



Transport for London  
Surface Transport

# **Cycle Superhighway Route 5 Inner Environmental Evaluation Report**

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# Executive Summary

## Introduction

This document presents the outcomes of the environmental evaluation of Cycle Superhighway Route 5 Inner (i.e. the Project). It includes a brief description of the Project, the evaluation methodology that has been used, the likely environmental impacts of the Project and measures to protect the built and natural environment.

The environmental evaluation follows Surface Transport's Project Environmental Evaluation procedure, part of its Environmental Management System. Where applicable, the environmental evaluation is guided by the Department for Transport's Analysis Guidance (TAG) and Design for Roads and Bridges (DMRB).

## Summary of Impacts

### Significance of Impacts

The Project is likely to lead to localised and route-wide beneficial and adverse environmental impacts; these impacts span the whole significance spectrum from significant to slight, including many areas where the Project is likely to have a neutral impact on the environment.

The environmental evaluation has concluded that the Project is unlikely to have significant environmental impacts on the following areas:

- Planning and Transport Policy
- Biodiversity
- Cultural Heritage
- Townscape
- Noise and Vibration
- Water Resources
- Physical Fitness
- Journey Experience
- Sustainable Design
- Environment Management

For Dust and Emissions to Air, some traffic is expected to reroute because of the Scheme and overall emissions are expected to decrease marginally. Due to this traffic redistribution, moderate and substantial beneficial impacts are expected on 1.6 km of the road network and moderate adverse impacts on 0.9 km of network. Within the Focus Areas<sup>1</sup>, moderate and substantial beneficial impacts are expected on 0.9 km of road and moderate adverse impacts on 0.2 km of road. In light of the small length of road concerned the effect is not considered to be significant.

Air quality impacts are driven by the redistribution of traffic along and around the Route. Traffic redistribution in turn redistributes air emission across the study area. Overall, the Project will not increase Dust and Air Emissions.

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<sup>1</sup> These are Areas that the GLA has identified as being priority areas for improvements in air quality due to existing concentrations within those areas and population exposure.

The next paragraphs and Table 1 below summarise the main environmental impacts of the Project during the construction and operational phase.

### Operational phase

#### *Benefits*

The Project is likely to have a number of Route-wide benefits, for instance it supports a number of local, regional and national policies which aim to encourage cycling and the use of more sustainable modes of transport. The Project is also likely to improve cyclists' journey experience and their physical fitness

The Project is likely to have a number of localised benefits particularly in terms of biodiversity as a result of tree planting and in terms of noise and air quality. For instance 10 road-links would experience a reduction in noise. The magnitude of these impacts is such that overall the scheme will bring more beneficial localised noise impacts (over 1.1km of road) than adverse localised noise impacts (over 0.9km of road). Localised air quality benefits are likely on 4.27km of road, leading to more localised air quality benefits than disbenefits overall.

#### *Disbenefits*

There are no route-wide disbenefits.

Where disbenefits are likely to arise, these tend to be of a localised nature. For instance there are likely to be localised noise and air quality disbenefits as a result of redistribution of traffic at certain locations. 7 road links will experience an increase in noise, however the magnitude of these impacts is such that overall the scheme will bring more beneficial localised noise impacts than adverse localise noise impacts. None of these changes are greater than 3 dB and so are minor.

Localised air quality disbenefits are likely to occur on 3.2km of road network, however only 0.9km is likely to be moderate adverse and therefore in light of the small length of road affected, the Project is not considered to have a significant effect. Overall, more road network will experience benefits in air quality (4.27km of road) than disbenefits. Energy consumption from way-finding monoliths will have a negative impact on energy efficiency objectives.

### Construction phase

During the implementation works, some slight temporary and localised adverse impacts will arise in the form of visual intrusion, energy consumption, waste production, dust, emissions to air, noise, vibration and disruption to the existing and other cycle routes.

**Table 1: Summary of Environmental Impacts**

|                                     | Construction Phase | Operational Phase              | Scale      |
|-------------------------------------|--------------------|--------------------------------|------------|
| Planning and Transport Policy (p.9) | 0                  | + +                            | Route-Wide |
| Biodiversity (p.9)                  | -                  | ++ and o                       | Local      |
| Cultural Heritage (p.11)            | 0 to -             | 0                              | Local      |
| Townscape (p.14)                    | 0 to -             | 0                              | Local      |
| Noise and Vibration (p.16)          | -                  | + to -                         | Local      |
| Dust and Emissions to Air (p.19)    | -                  | +++ to - -                     | Local      |
| Water Resources (p.20)              | 0                  | 0                              | Route-Wide |
| Physical Fitness (p.21)             | 0                  | +                              | Route-Wide |
| Journey Experience (p.22)           | -                  | + +                            | Route-Wide |
| Sustainable Design (p.23)           | -                  | 0 to -                         | Local      |
| Key:                                |                    |                                |            |
| - Slight Adverse                    | O Neutral          | + Slight Beneficial            |            |
| -- Mode Adverse                     |                    | ++ Moderate Beneficial         |            |
| --- Significant Adverse             |                    | ++ Significant Beneficial<br>+ |            |

# Project Description & Methodology

## Project Description

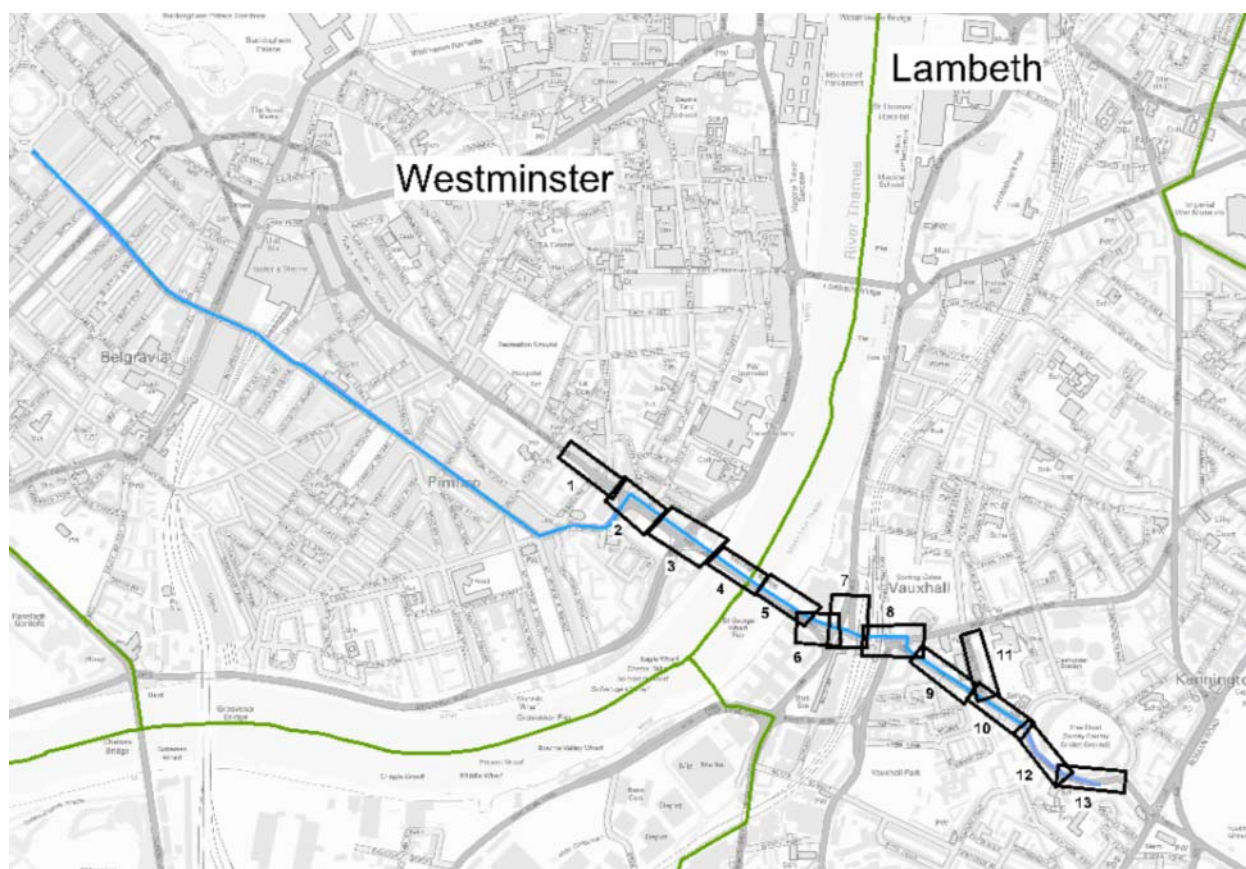
The Project is part of the Cycle Superhighways Programme, one of London's key cycling programmes which forms part of the Mayor's Vision for Cycling in London. The aim of the Programme is to break down the barriers that stop people commuting by bicycle.

The route (i.e. the geographical area along which the Project will operate) is 1.4km in length and extends from Oval to Pimlico. The route runs through two Local Authorities which are The City of Westminster and London Borough of Lambeth.

The route runs on both the Transport for London Road Network (TLRN) and Local Authority roads. Figure 1 shows the geographical extent of the Project.

The route will link with City of Westminster future proposals to provide an extension from Pimlico to Belgrave Square. This section is in its infancy in terms of design and is not scheduled for completion until 2016/17 - and hence, will not change the outcome of this Environmental Evaluation.

This report assesses the part of the route for which design is complete and is scheduled for implementation in 2015, i.e. section 1 to 13 in Figure 1.



**Figure 1 - Geographical Illustration of Cycle Superhighway 5**

The Project will aim to deliver the following measures where appropriate:

- Cyclist segregation from general traffic on the entire Route
- Advanced Stop Lines (ASLs)

- Safety mirrors at left turns
- De-cluttering
- Improved lighting
- Planting
- Improved pedestrian facilities
- Way-finding
- Cycle Parking
- Early starts for cyclists
- Cycle specific stages at junctions
- Coach and bus stop bypasses
- Two stage right turns for cyclists

The route will be branded as CS5 on the road and in sign posts. It is now proposed that blue surfacing will be used in only three locations, where there is increased potential for interactions between cyclists and motorists.

### **Environmental Evaluation Methodology**

The environmental evaluation of the Project follows Surface Transport's Project Environmental Evaluation Procedure, part of its Environmental Management System. Where applicable, the environmental evaluation is guided by the Department for Transport's Analysis Guidance (TAG) and the Highway Agency's Design for Roads and Bridges (DMRB). Appraisal methodologies are discussed in more detail under each relevant section.

This Environmental Evaluation Report defines the requirements for achieving the appropriate level of environmental evaluation for a project so that negative environmental impacts are understood and minimised, environmental benefits are enhanced, environmental risks are managed, challenges to the project are reduced and the required relevant environmental opinions, directions, consents, permits and licenses are identified. The Report provides assurance to the Project Manager, Client and Environmental Manager that the project's design and performance, the appraisal, monitoring and sampling methodology used, and other technical and reporting activities are of the required quality and standard to meet TfL's environmental obligations.

This report has been adapted from the Environmental Evaluation Report Template shown in Appendix A.

### **Consultation**

Consultation involving key stakeholder has taken place from the end of September 2014 to the beginning of November 2014.



## Detailed Appraisal

### Planning and Transport Policy

The Project is consistent and in accordance with national, regional and local planning and transport policy objectives which seek to achieve a more sustainable transport system by promoting cycling (Appendix B). The Project complements other existing and proposed initiatives such as other Cycle Superhighways, the London Cycle Network, Legible London, London Cycle Hire Scheme and The Mayor's Vision of Cycling in London. The Project will therefore result in moderate beneficial effects on planning and transport policy.

### Biodiversity

There are three key biodiversity elements along the Route, these are: Sites of Importance for Nature Conservation (SINCs), protected species and street trees.

SINCs are the next most important green spaces along the Route. They form part of a national network of non-statutory valued natural sites of Metropolitan, Borough or Local importance. Figure 2 displays SINCs in the area surrounding the Project.

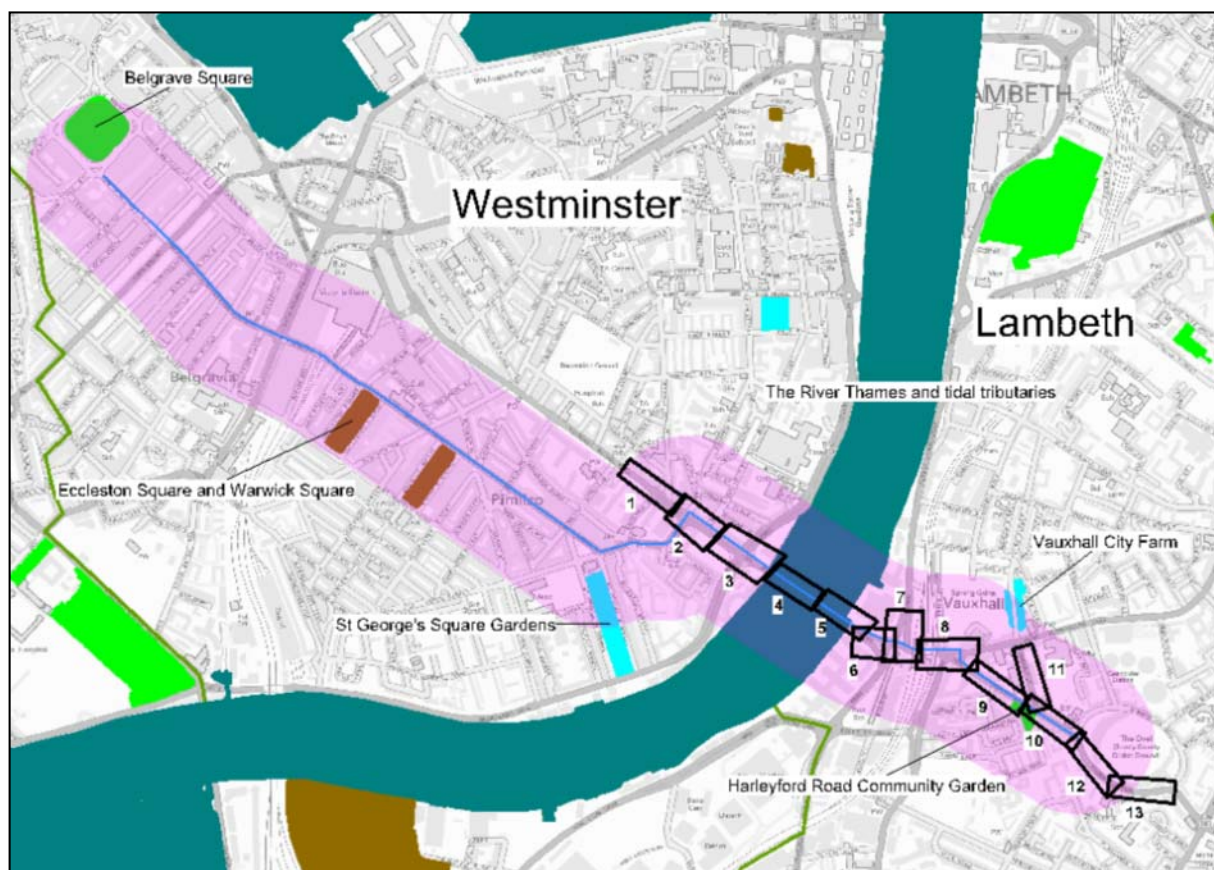
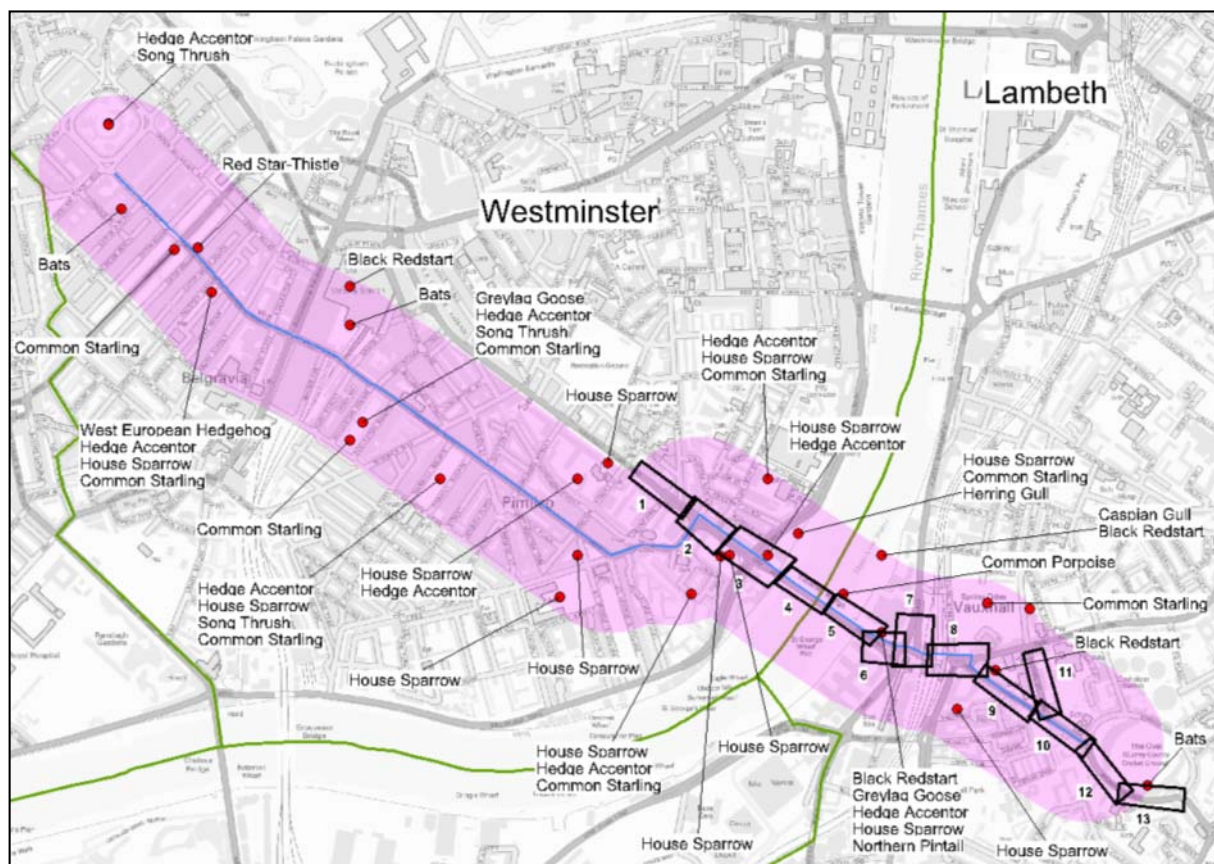


Figure 2 - Sites of Importance for Nature Conservation

A number of protected species have been sighted along the Route (Figure 3). These are animals and plants which, as a result of their rarity, vulnerability or persecution, are given some form of special protection through wildlife legislation. Species which may be found on the highway and therefore at potential impact from the Project are birds and bats which may nest or roost in street trees.



**Figure 3 - Sighting of Protected Species**

There are a large number of street trees along the Route. Trees are extremely important in an urban environment as they not only provide habitat sites for a number of protected species, but they also improve the visual appearance of an area. Trees also contribute towards the reduction of atmospheric particulate matter (PM<sub>10</sub>) and help adapt to climate change. Preliminary design indicates the removal of three street trees planted in planters in Section 3 to accommodate an extra traffic lane. These three trees will be replaced and other trees are proposed in other locations, subject to the investigations by the TfL Arboriculture and Landscape Manager.

TAG helps determine the impact that a project may have on biodiversity by combining the nature conservation value of an environmental feature with the magnitude of a project's impact. The conservation value of the SINCs, protected species and street trees is of high or medium importance at the local scale with a limited potential for substitution, the magnitude of the impact is positive where more trees will be planted therefore improving the biodiversity value of the route at those locations. Therefore the overall impact at those locations is:

Value (high or medium) + Magnitude (positive) = Moderate Beneficial

In locations where the magnitude of the impact is neutral, the overall impact is:

Value (high or medium) + Magnitude (neutral) = Neutral

There are also a number of other street trees that whilst not at risk they are in close proximity to the works. The potential adverse impact to these trees must be noted and appraised prior to the commencement of the works. The National Joint Utilities Group's (NJUG) 'Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees' and the British Standard 'BS 5837:2005, Trees in relation to construction – Recommendations' states that within the prohibited zone (i.e. one metre from the tree trunk) excavation of any kind must not be

undertaken unless there has been full consultation with the TfL Arboricultural and Landscape Manager.

Removal of trees must be agreed with TfL Arboricultural and Landscape Manager. Trees in Conservation Areas must not be felled unless the Local Authority has been notified.

The contractors will be required to produce an Environmental Management Plan through which they will seek to ensure that biodiversity features along the Route are protected and that a neutral impact on biodiversity is maintained during the implementation of the Project.

If protected species are present during works, TfL will ensure that only Defra licensed ecologists handle protected species. The Project Team has and will be in contact with the TfL Arboriculture and Landscape Manager for the area throughout the development of the Project.

## Cultural Heritage

There are a number of heritage designations, features and assets along the Route. These include Conservation Areas (Figure 4), Archaeological Priority Areas (Figure 5 **Error! Reference source not found.**), Listed Buildings and Structures (Figure 6), Scheduled Monuments and World Heritage Sites (Figure 7).

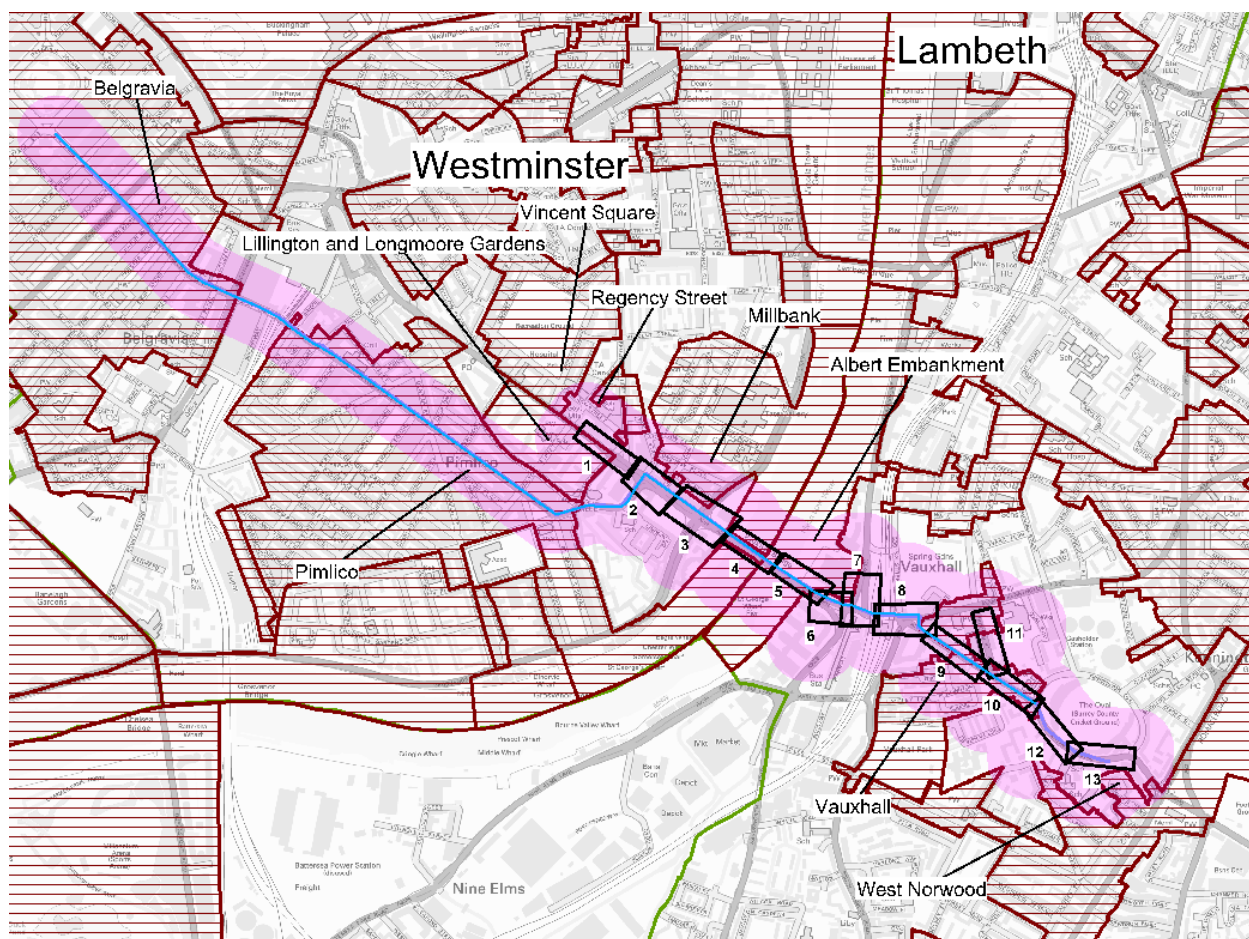


Figure 4 - Conservation Areas

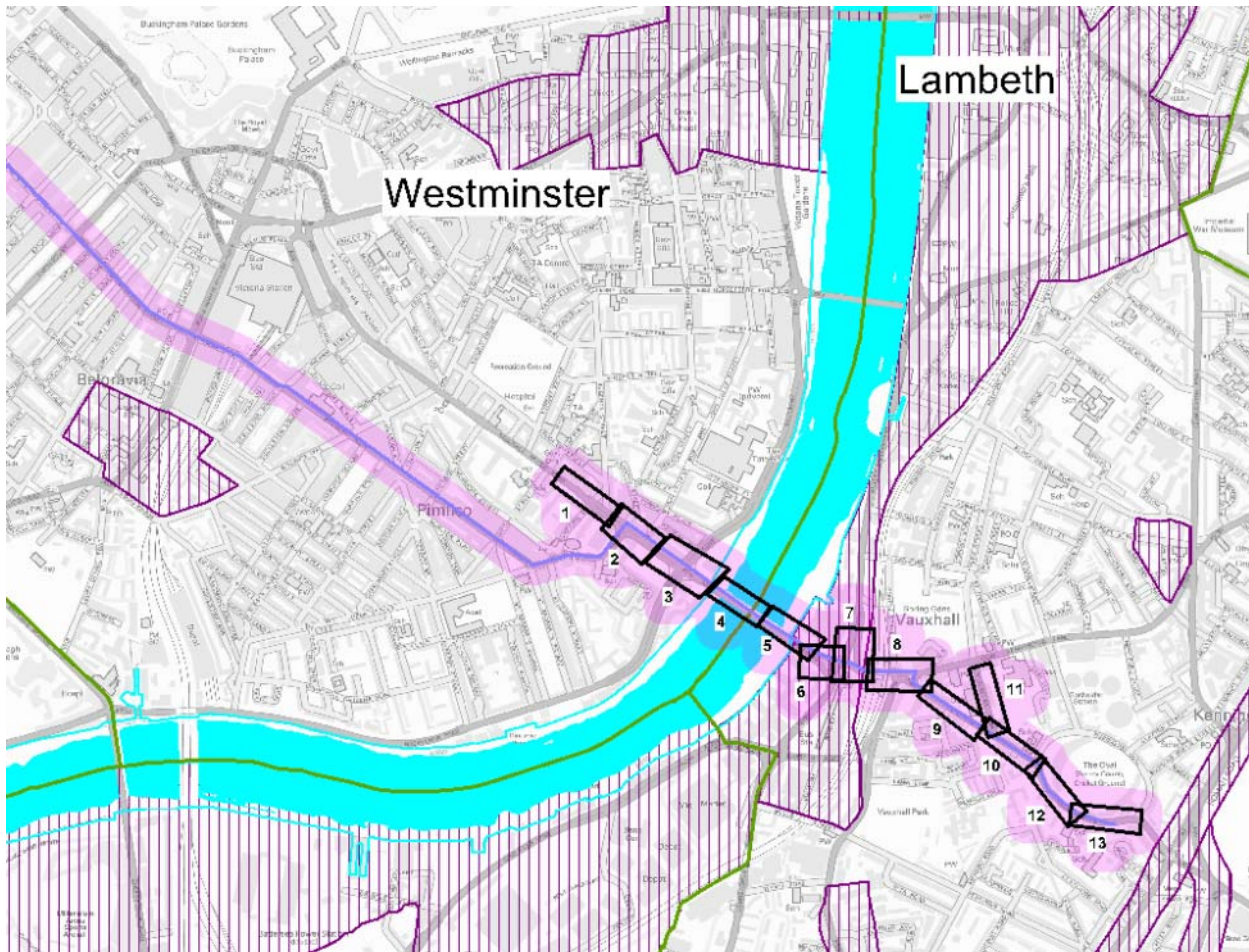


Figure 5 - Archaeological Priority Areas

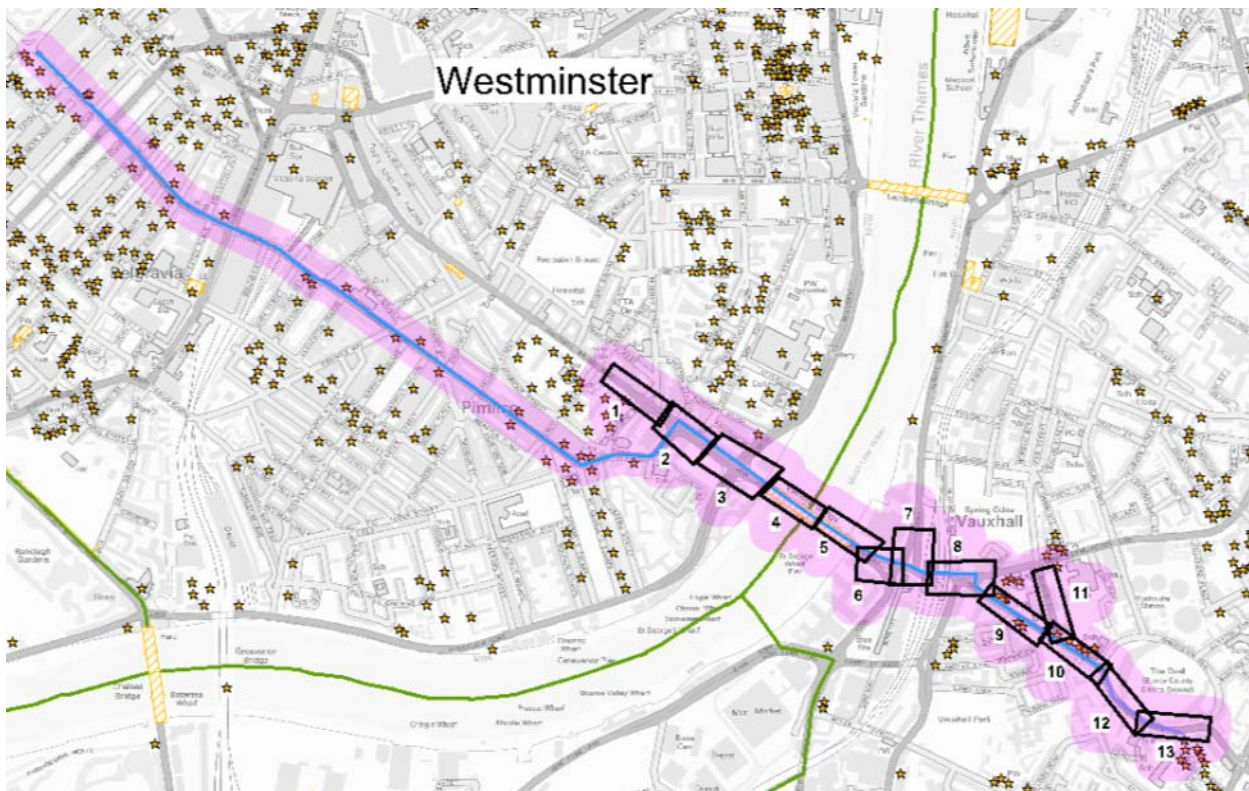


Figure 6 - Listed Buildings and Structures

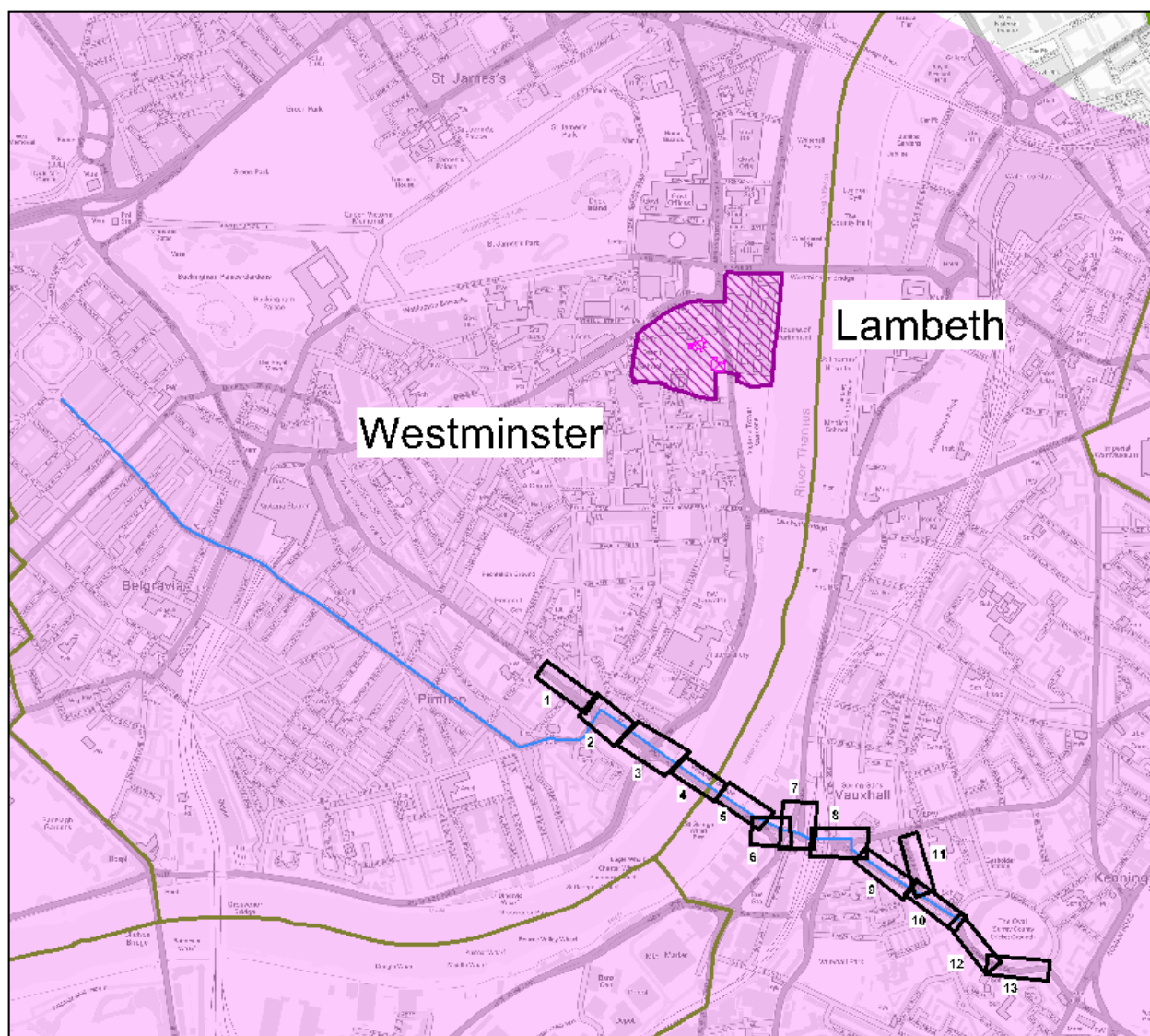


Figure 7 - World Heritage Sites & Scheduled Monuments

Appendix C lists all Conservation Areas along the route and provides a brief description of each together with an appraisal of the likely impacts of the Project. Appendix D lists nationally and locally Listed Buildings and Structures along the Route. Scheduled monuments within 2km of the route include Chapter House and Pyx Chamber in the Abbey Cloisters and Westminster Abbey and The Jewel Tower. The combined structures of the Palace of Westminster, Westminster Abbey and St Margaret's Church form the only World Heritage Site within 2km of the route.

Overall, the impact of the Project on cultural heritage during implementation and operation is expected to be neutral. This conclusion was derived by applying professional judgment guided by TAG.

The impact is likely to be neutral as the project maintains the existing historic character of the townscape; has no appreciable impacts, either positive or negative, on any known or potential heritage assets; and does not result in severance or loss of integrity, context or understanding within the historic landscape.

New way-finding street furniture, blue Cycle Superhighway branding and lighting upgrades are not likely to impact on the current heritage status of the Conservation Areas.

Some excavation may be required particularly when relocating stats and utilities. Required excavation is likely to be under 45cm and therefore have a neutral impact on archaeological remains. In London, archaeological remains tend to be found at a depth greater than one metre from the surface (with the exception of some ancient walls and Scheduled Ancient Monuments which are protected from the surface). If any excavation is to be over one metre, then the contractors will be expected to hand-dig the site if in an archaeological priority area. If archaeological remains are found, work shall stop and will only resume after approval from the relevant Local Authority Conservation Officer is received.

The contractors will be required to produce an Environmental Management Plan through which they will seek to ensure that cultural heritage features along the Route are protected and that a neutral impact on cultural heritage is maintained during the construction of the Project.

## Townscape

The Project is located within a number of townscape character areas identified in Figure 8 and described in Table 2.

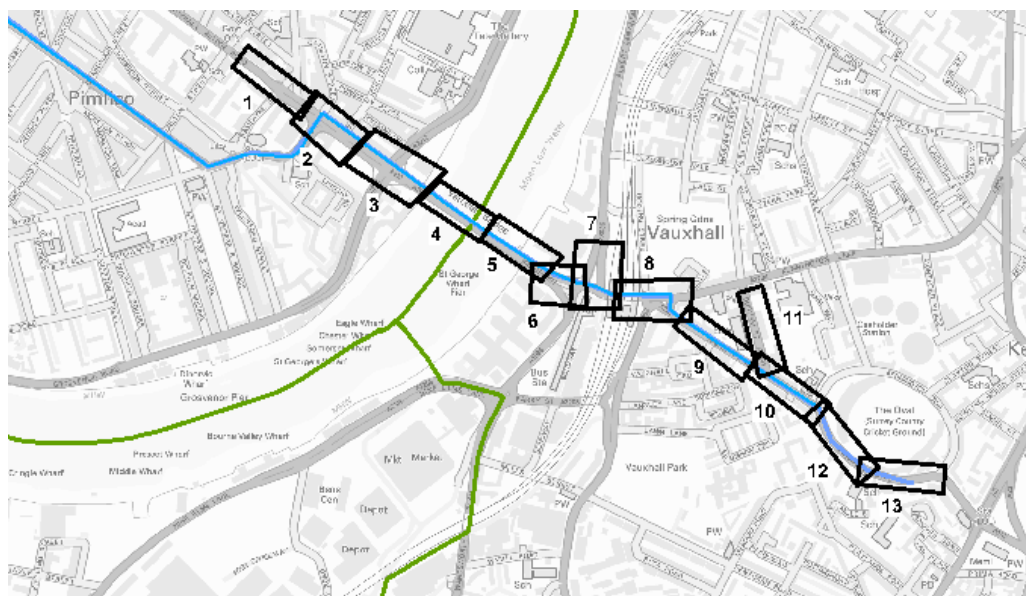


Figure 8 - Streetscape Character Areas

**Table 2 - Streetscape Character Areas**

| Section | Streetscape  | Definition  |
|---------|--|---|
| 1       | Urban Civic and Residential                                | Dominated by substantial governmental and commercial office buildings of both contemporary and traditional style. In addition to this there are privately owned properties facing directly onto the street. |
| 2       | Urban Residential with a small urban parkland              | Privately owned properties facing directly onto the street and a small urban park (Bessborough Gardens) fringed by trees.   |
| 3       | Urban Civic  | Dominated by substantial office buildings   |
| 4 & 5   | River  | Bridge- open views across the Thames  |
| 6       | Urban Civic and Residential                                | Dominated by substantial governmental and commercial office buildings of both contemporary and traditional style. In addition to this there are privately owned properties facing directly onto the street. |
| 7       | Urban Civic and Commercial                                 | Dominated by substantial governmental and commercial office buildings of both contemporary and traditional style. In addition there are a number of small businesses.                                       |
| 8       | Urban Civic and Residential (Route to go under the bridge) | Dominated by substantial office buildings of both contemporary and traditional style. In addition to this there are privately owned properties facing directly onto the street.                             |
| 9       | Urban Civic and Residential                                | Dominated by substantial governmental and commercial office buildings of both contemporary and traditional style. In addition to this there are privately owned properties facing directly onto the street. |
| 10      | Urban Residential  | Privately owned properties face directly onto the street.   |
| 11&12   | Urban Residential and the Oval Cricket Ground              | Privately owned properties face directly onto the street and the Oval Cricket Ground is located opposite these.   |

Overall, the impact of the Project on the townscape during the operational phase is expected to be neutral. This conclusion was derived by applying professional judgement guided by TAG.

TAG describes a project to have a neutral effect on townscape when it:

- Avoids neither being visually intrusive nor has an adverse effect on the current level of tranquillity (where these exist) of the townscape through which the route passes.
- Maintains existing townscape character in an area which is not a designated townscape, that is, neither national nor local high quality, nor is it vulnerable to change.
- Avoids conflict with government policy towards enhancing urban environments.

The townscape is already subject to stress conditions and the proposed measures are not expected to worsen them.

Some temporary and localised visual intrusion from the construction phase will have a slight adverse impact on townscape.

Overall the Project is expected to have a neutral slight adverse impact on townscape during the construction phase due to the traffic diversions and the consequent disruption to travel. In addition disruption could be worsened as a result of cumulative impacts from the simultaneous implementation of other projects in the area. During the operational phase, the Project is expected to have a neutral impact.

## Noise and Vibration

The Route passes through some densely populated areas; some of which have been identified by Defra as Important Areas for Noise. These are areas where high volumes of traffic meet high numbers of noise sensitive receptors (Figure 9 and Table 3).

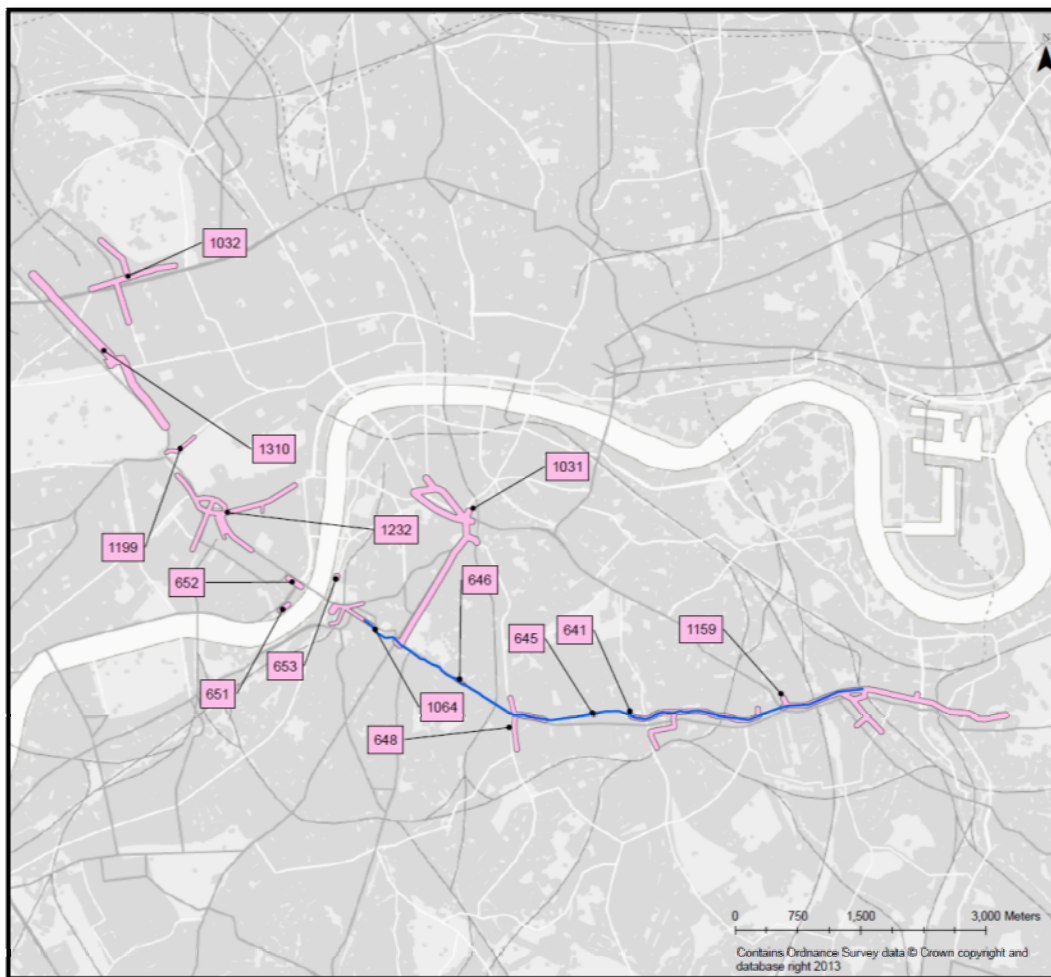


Figure 9 - Important Areas for Noise



**Table 3 - Important Areas for Noise**

| Important Area ID | London Borough       | List of Roads   | Length (km) |
|-------------------|----------------------|---|-------------|
| 641               | Southwark & Lewisham | A202 Peckham Road   | 2.30        |
| 645               | Southwark            | A202 Peckham Road   | 0.01        |
| 646               | Lambeth & Southwark  | A202 Camberwell New Road  | 0.13        |
| 648               | Lambeth & Southwark  | Denmark Hill, Camberwell Road, Camberwell New Road A202                           | 0.99        |
| 651               | Westminster          | A3212 Grosvenor Road  | 0.01        |
| 652               | Westminster          | Bessborough Gardens   | 0.12        |
| 653               | Lambeth              | Albert Embankment   | 0.18        |
| 1031              | Lambeth & Southwark  | A3 Kennington Park Road   | 0.06        |
| 1032              | Westminster          | A501 Marylebone Road and A41 Gloucester Place                                     | 2.11        |
| 1064              | Lambeth              | A202 Harleyford Road, A3204 Kennington Lane. A3036 South Lambeth Road             | 1.53        |
| 1159              | Lewisham & Greenwich | New Cross Road, A20 Lewisham Way, Blackheath Road                                 | 1.07        |
| 1199              | Westminster          | A4 Piccadilly   | 0.41        |
| 1232              | Westminster          | A302 Grosvenor Place, A202 Vauxhall Bridges Road and A3214 Buckingham Palace Road | 3.60        |
| 1310              | Westminster          | Park Lane, A5 Edgware Road  | 2.47        |

A high level noise assessment for short term impacts was carried out by Aecom following DMRB. Results show that the likely impact of the Project on noise ranges from Minor Beneficial to Minor Adverse as shown in Table 4. The table shows road links where there is a change in Basic Noise Level (BNL) of over 1dB. Changes between 1dB and 2.9dB are deemed to be minor. Changes between 3dB and 4.9dB are deemed to be moderate. Changes above 5dB are deemed to be major.

**Table 4 - Noise Calculations**

| Road Link                 | Length of Links (km) | IA ID   | % Link within IA | Do-Minimum (DM) |       |              |                               | Do-Something (DS) |       |              |                               | Difference DS - DM (L <sub>A10,15h</sub> dB) | Magnitude of Impact |
|---------------------------|----------------------|---------|------------------|-----------------|-------|--------------|-------------------------------|-------------------|-------|--------------|-------------------------------|--|---------------------|
|                           |                      |         |                  | AAWT            | %H GV | Speed (km/h) | BNL (L <sub>A10,15h</sub> dB) | AAWT              | %H GV | Speed (km/h) | BNL (L <sub>A10,15h</sub> dB) |  |                     |
| Regency Street            | 0.242                |         |                  | 1734            | 3     | 28           | 56                            | 1051              | 4     | 28           | 54                            | -2.6   | Minor               |
| Tyers Street              | 0.024                |         |                  | 2270            | 3     | 20*          | 59                            | 1539              | 4     | 20*          | 57                            | -1.8   |                     |
| Seymour Place             | 0.109                |         |                  | 1629            | 1     | 20*          | 55                            | 1329              | 0     | 20*          | 53                            | -1.5   |                     |
| John Islip Street         | 0.086                |         |                  | 2260            | 4     | 20*          | 59                            | 1700              | 5     | 20*          | 58                            | -1.3   |                     |
| Regency Street            | 0.194                |         |                  | 2116            | 4     | 25           | 58                            | 1558              | 5     | 25           | 57                            | -1.3   |                     |
| Regency Street            | 0.065                |         |                  | 2117            | 4     | 21           | 59                            | 1559              | 5     | 21           | 58                            | -1.2   |                     |
| Bolney Street             | 0.175                |         |                  | 1291            | 1     | 23           | 54                            | 1057              | 2     | 23           | 53                            | -1.1   |                     |
| Carterest Street          | 0.099                |         |                  | 1246            | 8     | 20*          | 57                            | 1078              | 8     | 20*          | 56                            | -1.1   |                     |
| A3204 Durham Street       | 0.1                  |         |                  | 10870           | 5     | 20*          | 67                            | 7807              | 6     | 20*          | 66                            | -1.0   |                     |
| A3204 Durham Street       | 0.016                |         |                  | 10855           | 5     | 20*          | 67                            | 7801              | 6     | 20*          | 66                            | -1.0   |                     |
| Manchester Street         | 0.372                |         |                  | 1329            | 0     | 20*          | 53                            | 1329              | 2     | 23           | 54                            | 1.1  | Minor               |
| A202 Vauxhall Bridge Road | 0.032                |         |                  | 8155            | 3     | 34           | 64                            | 8002              | 7     | 33           | 66                            | 1.2  |                     |
| A202 Vauxhall Bridge Road | 0.042                | 65<br>2 | 8.0%             | 8927            | 3     | 20*          | 65                            | 8748              | 6     | 21           | 66                            | 1.3  |                     |
| Manchester Street         | 0.126                |         |                  | 1106            | 14    | 20*          | 58                            | 1927              | 7     | 20*          | 60                            | 1.3  |                     |
| George Street             | 0.051                |         |                  | 1493            | 5     | 20*          | 57                            | 2359              | 4     | 20*          | 59                            | 2.0  |                     |
| George Street             | 0.108                |         |                  | 1476            | 5     | 20*          | 57                            | 2353              | 4     | 20*          | 59                            | 2.0  |                     |
| Atterbury Street          | 0.19                 |         |                  | 1013            | 0     | 20*          | 51                            | 1382              | 0     | 20*          | 54                            | 2.6  |                     |

In total there are 17 links where noise changes by more than 1dB, 7 links will experience a minor increase in noise (0.92km of road) whilst 10 links would experience a minor reduction in noise (1.1km of road). The magnitude of these increases is such that overall, based on a simple comparison of the total length of road, the scheme will bring more beneficial impacts than adverse impact on the basis of length of road link affected. At all 17 links the magnitude of impacts are minor.

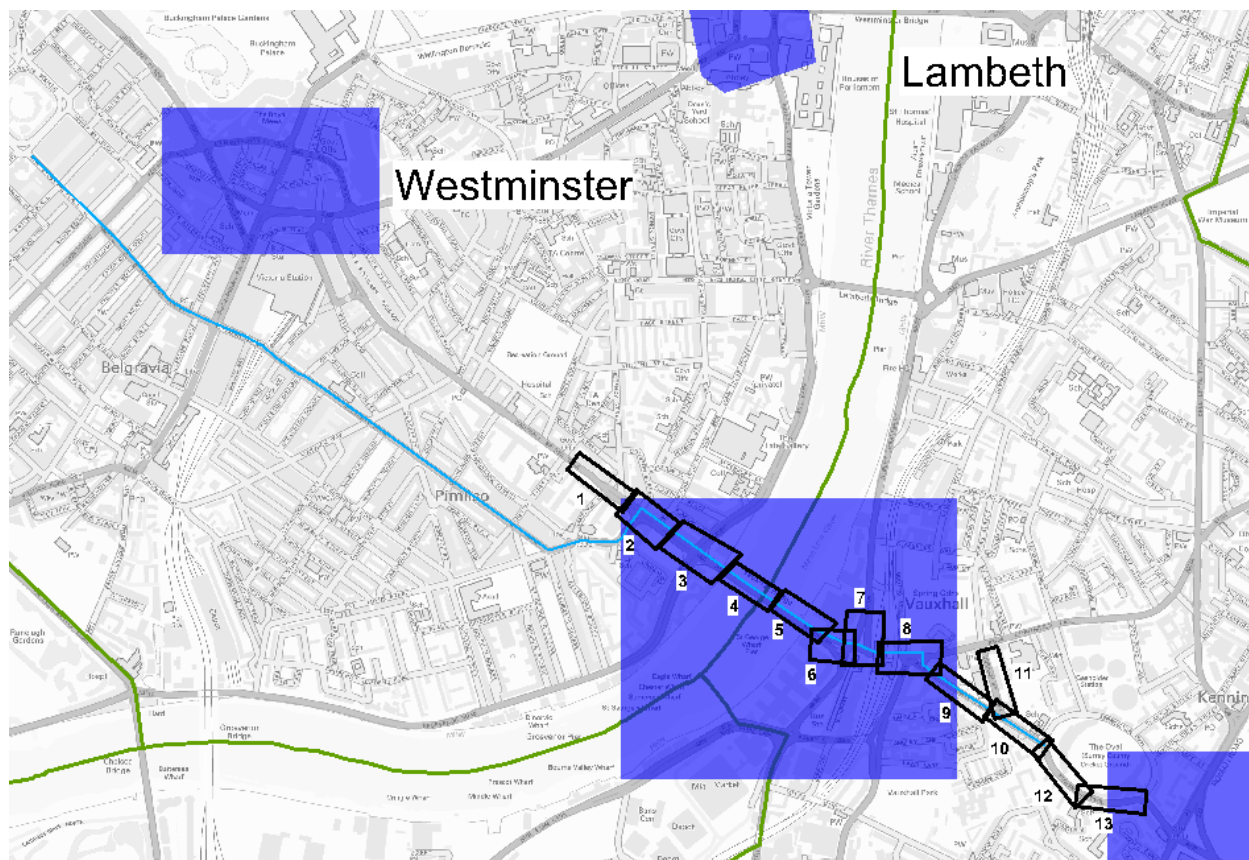
The noise assessment at this stage has not identified the location of sensitive receptors and the impact on noise on those sensitive receptors.

Some localised short-term slight adverse impacts on noise and vibration can be expected during the construction phase from the use of plant and vehicles.

Appropriate mitigation measures that seek to minimise noise during this phase will be put in place by the contractors. The contractors will be required to produce an Environmental Management Plan through which they will seek to minimise noise and vibration during the implementation phase.

## Dust and Emissions to Air

Part of the Route passes through areas which exceed air quality standards (Figure 10).



**Figure 10 - Areas of Air Quality Standard Exceedance**

A high level air quality assessment was carried out by Aecom following DMRB. Results show that the likely impact of the Project on air quality ranges from Moderate Adverse to Substantial Beneficial as shown in Table 5, Figure 11 and Appendix E. A significant impact is one of moderate or substantial impact.

**Table 5 - NO<sub>2</sub> Impact by Road Length**

| Impact                 | Road Length (m) |
|------------------------|-----------------|
| Substantial Beneficial | 820             |
| Moderate Beneficial    | 798             |
| Minor Beneficial       | 2554            |
| Negligible             | 255             |
| Minor Adverse          | 2247            |
| Moderate Adverse       | 927             |
| Substantial Adverse    | 0               |



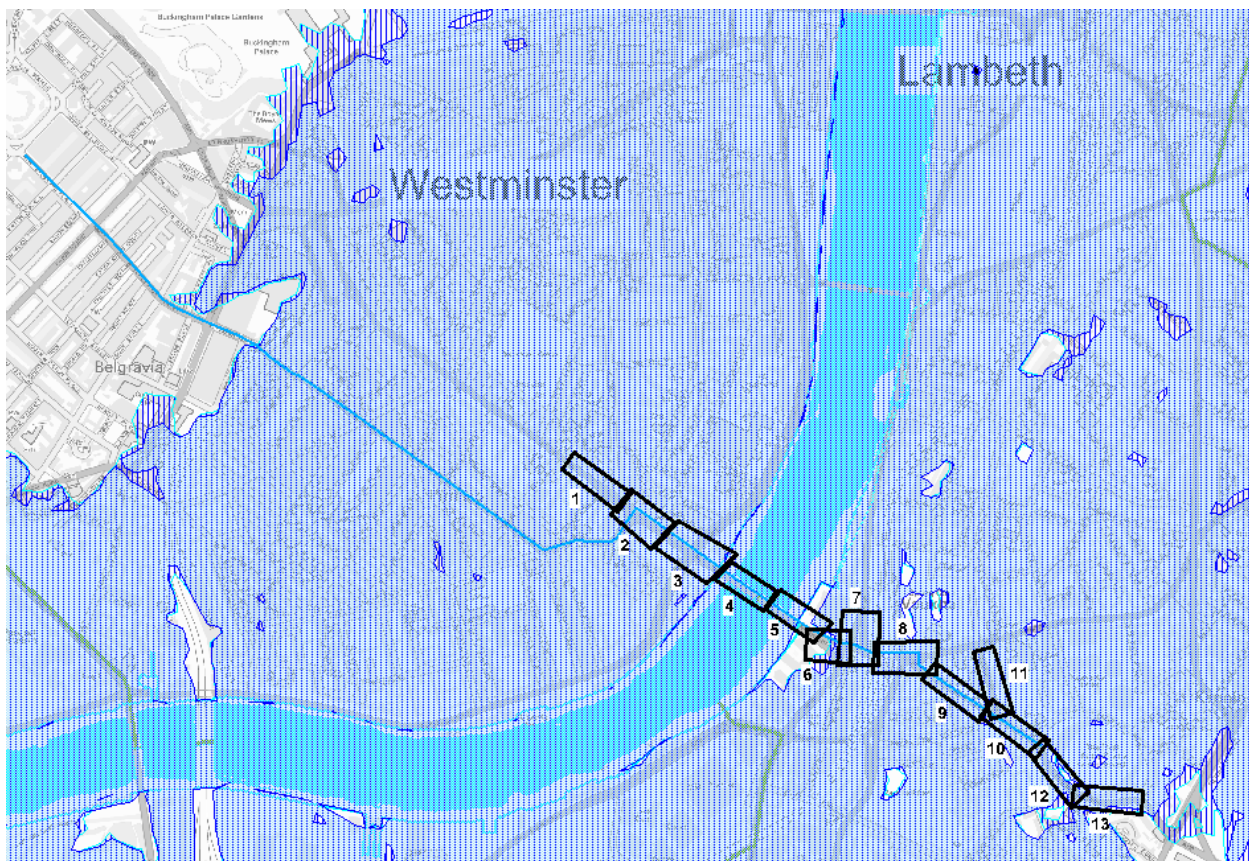


Figure 12 – Flood Risk Zones (dark blue) and River Thames (Light Blue)

The Route runs over the River Thames when passing over Vauxhall Bridge. The Environment Agency has confirmed that Flood Defence Consent is not required. The project will have no impact on flood defence structures. The risk to flooding along the Route will remain unchanged.

Overall the impact of the Project on the water environment is expected to be neutral. TAG describes a project to have a neutral impact on water when there is no appreciable effect, either positive or negative, on the identified attributes.

The contractors will be required to produce an Environmental Management Plan through which they will seek to avoid any impact to the water environment during the construction phase.

### Physical Fitness

TAG advises that significant improvements in fitness and well-being are most evident in those who cycle 30km or more per week and that those people taking up physical activities will receive greater health benefits than those partaking in physical activities already.

The Project will complement other cycling initiatives but will not lead to an immediate increase in cycling trips; therefore the Project will have an initial neutral effect upon physical fitness. However, increased health benefits can be expected as the Project generates additional cycling trips in future.

TAG does not provide a seven point impact appraisal scale for Physical Fitness. However, using professional judgment a conservative slight beneficial impact of the Project upon physical fitness can be expected. The number of cycling trips and associated health benefits will ultimately depend upon individuals' personal choices. Nonetheless, the overall potential health benefit of the Project is clear, especially if the cycling activity is complemented with other physical daily activities such as walking.

## Journey Experience

Different types of townscapes and the cycle routes in them provide different journey experiences to cyclists. For example canal, park and off-carriageway routes provide a better journey experience compared to on-carriageway routes.

Journey experience of cyclists along the Route is evaluated in accordance with TAG Journey Ambience methodology.

TAG identifies three components that contribute to journey experience. These are Traveller Care (cleanliness, facilities, information and environment), Traveller Views and Traveller Stress (frustration, fear of potential accidents and route uncertainty).

It is expected that Traveller Care along the Route will be improved during the operational phase of the Project, in particular:

**Cleanliness** – The Route will benefit from the proposed enhanced maintenance and enforcement measures. Local Authorities will continue to be responsible for litter collection and cleansing along the Route.

**Facilities** – The route will now be fully segregated and resurfaced. It will be maintained to a high standard.

**Information** – Way-finding monoliths and additional signage will be out in place to provide information about the Route and the local area. Maps of the Route will be available online to help cyclists plan their journeys.

**Environment** – The overall condition and smoothness of cycle rides is expected to be improved from the resurfacing of the Route and Route segregation

**Views along the Route** range from “restricted” (views are obscured by vegetation, fencing or buildings) to “no view” in more built up areas (views are obscured either side of the road by buildings).

Overall, it is expected that the Project will have a neutral effect on Travellers Views during the operational phase. The majority of the route is on carriageway and the route will not improve views of the area or hinder them. Travellers Views in the more built up areas may be further improved through measures such as landscape improvements and tree planting if possible.

It is expected that during the operational phase the Project will have a positive effect on Traveller Stress. The positive benefits are identified through the alleviation of three recognised causes of travel stress:

**Frustration** – Congestion, road layout and geometry and the inability to make good progress along the route are usually causes of frustration. Route resurfacing and segregation will help to reduce frustration.

**Fear of potential accidents** – One of the key objectives of the Project is to improve the image and perception of cycling, safety and the perception of safety. These objectives will be achieved by implementing measures such as Cycle Superhighway branding and segregation that will increase visibility of the Route to other road users. These measures combined with

Smarter Travel measures such as led rides, cycle support for school leavers and HGV and freight driver training will help reduce fear of potential accidents.

Route uncertainty – Route uncertainty would be improved through the implementation of distinctive blue branding and segregation. The Route will be signed with way-finding monoliths providing key information such as route number and average journey times to destinations. Proposed landscape improvements and lighting features are desired to provide continuity to the route but again the implementation of these is uncertain at present.

Overall the Project is going to be moderate beneficial to journey experience for cyclists

During the construction phase Traveller Views, Facilities and Frustration are expected to worsen due to the restriction or diversion of existing routes as the measures are implemented.

## **Sustainable Design**

TfL will encourage the use of sustainable materials, particularly in the design of the street furniture. TfL will require the contractor to reduce, reuse or recycle the waste that is generated and to record quantities of all waste streams. The contractor will also be required to comply with current legislation relating to the handling, transfer and disposal of all waste materials.

TfL will seek to locate street furniture in well lit areas where no additional street lighting is required. All lighting along the route will be replaced and upgraded to current standards; however it is uncertain at this stage whether LED will be implemented. In the event that additional street lighting is needed to provide light to street furniture, the lighting will be designed and located to minimise the visual intrusion of lighting columns into the daytime streetscape and to minimise light pollution at night-time.

Despite the use of sustainable materials, adopting the waste hierarchy and promoting the use of renewable energy, a slight adverse impact in respect of greenhouse gas emissions (due to an increase in energy use during implementation and operation and fuel use during construction) and the production of waste materials, is likely.

## **Environmental Management**

TfL will ensure that the contractors hold and maintain an environmental management system independently certified to ISO 14001:2004.

TfL will require the contractors to produce an Environmental Management Plan for the construction phase. The Environmental Management Plan will demonstrate how the contractors are going to implement appropriate environmental procedures, including preventative measures and controls for dealing with the unlikely event of environmental incidents. The contractors shall ensure that the Environmental Management Plan covers the whole of the works and highlight any site specific issues.

TfL will require the contractors to comply with current legislation relating to the handling, transfer and disposal of all waste materials including requirements set by the Waste Management Plans Regulations 2008 and Waste Electrical and Electronic Equipment Regulations 2006.

TfL will require the contractors to comply with the Greater London Authority and London Councils' Control of Dust and Emissions from Construction and Demolition Best Practice Guidance.

TfL will require the contractors to follow the British Standard BS 5837:2005, Trees in relation to construction – Recommendations and NJUG's Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees and that Local Authority Tree Officers and TfL Arboricultural and Landscape Managers are consulted about the potential impact that the Project can have on trees along the Route.

In the unlikely event that excavation for the installation of way-finding monoliths is over one metre in depth, TfL will require the contractors to hand-dig the site if in an archaeological priority area and if archaeological remains are found, work shall stop and will only resume after approval from the relevant Local Authority conservation officer and / or English Heritage is received.

In the unlikely event that protected species are present on site during works, TfL will ensure that only Defra licensed ecologists handle protected species.

To ensure compliance, TfL will monitor the performance of the contractors as works progress.



# Appendix A: Environmental Evaluation Report Template

## Environmental Evaluation Report - Improvement Projects and Capital Renewal Schemes

The Environmental Evaluation Report defines the requirements for achieving the appropriate level of environmental evaluation for a project so that negative environmental impacts are understood and minimised, environmental benefits are enhanced, environmental risks are managed, challenges to the project are reduced and the required relevant environmental consents, permits and licenses are identified.

The Report provides assurance to the Project Manager, Client and Environmental Manager that the project's design and performance, the appraisal, monitoring and sampling methodology used, and other technical and reporting activities are of the required quality and standard to meet TfL's environmental obligations.

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The Report contains a number of questions and bullet points which are intended to be key prompts. These do not represent an exhaustive list of best available practice or required consents, permits and licences. As such, expert environmental advice should be sought from the relevant expert if in doubt.

Version 4

**Project Information**

|   |  |
|---|--|
| <b>Project / Scheme Name:</b>   |  |
| <b>Project Code:</b>  |  |
| <b>Description of site, project / scheme and construction activities:</b> |  |

**Appraisal Summary**

**Impacts and Further Appraisal**

Comment:

|   | TfL<br>(Planning and Design Stage) |          |        |         |            |          |       | Contractor<br>(Design and Construction Stage) |          |        |         |            |          |       |
|---|------------------------------------|----------|--------|---------|------------|----------|-------|---|----------|--------|---------|------------|----------|-------|
|   | Adverse                            |          |        | Neutral | Beneficial |          |       | Adverse                                       |          |        | Neutral | Beneficial |          |       |
|   | Large                              | Moderate | Slight |         | Slight     | Moderate | Large | Large   | Moderate | Slight |         | Slight     | Moderate | Large |
| Natural Environment                               |                                    |          |        |         |            |          |       |   |          |        |         |            |          |       |
| Cultural Heritage                                 |                                    |          |        |         |            |          |       |   |          |        |         |            |          |       |
| Air Quality (NO <sub>2</sub> & PM <sub>10</sub> ) |                                    |          |        |         |            |          |       |   |          |        |         |            |          |       |
| Climate Change Mitigation (CO <sub>2</sub> )      |                                    |          |        |         |            |          |       |   |          |        |         |            |          |       |
| Climate Change Adaptation                         |                                    |          |        |         |            |          |       |   |          |        |         |            |          |       |
| Noise and Vibration                               |                                    |          |        |         |            |          |       |   |          |        |         |            |          |       |
| Soil and Water                                    |                                    |          |        |         |            |          |       |   |          |        |         |            |          |       |
| Community   |                                    |          |        |         |            |          |       |   |          |        |         |            |          |       |
| Built Environment                                 |                                    |          |        |         |            |          |       |   |          |        |         |            |          |       |
| Cumulative Impacts                                |                                    |          |        |         |            |          |       |   |          |        |         |            |          |       |

C – Construction O – Operation

|   | TfL | Contractor |
|---|-----|------------|
| The Project/Scheme has no significant impacts on the environment - No further appraisal is required |     |            |
| The Project/Scheme may have significant impacts on the environment - Further appraisal is required  |     |            |

**Required Actions**

| Control, Mitigation and Enhancement Measures (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks) |   |     |            |
|---|---|-----|------------|
|   | Measure   | TfL | Contractor |
| 2.1,2.3,2.4, 2.5,2.6,2.7, 6.1,6.3   | Contact the TfL Arboriculture and Landscape Route Manager if likely to impact any element of the green estate   |     |            |
| 2.1, 2.2, 6.2   | Follow British Standard BS 5837:2005, 'Trees in relation to construction – Recommendations' and the 'National Joint Utilities Group's Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees'.  |     |            |
| 2.1   | Removal of any green estate asset requires approval via SQA99. This includes affected 3 <sup>rd</sup> party assets.   |     |            |
| 2.3   | Injurious weeds shall be treated as controlled waste unless herbicide is present, in which case they shall be treated as hazardous waste  |     |            |
| 2.7,3.1,3.2, 8.3,8.5,8.6, 13.1  | Contact TfL Environmental Manger  |     |            |
| 4.4   | Works should be carried out in accordance with the Greater London Authority and London Councils 'The Control of Dust and Emissions from Construction and Demolition; Best Practice Guidance (2006)'.<br>Contractors should be encouraged to fit emission controls to all vehicles, plant and equipment where possible |     |            |
| 4.4,5.3,7.1   | Vehicles, plant and equipment should be turned off when not in use.   |     |            |
| 4.4,5.3   | Vehicles, plant and equipment should be inspected and maintained regularly.   |     |            |
| 5.2   | A Carbon and Energy Efficiency Plan (CCEP) may be required  |     |            |
| 5.3   | The Contractor should be encouraged to use energy and fuel efficient vehicles, plant and equipment where possible   |     |            |
| 7.1   | BS5228 Parts 1 and 2 – Noise and vibration control on construction and open sites should be adhered to  |     |            |
| 7.1   | Consider alternative 'quiet' running plant and equipment.   |     |            |
| 7.1   | Noisiest activities should be planned during 'normal working hours'   |     |            |
| 7.3   | Obtain Section 61 consent from the local authority environmental health officer.  |     |            |
| 8.3   | Consent for Works Affecting Watercourse and / or Flood Defences is required from the Environment Agency.  |     |            |
| 8.3   | Prepare a detailed Method Statement to support application for consent.   |     |            |
| 8.3   | Adhere to the Environment Agency's Pollution Prevention Guidelines.   |     |            |
| 8.5   | Environmental Permit is required from the Environment Agency.   |     |            |
| 8.6   | Trade Effluent consent is required from Thames Water.   |     |            |
| 9.2   | The worksite should be kept tidy and in good order, with minimal disturbance and footprint.   |     |            |
| 9.2   | The use of floodlights and flashing lights should be minimised, where possible and positioned away from residences and oncoming traffic.  |     |            |

| <b>Control, Mitigation and Enhancement Measures</b> (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks) |  |            |                   |
|--|--|------------|-------------------|
|  | <b>Measure</b>   | <b>TfL</b> | <b>Contractor</b> |
| 9.4  | Traffic management measures should be timed to minimise disruptions and should be clearly signed.  |            |                   |
| 12.1   | Hazardous substances must be stored away from sensitive receptors such as watercourses, habitat areas and residences.                                      |            |                   |
| 12.1   | Outside storage of oil (i.e. fuel) over 200 litres must comply with the Oil Storage Regulations  |            |                   |
| 12.1   | Hazardous substances must be stored in a secure location within drip trays and/or bunds.   |            |                   |
| 12.1   | Refuelling should be undertaken within a designated impermeable, bunded area or undertaken off site.   |            |                   |
| 12.1   | Spill kits must be readily available.  |            |                   |
| 13.1   | Site Waste Management Plan (SWMP) is required. Use TfL SWMP Template   |            |                   |
| 13.2   | Ensure waste containers are not damaged and are suitable and safe for the type of waste.   |            |                   |
| 13.2   | Ensure that all waste containers are clearly labelled  |            |                   |
| 13.2   | Prevent dispersal of waste by wind, rain, animals or people.   |            |                   |
| 13.2   | Store waste away from drains, water courses and trees  |            |                   |
| 13.2   | Reduce the amount of waste created on site.  |            |                   |
| 13.2   | Reuse materials on site wherever possible.   |            |                   |
| 13.2   | Segregate waste for recycling  |            |                   |
| 13.2   | Ensure that the company removing waste is registered as a Waste Carrier.   |            |                   |
| 13.2   | Ensure that the waste is taken to an authorised waste facility   |            |                   |
| 13.3   | All hazardous waste must be segregated from general waste.   |            |                   |
| 13.3   | Ensure that consignment notes are retained.  |            |                   |
| 13.3   | If more than 500 KGs of hazardous waste is produced each year, then the site must be registered as a hazardous waste premises with the Environment Agency. |            |                   |

|   | <b>TfL</b> | <b>Contractor</b> |
|---|------------|-------------------|
| <p><b>Monitoring Systems</b> (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)</p>  |            |                   |
| <p><b>Environmental Consents, Licenses and Permits</b> (List any environmental consent, license and permit required for the works and explain how these will be obtained)</p>   |            |                   |
| <p><b>Staff environmental training</b> (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training)</p> |            |                   |

**Appraisal**

| 1   | Determination of need for Environmental Impact Assessment (EIA) – ONLY FOR IMPROVEMENT PROJECTS   | TfL |    |
|-----|---|-----|----|
|     |   | YES | NO |
| 1.1 | Is the project listed in Schedule 1 of the EIA Regulations? If so which section and paragraph?  |     |    |
| 1.2 | As defined in the EIA Regulations, is the project an Urban Development over 0.5 hectare (5,000m <sup>2</sup> ) (Schedule 2 10(b)) or the Construction of a Road exceeding 1 hectare (10,000m <sup>2</sup> ) (Schedule 2 10(f))? |     |    |
| 1.3 | Is the project in or within 2km of a sensitive site, as defined by the EIA Regulations i.e. National Nature Reserve, Scheduled Monument, SAC, SPA, SSSI, World Heritage Site? If so, which?                                     |     |    |
| 1.4 | <b>Does the project require EIA?</b>  |     |    |

|                              |      |
|------------------------------|------|
| Comments and Recommendations | None |
|------------------------------|------|

| 2   | Natural Environment  | TfL |    | Contractor |    |
|-----|--|-----|----|------------|----|
|     |  | YES | NO | YES        | NO |
|     | Will works affect grassed or planted areas as a result of land-take, excavation or temporary use of the grassed or planted areas?  |     |    |            |    |
|     | <u>If YES:</u>   |     |    |            |    |
| 2.1 | <ul style="list-style-type: none"> <li>Contact the TfL Arboriculture and Landscape Route Manager</li> <li>Removal of any green estate asset requires approval via SQA99. This includes affected 3<sup>rd</sup> party assets.</li> <li>Follow British Standard BS 5837:2005, Trees in relation to construction – Recommendations' and the 'National Joint Utilities Group's Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees'.</li> </ul> |     |    |            |    |
|     | Will the works be in close proximity to grassed or planted areas or trees?   |     |    |            |    |
|     | <u>If YES:</u>   |     |    |            |    |
| 2.2 | <ul style="list-style-type: none"> <li>Follow British Standard BS 5837:2005, Trees in relation to construction – Recommendations' and the 'National Joint Utilities Group's Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees'.</li> </ul>  |     |    |            |    |

| 2   | Natural Environment  | TfL |    | Contractor |    |
|-----|--|-----|----|------------|----|
|     |  | YES | NO | YES        | NO |
|     | Are there any known injurious weeds in the vicinity of the works?  |     |    |            |    |
|     | <u>If YES:</u>   |     |    |            |    |
| 2.3 | <ul style="list-style-type: none"> <li>Contact the TfL Arboriculture and Landscape Route Manager</li> <li>Injurious weeds shall be treated as controlled waste unless herbicide is present, in which case they shall be treated as hazardous waste</li> </ul>  |     |    |            |    |
|     | Is new or replacement planting proposed?   |     |    |            |    |
|     | <u>If YES:</u>   |     |    |            |    |
| 2.4 | <ul style="list-style-type: none"> <li>Contact the TfL Arboriculture and Landscape Route Manager</li> </ul>  |     |    |            |    |
|     | Is there scope for new or enhanced planting in the area? E.g. empty planters or tree pits, unused land, room on the footway for street trees, existing green space in poor condition.  |     |    |            |    |
|     | <u>If YES:</u>   |     |    |            |    |
| 2.5 | <ul style="list-style-type: none"> <li>Contact the TfL Arboriculture and Landscape Route Manager</li> </ul>  |     |    |            |    |
|     | Are protected species, sightings of protected species or areas of habitat potential present with 200 metres of the works?  |     |    |            |    |
|     | <u>If YES:</u>   |     |    |            |    |
| 2.6 | <ul style="list-style-type: none"> <li>Contact the TfL Arboriculture and Landscape Route Manager</li> <li>Contact the TfL Environmental Manager</li> </ul> <p>Note: Only Defra licensed ecologists are to handle protected species</p>   |     |    |            |    |
|     | Are designated landscape sites (i.e. Metropolitan Open Land, Green Belt, Commons), Sites of Importance for Nature Conservation (SINC) or areas of habitat potential present with 200 metres of the works?  |     |    |            |    |
|     | <u>If YES:</u>   |     |    |            |    |
| 2.7 | <ul style="list-style-type: none"> <li>Contact the TfL Arboriculture and Landscape Route Manager</li> <li>Contact the TfL Environmental Manager</li> </ul> <p>Note: biodiversity features must be protected in accordance with the requirements of the relevant authority (e.g. Natural England or Local Authority).</p> |     |    |            |    |

|  |  | Key: 0=Neutral, 1=Slight, 2=Moderate, 3=Large |   |   |   |               |   |   |   |
|--|--|---|---|---|---|---------------|---|---|---|
|  |  | 0   | 1 | 2 | 3 | 0             | 1 | 2 | 3 |
| <b>Impact on the Natural Environment</b>   |  | +   |   |   |   |               |   |   |   |
|  |  | -   |   |   |   |               |   |   |   |
|  |  | C – Construction                              |   |   |   | O – Operation |   |   |   |
| <b>Is further appraisal required?</b>  |  |   |   |   |   |               |   |   |   |
| <b>Control, Mitigation and Enhancement Measures</b> (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks)                                   |  |   |   |   |   |               |   |   |   |
| <b>Monitoring Systems</b> (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)  |  |   |   |   |   |               |   |   |   |
| <b>Environmental Consents, Licenses and Permits</b> (List any environmental consent, license and permit required for the works and explain how these will be obtained)   |  |   |   |   |   |               |   |   |   |
| <b>Staff environmental training</b> (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training) |  |   |   |   |   |               |   |   |   |

| 3   | <b>Cultural Heritage</b>   | <b>TfL</b> |           | <b>Contractor</b> |           |
|-----|--|------------|-----------|-------------------|-----------|
|     |  | <b>YES</b> | <b>NO</b> | <b>YES</b>        | <b>NO</b> |
| 3.1 | <p>Are heritage features such as a Conservation Area within 100m, listed buildings within 50m, registered park and garden within 200m, London Square or archaeological features (e.g. London Wall) within 50m from the works.</p> <p>Are the works within an archaeological priority area?</p> <p><u>If YES:</u></p> <ul style="list-style-type: none"> <li>Contact the TfL Environmental Manager</li> </ul> <p>Note: Heritage or archaeological feature must be protected in accordance with the requirements of the relevant authority (e.g. English Heritage or Local Authority).</p> |            |           |                   |           |
| 3.2 | <p>Are heritage or archaeological artefacts encountered on site during the works?</p> <p><u>If YES:</u></p> <ul style="list-style-type: none"> <li>Works should cease immediately.</li> <li>Consult the relevant authority (e.g. English Heritage or Local Authority).</li> <li>Contact the TfL Environmental Manager</li> </ul>   | n/a        | n/a       |                   |           |

|  |  | Key: 0=Neutral, 1=Slight, 2=Moderate, 3=Large |   |   |   |               |   |   |   |
|--|--|---|---|---|---|---------------|---|---|---|
|  |  | 0   | 1 | 2 | 3 | 0             | 1 | 2 | 3 |
| <b>Impact on Cultural Heritage</b>   |  | +   |   |   |   |               |   |   |   |
|  |  | -   |   |   |   |               |   |   |   |
|  |  | C – Construction                              |   |   |   | O – Operation |   |   |   |
| <b>Is further appraisal required?</b>  |  |   |   |   |   |               |   |   |   |
| <b>Control, Mitigation and Enhancement Measures</b> (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks)                                   |  |   |   |   |   |               |   |   |   |
| <b>Monitoring Systems</b> (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)  |  |   |   |   |   |               |   |   |   |
| <b>Environmental Consents, Licenses and Permits</b> (List any environmental consent, license and permit required for the works and explain how these will be obtained)   |  |   |   |   |   |               |   |   |   |
| <b>Staff environmental training</b> (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training) |  |   |   |   |   |               |   |   |   |

| 4   | Air Quality (PM <sub>10</sub> & NO <sub>2</sub> )  | TfL |    |  |  | Contractor |    |  |  |
|-----|--|-----|----|--|--|------------|----|--|--|
|     |  | YES | NO |  |  | YES        | NO |  |  |
| 4.1 | Upon completion, will the project /scheme generate additional stop and start traffic conditions?   |     |    |  |  |            |    |  |  |
| 4.2 | Is the project /scheme in a road flanked by tall buildings on either side (i.e. street canyon) which prevent pollutants from dispersing?   |     |    |  |  |            |    |  |  |
| 4.3 | Will dust be generated as a result of the works?<br><u>If YES:</u><br><ul style="list-style-type: none"> <li>Works should be carried out in accordance with the Greater London Authority and London Councils 'The Control of Dust and Emissions from Construction and Demolition; Best Practice Guidance (2006)'. </li> </ul>  |     |    |  |  |            |    |  |  |
| 4.4 | Are vehicles, plant and equipment to be used?<br><u>If YES:</u><br><ul style="list-style-type: none"> <li>Contractors should be encouraged to fit emission controls to all vehicles, plant and equipment where possible</li> <li>Vehicles, plant and equipment should be turned off when not in use.</li> <li>Vehicles, plant and equipment should be inspected and maintained regularly.</li> </ul> |     |    |  |  |            |    |  |  |
| 4.5 | Is the project in an air quality management area, in a focus (NO <sub>2</sub> ) area or in an air quality priority area (PM <sub>10</sub> )? Specify   |     |    |  |  |            |    |  |  |

Key: 0=Neutral, 1=Slight, 2=Moderate, 3=Large

|                       |  |   |   |   |   |   |   |   |   |
|-----------------------|--|---|---|---|---|---|---|---|---|
| Impact on Air Quality |  | 0 | 1 | 2 | 3 | 0 | 1 | 2 | 3 |
|                       |  | + |   |   |   |   |   |   |   |
|                       |  |   |   |   |   |   |   |   |   |

C – Construction O – Operation

|  |  |  |  |
|--|--|--|--|
| <b>Is further appraisal required?</b>  |  |  |  |
| <b>Control, Mitigation and Enhancement Measures</b> (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks)                                   |  |  |  |
| <b>Monitoring Systems</b> (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)  |  |  |  |
| <b>Environmental Consents, Licenses and Permits</b> (List any environmental consent, license and permit required for the works and explain how these will be obtained)   |  |  |  |
| <b>Staff environmental training</b> (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training) |  |  |  |

| 5   | Climate Change Mitigation (CO <sub>2</sub> )   | TfL |    |  |  | Contractor |    |  |  |
|-----|--|-----|----|--|--|------------|----|--|--|
|     |  | YES | NO |  |  | YES        | NO |  |  |
| 5.1 | Upon completion, will the project/scheme increase congestion?  |     |    |  |  |            |    |  |  |
| 5.2 | Will the project/scheme affect energy consumption?<br><u>If YES:</u><br><ul style="list-style-type: none"> <li>A Carbon and Energy Efficiency Plan (CEEP) may be required</li> </ul>   |     |    |  |  |            |    |  |  |
| 5.3 | Are vehicles, plant and equipment to be used?<br><u>If YES:</u><br><ul style="list-style-type: none"> <li>The Contractor should be encouraged to use energy and fuel efficient vehicles, plant and equipment where possible</li> <li>Vehicles, plant and equipment should be turned off when not in use.</li> <li>Vehicles, plant and equipment should be inspected and maintained regularly.</li> </ul> |     |    |  |  |            |    |  |  |

Key: 0=Neutral, 1=Slight, 2=Moderate, 3=Large

|                                     |  |   |   |   |   |   |   |   |   |
|-------------------------------------|--|---|---|---|---|---|---|---|---|
| Impact on Climate Change Mitigation |  | 0 | 1 | 2 | 3 | 0 | 1 | 2 | 3 |
|                                     |  | + |   |   |   |   |   |   |   |
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| <b>Is further appraisal required?</b>  |  |  |  |
| <b>Control, Mitigation and Enhancement Measures</b> (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks)                                   |  |  |  |
| <b>Monitoring Systems</b> (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)  |  |  |  |
| <b>Environmental Consents, Licenses and Permits</b> (List any environmental consent, license and permit required for the works and explain how these will be obtained)   |  |  |  |
| <b>Staff environmental training</b> (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training) |  |  |  |

| 6            | Climate Change Adaptation   | TfL |    |  |  | Contractor |    |  |  |
|--------------|---|-----|----|--|--|------------|----|--|--|
|              |   | YES | NO |  |  | YES        | NO |  |  |
| 6.1<br>(2.1) | Will works require land take, excavation or temporary use of the grassed verge or planted areas which will increase hard surfaced area and/or surface water run-off?<br><br><u>If YES:</u><br><ul style="list-style-type: none"><li>Contact the TfL Arboriculture and Landscape Route Manager</li></ul>   |     |    |  |  |            |    |  |  |
| 6.2<br>(2.2) | Will the works be in close proximity to or require the removal or disturbance of street trees?<br><br><u>If YES:</u><br><ul style="list-style-type: none"><li>Contact the TfL Arboriculture and Landscape Route Manager</li><li>Follow British Standard BS 5837:2005, Trees in relation to construction – Recommendations’ and the ‘National Joint Utilities Group’s Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees’.</li></ul> |     |    |  |  |            |    |  |  |
| 6.3<br>(2.4) | Is new or replacement planting proposed?<br><br><u>If YES:</u><br><ul style="list-style-type: none"><li>Contact the TfL Arboriculture and Landscape Route Manager</li></ul>   |     |    |  |  |            |    |  |  |
| 6.4<br>(8.1) | Upon completion, will the project/scheme increase hard surfaced area and/or surface water run-off?<br><br><u>If YES:</u><br><ul style="list-style-type: none"><li>Consider the introduction of Sustainable Urban Drainage Systems (SUDS)</li></ul>  |     |    |  |  |            |    |  |  |

Key: 0=Neutral, 1=Slight, 2=Moderate, 3=Large

| Impact on Climate Change Adaptation |  | 0 |  |  |  | 1 |  |  |  | 2 |  |  |  | 3 |  |  |  |
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| <b>Is further appraisal required?</b>  |  |
| <b>Control, Mitigation and Enhancement Measures</b> (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks)                                   |  |
| <b>Monitoring Systems</b> (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)  |  |
| <b>Environmental Consents, Licenses and Permits</b> (List any environmental consent, license and permit required for the works and explain how these will be obtained)   |  |
| <b>Staff environmental training</b> (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training) |  |

| 7   | Noise  | TfL |    |  |  | Contractor |    |  |  |
|-----|--|-----|----|--|--|------------|----|--|--|
|     |  | YES | NO |  |  | YES        | NO |  |  |
| 7.1 | Are works likely to create noise and vibration that will disturb residences, schools, hospitals, places of worship, sensitive habitats or other sensitive receptors?<br><br><u>If YES:</u><br><ul style="list-style-type: none"><li>BS5228 Parts 1 and 2 – <i>Noise and vibration control on construction and open sites</i> should be adhered to.</li><li>Vehicles, plant and equipment should be turned off when not in use.</li><li>Consider alternative ‘quiet’ running plant and equipment.</li><li>Noisiest activities should be planned during ‘normal working hours’</li></ul> |     |    |  |  |            |    |  |  |
| 7.2 | Are the works in an Important Area for noise?  |     |    |  |  |            |    |  |  |
| 7.3 | Are works required to be carried out at night or outside of ‘normal working hours’?<br><br><u>If YES:</u><br><ul style="list-style-type: none"><li>Obtain Section 61 consent from the local authority environmental health officer.</li></ul>  |     |    |  |  |            |    |  |  |
| 7.4 | Upon completion will the project move traffic closer to residences, schools, hospitals, places of worship, sensitive habitats or other sensitive receptors?  |     |    |  |  |            |    |  |  |

Key: 0=Neutral, 1=Slight, 2=Moderate, 3=Large

| Impact on Noise and Vibration |  | 0 |  |  |  | 1 |  |  |  | 2 |  |  |  | 3 |  |  |  |
|-------------------------------|--|---|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|
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| <b>Is further appraisal required?</b>  |  |
| <b>Control, Mitigation and Enhancement Measures</b> (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks)                                   |  |
| <b>Monitoring Systems</b> (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)  |  |
| <b>Environmental Consents, Licenses and Permits</b> (List any environmental consent, license and permit required for the works and explain how these will be obtained)   |  |
| <b>Staff environmental training</b> (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training) |  |

| 8   | Soil and Water  | TfL |    |  |  | Contractor |    |  |  |
|-----|---|-----|----|--|--|------------|----|--|--|
|     |   | YES | NO |  |  | YES        | NO |  |  |
| 8.1 | Upon completion, will the project/scheme increase hard surfaced area or water run-off?<br><u>If YES:</u><br>• Consider the introduction of Sustainable Urban Drainage Systems (SUDS)  |     |    |  |  |            |    |  |  |
| 8.2 | Is the project/scheme within a flood risk area?<br><u>If YES:</u><br>• Consider the introduction of Sustainable Urban Drainage Systems (SUDS)   |     |    |  |  |            |    |  |  |
| 8.3 | Are the works in, over or under a watercourse or within 16 metres of a tidal river or 8 metres from a non tidal river, river bank, river wall, embankment or flood defence structure?<br><u>If YES:</u><br>• Contact the TfL Environmental Manager.<br>• Consent for Works Affecting Watercourse and / or Flood Defences is required from the Environment Agency.<br>• Prepare a detailed Method Statement to support application for consent.<br>• Adhere to the Environment Agency's Pollution Prevention Guidelines. |     |    |  |  |            |    |  |  |
| 8.4 | Have there been instances of blocked gullies or drainage issues?  |     |    |  |  |            |    |  |  |
| 8.5 | Is discharge to a watercourse or waterbody required? Are any dewatering activities required?<br><u>If YES:</u><br>• Contact the TfL Environmental Manager.<br>• Environmental Permit is required from the Environment Agency.   |     |    |  |  |            |    |  |  |
| 8.6 | Is discharge to a sewer required?<br><u>If YES:</u><br>• Contact the TfL Environmental Manager.<br>• Trade Effluent consent is required from Thames Water.  |     |    |  |  |            |    |  |  |

Key: 0=Neutral, 1=Slight, 2=Moderate, 3=Large

| Impact on Soil and Water |  | 0 |  |  |  | 1 |  |  |  | 2 |  |  |  | 3 |  |  |  |
|--------------------------|--|---|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|
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| <b>Is further appraisal required?</b>  |  |  |  |
| <b>Control, Mitigation and Enhancement Measures</b> (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks)                                   |  |  |  |
| <b>Monitoring Systems</b> (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)  |  |  |  |
| <b>Environmental Consents, Licenses and Permits</b> (List any environmental consent, license and permit required for the works and explain how these will be obtained)   |  |  |  |
| <b>Staff environmental training</b> (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training) |  |  |  |

| 9   | Community   | TfL |    |  |  | Contractor |    |  |  |
|-----|---|-----|----|--|--|------------|----|--|--|
|     |   | YES | NO |  |  | YES        | NO |  |  |
| 9.1 | Upon completion, will the project/scheme be visually intrusive or cause light pollution to residences, schools, hospitals, places of worship, sensitive habitats or other sensitive receptors?  |     |    |  |  |            |    |  |  |
| 9.2 | Can residents and users of nearby premises view the works?<br><u>If YES:</u><br>• The worksite should be kept tidy and in good order, with minimal disturbance and footprint.<br>• The use of floodlights and flashing lights should be minimised, where possible and positioned away from residences and oncoming traffic. |     |    |  |  |            |    |  |  |
| 9.3 | Upon completion, will the project/scheme have moved traffic closer to residences, schools, hospitals, places of worship, sensitive habitats or other sensitive receptors?   |     |    |  |  |            |    |  |  |
| 9.4 | Will the works require diversion routes or temporary alterations to accesses?<br><u>If YES:</u><br>• Traffic management measures should be timed to minimise disruptions and should be clearly signed.  |     |    |  |  |            |    |  |  |

Key: 0=Neutral, 1=Slight, 2=Moderate, 3=Large

| Impact on Community |  | 0 |  |  |  | 1 |  |  |  | 2 |  |  |  | 3 |  |  |  |
|---------------------|--|---|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|
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| <b>Is further appraisal required?</b>  |  |  |  |
| <b>Control, Mitigation and Enhancement Measures</b> (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks)                                   |  |  |  |
| <b>Monitoring Systems</b> (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)  |  |  |  |
| <b>Environmental Consents, Licenses and Permits</b> (List any environmental consent, license and permit required for the works and explain how these will be obtained)   |  |  |  |
| <b>Staff environmental training</b> (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training) |  |  |  |



| 10  | Built Environment   | TfL   |    |   |   | Contractor |    |   |   |   |
|---|---|---|----|---|---|------------|----|---|---|---|
|   |   | YES   | NO |   |   | YES        | NO |   |   |   |
| 10.1  | Would the project impact on the townscape?  |   |    |   |   |            |    |   |   |   |
| 10.2  | Would the project/scheme benefit from a Design Review and/or surgery?<br><i>Note: Design Review for projects over £2m is compulsory</i> |   |    |   |   |            |    |   |   |   |
| 10.3  | Is the project/scheme compliant with TfL Streetscape Guidance?  |   |    |   |   |            |    |   |   |   |
|   |   | Key: 0=Neutral, 1=Slight, 2=Moderate, 3=Large |    |   |   |            |    |   |   |   |
| Impact on Community   |   | +   | 0  | 1 | 2 | 3          | 0  | 1 | 2 | 3 |
|   |   | -   |    |   |   |            |    |   |   |   |
|   |   | C – Construction O – Operation                |    |   |   |            |    |   |   |   |
| Is further appraisal required?  |   |   |    |   |   |            |    |   |   |   |
| Control, Mitigation and Enhancement Measures (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks)                                   |   |   |    |   |   |            |    |   |   |   |
| Monitoring Systems (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)  |   |   |    |   |   |            |    |   |   |   |
| Environmental Consents, Licenses and Permits (List any environmental consent, license and permit required for the works and explain how these will be obtained)   |   |   |    |   |   |            |    |   |   |   |
| Staff environmental training (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training) |   |   |    |   |   |            |    |   |   |   |

| 11  | Cumulative Impacts  | TfL   |    |   |   | Contractor |    |   |   |   |
|---|---|---|----|---|---|------------|----|---|---|---|
|   |   | YES   | NO |   |   | YES        | NO |   |   |   |
| 11.1  | Will the project cumulatively cause adverse or positive impacts to any of the above if the evaluation took account of any other related project and / or schemes in the area? |   |    |   |   |            |    |   |   |   |
|   |   | Key: 0=Neutral, 1=Slight, 2=Moderate, 3=Large |    |   |   |            |    |   |   |   |
| Impact on Community   |   | +   | 0  | 1 | 2 | 3          | 0  | 1 | 2 | 3 |
|   |   | -   |    |   |   |            |    |   |   |   |
|   |   | C – Construction O – Operation                |    |   |   |            |    |   |   |   |
| Is further appraisal required?  |   |   |    |   |   |            |    |   |   |   |
| Control, Mitigation and Enhancement Measures (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks)                                   |   |   |    |   |   |            |    |   |   |   |
| Monitoring Systems (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)  |   |   |    |   |   |            |    |   |   |   |
| Environmental Consents, Licenses and Permits (List any environmental consent, license and permit required for the works and explain how these will be obtained)   |   |   |    |   |   |            |    |   |   |   |
| Staff environmental training (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training) |   |   |    |   |   |            |    |   |   |   |

| 12  | Hazardous Substances  | TfL |    | Contractor |    |
|---|---|-----|----|------------|----|
|   |   | YES | NO | YES        | NO |
| 12.1  | Will the works require the use of fuels, chemicals or other hazardous substances?<br><br><u>If YES:</u> <ul style="list-style-type: none"> <li>Hazardous substances must be stored away from sensitive receptors such as watercourses, habitat areas and residences.</li> <li>Outside storage of oil (i.e. fuel) over 200 litres must comply with the Oil Storage Regulations</li> <li>Hazardous substances must be stored in a secure location within drip trays and/or bunds.</li> <li>Refuelling should be undertaken within a designated impermeable, bunded area or undertaken off site.</li> <li>Spill kits must be readily available.</li> </ul> |     |    |            |    |
| Is further appraisal required?  |   |     |    |            |    |
| Control, Mitigation and Enhancement Measures (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks)                                   |   |     |    |            |    |
| Monitoring Systems (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)  |   |     |    |            |    |
| Environmental Consents, Licenses and Permits (List any environmental consent, license and permit required for the works and explain how these will be obtained)   |   |     |    |            |    |
| Staff environmental training (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training) |   |     |    |            |    |

| 13   | Waste  | TfL |    | Contractor |    |
|------|--|-----|----|------------|----|
|      |  | YES | NO | YES        | NO |
| 13.1 | <p>Will the works cost in excess of £300,000?</p> <p><u>If YES:</u></p> <ul style="list-style-type: none"> <li>Follow the relevant Pathway Waste Management product</li> <li>Contact the TfL Environmental Manager</li> <li>Site Waste Management Plan (SWMP) is required.</li> <li>Use the TfL Site Waste Management Plan Template</li> </ul>   |     |    |            |    |
| 13.2 | <p>Will the works generate waste?</p> <p><u>If YES:</u></p> <ul style="list-style-type: none"> <li>Ensure waste containers are not damaged and are suitable and safe for the type of waste.</li> <li>Ensure that all waste containers are clearly labelled</li> <li>Prevent dispersal of waste by wind, rain, animals or people.</li> <li>Store waste away from drains, water courses and trees</li> <li>Reduce the amount of waste created on site.</li> <li>Reuse materials on site wherever possible.</li> <li>Segregate waste for recycling</li> <li>Ensure that the company removing waste is registered as a Waste Carrier.</li> <li>Ensure that the waste is taken to an authorised waste facility</li> </ul> |     |    |            |    |
| 13.3 | <p>Will the works generate hazardous waste, including contaminated soil?</p> <p><u>If YES:</u></p> <ul style="list-style-type: none"> <li>All hazardous waste must be segregated from general waste.</li> <li>Ensure that consignment notes are retained.</li> <li>If more than 500 KGs of hazardous waste is produced each year, then the site must be registered as a hazardous waste premises with the Environment Agency.</li> </ul>   |     |    |            |    |

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| <b>Is further appraisal required?</b>  |  |  |
| <b>Control, Mitigation and Enhancement Measures</b> (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks)                                   |  |  |
| <b>Monitoring Systems</b> (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)  |  |  |
| <b>Environmental Consents, Licenses and Permits</b> (List any environmental consent, license and permit required for the works and explain how these will be obtained)   |  |  |
| <b>Staff environmental training</b> (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training) |  |  |

| 14   | Environmental Incidents  | TfL |     | Contractor |    |
|------|--|-----|-----|------------|----|
|      |  | YES | NO  | YES        | NO |
| 14.1 | <p>Has any polluting substance been spilled over land, into a drain or watercourse?</p> <p><u>If YES:</u></p> <ul style="list-style-type: none"> <li>Contact the Environment Agency</li> <li>Inform the TfL Environmental Manager</li> </ul>                   | n/a | n/a |            |    |
| 14.2 | <p>Has any protected animal or habitat been harmed or damaged during the works?</p> <p><u>If YES:</u></p> <ul style="list-style-type: none"> <li>Contact the TfL Environmental Manager</li> <li>Contact the TfL Arboriculture and Landscape Manager</li> </ul> | n/a | n/a |            |    |
| 14.3 | <p>Has any tree, planted area or grassed area been harmed or damaged during the works?</p> <p><u>If YES:</u></p> <ul style="list-style-type: none"> <li>Contact the TfL Arboriculture and Landscape Manager</li> </ul>   | n/a | n/a |            |    |

|  |     |
|--|-----|
| <b>Is further appraisal required?</b>  | n/a |
| <b>Control, Mitigation and Enhancement Measures</b> (list measures aimed at mitigating against negative environmental impacts, enhance environmental benefits and control environmental risks)                                   | n/a |
| <b>Monitoring Systems</b> (Describe the checks that are in place to ensure that the control and mitigation measures outlined above are implemented correctly)  | n/a |
| <b>Environmental Consents, Licenses and Permits</b> (List any environmental consent, license and permit required for the works and explain how these will be obtained)   | n/a |
| <b>Staff environmental training</b> (List any staff environmental training required to ensure that control, mitigation and enhancement measures are carried out in a suitable manner. Describe timing and frequency of training) | n/a |

**Approvals**

| TfL   |      |  |              | Contractor                                    |      |  |
|---|------|--|--------------|---|------|--|
|   | Date |  | Completed by |   | Date |  |
| TfL Environmental Manager                     |      |  |              | Contractor Environmental Manager              |      |  |
|   | Date |  | Confirmed by |   | Date |  |
| TfL Project Manager                           |      |  |              | Contractor Project Manager                    |      |  |
|   | Date |  | Issued to    |   | Date |  |
| TfL Arboriculture and Landscape Route Manager |      |  |              | TfL Arboriculture and Landscape Route Manager |      |  |
|   |      |  | Issued to    |   | Date |  |
|   |      |  |              | Contractor Landscape Advisor                  |      |  |
|   |      |  | Issued to    |   | Date |  |
|   |      |  |              | TfL Environmental Manager                     |      |  |

|   |  |
|---|--|
| <p>Note to TfL Project Manager: Contact the TfL Environmental Manager if details of the project change.</p> | <p>Note to Contractor Project Manager: Contact the Contractor Environmental Advisor if the details of the project change</p> |
|---|--|

**Supporting Information (e.g. drawing, maps)**

## Appendix B: Relevant Planning and Transport Policies

The table below outlines the national, regional and local planning and transport policy documents which the Project supports.

| Policy Document                         | Scale    | Conformity with Policy   |
|---|----------|--|
| National Planning Policy Framework 2012 | National | <p><b>Sustainable Development:</b> The planning system should secure more sustainable patterns of transport development. Improved accessibility to facilities such as walking, cycling and public transport should be encouraged. The Project will encourage access to cycling facilities.</p> <p><b>Planning and Climate Change:</b> Spatial planning should contribute to reducing carbon emissions and stabilising climate change (mitigation) and take into account the unavoidable consequences (adaptation).The Project will promote cycling which has no carbon emissions.</p> <p><b>Biodiversity and Geological Conservation:</b> Planning policies on the protection of biodiversity and geological conservation through planning decisions aim to maintain, enhance, restore or add to biodiversity and geological conservation interests. The Project's design will seek to maintain biodiversity and ensure that no adverse impacts on biodiversity will occur. Tree planting and landscape improvements are planned where possible.</p> <p><b>Transport:</b> Requirement to promote accessibility to jobs, shopping, leisure facilities and services by way of public transport, walking and cycling. The policy supports solutions to reduce greenhouse gas emissions and congestion giving priority to pedestrian and cycle movements. The policy also states that developments should create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians; which this project clearly sets out to do. The Project is consistent with the aims of the policy as it will promote accessibility to jobs, shopping, leisure facilities and services by way of cycling.</p> <p><b>Planning and the Historic Environment:</b> There is a requirement that special attention should be paid to the desirability of preserving or enhancing the character or appearance of any conservation area. Developments with less than substantial harm to the significance of a designated heritage asset should be weighed against the public benefits of the proposal. This development will not cause an adverse negative impact on the conservation areas and there will be great benefits to the public.<br/>It is advised that development within the historic environment should be of a high quality design. The Project is to consider the preservation of the appearance of conservation areas and where possible aims to ensure that street furniture will be of a high quality design.<br/>There is a need to assess the possibility of archaeological remains</p> |

| Policy Document   | Scale             | Conformity with Policy   |
|---|-------------------|--|
|   |                   | <p>being found if excavations are set to be carried out. Works on site must stop immediately if archaeology is found.</p> <p><b>Planning and Noise:</b> This policy framework guides local authorities on the use of their planning powers to minimise the adverse impact of noise. It outlines the considerations to be taken into account in determining planning applications both for noise-sensitive developments and for those activities which generate noise. The Contractors appointed to deliver the Project will be required to produce an Environmental Management Plan which amongst other things will need to address how noise is to be minimised during the Project's implementation phase.</p> <p><b>Development and Flood Risk:</b> The Policy framework ensures that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk. The Project should seek to obtain the relevant Flood Defence consent if required.</p> |
| Planning Policy Statement 10: Planning for Sustainable Waste Management (PPS10) | National          | PPS10 helps deliver sustainable development through driving waste management up the waste hierarchy, addressing waste as a resource and looking to disposal as the last option, but one which must be adequately catered for. The Contractors appointed to deliver the Project will be required to produce a Site Waste Management Plan.   |
| White Paper: The Future of Transport: A Network for 2030                        | National          | The Paper, amongst other things, aims to make <b>cycling</b> a real alternative for local trips. The Project is designed to facilitate and promote bicycle trips, which would have otherwise been made by bus, tube or car.  |
| The Eddington Transport Strategy  | National          | The Report examines the long-term links between transport and the UK's economic productivity, growth and stability, within the context of the Government's broader commitment to sustainable development. The Report demonstrates that small-scale interventions such as cycling are often the most cost-effective solutions.  |
| Sustainable Future for Cycling  | National          | The Report recognises the important contribution of cycling as a sustainable form of transport and how cycling contributes to every one of the five goals set out in Towards a Sustainable Transport System: Supporting Economic Growth in a Low Carbon World, namely: competitiveness and productivity, climate change; health, security and safety; quality of life; and equality of opportunity.  |
| The Mayor's Transport Strategy (March 2012)                                     | Regional (London) | The Strategy recognises that transport investment in new major projects such as those that promote and encouraging cycling is required to achieve sustainable growth. The Strategy also recognises the health benefits of cycling.   |
| Way to Go!  | Regional          | Publication which outlines the Mayor's vision for transport and  |

| Policy Document  | Scale             | Conformity with Policy   |
|--|-------------------|--|
| (November 2008)  | (London)          | intended revisions to the Transport Strategy. The Publication makes specific reference to the previous and ongoing Cycle Superhighway projects.  |
| The Mayor's Transport Strategy (Public Draft, October 2009- January 2010)                      | Regional (London) | Publication which outlines London's transport strategy. The Publication makes specific reference to the previous and ongoing Cycle Superhighway projects.  |
| London Cycle Action Plan (February 2004)   | Regional (London) | The Plan sets out measures to help achieve the Mayor's vision of developing London as an exemplary sustainable world city. In particular the Plan seeks to increase cycle accessibility, safety and priority. It gives support to innovative cycle Projects and it seeks to promote cycling and its status.  |
| Living Well in London – The Mayor's Draft Health Equalities Strategy for London (January 2008) | Regional (London) | The Draft Strategy sets out a framework to reduce health inequalities. In doing so it seeks to develop and promote London as a healthy place for all through the provision of high quality cycling opportunities, continued investment in sustainable modes of transport and the planning of developments that are sustainable.  |
| The London Plan 2011 (revised early minor alterations REMA 2013)                               | Regional (London) | The Plan places importance on sustainable development that takes into account impacts on natural resources, environmental and cultural assets and the health of local people. REMA states that new development should be supported by necessary and accessible health and social infrastructure. The Plan also seeks to achieve an increase in the capacity, quality and integration of public transport in London, support shifts to more sustainable modes of transport and improve the provision of cycling facilities. |

| Policy Document   | Scale             | Conformity with Policy  |
|---|-------------------|---|
| Planning for a Better London (published July 2008)                  | Regional (London) | The Report sets out the Mayor's strategic thinking and outlines key areas to be covered in what is now the new revision of the London Plan (2011). The Report further highlights the importance of establishing a strategic planning framework supportive of cycling. |
| The London Plan (Consultation draft replacement plan, October 2009) | Regional (London) | Publication which outlines London's land-use strategy. The Publication makes specific reference to the previous and ongoing Cycle superhighway projects.  |
| The Mayor of  | Regional          | The Strategy presents policies and proposals aimed at improving   |

|   |                   |  |
|---|-------------------|--|
| London Air Quality Strategy   | (London)          | London's air quality. Measures seek to facilitate a major improvement in public transport capacity, and encourage a shift from car travel towards cycling and other sustainable forms of travel. The Project will promote cycling and as such will support the Strategy.   |
| Clearing the air (The Mayor's draft Air Quality Strategy for consultation with the London Assembly and functional bodies, October 2009) | Regional (London) | The Strategy sets measures to reduce concentrations of particulate matter (PM10) and nitrogen dioxide (NO2). The Publication makes specific reference to the previous and ongoing Cycle Superhighway projects.   |
| The Mayor of London Noise Ambient Strategy  | Regional (London) | The Strategy seeks to actively manage long term noise, mainly from transport sources. The Strategy recognises that modal shift away from motorised vehicles, towards cycling for instance, can contribute to a reduction of transport related noise. The Project will promote cycling and as such will support the Strategy.   |
| The Mayor of London Biodiversity Strategy   | Regional (London) | The Strategy seeks to ensure that there is no overall loss of wildlife habitats in London, and that more open spaces are created and made accessible to all Londoners. The Project will not take away green areas but has an aim of introducing improvements to urban realm (including 'greening').  |
| The Mayor of London Climate Change Action Plan  | Regional (London) | The Plan recommends key actions to help London and Londoners tackle climate change. Cycling is recognised as one measure that can help reduce transport related carbon emissions. The Project will promote cycling and in doing so it will support the Plan.   |
| The Mayors vision of cycling in London  | Regional (London) | The Mayor wants to attract and encourage cycling in London. By planning to create segregated cycle lanes the protection of cyclists, through their own dedicated space along the route, is seen as attractive, comfortable and safe. The cycle superhighway routes are labelled as "a Crossrail for the bike". The project will adhere to the Mayors vision of cycling in London.  |
| Cycling Revolution London strategy, published in 2010   | Regional (London) | This strategy advertises cycling as a major transport mode right across the capital, from central London to the outer boroughs. It supports the creation of streets and spaces where everyone respects each other's right to use the road and as a result reduce cycling casualties. It aims to promote cycling as an enjoyable, everyday, healthy activity. It states that cycling needs to be embedded into the way the city is planned and run. The project will accomplish these points. |

| Policy Document                                    | Scale                       | Conformity with Policy  |
|--|-----------------------------|---|
| Westminster City Unitary Development Plan (UDP)    | Local (City of Westminster) | The Plan seeks to encourage and promote cycling as a healthy, efficient, sustainable and effective form of transport, which produces no emissions and which often allows a journey to be made more quickly than by a private car. The Plan therefore seeks to restrain the unnecessary use of the private car in order to achieve a more balanced road space between users. The Project has the potential to reduce traffic through encouraging and promoting cycling as a sustainable mode of transport and thus is consistent with the Plan.  |
| Westminster City Local Development Framework (LDF) | Local (City of Westminster) | The Plan aims to address road transport and congestion with a need for better provision for pedestrians and cyclists. It also aims to improve the air quality to reduce the pressure on the natural and built environment. The Plan seeks to promote and improve health and well-being and improve air quality by encouraging walking, cycling and the use of public transport. The Project has the potential to encourage cycling thereby contributing to improving the air quality; therefore this project is consistent with the plan.   |
| Westminster City Local Implementation Plan (LIP)   | Local (City of Westminster) | The Plan highlights the fact that Westminster City is a very busy and therefore issues such as congestion, overcrowding, poor air quality, noise and road safety can arise. Cycling is encouraged to promote a healthier lifestyle, improve air quality and reduce traffic on the roads. The Project, through promoting cycling and improving cycling facilities is consistent with the Plan.   |
| Lambeth Unitary Development Plan (UDP)             | Local (Lambeth)             | The Plan seeks to establish a safe, accessible and attractive transport network. The Council seeks to promote walking and cycling and restrict the use of the private car. The Plan encourages developments with opportunities for interchange facilities between public transport modes and walking and cycling; The Plan states that land use decisions need to be integrated with the public transport network and the full range of transport modes (including walking, cycling, and taxis) and the development of an integrated transport system linked to regeneration programmes and environmental improvement. According to the Plan a Lambeth Cycle Network is being developed. New developments should connect to, facilitate and improve upon the network with direct, safe and well lit cycle routes and have full cycle access and facilities. Lambeth seeks to create a high quality network of cycle routes to enable full cycling access to the borough; achieved by providing cycling routes and facilities to allow comprehensive, safe direct and convenient cycling access, which will lessen reliance on less sustainable modes of transport. The Project has the potential to encourage cycling through the use of segregated cycle routes, linking to existing cycle routes and achieving an integrated transport network. Therefore this project is consistent with the Plan. |



|   |                 |  |
|---|-----------------|--|
| Local development framework Core Strategy | Local (Lambeth) | By promoting alternative modes of transport the Plan addresses how cycling contributes to tackling climate change, sustaining a healthy lifestyle and preventing obesity. The Strategy states that by working in partnership with Transport for London there could be an increase in public transport capacity and accessibility, reduction in the reliance on the private car and an increase in walking and cycling. Walking and cycling should be promoted through improvements to existing provision and provision in and around new development for cycling, cycle parking, the public realm and transport and highway infrastructure. The Strategy seeks to develop an accessible, legible and permeable pedestrian and cycling environment. This Project is consistent with the Strategy. |
|---|-----------------|--|

| Policy Document                             | Scale           | Conformity with Policy   |
|---|-----------------|--|
| Lambeth Transport plan 2011-2031            | Local (Lambeth) | The Plans seeks to increase numbers in walking and cycling. In this Plan Lambeth Council believes sustainable transport such as walking and cycling should be at the heart of their policies, and they hope that together, working with all their stakeholders, they can achieve the goals and visions they have set. This means working with TfL when implementing cycling. The Plan recognises existing cycling routes in the borough such as Cycle Superhighway Route 7, the Cycle Hire Scheme, the London Cycle Network (LCN) Links 127 – 139 and National Cycle Route 4. The Plan mentions TfL's Analysis of Cycling Potential (2010) which predicts that levels of cycling in inner London, which includes Lambeth, could be much higher with a further 4.3 million trips per average day being identified as potentially cyclable. The Plan states that walking and cycling are seen as one of the easiest ways of incorporating exercise into a regular routine, therefore the Plan realises the health benefits of walking and cycling. In addition there would be a reduction in emissions, congestion and road danger on the road network. The Plan is consistent with Project. |
| Sustainable Community Strategy- vision 2020 | Local (Lambeth) | The strategy seeks to increase public transport accessibility and promote walking and cycling and thus is consistent with the Project.   |

## Appendix C: Evaluation of Conservation Areas

| Conservation Area   | Conservation Area Key Characteristics<br>(Source Local Authority)  | Impact<br>on Conservation Area's Character   |
|---|--|--|
| Belgravia<br>(LA Road Westminster)  | First designated in 1968 and extended in 1990. The area is predominantly residential with some shops on the edges. There are also significant numbers of embassies, diplomatic buildings and institutional headquarters, especially around Belgrave Square.  | Overall, the impact of the Project on this conservation area is <u>neutral</u> as the project maintains the existing historic character of the townscape; has no appreciable impacts, either positive or negative, on any known or potential heritage assets; and does not result in severance or loss of integrity, context or understanding within the historic landscape. |
| Pimlico<br>(LA Road Westminster)  | First designated in 1968, extended in 1973 and in 1990. The Pimlico Conservation Area is characterised by a highly disciplined and formal street layout based on a grid pattern. The Conservation Area includes the stretch of riverside from St George's Square to Vauxhall Bridge. The area contains many small hotels in the streets close to Victoria Station and multi-occupied residential buildings.  | Overall, the impact of the Project on this conservation area is <u>neutral</u> as the project maintains the existing historic character of the townscape; has no appreciable impacts, either positive or negative, on any known or potential heritage assets; and does not result in severance or loss of integrity, context or understanding within the historic landscape. |
| Lillington and Longmoore Gardens<br>(LA Road Westminster and part of Section 1) | The Lillington Gardens Estate Conservation Area was designated in 1990 and extended in 2012 to include Longmoore Gardens. Today the original Lillington Gardens estate remains of significant historic interest as a pioneering example of medium-rise high density but context friendly housing, which established an alternative to the sometimes unpopular post-war modernist high-rise housing development. It provided a model for the later Longmoore Gardens and for this type of housing development around the country. | Overall, the impact of the Project on this conservation area is <u>neutral</u> as the project maintains the existing historic character of the townscape; has no appreciable impacts, either positive or negative, on any known or potential heritage assets; and does not result in severance or loss of integrity, context or understanding within the historic landscape. |

| Conservation Area   | Conservation Area Key Characteristics<br>(Source Local Authority)  | Impact<br>on Conservation Area's Character   |
|---|--|--|
| Vincent Square<br>(Within 200m of Route in Westminster)                           | Designated as a Conservation Area in 1979. The Conservation Area is most notable for the wide open space of the Westminster School private playing field and the trees which surround it. It provides a unique space within Westminster which forms an attractive and quiet haven from the traffic and bustle of nearby Vauxhall Bridge Road and Victoria Street. The Square is surrounded by a mixture of styles of building. | Overall, the impact of the Project on this conservation area is <u>neutral</u> as the project maintains the existing historic character of the townscape; has no appreciable impacts, either positive or negative, on any known or potential heritage assets; and does not result in severance or loss of integrity, context or understanding within the historic landscape. |
| Regency Street<br>(Within 200m of the Route and part of Section 1 in Westminster) | Designated as the Regency Street Conservation Area in 1990. This area is characterised by pleasant three to five storey Edwardian and post World War I brick buildings which give the area a cohesive character in terms of scale and materials.   | Overall, the impact of the Project on this conservation area is <u>neutral</u> as the project maintains the existing historic character of the townscape; has no appreciable impacts, either positive or negative, on any known or potential heritage assets; and does not result in severance or loss of integrity, context or understanding within the historic landscape. |

|  |   |   |
|--|---|---|
| <p>Millbank<br/>(Within 200m of the Route at Section 2 and on TLRN Section 4 in Westminster)</p> | <p>First designated in 1969 covering the octagonal site of Millbank Penitentiary. It was extended in 1990 to include the river embankment and the Westminster half of the Thames between the Vickers Tower and Vauxhall Bridge and Ponsonby Place area. The Millbank Conservation Area contains four distinct elements. First, the early 19th century parts of stock brick and stucco terraced housing around Ponsonby Place. Secondly, the Tate Gallery and Army Medical Corps grand buildings to the north. Thirdly, the red brick Arts and Crafts style mansion blocks of flats to the West of the Tate Gallery. Fourthly, the Embankment wall with its attractive dolphin lamps and a large stretch of the Thames to the south.</p> | <p>Overall, the impact of the Project on this conservation area is <u>neutral</u> as the project maintains the existing historic character of the townscape; has no appreciable impacts, either positive or negative, on any known or potential heritage assets; and does not result in severance or loss of integrity, context or understanding within the historic landscape.</p> |
|--|---|---|

| Conservation Area                           | Conservation Area Key Characteristics<br>(Source Local Authority)   | Impact<br>on Conservation Area's Character  |
|---|---|---|
| <p>Albert Embankment<br/>(TLRN Lambeth)</p> | <p>Albert Embankment Conservation Area was designated in 2001. The character of this conservation area is clearly defined by its location along the River Thames and the borough boundaries to the west (with Westminster) and south (with Wandsworth). Includes occupied by the River Thames itself, including the shingle foreshore and mud-banks, the Fire Brigade Pier, Vauxhall Bridge, a pub, post-war office buildings and elevated railway lines.</p> | <p>Overall, the impact of the Project on this conservation area is <u>neutral</u> as the project maintains the existing historic character of the townscape; has no appreciable impacts, either positive or negative, on any known or potential heritage assets; and does not result in severance or loss of integrity, context or understanding within the historic landscape.</p> |

|                                |   |  |
|--------------------------------|---|--|
| Vauxhall<br>(TLRN Lambeth)     | Vauxhall Conservation Area was designated in September 1981 when it comprised of Harleyford Road and most of the westernmost end of Kennington Lane. It was extended in 1984 to include Bonnington Square and most of Vauxhall Grove and 1998 to include Vauxhall Park, Lawn Lane and St Anne's Church. The area includes historic routes, listed buildings and a park. | Overall, the impact of the Project on this conservation area is <u>neutral</u> as the project maintains the existing historic character of the townscape; has no appreciable impacts, either positive or negative, on any known or potential heritage assets; and does not result in severance or loss of integrity, context or understanding within the historic landscape. |
| West Norwood<br>(TLRN Lambeth) | The second of eight London cemeteries established by Act of Parliament between 1832 and 1847. A designed landscape of historical interest containing numerous structures of interest, the cemetery forms the heart of the conservation area with adjoining 19th century public, commercial and residential buildings also being included.                               | Overall, the impact of the Project on this conservation area is <u>neutral</u> as the project maintains the existing historic character of the townscape; has no appreciable impacts, either positive or negative, on any known or potential heritage assets; and does not result in severance or loss of integrity, context or understanding within the historic landscape. |

## Appendix D: List of Listed Buildings and Structures

| Structure Name  | Street number | Street name          | Grade |
|---|---------------|----------------------|-------|
| CHURCH OF ST PETER  |               | KENNINGTON LANE SE11 | II*   |
|   | 21-27         | HANOVER GARDENS SE11 | II    |
|   | 28-37         | HANOVER GARDENS SE11 | II    |
| PRIORY HOUSE LILLINGTON GARDENS ESTATE WITH ATTACHED WALLS AND STEPS        |               | RAMPAYNE STREET      | II    |
|   | 38            | HANOVER GARDENS SE11 | II    |
|   | 78-130        | BELGRAVE ROAD SW1    | II    |
|   | 57 AND 59     | HARLEYFORD ROAD SE11 | II    |
|   | 25-33         | ECCLESTON STREET SW1 | II    |
| FORECOURT PIERS AND RAILINGS TO NUMBER 63                                   |               | HARLEYFORD ROAD SE11 | II    |
| QUEEN OF DENMARK PUBLIC HOUSE   | 1             | LUPUS STREET SW1     | II    |
|   | 39 AND 40     | HANOVER GARDENS SE11 | II    |
| ST ANNE'S HOUSE   | 363           | KENNINGTON LANE SE11 | II    |
| ROMAN CATHOLIC CHURCH OF ST ANNE  |               | KENNINGTON LANE SE11 | II    |
| NUMBER 11 INCLUDING MEWS ARCH   |               | BELGRAVE PLACE SW1   | II    |
|   | 365 AND 367   | KENNINGTON LANE SE11 | II    |
| GROUP OF FOUR K6 TELEPHONE KIOSKS BY GARDEN WALL TO NUMBER 1 WARWICK SQUARE |               | BELGRAVE ROAD SW1    | II    |
|   | 337           | KENNINGTON LANE SE11 | II    |
|   | 1             | BELGRAVE PLACE SW1   | II    |

| Structure Name  | Street number | Street name            | Grade |
|---|---------------|------------------------|-------|
|   | 58 AND 60     | HARLEYFORD ROAD SE11   | II    |
|   | 41,42 AND 43  | HANOVER GARDENS SE11   | II    |
|   | 52-56         | BELGRAVE ROAD SW1      | II    |
|   | 58-70         | EBURY STREET SW1       | II    |
|   | 48-56         | HARLEYFORD ROAD SE11   | II    |
| THORNDIKE HOUSE LILLINGTON GARDENS ESTATE WITH ATTACHED WALLS AND STEPS |               | VAUXHALL BRIDGE ROAD   | II    |
|   | 19 AND 21     | HARLEYFORD ROAD SE11   | II    |
| HERBERT HOUSE   | 312           | KENNINGTON LANE SE11   | II*   |
| CABMEN'S SHELTER  |               | ST GEORGE'S SQUARE SW1 | II    |
|   | 83-102        | EATON SQUARE SW1       | II*   |
| CHURCH OF ST SAVIOUR  |               | ST GEORGE'S SQUARE SW1 | II    |
|   | 39            | HARLEYFORD ROAD SE11   | II    |
| EXBURY HOUSE LILLINGTON GARDENS ESTATE WITH ATTACHED WALLS AND STEPS    |               | RAMPAYNE STREET        | II    |
|   | 20            | HANOVER GARDENS SE11   | II    |
|   | 2-22          | ST GEORGE'S SQUARE SW1 | II    |
| SPANISH EMBASSY   | 24            | BELGRAVE SQUARE SW1    | I     |
| RAILINGS AND GATEPIERS GATES TO NUMBER 24                               |               | BELGRAVE SQUARE SW1    | II*   |
|   | 52            | KENNINGTON OVAL SE11   | II    |
|   | 14-23         | CHESTER SQUARE SW1     | II    |
|   | 1-3           | ECCLESTON SQUARE SW1   | II    |

| Structure Name   | Street number   | Street name            | Grade |
|--|-----------------|------------------------|-------|
| K6 TELEPHONE KIOSK OUTSIDE FLANK ELEVATION OF NUMBER 103 EATON SQUARE  |                 | BELGRAVE PLACE SW1     | II    |
|  | 65-113          | BELGRAVE ROAD SW1      | II    |
|  | 2-8             | LUPUS STREET SW1       | II    |
|  | 63              | HARLEYFORD ROAD SE11   | II    |
|  | 20-24           | BELGRAVE ROAD SW1      | II    |
|  | 1-13            | CHESTER SQUARE SW1     | II    |
| ST PETER'S VICARAGE  | 308             | KENNINGTON LANE SE11   | II    |
|  | 67-80           | WARWICK SQUARE SW1     | II    |
|  | 79-81           | ECCLESTON SQUARE SW1   | II    |
|  | 25              | HARLEYFORD ROAD SE11   | II    |
|  | 27-33           | ST GEORGE'S SQUARE SW1 | II    |
|  | 3-25            | ST GEORGE'S SQUARE SW1 | II    |
| LONGLEAT HOUSE LILLINGTON GARDENS ESTATE WITH ATTACHED WALLS AND STEPS |                 | VAUXHALL BRIDGE ROAD   | II    |
| ST MARKS' CHURCH OF ENGLAND JUNIOR MIXED AND INFANTS SCHOOLS           |                 | HARLEYFORD ROAD SE11   | II    |
|  | 2, 2A, 2B AND 4 | ECCLESTON STREET SW1   | II    |
|  | 9-19            | BESSBOROUGH STREET SW1 | II    |
|  | 15 AND 17       | HARLEYFORD ROAD SE11   | II    |
|  | 43-55           | HARLEYFORD ROAD SE11   | II    |
|  | 2-5             | BELGRAVE PLACE SW1     | II    |



| Structure Name   | Street number | Street name             | Grade |
|--|---------------|-------------------------|-------|
|  | 23            | HARLEYFORD ROAD<br>SE11 | II    |
| MORPETH ARMS PUBLIC HOUSE  | 58            | MILLBANK SW1            | II    |
| WISLEY HOUSE LILLINGTON GARDENS<br>ESTATE WITH ATTACHED WALLS AND<br>STEPS         |               | RAMPAYNE STREET         | II    |
|  | 24-32         | ECCLESTON<br>STREET SW1 | II    |
| WALL ON EAST SIDE OF FRONT GARDEN<br>TO NUMBER 308                                 |               | KENNINGTON LANE<br>SE11 | II    |
| SEWER VENT COLUMN/ FORMER GAS<br>LAMP STANDARD AT JUNCTION WITH<br>HARLEYFORD ROAD |               | DURHAM STREET<br>SE11   | II    |
| VAUXHALL BRIDGE  |               |                         | II*   |

## Appendix E: NO<sub>2</sub> Concentrations

| Link | Road Name               | Traffic Flow (veh/day) |        |        | Predicted Concentration NO <sub>2</sub> (µg/m <sup>3</sup> ) |      |        | Significance of Impact | Road length (m) |
|------|-------------------------|------------------------|--------|--------|--|------|--------|------------------------|-----------------|
|      |                         | DM                     | DS     | Change | DM   | DS   | Change |                        |                 |
| 1    | A202 Vauxhall Bridge    | 34,450                 | 32,145 | -2,305 | 56.5   | 55.9 | -0.6   | Minor Beneficial       | 35              |
| 2    | A3212 Grosvenor Rd      | 13,585                 | 14,818 | 1,233  | 47.8   | 49   | 1.2    | Minor Adverse          | 358             |
| 3    | A202 Vauxhall Bridge Rd | 22,609                 | 17,764 | -4,845 | 53.1   | 51.6 | -1.5   | Minor Beneficial       | 72              |
| 4    | A3212 Grosvenor Rd      | 13,585                 | 14,819 | 1,234  | 47.8   | 49   | 1.2    | Minor Adverse          | 33              |
| 5    | A3213 Belgrave Rd       | 12,424                 | 10,962 | -1,463 | 46.7   | 45.3 | -1.4   | Minor Beneficial       | 32              |
| 6    | A202 Vauxhall Bridge Rd | 12,241                 | 11,210 | -1,031 | 46.5   | 45.5 | -1     | Minor Beneficial       | 50              |
| 7    | A202 Vauxhall Bridge Rd | 11,674                 | 10,660 | -1,014 | 46   | 45   | -1     | Minor Beneficial       | 23              |
| 8    | A3213 Belgrave Rd       | 10,848                 | 9,094  | -1,754 | 45.1   | 43.4 | -1.8   | Minor Beneficial       | 89              |
| 9    | A3213 Belgrave Rd       | 11,601                 | 9,885  | -1,716 | 45.9   | 44.2 | -1.7   | Minor Beneficial       | 103             |
| 10   | B323 Horseferry Rd      | 4,188                  | 5,201  | 1,013  | 38.1   | 39.2 | 1.1    | Minor Adverse          | 161             |
| 11   | A202 Vauxhall Bridge Rd | 22,610                 | 17,764 | -4,846 | 53.1   | 51.6 | -1.5   | Minor Beneficial       | 74              |
| 12   | A202 Vauxhall Bridge Rd | 22,981                 | 19,249 | -3,732 | 53.3   | 52.1 | -1.2   | Minor Beneficial       | 32              |
| 13   | Manchester St           | 417                    | 1,544  | 1,127  | 33.7   | 35   | 1.3    | Minor Adverse          | 372             |
| 14   | George St               | 1,734                  | 2,740  | 1,006  | 35.2   | 36.4 | 1.2    | Minor Adverse          | 51              |
| 15   | B323 Horseferry Rd      | 4,188                  | 5,201  | 1,013  | 38.1   | 39.2 | 1.1    | Minor Adverse          | 70              |
| 16   | A202 Vauxhall Bridge Rd | 22,981                 | 19,249 | -3,731 | 53.3   | 52.1 | -1.2   | Minor Beneficial       | 53              |
| 17   | George St               | 1,715                  | 2,733  | 1,018  | 35.2   | 36.4 | 1.2    | Minor                  | 108             |

| Link | Road Name               | Traffic Flow (veh/day) |        |        | Predicted Concentration (µg/m <sup>3</sup> ) |      |        | Significance of Impact | Road length (m) |
|------|-------------------------|------------------------|--------|--------|--|------|--------|------------------------|-----------------|
|      |                         | DM                     | DS     | Change | DM   | DS   | Change |                        |                 |
|      |                         |                        |        |        |  |      |        | Adverse                |                 |
| 18   | A202 Vauxhall Bridge Rd | 12,273                 | 11,238 | -1,034 | 46.6   | 45.5 | -1     | Minor Beneficial       | 144             |
| 19   | A202 Vauxhall Bridge Rd | 12,273                 | 11,240 | -1,033 | 46.6   | 45.5 | -1     | Minor Beneficial       | 136             |
| 20   | A202 Vauxhall Bridge Rd | 12,230                 | 11,202 | -1,028 | 46.5   | 45.5 | -1     | Minor Beneficial       | 55              |
| 21   | A202 Vauxhall Bridge Rd | 10,479                 | 8,511  | -1,968 | 44.8   | 42.7 | -2     | Moderate Beneficial    | 34              |
| 22   | A202 Vauxhall Bridge Rd | 10,479                 | 8,511  | -1,968 | 44.8   | 42.7 | -2     | Moderate Beneficial    | 55              |
| 23   | A202 Vauxhall Bridge    | 33,987                 | 31,562 | -2,425 | 56.4   | 55.8 | -0.7   | Minor Beneficial       | 159             |
| 24   | A202 Vauxhall Bridge    | 33,987                 | 31,562 | -2,425 | 56.4   | 55.8 | -0.7   | Minor Beneficial       | 117             |
| 25   | A3204 Kennington La     | 13,076                 | 11,958 | -1,118 | 47.3   | 46.2 | -1.1   | Minor Beneficial       | 111             |
| 26   | A3204 Kennington La     | 13,069                 | 11,957 | -1,111 | 47.3   | 46.2 | -1.1   | Minor Beneficial       | 143             |
| 27   | A3204 Kennington La     | 15,514                 | 13,085 | -2,429 | 50.8   | 47.3 | -3.5   | Moderate Beneficial    | 120             |
| 28   | A3204 Kennington La     | 16,104                 | 13,583 | -2,522 | 51   | 47.8 | -3.2   | Moderate Beneficial    | 75              |
| 29   | Tyers Street            | 2,133                  | 1,092  | -1,041 | 35.7   | 34.5 | -1.2   | Minor Beneficial       | 190             |
| 30   | Fentiman Rd             | 5,458                  | 7,353  | 1,894  | 39.5   | 41.5 | 2.1    | Moderate Adverse       | 272             |
| 31   | A3 Clapham Rd           | 16,253                 | 19,123 | 2,871  | 51.1   | 52   | 0.9    | Minor Adverse          | 20              |
| 32   | Fentiman Rd             | 5,239                  | 7,150  | 1,911  | 39.2   | 41.3 | 2.1    | Moderate Adverse       | 133             |
| 33   | A203 South Lambeth Rd   | 14,285                 | 16,477 | 2,192  | 48.5   | 51.2 | 2.7    | Moderate Adverse       | 30              |
| 34   | A3204 Kennington La     | 16,323                 | 14,017 | -2,306 | 51.1   | 48.2 | -2.9   | Moderate Beneficial    | 131             |
| 35   | A202 Harleyford Rd      | 14,975                 | 11,742 | -3,233 | 49.1   | 46   | -3.1   | Moderate Beneficial    | 48              |

| Link | Road Name              | Traffic Flow (veh/day) |        |        | Predicted Concentration (µg/m <sup>3</sup> ) |      |        | Significance of Impact | Road length (m) |
|------|------------------------|------------------------|--------|--------|--|------|--------|------------------------|-----------------|
|      |                        | DM                     | DS     | Change | DM   | DS   | Change |                        |                 |
| 36   | A3204 Kennington La    | 26,543                 | 24,882 | -1,661 | 54.3   | 53.8 | -0.5   | Minor Beneficial       | 147             |
| 37   | A202 Harleyford Rd     | 15,476                 | 10,883 | -4,594 | 50.8   | 45.2 | -5.7   | Substantial Beneficial | 61              |
| 38   | A3204 Durham St        | 12,609                 | 9,062  | -3,547 | 46.9   | 43.3 | -3.6   | Moderate Beneficial    | 16              |
| 39   | A3 Roman Rd            | 27,618                 | 28,708 | 1,091  | 54.6   | 55   | 0.3    | Negligible             | 122             |
| 40   | A202 Camberwell New Rd | 15,688                 | 13,567 | -2,121 | 50.9   | 47.8 | -3.1   | Moderate Beneficial    | 120             |
| 41   | A3 Clapham Rd          | 15,443                 | 18,390 | 2,947  | 50.8   | 51.8 | 1      | Minor Adverse          | 41              |
| 42   | A202 Kennington Oval   | 15,478                 | 10,890 | -4,589 | 50.8   | 45.2 | -5.7   | Substantial Beneficial | 57              |
| 43   | A3 Roman Rd            | 27,620                 | 28,711 | 1,091  | 54.6   | 55   | 0.3    | Negligible             | 55              |
| 44   | A23 Kennington Rd      | 9,911                  | 11,029 | 1,117  | 44.2   | 45.3 | 1.1    | Minor Adverse          | 253             |
| 45   | A3204 Kennington La    | 14,606                 | 12,897 | -1,709 | 48.8   | 47.2 | -1.6   | Minor Beneficial       | 122             |
| 46   | A3204 Kennington La    | 14,607                 | 12,897 | -1,709 | 48.8   | 47.2 | -1.6   | Minor Beneficial       | 60              |
| 47   | A3204 Kennington La    | 14,607                 | 12,898 | -1,709 | 48.8   | 47.2 | -1.6   | Minor Beneficial       | 147             |
| 48   | A202 Bridgefoot        | 34,021                 | 31,628 | -2,393 | 56.4   | 55.8 | -0.6   | Minor Beneficial       | 36              |
| 49   | A202 Bridgefoot        | 34,450                 | 30,530 | -3,920 | 56.5   | 55.5 | -1.1   | Minor Beneficial       | 60              |
| 50   | A3204 Kennington La    | 13,204                 | 11,114 | -2,090 | 47.5   | 45.4 | -2.1   | Moderate Beneficial    | 99              |
| 51   | A202 Kennington Oval   | 15,230                 | 10,866 | -4,364 | 50.8   | 45.2 | -5.6   | Substantial Beneficial | 96              |
| 52   | A202 Kennington Oval   | 15,230                 | 10,866 | -4,364 | 50.8   | 45.2 | -5.6   | Substantial Beneficial | 318             |
| 53   | A3 Roman Rd            | 27,612                 | 28,704 | 1,092  | 54.6   | 55   | 0.3    | Negligible             | 78              |
| 54   | A3 Clapham             | 16,24                  | 19,11  | 2,869  | 51.1   | 52   | 0.9    | Minor                  | 88              |

| Link | Road Name             | Traffic Flow (veh/day) |        |        | Predicted Concentration (µg/m <sup>3</sup> ) |      |        | Significance of Impact | Road length (m) |
|------|-----------------------|------------------------|--------|--------|--|------|--------|------------------------|-----------------|
|      |                       | DM                     | DS     | Change | DM   | DS   | Change |                        |                 |
|      | Rd                    | 5                      | 4      |        |  |      |        | Adverse                |                 |
| 55   | A3 Clapham Rd         | 16,252                 | 19,122 | 2,870  | 51.1   | 52   | 0.9    | Minor Adverse          | 93              |
| 56   | A3 Clapham Rd         | 16,097                 | 18,929 | 2,832  | 51   | 52   | 0.9    | Minor Adverse          | 80              |
| 57   | A202 Harleyford Rd    | 15,471                 | 10,874 | -4,596 | 50.8   | 45.2 | -5.7   | Substantial Beneficial | 56              |
| 58   | A23 Kennington Rd     | 9,868                  | 10,993 | 1,125  | 44.2   | 45.3 | 1.1    | Minor Adverse          | 65              |
| 59   | A23 Kennington Rd     | 9,862                  | 10,987 | 1,125  | 44.1   | 45.3 | 1.1    | Minor Adverse          | 125             |
| 60   | A3204 turning lane    | 1,307                  | -      | -1,307 | 34.7   | 33.2 | -1.6   | Minor Beneficial       | 36              |
| 61   | A3204 Kennington La   | 13,217                 | 12,109 | -1,109 | 47.5   | 46.4 | -1.1   | Minor Beneficial       | 38              |
| 62   | A203 South Lambeth Rd | 14,286                 | 16,468 | 2,183  | 48.5   | 51.2 | 2.7    | Moderate Adverse       | 55              |
| 63   | A203 South Lambeth Rd | 26,476                 | 22,546 | -3,930 | 54.3   | 53.1 | -1.2   | Minor Beneficial       | 52              |
| 64   | A3036 Wandsworth Rd   | 27,320                 | 29,973 | 2,653  | 54.6   | 55.3 | 0.8    | Minor Adverse          | 146             |
| 65   | A203 South Lambeth Rd | 26,488                 | 22,570 | -3,918 | 54.3   | 53.1 | -1.2   | Minor Beneficial       | 28              |
| 66   | A203 South Lambeth Rd | 14,282                 | 16,462 | 2,180  | 48.5   | 51.2 | 2.7    | Moderate Adverse       | 124             |
| 67   | A202 Bridgefoot       | 34,458                 | 32,134 | -2,324 | 56.5   | 55.9 | -0.6   | Minor Beneficial       | 3               |
| 68   | A3204 Durham St       | 12,627                 | 9,068  | -3,558 | 46.9   | 43.3 | -3.6   | Moderate Beneficial    | 100             |
| 69   | Fentiman Rd           | 4,515                  | 6,430  | 1,914  | 38.4   | 40.5 | 2.1    | Moderate Adverse       | 313             |
| 70   | A202 Harleyford Rd    | 15,184                 | 10,643 | -4,541 | 50.7   | 44.9 | -5.8   | Substantial Beneficial | 124             |
| 71   | A203 South Lambeth Rd | 26,476                 | 22,549 | -3,928 | 54.3   | 53.1 | -1.2   | Minor Beneficial       | 152             |
| 72   | A202 Harleyford Rd    | 16,283                 | 11,745 | -4,538 | 51.1   | 46   | -5.1   | Substantial Beneficial | 108             |
| 73   | A3036 Wandsworth Rd   | 27,345                 | 29,987 | 2,642  | 54.6   | 55.3 | 0.8    | Minor Adverse          | 70              |

| Link | Road Name           | Traffic Flow (veh/day) |        |        | Predicted Concentration (µg/m <sup>3</sup> ) |      |        | Significance of Impact | Road length (m) |
|------|---------------------|------------------------|--------|--------|--|------|--------|------------------------|-----------------|
|      |                     | DM                     | DS     | Change | DM   | DS   | Change |                        |                 |
| 74   | A3204 Kennington La | 28,197                 | 25,974 | -2,223 | 54.8   | 54.2 | -0.6   | Minor Beneficial       | 28              |
| 75   | A3204 Kennington La | 26,561                 | 24,888 | -1,673 | 54.3   | 53.8 | -0.5   | Minor Beneficial       | 27              |
| 76   | A3036 Wandsworth Rd | 27,345                 | 29,987 | 2,642  | 54.6   | 55.3 | 0.8    | Minor Adverse          | 60              |
| 77   | Queens Rd           | 11,706                 | 12,938 | 1,232  | 46   | 47.2 | 1.2    | Minor Adverse          | 53              |

## Appendix F: Environmental Data Sources

| Category                                   | Dataset                             | Source   |
|--|-------------------------------------|--|
| Sensitive Site                             | National Nature Reserve             | English Nature                                   |
|  | Scheduled Ancient Monument          | English Heritage                                 |
|  | Special Area of Conservation        | English Nature                                   |
|  | Special Protection Area             | English Nature                                   |
|  | Site of Special Scientific Interest | English Nature                                   |
|  | World Heritage site                 | English Heritage                                 |
| Designated Landscape                       | Metropolitan Open Land              | Greater London Authority                         |
|  | Green Belt                          | Not available                                    |
| Site of Importance for Nature Conservation | Metropolitan                        | Greater London Authority                         |
|  | Borough grade 1                     | Greater London Authority                         |
|  | Borough grade 2                     | Greater London Authority                         |
|  | Local significance                  | Greater London Authority                         |
| TfL habitat site                           | TfL habitat sites                   | Transport for London Ecological Survey 2005      |
| Protected Species                          | All Protected Species               | Greenspace Information for Greater London (GIGL) |
| Heritage Conservation Area                 | Archaeological priority area        | Local Authority Data.                            |
|  | Conservation area                   | Local Authority Data.                            |
|  | Locally Listed Building             | Local Authority Data.                            |
|  | Nationally listed building          | English Heritage                                 |
|  | Millennium Greens                   | Defra  |

| Category    | Dataset                                  | Source   |
|-------------|--|--|
|             | London Square                            | English Heritage   |
|             | Registered Battlefields                  | English heritage   |
|             | Registered park or garden                | English heritage   |
| Flood Risk  | Flood Zone 2                             | Environment Agency                                       |
|             | Flood zone 3                             | Environment Agency                                       |
|             | Flood risk area                          | Environment Agency                                       |
|             | Flood defences                           | Environment Agency                                       |
|             | Flood events (TLRN only)                 | Transport for London Asset Information Management System |
|             | Increase hard surfaced area              | N/A  |
| Noise Data  | Important Areas for Noise                | Defra  |
| Air Quality | Areas of air quality standard exceedance | TfL  |