



Sovereign Bower Beams

Timber in contact with damp masonry is vulnerable to attack from Wet Rot and more particularly Dry Rot.



Product Code

BM6: **30806692**

BM9: **30806693**

BM17: **30806694**

Types and Sizes

BM6 Designed to support joists where decayed timber is cut back up to 150mm (6") from the joist end.

BM9 Designed to support joists where decayed timber is cut back up to 225mm (9") from the joist end.

BM17 Designed to support joists where decayed timber is cut back up to 430mm (17") from the joist end.

The Sovereign Bower Beam is designed for use on joist widths ranging from 50mm (2") to 150mm (6") approx.

Each unit comprises two 'L' shaped sections supplied complete with fixings.

Description

The most vulnerable timbers in any property are the timber floor joists of suspended ground floors. This is particularly true in older properties where the joist ends bear directly into the retaining walls. Modern construction allows joists to stop short of retaining walls and rest instead on sleeper walls where they are protected by a damp proof membrane.

In many older buildings the joist ends are let into sockets in the walls below the damp proof course. These joist ends are often permanently wet and gradually succumb to slow decay from one of the Wet Rot fungi (usually Cellar fungus - *Coniophora puteana*). Replacement of decayed joist ends, although only a small part of the joist is affected, can cause a major amount of work because the 'small part affected' is the vital joist end that is supporting the floor.



TRADITIONAL METHODS

Traditional methods of replacement of rotten joist ends involve complex, difficult, costly and time consuming methods to support floors and fit new joists that are treated and protected from rot.

SOVEREIGN BOWER BEAM METHOD

The Bower Beam method eliminates most of the work of the traditional method, and leaves the floor joist as strong as before and clear of the damp wall.

It involves:

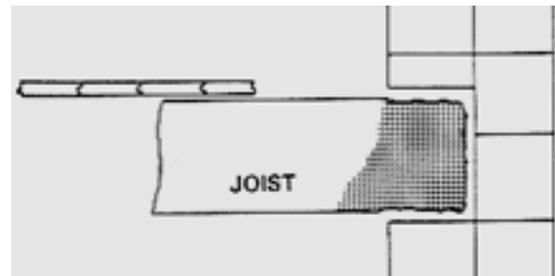
- ✓ Cutting the joist end back to sound wood and applying preservative treatment.
- ✓ Fixing Sovereign Bower Beam to joist end and into existing wall socket.

ADVANTAGES OF USING SOVEREIGN BOWER BEAMS

1. Joist ends can be replaced one at a time avoiding the need to support the floor.
2. Existing wall sockets are used thus avoiding the time and labour to cut new sockets alongside the old or using joist hangers which are unacceptable to many specifying authorities and are often difficult to fix or building a crosswise beam which is expensive and labour intensive.
3. Sovereign Bower Beams fit all sizes of joists from 50 mm to 150 mm thickness. Each kit is complete with its own fixings. The short length of the Sovereign Bower Beam makes it easy to manoeuvre in confined sub-floor spaces and from a load-bearing point of view it is much stronger than a timber joist (see Test Report)
4. The Sovereign Bower Beam is made from 2 mm KHR steel with a Supergalv finish and so will not deteriorate in damp conditions.
5. The joist end is held clear of the wall (as in modern sleeper-wall construction) and is no longer vulnerable to the dampness in the wall.
6. The Sovereign Bower Beam does NOT require grouting-in. The wall socket needs no special DPM, polythene or bitumen treatments (though sometimes making good to level may be necessary), and treatment of the socket is recommended where Dry Rot has attacked.

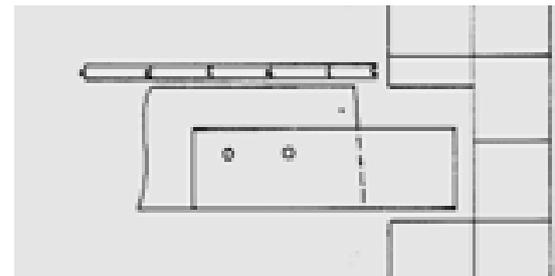
SPECIFYING THE APPROPRIATE SIZES

THE PROBLEM EXPOSED



By the usual testing methods, determine the extent of joist end cut-back necessary to reach sound timber. This will indicate the size of the Sovereign Bower Beam required

THE PROBLEM SOLVED



TYPICAL EXAMPLE - up to 150 mm (6") CUTBACK NECESSARY (not to scale)

It should be noted that with BM9 and BM17 an additional section of treated timber must be inserted between the cut end and the wall to carry the floorboards



TYPICAL EXAMPLE - 225 mm (9" or up to 430 mm (17") CUTBACKS NECESSARY (NOT TO SCALE)

For simplicity, the exact positions and numbers of fixings and locating holes have been omitted from the above diagrams. Please see following page, for dimensions and details of complete range.

HOW MUCH TIMBER DO YOU CUT BACK?

With a severe Dry Rot or Wet Rot out-break it is preferable to use the services of a specialist Remedial Treatment Company because replacement of joist ends may not be sufficient.

For guidance on the treatment of Dry Rot (*Serpula lacrymans*) see Sovereign Dry Rot Specification.

With Wet Rot it is only necessary to cut back to sound timber.

ADDITIONAL TREATMENT

DRY ROT

Requires removal of plaster and exposure of brickwork adjacent to the outbreak. This may be extensive and care should be taken to examine brickwork around adjacent woodwork such as skirting's, doorframes and window frames.

Fungicidal sterilisation of the masonry and sub floor is necessary.

All of the floor timbers must be given fungicidal treatment.

This specialised process involves hazardous chemicals not available to the public and should be carried out only by approved Contractor.

The source of the dampness must be eliminated.

WET ROT

Does not require removal of plaster as part of the treatment. Clean and treat all sound timbers in the vicinity of the outbreak. The source of dampness must be eliminated.

FIXINGS

A "Unit" refers to BOTH identical 'L' shaped sections supplied COMPLETE with the correct quantity of galvanised coach-screws and locating pins, in accordance with the size(s) chosen.

In practice though, we suggest that you simply nominate in terms of "however many JOIST ENDS to be replaced" - times the (various) size(s) required, of course.

1. Pilot-holes to be drilled

BM6 requires 8 total per joist end

BM9 requires 10 total per joist end

BM17 requires 12 total per joist end

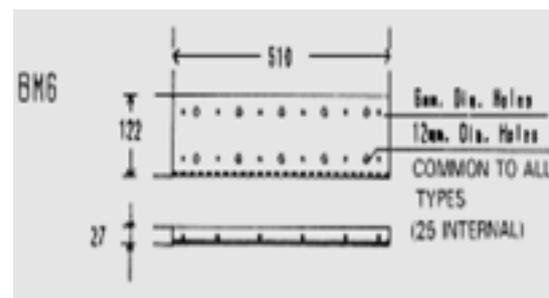
Each section has many more fixing and locating holes provided, than fixings are actually required. This gives maximum versatility in confined workspaces.

FIXINGS CONTINUED

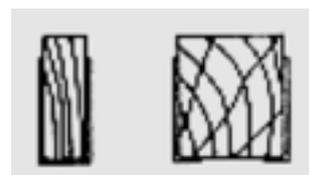
- If preferred, the Sovereign Bower Beam may still be fitted by through bolting (rather than coach-screwing). However, this method does require drilling through the complete joist section and entails more precise alignment. Galvanised "Allthread" bolts, nuts and washers will be supplied, when specified by customer. (Washers are required with "Allthread" - but not with coach screws).
- With either method, the locating pins are purely to assist in positioning, during fitting. They are NOT a structural requirement

PREPARATION

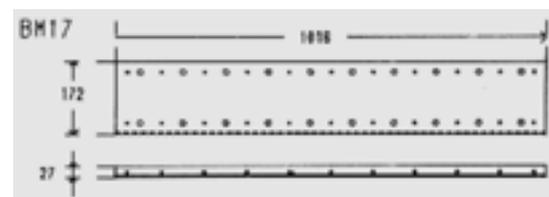
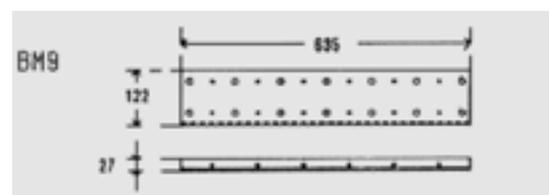
General Dimensions and Detail



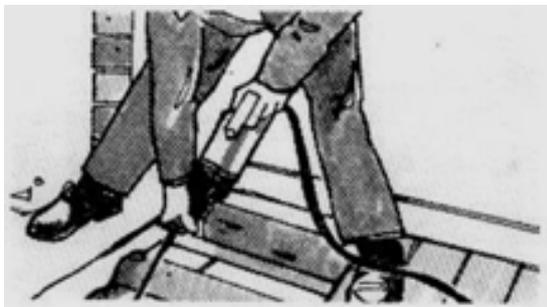
TYPICAL EXAMPLES BM6, 9, AND 17



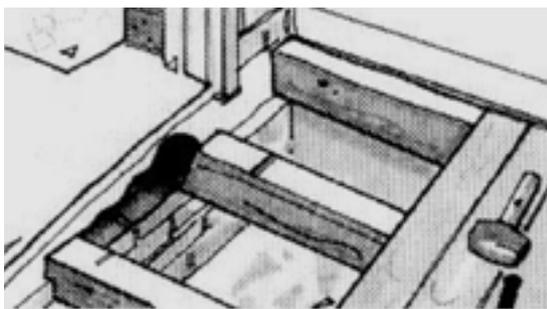
ALL STANDARD TYPES FOR USE WITH MINIMUM 50mm (2") TO MAXIMUM 150mm (6") approx.



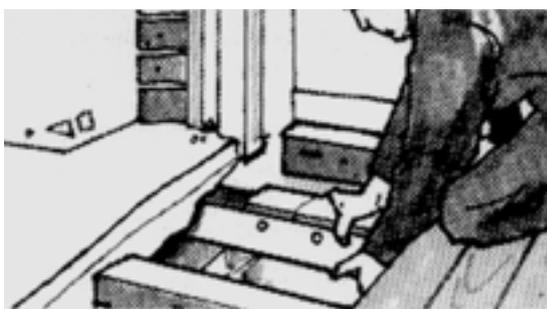
FITTING



1. Temporarily support the floor area to be worked on, **ONLY** if intending to replace more than one joist end at a time. Cut back decayed joist end(s) as far as necessary to reach sound timber.



2. Clean out the joist socket and make-good to level, if necessary. Wire brush the cut end and apply deep penetrating preservative paste to protect against further insect and fungal attack.

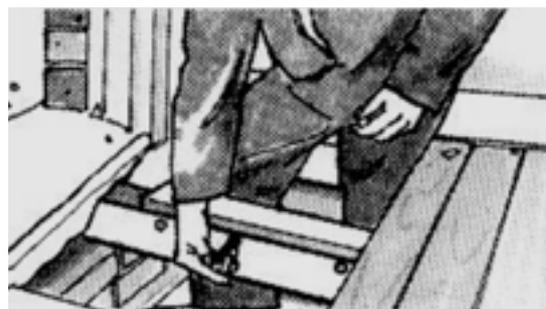


3. Place the two 'L' sections of the Sovereign Bower Beam unit one each side of the joist, then slide the nearest ends a minimum of 110mm (4") into the joist socket. Position the two sections of the resulting U-Beam in place, by hammering in the galvanised locating pins, through the **SMALL** holes, (but **NOT** opposite each other, to avoid clashing).

FITTING CONTINUED

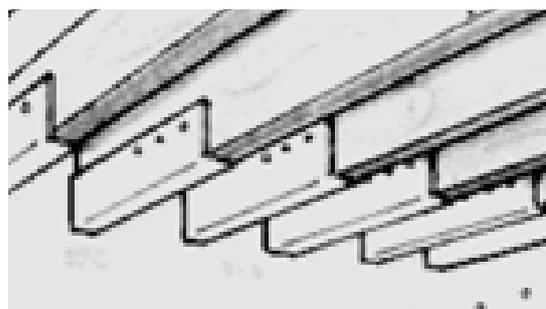


4. Using the **LARGE** holes as a guide, drill the appropriate **NUMBER** of pilot-holes in the joist, but again, **NOT** opposite each other. Use a 5mm (3/16") bit, to a depth of 30mm (1 1/4"). For 'numbers', first refer to **FIXINGS** on previous page. (Hardwood joists will require deeper holes - please consult our Technical Department).



5. Finally, insert the galvanised coach-screws. Tighten up with a 11/16" AF spanner. After treating any additional floorboard-supporting timber with preservative paste. Diagram B - drop into position and fix with one pin per **SIDE** (coach screws for BM17 only). Replace the boards as necessary, taking care that neither they, nor the support timber come into **CONTACT** with Brickwork.

COMPLETE INSTALLATION





HEALTH & SAFETY

- ! Keep out of reach of children.
- ! Working under floors can generate excessive dust. Do not breathe dust.
- ! Avoid contact with the skin.
- ! Wear suitable protective clothing, gloves and eye/face protection.



Health & safety information
available on request



Important Disclaimer

The information given is in good faith based on experience and usage, however all recommendations are made without warranty or guarantee, since the conditions of use are beyond our control. All goods are sold in accordance with our Conditions of Sale, copies of which are available on request. Customers are advised that product, techniques and codes of practice are under constant review and changes occur without notice. Please ensure you have the latest updated information.



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