racks aligned in such a way to render a relatively large area unusable. Such areas would benefit from a bespoke design, potentially with the creation of pocket parks which can accommodate facilities/street furniture in an improved layout.
- 3.22 Another example included an area of raised, brick planters along Landor Road (GI.13) which supported poorly maintained and visually unattractive scrub planting beneath mature trees. These planters could be the subject of a community planting scheme to create a more visually attractive and wildlife friendly feature. The success of this would likely depend on community involvement to deliver long-term maintenance.



Cluttered open space outside of the Clapham Library (GI.12)

## Green walls

- 3.23 Green walls can have a dramatic and visible greening effect, and have the added advantage of screening unattractive buildings and providing habits for wildlife.
- 3.24 However to be a sustainable greening feature it is also important that a watering system is in place that does not rely on mains water, for example using rainfall runoff or using grey water. The most economical way of achieving a green wall is with climbing plants growing from beds or planters at the base of a wall. The alternative to this is a modular green wall system where plug plants are established within a vertical growing system. The latter is considerably more expensive and requires more intensive management.

- 3.25 Some buildings along the Clapham High Street show potential for green wall installation. This would have a dramatic effect on the streetscape, and they could be installed at key gateways within the area such as Clapham North and Clapham Common Underground Stations.
- 3.26 Green walls do not normally require planning permission unless the affected building is listed or is within a Conservation Area. However the local planning authority should be consulted.
- 3.27 Important considerations when planning green walls are the aspect with north facing wall needing less maintenance and use less water however there are limited plant species which can tolerate high shade. It is also important to consider if there is a nearby water sources. For modular systems it is important to confirm with a structure engineer that the wall can support the weight and take any necessary fixings. It is also important the living wall is separated from the structure by a waterproof barrier.
- 3.28 The audit identified as many as 18 opportunities for green walls. These could be created through using climbers grown in the ground and train on tensioned wire or through the use of modular units. However the deliverability of the green walls will be greatly dependent on the support from the property owner and tenants. The following locations were identified as having the greatest potential for green walls:
  - Clapham North Underground Station (GW.05 and GW.16)
  - Clapham Common Underground Station South Side Entrance (GW.18)
  - Railway arches on Voltaire Road (GW.07), Gauden Road (GW.07) and Lendal Terrace (GW.15)
  - Two above ground structures associated with deep level air shelters on Clapham High Street (GI.10 and GI.19)

Figure 3-3: Possible green wall opportunities



Possible green wall above Byron restaurant on Clapham High Street (GW.09)



Possible green wall on Clapham Common Underground Station South Side entrance (GW.18)



Green wall on the Clapham North Underground Station (potential modular system and green wall created by overhanging vegetation from the roof)(GW.16)

## Green roofs

- 3.29 The type of green roof which can be installed at a building depends on the following:
  - Structural loading of the roof
  - Amount of substrate which can be supported
  - Potential for public access
- 3.30 The Green Roof Code identifies four main types of green roof:
  - Extensive: lightweight, low maintenance system with a substrate of between 80-100mm
  - Biodiverse: similar to extensive but designed specifically to benefit wildlife.
  - Semi-intensive: deeper substrate typically of 100-200mm and therefore able to support a greater range of vegetation.
  - Intensive: a roof garden or small urban park with public access. Requires maintenance and irrigation.
- 3.31 Dependent on the roof type, a range of benefits can be provided such as:
  - Water attenuation
  - Improved thermal efficiency of buildings
  - Air pollution control
  - Provision of wildlife habitats
  - Provision of open space
  - Energy savings in relation to the heating and cooling of buildings
- 3.32 There are a range of factors which influence the amount of rainwater a green roof is able to absorb. These include the season, climate, depth of substrate, design of the green roof and

the type of plant material.<sup>5</sup> However, as an average, the different types of attenuating approximately the following amount of rainfall:

- Extensive/ biodiverse roof: between 45-55% of annual rainfall
- Semi-intensive roof: between 60-65% of annual rainfall
- Intensive roof: between 9–100% of annual rainfall
- 3.33 An initial desk-base assessment of roofs in the This If Clapham BID area was completed using aerial photography. This was followed up by an initial site visit carried out by a structure engineer for a selection of roofs.
- 3.34 Four particular opportunities for green roofs were identified based on the structural characteristics of the buildings as well as the level of impact these would have for Clapham residents, workers and visitors. These are:
  - Clapham North Underground Station: likely to support a reinforced concrete roof with steel support beams. Good potential to support a lightweight substrate suitable for 'brown' or biodiverse roof creation, or for sedum matting. May be potential for localised areas to support a greater load, such as planters (potentially to support hanging species down the front of the building).
  - Bungalow frontages along Clapham High Street likely that the existing roofs comprise timber joists spanning the party walls which would not support additional weight. Greening of these areas would be possible but would require installation of a suspended roof structure between party walls (for example). This would require significant investment and therefore may only be considered appropriate for any roofs which would then become publically accessible, for example as a bar or café garden.
  - Two above ground structures associated with deep level air shelters on Clapham High Street. Access was not available

 $<sup>^{5}</sup>$  Dunett N. and Clayden A (2007) Rain gardens: Managing water sustainably in the garden and designed landscape

but it was considered that these may support reinforced concrete roofs. Further inspection may confirm suitability for green roofs, including potentially localised planters or more lightweight use of substrates.



The bungalow shop frontages provide opportunities for greening with structural reinforcement.

## Multiple opportunities

- 3.35 A number of sites have the potential for the delivery of a number of greening opportunities such as street tree planting, rain garden, green walls and green roofs. Examples of such locations include:
  - Voltaire Road (GI.15)
  - Clapham North Underground Station (GI.14)
  - Deep shelters along Clapham High Street (GI.10 and GI.19)

### **Voltaire Road**

3.36 The junction of Voltaire Road with Clapham High Street supports a wide road, a large pedestrian island, and relatively wide pavements. The railway viaduct provides a vertical structure, with the arches currently tenanted including restaurants and bars. This area was identified as providing a key opportunity for an ambitious redesign which could include narrowing of the road and use of shared pedestrian/vehicle surfaces (as found at Clapham Old Town and Venn Street). This would create a more pedestrian friendly space, increase space for greening including for street trees and rain gardens, and offer the potential for improved use of the space by tenants of the arches and potentially for stalls or pop up events. Any such proposal should seek to complement, not compete with, the Venn Street Market. The vertical walls of the railway arches could support green walls, with the use of planters supporting climbers, or with hanging plants cascade down the frontage from fixed planters.



#### **Clapham North Underground Station**

3.37 The station building provides large areas of wall and roof space which may be suitable for greening, with potential for walls to support modular systems, climbers and/or hanging plants (from the roof). It is understood that The Edible Bus Stop are currently working with the station manager to develop greening opportunities, which could include community food growing using moveable planters which could be kept within the station overnight, or raised planters could be constructed along the station frontage (potentially combined with cycle storage features). There may also be space for the creation of rain gardens and tree planting outside the station, although footfall is high in this location.



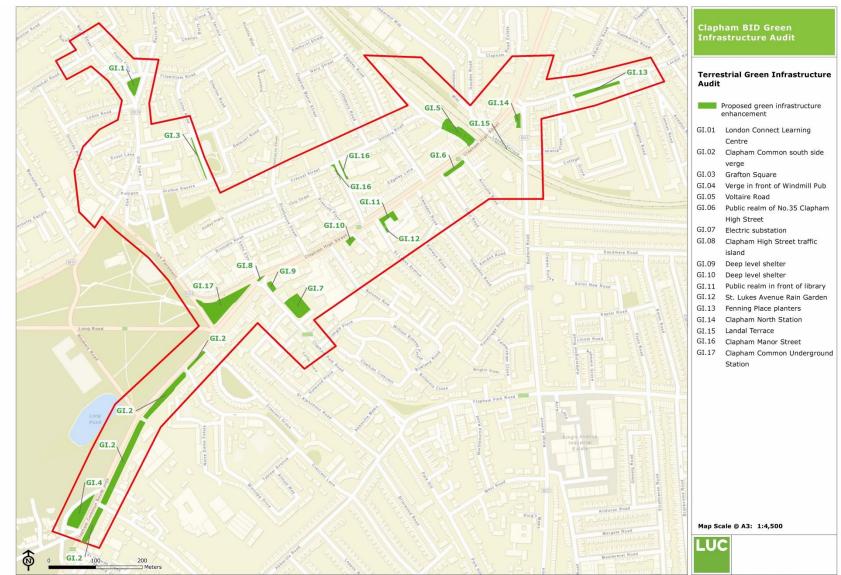
## **Deep Shelters**

3.38 The deep shelters are prominent feature along the Clapham High Street. These feature are important to the local heritage but are currently covered in timber fencing and hoardings. These brick and concrete structures may be suitable for supporting green walls and roofs, with potential to create a cascade effect with vegetation. This would be combined with other art features to help create key focal points along the high street.

Figure 3-4: Example of green walls incorporating advertising<sup>6</sup>



<sup>&</sup>lt;sup>6</sup> All images taken from http://www.scotscape.net/



## Figure 3-5: Terrestrial green infrastructure interventions identified in This Is Clapham BID area

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community CB:JH EB:Johnny\_H LUCLON 6413-01\_003\_Terrestrial\_GI\_Audit 04/06/2015 Source: Lambeth Borough Council

Opportunity	Туре	Benefits	Ease of delivery / Approximate cost	Barriers to delivery
GI.01: London Connect Learning Centre	<ul> <li>Food growing: fruit trees/ vegetables</li> <li>Street trees</li> <li>Planters</li> <li>Green wall/ climbing plants</li> </ul>	<ul> <li>Biodiversity</li> <li>Visual appearance</li> <li>Local amenity</li> <li>Community involvement</li> </ul>	Moderate: £5- 15k	<ul> <li>Current uses e.g. active use, transport infrastructure</li> <li>Listed buildings or other building constraints</li> <li>Underground services - water mains, gas, telecoms, sewers</li> <li>Wayleaves</li> </ul>
GI.02: Clapham Common Southside Verge	<ul> <li>Wildflower meadow/ semi-natural grassland</li> <li>Wetland features/ rain gardens</li> <li>Pocket park on verge in front of college</li> </ul>	<ul><li>Biodiversity</li><li>Flood storage</li><li>Visual amenity</li></ul>	Moderate: £5- £15k	<ul> <li>Current uses e.g. active use, transport infrastructure</li> <li>Underground services - water mains, gas, telecoms, sewers</li> <li>Wayleaves</li> </ul>
GI.03: Grafton Square	Wetland features/ rain gardens	<ul><li>Biodiversity</li><li>Flood storage</li><li>Visual amenity</li></ul>	Moderate: £5- £15k	<ul> <li>Current uses e.g. active use, transport infrastructure</li> <li>Underground services – water mains, gas, telecoms, sewers</li> <li>Wayleaves</li> </ul>
GI.04: Verge in front of Windmill Pub	<ul> <li>Wildflower meadow/ semi-natural grassland</li> <li>Tree planting: woodland</li> </ul>	<ul><li>Biodiversity</li><li>Visual appearance</li></ul>	Easy/ quick win: Less than £5k	None recorded
GI.05: Voltaire Road	<ul> <li>Wetland features/ rain garden</li> <li>Green wall/ climbing plants</li> <li>Substantial window box</li> <li>Food growing: fruit trees/ vegetables</li> <li>Street tree</li> <li>Planters</li> </ul>	<ul> <li>Water storage and surface water interruption</li> <li>Biodiversity</li> <li>Visual amenity</li> <li>Food growing</li> <li>Community involvement</li> </ul>	Challenging: More than £30k	<ul> <li>Current uses e.g. active use, transport infrastructure</li> <li>Listed buildings or other building constraints</li> <li>Underground services - water mains, gas, telecoms, sewers</li> <li>Wayleaves</li> <li>Highways</li> </ul>

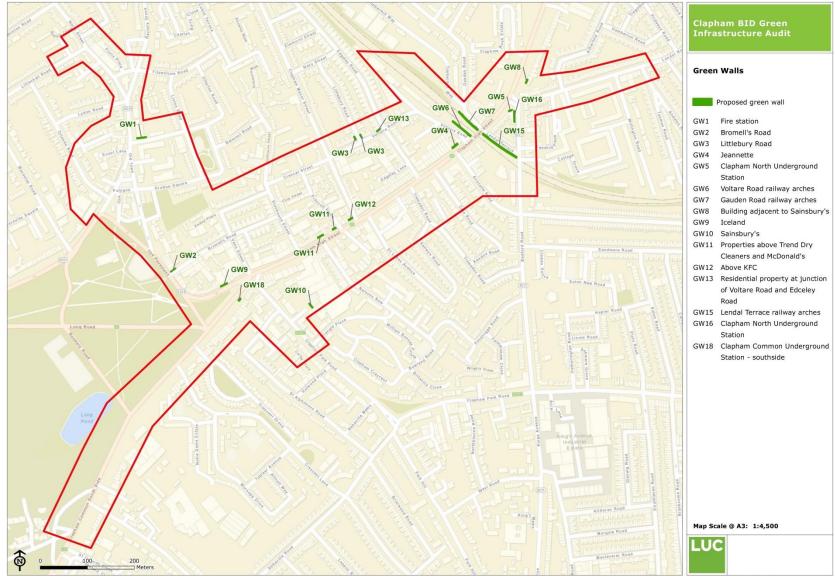
## Table 3-2: Summary of terrestrial interventions identified in the This Clapham BID area

Opportunity	Туре	Benefits	Ease of delivery / Approximate cost	Barriers to delivery
GI.06: Public realm opposite no.35 Clapham High Street	<ul> <li>Wetland features/ semi-natural grassland</li> <li>Street tree</li> </ul>	<ul> <li>Water storage and surface water interruption</li> <li>Biodiversity</li> <li>Visual amenity</li> </ul>	Moderate: £15- £30k	<ul> <li>Current uses e.g. active use, transport infrastructure</li> <li>Underground services - water mains, gas, telecoms, sewers</li> <li>Wayleaves</li> </ul>
GI.07: Electric substation	<ul> <li>Wildflower meadow/ semi-natural grassland</li> <li>Green wall/ climbing plants</li> </ul>	<ul> <li>Biodiversity</li> <li>Water storage and surface water interruption</li> <li>Visual amenity</li> </ul>	Moderate – challenging: £5- more than £30k	<ul> <li>Underground services - water mains, gas, telecoms, sewers</li> <li>Wayleaves</li> <li>Support of site owners</li> </ul>
GI.08: Clapham High Street traffic island	<ul> <li>Wildflower meadow/ semi-natural grassland</li> <li>Wetland features/ rain gardens</li> <li>Planters</li> </ul>	<ul> <li>Biodiversity</li> <li>Water storage and surface water interruption</li> <li>Visual amenity</li> </ul>	Easy/ quick win – moderate: less than £5k - £15k	<ul> <li>Current uses e.g. active use, transport infrastructure</li> <li>Underground services - water mains, gas, telecoms, sewers</li> <li>Wayleaves</li> </ul>
GI.09: Deep level shelter	<ul><li>Green roof</li><li>Green wall</li></ul>	<ul> <li>Biodiversity</li> <li>Water storage and interruption</li> <li>Visual amenity</li> </ul>	Moderate – challenging: £5k – more than £30k	Listed buildings or other building constraints
GI.10: Deep level shelter	<ul><li>Green roof</li><li>Green wall</li></ul>	<ul> <li>Biodiversity</li> <li>Water storage and interruption</li> <li>Visual amenity</li> </ul>	Moderate – challenging: £5k – more than £30k	Listed buildings or other building constraints
GI.11: Public	Wetland features/ rain gardens	Biodiversity	Moderate: £5 -	Current uses e.g. active use, transport infrastructure

Opportunity	Туре	Benefits	Ease of delivery / Approximate cost	Barriers to delivery
realm in front of library	<ul><li>Planters</li><li>Creation of pocket park</li></ul>	<ul> <li>Water storage and surface water interruption</li> <li>Visual amenity</li> </ul>	£30k	<ul> <li>Underground services – water mains, gas, telecoms, sewers</li> <li>Wayleaves</li> </ul>
GI.12: St Luke's Avenue	Wetland features/ rain gardens	<ul> <li>Biodiversity</li> <li>Water storage and surface water interruption</li> <li>Visual amenity</li> </ul>	East – moderate: £5- £15k	<ul> <li>Underground services – water mains, gas, telecoms, sewers</li> <li>Wayleaves</li> </ul>
GI.13: Fenwick Place planters	<ul> <li>Wildflower meadow/ semi-natural grassland</li> <li>Wetland features/ rain gardens</li> <li>Water storage feature</li> <li>Street tree</li> <li>Shrub</li> </ul>	<ul> <li>Biodiversity</li> <li>Water storage and surface water interruption</li> <li>Visual amenity</li> </ul>	Easy/ quick win – moderate: Less than £5 - £15k	<ul> <li>Underground services – water mains, gas, telecoms, sewers</li> <li>Wayleaves</li> </ul>
GI.14: Clapham North Station	<ul> <li>Water storage feature</li> <li>Green wall/ climbing plants</li> <li>Substantial window box</li> <li>Food growing: vegetables</li> <li>Planters</li> </ul>	<ul> <li>Biodiversity</li> <li>Visual amenity</li> <li>Local amenity</li> <li>Water storage</li> <li>Community involvement</li> </ul>	Easy/ quick win – challenging: Less than £5- more than £30k	<ul> <li>Current uses e.g. active use, transport infrastructure</li> <li>Underground services - water mains, gas, telecoms, sewers</li> <li>Wayleaves</li> </ul>
GI.15: Landal Terrace	Substantial window box	<ul><li>Biodiversity</li><li>Visual amenity</li></ul>	Moderate £5- £15K	<ul><li>Current uses e.g. active use, transport infrastructure</li><li>Support from landowners and tenants</li></ul>
GI.16: Clapham Manor Street	Wildflower meadow/ semi-natural grassland	<ul><li>Biodiversity</li><li>Water storage and</li></ul>	Challenging: £15k – more	<ul> <li>Current uses e.g. active use, transport infrastructure</li> <li>Underground services – water mains, gas, telecoms,</li> </ul>

Opportunity	Туре	Benefits	Ease of delivery / Approximate cost	Barriers to delivery
	<ul><li>Wetland features/ rain garden</li><li>Street tree</li></ul>	surface water interruption • Visual amenity	than £30k	sewers • Wayleaves • Highways
GI.17: Clapham Common Underground Station	<ul> <li>Wildflower meadow/ semi-natural grassland</li> <li>Wetland features/ rain garden</li> <li>Planters</li> </ul>	<ul> <li>Biodiversity</li> <li>Water storage and surface water interruption</li> <li>Visual amenity</li> </ul>	Moderate: Less than £5k - £15k	<ul> <li>Current uses e.g. active use, transport infrastructure</li> <li>Underground services - water mains, gas, telecoms, sewers</li> <li>Wayleaves</li> <li>Designations (i.e. area forms part of Clapham Common)</li> </ul>

#### Figure 3-6: Green wall interventions identified



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

# 4 Implementation and management

- 4.1 Consultation with landowners, local groups and community representatives will be essential to the effective delivery and long term maintenance of the GI features. Key groups to involve would include Network Rail, Transport for London, statutory undertakers, highways authority, developers, property management companies and neighbourhood forum representatives. We suggest that a short period of consultation with partners of the This Is Clapham BID should take place. Consultation should seek to achieve the following:
  - Allow interested parties to comment on opportunities which have been identified on their property, or related to sites and infrastructure in which they have an interest.
  - Provide an opportunity to raise any concerns about the proposals, identify constraints, and comment on potential design.
  - Enable the partnership to refine its priorities and deliver GI enhancements with the support of the wider business and residential communities.
- 4.2 Consultation could take the form of one to one sessions or a roundtable workshop type meeting, where complementary objectives could be matched as a basis for future partnership working, and any conflicts identified and addressed. This could be supported by a follow up session as proposals are worked up.
- 4.3 The involvement of Lambeth Council will be integral to the delivery of many of the opportunities identified, particularly those within the public realm, the management of which is the responsibility of the local authority.

## **Additional surveys**

- 4.4 For some of the opportunities identified, further survey work will be required to ensure that the site or building is suitable for the proposed feature. This is particularly true of the green roof opportunities, and all buildings will require a structural survey to ensure the building can safely take the additional weight that the installation of a green roof generates. Any future modular green walls should also have a structural assessment, to ensure the wall can support the additional weight of the green wall system.
- 4.5 For all street tree proposals (and those involving large/specimen shrubs with large root systems), a detailed assessment should be made of the presence and vicinity of underground services and associated way leaves, plus overground services/power lines/cables/street lighting. Sight lines and visibility splays in relation to highways and site accesses should also be considered, in liaison with the adopting authority/highway authority.
- 4.6 In selecting tree species, detailed consideration should also be given to maintenance issues (watering requirements, design of tree pits to facilitate, accessibility for water bowsers as appropriate; consideration of maintenance/level of street cleaning if fruiting species are selected). Species selection should also be mindful of climate change related pollution/pathogens/air borne pathogens and spores, actively avoiding specifying such species in schemes (e.g. ash spp *Fraxinus excelsior* and cultivars, horse chestnut spp *Aesculus hippocastanum* and cultivars). As detailed previopusly, it is suggested that a Tree Strategy may be useful to ensure a coordinated approach to planting through the BID area.

## Design

- 4.7 For many terrestrial features, design advice should be sought. Appropriate types of design guidance include:
  - Planting advice, including species which are beneficial to wildlife.
  - Horticultural, landscape architectural and landscape management expertise will be important for most features, in order to ensure that an appropriate palette of species is identified for the conditions.

- Townscape assessment and design plans to ensure continuity with existing streetscape enhancement proposals, and with established character of the place.
- 4.8 Independent environmental consultants (as opposed to contractors and suppliers) should be consulted prior to installing green roofs and walls, as they can advise on the creation and design based on the roof style and a range of environmental factors.
- 4.9 For the larger opportunities, such as roof gardens where public access is being introduced, the incorporation of green walls on listed buildings, and the creation of new green spaces, it is also possible that planning permission may be required. This should be scoped with the local authority at the earliest stage.

#### Delivery

4.10 Delivery of green infrastructure features may be co-ordinated by the This Is Clapham BID and implemented in partnership with others, e.g. developers, principal landowners/ Clapham Society/ resident groups.

#### Funding urban greening

4.11 Funding sources may become available for delivery of GI and the BID and its partners could apply to such funding streams. For example, Transport for London administers 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. Where enhancements will deliver direct benefits to specific companies, it may be appropriate for This Is Clapham 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.

#### Maintenance

4.12 Maintenance of the new GI features will be essential to maintain both the provision of functions such as alleviation of surface water flooding, and their visual appearance. The options for maintenance need to be considered by the partnership at the outset, as this is likely to influence prioritisation of opportunities to be delivered.

- 4.13 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 the identified opportunities are within the public realm, the local authorities will have a key role to play in agreeing responsibility for management and maintenance.
- 4.14 There may be a need to consider creating an independent body which will oversee GI maintenance, for example a green infrastructure Trust, or a partnership approach could be followed with delivery of various aspects shared between the Council and BID, and therefore partly funded by the BID levy (this model has been used, for example, to deliver environmental maintenance within the Heart of London BID).
- 4.15 An 'adopt a feature' scheme could also be implemented, with local businesses and community groups encouraged to adopt and look after greening 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.
- 4.16 There may also be scope for consideration of community based implementation and management schemes, along the lines of models being pursued in a number of American cities<sup>7</sup>.

#### Monitoring

- 4.17 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 study area.

<sup>&</sup>lt;sup>7</sup> See the San Francisco model being promoted by the work of 'Friends of the Urban Forest, a street tree and sidewalk garden planting project - http://www.fuf.net/

- The quality of the GI features, and whether they are being appropriately maintained (site based assessments as part of maintenance contracts, visitor/user surveys).
- 4.18 Monitoring will help inform priorities for future investment, and should seek to provide quantified information to enable the success and outputs of the partnership's investment to be measured. This would require some baseline data against which to compare any changes. Monitoring the outputs will support the promotion of this approach to retrofitting GI into the inner city environment.

# **Appendix 1: Terrestrial GI Opportunity Proformas**

L. Site Infor	mation			
Site ID:	GI 1		Easting:	
Survey date:	10/04/20	15	Northing:	
Surveyor:	em & mp		Size:	Sq m
Name/location	:			
	onnected Learnin	g Centre		
✓ Potential	Existing	Tick both if there is potential t	o improve an existing site	
2. Site Cate	Jory			
🗌 Local park	[	Community garden/ Allotment	$\Box$ Derelict building plot	t

□ Grass verge

□ Hedge

 $\Box$  Wetland/ standing water

 $\Box$  Garden or square

Pocket park

- $\hfill\square$  Planter/ raised bed
- ✓ Street tree in pit

#### 3. Condition of GI

- □ Good (signs of active management)
- ✓ Moderate (signs of limited management)
- □ Poor (few signs of management)

#### 4. Current Management

□ Mowing/grass cutting - please specify here:

Pruning or other tree maintenance

□ Highway infrastructure e.g. traffic island

✓ Pavement or other hard surface

- $\square$  No obvious signs of management
- Appears unmanaged/overgrown
- $\Box$  Productive use for food

$\Box$ Amenity grassland	✓ Building
$\Box$ Semi-natural grassland	Pavement/paved area
$\Box$ Woodland	□ Highway
$\Box$ Scrub/shrubs (please indicate wildlife value)	□ Traffic island

Clapham BID Green Infrastructure Audit - Terrestrial GI	
Value:	Roof
Other (please specify):	$\Box$ Green space

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

Public use: informal recreation	1 Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	Not in active use but managed
2 Wildlife	Not in use/derelict

#### 7. Scope for Enhancement

Enhance existing function	✓	Enhance	existing	function
---------------------------	---	---------	----------	----------

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

biodiversity visual appearance local amenity community involvement	
Create a new function/feature	
$\Box$ Wildflower meadow/semi-natural grassland	$\checkmark$ Substantial window box
$\Box$ Tree-planting: woodland	$\Box$ Floristic annual planting
$\Box$ Wetland features/rain gardens	Food growing: fruit trees/vegetables
$\Box$ Water storage feature	✓ Street tree
Green wall/climbing plants	✓ Shrub
Additional comments:	✓ Planters

#### 8. Ease of Delivery

 $\Box$  Easy/quick win

Moderate

□ Challenging

#### 9. Barriers to Delivery

- Current uses , e.g. active use, transport infrastructure
- ☑ Listed buildings or other building constraints
- $\checkmark$  Underground services water mains, gas, telecoms, sewers
- ✓ Wayleaves (strip of land that allows access to underground service)

#### **10. Approximate Cost**

- $\Box$  Less than £5k
- **⊻** £5-15k
- □ £15-30k
- $\Box$  More than £30k

#### **11. Any Other Notes/Observations:**

Extensive new tree planting of random species lack of legibility

. Site million	mation		
Site ID:	GI 2	Easting:	
Survey date:	03/04/201	5 Northing:	
Surveyor:	EM & MP	Size:	Sq m
Name/location Clapham Com	: mon Southside Ver	ge	

Z. Site	category	

Local park	$\Box$ Community garden/ Allotment	Derelict building plot
Pocket park	$\Box$ Shrub plantings	Highway infrastructure
$\Box$ Garden or square	$\Box$ Wetland/ standing water	e.g. traffic island Pavement or other hard surface
$\Box$ Planter/ raised bed	Grass verge	
✓ Street tree in pit	Hedge	

#### 3. Condition of GI

□ Good (signs of active management)

✓ Moderate (signs of limited management)

□ Poor (few signs of management)

#### 4. Current Management

✓ Mowing/grass cutting - please specify here:	Pruning or other tree maintenance
Short	$\Box$ No obvious signs of management
	$\Box$ Appears unmanaged/overgrown
	$\Box$ Productive use for food

- ✓ Amenity grassland
- □ Semi-natural grassland
- □ Woodland
- $\Box$  Scrub/shrubs (please indicate wildlife value)
- Building
- ✓ Pavement/paved area
- ✓ Highway
- $\Box$  Traffic island

Clapham BID Green Infrastructure Audit - Terrestrial GI	
Value:	Roof
Other (please specify):	$\Box$ Green space

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

Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
1 Visual/amenity	2 Not in active use but managed
Wildlife	Not in use/derelict

#### 7. Scope for Enhancement

🗹 Enhand	ce existing	function
----------	-------------	----------

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

visual amenity. Increase flood storage capacity.
$\Box$ Substantial window box
$\Box$ Floristic annual planting
$\square$ Food growing: fruit trees/vegetables
□ Street tree
□ Shrub
Planters

## 8. Ease of Delivery

✓ Easy/quick win

□ Moderate

□ Challenging

#### 9. Barriers to Delivery

Clapham BID Green Infrastructure Audit - Terrestrial GI	
Current uses , e.g. active use, transport infrastructure	
$\square$ Listed buildings or other building constraints	
Underground services - water mains, gas, telecoms, sewers	
✓ Wayleaves (strip of land that allows access to underground service)	

### **10. Approximate Cost**

- $\Box$  Less than £5k
- **✓** £5-15k
- □ £15-30k
- $\Box$  More than £30k

#### **11. Any Other Notes/Observations:**

Possibility to create pocket park on verge in front of college

. Site Info	rmation				
Site ID:	GI 3		Easting:		
Survey date:	10/04/20	15	Northing:		
Surveyor:	EM & MP		Size:		Sq m
Name/location	1:				
✓ Potential	$\Box$ Existing	Tick both if there is potential to	improve an exis	ting site	
. Site Cate	gory				
🗹 Local park	[	Community garden/ Allotment	Derelict	buildina plot	

Local park	Community garden/ Allotment	Derelict building plot
$\Box$ Pocket park	$\Box$ Shrub plantings	Highway infrastructure e.g. traffic island
$\Box$ Garden or square	$\Box$ Wetland/ standing water	Pavement or other hard surface
□ Planter/ raised bed	□ Grass verge	
✓ Street tree in pit	Hedge	

#### 3. Condition of GI

□ Good (signs of active management)

□ Moderate (signs of limited management)

✓ Poor (few signs of management)

#### 4. Current Management

□ Mowing/grass cutting - please specify here:

✓ Pruning or other tree maintenance

 $\square$  No obvious signs of management

- □ Appears unmanaged/overgrown
- Productive use for food

- □ Amenity grassland
- □ Semi-natural grassland
- □ Woodland
- □ Scrub/shrubs (please indicate wildlife value)
- Building
- ✓ Pavement/paved area
- ✓ Highway
- □ Traffic island

Clapham BID Green Infrastructure Audit - Terrestrial GI		
Value:	Roof	
Other (please specify):	$\Box$ Green space	
(F		

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

Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	1 Not in active use but managed
Wildlife	Not in use/derelict

#### 7. Scope for Enhancement

✓	Enhance	existing	function
---	---------	----------	----------

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

$\Box$ Substantial window box
$\square$ Floristic annual planting
$\square$ Food growing: fruit trees/vegetables
□ Street tree
□ Shrub
Planters

#### 8. Ease of Delivery

□ Easy/quick win

Moderate

□ Challenging

#### 9. Barriers to Delivery

Clapham BID Green Infrastructure Audit - Terrestrial GI	
Current uses , e.g. active use, transport infrastructure	
$\square$ Listed buildings or other building constraints	
Underground services - water mains, gas, telecoms, sewers	
✓ Wayleaves (strip of land that allows access to underground service)	

#### **10. Approximate Cost**

- $\Box$  Less than £5k
- **✓** £5-15k
- □ £15-30k
- $\Box$  More than £30k

#### **11. Any Other Notes/Observations:**

wide path, residential road adjacemt to local park. Would increase biodiversity vaue, capture surface water runoff and increase visul amenity

I. Site Info	rmation		
Site ID:	GI 4	Easting:	
Survey date:	10/04/2015	Northing:	
Surveyor:	EM & MP	Size:	Sq m
Name/locatior	n:		
Verge in front	of Windmill Pub		

Local park	$\Box$ Community garden/ Allotment	$\Box$ Derelict building plot
Pocket park	$\Box$ Shrub plantings	Highway infrastructure
$\Box$ Garden or square	$\Box$ Wetland/ standing water	e.g. traffic island Pavement or other hard surface
$\Box$ Planter/ raised bed	✓ Grass verge	
□ Street tree in pit	Hedge	

#### 3. Condition of GI

□ Good (signs of active management)

✓ Moderate (signs of limited management)

□ Poor (few signs of management)

#### 4. Current Management

✓ Mowing/grass cutting - please specify here:

- Pruning or other tree maintenance
- $\hfill\square$  No obvious signs of management
- □ Appears unmanaged/overgrown
- □ Productive use for food

- Amenity grassland
  Semi-natural grassland
- □ Woodland
- □ Scrub/shrubs (please indicate wildlife value)
- □ Building
- ✓ Pavement/paved area
- ✓ Highway
- □ Traffic island

Clapham BID Green Infrastructure Audit - Terrestrial GI		
Value:	Roof	
Other (please specify):	□ Green space	
Other (please specify):	Green space	

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

1 Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
2 Visual/amenity	Not in active use but managed
2 Wildlife	Not in use/derelict

#### 7. 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	
✓ Wildflower meadow/semi-natural grassland	$\Box$ Substantial window box
✓ Tree-planting: woodland	$\Box$ Floristic annual planting
$\Box$ Wetland features/rain gardens	$\Box$ Food growing: fruit trees/vegetables
$\Box$ Water storage feature	$\Box$ Street tree
$\Box$ Green wall/climbing plants	□ Shrub
Additional comments:	

#### 8. Ease of Delivery

✓ Easy/quick win

□ Moderate

□ Challenging

#### 9. Barriers to Delivery

Clapham BID Green Infrastructure Audit - Terrestrial GI
$\square$ Current uses , e.g. active use, transport infrastructure
$\square$ Listed buildings or other building constraints
$\Box$ Underground services - water mains, gas, telecoms, sewers
<ul> <li>Wayleaves (strip of land that allows access to underground service)</li> </ul>
10. Approximate Cost

✓ Less than £5k

□ £5-15k

□ £15-30k

 $\Box$  More than £30k

#### **11. Any Other Notes/Observations:**

adjacent to pub. Potential to overspill from pub garden. Part of clapham common and adjacent to car park.

1. Site Info	rmation		
Site ID:	GI 5	Easting:	
Survey date:		Northing:	
Surveyor:	EM & MP	Size:	Sq m
Name/locatior	ו:		
Voltaire Road			
✓ Potential	□ Existing	Tick both if there is potential to improve an existing site	
2. Site Cate	gory		
🗌 Local park		□ Community garden/ Allotment □ Derelict building plot	

□ Shrub plantings

Grass verge

□ Hedge

□ Wetland/ standing water

- ✓ Highway infrastructure e.g. traffic island
- ✓ Pavement or other hard surface

#### 3. Condition of GI

Pocket park

□ Garden or square

□ Planter/ raised bed

□ Street tree in pit

Good (signs of active management)

□ Moderate (signs of limited management)

□ Poor (few signs of management)

#### 4. Current Management

□ Mowing/grass cutting - please specify here:

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

- □ Amenity grassland
- □ Semi-natural grassland
- □ Woodland
- □ Scrub/shrubs (please indicate wildlife value)
- Building
- Pavement/paved area
- ✓ Highway
- ✓ Traffic island

Clapham BID Green Infrastructure Audit - Terrestrial GI		
Value:	Roof	
Other (please specify):	$\Box$ Green space	

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

1 Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	Not in active use but managed
Wildlife	Not in use/derelict

#### 7. Scope for Enhancement

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

Surface water interruption, biodiversity, visual and	menity and food growing.
Create a new function/feature	
$\square$ Wildflower meadow/semi-natural grassland	Substantial window box
$\Box$ Tree-planting: woodland	$\Box$ Floristic annual planting
Wetland features/rain gardens	Food growing: fruit trees/vegetables
$\square$ Water storage feature	✓ Street tree
Green wall/climbing plants	□ Shrub
Additional comments:	✓ Planters

#### 8. Ease of Delivery

□ Easy/quick win

□ Moderate

✓ Challenging

#### 9. Barriers to Delivery

# Clapham BID Green Infrastructure Audit - Terrestrial GI Current uses , e.g. active use, transport infrastructure Listed buildings or other building constraints

- $\checkmark$  Underground services water mains, gas, telecoms, sewers
- ✓ Wayleaves (strip of land that allows access to underground service)

#### **10. Approximate Cost**

- $\Box$  Less than £5k
- □ £5-15k
- □ £15-30k
- ✓ More than £30k

#### **11. Any Other Notes/Observations:**

1. Site Info	mation			
Site ID:	GI 6	Easting:		
Survey date:		Northing:		
Surveyor:	EM & MP	Size:	9	Sq m
Name/location	1:			
Public realm ir	n front of No. 35 Cla	pham High Street		
✓ Potential	□ Existing	Tick both if there is potential to improve an exis	ting site	

#### 2. Site Category

$\Box$ Local park	$\Box$ Community garden/ Allotment	$\Box$ Derelict building plot
$\Box$ Pocket park	$\Box$ Shrub plantings	Highway infrastructure
$\Box$ Garden or square	$\Box$ Wetland/ standing water	e.g. traffic island Pavement or other hard surface
$\Box$ Planter/ raised bed	□ Grass verge	
✓ Street tree in pit	🗌 Hedge	

#### 3. Condition of GI

✓ Good (signs of active management)

□ Moderate (signs of limited management)

□ Poor (few signs of management)

#### 4. Current Management

Mowing/grass cutting - please specify here:	$\Box$ Pruning or other tree maintenance
	$\square$ No obvious signs of management
	$\Box$ Appears unmanaged/overgrown
	$\Box$ Productive use for food

$\square$ Amenity grassland	□ Building
$\Box$ Semi-natural grassland	Pavement/paved area
$\Box$ Woodland	□ Highway
$\Box$ Scrub/shrubs (please indicate wildlife value)	$\Box$ Traffic island

Clapham BID Green Infrastructure Audit - Terrestrial GI		
Value:		
Other (please specify):	$\Box$ Green space	

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

1 Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	Not in active use but managed
Wildlife	Not in use/derelict

#### 7. Scope for Enhancement

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

Consider installing systems to capture/ interrupt surface water runoff from surrounding footpath and highway.			
Create a new function/feature			
ceil Wildflower meadow/semi-natural grassland	$\Box$ Substantial window box		
Tree-planting: woodland	$\Box$ Floristic annual planting		
${f \ell}$ Wetland features/rain gardens	$\Box$ Food growing: fruit trees/vegetables		
Vater storage feature	✓ Street tree		
$\Box$ Green wall/climbing plants	□ Shrub		
Additional comments:			

#### 8. Ease of Delivery

 $\Box$  Easy/quick win

Moderate

□ Challenging

#### 9. Barriers to Delivery

Clapham BID Green Infrastructure Audit - Terrestrial GI
Current uses , e.g. active use, transport infrastructure
$\square$ Listed buildings or other building constraints
Underground services - water mains, gas, telecoms, sewers
<ul> <li>Wayleaves (strip of land that allows access to underground service)</li> </ul>
10. Approximate Cost

- $\Box$  Less than £5k
- □ £5-15k
- ✓ £15-30k
- $\Box$  More than £30k

#### **11. Any Other Notes/Observations:**

The area is located along Clapham High Street so potentially there is a high level of footfall and underground services which may limit opportunities for rain gardens. However there may be potential for installing permeable paving.

Site Info	mation		
Site ID:	GI 7	Easting:	
Survey date:	10/04/2015	Northing:	
Surveyor:	EM & MP	Size:	Sq m
Name/location	:		
	ion, Clapham Park I		

Local park	$\Box$ Community garden/ Allotment	Derelict building plot
$\Box$ Pocket park	$\Box$ Shrub plantings	Highway infrastructure
$\Box$ Garden or square	$\Box$ Wetland/ standing water	e.g. traffic island Pavement or other hard surface
$\Box$ Planter/ raised bed	Grass verge	
$\Box$ Street tree in pit	🗌 Hedge	

#### 3. Condition of GI

□ Good (signs of active management)

□ Moderate (signs of limited management)

✓ Poor (few signs of management)

#### 4. Current Management

□ Mowing/grass cutting - please specify here:

$\square$ Pruning or other tree maintenance	
$\checkmark$ No obvious signs of management	
$\Box$ Appears unmanaged/overgrown	
$\Box$ Productive use for food	

#### 5. Landcover / Habitat Types

$\Box$ Amenity grassland	✓ Building
$\Box$ Semi-natural grassland	Pavement/paved area
□ Woodland	□ Highway
$\Box$ Scrub/shrubs (please indicate wildlife value)	$\Box$ Traffic island

Clapham BID Green	Infrastructure Audit - Terrestrial GI
Value:	
Other (please specify):	$\Box$ Green space

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

Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	Not in active use but managed
Wildlife	1 Not in use/derelict

#### 7. Scope for Enhancement

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

$\Box$ Substantial window box
$\Box$ Floristic annual planting
$\Box$ Food growing: fruit trees/vegetables
□ Street tree
□ Shrub
Planters

#### 8. Ease of Delivery

✓ Easy/quick win ✓ Moderate ✓ Challenging

#### 9. Barriers to Delivery

	Clapham BID Green Infrastructure Audit - Terrestrial GI
	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)

#### **10. Approximate Cost**

- $\Box$  Less than £5k
- **✓** £5-15k
- 🗹 £15-30k
- ✓ More than £30k

#### **11. Any Other Notes/Observations:**

There may be potential to use this space to promote biodiveristy. The site contains a significant amount of unused paved surfacing, walls and has an extensive flat roof. However the site is an electric substation so there may be limitations to what features could be delivered. Support from the National Grid will be vital.

1. Site Info	rmation			
Site ID:	GI 8		Easting:	
Survey date:	10/04/20	015	Northing:	
Surveyor:	Em & MP		Size:	Sq m
Name/location	ı:			
Traffic Island	at junction on Cla	apham High Street and Clapham Parl	< Road	
✓ Potential	□ Existing	Tick both if there is potential to	improve an existing site	
2. Site Cate	gory			
Local park		$\Box$ Community garden/ Allotment	Derelict building	plot
Pocket park		$\Box$ Shrub plantings	Highway infrastru o o traffic island	
$\Box$ Garden or s	quare	$\Box$ Wetland/ standing water	e.g. traffic island	
Planter/ rais	sed bed	Grass verge		

#### 3. Condition of GI

 $\Box$  Street tree in pit

 $\Box$  Good (signs of active management)

✓ Moderate (signs of limited management)

□ Hedge

□ Poor (few signs of management)

#### 4. Current Management

Mowing/grass cutting - please specify here:	$\Box$ Pruning or other tree maintenance
	$\Box$ No obvious signs of management
	$\Box$ Appears unmanaged/overgrown
	$\Box$ Productive use for food

$\Box$ Amenity grassland	□ Building
$\Box$ Semi-natural grassland	$\square$ Pavement/paved area
□ Woodland	□ Highway
$\Box$ Scrub/shrubs (please indicate wildlife value)	✓ Traffic island

Clapham BID Green	Infrastructure Audit - Terrestrial GI
Value:	Roof
Other (please specify):	$\Box$ Green space

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

1 Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	Not in active use but managed
Wildlife	Not in use/derelict

#### 7. Scope for Enhancement

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

Create a new function/feature	
Wildflower meadow/semi-natural grassland	$\Box$ Substantial window box
Tree-planting: woodland	$\Box$ Floristic annual planting
Wetland features/rain gardens	$\Box$ Food growing: fruit trees/vegetables
☐ Water storage feature	$\Box$ Street tree
$\Box$ Green wall/climbing plants	□ Shrub
Additional comments:	✓ Planters

#### 8. Ease of Delivery

✓ Easy/quick win

✓ Moderate

□ Challenging

#### 9. Barriers to Delivery

	Clapham BID Green Infrastructure Audit - Terrestrial GI
✓	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)

#### **10. Approximate Cost**

- ✓ Less than £5k
- **✓** £5-15k
- □ £15-30k
- $\Box$  More than £30k

#### **11. Any Other Notes/Observations:**

Potential to lift raised areas of paving and replace with soft landscape features e.g. rain gardens. Opportunites may be restricted due to underground surfaces.

. Site Info	rmation		
Site ID:	GI 9	Easting:	
Survey date:	10/04/2015	Northing:	
Surveyor:	EM & MP	Size:	Sq m
Name/locatio	ו:		
✓ Potential	Existing	Tick both if there is potential to improve an existing site	
. Site Cate	gory		

🗆 Local рагк	Community garden/ Allotment	
Pocket park	$\Box$ Shrub plantings	Highway infrastructure e.g. traffic island
$\Box$ Garden or square	$\Box$ Wetland/ standing water	<ul> <li>Pavement or other hard surface</li> </ul>
$\Box$ Planter/ raised bed	□ Grass verge	
$\Box$ Street tree in pit	Hedge	

#### 3. Condition of GI

□ Good (signs of active management)

□ Moderate (signs of limited management)

✓ Poor (few signs of management)

#### 4. Current Management

 $\Box$  Mowing/grass cutting - please specify here:

$\square$ Pruning or other tree maintenance
$\checkmark$ No obvious signs of management
$\Box$ Appears unmanaged/overgrown
$\Box$ Productive use for food

#### 5. Landcover / Habitat Types

$\Box$ Amenity grassland	✓ Building
$\Box$ Semi-natural grassland	$\square$ Pavement/paved area
□ Woodland	□ Highway
$\Box$ Scrub/shrubs (please indicate wildlife value)	$\Box$ Traffic island

Clapham BID Green Infrastructure Audit - Terrestrial GI		
Value:	Roof	
Other (please specify):	$\Box$ Green space	

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

Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	Not in active use but managed
Wildlife	1 Not in use/derelict

#### 7. Scope for Enhancement

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

Create a new function/feature	
$\Box$ Wildflower meadow/semi-natural grassland	$\Box$ Substantial window box
$\Box$ Tree-planting: woodland	$\Box$ Floristic annual planting
$\Box$ Wetland features/rain gardens	$\Box$ Food growing: fruit trees/vegetables
$\Box$ Water storage feature	□ Street tree
Green wall/climbing plants	□ Shrub
Additional comments:	Planters
Green roofs	

#### 8. Ease of Delivery

□ Easy/quick win ☑ Moderate ☑ Challenging

#### 9. Barriers to Delivery

Clapham BID Green Infrastructure Audit - Terrestrial GI
$\Box$ Current uses , e.g. active use, transport infrastructure
Listed buildings or other building constraints
$\square$ Underground services - water mains, gas, telecoms, sewers
Wayleaves (strip of land that allows access to underground service)
10. Approximate Cost

 $\Box$  Less than £5k

**⊻** £5-15k

🗹 £15-30k

✓ More than £30k

#### **11. Any Other Notes/Observations:**

There are a number of these features in prominent locations along Clapham High Street. It is possible these structures are reasonably robust so there may be potential for these features to be covered green walls and green roofs. However structural surveys will need to be carried out and a water point identified to enable irrigation.

1. Site Infor	rmation			
Site ID:	GI 10		Easting:	
Survey date:	10/04/20	015	Northing:	
Surveyor:	Em & MP		Size:	Sq m
Name/location	n:			
Deep level she	elter on junction	of Clapham High Street and Carpent	er's Place	
✓ Potential	Existing	Tick both if there is potential to	improve an existing site	
2. Site Cate	gory			
🗌 Local park		$\Box$ Community garden/ Allotment	$\Box$ Derelict building plot	
Pocket park		$\Box$ Shrub plantings	Highway infrastructure e.g. traffic island	
$\Box$ Garden or s	quare	$\Box$ Wetland/ standing water	<ul> <li>Pavement or other hard s</li> </ul>	urface
Planter/ rais	sed bed	Grass verge		

#### 3. Condition of GI

 $\Box$  Street tree in pit

□ Good (signs of active management)

□ Moderate (signs of limited management)

□ Hedge

✓ Poor (few signs of management)

#### 4. Current Management

Mowing/grass cutting - please specify here:	$\Box$ Pruning or other tree maintenance
	$\Box$ No obvious signs of management
	$\Box$ Appears unmanaged/overgrown
	$\Box$ Productive use for food

$\Box$ Amenity grassland	✓ Building
$\Box$ Semi-natural grassland	$\square$ Pavement/paved area
$\Box$ Woodland	□ Highway
$\Box$ Scrub/shrubs (please indicate wildlife value)	$\Box$ Traffic island

Clapham BID Green Infrastructure Audit - Terrestrial GI		
Value:	Roof	
Other (please specify):	Green space	

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

Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	Not in active use but managed
Wildlife	1 Not in use/derelict

#### 7. Scope for Enhancement

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

Create a new function/feature	
$\square$ Wildflower meadow/semi-natural grassland	$\Box$ Substantial window box
$\Box$ Tree-planting: woodland	$\Box$ Floristic annual planting
$\Box$ Wetland features/rain gardens	$\Box$ Food growing: fruit trees/vegetables
$\Box$ Water storage feature	□ Street tree
Green wall/climbing plants	□ Shrub
Additional comments:	Planters
Potential for green/ brown roof	

#### 8. Ease of Delivery

□ Easy/quick win ☑ Moderate ☑ Challenging

#### 9. Barriers to Delivery

Clapham BID Green Infrastructure Audit - Terrestrial GI
$\Box$ Current uses , e.g. active use, transport infrastructure
$\square$ Listed buildings or other building constraints
$\Box$ Underground services - water mains, gas, telecoms, sewers
Wayleaves (strip of land that allows access to underground service)
10. Approximate Cost

- $\Box$  Less than £5k
- **⊻** £5-15k
- ✓ £15-30k
- ☑ More than £30k

#### **11. Any Other Notes/Observations:**

Prominent structure on Clapham High Street but is currently disguised by hoarding. Opportunities to replace hoarding with green/ brown roof and walls

1. Site Infor	rmation		
Site ID:	GI 11	Easting:	
Survey date:	10/04/2015	5 Northing:	
Surveyor:	EM & MP	Size:	Sq m
Name/location	ı:		
✓ Potential	<ul> <li>Existing</li> </ul>	Tick both if there is potential to improve an existing	site
2. Site Cate	gory		
Local park		Community garden/ Allotment 🛛 Derelict build	ling plot

□ Shrub plantings

Grass verge

□ Hedge

 $\Box$  Wetland/ standing water

- Highway infrastructure e.g. traffic island
- ✓ Pavement or other hard surface

#### $\checkmark$ Street tree in pit

Garden or square

□ Planter/ raised bed

Pocket park

#### 3. Condition of GI

- □ Good (signs of active management)
- ✓ Moderate (signs of limited management)
- □ Poor (few signs of management)

#### 4. Current Management

Mowing/grass cutting - please specify here:	$\Box$ Pruning or other tree maintenance
	$\Box$ No obvious signs of management
	$\Box$ Appears unmanaged/overgrown
	$\Box$ Productive use for food

$\Box$ Amenity grassland	✓ Building
□ Semi-natural grassland	Pavement/paved area
$\Box$ Woodland	□ Highway
$\Box$ Scrub/shrubs (please indicate wildlife value)	□ Traffic island

Clapham BID Green Infrastructure Audit - Terrestrial GI		
Value:		
Other (please specify):	$\Box$ Green space	

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

1 Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	Not in active use but managed
Wildlife	Not in use/derelict

#### 7. Scope for Enhancement

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

Potential to replace large area of impermeable s	urfacing to creat a pocket par.
Create a new function/feature	
$^{]}$ Wildflower meadow/semi-natural grassland	$\Box$ Substantial window box
Tree-planting: woodland	$\Box$ Floristic annual planting
${f \ell}$ Wetland features/rain gardens	$\Box$ Food growing: fruit trees/vegetables
${f Z}$ Water storage feature	□ Street tree
Green wall/climbing plants	□ Shrub
Additional comments:	✓ Planters

#### 8. Ease of Delivery

□ Easy/quick win

Moderate

□ Challenging

#### 9. Barriers to Delivery

Clapham BID Green Infrastructure Audit - Terrestrial GI	
Current uses , e.g. active use, transport infrastructure	
$\square$ Listed buildings or other building constraints	
Underground services - water mains, gas, telecoms, sewers	
✓ Wayleaves (strip of land that allows access to underground service)	

#### **10. Approximate Cost**

- $\Box$  Less than £5k
- **✓** £5-15k
- 🗹 £15-30k
- $\Box$  More than £30k

#### **11. Any Other Notes/Observations:**

Large area of hard surfacing in front of library building. The area contains a number of features (e.g bus shelter, cycle parking) which clutters the space. There may be potential to remove clutter and replace existing surface material with a permeable surface to create a pocket park.

. Site Infor	mation		
Site ID:	GI 12	Easting:	
Survey date:	10/04/2015	Northing:	
Surveyor:	Em & MP	Size:	Sq m
Name/location	:		
St Lukes Aven	ue rain garden		
✓ Potential	Existing	Tick both if there is potential to improve an existing	site

#### 2. Site Category

$\Box$ Local park	$\Box$ Community garden/ Allotment	Derelict building plot
$\Box$ Pocket park	$\Box$ Shrub plantings	Highway infrastructure
$\Box$ Garden or square	$\Box$ Wetland/ standing water	e.g. traffic island Pavement or other hard surface
$\Box$ Planter/ raised bed	□ Grass verge	
$\Box$ Street tree in pit	🗌 Hedge	

#### 3. Condition of GI

 $\Box$  Good (signs of active management)

✓ Moderate (signs of limited management)

□ Poor (few signs of management)

#### 4. Current Management

Mowing/grass cutting - please specify here:	$\Box$ Pruning or other tree maintenance
	$\Box$ No obvious signs of management
	$\Box$ Appears unmanaged/overgrown
	$\Box$ Productive use for food

$\Box$ Amenity grassland	Building
$\Box$ Semi-natural grassland	Pavement/paved area
$\Box$ Woodland	□ Highway
$\Box$ Scrub/shrubs (please indicate wildlife value)	$\Box$ Traffic island

Value: 🗌 Roof
Other (please specify): $\Box$ Green space

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

1 Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	Not in active use but managed
Wildlife	Not in use/derelict

#### 7. Scope for Enhancement

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

Potential to replace existing hard surface to creat from adjacent highway.	te an attenuation feature capturing rainwater runoff
Create a new function/feature	
Wildflower meadow/semi-natural grassland	$\Box$ Substantial window box
Tree-planting: woodland	$\Box$ Floristic annual planting
✓ Wetland features/rain gardens	$\Box$ Food growing: fruit trees/vegetables
□ Water storage feature	$\Box$ Street tree
Green wall/climbing plants	□ Shrub
Additional comments:	Planters

#### 8. Ease of Delivery

✓ Easy/quick win

Moderate

□ Challenging

#### 9. Barriers to Delivery

	Clapham BID Green Infrastructure Audit - Terrestrial GI
	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)

#### 10. Approximate Cost

- $\Box$  Less than £5k
- ✔ £5-15k
- □ £15-30k
- $\Box$  More than £30k

#### **11. Any Other Notes/Observations:**

1. Site Infor	mation		
Site ID:	GI 13	Easting:	
Survey date:	10/04/2015	Northing:	
Surveyor:	Em & MP	Size:	Sq m
Name/location	:		
Fenwick Place	Planters		
✓ Potential	✓ Existing	Tick both if there is potential to improve an existing site	

#### 2. Site Category

$\Box$ Local park	$\Box$ Community garden/ Allotment	Derelict building plot
$\Box$ Pocket park	✓ Shrub plantings	Highway infrastructure
$\Box$ Garden or square	$\Box$ Wetland/ standing water	e.g. traffic island Pavement or other hard surface
✓ Planter/ raised bed	Grass verge	
□ Street tree in pit	🗆 Hedge	

#### 3. Condition of GI

□ Good (signs of active management)

✓ Moderate (signs of limited management)

□ Poor (few signs of management)

#### 4. Current Management

□ Mowing/grass cutting - please specify here:

- Pruning or other tree maintenance
- $\hfill\square$  No obvious signs of management
- □ Appears unmanaged/overgrown
- □ Productive use for food

$\square$ Amenity grassland	Building
$\square$ Semi-natural grassland	Pavement/paved area
$\Box$ Woodland	□ Highway
Scrub/shrubs (please indicate wildlife value)	$\Box$ Traffic island

Clapham BID Green Infrastructure Audit - Terrestrial GI		
Value:	limited	Roof
Other (	please specify):	Green space
Trees		

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

Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
1 Visual/amenity	Not in active use but managed
Wildlife	Not in use/derelict

#### 7. Scope for Enhancement

Enhance existing functio
--------------------------

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

Raised planters alongside purpose built flats. Pla replacement. Wide footpath along Landor Road rainwater gardens or wildflower meadow.	anting is in a poor condition and in need of could be narrowed replacing tarmac surface with
Create a new function/feature	
✔ Wildflower meadow/semi-natural grassland	$\Box$ Substantial window box
Tree-planting: woodland	$\Box$ Floristic annual planting
✓ Wetland features/rain gardens	$\Box$ Food growing: fruit trees/vegetables
✔ Water storage feature	✓ Street tree
Green wall/climbing plants	✓ Shrub
Additional comments:	Planters

#### 8. Ease of Delivery

Easy/quick win

✓ Moderate

□ Challenging

#### 9. Barriers to Delivery

## Clapham BID Green Infrastructure Audit - Terrestrial GI 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)

#### **10. Approximate Cost**

- ✓ Less than £5k
- **⊻** £5-15k
- □ £15-30k
- $\Box$  More than £30k

#### **11. Any Other Notes/Observations:**

. Site Info	rmation		
Site ID:	GI14	Easting:	
Survey date:	03/04/2015	Northing:	
Surveyor:	EM & MP	Size:	Sq m
Name/locatior	ı:		
✓ Potential	□ Existing	Tick both if there is potential to improve an existing site	
. Site Cate	gory		
🗌 Local park		Community garden/ Allotment 👘 Derelict building plot	

	$\Box$ Community garden/ Allotment	
Pocket park	□ Shrub plantings	<ul> <li>Highway infrastructure</li> <li>e.g. traffic island</li> </ul>
$\Box$ Garden or square	$\Box$ Wetland/ standing water	<ul> <li>Pavement or other hard surface</li> </ul>
$\Box$ Planter/ raised bed	□ Grass verge	
□ Street tree in pit	Hedge	

#### 3. Condition of GI

 $\Box$  Good (signs of active management)

□ Moderate (signs of limited management)

□ Poor (few signs of management)

#### 4. Current Management

Mowing/grass cutting - please specify here:	$\Box$ Pruning or other tree maintenance
	$\Box$ No obvious signs of management
	$\Box$ Appears unmanaged/overgrown
	$\Box$ Productive use for food

Building
Pavement/paved area
Highway
Traffic island
]

Clapham BID Green Infrastructure Audit - Terrestrial GI	
Value:	Roof
Other (please specify):	Green space
Other (please specify):	

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

1 Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	Not in active use but managed
Wildlife	Not in use/derelict

#### 7. Scope for Enhancement

$\Box$ Enhance existing function
----------------------------------

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

Create a new function/feature	
$\Box$ Wildflower meadow/semi-natural grassland	$\checkmark$ Substantial window box
$\Box$ Tree-planting: woodland	$\Box$ Floristic annual planting
$\Box$ Wetland features/rain gardens	Food growing: fruit trees/vegetables
✔ Water storage feature	□ Street tree
Green wall/climbing plants	□ Shrub
Additional comments:	✓ Planters

#### 8. Ease of Delivery

✓ Easy/quick win ✓ Moderate ✓ Challenging

#### 9. Barriers to Delivery

#### **10. Approximate Cost**

✓ Less than £5k

**⊻** £5-15k

🗹 £15-30k

✓ More than £30k

#### **11. Any Other Notes/Observations:**

1. Site Info	rmation				
Site ID:	GI15		Easting:		
Survey date:	30/04/20	15	Northing:		
Surveyor:	MP		Size:		Sq m
Name/locatior	ı:				
Landal Terrac					
Potential	Existing	Tick both if there is potential to	improve an exi	sting site	
2. Site Cate	gory				
🗌 Local park	[	Community garden/ Allotment		building plot	
Pocket park	: [	Shrub plantings	🗹 Highway	/ infrastructure	

 $\Box$  Wetland/ standing water

□ Grass verge

□ Hedge

e.g. traffic island

□ Pavement or other hard surface

- $\Box$  Garden or square
- □ Planter/ raised bed
- $\Box$  Street tree in pit

#### 3. Condition of GI

- □ Good (signs of active management)
- ✓ Moderate (signs of limited management)
- □ Poor (few signs of management)

#### 4. Current Management

Mowing/grass cutting - please specify here:	$\Box$ Pruning or other tree maintenance
	$\square$ No obvious signs of management
	$\Box$ Appears unmanaged/overgrown
	$\Box$ Productive use for food

$\Box$ Amenity grassland	□ Building
□ Semi-natural grassland	□ Pavement/paved area
$\Box$ Woodland	□ Highway
$\Box$ Scrub/shrubs (please indicate wildlife value)	□ Traffic island

Value: Roof Other (please specify): Green space Railway viaduct	Other (please specify):	Clapham BID Green Infras	structure Audit - Terrestrial GI
		Value:	Roof
Railway viaduct	Railway viaduct	Other (please specify):	Green space
		Railway viaduct	

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

Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	Not in active use but managed
Wildlife	Not in use/derelict

#### 7. Scope for Enhancement

✓	Enhance	existing	function
---	---------	----------	----------

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

$\checkmark$ Substantial window box
$\Box$ Floristic annual planting
$\Box$ Food growing: fruit trees/vegetables
□ Street tree
□ Shrub
Planters
mercial properties within arches of railway viaduct.

#### 8. Ease of Delivery

□ Easy/quick win

Moderate

□ Challenging

#### 9. Barriers to Delivery

## Clapham BID Green Infrastructure Audit - Terrestrial GI 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)

#### **10. Approximate Cost**

- $\Box$  Less than £5k
- **⊻** £5-15k
- □ £15-30k
- $\Box$  More than £30k

#### **11. Any Other Notes/Observations:**

1. Site Info	rmation		
Site ID:	GI 16	Easting:	
Survey date:	03/04/2015	Northing:	
Surveyor:	Em & MP	Size:	Sq m
Name/locatior	n:		
Clapham Mano	or Street		
Potential	□ Existing	Tick both if there is potential to improve an existing site	

#### 2. Site Category

$\Box$ Local park	$\Box$ Community garden/ Allotment	Derelict building plot
$\Box$ Pocket park	$\Box$ Shrub plantings	✓ Highway infrastructure
$\Box$ Garden or square	$\Box$ Wetland/ standing water	e.g. traffic island Pavement or other hard surface
✓ Planter/ raised bed	□ Grass verge	
✓ Street tree in pit	🗌 Hedge	

#### 3. Condition of GI

□ Good (signs of active management)

✓ Moderate (signs of limited management)

□ Poor (few signs of management)

#### 4. Current Management

□ Mowing/grass cutting - please specify here:

- Pruning or other tree maintenance
- $\hfill\square$  No obvious signs of management
- $\Box$  Appears unmanaged/overgrown
- □ Productive use for food

$\Box$ Amenity grassland	□ Building
□ Semi-natural grassland	Pavement/paved area
□ Woodland	✓ Highway
$\Box$ Scrub/shrubs (please indicate wildlife value)	□ Traffic island

Clapham BID Green	Infrastructure Audit - Terrestrial GI
Value:	Roof
Other (please specify):	$\Box$ Green space

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

1 Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	Not in active use but managed
Wildlife	Not in use/derelict

#### 7. 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	
$oldsymbol{arsigma}$ Wildflower meadow/semi-natural grassland	$\Box$ Substantial window box
$\Box$ Tree-planting: woodland	$\Box$ Floristic annual planting
Wetland features/rain gardens	$\Box$ Food growing: fruit trees/vegetables
$\Box$ Water storage feature	✓ Street tree
$\Box$ Green wall/climbing plants	Shrub
Additional comments:	Planters
Potential to create a rain garden along Clapham Mar Extent of rain garden will depend on the requiremer	

#### 8. Ease of Delivery

 $\Box$  Easy/quick win

□ Moderate

Challenging

#### 9. Barriers to Delivery

# Clapham BID Green Infrastructure Audit - Terrestrial GI 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)

#### **10. Approximate Cost**

- $\Box$  Less than £5k
- □ £5-15k
- 🗹 £15-30k
- ✓ More than £30k

#### **11. Any Other Notes/Observations:**

Site Info	rmation		
Site ID:	GI 17	Easting:	
Survey date:	03/04/2015	Northing:	
Surveyor:	Em & MP	Size:	Sq m
Name/locatio	ו:		

ڶ Local park	$\Box$ Community garden/ Allotment	$\Box$ Derelict building plot
Pocket park	$\Box$ Shrub plantings	Highway infrastructure e.g. traffic island
$\Box$ Garden or square	$\Box$ Wetland/ standing water	<ul> <li>Pavement or other hard surface</li> </ul>
$\Box$ Planter/ raised bed	□ Grass verge	
Street tree in pit	Hedge	

#### 3. Condition of GI

 $\Box$  Good (signs of active management)

✓ Moderate (signs of limited management)

□ Poor (few signs of management)

#### 4. Current Management

✓ Mowing/grass cutting - please specify here:	$\checkmark$ Pruning or other tree maintenance
Short	$\square$ No obvious signs of management
	$\Box$ Appears unmanaged/overgrown
	$\Box$ Productive use for food

Amenity grassland	✓ Building
$\Box$ Semi-natural grassland	Pavement/paved area
□ Woodland	□ Highway
$\Box$ Scrub/shrubs (please indicate wildlife value)	□ Traffic island

Clapham BID Green Infrastructure Audit - Terrestrial GI		
Value:	Roof	
Other (please specify):	Green space	

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

1 Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
2 Visual/amenity	Not in active use but managed
Wildlife	Not in use/derelict

#### 7. 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	
✔ Wildflower meadow/semi-natural grassland	$\Box$ Substantial window box
$\Box$ Tree-planting: woodland	$\Box$ Floristic annual planting
Wetland features/rain gardens	$\Box$ Food growing: fruit trees/vegetables
$\Box$ Water storage feature	□ Street tree
$\Box$ Green wall/climbing plants	□ Shrub
Additional comments:	Planters

#### 8. Ease of Delivery

□ Easy/quick win

Moderate

□ Challenging

#### 9. Barriers to Delivery

### Clapham BID Green Infrastructure Audit - Terrestrial GI 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)

#### **10. Approximate Cost**

- ✓ Less than £5k
- **∠** £5-15k
- □ £15-30k
- $\Box$  More than £30k

#### **11. Any Other Notes/Observations:**

Area forms part of Clapham Common so there are restrictions about the type of interventions that could be delivered in this location.

1. Site Info	ormation			
Site ID:	GI 18		Easting:	
Survey date	: 10/04/2	015	Northing:	
Surveyor:	Em & MP		Size:	Sq m
Name/locati	on:			
✓ Potential	Existing	Tick both if there is potential to	o improve an existing	site
2. Site Cat	egory			
🗌 Local park	ĸ	$\Box$ Community garden/ Allotment	Derelict build	ding plot
Pocket pa	rk	Shrub plantings	Highway infr e.g. traffic is	
🗌 Garden or	r square	$\Box$ Wetland/ standing water		

 $\Box$  Pavement or other hard surface

#### $\Box$ Street tree in pit

□ Planter/ raised bed

#### 3. Condition of GI

□ Good (signs of active management)

✓ Moderate (signs of limited management)

□ Grass verge

□ Hedge

□ Poor (few signs of management)

#### 4. Current Management

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

$\Box$ Amenity grassland	✓ Building
$\Box$ Semi-natural grassland	Pavement/paved area
□ Woodland	□ Highway
$\Box$ Scrub/shrubs (please indicate wildlife value)	$\Box$ Traffic island

Clapham BID Green	Infrastructure Audit - Terrestrial GI
Value:	Roof
Other (please specify):	Green space

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

Public use: informal recreation	Food growing/productive use
Public use: formal recreation	Flood management/water storage
Visual/amenity	1 Not in active use but managed
Wildlife	Not in use/derelict

#### 7. Scope for Enhancement

□ Enhance existing function
-----------------------------

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

$\square$ Substantial window box
$\Box$ Floristic annual planting
$\Box$ Food growing: fruit trees/vegetables
□ Street tree
□ Shrub
Planters

#### 8. Ease of Delivery

 $\Box$  Easy/quick win

Moderate

□ Challenging

#### 9. Barriers to Delivery

Clapham BID Green Infrastructure Audit - Terrestrial GI
$\Box$ Current uses , e.g. active use, transport infrastructure
$\square$ Listed buildings or other building constraints
$\Box$ Underground services - water mains, gas, telecoms, sewers
Wayleaves (strip of land that allows access to underground service)
10. Approximate Cost

✓ Less than £5k

✔ £5-15k

□ £15-30k

 $\Box$  More than £30k

#### **11. Any Other Notes/Observations:**

**Appendix 2: Green Wall Opportunity Proformas** 

#### **Clapham BID Green Infrastructure Audit - Green Walls**

1. Site Infor	mation	
Site ID:	GW 1	Easting:
Survey date:	10/04/2015	Northing:
Surveyor:	Em & mp	Size: Sq m
Name/location	:	
Fire Station		
✓ Potential	Existing	Tick both if there is potential to improve an existing site

#### 2. Building Details

Building det	ails:				
Building add	lress 1:				
Building add	lress 2:				
Building add	lress 3:				
Building add	lress 4:				
Building pos	tcode:				
Ownership:					
Building ow	ner:				
Building ten	ant:				
Aspect:					

#### 3. Existing Green Wall

Туре:	
Modular	□ Other - please specify:
$\Box$ Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

## Type: ✓ Modular □ Planted in ground

Potential	species:
-----------	----------

Potential area of greening:

6 Sq m

#### 5. Any Other Notes/Observations

Would need support from London Fire Brigade

#### **Clapham BID Green Infrastructure Audit - Green Walls**

1. Site Infor	mation	
Site ID:	GW 2	Easting:
Survey date:	10/04/2015	Northing:
Surveyor:	em & mp	Size: Sq m
Name/location	:	
Bromwell's Roa	ad	
	Existing	Tick both if there is potential to improve an existing site

#### 2. Building Details

Building deta	ails:				
Building add	ress 1:				
Building add	ress 2:				
Building add	ress 3:				
Building add	ress 4:				
Building pos	tcode:				
Ownership:					
Building owr	ner:				
Building tena	- m.t.				
Panang ten	ant:				
Aspect:					

#### 3. Existing Green Wall

Туре:	
🗆 Modular	Other - please specify:
$\Box$ Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

### Type: ✓ Modular □ Planted in ground

Dotontial	chocioci
Potential	SUELIES.

Potential area of greening:

Sq m

#### 5. Any Other Notes/Observations

Pri

ate - retail, residential above. Good visibility from The Pavement and Claphm Common

#### **Clapham BID Green Infrastructure Audit - Green Walls**

1. Site Infor	mation	
Site ID:	GW 3	Easting:
Survey date:		Northing:
Surveyor:	MP & EM	Size: Sq m
Name/location	:	
Littlebury Roa	d	
✓ Potential	Existing	Tick both if there is potential to improve an existing site

#### 2. Building Details

<b>Building details:</b>								
Building address	1:							
Building address	2:							
Building address	3:							
Building address	4:							
Building postcod	e:							
Ownership:								
Building owner:	F	Private residenti	al property	/				
Building tenant:								
Aspect:								
	NE	✓E	□se	□s	□sw	W	□NW	

#### 3. Existing Green Wall

Туре:	
🗆 Modular	Other - please specify:
Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

#### Type: ✓ Other - please specify: Modular

□ Planted in ground

Planted in raised planters

#### 5. Any Other Notes/Observations

#### **Clapham BID Green Infrastructure Audit - Green Walls**

1. Site Infor	rmation	
Site ID:	GW 4	Easting:
Survey date:		Northing:
Surveyor:	EM & MP	Size: Sq m
Name/location	1:	
Jeannette, Cla	pham High Street	
✓Potential	Existing	Tick both if there is potential to improve an existing site

#### 2. Building Details

Building deta	ls:				
Building addr	ess 1:				
Building addr	ess 2:				
Building addr	ess 3:				
Building addr	ess 4:				
Building posto	code:				
Ownership:					
Building owne	er:				
Building tena	nt:				
Acroch					
Aspect:					

#### 3. Existing Green Wall

Туре:	
Modular	□ Other - please specify:
$\Box$ Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

## Type: ✓ Modular □ Planted in ground

Potential species:

#### 5. Any Other Notes/Observations

#### **Clapham BID Green Infrastructure Audit - Green Walls**

1. Site Infor	mation	
Site ID:	GW 5	Easting:
Survey date:	10/04/2015	Northing:
Surveyor:	EM & MP	Size: Sq m
Name/location	:	
Clapham North	n Underground Stati	n
Potential	Existing	Tick both if there is potential to improve an existing site

#### 2. Building Details

Building details:							
Building address 1:							
Building address 2:							
Building address 3:							
Building address 4:							
Building postcode:							
Ownership:							
Building owner:							
Building tenant:							
Aspect:							
	✓E	□se	$\Box$ s	□sw	□w	□nw	

#### 3. Existing Green Wall

Туре:	
Modular	Other - please specify:
Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

#### Type:

Modular

 $\Box$ Other - please specify:

✓ Planted in ground

Potential species:

Potential area of greening:

Sq m

#### 5. Any Other Notes/Observations

There is a section of single storey wall on the eastern façade of the Underground Station. It may be possible to plant climbing plants straight into the ground or to install a modular system. Either option would need support from Transport for London.

#### **Clapham BID Green Infrastructure Audit - Green Walls**

1. Site Info	rmation	
Site ID:	GW 6	Easting:
Survey date:		Northing:
Surveyor:	EM & MP	Size: Sq m
Name/location	ו:	
Voltaire Road	railway arches	
✓Potential	Existing	Tick both if there is potential to improve an existing site

#### 2. Building Details

Building details:				
Building address 1:				
Building address 2:				
Building address 3:				
Building address 4:				
Building postcode:				
Ownership:				
Building owner:				
Building tenant:				
Building tenant: Aspect:	✓SE			

#### 3. Existing Green Wall

Туре:	
🗆 Modular	□ Other - please specify:
Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

#### Type:

Modular	✓ Other - please specify:
Planted in ground	Climbing plants in planters supported along viaduct. Possible wndow boxes for food growing.
Potential species:	

#### 5. Any Other Notes/Observations

1. Site Info	rmation	
Site ID:	GW 7	Easting:
Survey date:		Northing:
Surveyor:	Em & MP	Size: Sq m
Name/locatio	n:	
Gauden Road	railway arches	
Potential		Tick both if there is potential to improve an existing site

#### 2. Building Details

Building details:							
Building address 1:							
Building address 2:							
Building address 3:							
Building address 4:							
Building postcode:							
Ownership:							
Building owner:							
Building tenant:							
Aspect:							
□ <sub>N</sub> ✓NE	Ξe	□se	$\Box$ s	□sw	W	□nw	

#### 3. Existing Green Wall

Туре:	
🗆 Modular	Other - please specify:
$\Box$ Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

#### Type:

	Modular	$\Box$ Other - please specify:
✓	Planted in ground	

Sq m

#### **5. Any Other Notes/Observations**

Investigate oportunities to lift exsting hard surface at base of arches to enable planting of climbing plants to be trained onto struture of railway viaduct.

. Site Info	rmation	
Site ID:	GW 8	Easting:
Survey date:	10/04/2015	Northing:
Surveyor:	EM & MP	Size: Sq m
Name/location	1:	
Green wall on	single storey buildir	g adjacent to Sainsburys
✓Potential		Tick both if there is potential to improve an existing site

#### 2. Building Details

Building details:				
Building address 1:				
Building address 2:				
Building address 3:				
Building address 4:				
Building postcode:				
Ownership:				
Building owner:				
Building tenant:				
Aspect:				

#### 3. Existing Green Wall

Туре:	
🗆 Modular	Other - please specify:
$\Box$ Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

#### Type:

Modular

 $\Box$ Other - please specify:

✓ Planted in ground

Potential species:

1. Site Infor	mation	
Site ID:	GW 9	Easting:
Survey date:	10/04/2015	Northing:
Surveyor:	EM & MP	Size: Sq m
Name/location	:	
Iceland supern	narket	
✓Potential	Existing	Tick both if there is potential to improve an existing site

#### 2. Building Details

Building details:							
Building address 1:							
Building address 2:							
Building address 3:							
Building address 4:							
Building postcode:							
Ownership:							
Building owner:							
Building tenant:							
Aspect:							
	ΠE	✓SE	□s	□sw	W	□nw	

#### 3. Existing Green Wall

Туре:	
🗆 Modular	□ Other - please specify:
Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

# Type: ✓ Modular □ Planted in ground

Potential	species:

Sq m

#### 5. Any Other Notes/Observations

Potential to install modular green wall along space above signage to Iceland supermarket. Alternatively planters could be installed on the first floor roof space and allowed to drape over façade of builing. Opportunity to capture rainwater runoff to help irrigate green wall?

L. Site Infor	mation	
Site ID:	GW 10	Easting:
Survey date:	10/04/2015	Northing:
Surveyor:	Em & MP	Size: Sq m
Name/location	:	
Sainsbury's su	permarket, entrance	e to car park
✓ Potential	Existing	Tick both if there is potential to improve an existing site

#### 2. Building Details

Building details:				
Building address 1:				
Building address 2:				
Building address 3:				
Building address 4:				
Building postcode:				
Ownership:				
Building owner:				
Building tenant:				
Building tenant: Aspect:				

#### 3. Existing Green Wall

Туре:	
🗹 Modular	$\Box$ Other - please specify:
Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

# Type: Modular Other - please specify: Planted in ground

Potential	species:

Sq m

#### 5. Any Other Notes/Observations

Brockwork above entrance to the vehicular entrance to Sainsbury's supermarket may be suitable for a green wall. However structural examination would be needed as would options for irrigation.

. Site Infor	mation		
Site ID:	GW 11	Easting:	
Survey date:	10/04/2015	Northing:	
Surveyor:	EM & MP	Size:	Sq m
Name/location	1:		
Property abov	e Trend Dry Cleaner	S	
✓Potential		Tick both if there is potential to improve an exist	ing site

#### 2. Building Details

Building details:				
Building address 1:				
Building address 2:				
Building address 3:				
Building address 4:				
Building postcode:				
Ownership:				
Building owner:				
Building tenant:				
Aspect:				

#### 3. Existing Green Wall

Туре:	
Modular	□ Other - please specify:
$\Box$ Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

### Type: ✓ Modular $\Box$ Other - please specify:

□ Planted in ground

:

. Site Info	rmation	
Site ID:	GW 12	Easting:
Survey date:	10/04/2015	Northing:
Surveyor:	EM & MP	Size: Sq m
Name/locatior	1:	
Residential pro	operty above KFC re	taurant, Clapham Manor Street
✓Potential		Tick both if there is potential to improve an existing site

#### 2. Building Details

Building details:				
Building address 1:				
Building address 2:				
Building address 3:				
Building address 4:				
Building postcode:				
Ownership:				
Building owner:				
Building tenant:				
Aspect:				

#### 3. Existing Green Wall

Туре:	
Modular	□ Other - please specify:
$\Box$ Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

## Type: ✓ Modular □Other - please specify: □ Planted in ground

Potential species:

Sq m

#### 5. Any Other Notes/Observations

Small section of wall on the corner of Clapham High Street and Clapham Manor Street

. Site Info	rmation	
Site ID:	GW 13	Easting:
Survey date:	10/04/2015	Northing:
Surveyor:	EM & MP	Size: Sq m
Name/locatior	1:	
Residential pro	operty at junction of	otaire Road and Edgerley Road
		ick both if there is potential to improve an existing site

#### 2. Building Details

Building detai	ils:							
Building addro	ess 1:							
Building addro	ess 2:							
Building addre	ess 3:							
Building addre	ess 4:							
Building posto	code:							
Ownership:								
Building owne	er:	Residential pr	roperty					
Building tena	nt:							
Aspect:								
$\square_{N}$	□ne	ΠE	SE	✓s	□sw	W	NW	

#### 3. Existing Green Wall

Туре:	
Modular	Other - please specify:
Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

# ✓ Modular □Other - please specify: □ Planted in ground

Potentia	l species:
----------	------------

. Site Info	rmation	
Site ID:	GW 14	Easting:
Survey date:	10/04/2015	Northing:
Surveyor:	EM & MP	Size: Sq m
Name/locatior	ı:	
Residential pr	operties at junction	f Littlebury Road and Voltaire Road
✓Potential		Tick both if there is potential to improve an existing site

#### 2. Building Details

Building details:							
Building address 1:							
Building address 2:							
Building address 3:							
Building address 4:							
Building postcode:							
Ownership:							
Building owner:	Residential						
Building tenant:							
Aspect:							
$\square_{N}$ $\square_{N}$	E <b>∠</b> E	□se	$\Box_{S}$	□sw	✓ W	□nw	

#### 3. Existing Green Wall

Туре:	
🗌 Modular	Other - please specify:
Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

# ✓ Modular □Other - please specify: □ Planted in ground

1. Site Infor	mation	
Site ID:	GW 15	Easting:
Survey date:	10/04/2015	Northing:
Surveyor:	EM & MP	Size: Sq m
Name/location	:	
Railway arch o	n Lendal Terrace	
✓Potential	Existing	Tick both if there is potential to improve an existing site

## 2. Building Details

Building details:							
Building address 1	.:						
Building address 2	2:						
Building address 3	3:						
Building address 4	ł:						
Building postcode:	:						
Ownership:							
Building owner:							
Building tenant:							
Aspect:							
	NE	ΠE	SE	□s	□sw	□w	□NW

#### **3. Existing Green Wall**

Туре:	
Modular	□ Other - please specify:
$\Box$ Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

#### Type:

	Modular	$\Box$ Other - please specify:
✓	Planted in ground	

1. Site Infor	mation	
Site ID:	GW 16	Easting:
Survey date:	10/04/2015	Northing:
Surveyor:	Em & MP	Size: Sq m
Name/location	:	
Clapham North	n Underground Stati	n
	Existing	Tick both if there is potential to improve an existing site

#### 2. Building Details

Building details	:						
Building address	s 1:						
Building address	s 2:						
Building address	s 3:						
Building address	s 4:						
Building postcoo	de:						
Ownership:							
Building owner:							
Building tenant:							
Aspect:							
✓ N	✓ NE	E	SE	□s	□sw	W	<b>∠</b> NW

#### 3. Existing Green Wall

Туре:	
Modular	Other - please specify:
Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

# Type: ✓ Modular □Other - please specify: □ Planted in ground

Potential species:

Sq m

#### 5. Any Other Notes/Observations

Opportunity to install a green wall above the entrance to the Underground Station. Potential to install a blue roof on station with captured rainwater used to help irrigate green wall.

. Site Infor	mation	
Site ID:	GW 17	Easting:
Survey date:	10/04/2015	Northing:
Surveyor:	mp	Size: 10 Sq m
Name/location	1:	
Razel Road		
✓Potential	Existing	Tick both if there is potential to improve an existing site

#### 2. Building Details

Building details:				
Building address	1:			
Building address	2:			
Building address	3:			
Building address	4:			
Building postcode	e:			
Ownership:				
Building owner:				
Building tenant:				
Aspect:				

#### 3. Existing Green Wall

Туре:	
Modular	□ Other - please specify:
$\Box$ Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

# Type: ✓ Modular □ Planted in ground

10 Sq m

#### 5. Any Other Notes/Observations

Mixed use proprety - residential and retail

. Site Info	rmation	
Site ID:	GW 18	Easting:
Survey date:	03/04/2015	Northing:
Surveyor:	Em & MP	Size: Sq m
Name/locatior	1:	
Clapham Com	mon Underground S	tion - South Side
✓Potential		Fick both if there is potential to improve an existing site

#### 2. Building Details

Building details:				
Building address 1:				
Building address 2:				
Building address 3:				
Building address 4:				
Building postcode:				
Ownership:				
Building owner:				
Building owner:				

# 3. Existing Green Wall

Туре:	
Modular	□ Other - please specify:
Planted in ground	
Existing species:	
Existing area of greening:	Sq m

#### 4. Potential Green Wall

# Image: Second state Image: Second state</t

Potential	species:
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# **Appendix 3: Roof Audit Forms**



#### engineering design and analysis

*5 Sanderstead Hill South Croydon CR2 0HB* tel/fax: 020 8405 6287; e-mail: <u>eda@blueyonder.co.uk</u>

#### Clapham GI Audit

Survey Date: 9.06.15

Surveyor: Richard Jackson

Site name/location: Clapham North Underground Station

Building address:

LUC ID:

Approximate area of Roof:

Building Owner:

Structural Form and	Believed to be reinforced concrete, supported by steel beams
Condition of Roofs	spanning the entire width of the roof over the ticket hall
Estimate Safe Superimposed Loading	2.0kN/m <sup>2</sup> (Total)
Possibility of Strengthening	Nothing practical
Possibility of suspending loads from other strong points	Good potential for spanning decking with heavy loads over roof panels between downstand beams
Requirements for Safety Balustrading	Gravity and fixed systems already in place
Recommendations for Detailed Appraisal of Capacity	Not necessary unless heavy loads (above average additional UDL of 1.5kN/m <sup>2</sup> ) are proposed
Type of green roof suitable for installation	Shallow planting in lightweight planting medium or sedum with local loose planters around perimeter of space. Heavier loads possible directly over or suspended between downstand beams
Potential issues and barriers to green roof/wall installation	None
Other Notes	Roof already supports plant with simple spreaders. Heavy masonry wall suspended off transfer beam off downstands, confirming capacity available.



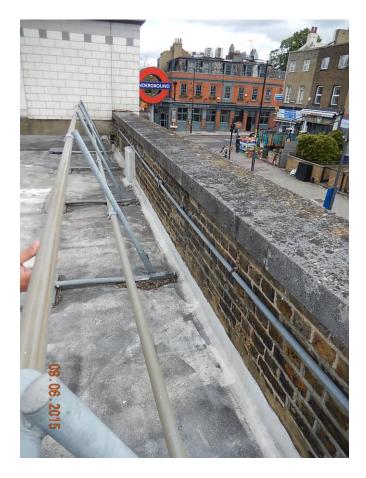
#### engineering design and analysis

*5 Sanderstead Hill South Croydon CR2 0HB* tel/fax: 020 8405 6287; e-mail: <u>eda@blueyonder.co.uk</u>

#### **Photographs**









#### engineering design and analysis

*5 Sanderstead Hill South Croydon CR2 0HB* tel/fax: 020 8405 6287; e-mail: <u>eda@blueyonder.co.uk</u>

#### **Clapham GI Audit**

Survey Date: 9.06.15

Surveyor: Richard Jackson

Site name/location: Single Storey Shop Fronts to Clapham High Street

Building address:

LUC ID:

Approximate area of Roof:

Building Owner:

Structural Form and Condition of Roofs	Timber joists spanning between party walls
Estimate Safe Superimposed Loading	0.6kN/m <sup>2</sup>
Possibility of Strengthening	Strengthening from below (doubling floor joists) possible but not very practical
Possibility of suspending loads from other strong points	Loads can be suspended between party walls
Requirements for Safety Balustrading	Balustrading would be required for all installations
Recommendations for Detailed Appraisal of Capacity	N/A
Type of green roof suitable for installation	N/A
Potential issues and barriers to green roof/wall installation	N/A
Other Notes	Some tenants have strengthened or re-made their roofs, so the potential for strengthening has been demonstrated (e.g. Aquum Unit), but considerable work was involved