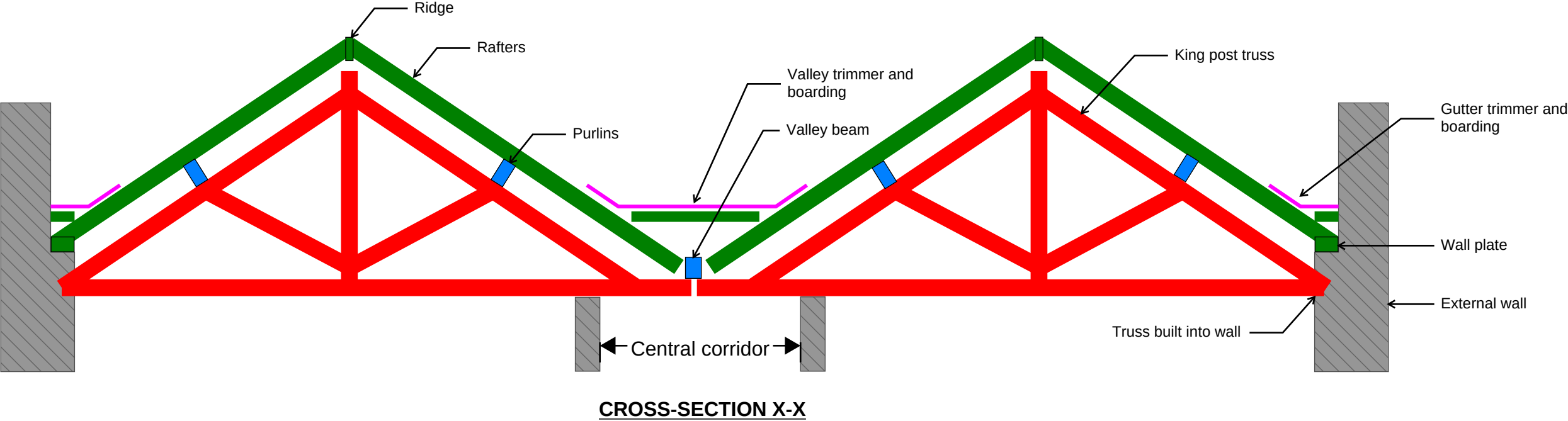
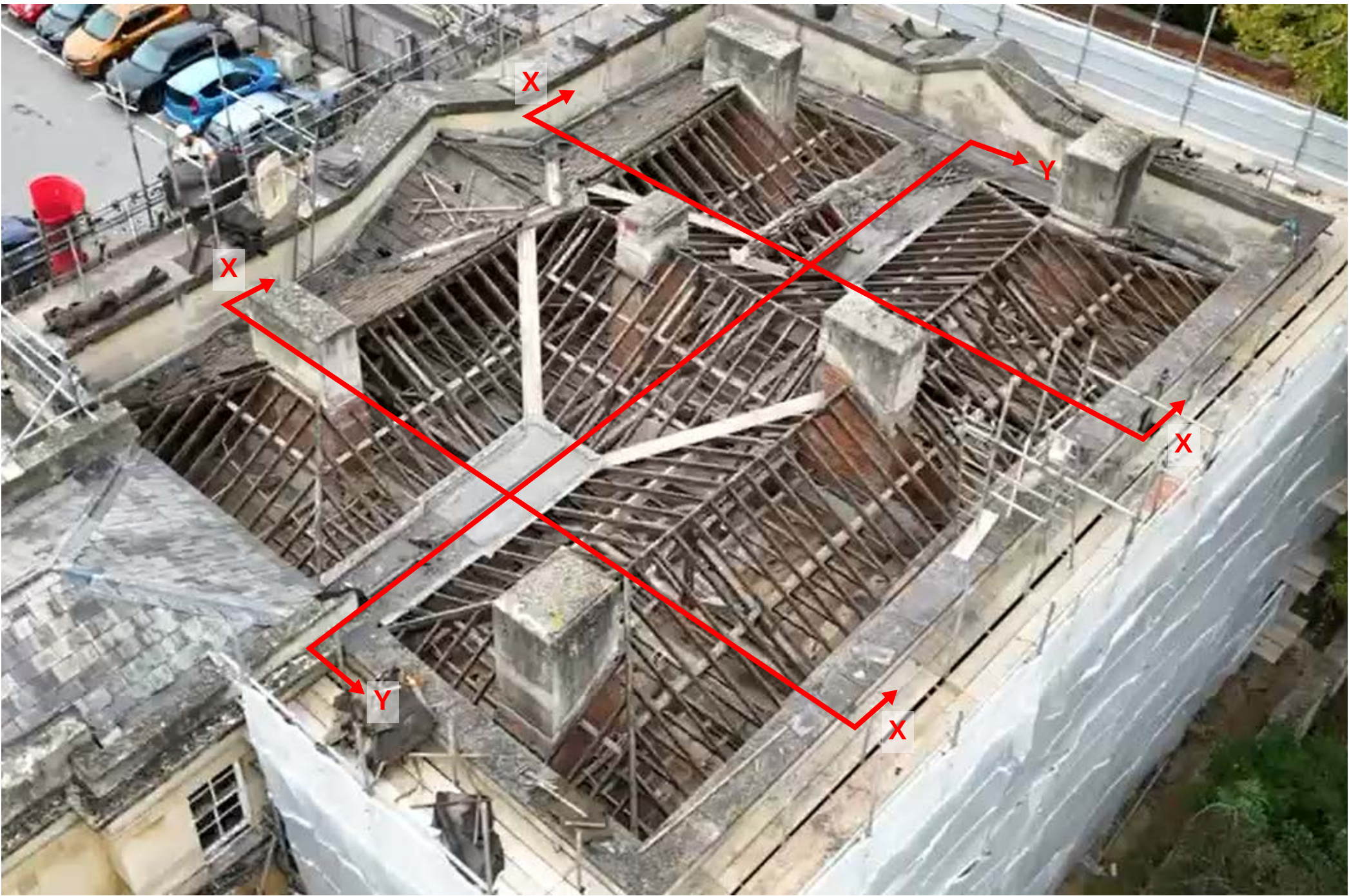
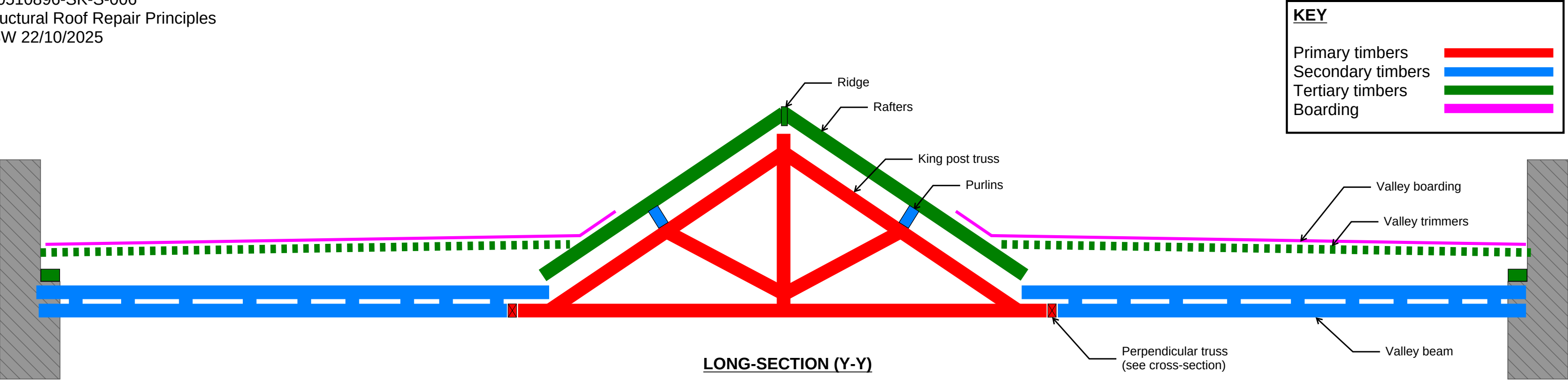






Approach to Structural Timber Repairs

It is proposed to establish a suite of timber repairs that may be employed across this, the Northern roof, and the Southern roof. Repairs are developed according to the structural importance of the element(s) and its historic significance.

Primary timbers

The roof comprises seven interlinking king post trusses. Trusses include carpenter marks and interesting connection details. Given this the primary timbers are considered to be of historic value and repairs will be limited to piecing in new timbers to replace decayed section and/or augmenting existing timbers to provide additional structural capacity and mitigate issues of damp in the wall.

Secondary timbers

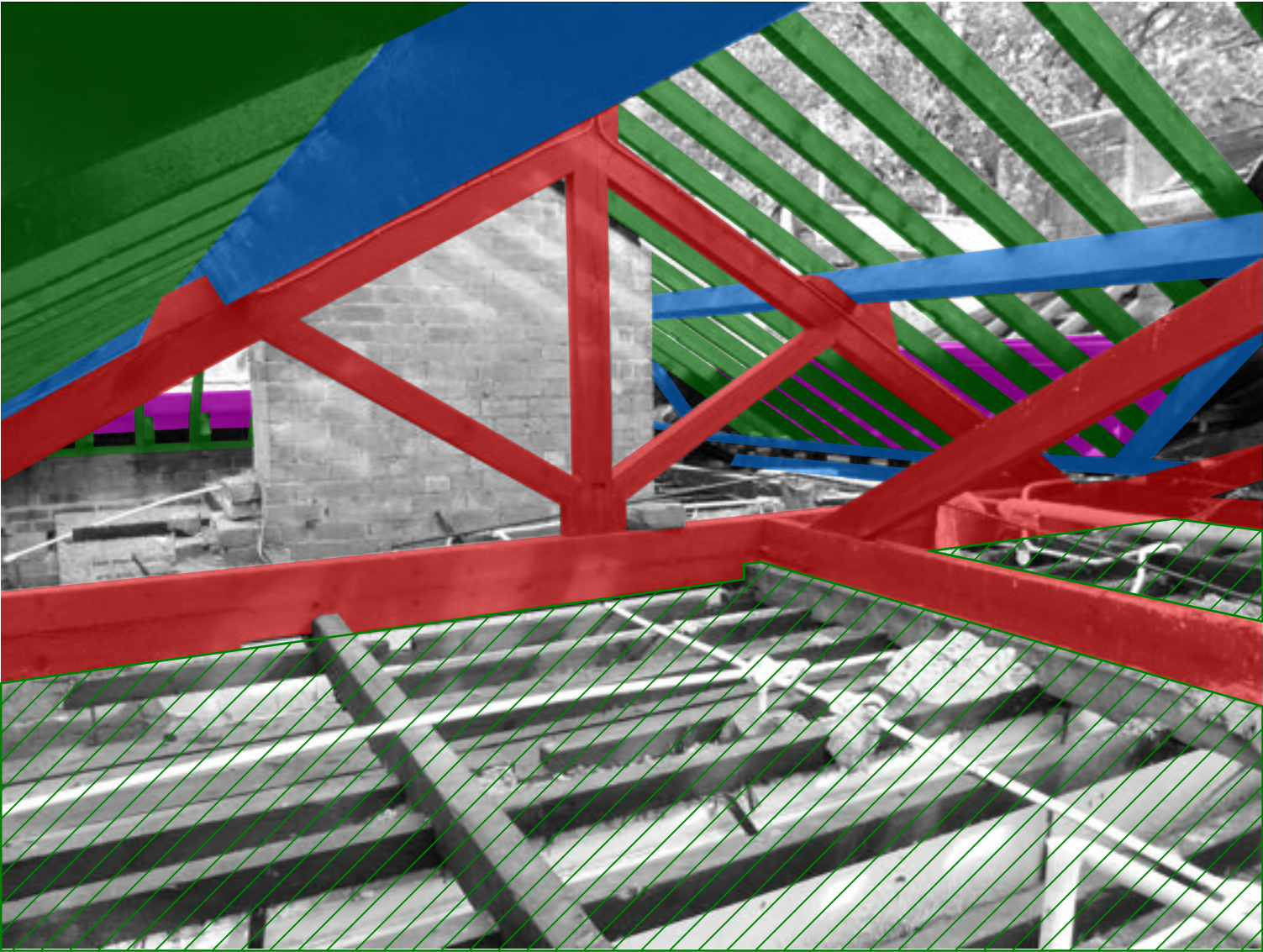
Secondary timbers generally bear directly onto the roof trusses and include purlins, hips and valley beams. They are integral to the structure but are generally simple rectangular section sawn timbers without carpentry details. These timbers are considered to have little historic value and repairs may include replacement where the majority of the element is damaged.

Tertiary timbers

Tertiary timbers generally bear onto secondary timbers and/or other elements such as walls or chimneys. These include rafters, wall plates and all ceiling timbers. Each timber only supports a relatively small area of roof but are generally the most damaged elements. They are simple rectangular sawn timbers without carpentry details and so are considered to have little historic value. Where damage has occurred replacement is the most likely option.

Boarding

Boards are provided to line the perimeter gutters, the valley gutters and the roof hips. Several boards appear to have been previously replaced and many are severely damaged. Where damaged complete replacement of the timber is proposed.



TYPICAL AREA OF ROOF



All damaged boards to be replaced with new matching

All damaged tertiary timbers to be replaced with new matching

Remove decayed hips timbers back to sound timber and splice in new timber to match

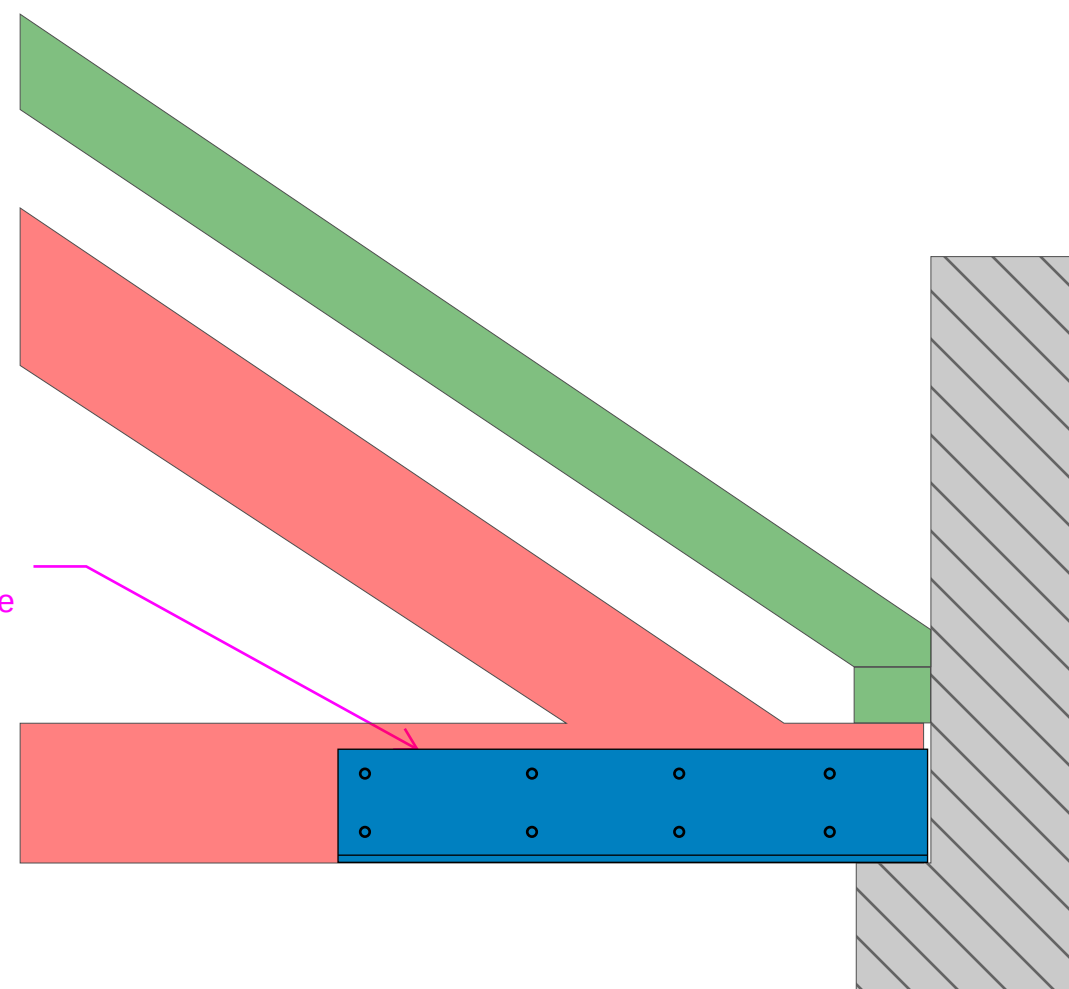
Remove decayed valley beam timbers back to sound timber and splice in new timber to match



EXAMPLE REPAIR STRATEGY
PRIMARY TRUSSES and WALL PLATES



Where ends of primary trusses
embedded in walls are decayed
augment with stainless steel plate



Decayed wall plates to be
replaced with new matching

Opened timber joints to be
strapped with steel plates

