Selection of the appropriate Tensar TriAx® Geogrid

A. Primary selection criteria

1. For use with well graded fill having maximum particle size of 75mm

Subgrade strength is the principal factor affecting the selection of the most appropriate **Tensar TriAx® geogrid** to place on the subgrade. This is expressed as a CBR value, or an undrained shear strength (C_u). In some situations, where the subgrade strength is very weak, multi-layer geogrid stabilisation is often appropriate. Guidance, according to subgrade strength, is as follows:

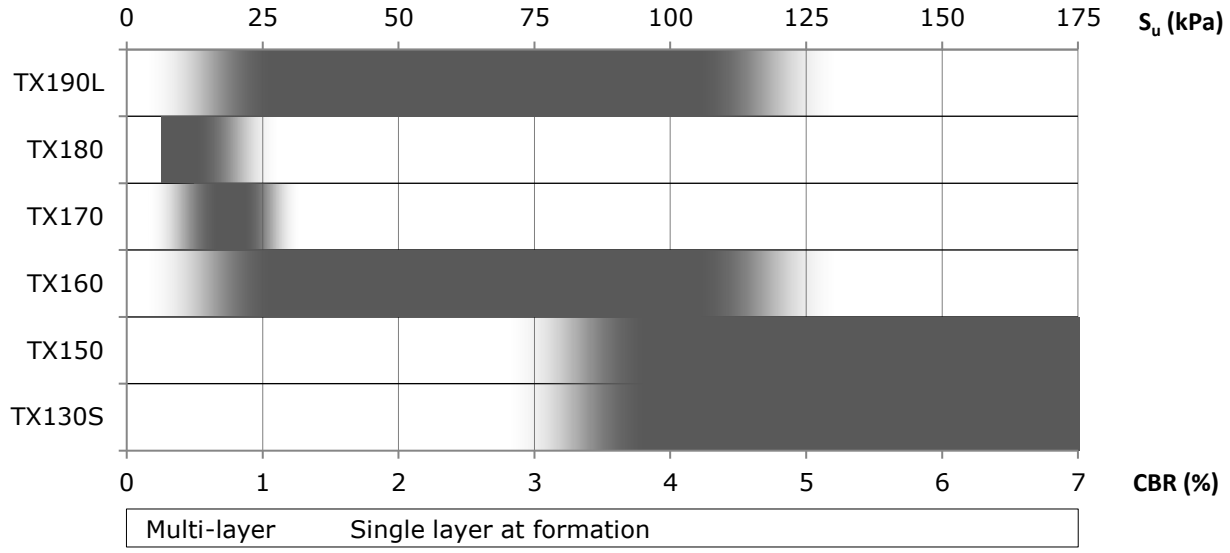

Table 1 Geogrid selection: subgrade strength

2. For use with coarse or fine well graded granular fill

Tensar recognise that the type and availability of granular fill used within the construction industry can vary in terms of grading and maximum particle size. To reflect this and allow Engineers to select a Tensar TriAx geogrid to optimise the performance of their mechanically stabilised layer, two further grades of TriAx geogrid have been developed to deal with coarser and finer granular fill respectively.

- Tensar TX190L – larger aperture geogrid to cater for coarse aggregate grades
- Tensar TX130S – smaller aperture geogrid to cater for fine aggregate grades

As an important part of the selection criteria for the Tensar component of an MSL, guidance follows for these grades of Tensar TriAx in terms of appropriate selection based on subgrade strength and maximum particle size of the proposed granular fill.

3. For use with a poorly graded or a gap graded fill which is likely to suffer contamination by 'pumping' of subgrade fines

For fills which are not well graded, and a subgrade which contains potentially mobile silt and fine sand, consideration should be given to use of an appropriate separating geotextile immediately below the bottom geogrid. In such cases use of a composite consisting of a Tensar geogrid, factory bonded to a suitable non woven geotextile, is recommended for ease of installation.

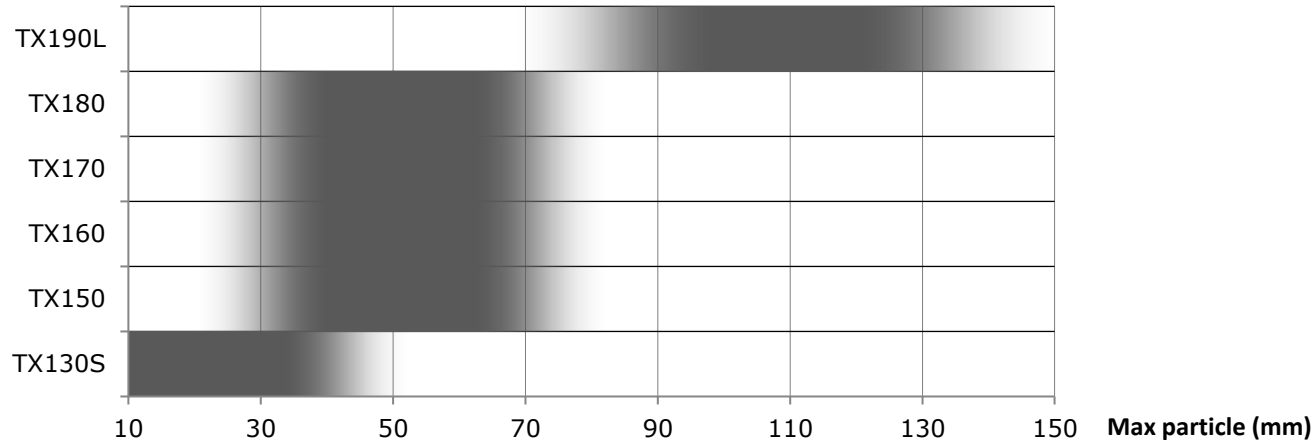

Table 2 Geogrid selection: maximum particle size

B. Secondary selection criteria

There are some further considerations which can influence geogrid choice. These are the magnitude of axle loads (mainly during construction but also in service), and the function or service life of the installation. Guidance on these secondary considerations is as follows:

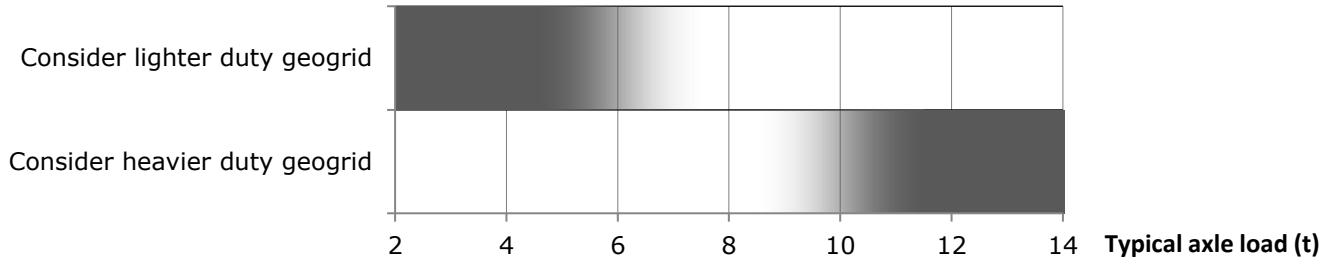

Table 3 Geogrid selection: axle loading

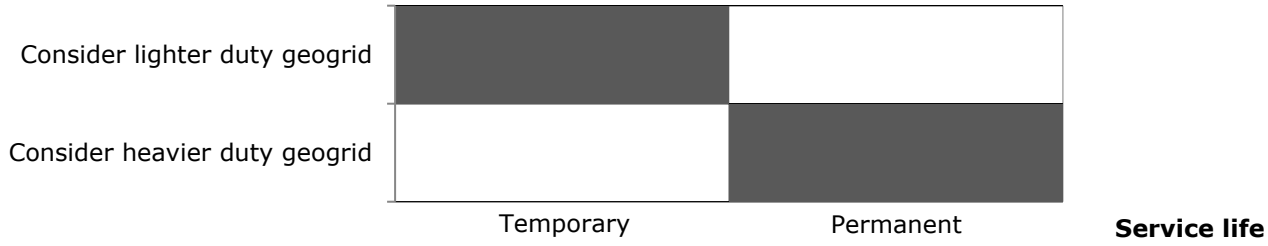

Table 4 Geogrid selection: service life

Compatibility review

The appropriate geogrid choice is that which best matches the requirements of the primary and secondary guidance On completion of the geogrid selection process, the user should consider the compatibility of the proposed Tensar MSL in terms of potential inconsistencies for practical installation e.g. fill with a 150mm maximum particle size in a 150mm thick MSL?

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