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67. RT REF 14.4/9916/30.5.99  
No. 18. Mews building with new windows  
and door frame. Cobble sidewalk ends here.

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68. RT REF 15/4/9916/30.5.99  
Nos. 16, 14, 12, 10 and 8. Terrace of five three-storey 1930's (?)  
houses. Small front gardens. No car-parking facilities.



69. RT REF 16.49916/30.5.99  
South Side. Three storey block of flats.  
flats with garages under, and parking spaces.

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70. ICI REF 174/9916 30.5.99  
South Side. View between No. 7 and No. 9, with  
tennis courts beyond.



"1. RT REF 18/4/9916/30,5,99  
South Side. View into 'car park' east of No. 3, with  
tennis courts behind

ENTER 8055



72. RT REF 19/4/9916/30.5.99  
South Side. Entrance from Aubrey Walk to  
Thames Water Site. Appeal Site beyond.



73. R1 REF 24/6/9916/1.6.99  
6, 4, and 2, Aubrey Walk. Listed (Grade II) houses  
c. 1820 on north side of the street. St George's Church  
is on the right. Note: railings, greenery, and  
patched brickwork; also reproduction Victorian lamp post.



74. RT REF 14/3.9916/30.5.99  
Looking westwards down Aubrey Walk. Appeal Site  
to the south: Victorian stucco, No. 36 Campden Hill  
Gardens to the north, with tower of St George's beyond.

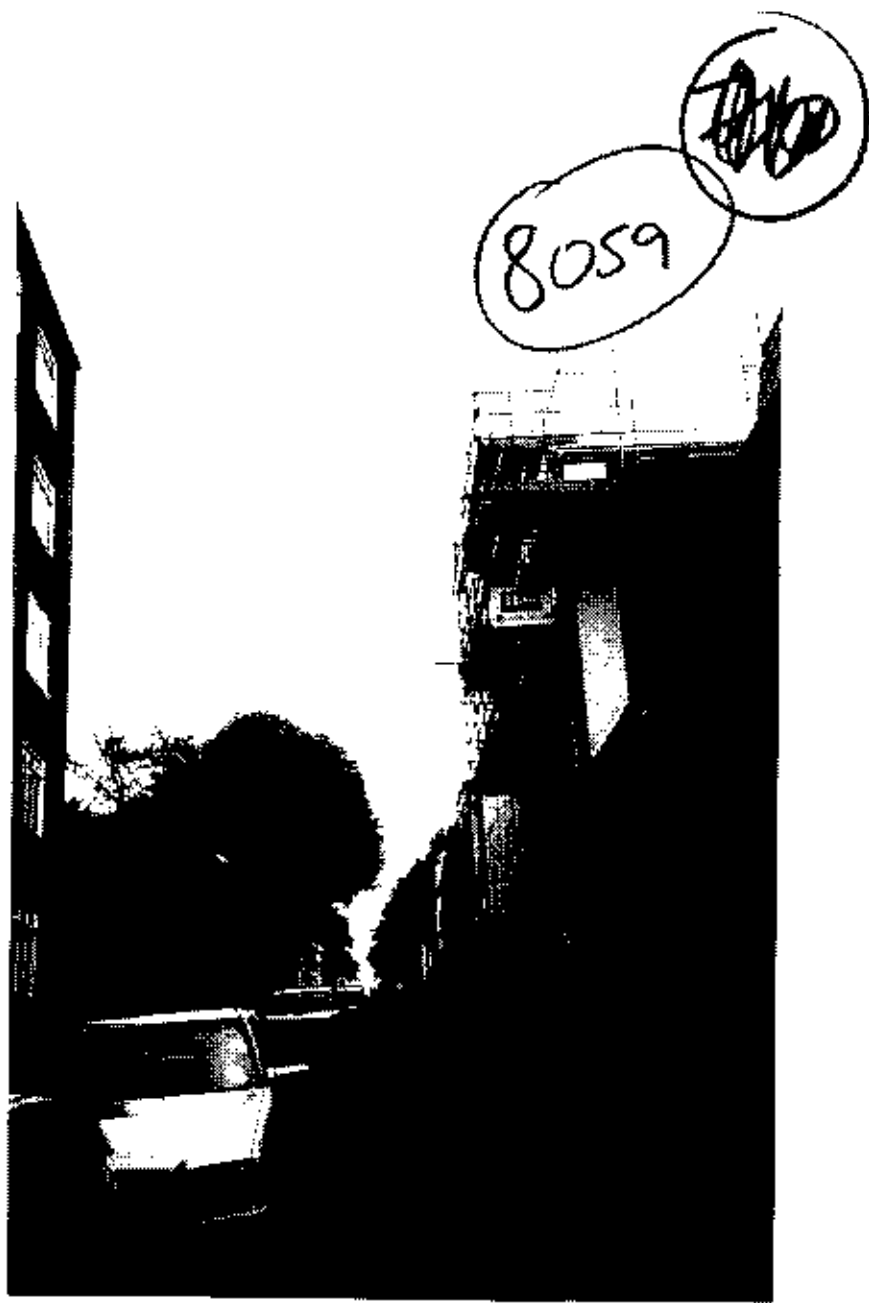


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75. RT REF 21/4/9916/30.5.99  
South side of Campden Hill Square, mid-Victorian five storey family houses, stock brick with stuccoed ground floors, punctuated here by red brick No. 18, rebuilt by J T Newman in 1887-8.



70. RT REF 2014/9916-30,5,99  
View up Hillsleigh Road from Notting Hill Gate end.  
Can only just see Appeal Site on brow of hill in distance.

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RT REF 15/2/9916/30.5.99  
From security gate at west end of Airlie Gardens. Thorpe Lodge, much altered villa of 1814, now West London College of Commerce; Holland Park School seen beyond.

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78. RT REF 16/2/9916/30,5,99  
From same viewpoint, looking north to Appeal Site  
beyond high red brick wall. Tennis courts beyond.  
Could not see players, but could hear them.



79. RT REF 3/5/9916/1.6.99  
At walkway level on the southern side of the reservoirs; tennis courts are at a higher level to the right. See also ventilator to reservoirs and access stairs. This is 'non-accessible' open space.

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SU. RT REF 4/5/9916/1.6.99  
Looking down from 'non-accessible open space' on  
south side of reservoir onto Thorpe Lodge, Grade II.

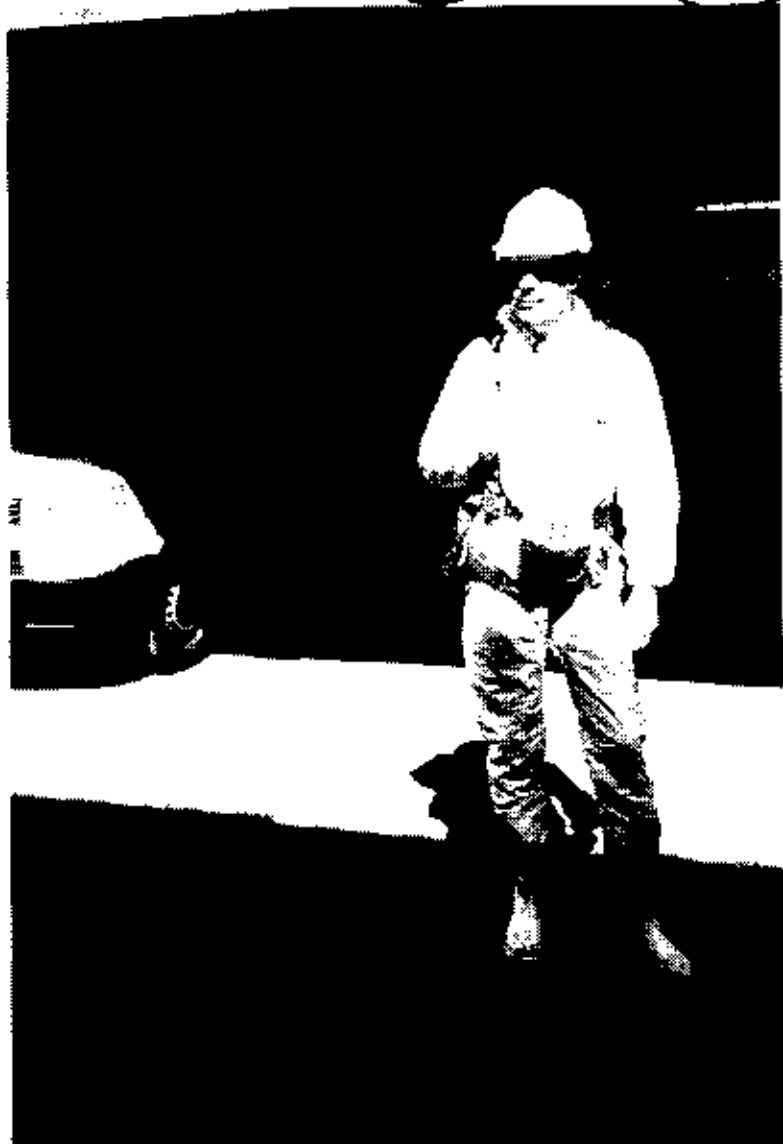
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81. RT REF. S/5/9916/1.6.99  
'non-accessible open space' on south side of reservoirs.  
Looking east to Kensington Heights. Tennis courts at  
higher level to the left. Note: blocked in concrete air bricks  
which run through to inside of reservoir.

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*[Handwritten signature]*



82. RT REF 2/5/9916/1.6.99  
Necessary protective clothing and  
emergency breathing equipment  
for use inside the reservoirs:  
includes air quality testing device.



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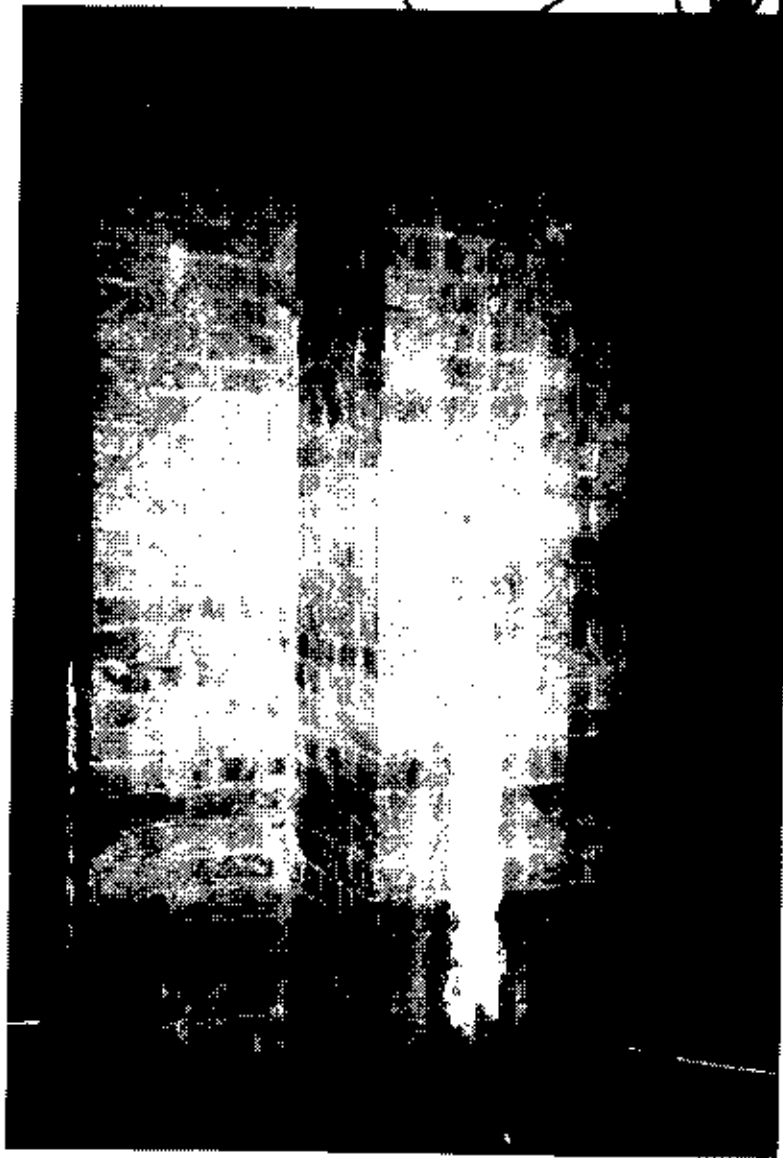
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83. RT REF 8/5/9916/1,6,99  
In Middle Reservoir/ Segmental barrel vaults on  
segmental arches, with lower segmental arches  
transversely. Supported on cruciform piers. All in brick.  
Can also see open ventilator and cruciform block air bricks.

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84. RT REF 6/5/9916/1.6.99  
Typical brick cross-shaped support in Middle Reservoir.

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85. RT REF 7/5/9916/L6.99  
The flat floor of the reservoir. This is Middle Reservoir.  
Shows outer wall of reservoir which is segmental on plan.



86. RT REF 9/5/9916/L6.99  
Looking north across tennis court surface to Aubrey Walk with  
backs of houses on south side of Campden Hill Square beyond.



87. RT REF 10/5/9916/1.6.99  
'non-accessible open space' on south  
side of reservoir. Looking west.

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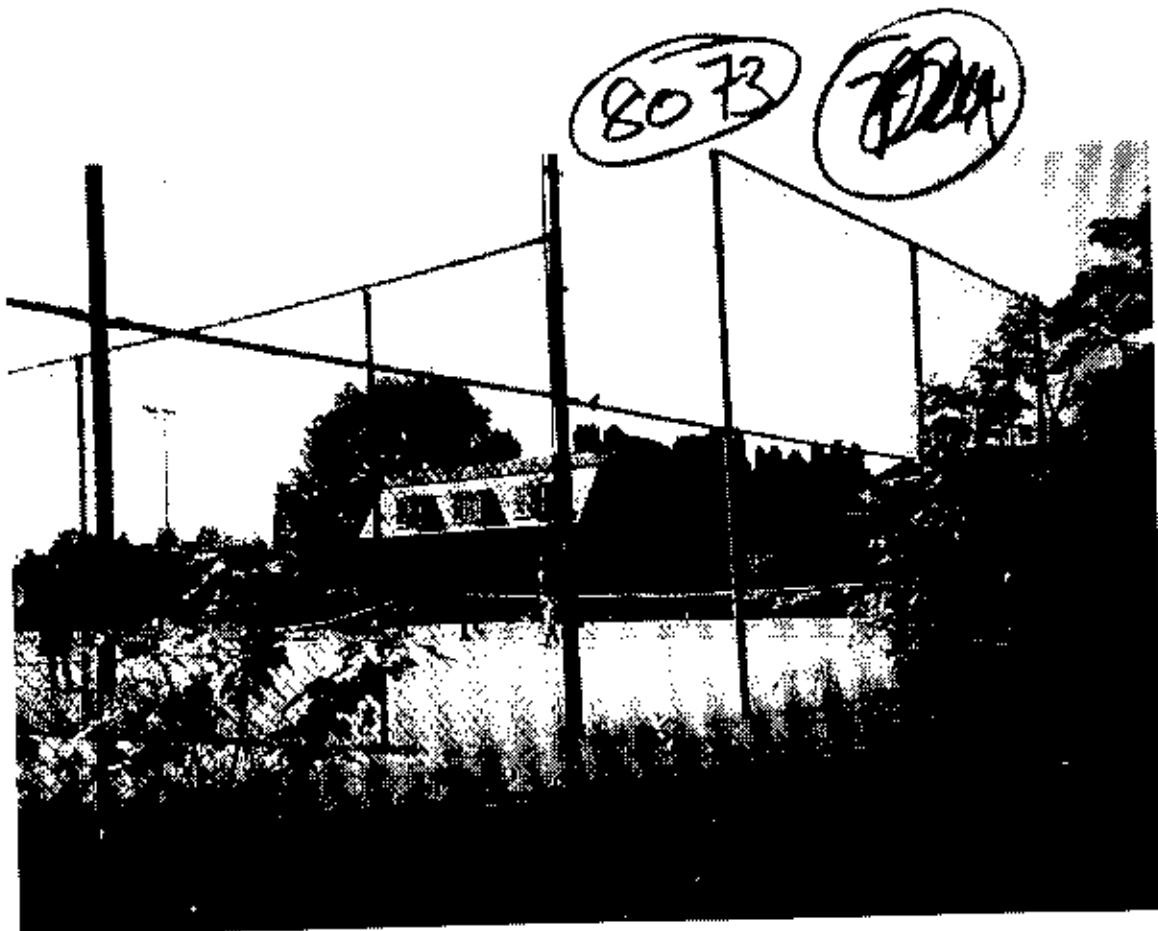
88. RT REF 11/5/9916/1.6.99  
**'Non-accessible open space' on north side of reservoir.  
Tennis court surface is at higher level to the right. Backs  
of buildings on south side of Aubrey Walk to the left.**

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89. RT REF 13/5/9916/1.6.99  
Looking north-east from non-accessible open  
space on east of tennis courts. Tower of St  
George's in distance behind Pump Room.



90. RT REF 14/5/9916/1.6.99  
Looking north-west from eastern perimeter strip just below level of tennis court surface. Note buildings beyond tennis courts in Aubrey Walk and Campden Hill Square.



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91. RT REF 12/5/9916/1.6.99  
Looking north-east across access road behind  
Kensington Heights, with Water Tower House  
beyond. Southern wall of Pump Room is to the left.

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92. RT REF 23/6/9916/1.6.99  
The hierarchy of levels to the north of Thorpe  
Lodge. Serpentine wall of reservoir beyond  
(north of) six foot brick boundary wall.



93. RI REF 206/9916/L6.99  
North elevation of Thorpe Lodge, from  
car park. Looking west.



94. RT REF 19/6/9916/1.6,99  
Central part of North Elevation of Thorpe Lodge.

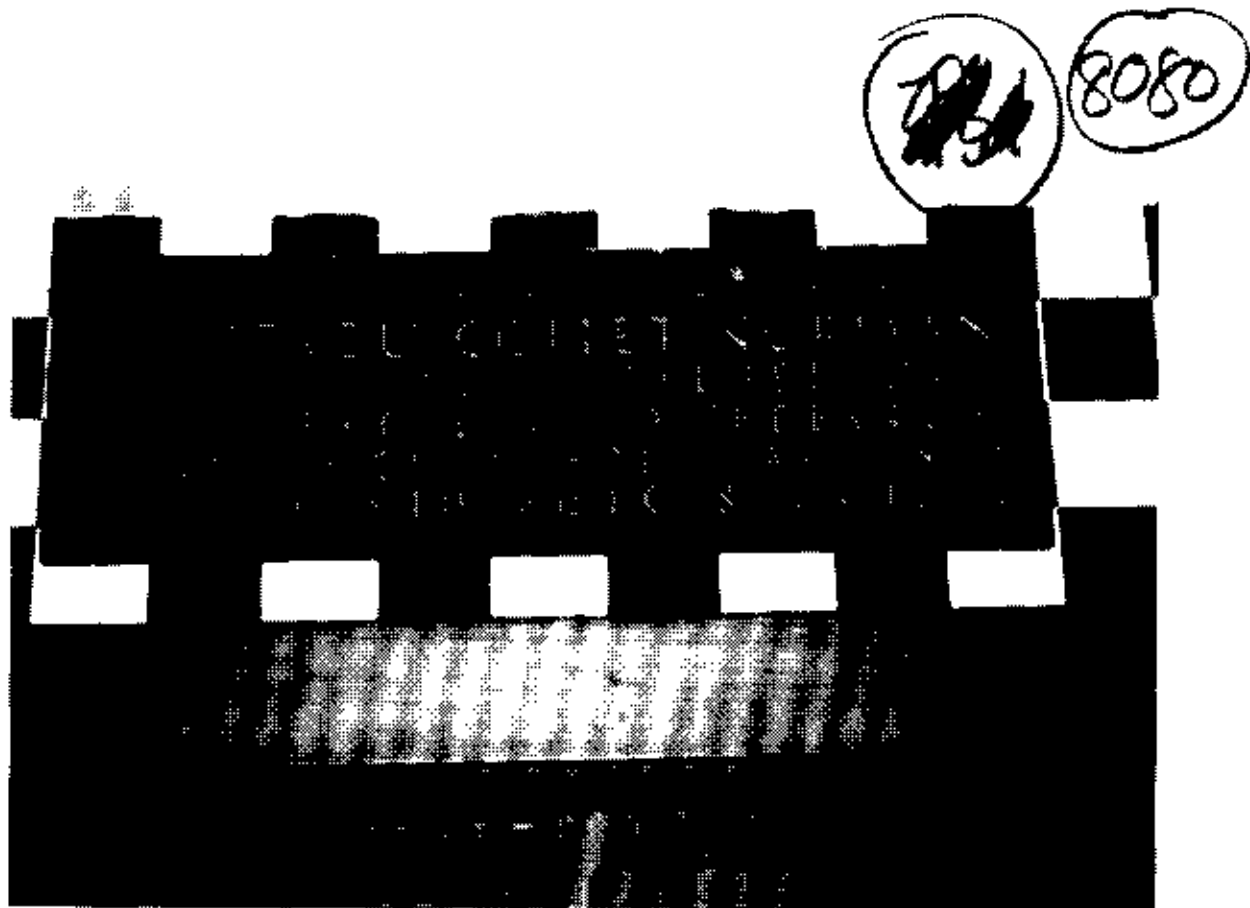


95. RI REF 21:6:9916/L.6.99  
The western elevation (by J L Pearson) of Thorpe Lodge.  
Now in educational use, previously studio.

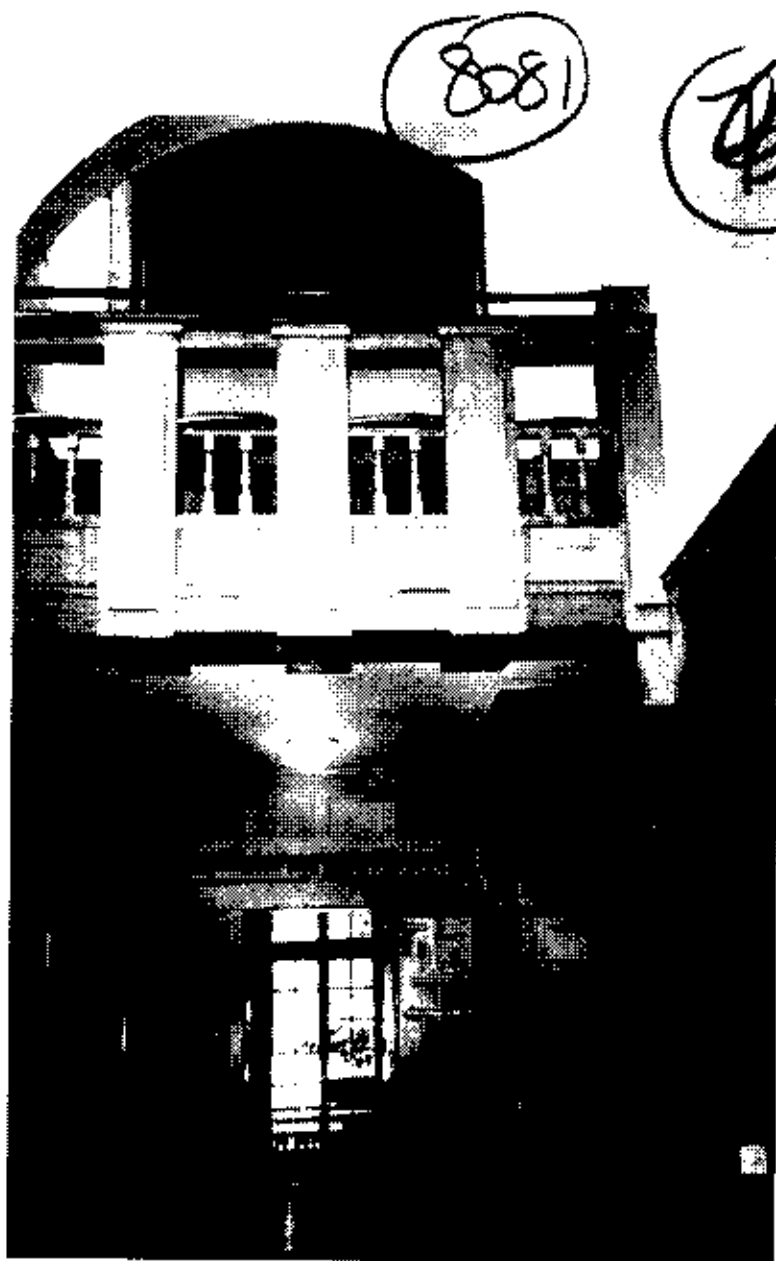
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96. RT REF 17/6/9916/L6.99  
Thorpe Lodge:  
The entrance porch (added in the 20th c.)  
on the north elevation of Thorpe Lodge.



97. RT REF 16/6/9916/1.6.99  
Thorpe Lodge:  
Plaque above the entrance door  
on north side of Thorpe Lodge.

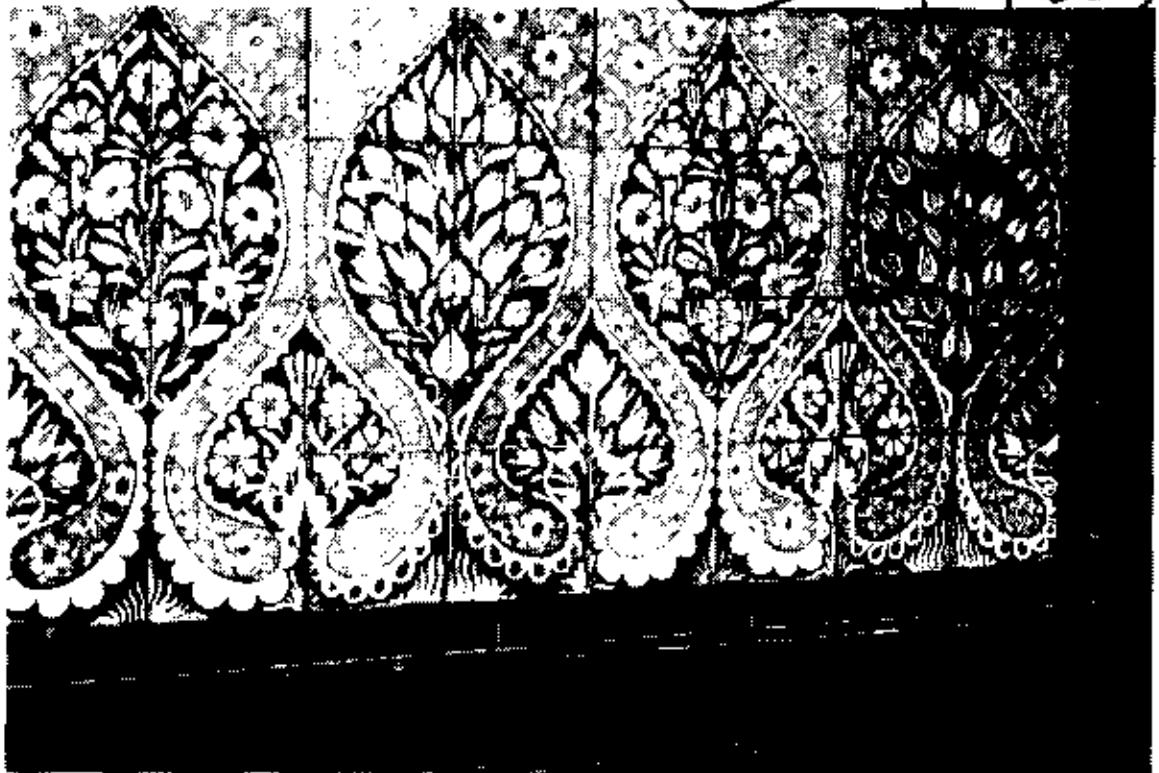


98. RT REF 4/6/9916/1.6.99  
Thorpe Lodge: Entrance Hall with balcony over.





99. RT REF 5/6/9916/1.6.99  
Thorpe Lodge: Birds and snakes glazed tiles.



100. R1 REF 6/6/9916/L6,99  
Thorpe Lodge: Detail of glazed tile feature.



101. RT REF 7/6/9916/4.6.99  
Thorpe Lodge: Ground floor entrance  
hall with 'mother-of-pearl' tiling, wood  
panelling and glazed tile decoration.

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102. RT REF 8/6/9916/1.6.99  
Thorpe Lodge: Detail of three-dimensional  
silk thread tapestry with peacocks.



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103. RT REF 12/6/9916/1.6.99  
Thorpe Lodge: Looking south  
down length of back garden.



104. RT REF 15/6/99|6:1.6.99  
Thorpe Lodge: In the two-storey entrance hall.



105. RT REF 22/6/9916/1.6.99  
West wall of Airlie Gardens seen beyond  
gazebo in back garden of Thorpe Lodge.



106. RT REF 22/4/9916/30.5.99  
From Holland Walk, looking north over  
wall to Aubrey House, listed Grade II.



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PLATE



107. RT REF 23/4/9916/30.5.99  
Walking south east along Holland Walk.  
Holland Park School behind high wall.



108. RT REF 24/4/9916/30.5.99  
Looking north towards the Appeal Site across Holland  
Park School grounds. Cannot see tennis courts.

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**PROOF OF EVIDENCE**

**BY**

**M. A. NEY BSc., FRICS., FEng., MaPS., Companion CIBSE**

**ON BEHALF OF**

**ST. JAMES HOMES LTD.**

**REDEVELOPMENT OF WATER TOWER HOUSE  
AND  
THE FORMER RESERVOIRS, AUBREY WALK, KENSINGTON**

**APPEAL REFERENCES**

**APP/K5600/E/99/1016054**

**APP/K5600/A/99/1016055**

**JUNE 1999**

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**1.0 INTRODUCTION**

1.1 I am Michael Alan Ney, BSc (Hons), FRICS, FBEEng., Companion CIBSE, MaPS, formerly a Partner in McBains Cooper of 3 Cavendish Square, London W1 and now a consultant in the Firm.

1.2 I am a qualified Building Surveyor having specialised in this branch of surveying since 1972.

**2.0 INSTRUCTIONS**

2.1 I am instructed by St James Homes Ltd to advise them in respect of rights of light and sunlight and daylight with regard to a proposed redevelopment of Water Tower House and the redundant reservoirs at Aubrey Walk. London W8.

**3.0 FINDINGS**

3.1 I visited Kensington Heights during the 1970s when I was with Thames Water Authority and I designed microwave and UHF antennae to be installed on the roof-top plant room.

3.2 I have visited the site in order to examine the surrounding buildings and have attended meetings of the design team and have studied the drawings produced by the Architects for the scheme. Using these drawings I have made calculations and measurements to assess the likely impact of the proposals on the surrounding properties. I have studied the impact of effects on sunlight and daylight penetration to the surrounding properties as set out in the BRE Code of Practice published in 1991.

3.3 I have studied the letters of response from the public to the applications for consent lodged by St James Homes Ltd. A small proportion - confined, as one would expect, to those directly affected - mention effects to their light, sunshine or airiness.

3.4 Sunlight and Daylight within the meaning of the BRE Code of Practice is a Planning matter to be considered as an aspect of public policy. It deals with the principles by which buildings on one site affect surrounding buildings to provide an acceptable standard of environmental amenity as far as natural lighting and sunshine penetration are concerned. The principle evinced in the Code is that of "good neighbourliness" Kensington & Chelsea have adopted the BRE Guide as the method of complying with policies CD28 and 29

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- 3.5 Within the BRE Guide, the author, Prof. Littlefair, makes the point that the numerical values given within the Guide are not rigid prescriptions but must be interpreted flexibly. In urban settlements, lower values for sunshine penetration and sky visibility must be accepted while in rural areas, the criteria would seek higher values for sunlight and daylight. RBKC's UDP repeats this point ; at para. 3.11 it states that no particular minimum or maximum standards will be required. At para 3.12 it states that the Council will seek good light conditions taking into account the general levels of light in the immediate area. At para. 3.13, the UDP states that sunlight and daylight are but one of a series of considerations for judging a proposal.
  
- 3.6 The approach of the Inspector in the appeal reference T/APP/X5990/A/92/213987/P4 and T/APP/X5990/E/92/809421/P4 in October 1993 by NCP against refusal of consent to redevelop a car park in Carrington Street W1. is instructive for the approach given for the consideration of matters of sunlight and daylight in London. The Inspector, considered the application of the Guide and was minded to accept the caveats that the Guide contains warning against adopting the numerical values given in it slavishly. It also clearly states that the Guide is not to be considered an instrument of planning policy. The Inspector felt that the advantages of living in central London outweigh consequential disbenefits which would include less than ideal standards of daylight and sunlight.
  
- 3.7 The inspector accepted that any redevelopment of that site that preserved, let alone enhanced the character of the Conservation Area would have adverse effects on some of the local surrounding residential buildings. He felt this was a necessary disadvantage and should not form the basis for preventing the development. *"..while the proposed development will undoubtedly have an adverse effect upon living conditions in a number of flats by reason of a reduction in skylight and sunlight, nowhere is this reduction so significant, nor the total number of flats affected so great, as to outweigh the enhancement of the Conservation Area that would be occasioned by the proposed development, or to otherwise justify the refusal of planning permission."*
  
- 3.8 Without knowing the details of the Carrington Street scheme, I am familiar with the area involved and have done studies of sunlight and daylight in White Horse Street, close by. Nevertheless the present appeal scheme appears to differ in that it does not have *"adverse effect upon living conditions in a number of flats by reason of a reduction in skylight and sunlight"*. The appeal scheme is even better placed than the Carrington Street scheme was

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3.9 The Council's UDP crystallises its thinking on sunlight and daylight into two Conservation and Design Policies CD28 and CD29 which require the Council to resist developments that significantly reduce the sunlight and daylight to adjoining buildings and amenity spaces and to require developments to be designed to ensure good light conditions for its buildings and spaces (that is to say, within the development itself).

#### 4.0 DAYLIGHT, SUNLIGHT AND RIGHTS OF LIGHT

4.1 I must first explain the term "daylight" and with care, it does not mean sunshine nor a view. Because the climate varies from hour to hour and from season to season, certain assumptions have to be made in order to make objective assessments of daylight. Light meters are inappropriate to use because anyone who is a keen photographer will know that (with a manual camera at least) no sooner have you set the aperture ring or shutter speed than the meter indicates the need to stop the lens open or closed by one or more *f* stops. Every stop indicates a doubling or halving of the light intensity. The need for an objective standard against which to measure "before" and "after" conditions is needed.

4.2 This is provided in the CIE (Commission Internationale d'Eclairage) standard overcast sky. The "vertical sky component" is measured. This is the ratio between the direct sky illuminance falling on a vertical window to the simultaneous horizontal illuminance from an unobstructed sky. The maximum vertical sky component falling on a vertical window in a flat wall is 40%. The vertical sky component (VSC) is an objective test that is repeatable and does not rely on an individual's subjective view of what is bright and what is gloomy.

4.3 The term "Sunlighting" applies to the effects of direct sunshine onto buildings. Because the Earth rotates on its axis the sun appears to rise on one side of the horizon and set on the other. The Earth's axis is tilted relative to the plane of its orbit and the orbit around the Sun is elliptical. This means that the vertical angle of the sun above the horizon at its daily zenith varies throughout the year. In the tropics, the variation in the angle of the Sun does not matter through the seasons because it is not perceived as very great. The Sun rises more or less due East every day, passes almost directly overhead at noon, and sets due West. The sun shines for 12 hours and disappears for 12 hours. Dawn and dusk come very quickly and the transition from day to night and back to day again is short. Above and below the Arctic / Antarctic circles, the effect of the Earth's tilt is very pronounced; for part of the year the Sun never rises above the horizon at all and in Summer, it does not set but appears to go round and round the point on the Earth's surface, dipping towards the horizon at night and bobbing up again during the day. Visitors to Scotland will know that the day lasts longer there in summer than in England. From London to Edinburgh is only

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450 miles and this makes a significant difference to the apparent movement of the Sun. London lies approximately 51.5° N of the equator and Edinburgh 56°N. I have used the figures for 51.5°N.

- 4.4 It can be calculated mathematically how long the sun **could** shine each day throughout the year and add them together. For London, if there are no obstructions to the sun, this is 1486 hours. We can then measure how many hours the sun would shine on a particular point if there were no cloud at all but taking into account the obstructions caused to the sun by buildings. These are called probable sunshine hours and can be expressed as a percentage of the annual probable sunshine hours.
- 4.5 Because it makes visualisation of the sun's movement easier if we think of the Solar System as geocentric, the calculations assume that the earth is flat, the sky is a dome of uniformly bright opal glass and the sun goes round the earth. Indeed, the sunpath diagrams I have used make this assumption because to us, standing still on the surface of the Earth, that is what appears to happen. It is only if we try to navigate on the high seas or try to leave the Earth's atmosphere that the distinction between a geocentric and solarcentric solar system becomes important. As buildings do not move, the geocentric assumptions hold true throughout the year.
- 4.6 "Rights of light" are often mentioned. These are not strictly relevant to the Planning process and they involve private property rights of one land-holding over another. At para 64 in PPG1 it is stated that "The planning system does not exist to protect the private interests of one person against the activities of another." The light protected by private easements is to a flow of light from the sky and makes no reference to sunshine, nor to views. The planning process approaches the question of light from an entirely different perspective and seeks to conserve the natural beauty and amenity of land and to improve the physical environment. These criteria normally form the background to the policies set out in the local planning authority's UDP. These policies can take into account the view from one building to another and the entry of sunshine into a development. The criteria upon which planning decisions are made can be on much broader economic and social benefits grounds than private, common law rights.
- 4.7 Rights of light relate to the actual light from the diffuse sky penetrating real rooms in the dominant owner's building over the servient owner's land. The flow of light has to be through "defined apertures", usually windows.

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4.8 Rights of light are included within my report which has been submitted as part of the planning process. This report is attached as an appendix to this proof.

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## 5.0 DAYLIGHT

5.1 The BRE Guide has established that if a proposed new building subtends an angle of less than 25° from the horizontal at the centre line of the ground floor windows of an adjoining building, the effect upon the adjoining building is unlikely to be significant. Where the proposed new building will subtend an angle of greater than 25° it is necessary to check the VSC to ensure that 27% or more remains or, where windows already have a VSC of less than 27%, the proposed new building should not reduce the VSC to less than 80% of its present value.

5.2 To assess the VSC I have used the method of the Waldram Diagram. At p.54, the Guide states "...the Waldram diagram is more precise [than the skylight indicator] and may be used for very complex obstructions." The Waldram diagram also has the advantage that it shows the obstruction in a more pictorial way, which is often of assistance in gauging the likely effects.

### 2-6 Aubrey Walk

5.3 An assessment of these houses shows that the proposed new building will subtend an angle of 24.8° which is marginally below the 25° given in the Guide. The Vertical Sky Component has, therefore, been calculated and I find that the VSC available is 29% for 2 and 4 and 25.33% for No 6. The reduction of VSC at this point is small and still affords more than 80% of the existing VSC. In addition, No 6 is also lit from the side, deriving an almost uninterrupted VSC down Aubrey Walk. The proposals call for the demolition of the present block of flats in Aubrey Walk so that the side elevation will gain sky visibility

### 8 - 16 Aubrey Walk

5.4 These building benefit from the proposals because the raised bank, walls, fencing and gates in front of them now are to be removed and the open vista of the square replaces them. No 8, and to a lesser extent No 10, has a new building built in front of it. This building will subtend an angle of 15° to the centreline of the ground floor windows. This is well below the 25° envisaged as acceptable by the Guide.

### 18-24 Aubrey Walk

5.5 Nos 18 to 24 will be slightly affected by the scheme but not to any appreciable adverse extent. The proposed building fronting onto Aubrey Walk subtends in places an angle

greater than 25° from the midpoint of the lowest level of windows. In the case of No 18, I calculate that the VSC will be 30.8% which exceeds the recommendation in the Guide. No 20 has no windows at ground floor level and the angle subtended to its 1<sup>st</sup> floor windows is only 23.5° to the highest point on the new development. These windows do not fall to be considered further under the Code. In the case of Nos. 22 and 24, parts only of the new development intrude above the 25° line and I have checked the VSC using Waldram diagrams. These show that the resulting VSC is 27.56% and, again exceeds that required by the Guide.

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[Handwritten scribble]

### **Thorpe Lodge**

5.6 From the daylighting point of view, I have verified that the angle of obstruction formed by the new buildings at the centres of the ground floor windows will intrude above the 25° line at 27°. I have, therefore checked the sky factor along the window wall and find that it is 27.5% so that the criteria given in Section 2.2 of the Code of Practice published by the BRE is satisfied.

### **Kensington Heights**

5.7 I have used the BRE Code of Practice for daylight and sunlight 1991 as the basis for consideration of the effects of the new proposed development on the flats in Kensington Heights. Section 2,2 deals with the effects of developments on existing buildings and I have followed the decision chart given on p.7 of the Guide. In some instances, the new development does subtend an angle greater than 25° at the centre line of the lowest storey of windows so I have gone on to verify the actual vertical sky components (VSC).

5.8 The Guide seeks a VSC of 27% at the centreline of windows to be affected. Where this is not attained the Guide then seeks to identify whether the proposed VSC will be 80% or more of the existing figure. If so, then it concludes that daylighting is unlikely to be seriously affected. The Guide requires a further assessment to be made even where the 27% is exceeded and that is to establish whether the proposed VSC is more than 80% of the existing. I have marked with a 'N' those situations where one or other of the Guide's recommendations is not met.

### West Elevation