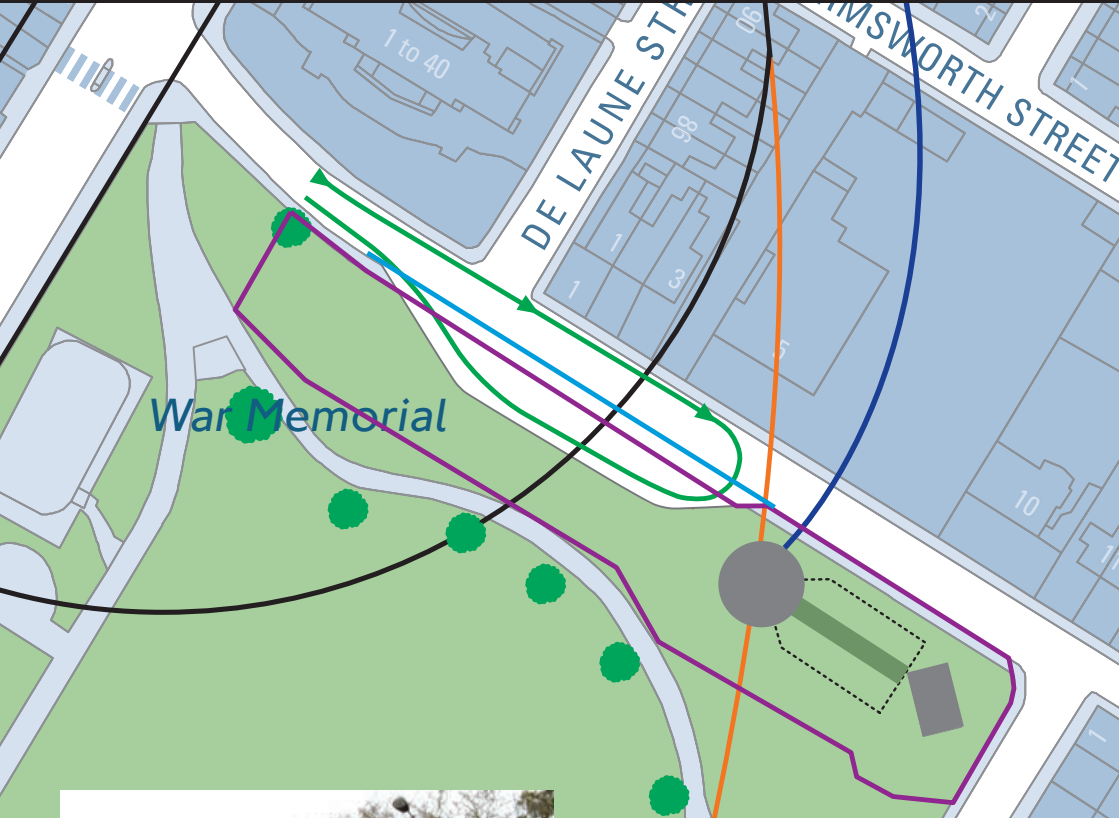


# Northern line extension

## Factsheet D: Permanent shaft at Kennington Park



### Key

- Northern line
- Proposed Northern line extension
- Construction traffic access
- Construction site perimeter
- Electricity substation
- Shaft
- Old lodge
- Passageway underground
- Suspended parking during construction
- Trees to be protected
- Temporary gallery tunnel



## 1. Introduction

Permanent shafts will be needed to allow air in and out of the underground tunnels, help cool the Tube, control smoke in the unlikely event of a fire and provide emergency access. They must also be directly above the tunnels to allow for the removal of the machines used to dig the tunnels.

The shafts need to be constructed on the new sections of railway as close as is practicable to their junctions with the Kennington loop.

Following design and technical appraisals, Kennington Green (serving the northbound tunnel) and Kennington Park (serving the southbound tunnel) were identified as the optimal locations for these permanent shafts.

The shaft at Kennington Park is underground but requires a structure on the surface, known as a head house, to provide access and to house ventilation fans and other equipment. The shaft itself would be constructed above the tunnel in Kennington Park. However, as it is not essential for the head house to be situated directly above the shaft, during a public consultation held in summer 2011 we asked local people if they would prefer it to be located in the park or on the site of the old lodge. There was an overwhelming preference for the site of the old lodge. This is located on land

separated from the park and, as the head house will replace an existing building, will not entail the permanent loss of any park space.

## 2. Alternative shaft locations

As the proposals for the Northern line extension (NLE) have developed, a number of alternative locations to the old lodge site that were suggested during public consultation have been considered including:

### Kennington station

This option is considered unviable for several reasons. There is no suitable site for a shaft around the station unless several houses are demolished for the structure itself, with further property demolition required for the construction site. Even then, a shaft at the station may not provide suitable access for the emergency services given the layout of the station and tunnels. It should also be noted that Kennington station is a Grade II listed building, which is likely to constrain works.

Furthermore, any works at the station would entail major disruption to the Northern line during construction.

This option is therefore considered unacceptable from a public, property, heritage, engineering and environmental perspective.

### The 'yard' site at Kennington Park

This option is considered unviable for a number of reasons. It is further away from Kennington station and the step



View from St Agnes Place

plate junction than the old lodge site. This increases the probability of having two or more trains in the same section of new tunnel not fully protected by the new tunnel ventilation system. This is not acceptable for health and safety reasons.

In addition, it is not directly above the alignment of the extension and any change to this would increase the curvature of the track leading to a bumpy journey experience for passengers, a potential increase in the noise levels and significantly increased line maintenance requirements. The site also has the potential to negatively impact more residential properties than the old lodge site and overall access to the site is more limited due to its location on a narrower residential road.

### **The Oval site (Oval Green)**

This option is considered unviable

for a number of reasons including the distance from Kennington station and the step plate junction and construction feasibility. The ground conditions here are significantly less favourable for tunnelling with a history of construction issues when the original line to Morden was built. Additionally, the length of the link from the shaft to the running tunnel means there is a significant amount of other existing infrastructure to encounter in the area, including Home Office shelters and power infrastructure. This would mean that any construction would have an increased risk of damage and disruption to infrastructure as well as additional safety concerns.

TfL has selected the proposed site on the basis it has the least impacts overall and is therefore the most suitable location. It results in no

permanent loss of park space or business premises and we believe has the least impact on surrounding residential properties. This conclusion is supported by the London Borough of Lambeth (LBL).

### **3. The proposal**

The proposal is for the construction of a shaft measuring approximately 13.5m in diameter and 25m deep. The top of the shaft will be flush to the ground, covered with materials in keeping with the surroundings (including grass, stone and other materials). The head house would be built on the site of the old lodge which would be demolished.

Between the head house and the shaft, provision for an underground electricity substation to power the trains and a passage to link the shaft and the head house is proposed. These would be beneath the surface and measure approximately 17m long by 8m wide and 17m deep.

It was originally proposed to put in place a new community building alongside the head house at the site of the old lodge and this was reflected in our TWAO application on 30 April 2013.

However, after further discussions with Lambeth, the community building has been removed from the proposals as they would prefer to support existing community facilities in the surrounding area.

We have amended our proposals for landscaping and the planting of trees and shrubs in the area previously taken up by the proposed community building to open up the space to the rest of the park. Detailed proposals will be subject to approval by the local planning authority closer to the time of construction.

### **4. Location**

The map shows the proposed location of the shaft, head house and underground passageway and the likely construction site required to carry out the works.

### **5. Design**

We have taken great care to develop a design which is sensitive to its location and is informed by comments from local people. Contemporary in approach, the head house creates a distinctive yet sympathetic addition to the park. Its sculptural pitched roof gives it a strong identity whilst also reducing its bulk and lessening the impact on the surrounding park and adjacent listed buildings. The proposed materials respond positively to the building's setting in the conservation area. Set away from the park's boundary and surrounded by landscaping, the head house is one of a number of pavilions in the park.

The design approach and appearance is supported by English Heritage and conservation officers at the councils of Lambeth and Southwark.

## 6. Construction impacts

Our TWAO application included powers for two potential construction methods (via underground 'gallery' tunnels or temporary shafts at Harmsworth Street and Radcot Street) to connect the old tunnels to the new NLE tunnels and to stabilise the ground.

Following further feasibility work, the temporary shafts have been removed from the scheme as they are no longer required. This means that the construction site at Kennington Park will also be used for the excavation of the gallery tunnels, extending the construction period by approximately six months to around three and half years. More detail of this approach is described in Factsheet A: Gallery tunnels; connecting the extension to the existing Northern line and stabilising the ground.

Tunnelling work may need to take place both day and night for reasons of practicality and safety. However, the majority of the traffic movements to and from the site would be during normal working hours. These are detailed in our code of construction practice as 08:00 to 18:00 on weekdays (Monday – Friday excluding bank holidays) and 08:00 to 13:00 on Saturdays.

### Traffic

During the construction period there would be activity around the site, including traffic to remove excavated

material and deliver site supplies. There would be up to 40 vehicles per day for approximately six weeks and between 11 and 20 vehicles per day for around 19 weeks in total. For the rest of the programme, there would be 10 vehicles or fewer per day.

Any lorry movements outside of normal working hours will be kept to a minimum and they would be subject to approval by the local authority under section 61 of the Control of Pollution Act. This application would be submitted by the contractor appointed to undertake the works. For further details of the code of construction practice, please see Factsheet H: Our approach to managing the construction impacts of the NLE.

### Parking

Access to the site would be from Kennington Park Place. To avoid the need for construction traffic to park on the road the site will be designed so that lorries can turn on the site.

However there would be 13 parking spaces suspended on Kennington Park Place over the period of construction, and an additional three spaces would be suspended on an ad hoc basis. We would work with residents to provide advance warning of when these additional spaces will be required. Parking surveys conducted in the area indicate that there will adequate parking available close by.



Kennington Park site plan showing landscape proposals

## Key

1. Underground structure
2. Head house
3. New avenue trees
4. New flowering trees
5. Existing evergreen oak trees
6. Existing park trees
7. Maintenance access to head house
8. Dog walking area
9. Meadow grass / wildflowers
10. Existing light column
11. Shrub planting
12. Entrance to dog walking area
13. Fence panel (removable for access to replace major plant)

## Trees

As part of the environmental statement a detailed analysis of the temporary impacts during construction has been undertaken, including an arboriculture survey of all the sites required to build the NLE. At Kennington Park, 29 trees were surveyed and seven identified for protection during construction. Once works have concluded at the site, an extensive replanting programme would be undertaken, to include a new avenue of trees along the park boundary with Kennington Park Place. This would be agreed with the local authority with the intention of restoring the landscape to a higher standard than the one that currently exists.

## Current users of the old lodge

The bee keeping and other community activities carried out by Bee Urban at the old lodge have been on an informal tenancy arrangement with Lambeth. The lodge is currently on the council's disposals register and Bee Urban's facilities will therefore be relocated regardless of whether permission is given to build the NLE. However, in recognition of the value these activities bring to the local community and to secure bee keeping facilities in the park on a more formal basis, Lambeth has worked with Bee Urban to agree a suitable new location in the park.

## Dog walking area

The proposed construction site will take up an area of the park that is

currently used as a dog walking area. Should permission be granted to build the NLE and whilst construction works are undertaken, an alternative temporary location has been identified to the south of the park near the Brixton Gate. This will be of comparable size, suitably landscaped and fenced off from the rest of the park. Its location would not interfere with park events. On completion of the NLE works, provision will be made to reinstate the existing dog walking area. This will be subject to agreement with Friends of Kennington Park and Lambeth and we will work closely with them to plan the detail.

## **7. Code of construction practice**

We understand residents' concerns about potential disruption during construction of the NLE and we will seek to keep this to a minimum. We will be required to adhere to a strict code of construction practice which is being agreed with the local authorities. The code includes provisions on construction, vibration, dirt on highways and working hours. Please see Factsheet H: Our approach to managing the construction impacts for the NLE.

## **8. Compensation, blight and hardship**

Owners of land directly affected by construction or operation of the NLE may be entitled to claim compensation. Entitlement to

compensation is governed by legislation and case law known as the Compensation Code. In some cases, landowners whose property is directly blighted by the prospect of the NLE may be entitled to require their property to be acquired from them early. Further information both on the Code and on blight is available online at [www.communities.gov.uk](http://www.communities.gov.uk)

The construction of the NLE will cause noise and vibration in some areas. This will be controlled as far as possible by implementing measures to limit noise and vibration on the construction site itself. Levels will be regulated through the code of construction practice agreed with the relevant local authorities. However, there may be circumstances in which noise impacts arise which need to be alleviated further. For those who may be affected by this TfL has a Noise and Vibration Policy in place. This covers aspects such as potential mitigation measures (for example secondary glazing) or in certain circumstances an offer of rehousing on a temporary basis where noise thresholds are likely to be reached for extended periods.

TfL also has a Hardship Policy, where owners of eligible properties who have a compelling reason to sell their property and are unable to do so owing to the NLE, could have their property purchased by TfL. These policies are all available at [tfl.gov.uk/nle](http://tfl.gov.uk/nle)

## 9. Tunnelling and ground movement

Please refer to Factsheet B: Tunnelling and ground movement, for more information about our approach to managing potential tunnelling and ground movement.

## 10. Further information

Full details about the NLE TWAO application, and the documents to support this are available at [tfl.gov.uk/nle](http://tfl.gov.uk/nle)

If you would like more information about the proposals please email [nle@tfl.gov.uk](mailto:nle@tfl.gov.uk)

To receive this document in large print, audio or another language please call 0800 298 3009.



Visualisation of the corner of Kennington Park Place and St Agnes Place