

COMMERCIAL PH, COLLEGE STREET, WREXHAM LL13 8LU

BUILDING CONTROL INFORMATION REQUIRED SCHEDULE

PART A – STRUCTURE

FLOOR CONSTRUCTION

The existing floor joists at 1st and 2nd floor levels were exposed at the time of our inspection.

The existing floor joist sizes are generally 75x125mm at 400mm cts and we have assumed the grading in C16.

The contractor was fixing an additional joist to the side at each position, this is a 50x150mm C16 section and fixed to the existing using glue and screws. This provides increased strength to the floor and enables installation of the required sound insulation.

We have assessed the suitability of construction as follows,

1. The worst case span of the floor construction is 3.5m
2. The moment of inertia of the existing 75x125mm joist is 1220.7 cm⁴
The moment of inertia of the new 50x150mm joist is 1406.3 cm⁴
Making a total of 2627 cm⁴ for the upgraded floor joist.
3. The attached calculation shows a timber section of 63x171mm which has the same moment of inertia.
4. We have applied an imposed load to this section of 2.13kn/m² which allows for standard domestic live load and a stud partition load.
5. A dead load of 0.75kn/m² has been used (excludes self-weight of joist, separate in calculations). The actual dead load of the increased ceiling linings, Gyproc plank and insulation is 0.56kn/m² and therefore is less than the dead load allowed.

The calculation passes and therefore the improved floor construction is satisfactory for the new dead and live loads.

REAR ELEVATION WALL LINTEL

The lintel specified by the Architect is an S/K-50 steel lintel suitable for a cavity wall. The existing wall is solid construction and the lintel should be changed to an IB/K-2C lintel or equivalent to suit a solid wall construction.