Date	06.08.18	29.10.18	07.03.19	03.04.19	01.05.19						
lssue	1	2	3	4	5						

Drawing Number	Document Title	Scale	Paper Size		Revision											
100	Lower Ground Floor Plan	1:100	A1	P1	P2	Р3	P4	Ρ4								
101	Ground Floor Plan	1:100	A1	P1	P2	Р3	Ρ4	Ρ5								
102	First Floor Plan	1:100	A1	P1	P2	Р3	P4	Ρ4								
103	Second Floor Plan	1:100	A1	P1	P2	Р3	P4	P4								
104	Roof Plan	1:100	A1	P1	P2	Р3	Ρ4	Ρ4								
300	Sections A and B	1:50	A1	Ρ1	P2	Р3	Ρ4	Ρ4								
301	Section C	1:50	A1	Ρ1	P2	Р3	Ρ4	Ρ4								
500	Structural Details (Sheet 1 of 1)	1:20	A1		Ρ1	P2	P4	Ρ4								
501	Proposed Entrance Ramp Plan and Sections	Varies	A1		P1	P2	P4	Р4								
502	Proposed Canopy Plans and Sections	Varies	A1		P1	P2	P4	Ρ4								
700	Temporary Works: Stages 1 - 4	1:100	A1		P1	P2	Ρ4	Ρ4								
-	Structural Specification	-	A4	А	-	-	-	-								

Distribution	Issue (E denotes electronic issue)															
Ridge and Partners LLP		Е	Е	Е	Е	Е										
Satellite Architects		Е	Е	Е	Е	Е										
Revision prefixes:	P — Preliminary			Т —	Ter	nder		С	C	Cons	truc	tion	1	R —	- Red	cord



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Title:		lssue:	
Document Register		5	
Project:		Job No:	
Abacus Belsize Primary Sch	ool	4343	
By:	Sheet:	Date:	
ES	1 of 1	01.05.19	



 100x100x10 SHS

 600x600x750mm deep mass concrete foundation

 All Pad foundation dimensions to be as shown in column schedule. Constructed from FND2 concrete mix or other approved by building control officer - depth of foundations to be minimum 1000mm below ground level and as agreed with Building Control

Unless dimensioned otherwise, new wide trench filled foundations to extend to existing foundations with FMD2 concrete mix or other approved by building control officer -depth of foundations to be minimum 1000mm below ground level and as agreed with Building Control

Exercise 3.6N/mm² blockwork with class (iii) mortar. Engineering bricks or F2 designation blockwork to be used below DPC

Indicates existing structure to be demolished. Where • existing walls are being demolished, foundations are to be retained to provide support to new floor structure

 $\pmb{\star}$ Indicates junction between new and old masonry walls use Ancon Staifix Universal wall starter kit

Indicates lintels over openings to be raised. Allow for precast builders work lintels internally and reforming arches on exterior elevations

 $\ensuremath{^+}\xspace$ Indicates new opening. Precast concrete lintels and exterior detailing to Architect's specification

Allow for new steelwork at high level to support M&E mechanical plant. Allow 200kg. Make allowance for openings for air ducts including lintels

SCALE 1:100

5

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Ref.

C1

C2

C3

C4

C5

This scheme is based on limited opening up works of the existing structure. All assumptions subject to confirmation during next stage.

Founding material assumed to be sandy clay with allowable bearing pressure 150kN/m². To be confirmed by geotechnical investigation (not seen)

Proposed Column Schedule

Serial Size 254x254x107 UKC

2 x 2 x 1m deep mass concrete foundation

203x203x86 LIKC

203x203x46 UKC 1 x 1 x 1m deep mass concrete foundation

152x152x30 UKC 1 x 1 x 1m deep mass concrete foundation

150x150x10 SHS 1 x 1 x 1m deep mass concrete foundation

100x100x10 SHS

1.5 x 1.5 x 1m deep mass concrete four

NOTES:

Stage 3 Drawing



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Rev	Date	Description	Drawn	Checked
P1	06.08.18	For Comment	RS	CG
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P4	05.04.19	Updated	ES	CG

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Lower Ground Floor Structural Engineering Plan Abacus Belsize Primary School, NW3

ESFA

Job No. 4343

Drawing 100

Revisio P4

1:100 at A1

Allow for new ramp structure. Refer to dwg. 501 Allow for 100mm deep Reconfigured footway New masonry lift shaft in-situ concrete infill Downshire Hill В X ΈΞ /// 64 B8 M&I \land Œ 3F 🔨 D4 Ó £..... 3F * T < В ۴Ħ Allow for roof canopy. Refer to dwg. 502 D5 1 i _ ; ----D5 Rosslyn Hill M&E <<u>+</u> DG ND9 D9/ :h <.... R2 <u>.</u> 83.6 F4 ...B2. Engineering bricks or F2 designation blockwork to be used below DPC D6 8 1 88 в2 В2 ΠÞ B2 B2 Indicates existing structure to be demolished. Where • existing walls are being demolished, foundations are to be retained to provide support to new floor structure / D12 D12 3B 🔨 11 M&E + O. Allow for new entrance steps in precast concrete V # Indicates lintels over openings to be raised. Allow for precast builders work lintels internally and reforming arches on exterior elevations кШ A Allow for 150mm deep in-situ concrete infill. Refer to Detail D12 $\ensuremath{^{+}}$ Indicates new opening. Precast concrete lintels and exterior detailing to Architect's specification Allow for new stairs to Architect's specification Indicates assumed span of existing floor. Number/letter reference where build-up has been confirmed, see dwg. 500 VIIIIX **K**\$ Typically, joists are at 650mm centres, with 100mm deep clay pot and clinker concrete infill and topping



	Proposed Beam Schedule
Ref.	Serial Size
B1	203x133x25 UKB
B2	356x171x45 UKB
B3	457x191x74 UKB
B4	533x210x92 UKB
B5	203x203x46 UKC
B6	254x254x89 UKC
B7	305x305x118 UKC
B8	356x368x177 UKC
B9	356x406x467 UKC
B10	152x152x30 UKC
B11	200x90x30 PFC

	Proposed Column Schedule							
Ref.	Serial Size							
C1	254x254x107 UKC							
C2	203x203x86 UKC							
C3	203x203x46 UKC							
C4	152x152x30 UKC							

K 🗂	v
in C	γ.

ZZZ Indicates new brickwork to Architect's specification with class (iii) mortar. Brickwork with F2 designation to be used below DPC

--- Indicates line of structure under

* Indicates junction between new and old masonry walls use Ancon Staifix Universal wall starter kit

 $\overline{}$

Indicates existing beam and block floor

Indicates new 150mm deep concrete floor on metal deck

T Indicates new 200x50mm C24 timber joists at 400mm centres

Unless noted otherwise, allow for 450x215x215mm deep mass concrete padstones under all beams

M&E Allow for new steelwork at high level to support mechanical plant. Allow 200kg. Make allowance for openings for air ducts including lintels





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SCALE 1:100

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New stairs and masonry shaft to Architect's specification



Stage 3 Drawing



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isions to be verified on cing work. All error and to the Engineer. This d ction with all relevant E and specifications

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P1	06.08.18	For Comment	RS	CG
P2	29.10.18	For Comment	RS	CG
P3	07.03.19	For Comment	ES	CG
P4	05.04.19	Updated	ES	CG
P5	01.05.19	Updated	ES	CG

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Ground Floor Structural Engineering Plan Abacus Belsize Primary School, NW3

ESFA

Job No. 4343

Drawing N 101

Revisio P4

_						
		Proposed Beam Schedule				
	Ref.	Serial Size				
	B1	203x133x25 UKB				
	B2	356x171x45 UKB				
	B3	457x191x74 UKB				
	B4	533x210x92 UKB				
	B5	203x203x46 UKC				
	B6	254x254x89 UKC				
	B7	305x305x118 UKC				
	B8	356x368x177 UKC				
	B9	356x406x467 UKC				
	B10	152x152x30 UKC				
	B11	200x90x30 PEC				

Proposed Column Schedule Ref. Serial Size 254x254x107 UKC C1 C2 203x203x86 UKC C3 203x203x46 UKC C4 152x152x30 UKC

Key:

ZZZ Indicates new brickwork to Architect's specification with class (iii) mortar. Brickwork with F2 designation to be used below DPC

Rosslyn Hill

Engineering bricks or F2 designation blockwork to be used below DPC

--- Indicates line of structure under

...... Indicates existing structure to be demolished

★ Indicates junction between new and old masonry walls use Ancon Staifix Universal wall starter kit

Indicates lintels over openings to be raised. Allow for precast builders work lintels internally and reforming arches on exterior elevations

 $\ensuremath{\mathsf{T}}$ Indicates new opening. Precast concrete lintels and exterior detailing to Architect's specification

 Indicates assumed span of existing floor.
 Number/letter reference where build-up has been confirmed, see dwg. 500 $\overline{}$

Typically, joists are at 650mm centres, with 100mm deep clay pot and clinker concrete infill and topping

Indicates new flat roof formed from 200x50mm C24 timber joists at 400mm centres with 18mm ply over

Unless noted otherwise, allow for 450x215x215mm deep mass concrete padstones under all beams

Allow for new steelwork at high level to support M&E mechanical plant. Allow 200kg. Make allowance for openings for air ducts including lintels









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P3	07.03.19	For Comment	ES	CG
P4	05.04.19	Updated	ES	CG

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First Floor Structural Engineering Plan Abacus Belsize Primary School, NW3

ESFA

Job No. 4343

Drawing N 102

Revisio P4

1:100 at A1

	Proposed Beam Schedule
Ref.	Serial Size
B1	203x133x25 UKB
B2	356x171x45 UKB
B3	457x191x74 UKB
B4	533x210x92 UKB
B5	203x203x46 UKC
B6	254x254x89 UKC
B7	305x305x118 UKC
B8	356x368x177 UKC
B9	356x406x467 UKC
B10	152x152x30 UKC
B11	200x90x30 PFC

Proposed Column Schedule Ref. Serial Size C1 254x254x107 UKC C2 203x203x86 UKC C3 203x203x46 UKC C4 152x152x30 UKC

Key:

Indicates new brickwork to Architect's specification with class (iii) mortar. Brickwork with F2 designation to be used below DPC

Rosslyn Hill

Engineering bricks or F2 designation blockwork to be used below DPC

Indicates **10.4N/mm²** blockwork with class (iii) mortar. Engineering bricks or F2 designation blockwork to be used below DPC

--- Indicates line of structure under

...... Indicates existing structure to be demolished

 $\pmb{\star}$ Indicates junction between new and old masonry walls use Ancon Staifix Universal wall starter kit

Indicates lintels over openings to be raised. Allow for precast builders work lintels internally and reforming arches on exterior elevations

 $\ensuremath{\dagger}$ Indicates new opening. Precast concrete lintels and exterior detailing to Architect's specification

Indicates assumed span of existing floor. Number/letter reference where build-up has been confirmed, see dwg. 500 $\overline{}$

Typically, joists are at 650mm centres, with 100mm deep clay pot and clinker concrete infill and topping

Unless noted otherwise, allow for 450x215x215mm deep mass concrete padstones under all beams

M&E Allow for new steelwork to support mechanical plant. Allow 200kg. Make allowance for openings for air ducts including lintels









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P3	07.03.19	For Comment	ES	CG
P4	05.04.19	Updated	ES	CG

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Second Floor Structural Engineering Plan Abacus Belsize Primary School, NW3

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Job No. 4343

Drawing M 103

Revision P4





NOTES:

Key:

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P2	29.10.18	For Comment	RS	CG
P3	07.03.19	For Comment	ES	CG
P4	05.04.19	Updated	ES	CG





Scale 1:50

Section A Scale 1:50

Note: Finishes not known

SCALE 1:50

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Stage 3 Drawing



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Drawing History				
Rev	Date	Description	Drawn	Checked
P1	06.08.18	For Comment	RS	CG
P2	29.10.18	Revised Sections	RS	CG
P3	07 03 19	For Comment	FS	CG

P4 05.04.19 For Comment ES CG

Note: Finishes not known

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Title Structural Engineering Sections A and B

Project Abacus Belsize Primary School, NW3

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Job No. 4343

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SCALE 1:50 0

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Crank in beam to be full strength

Existing mid-floor (beyond) to be retained

A1



Stage 3 Drawing



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Rev	Date	Description	Drawn	Checked
P1	06.08.18	For Comment	RS	CG
P2	29.10.18	Added Levels	RS	CG
P3	07.03.19	For Comment	ES	CG
P4	05.04.19	For Comment	ES	CG

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Title Structural Engineering Section C

Project Abacus Belsize Primary School, NW3

Client ESFA

Job No. 4343 Drawing No. 301 Revision P4

^{Scale} 1:50 at A1



Detail D4 Scale 1:20







Detail D11 Scale 1:20



Detail D12 Scale 1:20



Scale 1:20

Dimensions (mm)					
Location on Plan	Floor Type	Beam Size	а	b	С
2	В	BSB4	100	75	640
3	B and F	BSB6	125 - 130	75	600 - 660
4	B and F	BSB8	150	75	640 - 835
5	B and F	BSB11	180	100	640
6	В	BSB12	200	100	640
Note: based on limited opening-up works. Full survey required prior to final design					

Typical Existing Floor Construction Scale 1:20



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Drawing History				
Rev	Date	Description	Drawn	Checked
P1	29.10.18	For Comment	RS	CG
P2	07.03.19	For Comment	ES	CG
P3	05.04.19	For Comment	ES	CG

Scale 1:20

lote: based on limited opening-up works. Full survey required prior to final design

Stage 3	Drawing
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Structural Engineering Details (Sheet 1 of 1)

Project Abacus Belsize Primary School, NW3

Client ESFA

Job No. 4343

Drawing No. 500 Revision P3

Proposed Steel Schedule				
Ref.	Serial Size			
Entrance Ramp Beam ERB1	200x100x10 RHS			
Entrance Ramp Beam ERB2	100x60x5 RHS			
Entrance Ramp Beam ERB3	100x100x10 SHS			
Bracing BR1	70x70x5 EQA			
Handrail Uprights H1	60x60x5 RHS			
Posts C10	100x100x10 SHS 600 x 600 x 750m deep mass foundation			
Key:				
Indicates line of structu	re under			
Indicates existing structure to be demolished. Where existing walls are being demolished, foundations are to be retained to provide support to new floor structure				
Unless noted otherwise, allow for 450x215x215mm deep mass concrete padstones under all beams				













Α1



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P R E L I M I N A R Y NOT FOR CONSTRUCTION

Entrance Ramp, Structural Engineering Plans and Section

Abacus Belsize Primary School, NW3

Client ESFA

Job No. 4343

Drawing N 501

Revision P3

Scale Varies at A1

Proposed Beam Schedule		
Ref.	Serial Size	
Canopy Beam CB1	180x180x10 SHS	
Canopy Beam CB2	180x180x10 SHS	
Column C5	150x150x10 SHS	

Key: --- Indicates line of structure under Indicates existing structure to be demolished. Where • existing walls are being demolished, foundations are to be retained to provide support to new floor structure

Indicates span of glazing

Allow for 16mm laminated glass on supports to spec design. Details to Architect's drawings including drai perimeter details	ialist's inage and



Refer to Drawing 100 for plan of columns and foundation







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P3	05.04.19	Updated	ES	CG



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Structural Engineering Canopy,Plan and Sections

Abacus Belsize Primary School, NW3

Client ESFA

Job No. 4343

Drawing No 502

Revision P3





Proposed Ground Floor Part Plan Scale 1:100

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Stage 1 - Roof Works Scale 1:100

Section A - Existing Scale 1:100

Roof FFL

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93.340m AD



Stage 4 - Ground Floor Works Scale 1:100

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	Sequence
1	Through prop from roof to lower-ground
2	Install needles to support chimney stack
3	Demolish walls and flue stack at 2nd floor level
4	Insert beams tight to underside of roof and dry-pack
5	Remove needles and top level of props

Sequence		
1	Demolish walls to lower ground floor level	
2	Insert beams tight to underside of ground floor and dry pack	
3	Remove props at lower ground floor level	

PRELIMINARY NOT FOR CONSTRUCTION

Title Structural Engineering Temporary Works Stages 1 - 4 Abacus Belsize Primary School, NW3

Client ESFA Job No. 4343

Drawing No. 700 Revision P2