California Bearing Ratio (CBR) testing is most common way to evaluate the strength and bearing capacity of subgrades and base courses in pavement design.

However, it may not be the most appropriate method for testing cement-stabilised soils for several reasons:

Cement stabilised soils exhibit different mechanical properties compared to unbound aggregates or natural soils. The CBR test was primarily designed to assess the performance of granular materials and does not really capture the behaviour of cement-bound materials effectively.

CBR testing is known to be sensitive to moisture content, and cement stabilised soils can undergo significant changes in strength with variations in water content. Also, Laboratory test conditions may not accurately reflect in-situ stabilisation conditions, leading to inconsistent results.

Cement stabilised soils should always gain strength over time due to the hydration process of cement. Alternatively Graded crushed stone achieves its maximum strength after compaction.

CBR testing typically measures instant or short-term strength, which does not reflect the material's durability and stability over a longer period.

The CBR test involves applying a load that may cause consolidation and swell in the material being tested. Cement stabilised soils may have a different response to loading, which can lead to misleading results about their performance under actual service conditions.

In CBR testing, the material is compacted and then subjected to a load to evaluate penetration resistance. Cement stabilised soils have different material recovery characteristics upon unloading, which the CBR test might not appropriately evaluate.

Other testing methods, such as unconfined compressive strength (UCS) tests or resilient modulus and density tests, will provide a more accurate assessment for cement stabilised materials since these tests can better evaluate their unique characteristics and long-term performance.

Overall, while CBR testing is a valuable tool for specific applications, its limitations with cement stabilised soils necessitate the consideration of alternative testing methods to ensure that the material's behaviour and performance are thoroughly understood.

Design engineers should be encouraged to demand far more extensive stabilisation results that can accurately show:

- Unconfined Compressive Strength (UCS) - This measures the maximum axial compressive stress that the stabilized soil can withstand without failure. It is crucial for understanding the load-bearing capacity of the material.
- Flexural Strength - This determines the tensile strength of the stabilised soil, particularly important for applications like pavement layers where bending stresses may occur.
- Resilient Modulus - This parameter assesses the elastic response of stabilised soils under repeated loading, particularly for pavement design. It helps in understanding how the material will perform under traffic loads.
- Durability and Resistance to Erosion - Engineers need to understand how well stabilised soils resist weathering, moisture ingress, and physical erosion, which can impact their long-term performance.
- Optimal Moisture Content & Maximum Dry Density - These results help determine the conditions under which the soil can achieve maximum strength and stability during compaction.
- Hydration and Strength Development Over Time - Since the strength of cement-stabilised soils increases over time due to hydration, understanding the rate of strength gain is crucial for determining construction schedules and usage timelines.
- Swelling and Shrinkage Characteristics - Evaluating the soil's response to changes in moisture content and water borne sulphates is important for predicting potential volume changes and ensuring stability.
- Plasticity Index (PI) - This indicates the workability and plasticity of the soil before and after stabilisation, which can affect handling and compaction during construction.
- Permeability - Understanding the permeability of the stabilised soil helps in evaluating drainage conditions, which can affect both short-term stability and long-term durability.
- Correlation with Field Conditions - Engineers also aim to correlate lab test results with anticipated field conditions to make sure the stabilised soil will perform as expected when subjected to actual loads and environmental factors.

By obtaining these results, engineers can make informed decisions on material selection, design specifications, and construction methods for projects involving stabilised soils.

Computer programmes such as Shell Bisar Pavement design software will allow engineers to calculate linear stress-strain behaviour when accurate results are available. Ultimately ensuring safety and performance over the lifespan of the structure or pavement and having the tools and therefore the confidence to reduce structural elements based on true loading and where appropriate settlement and shear calculations.