



House type: Betts_EG_LEDH_DM_Multisheet	Job No:-		RED 737								Revision: C							
			Date of Issue:-															
	Day		24	22	17	14												
	Month		08	02	11	03												
	Year		22	23	23	24												
Description	Size	No.																
Foundation/RC Slab Layout	A2	01	-	-	A	B												
Beam and Block Layout	A2	02	-	-	A	B												
First Floor Layout (showing steels below)	A2	03	-	-	A	B												
Windpost Details	A1	04	-	A	A	A												
MJ & BJR Elevations B1	A3	05	-	A	A	A												
MJ & BJR Elevations A1	A3	06	-	A	A	A												
Distribution																		
Redrow Homes Group Technical			-	-	-	-												
Purpose of Issue: I-Info P-Prelim B-Bill T-Tender C-Const A-Approval			C	C	C	C												
Method of Issue: CDE-Upload E-Email D-Disk P-Print X-Issue sheet only			E	E	E	E												
Issued By:			KF	KF	MC	MC												
Comments:			For calculations refer to separate structural calculation document															

General Notes

- G1. This drawing is to be read in conjunction with all relevant Client, Architects & Specialists Drawings & Specifications.
- G2. All materials & workmanship shall be in accordance with NHBC Standards;

Concrete Mixes

- C1. Unless noted otherwise, mixes shall be designated mixes in accordance with BS8500 and NHBC Standards Section 2.1, as follows:

Location	Mix	Max Agg Size (mm)	Consistency Class
Ground floor slab	RC28/35	20	S2
concrete foundations	Gen 1	20	S3

The above mix details for concrete in contact with the ground are based upon design sulphate class DS-1, ACEC class AC-1. Refer to site specific Soil Investigation Report for site specific modifications to the above mixes.

- C2. All workmanship, including formwork, reinforcement, testing, casting and curing, shall be in accordance with NHBC Standards Section 2.1
- C3. Cover to reinforcement to be as follows:

Top of slab 25 mm
Btm of slab 40 mm

- C4. Minimum laps in reinforcement to be as follows:

Mesh Ends - 400 mm
Mesh Sides - 250 mm

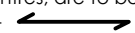
Foundation Notes

- F1. Foundations widths have been based on an allowable design ground bearing capacity of 100kN/m². Refer to site specific soil investigation report for site specific bearing capacity.
- F4. Foundation formation depths are to be stepped in accordance with NHBC Standards.
600 Denotes width of foundations refer to plan.
- F5. Where ground conditions are locally poor or unsuitable at the minimum specified depth, the formation level is to be extended down to an approved bearing strata in lean mix concrete.
- F6. Where the following conditions occur, and have not been identified within the Geo-environmental report or on other drawings, further advice should be sought:
- Presence of trees, on or around the site
 - Presence of ponds and/or streams
 - Knowledge of, or discovery of, tipped or waste materials
 - Knowledge of, or discovery of, old mine or quarry's
 - Ground slopes greater than anticipated.
- F7. Foundation excavations should take due account of external services.
- F8. Excavations for foundations are to be inspected by the Local Authority/ NHBC Inspector prior to casting.

Substructure Masonry Notes

- M1. For brickwork specification refer to Architect's Details.
- M2. The contractor is to provide all temporary bracing/ strutting to brick/ block walls to ensure their stability.

Ground Floor Slab Notes

- G1. The ground floor slab is designed as suspended and is to be cast on a sub-base of clean well graded, inert selected site fill material. This material should be nominally compacted to provide a suitable base for receiving freshly poured concrete and shall be blinded with fines and covered with 1200g DPM. For below floor insulation requirements refer to architects specification.
- G2. All ground floor slabs to be 190mm thick, U.N.O., and reinforced in accordance with details shown on the drawing. Slabs are to receive a power float finish in accordance with Redrow Homes specification and requirements.
- G4. The main bars, at 100mm centres, are to be placed parallel with the span directions shown thus: -  and shall be located nearest to the outer faces of the slab.

(DL:kN/m) (IL:kN/m) Indicates Dead & Imposed service line loads in kN/m. These loads include all superstructure loadings and the ground floor slab. All loadings below the slab are to be added to the loads shown. The above statement is based on information contained in drawings for EG_LEDH_DM. If there are any subsequent revisions to these drawings, refer to Redrow Homes for further instruction

Schedule of sections:

Section 1-1 = SD-G-RCUFH0011
Section 2-2 = SD-G-RCUFH0012
Section 3-3 = SD-G-RCUFH0019
Section 4-4 = SD-G-RCUFH0015
Section 5-5 = SD-G-RCUFH0057
Section 6-6 = SD-G-RCUFH0058
Section 7-7 = SD-G-RCUFH0059
Section 8-8 = SD-G-RCUFH0067
Section 9-9 = SD-G-RCUFH0125

External footings generally to be:

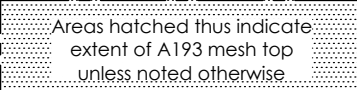
600mm Wide x 175mm Deep.

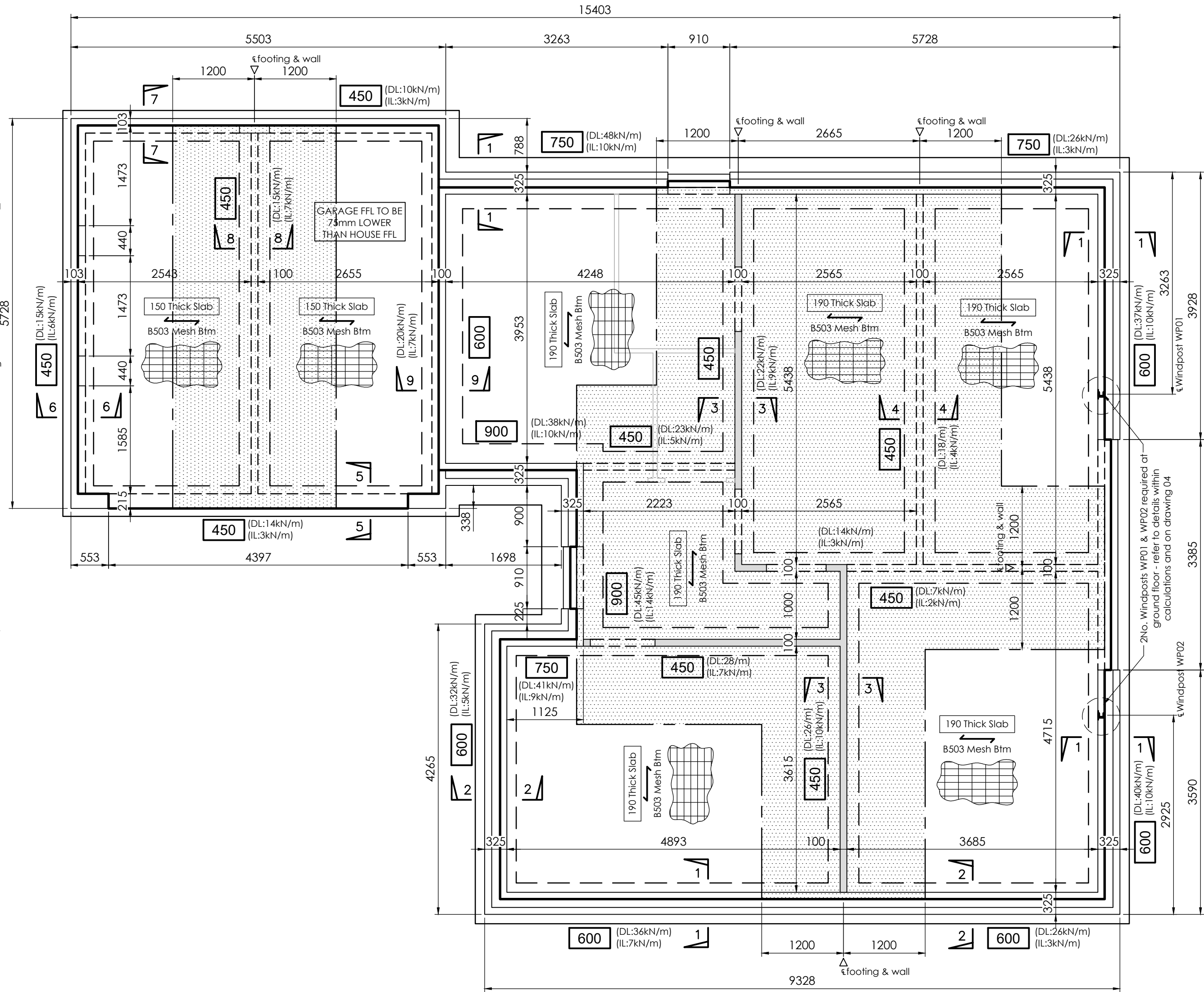
Internal footings generally to be:

450mm Wide x 175mm Deep.
600mm Wide x 250mm Deep.

 Indicates internal loadbearing walls






 Indicates timber partitions
Refer to Redrow details for setting out

 Areas hatched thus indicate extent of A193 mesh top unless noted otherwise



CDM Key

For details refer to CDM sheet

Element	Hazard
Foundations	 Collapse
	 Falls
	 Health
	 Manual handling
	 Man handling-steel and lintel
Ground floor structural	

B	14/03/24	Line loads updated following calc review	MC
A	09/11/23	Section reference updated for section 9-9	MC
Mark	Date	Details	By

Revision history			
------------------	--	--	--

Drawing originator:



Client:



Project title:

Redrow Homes Group
Standard Housetype Catalogue

Drawing title:

Ledsham (EG_LEDH_DM)
Foundation/RC Slab layout
BETTS_EG_LEDH_DM_RCSLAB

Scale: As Indicated for the original size of A2

Drawn by: WR | Checked by: KF | Passed by: | Date: AUG 22

Drawing status:

Construction

Job No:	Drawing No:	Project	Origin	Volume	Level	Type	Discp.	Number	Revision:
RED737	LEDH	BET						01	B

Do not scale this drawing

6-7 Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire, CH5 2LY
enquiries@betts-associates.co.uk
Tel 01244 288178

General Notes

- G1. This drawing is to be read in conjunction with all relevant Client, Architects & Specialists Drawings & Specifications.
- G2. All materials & workmanship shall be in accordance with NHBC Standards;

Concrete Mixes

- C1. Unless noted otherwise, mixes shall be designated mixes in accordance with BS8500 and NHBC Standards Section 2.1, as follows:

Location	Mix	Max Agg Size (mm)	Consistency Class
Ground floor slab	RC28/35	20	S2
concrete foundations	Gen 1	20	S3

The above mix details for concrete in contact with the ground are based upon design sulphate class DS-1, ACEC class AC-1. Refer to site specific Soil Investigation Report for site specific modifications to the above mixes.

- C2. All workmanship, including formwork, reinforcement, testing, casting and curing, shall be in accordance with NHBC Standards Section 2.1
- C3. Cover to reinforcement to be as follows:
Top of slab 25 mm
Btm of slab 40 mm
- C4. Minimum laps in reinforcement to be as follows:
Mesh Ends - 400 mm
Mesh Sides - 250 mm

Foundation Notes

- F1. Foundations widths have been based on an allowable design ground bearing capacity of 100kN/m². Refer to site specific soil investigation report for sie specific bearing capacity.
- F4. Foundation formation depths are to be stepped in accordance with NHBC Standards.
600 Denotes width of foundations refer to plan.
- F5. Where ground conditions are locally poor or unsuitable at the minimum specified depth, the formation level is to be extended down to an approved bearing strata in lean mix concrete.
- F6. Where the following conditions occur, and have not been identified within the Geo-environmental report or on other drawings, further advice should be sought:
• Presence of trees, on or around the site
• Presence of ponds and/or streams
• Knowledge of, or discovery of, tipped or waste materials
• Knowledge of, or discovery of, old mine or quarry's
• Ground slopes greater than anticipated.
- F7. Foundation excavations should take due account of external services.
- F8. Excavations for foundations are to be inspected by the Local Authority/ NHBC Inspector prior to casting.

Substructure Masonry Notes

- M1. For brickwork specification refer to Architect's Details.
- M2. The contractor is to provide all temporary bracing/ strutting to brick/ block walls to ensure their stability.

Beam & Block Floor

- PC1. PC floors shall be designed in accordance with BS 8110, with spans taken as simply supported and to carry the following service loadings plus self weight in kN/m²:-
Timber partitions* = 0.75
Finishes/ screed = 1.80 (Inc. Jeffloor topping self wgt)
Superimposed = 1.50
Superimposed garage = 2.50
* Alternatively assume a line load of 2kN/m for non-loadbearing block partitions.
- PC2. Provide minimum 150mm clear void between lowest point of pre-cast ground floor and ground level - Refer to sections.
- PC3. Denotes span of Hanson Jeffloor or S/A with a certified fibrous screed.
- PC4. The camber in the units shall be within the limits specified in BS 8110; the anticipated maximum camber is to be specified.
- PC5. The maximum size and location of holes to be drilled on site is to be specified.
- PC6. Flooring layouts shall be submitted to the client for review prior to manufacture.

(DL:-kN/m) (LL:-kN/m) Indicates Dead & Imposed service line loads in kN/m. These loads include all superstructure loadings and the ground floor slab. All loadings below the slab are to be added to the loads shown.
The above statement is based on information contained in drawings for EG_LEDH_DM. If there are any subsequent revisions to these drawings, refer to Redrow Homes for further instruction

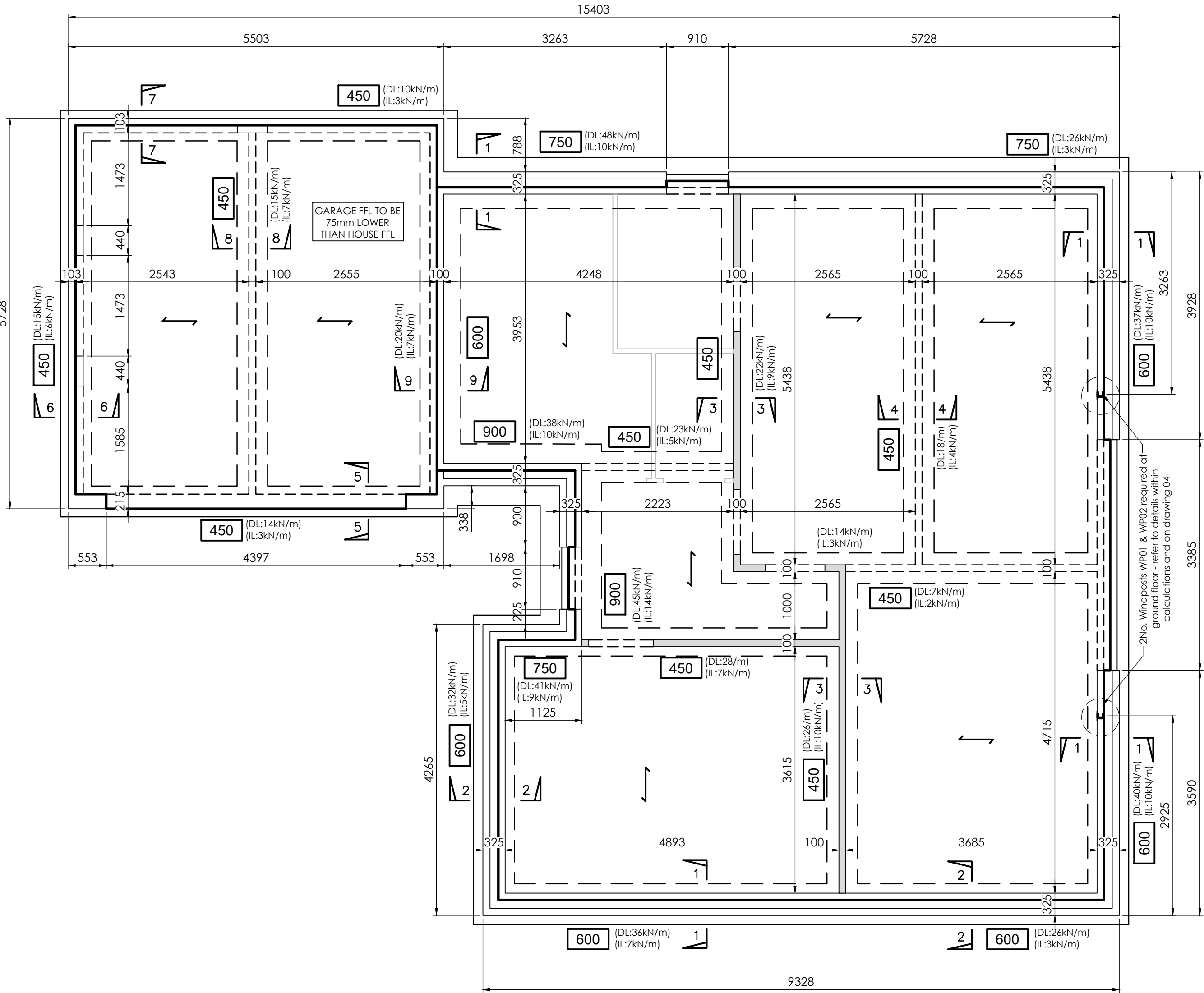
Schedule of sections:

Section 1-1 = SD-G-BB0001
Section 2-2 = SD-G-BB0002
Section 3-3 = SD-G-BB0009
Section 4-4 = SD-G-BB0005
Section 5-5 = SD-G-BB0035
Section 6-6 = SD-G-BB0036
Section 7-7 = SD-G-BB0037
Section 8-8 = SD-G-BB0044
Section 9-9 = SD-G-BB0088

External footings generally to be:
600mm Wide x 175mm Deep.

Internal footings generally to be:
450mm Wide x 175mm Deep.
600mm Wide x 250mm Deep.

- Indicates internal loadbearing walls
- Indicates timber partitions
- Refer to Redrow details for setting out



CDM Key

For details refer to CDM sheet

Element	Hazard
Foundations	Collapse
	Falls
	Health
	Manual handling
Ground floor structural	Man handling-steel and lintel

B	14/03/24	Line loads updated following calc review	MC
A	09/11/23	Section reference updated for section 9-9	MC
Mark	Date	Details	By

Revision history

Drawing originator:



Client:



Project title:

Redrow Homes Group
Standard Housetype Catalogue

Drawing title:

Ledsham (EG_LEDH_DM)
Foundation/Beam & Block layout
BETTS_EG_LEDH_DM_B&B

Scale: As Indicated for the original size of A2

Drawn by: WR | Checked by: KF | Passed by: | Date: AUG 22

Drawing status:

Construction

Job No:	Drawing No:	Project	Origin	Volume	Level	Type	Discip.	Number	Revision:
RED737	LEDH	BET						02	B

Do not scale this drawing

6-7 Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire, CH5 2LY
enquiries@betts-associates.co.uk
Tel 01244 288178

General Notes: -

- G1. This drawing is to be read in conjunction with all relevant client, architects & specialists drawings & specifications.
- G2. All materials & workmanship shall be in accordance with nhbc standards;

Steel Beams Notes: -

- SB1. The steel beams rely on the final construction conditions (including the curing of concrete elements & mortar) for stability and to achieve full loadbearing capacity.
- SB2. In the temporary condition the beams are to be propped and precautions taken to avoid displacement of the beam (lateral movement, turning & rotation, etc...)

Superstructure Masonry Notes: -

- SM1. For brickwork specification refer to architect's details.
- SM2. Superstructure brickwork should be class F2 S2.
- SM3. Superstructure blockwork at ground floor: 7.3N/mm². blockwork at first floor and above: 3.6N/mm².
- SM4. Substructure blockwork as noted on block strength section.
- SM5. The contractor is to provide all temporary bracing/strutting to brick/block walls to ensure their stability.
- SM6. All mortar to be class M4/(iii)

Protective paint specification for all structural steelwork

In shop:-

Blast clean to Sa2½ in accordance with BS 7079 : Part A1 (BS EN ISO 8501-1)

Internal steelwork:-

High build zinc phosphate epoxy primer (80 microns) followed by high build recoatable epoxy micaceous iron oxide (mio) (120 microns), giving a minimum coating thickness of 200 microns

Load bearing masonry below

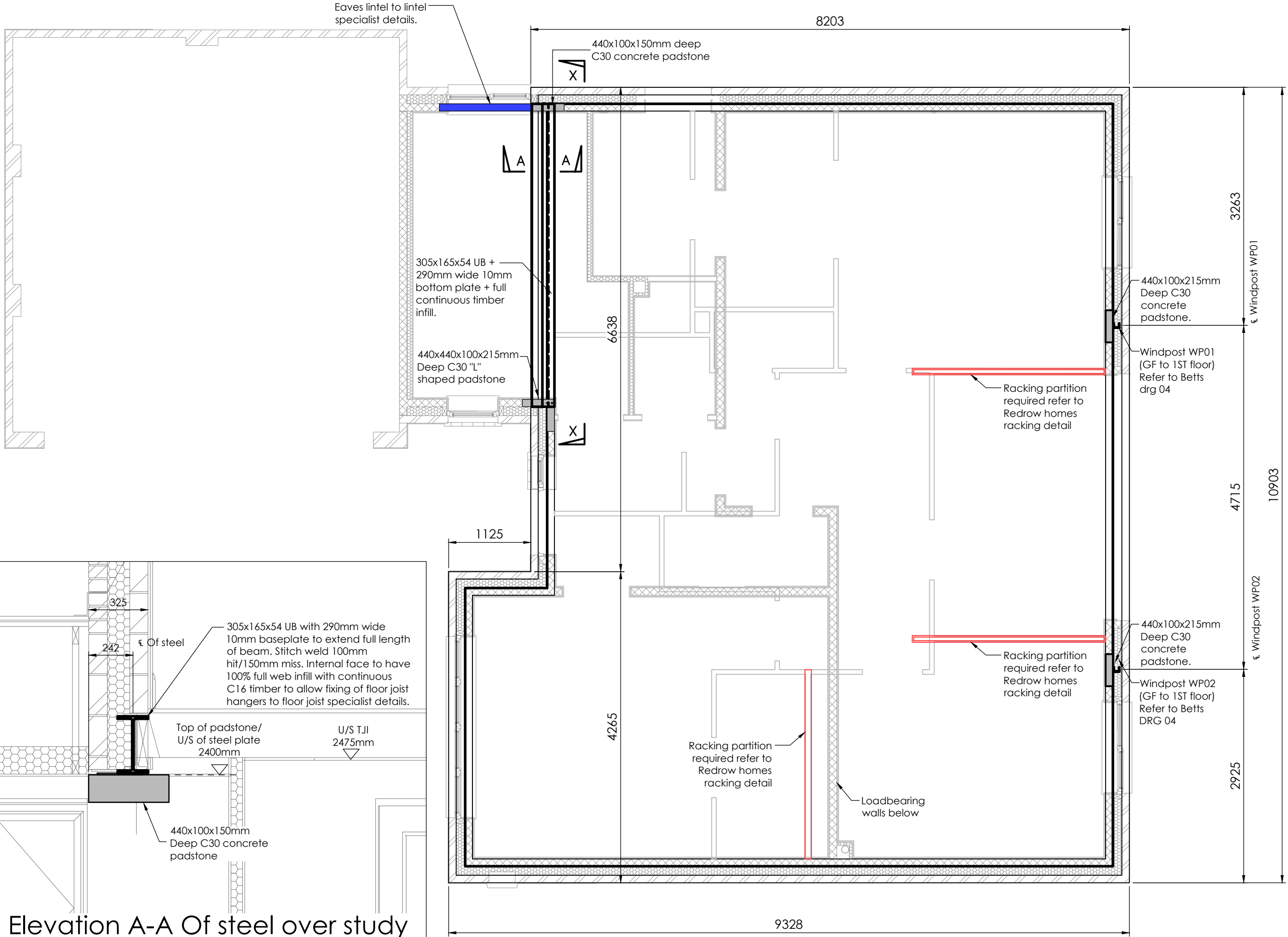
Timber partitions indicated thus

For setting out of internal partitions refer to Redrow drawing 202.

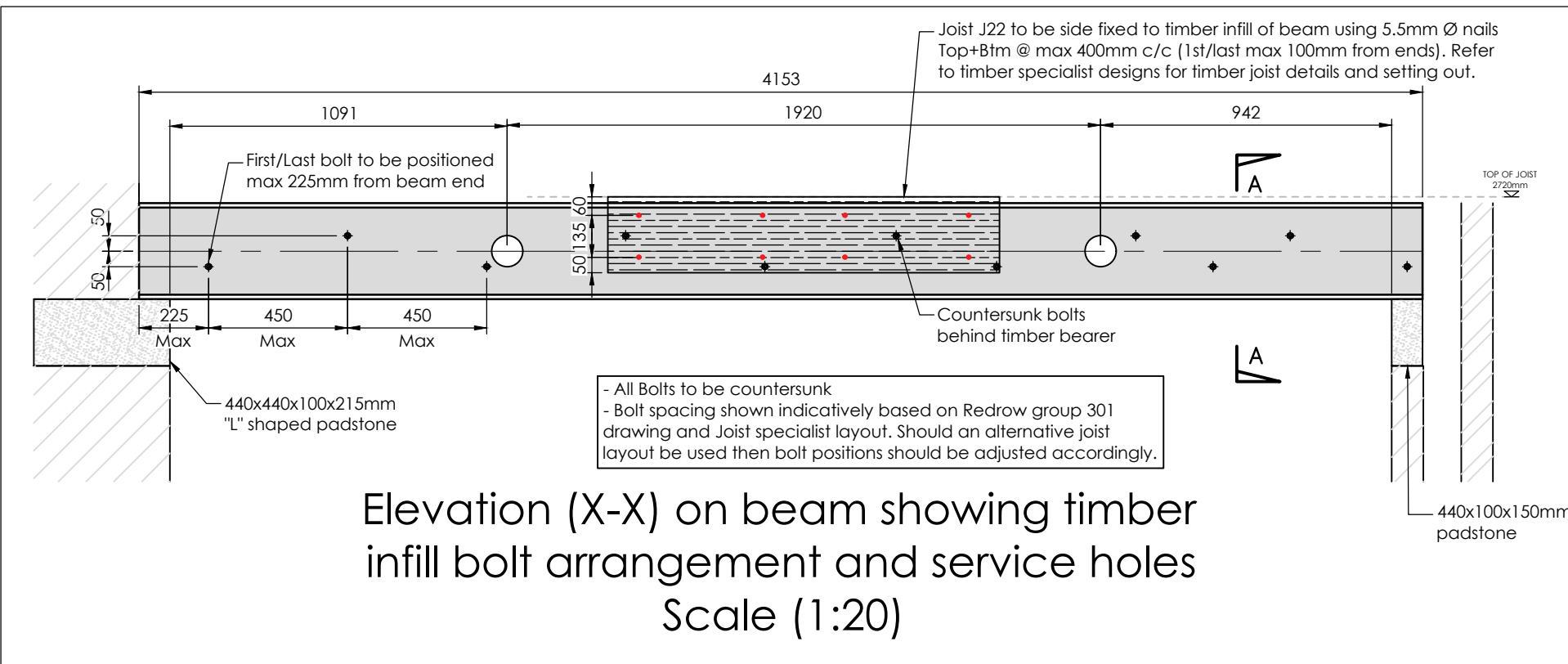
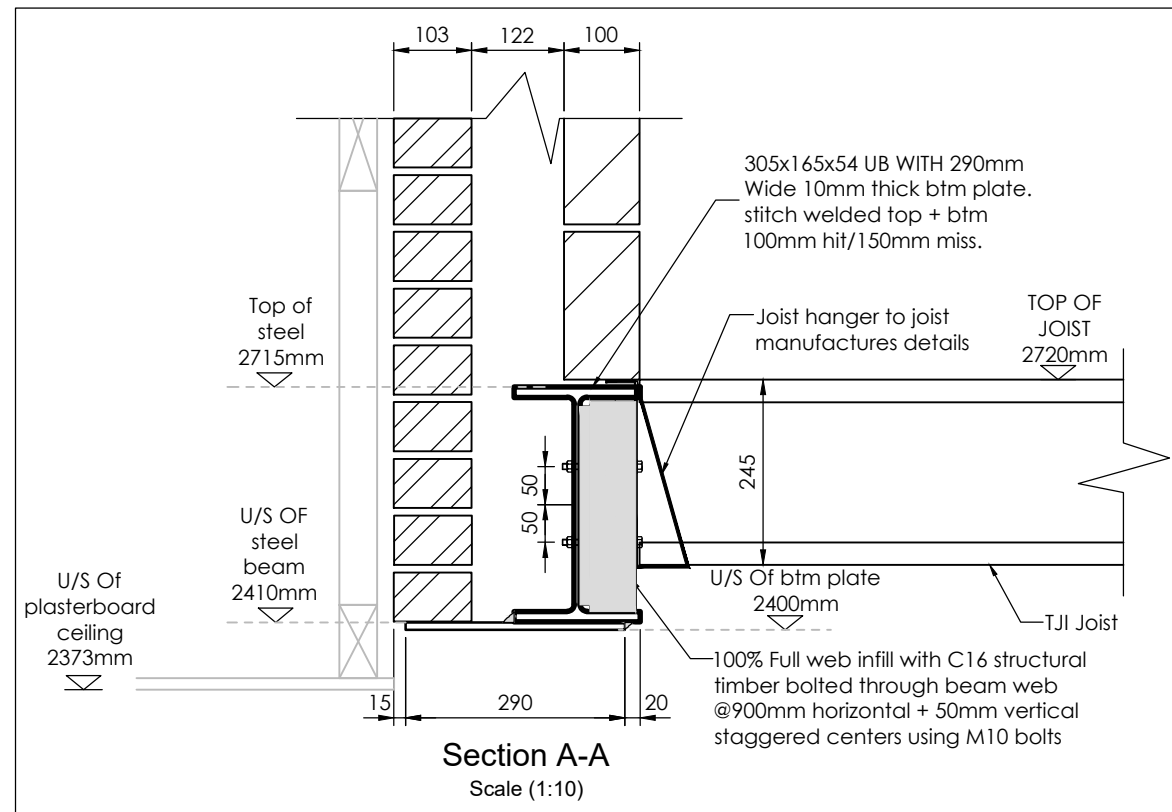
Note:- Steel beams rely on final construction conditions for stability. In the temporary condition, the contractor is to provide all necessary temporary propping.

All levels to be in accordance with Redrow details

All setting out and levels subject to architect drawings + site checking any variation to the dimensions shown to be brought to the attention of architect and engineer



Elevation A-A Of steel over study showing padstone local to W02

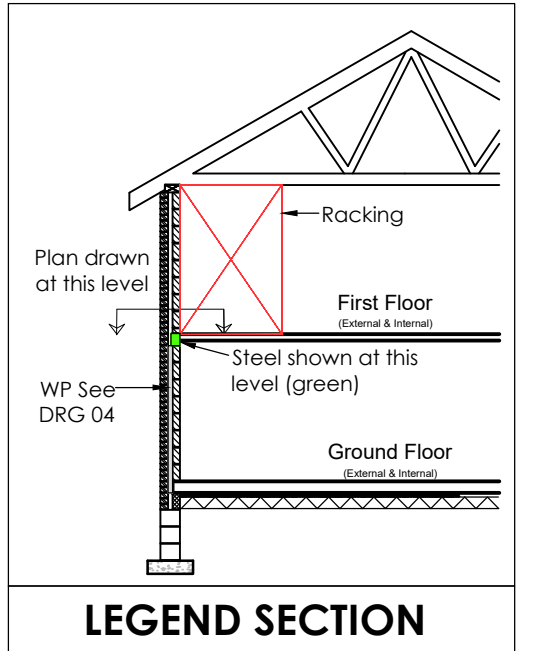


Elevation (X-X) on beam showing timber infill bolt arrangement and service holes Scale (1:20)

CDM Key

For details refer to CDM sheet

Element	Hazard
Foundations	Collapse
	Falls
	Health
	Manual handling
Ground floor structural	Man handling-steel and lintel



Print In Colour

B	14/03/24	Fixing details for J22 timber bearer added to beam elevation	MC
A	05/12/23	Beam elevation updated to address updated service hole positions	MC
Mark	Date	Details	By

Revision history

Drawing originator:



Client:



Project title:

Redrow Homes Group
Standard Housetype Catalogue

Drawing title:

Ledsham (EG_LEDH_DM)
First Floor Layout
BETTS_EG_LEDH_DM_FF

Scale: As Indicated for the original size of A2

Drawn by: WR Checked by: KF Passed by: Date: Nov 22

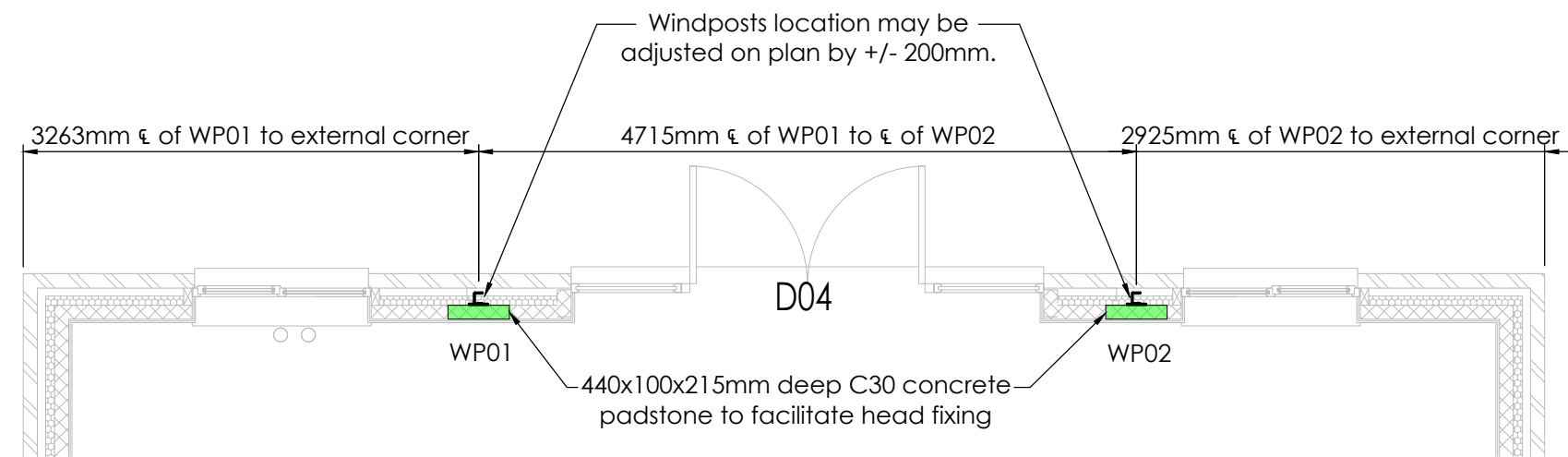
Drawing status:

Construction

Job No:	Drawing No:	Project	Origin	Volume	Level	Type	Discip.	Number	Revision:
RED737	LEDH	BET						03	B

Do not scale this drawing

6-7 Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire, CH5 2LY
enquiries@betts-associates.co.uk
Tel 01244 288178



WIND POST LOCATIONS AT GROUND FLOOR

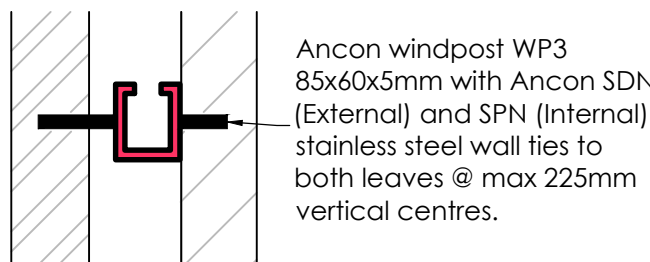
All dimensions must be checked against latest Redrow drawings

All windposts are Ancon WP3 (or similar approved)

All steel windposts, wall ties, plates and bolts to be stainless steel.



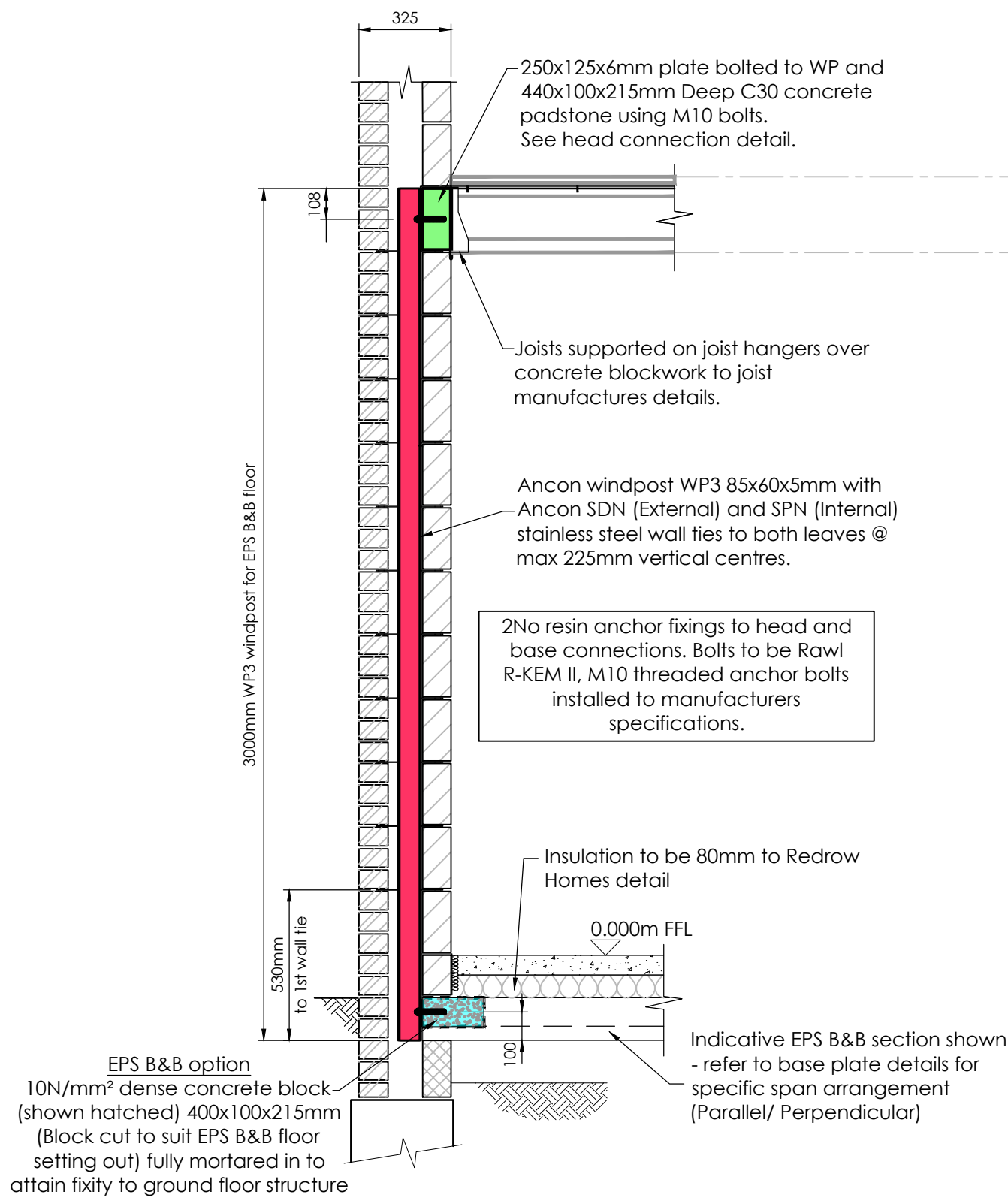
WINDPOST LOCATION ELEVATION SHOWING WP01 & WP02



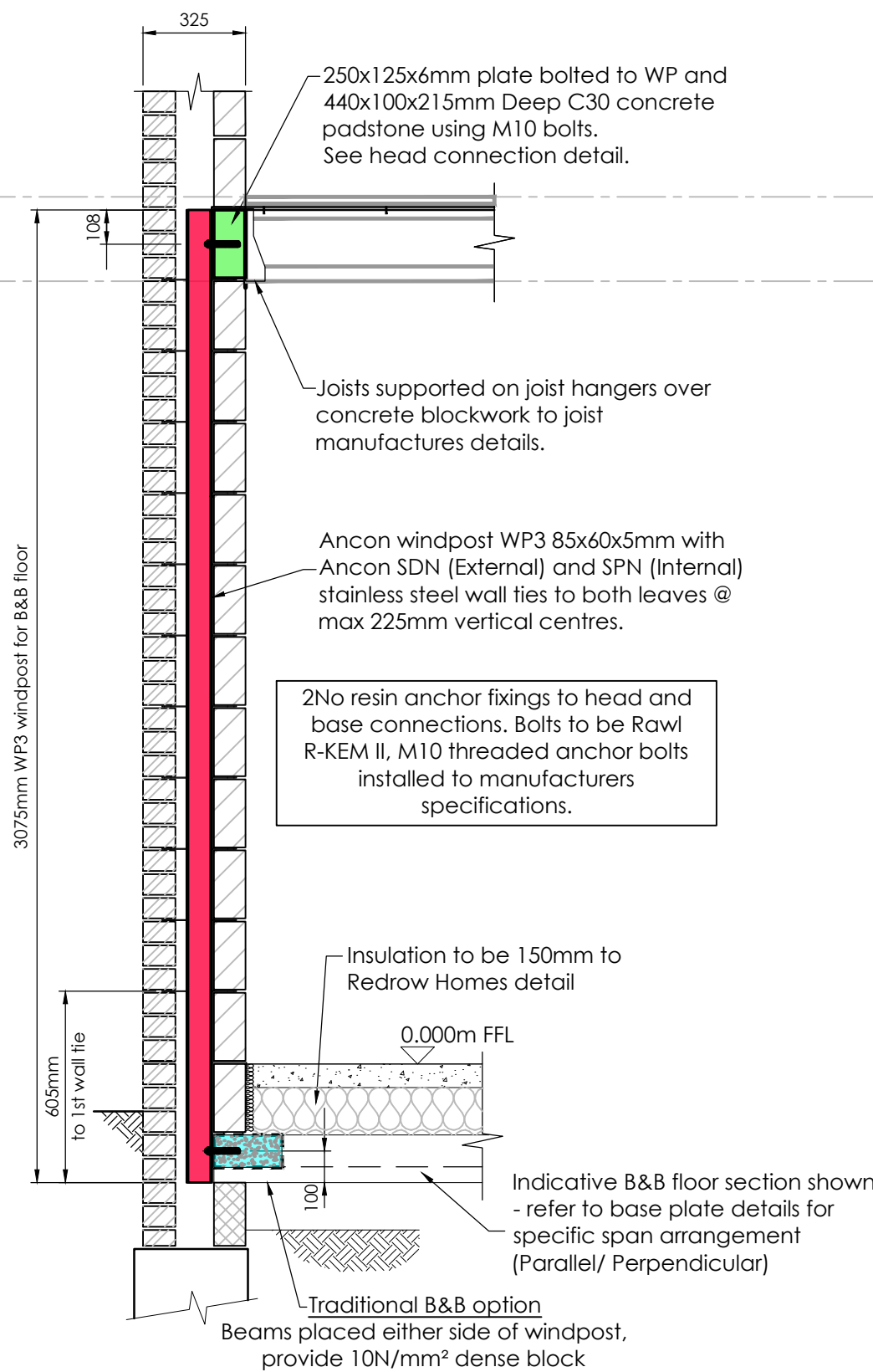
Plan on windpost

Note different windpost lengths for each floor type and windpost position:

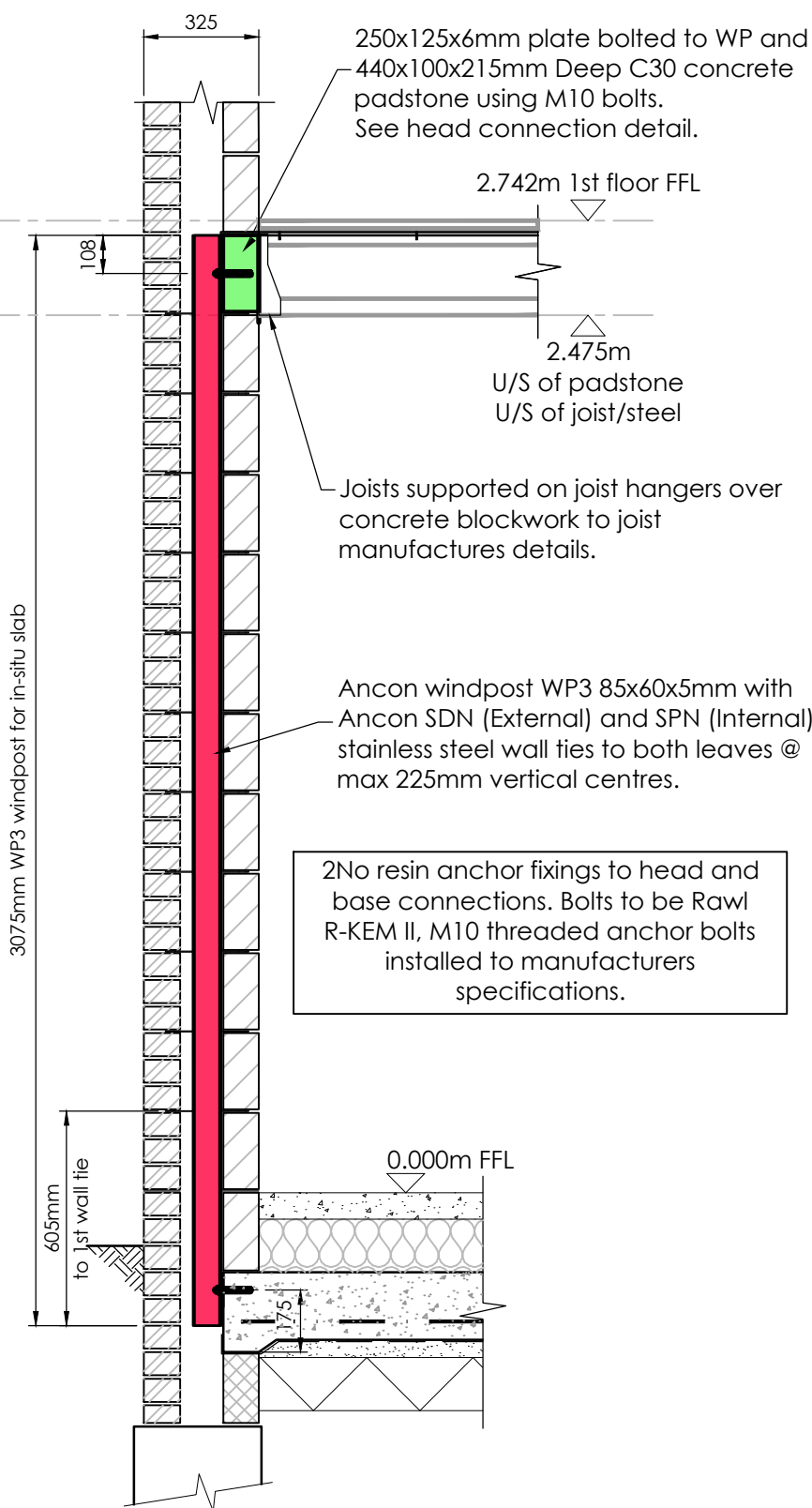
WP01 / WP02 - In-situ slab - 3075mm
Beam & Block - 3075mm
EPS Beam & Block - 3000mm



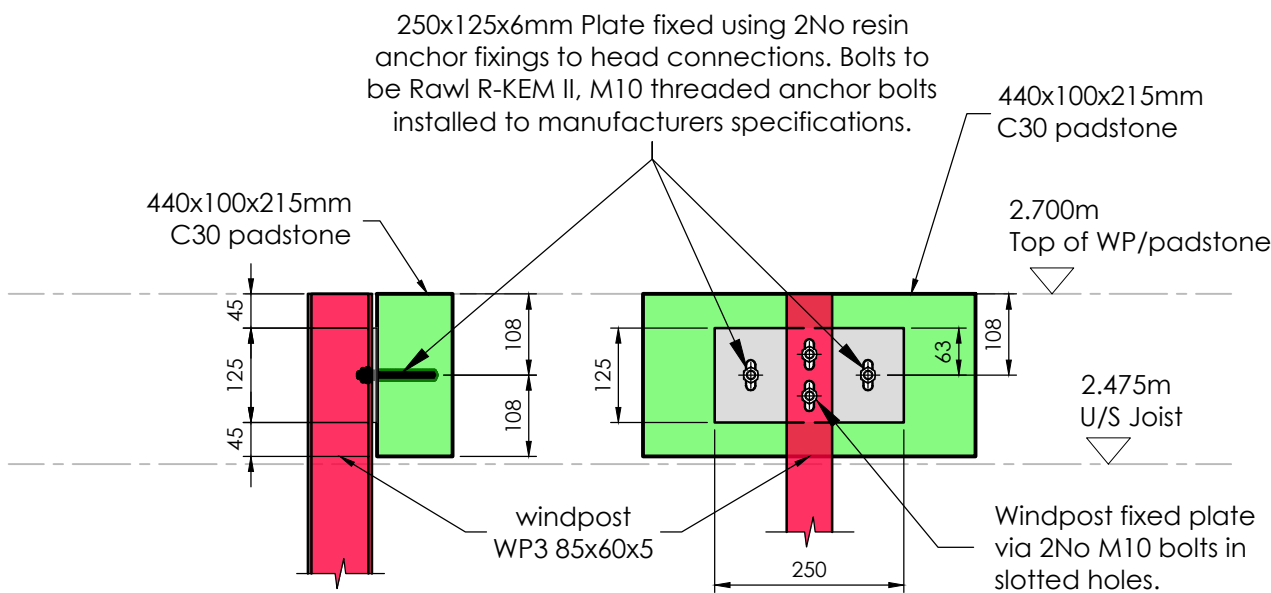
Windpost WP01 & WP02 Detail
EPS Beam & Block



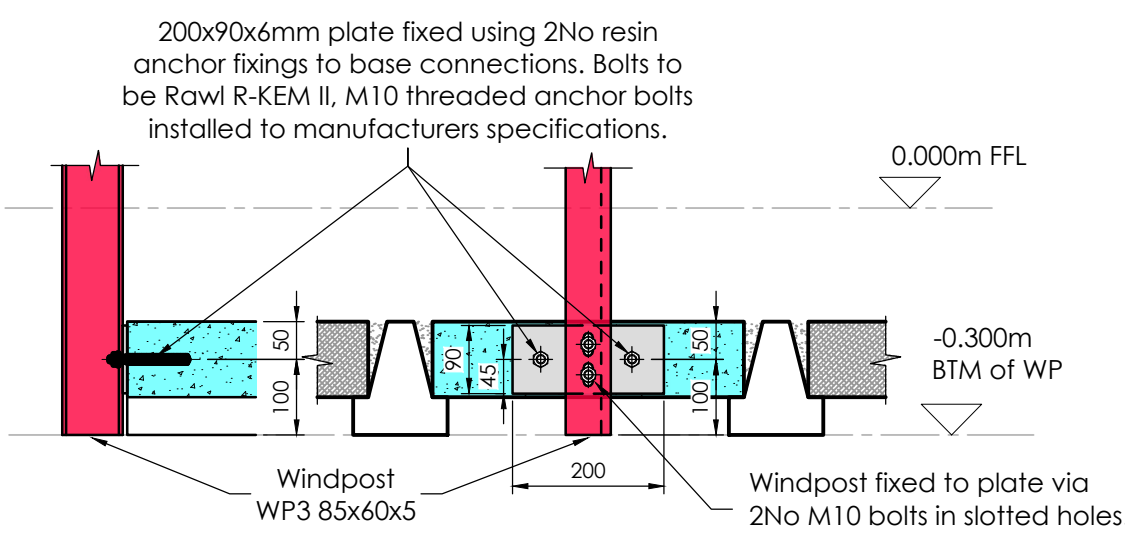
Windpost WP01 & WP02 Detail
Beam & Block



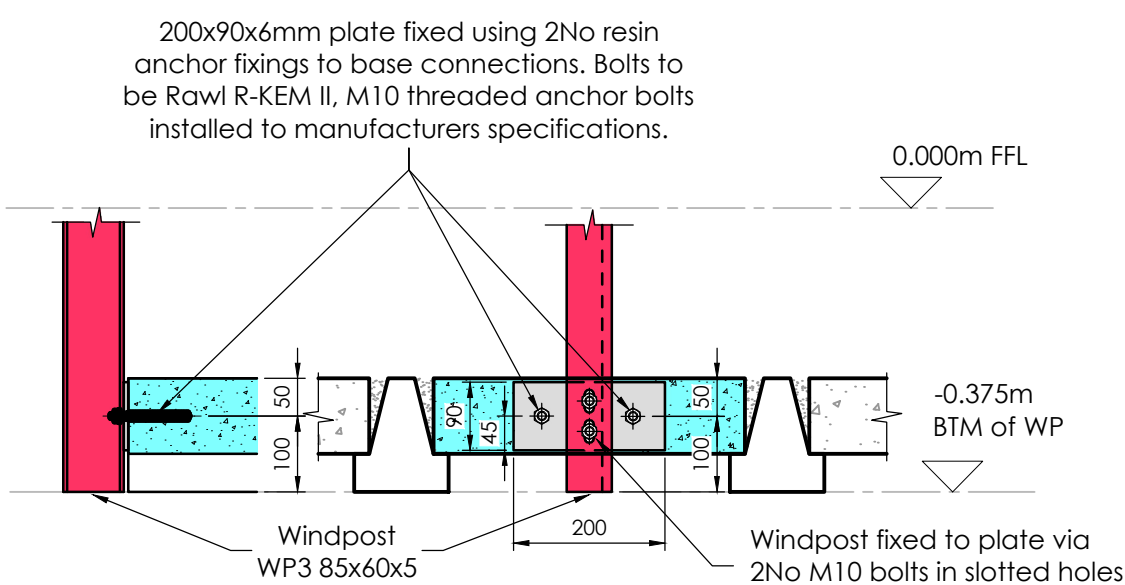
Windpost WP01 & WP02 Detail
In-Situ Slab



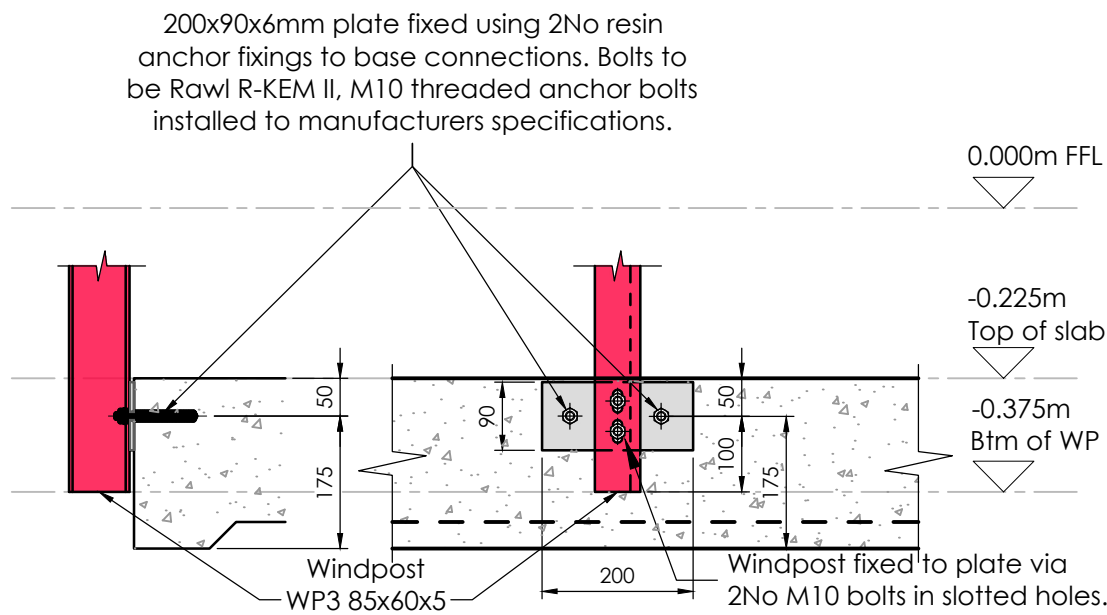
Head plate detail



EPS Beam & Block Base plate detail WP01 & WP02
Floor spans perpendicular to wall



B&B Base plate detail WP01 & WP02
Floor spans perpendicular to wall



RC slab + underfloor heating
base plate detail

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Mark	Date	Details	By
A	22/02/23	Elevations updated in line with DCC2 revision	KF

Movement joints and bed joint reinforcement indicated apply only when house is built as shown. if house is built as a semi-detached or terrace refer to block drawings for details.

See Redrow Homes standard details for movement joint construction details.

All exposed sub-DPC masonry over 600mm in height will require movement joints at max 6m (or to follow on from MJ's in the superstructure, whatever is less centers)



Front Elevation



Side Elevation



Rear Elevation



Side Elevation

A	22/02/23	Elevations updated in line with DCC2 revision	KF
Mark	Date	Details	By

Revision history

Drawing originator:



Client:



Project title:

Redrow Homes Group
Standard Housetype catalogue

Drawing title:

Ledsham (EG_LEDH_DM)

Movement Joint/Bed joint reinforcement Elevations

BETTS_EG_LEDH_DM_MJ & BJR Elevation B1

Scale: 1:50 for the original size of A3

Drn by: WR | Chkd by: KF | Passed by: | Date: AUG 22

Drawing status:

Construction

Job No:	Drawing No:							Revision:
RED 737	Project	Origin	Volume	Level	Type	Discip.	Number	A
	LEDH	BETTS	-	0	DR	S	05	

Do not scale this drawing

6 -7 Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire, CH5 2LY
enquiries@betts-associates.co.uk

| Chester 01244 288178 | Altrincham 0161 613531 |



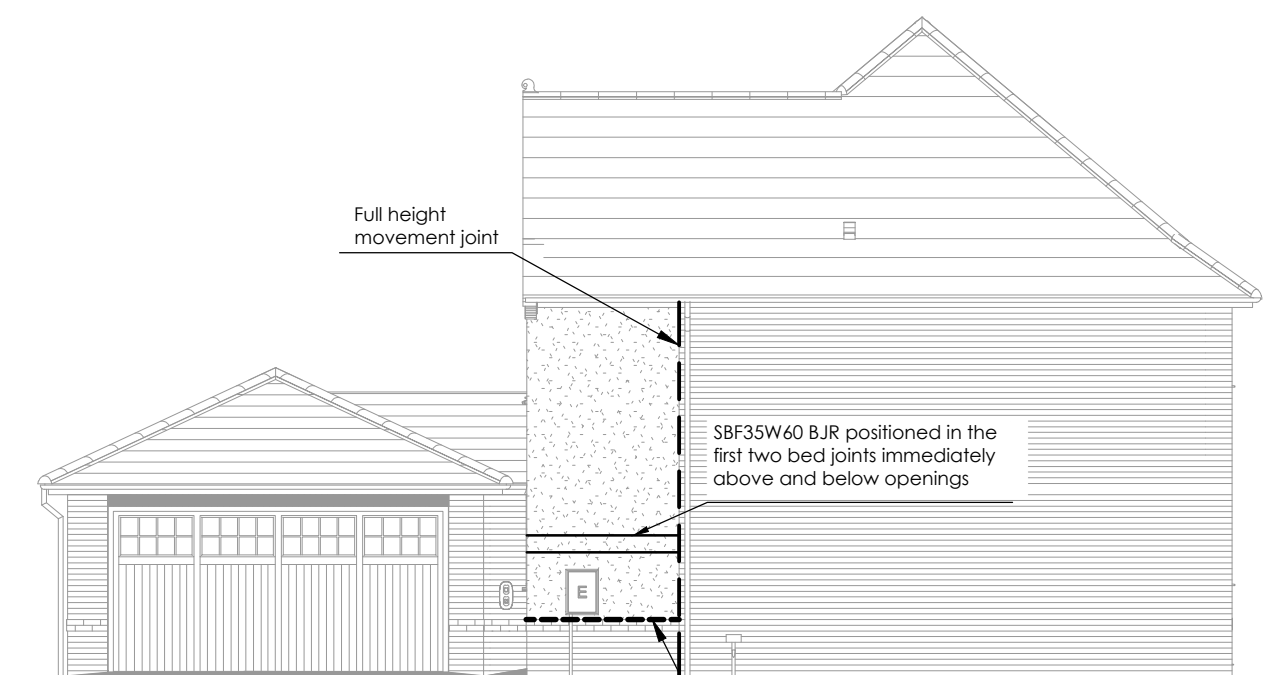
Front Elevation



Side Elevation



Rear Elevation



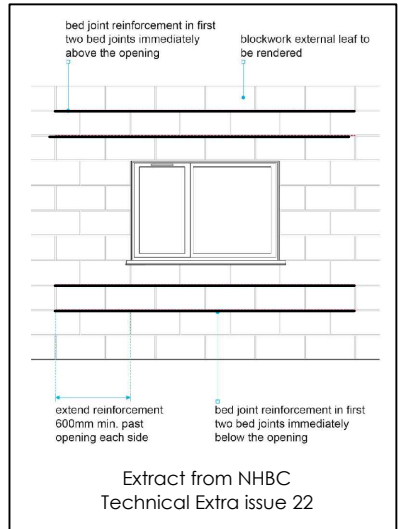
Side Elevation

Movement joints and bed joint reinforcement indicated apply only when house is built as shown. if house is built as a semi-detached or terrace refer to block drawings for details.

See Redrow Homes standard details for movement joint construction details.

All exposed sub-DPC masonry over 600mm in height will require movement joints at max 6m (or to follow on from MJs in the superstructure, whatever is less centers)

All blockwork which is to receive a render finish is to be 100mm, 3.6N/mm² with a density of at least 1350Kg/m³. Blocks specified for internal lear of external walls must not be used on external leaf.



A	22/02/23	Elevations updated in line with DCC2 revision	KF
Mark	Date	Details	By

Drawing originator:



Project title:

Redrow Homes Group
Standard Housetype catalogue

Drawing title:

Ledsham (EG_LEDH_DM)
Movement Joint/Bed joint reinforcement Elevations
BETTS_EG_LEDH_DM_MJ & BJR Elevation A1

Scale: 1:50 for the original size of A3

Drm by: WR | Chkd by: KF | Passed by: | Date: AUG 22

Drawing status: Construction									
Job No:	Drawing No:		Type		Discp.		Number		Revision:
RED 737	Project	Origin	Volume	Level	DR	S	06		A

Do not scale this drawing

6-7 Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire, CH5 2LY
enquiries@betts-associates.co.uk

| Chester 01244 288178 | Altrincham 0161 613531 |