

11 Appendix 1: Borehole logs from the recent soil investigation

ST. MART'S COLLEGE, WALKERHAY ROAD, TWICKENHAM
 RECORD OF BOREHOLE
 STARTED .03/01/07 COMPLETED
 Vial Fit Dimension:m(long) xm(wide) xm(deep)
 Rotary Drilled Hole:mm dia tom depth
 Core Sizemm dia Cased:mm dia tom depth
 Flushing Medium: Air/Water/Soil/Foam
 SOLE SIZE 150mm to12.00m depth
mm tom depth
mm tom depth
 LABORATORY DESCRIPTIONS & TESTING
 DRILLER GROUND LEVELm O.D.

Site Description of Strata	Depth n.	Sample or In-Situ Test Depth m. from to	Blows/ + C'head + Water + Date	Disturbed & Bulk Sample Descr	Laboratory Test Results		Laboratory Sample Descr	Change of Strata O.D. + Depth m. + m.	Revised Description of Strata
					m + LL/PL + SDen + C + S	PI % + kg/m3 + ks/m2 + deg			
Brown shaley fill	0.05	0.00	0.15	B1					
Black SW FILL	0.15	0.20	0.70	B2					
Brown mottled sandy/clayey fill with brick and roots	0.80	0.80	1.20	B3					
Medium dense brown SAND with occasional gravel with roots	1.20	1.70	B4						
	1.35	1.65	C						
Very dense brown SAND and GRAVEL	1.70								
	1.80	2.30	B5						
Dense brown SAND and GRAVEL	1.95	2.00	C						
	3.00	3.00	3.50	B6					
Medium dense brown SAND and GRAVEL	3.15	3.45	C						
	4.00	4.00	4.50	B7					
Stiff grey silty CLAY	4.15	4.45	C						
	5.00	5.50	B8						
Stiff grey silty CLAY	5.00								
	5.15	5.95	C						
Stiff grey silty CLAY	6.20	6.40	B9						
	6.35	6.65	C						
Stiff grey silty CLAY	6.40	6.40	6.70	B10					
	6.40	6.70							
Stiff grey silty CLAY	7.00	7.00	7.1	B11					
	7.00	7.50							
Stiff grey silty CLAY	8.00	8.45	B2						
	8.45		D1						
Stiff grey silty CLAY	9.00	9.45	B3						
	9.45		D2						
Stiff grey silty CLAY	10.00	10.00	10.45	B4					
	10.00	10.45							

B2 = m. Dcn/bk mottled clayey stc. with fine wire roots
 Gravel of concrete, Plint, ash, brick
 B4 = dbn sl. clayey sand with rare soft clay lenses. Gravel of Plint and quartzite
 B8 = dbn stc. Gravel of Plint & quartzite

GAO Malcolm Brady
 0207 240 2241

REMARKS
 1. Excavating a pit from 0.00m to 1.10m for 1 hour 2. Water added from 1.00m to 4.50m 3. Borehole cased to 7.00m depth GROUNDWATER OBSERVATIONS: 03/01/07 Depth observed 12.00m. Casing Depth 7.00m. Water level damp. 03/01/07 Depth observed 12.00m. Casing Depth 0.00m. Water Level dry.

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SITE		ST. MARY'S COLLEGE, WALKERDAVE ROAD, TWICKLESHAM		Trial Pit Dimension:.....m(long) x.....m(wide) x.....m(Deep)		SOLE SIZE		150.....mm to ..12.00.m depth	
RECORD OF		BORINGS/BORENOLS		Rotary Drilled Hole:.....mm dia to.....m depth		Core Size	mm dia Cased:.....mm dia to.....m depth	
STARTED		03/01/07		COMPLETED		LABORATORY DESCRIPTIONS & TESTING		DRILLER	
Site Description		Depth		Sample or In-situ Test		Blows/		Laboratory Test Results	
of Strata		n.		Depth m.		C'hean Water Data		m	
		From to		Type		kN/m2		k	
								+ FY k + Mg/ml + KN/m2 + dag +	
								Laboratory Sample Desor	
								+ Change of Strata	
								+ O.D. + Depth	
								+ n. + m.	
								Revised Description	
								of Strata	
stiff grey silty CLAY		10.50		D3					
		11.00		D4					
		11.30	11.35	U5	54				
		12.00	12.00	D5					

REMARKS
 1. Excavating a pit from 0.00m to 1.20m for 1 hour 2. Water added from 1.30m to 4.50m 3. Borehole cased to 7.00m depth GROUNDWATER OBSERVATIONS: 03/01/07 Depth observed 12.00m. Casing Depth 7.00m. Water Level damp. 03/01/07 Depth observed 12.00m. Casing Depth 0.00m. Water Level dry.

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SITE		ST. MARY'S COLLEGE, WALDEGRAVE ROAD, TWICKENHAM		Trial Pit Dimensions: m(long) x m(wide) x m(deep)		Rotary Drilled Hole: mm dia to m depth		HOLE SIZE 150 mm to 13.00 m depth	
RECORD OF BORERHOLE BR2		LABORATORY DESCRIPTIONS & TESTING		DRILLER		GROUND LEVEL		m.O.D.	
Site Description of Strata	Depth m	Sample or In-situ Test	Slows/	Disturbed & Bulk Sample Descr	Laboratory Test Results	Laboratory Sample Descr	Change of Strata	Revised Description of Strata	
	from to	Depth m	Type		u LL/PL/SDm C O		O.B. Depth		
					w PI % Mg/Al-kM/a2 deg		m m		
Brown shaley fill	0.15 - 0.20	D1							
Black ash fill	0.25 - 0.30	B1							
Brown SAND and GRAVEL	0.70 - 1.10	B2							
Brown SAND and GRAVEL becoming clayey	1.10 - 1.60	B3							
Dense brown SAND and GRAVEL	1.60 - 2.40	B4							
Medium dense grey/brown silty SAND and GRAVEL	2.40 - 4.40	B5, B6, B7, B8, B9, B10, B11, B12, B13, B14							
Stiff, gray silty CLAY	4.40 - 10.00	B15, B16, B17, B18, B19, B20, B21, B22, B23, B24, B25, B26, B27, B28, B29, B30, B31, B32, B33, B34, B35, B36, B37, B38, B39, B40							

Soft clay + dkkn mottled sandy clay.

dkn sl. clayey str.

Grey brown firm locally stiff clay

REMARKS
 1. Excavating a pit from 0.00m to 1.10m for 1 hour 2. Water added from 2.00m to 4.00m 3. Borehole cased to 6.50m depth 4. Gas monitoring standpipe installed to 7.00m depth
 07 Depth observed 15.00m. Casing Depth 6.50m. Water Level damp. 02/01/07 Depth observed 15.00m. Casing depth 6.00m. Water Level dry.

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S I T E : ST. MARY'S COLLEGE, WALDEGRAVE ROAD, TWICKENHAM
 RECORD OF TRIAL PIT/ADVISORY TPI
 STARTED 03/01/07 COMPLETED

Trial Pit Dimensions: 3.00m (long) x 0.60m (wide) x 3.30m (deep)
 Rotary Drilled Hole: mm dia to mm depth
 Core Size mm dia Cased: mm dia to mm depth
 Flushing Medium: Air/Water/Sand/Foam

BORE SIZE mm to mm depth
 mm to mm depth
 mm to mm depth

LABORATORY DESCRIPTIONS & TESTING
 DRILLER
 GROUND LEVEL m.O.S.

Site Description of Strata	Depth		Sample or In-Situ Test		Blows/ C' base Water Date	Disturbed & Bulk Sample Descr	Laboratory Test Results				Change of Strata		Revised Description of Strata		
	m.	Depth m. from to	Type	NR/ml			n	LL/Pl+BCn	C	φ	PI	%		kg/m ³	kg/m ²
MADE GROUND - Brown, slightly gravelly SAND. Gravel consists of fine to medium, angular to sub-angular igneous roadstone	0.02	0.02	D1												
	0.15	0.10	D2												
		0.40	D3												
MADE GROUND - black dark grey sandy GRAVEL. Gravel consists of fine to coarse, angular to sub-rounded flint and roadstone	0.50	0.70	D4												
		0.90	MP1	100											
		1.10	D1												
BUICKED TOPSOIL - Brown slightly gravelly silty SAND. Gravel consists of fine to coarse, angular to rounded flint and quartzite	1.60														
Brown and light brown slightly gravelly SAND. Gravel consists of fine to coarse, angular to rounded flint and quartzite	2.00	2.10	D2												
		2.00	MP2	100											
Brown sandy GRAVEL. Gravel consists of fine to coarse, angular to rounded flint and quartzite	3.00		D1												
		3.00	MP3	100											
		3.20	D3												
	3.30														

REMARKS
 1.No live roots observed 2.Water met at 3.00m depth 3.Pit sides unstable below 3.00m depth GROUNDWATER STRIKES : Struck at 3.00m.

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S I T E .ST.MARY'S COLLEGE, MALDENRAVE ROAD, TWICKENHAM
 RECORD OF TRIAL PIT/BOREHOLE
 STARTED .03/01/07 COMPLETED

Trial Pit Dimensions: . . . 2.80 . . . m(long) x . . . 0.80 . . . m(wide) x . . . 2.40 . . . m(deep)
 Rotary Drilled Hole: mm dia to m depth
 Core Size mm dia Cased: mm dia to m depth
 Flushing Medium: Air/Water/Mud/Foam

BORE HOLE mm to m depth
 mm to m depth
 mm to m depth

Site Description of Strata	Depth m.	Sample or In-Situ Test Depth m. from to	+Blows/ +C'beam +Water +Data	+Type	+km/m2	+Disturbed & Bulk Sample Descr	Laboratory Test Results				Laboratory Sample Descr	+Change of Strata+ O.D. + Depth m. + m.	Revised Description of Strata
							+m	+LL/PL+SDm	+C	+O			
MADE GROUND - Igneous sandstone	0.02 0.15	0.02 0.10		D1 D2									
MADE GROUND - Black dark grey sandy GRAVEL. Gravel consists of fine to coarse, angular to rounded flint and igneous sandstone	0.50	0.40		D3									
Brown slightly gravelly silty SAND. Gravel consists of fine to coarse, angular to rounded flint and quartzite		0.90 1.40	0.90 1.50	B1 B2									
Brown and light brown, golden brown sandy GRAVEL. Gravel consists of fine to coarse, angular to rounded flint and quartzite	2.00												

1.5 MPa-100

REMARKS
 1.No live roots observed 2.Bit dry 3.Bit sides stable

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S I T E . ST. MARY'S COLLEGE, WALTONGRAVE ROAD, TWICKENHAM
 RECORD OF TRIAL PIT/BOREHOLE . TP3
 STARTED .03/01/07 . COMPLETED

Trial Pit Dimensions: . . . 3.00 . . . m(long) x . . . 0.60 . . . m(wide) x . . . 1.40 . . . m(depth)
 Rotary Drilled Hole: mm dia to m depth
 Core Size mm dia Cased: mm dia to m depth
 Flushing Medium:- Air/Water/Mud/Foam

MOLE SIZE mm to m depth
 mm to m depth
 mm to m depth

LABORATORY DESCRIPTIONS & TESTING DRILLER GROUND LEVEL m.O.D.

Site Description of Strata	Depth m.	Sample or In-Situ Test		Blows/ C'bean KN/m2	Water Data	Disturbed & Bulk Sample Descr	Laboratory Test Results				Laboratory Sample Descr	Change of Strata		Revised Description of Strata
		Depth m. from to	Type				n	LL/PL/SDen % PI %	C Kg/m3	σ kg/m2		φ deg	C.D. m.	
MUDS GROUND - Igneous roadstone	0.03	0.02		D1										
	0.10	0.10		D2										
		0.30		D3										
MUDS GROUND - Black dark grey sandy GRAVEL. Gravel consists of fine to coarse, angular to rounded, flint and igneous roadstone	0.60			D4										
		0.70	0.75	MP1	100									
Brown slightly gravelly silty SAND. Gravel consists of fine to coarse, angular to rounded, flint and quartzite		1.10	1.20	B1										
		1.70	1.90	B2										
Brown and light brown sandy GRAVEL. Gravel of fine to coarse, angular to rounded flint and quartzite		2.03	2.11	MP2	100									
		2.50	2.60	B3										
		3.10	3.20	B4										
		3.10	3.20	MP3	100									
	3.40													

REMARKS
 1. Live roots observed to 1.50m depth 2. Pit sides unstable below 2.07m depth 3. Water met at 3.10m depth GROUNDWATER SYSTEMS : Struck at 3.10m.

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SITE No. **ST. MARY'S COLLEGE, WALDEGRAVE ROAD, TWICKENHAM**
 RECORD OF TRIAL PIT/BOREHOLE No. **174**
 Trial Pit Dimensions: **0.60m (long) x 0.40m (wide) x 0.60m (deep)**
 Rotary Drilled Hole: **50mm dia to 0.50m depth**
 Core Size **50mm dia** Cased: **50mm dia to 0.50m depth**
 Flushing Medium: **Air/Water/Sand/Foam**
 HOLE SIZE **50mm** to **50mm** depth
 to **0.50m** depth
 to **0.50m** depth
 to **0.50m** depth
 GROUND LEVEL **0.00m** O.D.

Site Description of Strata			Depth m.	Sample or In-situ Test Depth m. From to Type	Slows/ C-bone Water Date KN/m ²	Disturbed & Bulk Sample Recor	Laboratory Test Results M ± EE/PL-SDen C ± Ø % ± F1 % (Kg/m ³ +KN/m ²) dag	Laboratory Sample Descor	Change of Strata O.D. Depth m. m.	Revised Description of Strata
MADE GROUND - Brown sandy GRAVEL. Gravel consists of fine to coarse, angular to rounded flint and quartzite			0.10 0.15	0.05 0.13 0.30	D1 D2 D3					
MADE GROUND - Yellow brown SAND			0.60							
MADE GROUND - Brown slightly gravelly silty SAND. Gravel of fine to coarse, angular to rounded flint and quartzite										

REMARKS
 1. Live roots observed to 0.60m depth 2. Pit dry 3. Pit sides stable

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I T E ST. MARY'S COLLEGE, WALDINGGRAVE ROAD, TWICKENHAM
 RECORD OF BOREHOLE/BORRHOLE BH2
 Trial Bit Dimension:m(long) xm(wide) xm(deep)
 Rotary Drilled Hole:mm dia tom depth
 Core Sizemm dia Cased:mm dia tom depth
 Flushing Medium: Air/Water/Mud/#can
 HOLE SIZE 150mm to15.00m depth
mm tom depth
mm tom depth
 GROUND LEVELm O.D.

Site Description of Strata	Depth m.	Sample or In-Situ Depth m. From to	Test Type	Blows/ +C'head +Water +1m/m2	Date	Disturbed & Bulk Sample Descr	Laboratory Test Results				Laboratory Sample Descr	Change of Strata		Revised Description of Strata
							m	LL/PL/SH	C	φ		γ	mg/m3	
Soft, grey silty CLAY	10.45		D6											
	11.00		D7											
	11.50	11.95	U4	70										
	11.95		D8											
	12.50		D9											
	13.00	13.45	O5	75										
	13.45		D10											
	14.00		D11											
	14.50	14.95	U6	75										
	15.00	15.00	D12											

REMARKS
 1. Excavating a pit from 0.00m to 1.10m for 1 hour 2. Water added from 2.80m to 4.00m 3. Borehole cased to 5.50m depth 4. Gas monitoring standpipe installed to 7.00m depth GROUNDWATER OBSERVATIONS: 02/01/07
 07 Depth observed 15.00m. Casing Depth 5.50m. Water Level 02/01/07 Depth observed 15.00m. Casing Depth 5.00m. Water Level dry.

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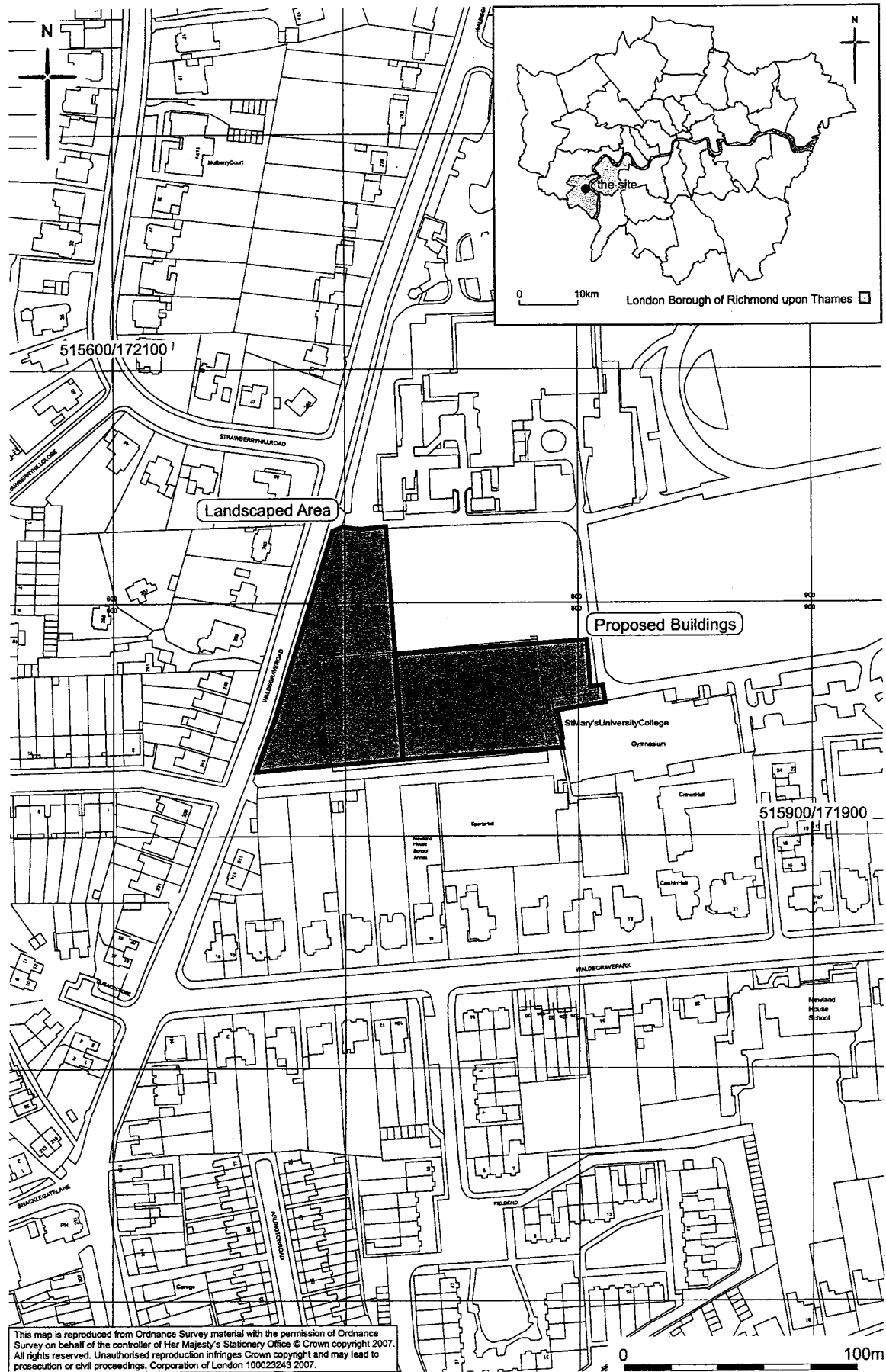


Fig 1 Site location

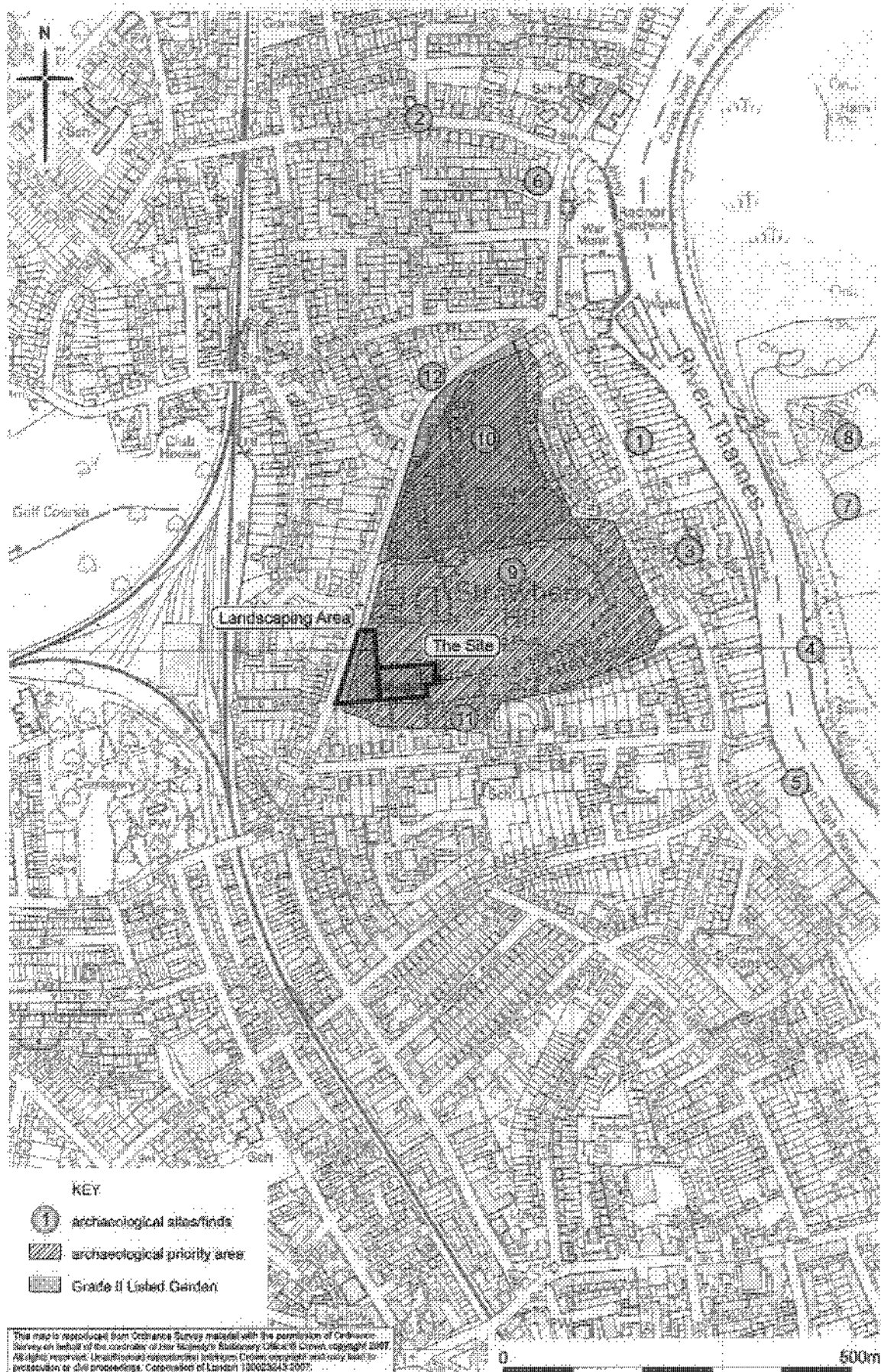


Fig 2 Archaeological features map

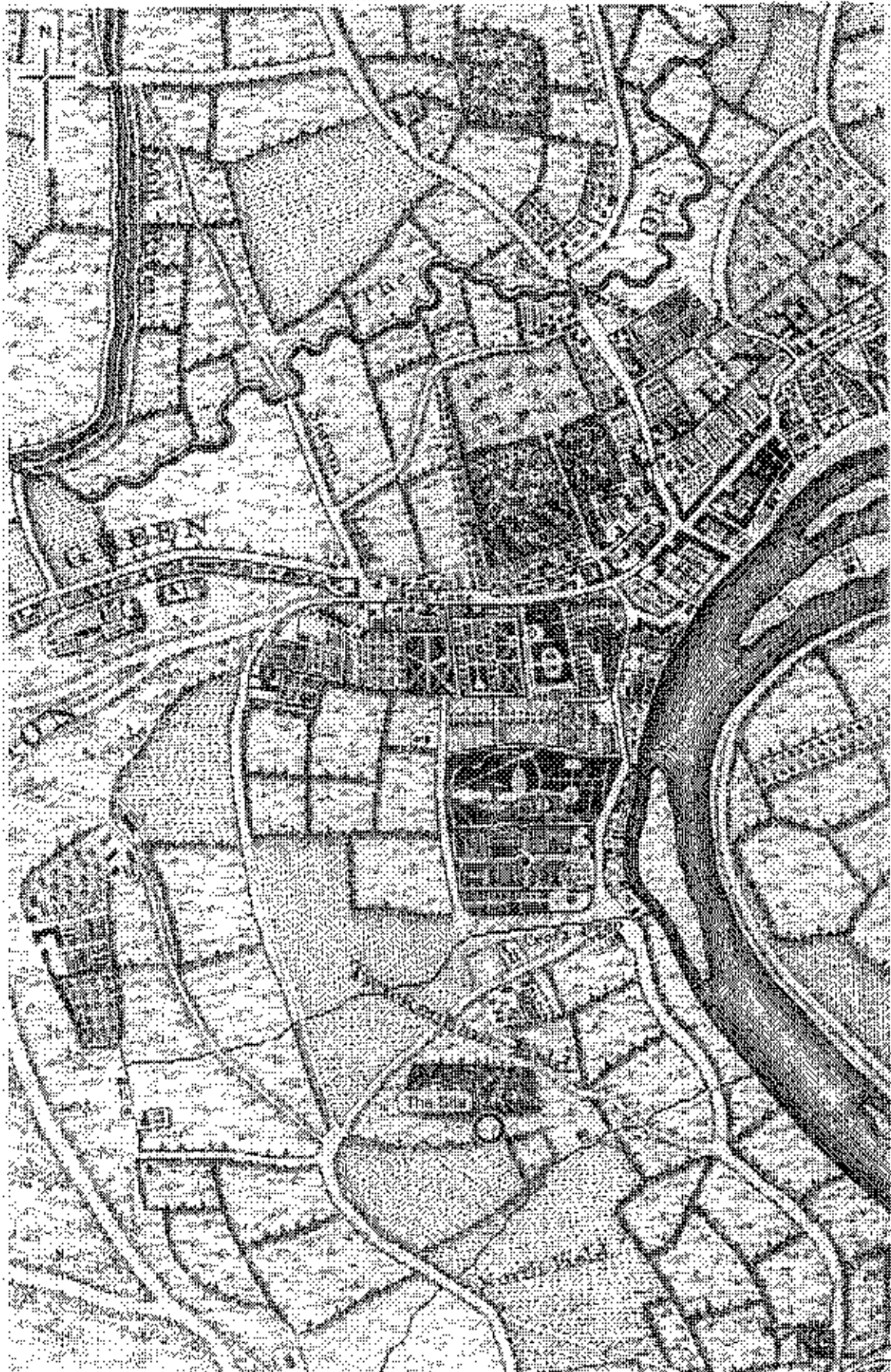


Fig 3 Detail from Rocque's map of 1746 showing the approximate position of the site

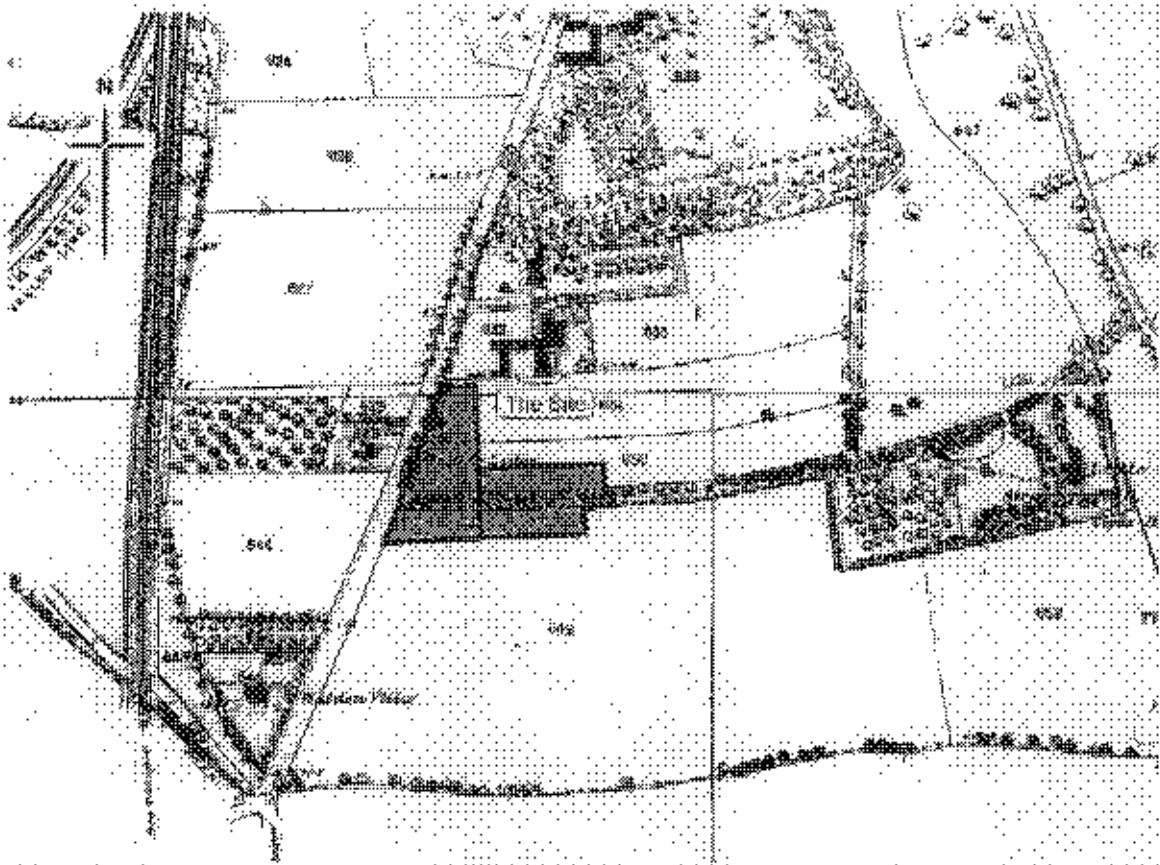


Fig 4 Detail from Ordnance Survey 1st edition 25" map of 1863 (not to scale)

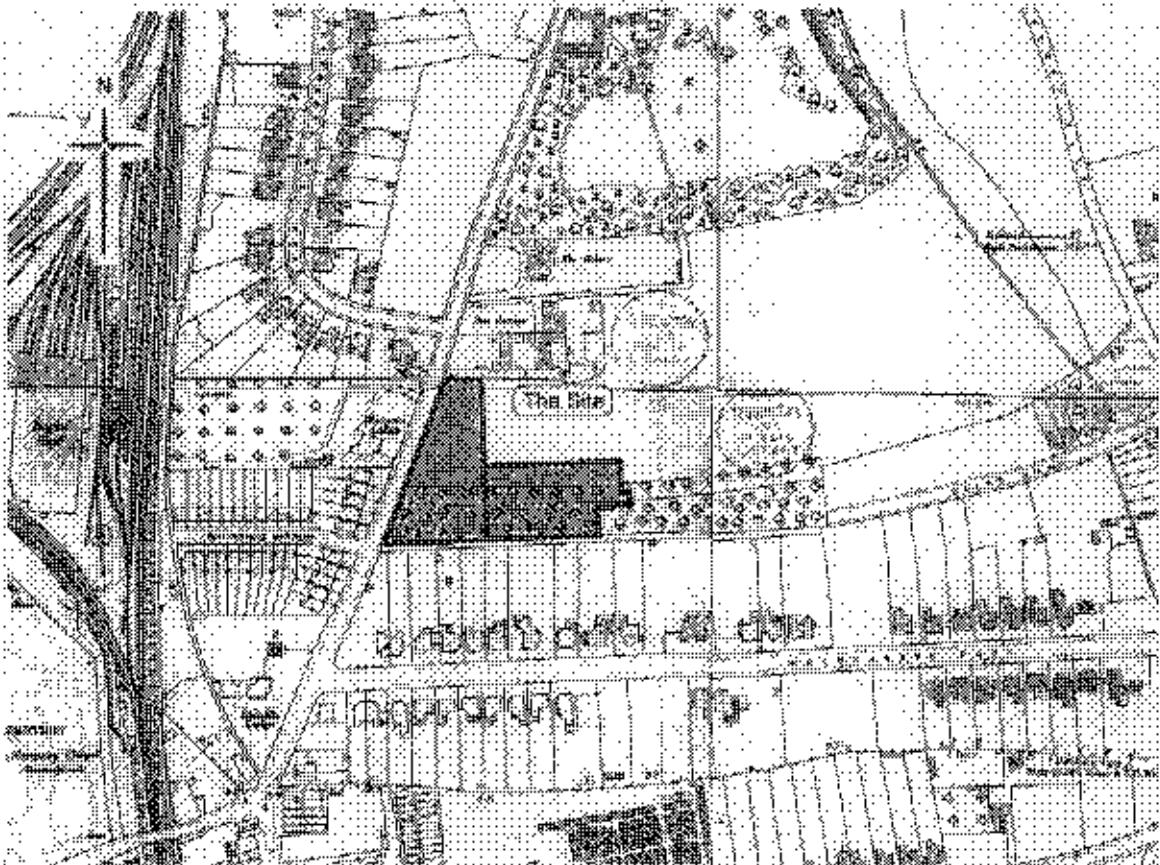


Fig 5 Detail from Ordnance Survey 25" map of 1914/1915 (not to scale)

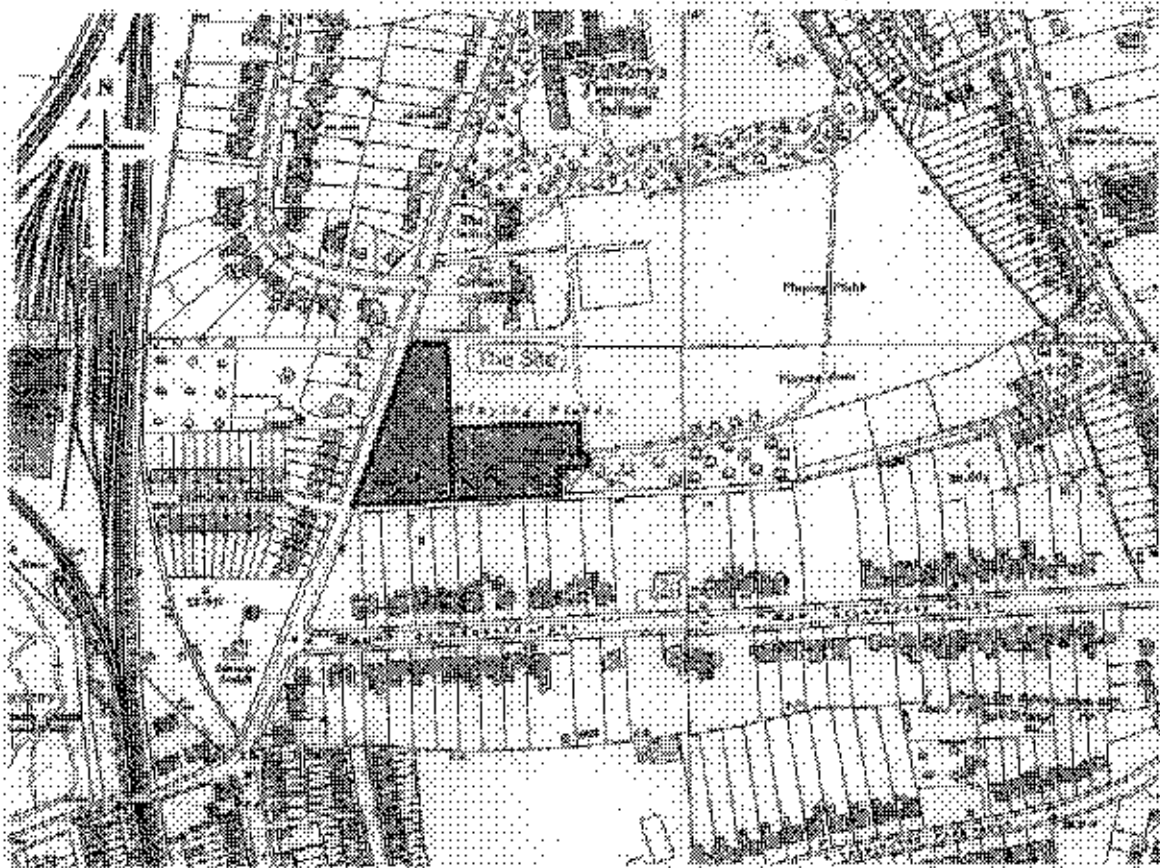


Fig 6 Detail from Ordnance Survey 25m map of 1934 (not to scale)

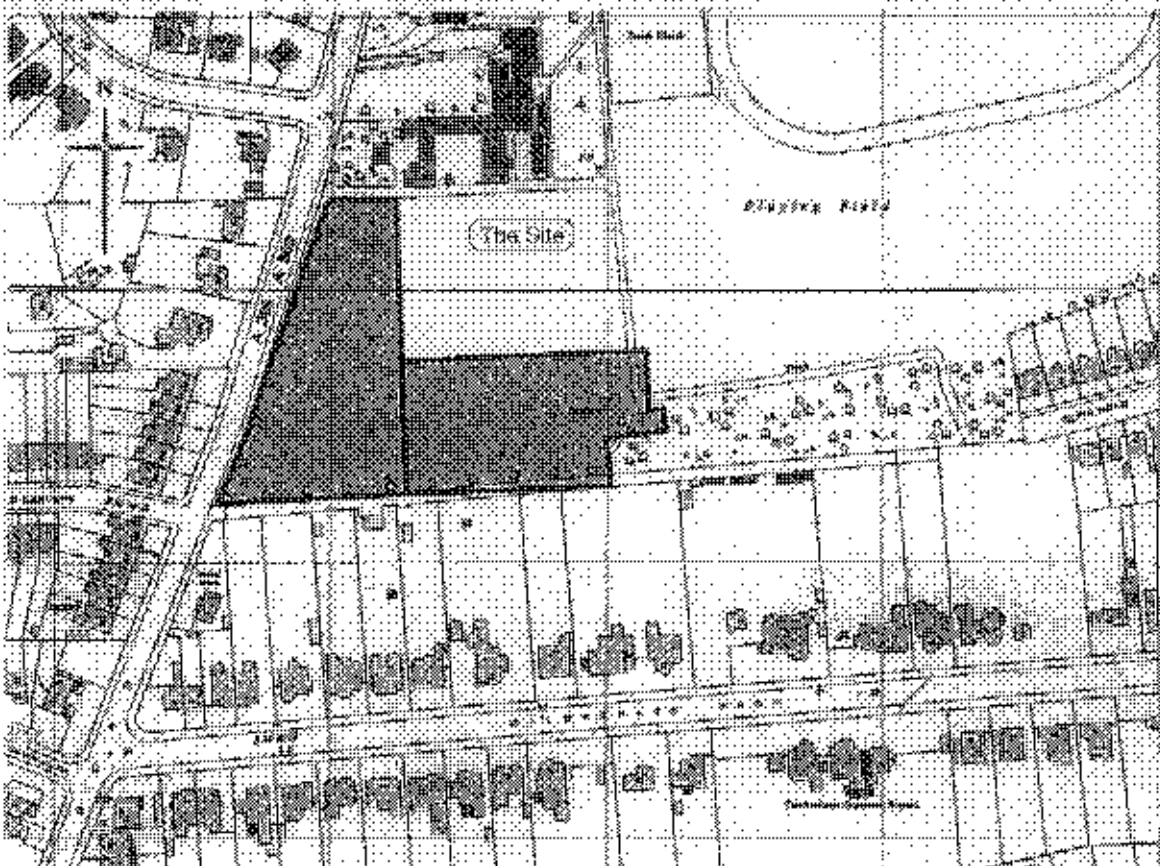


Fig 7 Detail from Ordnance Survey 1:2500 map of 1962

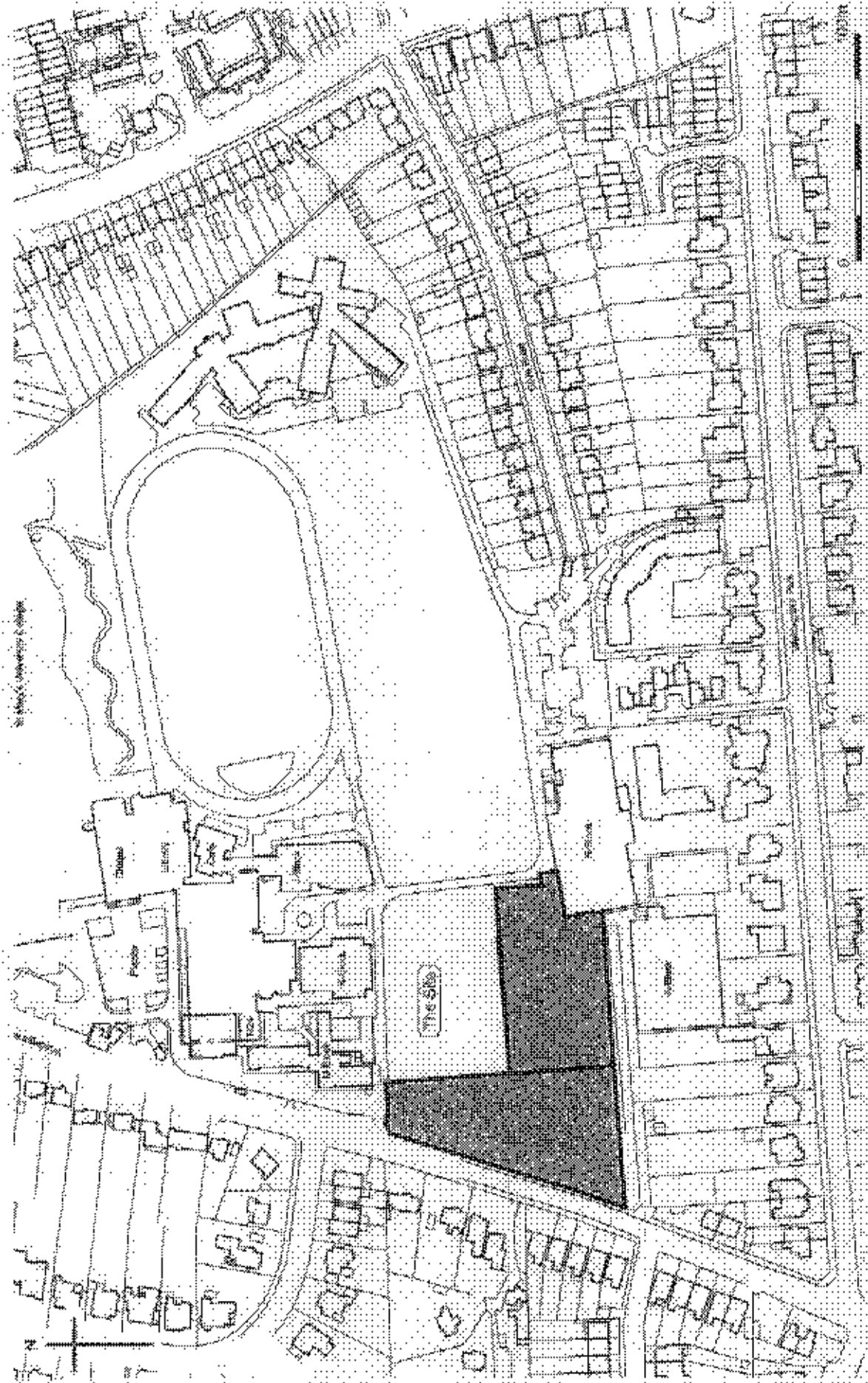


Fig 8. St Mary's College site plan showing existing Block B (adapted from Kittington Street Studio Architecture Gwg no. 05/01, November 06)

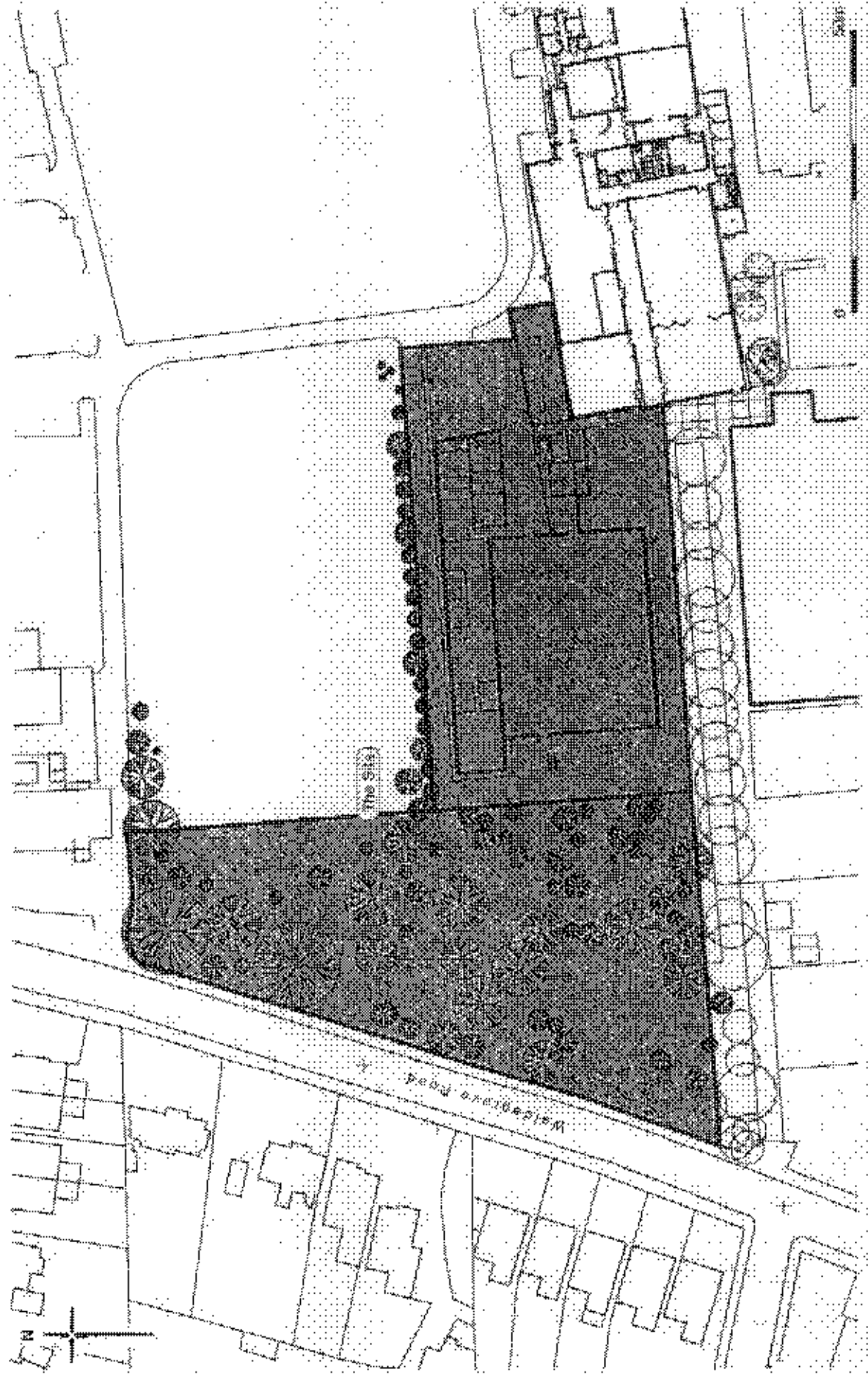


Fig 9 St Mary's College: proposed development (adapted from: Kivington Street Studio Architecture JWP no. 05/02, September 06)