

# Water reed Thatching guidance

Guidance for understanding the materials to hand for suitable construction specifications of Water Reed Thatch fixed new to a roof frame.

Thatch material: Water Reed fixed direct to roof frame	Regular length (single wale) Reed Circa: 1500mm to 2000mm	Long coarse (single wale) Reed Circa: 2000mm to 2500mm	Short fine (single wale) Reed Circa: 1000mm to 1500mm	Double –Triple? wale reed of various lengths, shapes, textures and qualities
Recommended position on roof for selected bunches	<p><b>Bunches of reasonable taper shape:</b> Main body of thatch, gables, hips, eaves and eyebrow dormers.</p> <p><b>Bunches full body and bushy tops:</b> Limited use on main body, valleys, top courses and backfill.</p>	<p><b>Bunches of reasonable taper shape:</b> Main body of thatch, gables, hips, eaves and eyebrow dormers.</p> <p><b>Bunches full body and bushy tops:</b> Limited use on main thatch body, valleys and backfill.</p>	<p><b>Bunches of reasonable taper shape:</b> Limited use on main body of thatch, eaves and gables on small tight features, top courses and backfill</p> <p><b>Bunches full body and bushy tops:</b> Limited use on main thatch body, eaves and backfill.</p>	<p>Best used for backfill, top course and setting eaves (not brow).</p> <p>Can be used for main coat work if a low content of possible brittle previous years growth is present.</p>
Optimum thicknesses of thatch coat (mm) For good durability.	<p><b>280mm to 330mm</b> Recommend decreasing thickness of coat with decrease in lengths of reed bunches</p>	<p><b>330mm to 380mm</b> Recommend decreasing thickness of coat with decrease in lengths of reed bunches</p>	<p><b>250mm to 300mm</b> Recommend decreasing thickness of coat with decrease in lengths of reed bunches, Crucial.</p>	<p>Ditto: Left columns, if fair reed is used for weathering coat.</p>
Backfill reed requirements	<p><b>Average requirement</b> More backfill is required on each course for the more tapered reed bunches and/or increases in thickness of coat. Extra backfill is needed for filling where dips occur in undulating roof frame.</p>	<p><b>Minimum requirement</b> Some backfill required, as well as for the secondary backfill purpose of stopping the reed tops catching underneath the battens. Extra backfill is needed for filling where dips occur in undulating roof frame.</p>	<p><b>Major requirement</b> Far more backfill is required with short reed to avoid 'stacking' of reed courses and the loss of the necessary natural kick tension along the length of fixed reed. Extra backfill is needed for filling where dips occur in undulating roof frame.</p>	<p>Ditto: Left columns, if fair reed is used for weathering coat.</p>
<p><b>Thermal Resistance</b> of any given thickness of reed thatch.  (U-Value) Conductivity 0.09 W/mK</p>	<p>Between R3.11 and R3.66</p>	<p>Between R3.66 and R4.22</p>	<p>Between R2.77 and R3.33</p>	<p>Ditto: Left columns</p>

<p><b>Optimum Depth of fixings from surface of thatch.</b></p> <p><b>Fixing spacing and positioning between reed courses.</b></p>	<p>Between 115mm and 130mm</p> <p>Between 460mm and 510mm Optimum positioning of fixings relates to length of reed to help ensure the best natural kick tension for each course, avoiding clamping the reed down tight nearer the surface.</p>	<p>Between 115mm and 130mm</p> <p>Between 510mm and 610mm Optimum positioning of fixings relates to length of reed to help ensure the best natural kick tension for each course, avoiding clamping the reed down tight nearer the surface.</p>	<p>Between 115mm and 130mm</p> <p>Between 400mm and 460mm Optimum positioning of fixings relates to length of reed to help ensure the best natural kick tension for each course, avoiding clamping the reed down tight nearer the surface.</p>	<p>Ditto: Left columns</p> <p>Ditto:</p>
<p><b>Fixings:</b> Steel sway 8mm plus... Hazel or other suitable wooden sway Iron hooks, stainless steel screw fixings, tarred cord, bramble rope.</p>	<p>Yes</p>	<p>Yes</p>	<p>Yes</p>	<p>Ditto</p>
<p><b>Thatch tension for fixings</b></p>	<p>Reasonably tight Difficulty in getting one finger under the sway. Check with palm pressure that the reed courses are under the correct tension either side of the fixed sway.</p>	<p>Reasonably tight Difficulty in getting one finger under the sway. Check with palm pressure that the reed courses are under the correct tension either side of the fixed sway.</p>	<p>Reasonably tight Difficulty in getting one finger under the sway. Check with palm pressure that the reed courses are under the correct tension either side of the fixed sway.</p>	<p>Ditto</p>
<p><b>Thatch surface tension</b></p>	<p><b>Important</b> Must not be 'concrete tight', slight give in the surface helps with surface breathability and avoids moisture wicking up the stems towards the fixings.</p>	<p><b>Important</b> Must not be 'concrete tight', slight give in the surface helps with surface breathability and avoids moisture wicking up the stems towards the fixings.</p>	<p><b>Very Important</b> Must not be 'concrete tight', slight give in the surface helps with surface breathability and avoids moisture wicking up the stems towards the fixings.</p>	<p>Ditto</p>
<p><b>Dealing with higher than normal proportions of shorter and longer reed bunches delivered/purchased.</b></p>	<p>Double bunch technique: Not really necessary.</p>	<p>Double bunch technique: Use available shorter regular bunches with a surplus of longer bunches (main body).</p>	<p>Double bunch technique: Use available regular bunches with a surplus of short reed (main body). It is possible to double bunch short and very long reed together but is not pleasing to the eye.</p>	<p>Ditto</p>



Life-cycle performance and durability: 50 degree plus pitch roof frame	50-70 years depending on other smaller contributing factors such as aspect etc	60-80 years depending on other smaller contributing factors such as aspect etc	40-60 years depending on other smaller contributing factors such as aspect etc	Less likely to perform quite as well as single wale reed, but reasonably good if thatched well.
Life-cycle performance and durability: Slack pitched roof frames	Poor Performance reduces incrementally with slacker pitches.	Fair Performance reduces incrementally with slacker pitches.	Very poor Performance reduces incrementally with slacker pitches.	Poor to very poor Performance reduces incrementally with slacker pitches.
Uniform thatch coat depth specification for each course of reed fixed.	Ensure that each course is dressed to within 10mm of specified depth before fixings are secured. Overfull coatwork courses <b>must not</b> be rectified by using a leggatt to dress up the extra thickness to the bindings, as this will effectively over tighten the thatch surface and leave the bindings/fixings incorrectly positioned (unintentional stack and clamping of reed).	Ditto	Ditto	Ditto

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