Orwell Structural Engineers Limited

01473 719524
www.orwellstructuralengineers.co.uk
info@orwellstructuralengineers.co.uk

Project	Project no.
11 Combs Green Combs	20/228
	Sheet no. 01

Calcs by	Date	Checked	Revision
DLW	December 2020		C 05.01.21

Health & Safety Risks

In addition to the typical risks associated with construction works detailed on this drawing OSEL would highlight the following significant risks:

1. Collapse - contractor to provide temporary support to existing structure
2. Manual handling - all items over 20kg to be mechanically lifted
3. Services - contractor to identify all existing services prior to works
4. Excavations - contractor to shore excavations as required
5. Working at height - contractor to provide scaffold/access platform

Key:

Denotes assumed span of existing first floor joists to be confirmed by contractor prior to commencement of works

Denotes new 63x150mm C24 timber rafters at 0.6m centres (minimum depth shown, can be increased to suit insulation). Rafters to be doubled up around rooflights subject to confirmation of rooflight sizes to be confirmed to structural engineer by Client/Contractor. Rafters sheathed with 9mm OSB

Denotes span of existing roof trusses

Lateral restraint, noggins, etc... to be in accordance with the building regulations

B2 254x146x31ub

B3 254x102x22ub

OR alternatively provide single 203x203x52uc with 8mm thick top plate to support cavity wall construction

(beams B2 & B3 bolted together with M16 Gr 8.8 fixing bolts)

Lintel references refer to Catnic lintels installed in accordance with Catnic details with minimum 150mm end bearings.

C1 203x203x46uc tied to masonry as detailed in calculation package (20mm thick baseplate)

C2, C3 100x100x5.0shs tied to masonry as detailed in calculation package

PS1 330 long x 100 wide x 3 courses deep engineering brick padstone

PS2 440 long x 100 wide x 3 courses deep engineering brick padstone

L1 203x133x25ub with 6mm thick bottom plate to pick up outer leaf (all galvanised)

L2 CG90/100 Catnic lintel

L3 CG90/100 Catnic lintel

Foundations:

Foundation design has been based upon a maximum nett allowable ground bearing pressure of 100kN/m²

P1 1.0 x 1.0 x minimum 600mm thick GEN 3 Concrete founded minimum depth 1.0m in Clay subsoils, below ground level subject to building control approval

New trenchfill foundations to comprise 0.45m wide x 1.0m deep GEN3 concrete

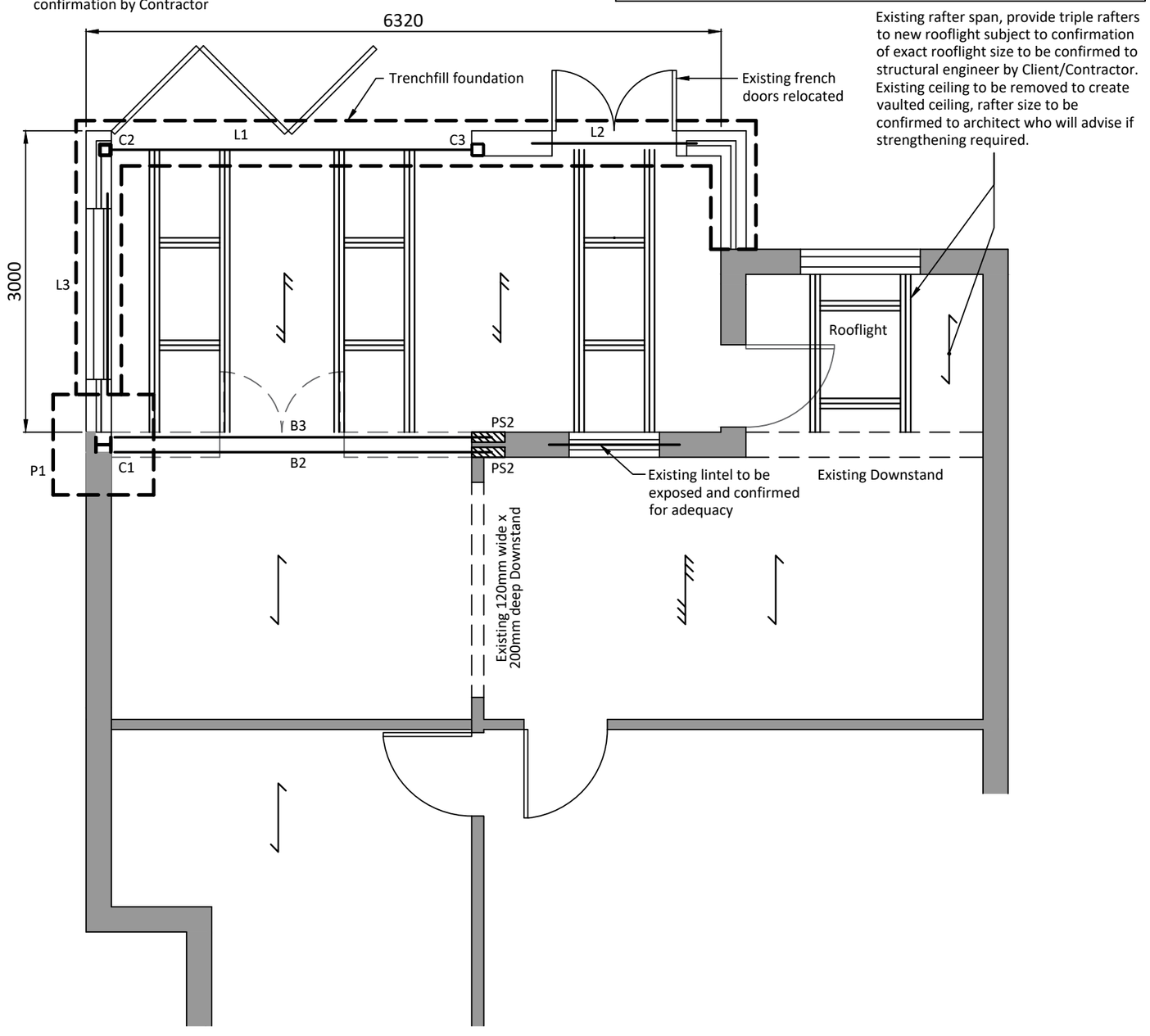
New foundations to be dowelled into existing with 4 No. H16 400mm long high tensile dowel bars with minimum 200mm embedment

All foundations to Building Control officer approval and NHBC Standards Chapter 4.2 'building near trees' where applicable

Notes:

1. All floor and roof spans to be confirmed by Contractor prior to commencement of works.
2. Contractor to confirm all setting out dimensions prior to ordering steelwork and commencing works.
3. Steelwork to be clad/fire protected to architect's details.
4. Minimum end bearings to beams and lintels to be 300mm (100mm where perpendicular to wall)

Dimensions shown are indicative and are subject to confirmation by Contractor



GROUND FLOOR GENERAL ARRANGEMENT SHOWING STRUCTURAL ELEMENTS OVER

SCALE: 1:50