

Location/Beam	Dimensions	Decay viewed from bearing side	Cross plan view	Photographs	Confirmed agreed repairs with Structural engineer comment in bold
E/VB/3 Full length of the beam	95mm 275mm		← 2500mm → 60mm Deep 30-40mm Deep + 300+ mm Cross plan View Decayed section	Decay to both bearing ends. The end opposite VB1, 300mm wide and 60mm deep The opposite end decay full height with decay extending 2500mm along the beam 30-40mm deep	 Recommendations Allow to fully renew the beam with C24 treated Douglas Fir Buro Happold agreed to replacement in email dated 25/10/24
E/VB/4 Bearing end opposite VB2	95mm 275mm		600mm 20mm Deep + 200 mm Cross plan View Decayed section	Superficial rot to face of valley beam opposite VB2 20mm deep to a section 600x100mm in section	 Recommendations Defrass the beam of all decay back to sound timber and treat with Wykamol 10.1 fungicide gel Buro Happold agreed to defrass and treat in email dated 25/10/24. Commented that section is adequate for shear at bearing end.
E/VB/5 Bearing end opposite	95mm 275mm		← 800 mm → 60mm Deep + 300+ mm Cross plan View Decayed section	Wet rot to bearing end opposite VB5. The decay affected 300mm of bearing end to depth of 60mm. The rot extension for a further 800mm	 Recommendations Flitch beam plate repair as per drawings and calculation provided by WMI Consulting drawing no 1179R Buro Happold agreed to flitch plate repair as per agreed detail in email dated 25/10/24
E/VB/12 Middle section of beam	95mm 275mm		← 800 mm → 20-30mm Deep Cross plan View Decayed section	Section to top face of beam at mid section 20-30mm deep spanning 800mm	 Recommendations Timber to timber scarfed infill to midspan required. To be installed as per BHE drawing VB12 intent. Repair to consist of a wedge fixed with structural adhesive, we will ensure the moisture content of the new piece matches the existing beam to avoid shrinkage to the repair. The wood would be cut back as a minimum, as detailed previous 50x50mm 800mm long is the maximum size of the wedge. Buro Happold agreed to the repair as per agreed detail in email dated 05/11/24

E/VB/13 Bearing end into external wall	95mm 440mm Bearing end 2000mm 15-20mm Deep Cross plan View Decayed section	Wet rot to the bearing end nearest the external wall with decay to the inner face towards the valley 15-20mm in depth		Recommendations Defrass the beam of all decay back to sound timber and treat with Wykamol 10.1 fungicide gel Buro Happold Comment Buro Happold agreed to defrass and treat in email dated 25/10/24. Commented that section is adequate for shear at bearing end.
E/VB/14 Full length of the beam	95mm 440mm Bearing end 10-15mm Deep 3000mm 30-50mm Deep 2000mm Cross plan View Decayed section	Rot to the inner face to the valley The first 2 metres from the external wall the decay 30 to 50mm to the upper 175mm of exposed beam. Superficial decay to the remaining 3 metres 10 to 15mm deep to upper 175mm of beam		Recommendations Beam to be replaced with C24 douglas fir to match existing section Buro Happold confirmed replacement rquired with the following comments: 15mm deep decay leaves enough section, but 50mm deep does not - shear OK, but bending towards middle of beam is not. Repair at midspan is not feasible. As such, replacement is beam is required - section to match existing, C24 douglas fir.