

Basement Masters

GOR-RAY HOUSE,
758 GREAT CAMBRIDGE ROAD
ENFIELD, MIDDLEX, EN1 3PN

Tel: (020) 8443 7099

Fax: (020) 8366 5576

Project Title

27 Lambolle Road, Camden

Job No.

27LRC16

Element

Loads

Calc. sheet No.

01

Drawing ref

Calculations by

CDW

Checked by

Date

March 2016

REF

CALCULATION SHEET

LOADS

Pitched Roof

Imposed 0.75 x1.6 = 1.20

Tiles Rafter

0.75

Ceiling

0.25

Services

0.25

Insulation

0.10

x1.4 = 1.89

Total

2.10kN/m2

x1.452 = 3.09kN/m2

Flat Roof

Imposed 0.75 x1.6 = 1.20

Membrane

0.50

Boards, joists

0.25

Ceiling

0.25

Insulation

0.10

x1.4 = 1.54

Total

1.85kN/m2

x1.481 = 2.74kN/m2

Suspended Floor

Imposed 1.50 x1.6 = 2.40

Boards, joists

0.35

Ceiling

0.25

Partitions

0.75

x1.4 = 1.89

Total

2.85kN/m2

x1.505 = 4.29kN/m2

Basement Floor Slab

Imposed 1.50 x1.6 = 2.40

75mm Screed

1.80

75mm Insulation

0.10

250mm Concrete Slab

6.00

x1.4 = 11.06

Total

9.40kN/m2

x1.688 = 15.86kN/m2

Walls

Stud Partitions 0.75kN/m2 x1.4 = 1.05kN/m2

100mm Blockwork 1.00kN/m2 x1.4 = 1.40kN/m2

100mm Brickwork 2.50kN/m2 x1.4 = 3.50kN/m2

Bwk + Blk 3.50kN/m2 x1.4 = 4.90kN/m2

215mm Bwk 5.00kN/m2 x1.4 = 7.00kN/m2

250mm Concrete 6.00kN/m2 x1.4 = 8.40kN/m2

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Project Title

Element

Drawing ref

Calculations by

CDW

Checked by

Job No.

27 LRG16

Calc. sheet No.

02

Date

MARCH 2016

REF

CALCULATION SHEET

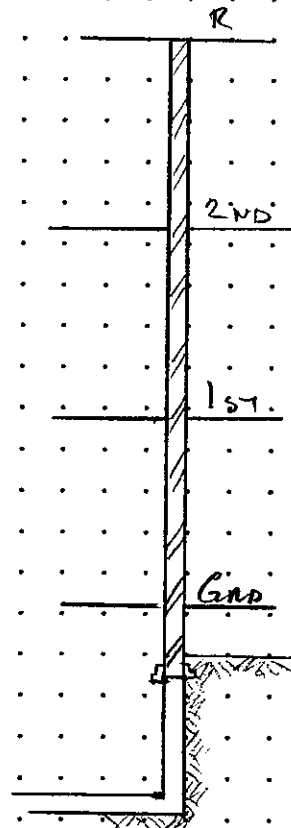
PARTY WALL

DEAD LOADS

$$\begin{aligned}
 &\text{ROOF (NOMINAL)} && 1.0 \\
 &2^{\text{ND}} \text{ FLOOR} = 1.35 \times 4.4 / 2 \times 2 = 5.94 \\
 &1^{\text{ST}} \text{ FLOOR} = 1.35 \times 4.4 / 2 \times 2 = 5.94 \\
 &\text{GND. FLOOR} = 1.35 \times 4.4 / 2 \times 2 = 5.94 \\
 &\text{WALL} = 5 \times 8.5 = 42.50 \\
 &\text{CONC WALL} = 6 \times 2.5 = 15.00 \\
 &P = 76.32 \text{ kN/m}
 \end{aligned}$$

IMPOSED LOADS

$$\begin{aligned}
 &\text{ROOF (NOMINAL)} && 1.0 \\
 &3 \text{ FLOORS} = 3 \times 1.5 \times 4.4 / 2 \times 2 = 19.8 \\
 &P = 20.8 \text{ kN/m}
 \end{aligned}$$



Basement Masters GOR-RAY HOUSE 758 GREAT CAMBRIDGE ROAD ENFIELD, MIDDLEX, EN1 3PN Tel: (020) 8443 7009 Fax: (020) 8366 5876	Project Title: 27 Lambolle Road	Job No: 27LRC16
	Element: Party Wall	Calc. Sheet No. 03
	Drawing Ref: Calculations by: CDW	Date: 16-Mar-16

Retaining Wall

Height	Angle of Repose		ka	kp	Water Depth	pw	Pw
m	Degrees	Radians			m		kN/m
2.750	30	0.52	0.333	3.000	1.500	12.26	7.66

Dead Loads

Overburden	Soil	Line Load	Distance	po	ps	Po	Ps	Pl
kN/m2	kN/m3	kN/m	m			kN/m	kN/m	kN/m
1.35	18.0	0	0	0.45	16.50	1.24	22.69	0.00

Live Loads

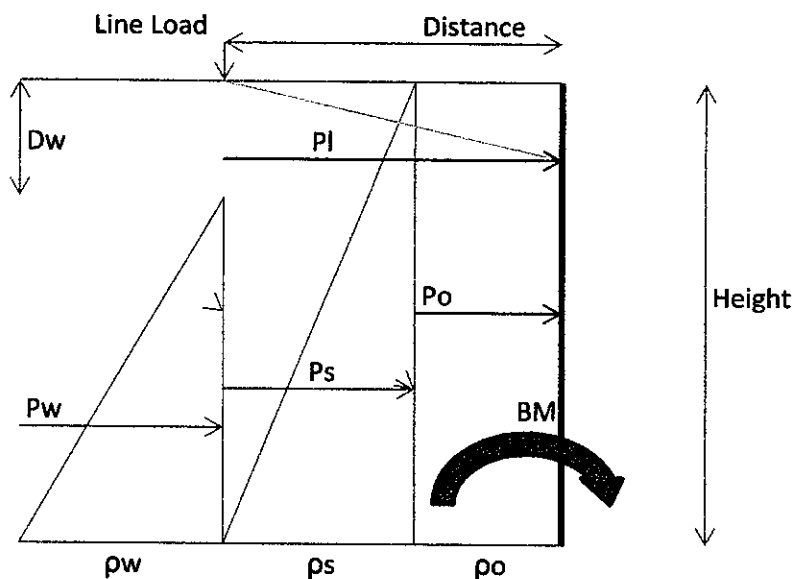
Overburden	Material	Line Load	Distance	po	ps	Po	Ps	Pl
kN/m2	kN/m3	kN/m	m			kN/m	kN/m	kN/m
1.50	0.0	0	0	0.50	0.00	1.38	0.00	0.00

Dead Loads

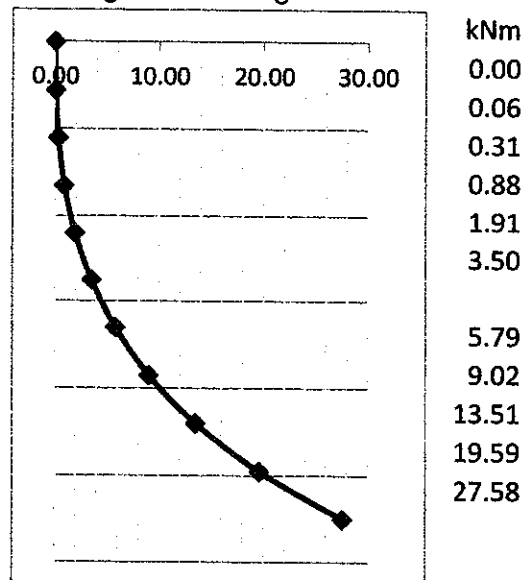
ΣP	Po BM	Ps BM	Pl BM	Pw BM	ΣBM	Load Fctr	Pu	Mu
kN/m	kNm/m	kNm/m	kNm/m	kNm/m	kNm/m		kN/m	kNm/m
31.59	1.70	20.80	0.00	3.19	25.69	1.4	44.225	35.969

Live Loads

ΣP	Po BM	Ps BM	Pl BM	ΣBM	Load Fctr	Pu	Mu
kN/m	kNm/m	kNm/m	kNm/m	kNm/m		kN/m	kNm/m
1.38	1.89	0.00	0.00	1.89	1.6	2.200	3.025



Bending Moment Diagram



Basement Masters GOR-RAY HOUSE, 758 GREAT CAMBRIDGE ROAD ENFIELD, MIDDLESEX EN1 3PN Tel: (020) 8443 7099 Fax: (020) 8360 5576	Project Title: 27 Lambolle Road	Job No: 27LRC16
	Element: Party Wall	Calc. Sheet No. 04
	Drawing Ref: Calculations by: CDW	Date: 17-Mar-16

Dead Loads		
P	W	BM
kN	kN/m ²	kNm
76.32	7.90	25.88

Live Loads		
P	W	BM
kN	kN/m ²	kNm
20.80	1.50	1.89

Grd Capacity	Slab T	Cover	Slab d	Wall T	Cover	b	Wall d
kN/m ²	mm	mm	mm	mm	mm	mm	mm
100	250	50	190	250	50	1000	190

Service Loads

P	W	B	Slab BM	Wall BM
kN	kN/m ²	m	kNm	kNm
97.12	9.40	1.072	52.05	27.77

Ultimate Loads

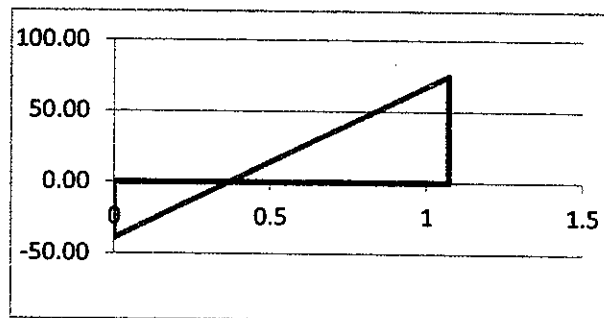
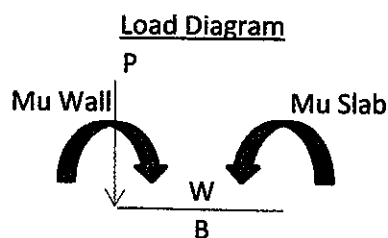
P	W	P/B	Slab Mu	Wall Mu	Fcu	Py
kN	kN/m ²	kN/m ²	kN	kNm	N/m ²	N/mm ²
140.13	13.46	130.72	75.11	39.26	35	460

Slab Design			
k	z'	As	Min As
		mm ²	mm ²
0.059	0.929	974	325

Charts 21 to 40	
d/h	100Asc/bh
0.76	0.4

Wall (Beam Design)				Wall (Column Design)			
k	z'	As	Min As	W/bh	M/bhh	As	Min As
		mm ²	mm ²	N/mm ²	N/mm ²	mm ²	mm ²
0.031	0.950	498	325	0.30	0.63	1000	1000

Trial As	Trial As'	Span/d
1005	393	6.458



Bending Moment Diagram kNm

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Project Title

Element

Drawing ref

Calculations by

CDW

Checked by

Job No.

27 LRC16

Calc. sheet No.

05

Date

MARCH 2016

REF

CALCULATION SHEET

REAR WALL

DEAD LOADS

$$\text{ROOF} = 1.35 \times 5.2 / 2 = 3.5$$

$$3 \text{ FLOORS (NOMINAL)} = 3.0$$

$$\text{WALL} = 5 \times 8.5 = 42.5$$

$$\text{CONC WALL} = 6 \times 2.5 = 15.0$$

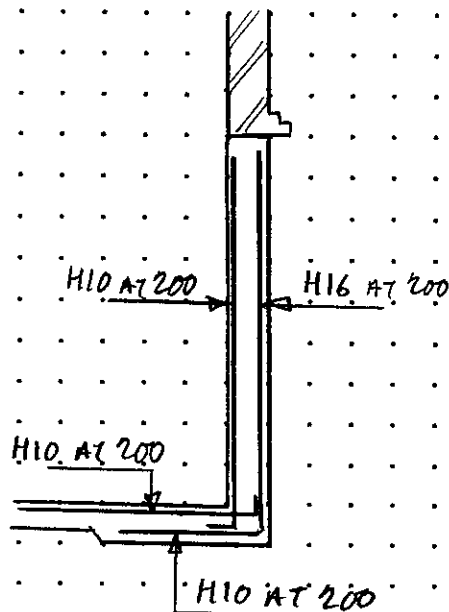
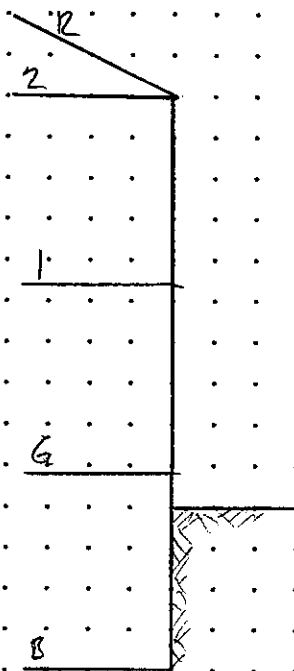
$$P = \frac{64.0}{}$$

IMPOSED LOADS

$$\text{ROOF} = 0.75 \times 5.2 / 2 = 1.95$$

$$3 \text{ FLOORS (NOMINAL)} = 3.00$$

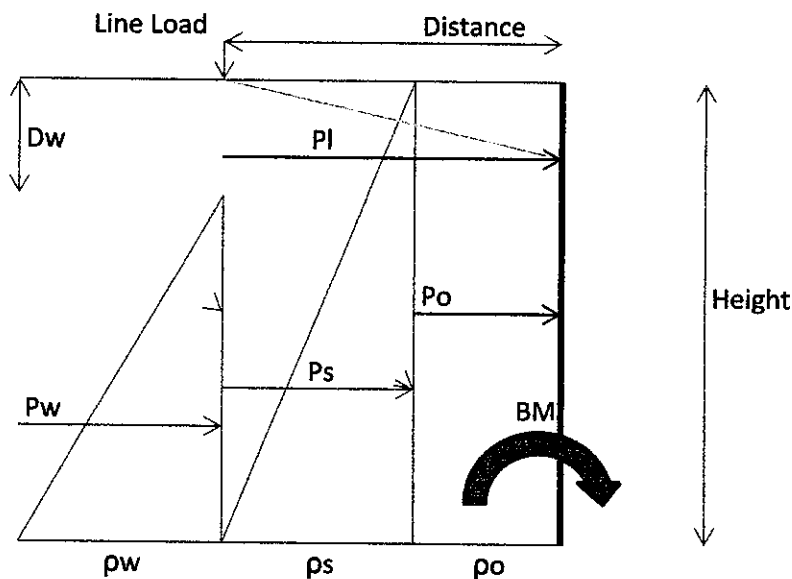
$$4.95 \text{ kN/m}$$



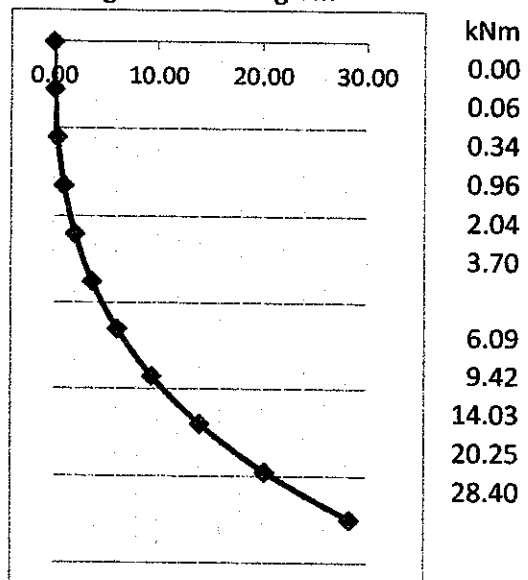
Basement Masters GOR-RAY HOUSE, 756 GREAT CAMBRIDGE ROAD ENFIELD, MIDDLEX, EN1 3PN Tel: (020) 8443 7099 Fax: (020) 8366 5576	Project Title: 27 Lambolle Road	Job No: 27LRC16
	Element: Rear Wall	Calc. Sheet No. 06
	Drawing Ref: Calculations by: CDW	Date: 17-Mar-16

Retaining Wall

Height m	Angle of Repose		ka	kp	Water Depth		pw	Pw
	Degrees	Radians			m (Dw)			kN/m
2.750	30	0.52	0.333	3.000	1.500		12.26	7.66
Dead Loads								
Overburden kN/m2	Soil kN/m3	Line Load kN/m	Distance m	po	ps	Po kN/m	Ps kN/m	PI kN/m
1.00	18.0	0	0	0.33	16.50	0.92	22.69	0.00
Live Loads								
Overburden kN/m2	Material kN/m3	Line Load kN/m	Distance m	po	ps	Po kN/m	Ps kN/m	PI kN/m
2.50	0.0	0	0	0.83	0.00	2.29	0.00	0.00
Dead Loads								
ΣP kN/m	Po BM kNm/m	Ps BM kNm/m	PI BM kNm/m	Pw BM kNm/m	ΣBM kNm/m	Load Fctr	Pu kN/m	Mu kNm/m
31.27	1.26	20.80	0.00	3.19	25.25	1.4	43.776	35.351
Live Loads								
ΣP kN/m	Po BM kNm/m	Ps BM kNm/m	PI BM kNm/m		ΣBM kNm/m	Load Fctr	Pu kN/m	Mu kNm/m
2.29	3.15	0.00	0.00		3.15	1.6	3.667	5.042



Bending Moment Diagram



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	Element: Rear Wall	Calc. Sheet No. 07
	Drawing Ref: Calculations by: CDW	Date: 17-Mar-16

Dead Loads		
P	W	BM
kN	kN/m ²	kNm
64.00	7.90	25.25

Live Loads		
P	W	BM
kN	kN/m ²	kNm
5.00	1.50	3.15

Grd Capacity	Slab T	Cover	Slab d	Wall T	Cover	b	Wall d
kN/m ²	mm	mm	mm	mm	mm	mm	mm
100	250	50	190	250	50	1000	190

Service Loads

P	W	B	Slab BM	Wall BM
kN	kN/m ²	m	kNm	kNm
69.00	9.40	0.762	26.27	28.40

Ultimate Loads

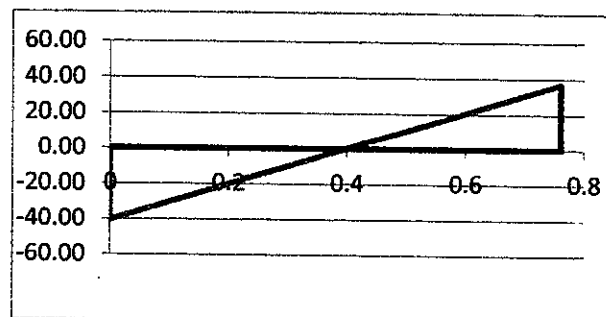
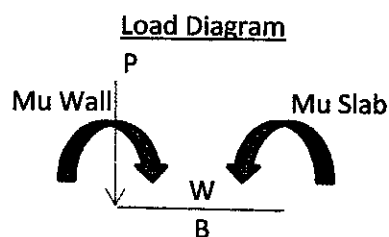
P	W	P/B	Slab Mu	Wall Mu	Fcu	Py
kN	kN/m ²	kN/m ²	kN	kNm	N/m ²	N/mm ²
97.60	13.46	128.15	37.17	40.39	35	460

Slab Design			
k	z'	As	Min As
		mm ²	mm ²
0.029	0.950	471	325

Charts 21 to 40	
d/h	100Asc/bh
0.76	0.4

Wall (Beam Design)				Wall (Column Design)			
k	z'	As	Min As	W/bh	M/bhh	As	Min As
		mm ²	mm ²	N/mm ²	N/mm ²	mm ²	mm ²
0.032	0.950	512	325	0.15	0.65	1000	1000

Trial As	Trial As'	Span/d
1005	393	6.594



Bending Moment Diagram kNm

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Project Title

Element

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Checked by

Job No.

27LRC16

Calc. sheet No.

08

Date

MARCH 2016

REF

CALCULATION SHEET

INTERNAL WALL

SERVICE LOADS

DEAD

$$\begin{aligned}
 \text{ROOF} &= 1.35 \times 7.5/2 = 5.06 \\
 \text{2ND.} &= 1.35 \times 7.5/2 = 5.06 \\
 \text{1ST.} &= 1.35 \times 7.5/2 = 5.06 \\
 \text{GRD.} &= 1.35 \times 7.5/2 = 5.06 \\
 \text{225 WALL} &= 5 \times 5.5 = 27.50 \\
 \text{340 WALL} &= 7.5 \times 2.75 = 20.63 \\
 &= \underline{68.37 \text{ kN/m}}
 \end{aligned}$$

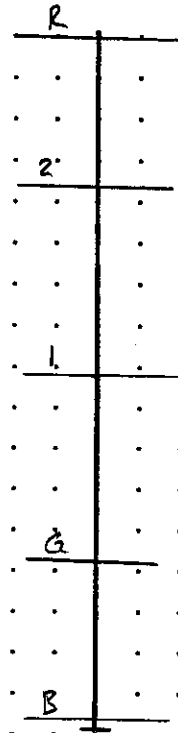
IMPOSED

$$\begin{aligned}
 \text{ROOF} &= 0.75 \times 7.5/2 = 2.81 \\
 \text{3 FLOORS} &= 3 \times 1.5 \times 7.5/2 = 16.88 \\
 &= \underline{19.69 \text{ kN/m}}
 \end{aligned}$$

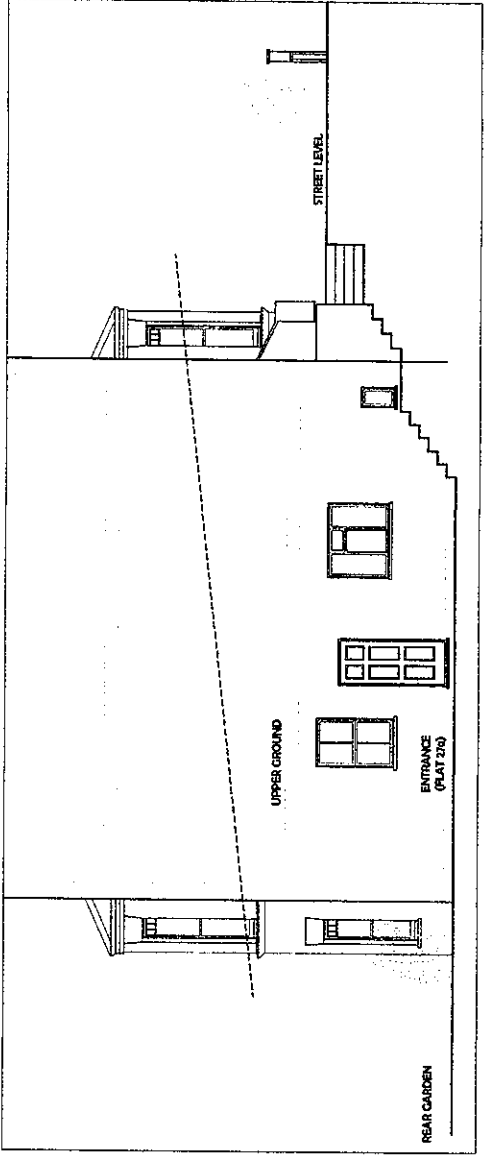
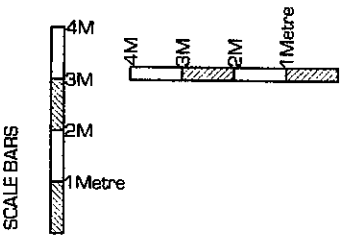
$$\Sigma = \underline{88.06 \text{ kN/m}}$$

$$\text{GROUND CAPACITY} = 100 \text{ kN/m}^2$$

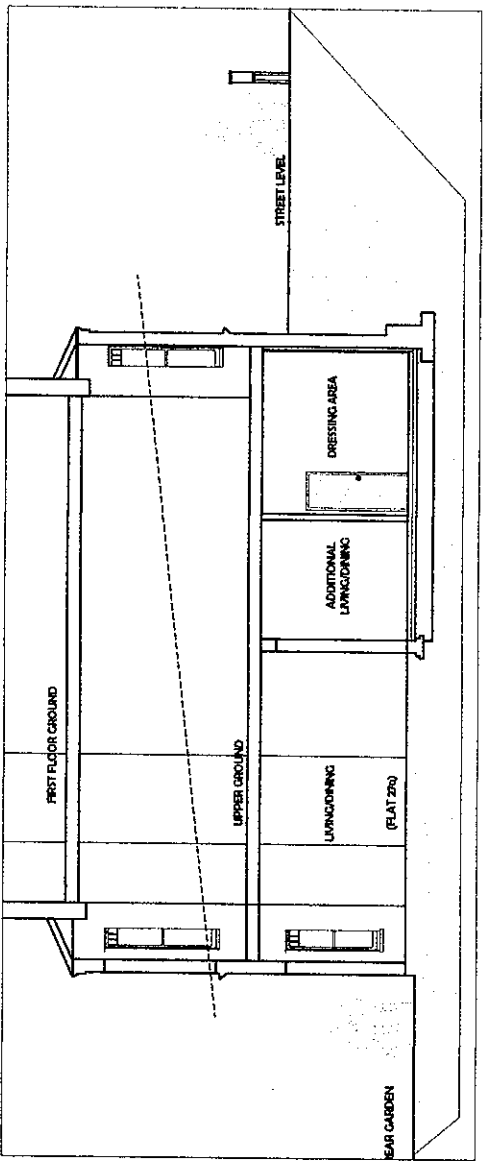
$$\text{FOOTING WIDTH} = 88/100 = 0.88 \text{ m say } \underline{900 \text{ mm}}$$



PROPOSED PLANS



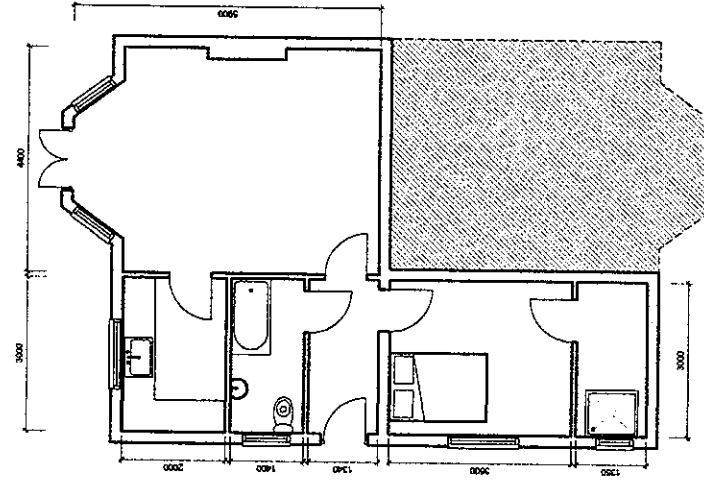
SIDE ELEVATION - No changes to elevations as all work proposed is to be at lower ground level and non visible externally



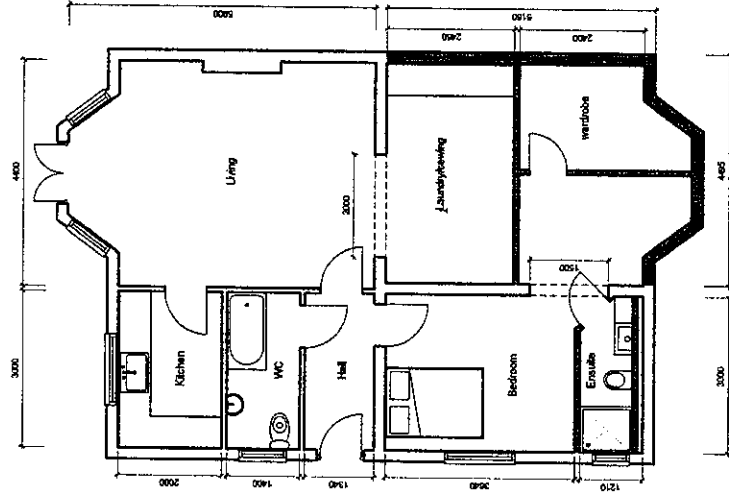
SECTION

Architectural floor plan of a two-bedroom apartment. The plan shows a living area with a fireplace, a dining area, a kitchen with a sink and stove, two bedrooms with beds, a bathroom with a bathtub and toilet, and a central hallway. Dimensions are provided for various sections: overall width 4600, overall depth 3000, and room-specific widths like 2000, 1800, 1340, 2000, 1300, and 3000.

1 Level 0 existing
1:50



3 **Level 0 opportunity** 1:50



2 Level 0 proposed
1:50

3
4
5
6
7
8

DATE	15/06/2011	DATE	01/06/11	TIME	00
PROJECT	32A Lambeth Road, London SE9 4LS				
DESCRIPTION	FLOORPLANS EXISTING AND PROPOSED				
1:100 (A1)	DATE	04/04/2011	OWNER	JP	
J FOSTER ARCHITECTS					
15.LAM 01 001					00

David J. Reardon, M.D., is a professor of medicine and director of the Division of Endocrinology and Metabolic Diseases at the University of California, San Francisco.

1. All planning and proposed layouts to be carried out by a registered architectural Architect (ARB/IBA)
2. All Planning and Conservation consents to be obtained from the Council.
3. Note: Camden Application ref 2017/042/0 was granted planning Permission for a basement and lightwell
4. Proposed parking, landscaping and other external works to be carried out in accordance with the
5. Proposed conditions, fittings and services to meet Building Regulations Approval.
6. Structural calculations to meet Approved Document A: The Building Regulations 2010.
7. Structural drawings to be submitted to the Council for approval.
8. Structural opening matters to be confirmed subject to further detailed structural analysis by the engineer.
9. All Party Wall matters to be dealt with by an appointed Party Wall Surveyor.
10. ALL DIMENSIONS ARE APPROXIMATE
11. ALL DIMENSIONS TO BE VERIFIED ON SITE