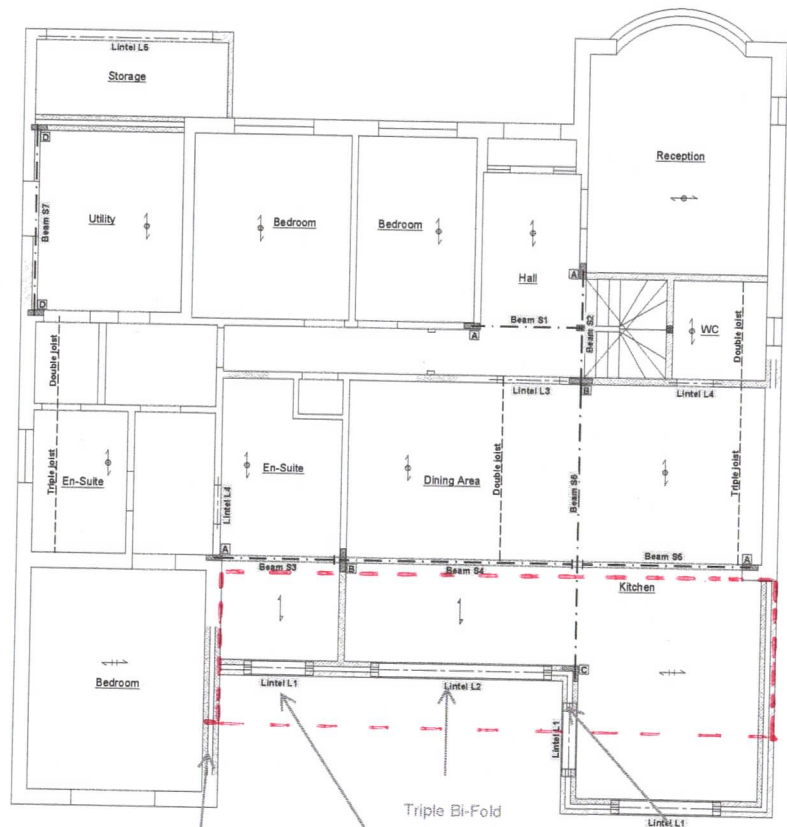




(Scale 1:50)

Single Window into Bedroom

Double Window into Bathroom

Single Kitchen Door

Triple Bi-Fold

- 
 Span of min 47x150mm grade C24 timber balcony joists at 400mm centres
 - 
 Span of min 47x200mm grade C24 timber flat roof joists at 400mm centres
 - 
 Span of min 47x150mm grade C24 timber rafters at 400mm centres
 - 
 Span of min 47x200mm grade C24 timber floor joists at 400mm centres
 (existing joists may be replaced through storage areas, subject to confirmation of existing member sizes and support arrangement)
 - 
 Loadbearing blockwork, min 3.6N/m² compressive strength
 - 
 Loadbearing studwork internal wall, comprising min 47x100mm grade C24 timber studs at 400mm centres, with 12mm OSB3 sheathing and 12.5mm plasterboard lining
- Timber studs to be doubled each side of openings unless noted otherwise. Studs are only indicated where multiple members are required for vertical support, otherwise at 400mm centres generally.
- OSB sheathing to be fixed using minimum Ø3.1mmx75mm ring shank nails at centres not exceeding 150mm.
- Plasterboard lining to be fixed using minimum Ø2.65mm ring shank nails at centres not exceeding 150mm.

STEELWORK

- 2 All open section steelwork (IHS, UC etc) to be grade S355JR fabricated, primed and installed in accordance with BS5950 & BS1025-3
- 3 All closed sections steelwork (RHS, SHS etc) to be grade S355JH fabricated, primed and installed in accordance with BS5950 & BS EN10210
- 4 All fixtures and fittings to be grade S275
- 5 All steelwork to be in accordance with National Structural Steel Specification (N.S.S.S.)
- 6 All steelwork and components to be manufactured in accordance with execution class EXC2 to BS EN1002-2
- 7 It will be to install on form full profile flat welds
- 8 All bolts to be S355JR, grade 8.8 ordinary carbon steel bolts. To be galvanised in hot-dipped galvanised conditions
- 9 All hot-dips to be bolt diameter $\times 2$ min. Minimum edge distance for bolts to be 1.4x and minimum spacing to be 2.0d (d = hole diameter)
- 10 Internal welds to be blast cleaned and primed. All steel to be hot-dipped epoxy zinc phosphate, dry film thickness 60 microns. Exposed internal steelwork to have site applied epoxy
- 11 finish, min thickness of 60 microns. Colour to architect's specification
- 12 Steel in exposed/external conditions to be hot-dipped galvanised to BS EN ISO 1461. If a coloured finish is required a mortar wash or primer specifically formulated for use on heat
- 13 treated steel is to be applied in accordance with the manufacturer's instructions, followed by 40 microns vinyl finish and 60 microns vinyl finish to architect's specification
- 14 Where anticorrosion protective measures may be used on the written approval of the structural engineer
- 15 The protection is to be provided in accordance with the architect's details
- 16 No hot-dips or other treatments to be applied to the steel, apart from those indicated, unless agreed with the engineer
- 17 These drawings are to be used to inform the steel fabricator when producing their own drawings, incorporating any details shown and submitted to the engineer/hot-dipped galvaniser
- 18 14 days for approval prior to commencing fabrication. The fabrication drawings are to include overall setting-out/alignment. Any discrepancies to be reported to the engineer

TIMBER:

2. All softwood timber to be FSC certified, graded as noted on drawings. When not specified timber to be grade C24.
3. All softwood timbers are to be treated by double vacuum preservative treatment to BS 5707 part 3. All timber ends to be treated on site.
4. All timber fixings are to be galvanneal/zincaluminised except when in Oak in which case fixings are to be stainless steel.
5. Multiple timbers are to be bolted together at max. 400mm centres using M12 bolts and 51mm dia. toothed plate connectors. Use square plate washers to outside face of timbers. Fixings to be staggered about member centre line along entire length of timbers.
6. Use proprietary joist hangers to support timbers off other timbers, or timber plate bolted to steel beam's webflange using M8 bolts at 800mm centres staggered along length of beam.
7. Fire protection where required, to architect's details.

INTEL'S

1. Lintels to be as specified, or designed by a competent person.
2. All lintels are to be installed with end bearings (typically 150mm) as recommended by the manufacturer for the particular lintels specified.

BRACING / STRAPPING:

- Traditional cut timber or truss rafter roofs are braced in accordance with BS5628 part 3 and/or in accordance with the truss manufacturer's design.
- 2 Vented and/or flat roof areas are to be lined with min. 9mm plywood fixed with 3mm dia nails at 300mm centres generally along each support and at 150mm centres along eaves and ridge. Straps to extend over 2m long galvanneal steel restraint straps (or similar approved with minimum tensile strength of 8kN) to be provided, for lateral restraint, to both ends of each strap. Straps to extend over 2m long galvanneal steel restraint straps (or similar approved with minimum tensile strength of 8kN) to be provided, for lateral restraint, to both ends of each strap. Straps to extend over 2m long galvanneal steel restraint straps (or similar approved with minimum tensile strength of 8kN) to be provided, for lateral restraint, to both ends of each strap. Straps to extend over 2m long galvanneal steel restraint straps (or similar approved with minimum tensile strength of 8kN) to be provided, for lateral restraint, to both ends of each strap.

MASONRY

2. All external blockwork to have a min. compressive strength of 20N/mm² with a water absorption value between 7% & 12%.
All blockwork to have a min. compressive strength of 3.6N/mm² unless noted otherwise.
Blockwork generally above damp to protect specification but at the strength indicated on engineer's drawings. Blockwork below damp to have a min. density of 1500kg/m³. All blockwork to have a unit weight not exceeding 20kg, otherwise the contractor is required to produce a risk assessment and method statement for manual handling. Hollow blocks will not be used without permission from the engineer.
3. Masonry shall be fully saturated (iv) above damp & grade (ii) below damp, unless noted otherwise.
4. All masonry supporting loads must be cured for at least 7 days prior to installation (extended to 10 days if temperatures have been below 5°C). Temporary lateral support and propping may be required for certain wall configurations and should be considered by the contractor.

BEARINGS:

2. All padstones to be positioned centrally under supported beam(s).
3. Padstones to be precast concrete (min 50N/mm²) unless noted otherwise, standard sizes specified where possible as supplied by Naylor Industries.
4. Padstone references are as follows:
- | | |
|---|--|
| A | Bear min 150mm onto 300x100x215mm deep precast concrete padstone. |
| B | Bear 100mm 440x100x215mm deep precast concrete padstone. |
| C | Bear min 150mm onto 300x300x100x215mm deep precast concrete corner padstone. |
| D | Bear 100mm onto 300x100x215mm deep precast concrete corner padstone. |

Member Schedule		
Ref.	Section	ULS Reaction (kN)
T5	90x225mm GL24 glulam	-
S1	178x102UB 19	23.10
S2	178x102UB 19	24.10
S3	203x102UB 23	22.30
S4	203x203UC 46	43.50
S5	203x133UB 25	25.20
S6	203x203UC 60	61.60/34.30
S7	203x102UB 23	-
L1	Stressline SL90	-
L2	Stressline SL90 HD	-
L3	Stressline R154 100x140mm deep prestressed concrete	-
L4	100x65mm deep prestressed concrete	-
L5	Stressline SL200 BOX	-

RISK SCHEDULE

- Design assumptions have been made relating to the span of elements of the existing structures (as noted on the drawings). To prevent existing or new members becoming overstressed and/or deflecting excessively, these assumptions must be checked before work on site commences. Any discrepancies must be reported to the engineer so that checking can be carried out, and any required amendments made before work proceeds.
- Temporary support – there is a risk of injury due to collapse of unsupported or inadequately supported infrastructure. The contractor must consider and provide temporary works designed by a suitably qualified person.
- Other design assumptions – From initial bore investigation we anticipate the excavations should remain dry and stable in the short term. To prevent collapse of excavations and any supported structures, consideration must be given to the use of temporary support and shoring. The contractor must ensure that the design is provided to all excavations whilst open.
- There is a risk of falling debris during excavation works. Therefore the Contractor should identify, mark and make operative areas of all excavations and take appropriate measures to prevent debris from falling onto the ground surface.
- Some main structure members may be under tension which could cross the site.
- Additional loads are required or locations require adjustments) irrespective of any limiting details mentioned.

3rd Angle

GENERAL NOTES

- [illegible]

P3	Amended to client comments	KAR	28/02
P2	Extn footprint & kitchen roof	KAR	11/02
P1	Preliminary issue	RD	26/01
REV.	DESCRIPTION	BY:	DATE

REVISIONS

SUBJECT TO BUILDING
CONTROL APPROVAL.

 **STRUCTURAL AND CIVIL ENGINEERS**

Unit 7, Boscombe Centre,
Mills Way, Amesbury,
Wiltshire, SP4 7SD

PROJECT TITLE: 18 Richmond Road
Caversham
Reading, RG4 7PP

DRAWING TITLE:

Groun Floor
Structural Arrangement

SKETCH	DATE	CHECKED	DATE	APPROVED	DATE
RD	01/25	KAR	01/25	KAR	01/25
DRAWING NO.		SHEET SIZE	SCALE	REVISION	
17669- 01		A1	1:50	P3	