

Design Statement Reference: 17-135-DS-001

Date: 10/04/18

Name of Project: Lightwell at 28 Kylemore Road, London NW6 2PT

Name of structure: Reinforced concrete lightwell

1. HIGHWAY DETAILS

- 1.1 Kylemore Road
- 1.2 30mph
- 1.3 No existing restrictions

2. SITE DETAILS

- 2.1 No obstacles crossed.

3. PROPOSED STRUCURE

- 3.1 Lightwell to 28 Kylemore Road
- 3.2 Reinforced concrete construction
- 3.3 Foundation to be rc slab on soil at base of structure (London CLAY)
- 3.4 Span arrangements – Not Applicable
- 3.5 Articulation arrangements – Not Applicable
- 3.6 No road restraint systems present
- 3.7 Proposed arrangements for maintenance and inspection
 - 3.7.1 Traffic management – no traffic management anticipated
 - 3.7.2 Access – All work within boundary of 28 Kylemore Road
- 3.8 Materials and finishes – Grade C40 concrete with high yield steel reinforcement and as struck formwork finish
- 3.9 Risks and hazards considered – The final structure will have a wrought iron handrail to match those at No. 21 around it (1.1m high & 0.1m spacings MAX)
- 3.10 Costing not applicable (Private property)

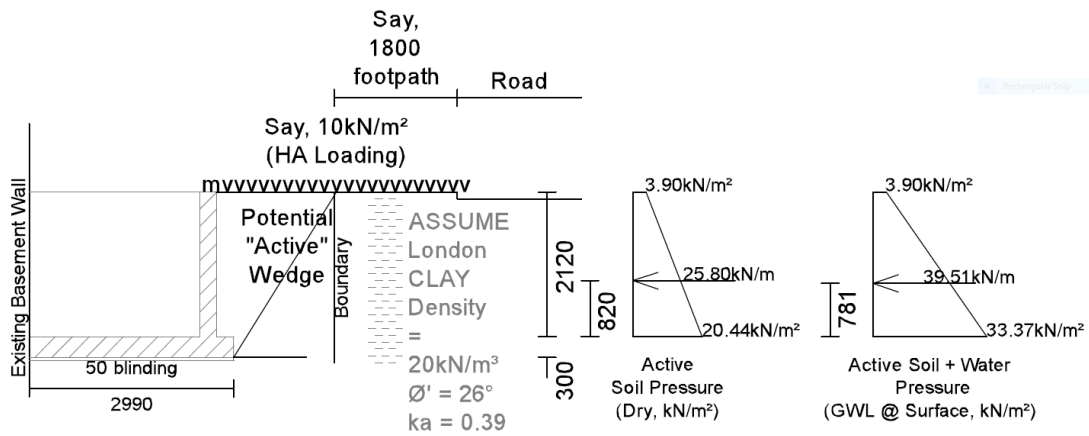
4. DESIGN CRITERIA

- 4.1 Live loading, Headroom
 - 4.1.1 10kN/m² traffic surcharge (HA Loading)
NB: Technically this loading is only applicable to the highway, but has also been used over the footpath and property ground on a prudently conservative basis.
 - 4.1.2 To 4.1.8 Not Applicable
- 4.2 List of relevant documents

BS 8002 : 1994
BS 5400 : Part 4 : 1990
BS 8666 : 2005
BD 37/01

5. STRUCTURAL ANALYSIS

- 5.1 Structure has been analysed using traditional methods to determine bending moments and shear.
- 5.2 Sketch of idealised structure



- 5.3 Assumptions intended for calculation of structural element stiffness – Not Applicable
- 5.4 Earth pressure coefficients used in the design of earth retaining elements – $k_a = 0.39$ ($\phi' = 26^\circ$)

6. GEOTECHNICAL CONDITIONS

- 6.1 No Geotechnical Report available
- 6.2 Hence, no Form C available
- 6.3 Differential settlement to be allowed for in design – Not Applicable
- 6.4 In the absence of a Geotechnical Report, the following assumptions have been made for design of the earth retaining elements:

Soil – Assumed London CLAY,
 $\gamma = 20 \text{ kN/m}^3$
 $\phi' = 26^\circ$ (long-term soil parameter)
 $k_a = 0.39$ ($\delta = \text{zero}$)

Ground water assumed at surface ($\gamma = 10 \text{ kN/m}^3$)

7. CHECKING

- 7.1 Category 2

8. DRAWINGS AND DOCUMENTS

17-135-D-004 Rev 01

17-135-D-005 Rev 01

Bending Schedule (Sheet 1) for above drawings

9. THE ABOVE IS SUBMITTED FOR ACCEPTANCE



Signed

Name

Ian Franklin Griffiths
Design Team Leader

Engineering Qualifications BSc CEng MICE

Name of organisation

Key Geosolutions Ltd

Date

10/04/18

10. THE ABOVE IS AGREED

Signed

Name

Position held

Engineering Qualifications

Approving Authority

Date

Revision	Date	By	Details
A	18/12/18	IG	Density of water amended BS8666:2005 added to document list