

## 1

### **Site description**

The site consists of the light industrial units, garages and storage with hardstanding in between. The archive study<sup>(1)</sup> contains a detailed description of the site to which the reader is referred. In addition, the topographical survey drawing is reproduced at Appendix C herein and serves to illustrate the general layout of the site.

## 4

### **Field work**

The extent of the field work was agreed with the client and comprised five boreholes advanced by continuous open drive sampling techniques to a maximum of 4.5m depth. (WSI could not be undertaken due to suspected services in the vicinity.)

Representative soil samples were recovered for subsequent laboratory examination and testing. Details of the strata encountered are provided on the Borehole Records at Appendix A; together with particulars of the samples recovered and groundwater observations.

## 5

### **Laboratory testing**

Chemical analyses was undertaken to detect the presence of contaminants indicated by the desk study, viz:-

Common contaminants listed by the ICRCCL <sup>(2)</sup>:-

Total arsenic, cadmium, chromium, lead, mercury, selenium, copper, nickel, zinc, monohydric phenol, polycyclic aromatic hydrocarbons and cyanide. Water soluble boron and sulphate. Sulphide, elemental sulphur and pH value.

Speciated total petroleum hydrocarbons (TPH)

Speciated Polyaromatic hydrocarbons (PAH)

Polychlorinated Byphenols (PCB)

The analysis was undertaken on soil samples and the results are presented at Appendix B.

## **6**

### **Ground conditions**

#### **6.1**

##### **Stratigraphy**

The stratigraphy of the site as revealed by boreholes is given in detail at Appendix A and is described in general terms hereafter.

### **6.1.1**

#### **Fill material**

Underlying the hardstanding was a sand with brick fragments and other man made detritus, sometime black in colour and having a hydrocarbon odour. Underlying this in WS2, 4 & 5 and replacing it in WS6 was a brown sandy clay with gravel and brick fragments. Fill material was proved to a maximum depth of 1.6m.

### **6.1.2**

#### **Langley Silt**

An layer of orange brown or grey brown sandy clay with some gravel was proved beneath the fill in all holes. A hydrocarbon odour was noted in WS 4, whilst this material is considered to represent Langley Silt.

### **6.1.3**

#### **Kempton Park Gravel**

Kempton Park Gravel was proved in all exploratory holes. It was generally found to be a brown and orange brown sandy gravel sometimes clayey at the top and with occasional clay layers within. The majority of the window sampler holes were terminated in this material, although WS4 proved it to 4.2m depth. A hydrocarbon odour was noted in WS4 from 3 to 4.2m depth.

### 6.1.3

#### **London Clay**

London Clay was proved in WS4 only and continued to the full depth of investigation. It comprised a fissured dark grey silty clay, consistent with the unweathered part of the formation.

The clay was visually assessed to be in a generally stiff condition.

### 6.2

#### **Groundwater**

Groundwater was encountered WS4 & 6 at 3 and 3.5m depth rising some ½m in the subsequent observation period. Full details are provided on the appropriate borehole record at Appendix A.

### 7

#### **Discussion**

#### 7.1

##### **General**

Based on the information given by the desk study, it was concluded that samples should be analysed for contaminants listed by the ICRCCL together with TPH and PAH.

## 7.2

### Contamination

This preliminary investigation has highlighted contamination predominantly by hydrocarbons in all exploratory position apart from WS6. It is our experience that a level of 350mg/kg is generally acceptable to the Local Environmental Health Officer and the Environment Agency for TPH although it is expected that a full site specific risk assessment will be required to confirm a level once the development layout is known. On the above basis significant hydrocarbon contamination has been found at the following locations:-

WS2 @ 0.3m

WS4 @ 1.3m

WS4 @ 3.3m

WS5 @ 0.3m

The sample from WS2 also showed significant level of PAH contamination.

All PCB results were below detection limits.

Based on the laboratory testing so far carried out, significant hydrocarbon contamination has been found in a number of locations (one of which is below groundwater). Additional investigation and sampling will be required to determine the lateral and vertical extent of the contamination. Also confirmation that the groundwater has / has not been impacted should be made. After this has been completed a site specific risk assessment should be undertaken.

Although, once this has been completed it is expected that some remediation will be required. Insitu bioremediation is proven technology to achieve this and is expected to be the most appropriate remediation solution..

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AP GEOTECHNICS LTD.  
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**37 HAMILTON ROAD, TWICKENHAM**  
For: Hamilton Lofts Ltd.

**Appendix f**  
**Transport Assessment**

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## TRANSPORT ASSESSMENT

### 1 INTRODUCTION

- 1.1 Transport and Traffic Consultancy have been engaged by Frenncastle Management Ltd to prepare a transport impact report in support of the current planning application.
  
- 1.2 This report should be read in conjunction with the scheme drawings and planning application statement prepared by Acanthus LW Architects.

## 2 THE SITE, SURROUNDINGS AND ACCESS

### Road Access and Parking

- 2.1 The site location is shown in Figure 1, and the site and its surroundings in more detail in Figure 2. The site lies in the western part of Twickenham, Hamilton Road being one of a number of cul de sac streets north of Edwin Road. These form part of a largely self-contained residential and industrial enclave in the angle between between the two railway lines west of Twickenham - the Thames Valley line and the Kingston loop line.
- 2.2 Residential land use, mainly in the form of late 19<sup>th</sup> and early 20<sup>th</sup> century terraced housing, predominates in the area. Hamilton Road and neighbouring local roads are of typical basic late Victorian back street width, with carriageways approximately 7 - 8 metres wide and footways approximately 2 metres wide in the vicinity of the site, and are not suitable for commercial goods vehicle traffic generated by the current authorised industrial use of the site. In common with other cul de sacs in this locality, Hamilton Road has no turning head for vehicles.
- 2.3 Access to/ from the site for all travel modes is via Hamilton Road and Edwin Road. Edwin Road is a local road which forms a loop off Colne Road via short connecting local roads Marsh Farm Road and Crane Road at each end. Colne Road is also a local road which itself similarly forms a loop off the A305 Heath Road/ The Green/ Staines Road, the main road running west from Twickenham town centre. The A311 The Green/ Hampton Road, diverges southwestwards from the A311 at a traffic signal junction a short distance west of the Colne Road/ Heath Road junction.
- 2.4 Local shopping and other businesses in parades on the Heath Road east of the railway extend into Twickenham town centre and provide a range of shopping and other services, and possible employment opportunities, well within convenient walk distance of the site.
- 2.5 Hamilton Road, Edwin Road and the surrounding area lie just outside the Central Twickenham controlled parking zone (CPZ), otherwise known as Zone D, the western limit if this CPZ coinciding with the Kingston loop railway. There are no formal parking restrictions in Hamilton Road or other neighbouring roads apart from 'Any time' double yellow line waiting restrictions in the short length of marsh farm Road linking Edwin Road with Crane Road. There are indicative white hatched carriageway markings on the corners at the Hamilton Road/ Edwin Road junction to discourage obstructive parking at the corners.

### Public Transport Access

- 2.6 The public transport network is shown in Figure 3. The A305 and A111 are well served bus corridors. London local bus routes 110, 267, 281, 290, 490, H22 and R70 call at stops in each direction on Heath Road near Laurel Avenue/ Saville Road, within a few minutes walk of the site, at reasonably high frequency throughout the day every day of the week. These bus routes provide a high frequency link to Twickenham town centre and railway station as well as transport to other areas such as Hounslow, Richmond, Teddington and Kingston. Night bus service N22 also serves these stops. Both stops have passenger shelters and perch seating.
- 2.7 Twickenham railway station, served by a good range and frequency of Southwest Trains services including to/ from London Waterloo, may be considered beyond acceptable walk distance from the site for many people, being approximately 1.2 km (nearly 0.75 mile) from the site, but there are good bus service links as outlined in para 2.6 above. Strawberry Hill station on the Kingston loop line is a similar walk distance away to the south but is not on the bus network.
- 2.8 A public transport accessibility level (PTAL) assessment using the widely accepted 'Hammersmith' method has been carried out for the site. The results of the assessment are

summarised at Appendix A of this report and confirm that the site has a PTAL of 2 or 3, depending on whether:-

- The common practice is adopted of taking account of services in one direction only regardless of whether or not they terminate in the locality or (as in this case) provide a through service to a second set of destinations, or
- Due account is taken of the greater contribution of a through service to the accessibility of a location.

2.9 The PTAL analyses are presented at Appendix A. PTAL 3 is a medium level of accessibility, but the crudity and defects of this assessment method, including that it takes no account of the range of destinations the transport services provide access to, must be acknowledged. In this instance the local bus routes run in a number of directions and provide direct access to a wide range of key travel objectives including major town centres and railheads.

2.10 In reality therefore, this site has a greater level of public transport accessibility than strict application of the PTAL methodology would indicate, and this would be perceived by potential occupants of the proposed development.

#### Cycle Access

2.11 The London Cycle network in the area is shown in Figure 4. Edwin Road is on the designated London Cycle Network (LCN) Route 37. This is part of a fairly dense network of LCN routes avoiding main roads and centred on Twickenham railway station, where there are large secure sheltered cycle parking facilities. Route 37 is largely a signed on-road route in the site locality, there being no special cycle facilities other than use of the wide pedestrian/ cycle link referred to in para 2.19 below.

2.12 The with-flow bus lane on Heath Road is available for use by eastbound cyclists and is a benefit on this direct route to Twickenham town centre.

#### Pedestrian access

2.13 Pedestrian access in this locality is largely confined to the on-street footways, together with a wide pedestrian/ cycle link under the Kingston loop railway linking the two halves of Edwin Road, and a footbridge from Marsh Farm Road over the Thames Valley railway which is the most direct link with the area north of the site.

2.14 There are no formal pedestrian crossing facilities on the local road network, but there are crossing facilities across the A306 and A311 including a pelican crossing west of Laurel Avenue/ Saville Road which is a particular benefit in providing safe access to the nearest westbound bus stop to the site.

### 3 PROPOSED DEVELOPMENT

- 3.1 The existing industrial buildings will mostly be demolished and replaced by the proposed new purpose-built development, consisting of a residential block at the north and west sides of the site with a basement car park underneath. The latter would accommodate most of the car parking spaces, but a few would be at surface level near the site entrance from Hamilton Road. One of the existing buildings in the centre of the site will be retained and refurbished to provide residential accommodation, and a separate building containing the proposed live/ work units will be constructed at the east side of the site.
  
- 3.2 The access and circulation area at the south side of the site adjacent to the entrance from Hamilton Road will be of a size and shape to comfortably accommodate vehicle turning manoeuvres, including by dustcarts and other large servicing vehicles. This turning area will also be available for use by existing Hamilton Road residents and other members of the public.

## 4 TRANSPORT IMPACT

### Traffic Movement

- 4.1 Traffic movement in Hamilton Road is currently negligible at all times, with no more than about 20 vehicle movements per hour even at peak times. This is, however, currently influenced by the minimal activity on the site. Full utilisation of the site for the current authorised industrial land use could generate significant traffic including heavy goods vehicles.
- 4.2 Traffic movement on Edwin Road is also minimal, with about 40 peak hour vehicle movements east of Hamilton Road and 25 west thereof. Observations confirm that a significant element of this traffic is by non-resident commuters working in local shops and other businesses, who park in this locality as it is just outside the boundary of the Central Twickenham CPZ. Most of these motorists stop briefly opposite Hamilton Road but then proceed further up Edwin Road to find parking space.
- 4.3 Even if all the proposed flats were occupied by residents who chose to drive to work which we consider unlikely, an additional 34 car movements would still result in very low traffic movement in Hamilton Road and Edwin Road, and the traffic impact on the road network would be insignificant.
- 4.4 The proposed turning head facility will also be helpful to existing users of Hamilton Road, some of whom can be observed to reverse out of the road when leaving, rather than trying to turn round within the limited carriageway width available.

### Parking

- 4.5 Although Hamilton Road is generally fairly heavily parked there is always some spare space available, typically about 15 - 20% vacancy out of the total kerbside capacity of about 68 cars against the existing total 64 houses in this road. Hardly any of the incoming commuters referred to in para 4.2 park in Hamilton Road because it generally appears to be full at a quick glance from the end of the street.
- 4.6 The proposed parking provision of one space per dwelling complies with the Council's parking standards, and would be expected to cater for the likely demand. There should therefore be no parking impact on Hamilton Road or other local roads.

## 5 CONCLUSIONS

- 5.1 The proposed residential development is situated in a largely residential area within easy reach of the local and strategic road and public transport networks, but away from heavily trafficked through routes. It would replace an existing industrial development which has the potential for much greater traffic and related environmental impact on the locality, including significant large goods vehicle traffic for which the local roads are manifestly unsuitable.
- 5.2 The site is only a short walk away from a wide range of shops and other services which could also provide employment opportunities. Numerous frequent local bus services call at stops within easy walk of the site, and the London Cycle network includes a designated route close to the site. All these facilities would encourage residents to walk or cycle rather than use cars for many journey purposes.
- 5.3 Traffic on Hamilton Road and other local roads is minimal, and the road network would be able to accommodate any traffic which could conceivably be generated by the proposed residential development, with no significant adverse impact on traffic capacity and movement.
- 5.4 The proposed parking provision within the development complies with the current UDP standard, and would be expected to accommodate the likely residential car ownership. In the event of more cars being owned than provided for on site (which we consider unlikely), however, those residents unable to park on site could readily find parking space in surrounding streets despite current parking pressure in some sections of street.
- 5.5 The development would generate considerably lower traffic flows, and in particular lower goods servicing vehicle movements, than those which can potentially be generated by the currently authorised industrial use of the site.
- 5.6 The development would also make available vehicle turning facilities to the general public, currently conspicuously lacking on Hamilton Road.
- 5.7 There is therefore no transport-related reason why the proposed development should not be permitted.



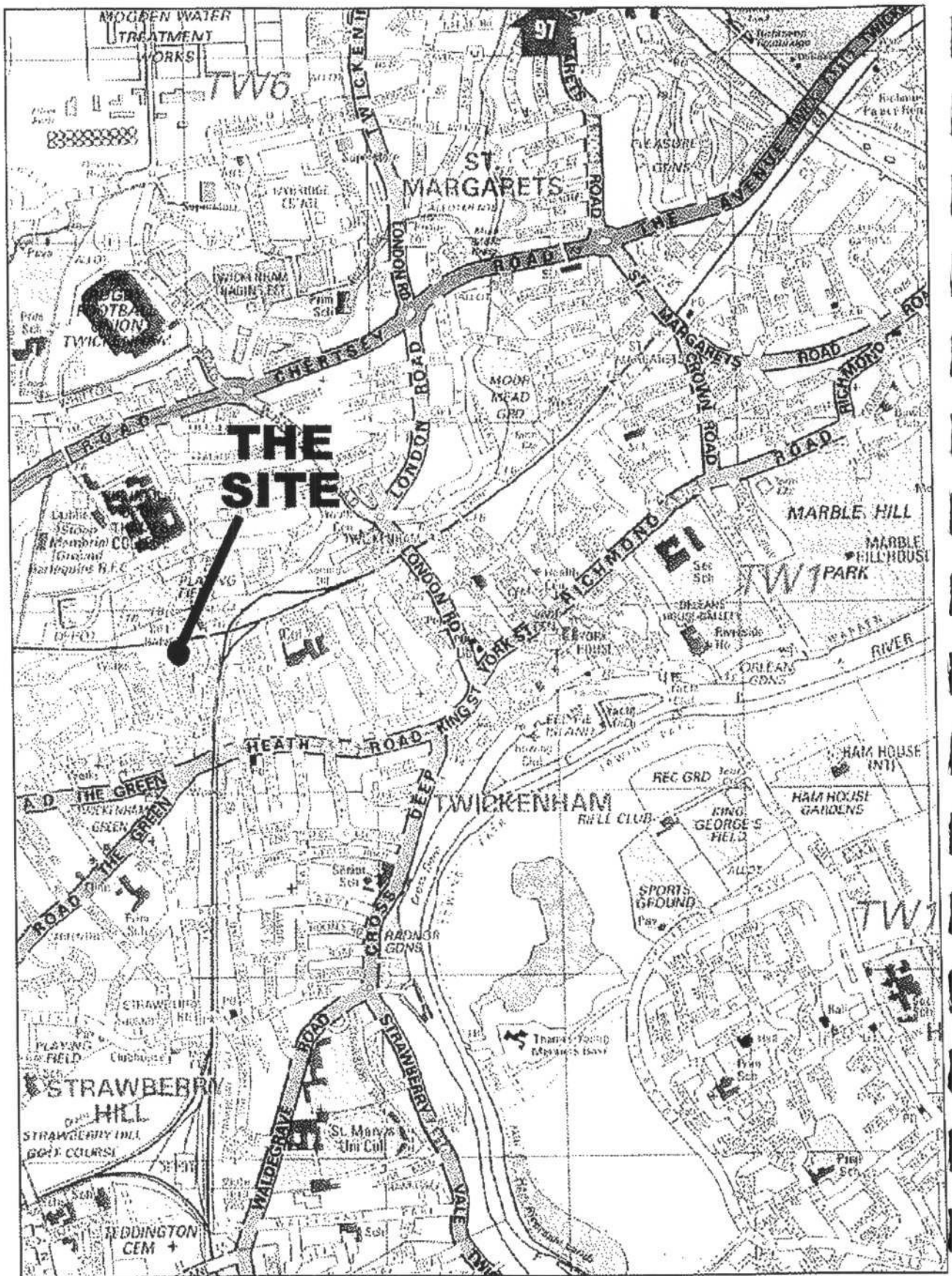


FIGURE 1 - SITE LOCATION





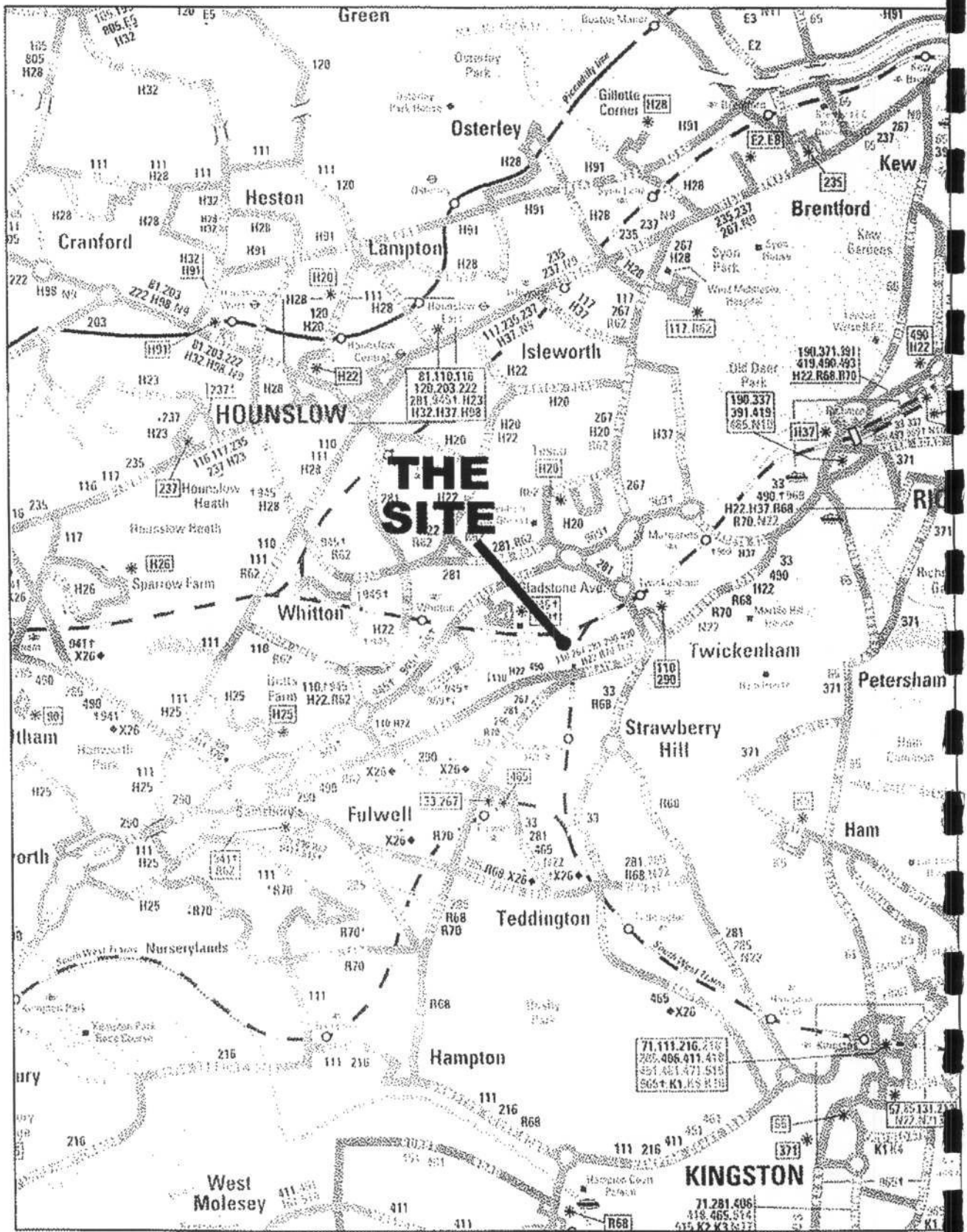


FIGURE 3 - SITE AND PUBLIC TRANSPORT

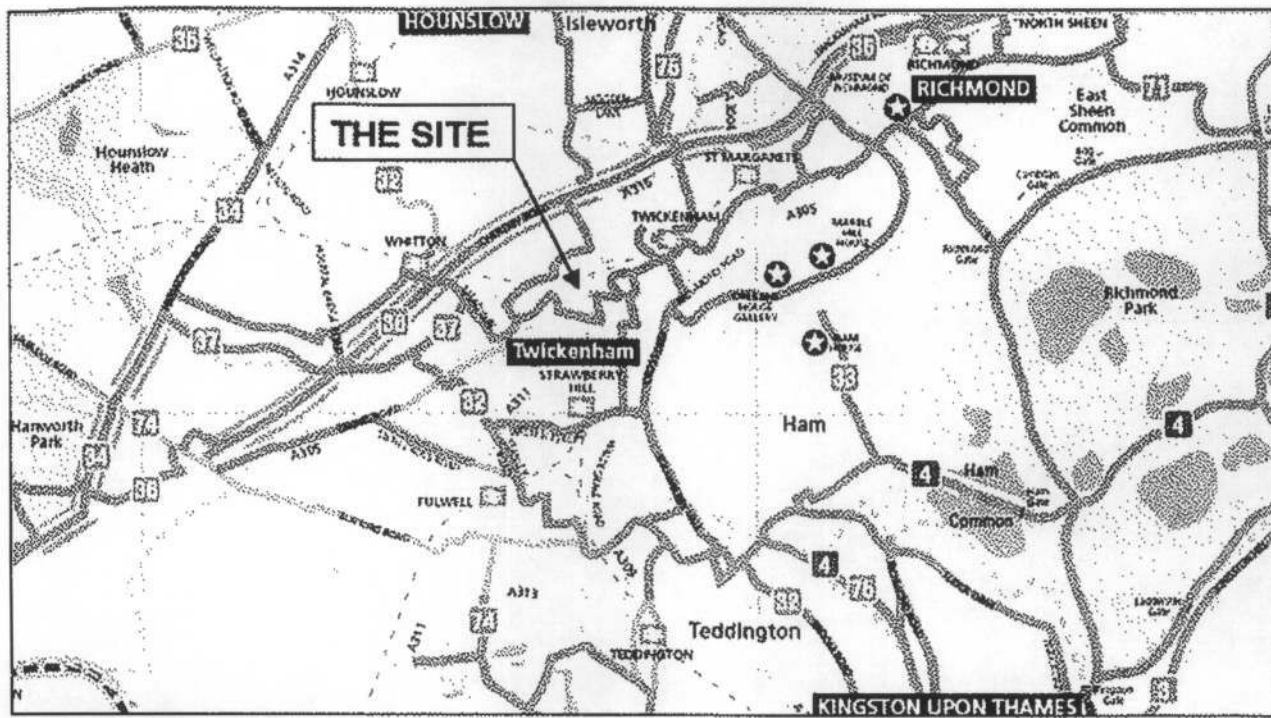


FIGURE 4 - SITE AND LONDON CYCLE NETWORK

