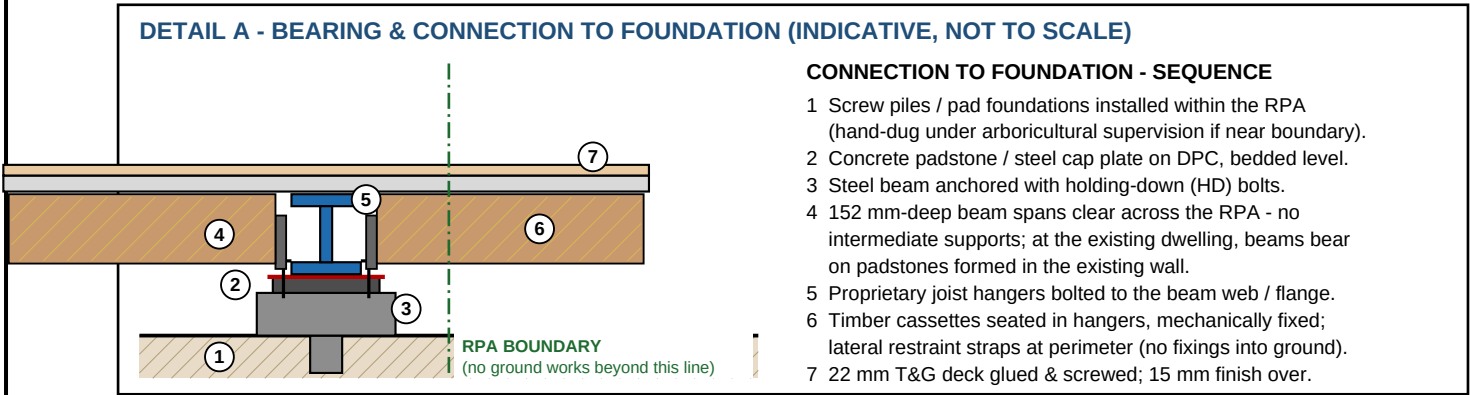


PROPOSED STEEL BEAM & TIMBER CASSETTE FLOOR

No-dig suspended floor - zero excavation within the TPO root protection area - BS 5837:2012 / RBC Local Plan Policy EN14 - Reading Borough Council



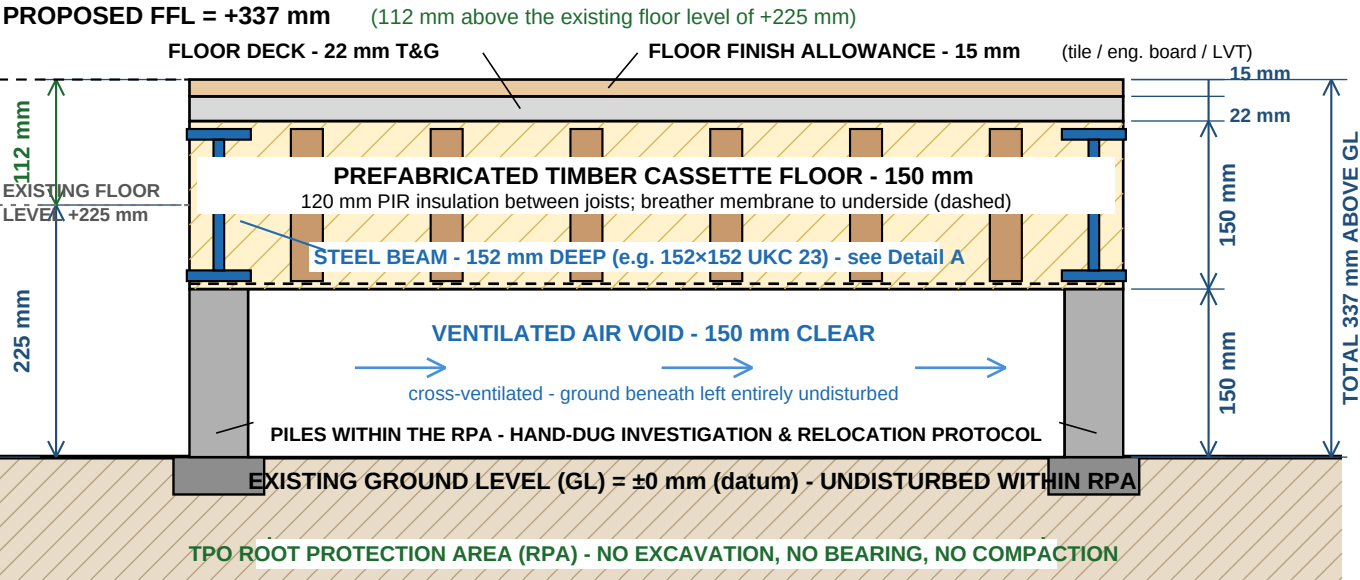
LEVELS CALCULATION

Ventilated air void (clear)	150 mm
Steel beam & timber cassette zone	150 mm
Floor deck (T&G board)	22 mm
Floor finish allowance	15 mm
Total build-up (all above GL)	337 mm
Proposed FFL / rise over existing	+337 / +112 mm

Ground works in RPA Pile positions only

NOTES

1. The Council requires no excavation within the RPA of the TPO trees. This no-dig design achieves ZERO excavation in the RPA, in accordance with BS 5837:2012, RBC Local Plan Policy EN14 (Trees, Hedges & Woodlands) and the RBC Tree Strategy (2021).
2. Plan areas: main extension 8500 × 2000 mm; link block 5980 × 3030 mm. Beams span the SHORT plan direction - max clear span ≈ 3.03 m (link block) and 2.0 m (extension). At domestic floor loading and span/depth ≈ 20, a 152 mm-deep section (e.g. 152×152 UKC 23 / 152×89 UB) suits both spans and sits flush within the 150 mm floor zone - sizes to be confirmed by structural calculations.
3. 150 mm cassettes with 120 mm PIR between joists (U-value to be confirmed by SAP / Building Regs); breather membrane to underside; panels craned in; ground protection boards during construction.
4. Foundation connection per Detail A: supports outside the RPA; padstone + DPC; HD bolts; joist hangers; restraint straps. Pile positions fall within the RPA; installed to the method set out in Note 7.
5. 150 mm cross-ventilated void over undisturbed ground - no bearing, compaction or root severance.
6. Dims in mm. Member sizes indicative - subject to structural engineer's design and calculations.
7. PILES WITHIN THE RPA (JP Mann position): every pile position is hand-dug / air-spaded under arboricultural supervision; roots over 25 mm dia. = pile relocated.



ZERO EXCAVATION WITHIN THE RPA - FLOOR SPANS OVER THE PROTECTED ROOTS

Steel beams span the short plan direction (max clear span ≈ 3.03 m) and bear only on supports outside the RPA. Lightweight timber cassettes are craned in - no dig, no ground bearing, no plant tracking over roots.

DRAWING TITLE

Proposed Steel Beam & Timber Cassette Floor
Zero excavation within TPO RPA - no-dig design

PREPARED BY

Mukesh Gupta
JP Mann – Structural & Geotechnical Consultants

APPLICANT / SITE ADDRESS

Dr. Abbas Raza Ali
2 Lancaster Close, RH1 5HB

AUTHORITY / PURPOSE

Reading Borough
Council - planning

DATE / SCALE

September 2026
NTS (dims in mm)