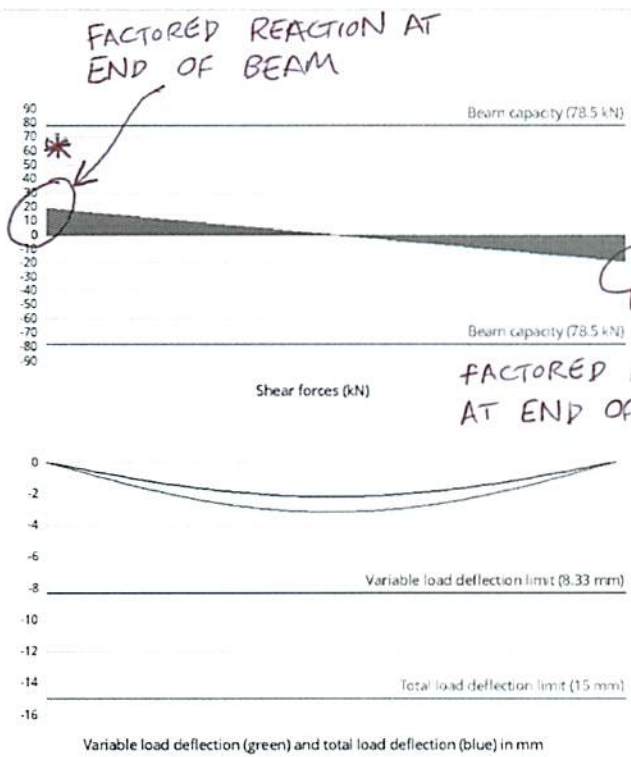


Project	Project number
Calcs for	Date



THIS VALUE IS THE MAXIMUM BEAM END REACTION.

Shear forces
 $\text{Shear capacity } V_c = 157\text{kN} \times 0.5 = 78.5\text{kN} > 18.74\text{kN}, \text{Therefore OK}$

Shear Capacity, V_c from Tata Steel 'Blue Book' to BS EN 1993 -1-1
 Reduction of moment resistance by high Coincidence shear force has been avoided by checking that the shear force is no more than 50% of the shear resistance

Deflection
 $\text{Variable load deflection} = 2.22\text{mm} < 8.33\text{mm}, \text{Therefore OK}$
 $\text{Total load deflection} = 3.18\text{mm} < 15\text{mm}, \text{Therefore OK}$

Notes

- $M_{c,y}$ value from Tata Steel 'Blue Book' to BS EN 1993-1-1
- M_b value interpolated from Tata Steel 'Blue Book' to BS EN 1993-1-1
- C_1 value conservatively taken as 1.0
- Shear Capacity, V_c from Tata Steel 'Blue Book' to BS EN 1993-1-1
- Reduction of moment resistance by high coincident shear force has been avoided by checking that the shear force is not more than 50% of the shear resistance
- Ends of beam are to be laterally restrained. Ends of beams can be laterally restrained using one of the following methods;
 - 1) End of beam built into masonry wall.
 - 2) End of beam fixed to a masonry wall.
 - 3) End of beam fixed to a column or a beam.
- The designer is to ensure that the proposed detail adequately ensures that the end of the beam is laterally restrained.
- No allowance has been made for destabilising loads which are outside the scope of these calculations (Destabilising loads would not normally occur in a traditional masonry structure)