Identify the application parameters
The applied load, the base material and any environmental factors.

Check the load bearing structure will support the applied load
If there is any doubt then the advice of a qualified structural engineer should be obtained before proceeding.

Check the need for redundancy in the ceiling grid
Ensure that one isolated failure does not result in the excessive overloading of other fixings leading to progressive collapse. Selecting an anchor with an ETA will simplify substantially considerations of redundancy.

Select the fixing type
Not all fixings are suitable for all the base materials. The manufacturer’s guidance should be checked.

Check the fixing load capacity

<table>
<thead>
<tr>
<th>Where recommended load of the fixing known for the specific base material</th>
<th>Where recommended load of the fixing unknown for the specific base material</th>
</tr>
</thead>
<tbody>
<tr>
<td>The approach is set out in BS 8539 for determining the anchor size once the anchor type has been selected.</td>
<td>The allowable load may be determined from preliminary tests.</td>
</tr>
</tbody>
</table>

Check the applied load is lower than the recommended load
For fixings without an ETA, the key design criterion can be stated as: APPLIED LOAD ≤ SAFE WORKING LOAD

Find the recommended load from preliminary tests on site, check the applied load is lower than the recommended load

Specify the selected fixing in the project documentation NBS K10/K40
Specified fixing to be installed in accordance with manufacturer’s instructions, by a competent person
Sample of fixings in each room to be proof tested, and the results to be recorded and filed in the O&M manual

“Incorrect selection and installation of the fixing were identified as the top two causes of ceiling collapses.”
FIS member survey

These factsheets and other best practice guides are available at thefis.org/publications/best-practice-guides