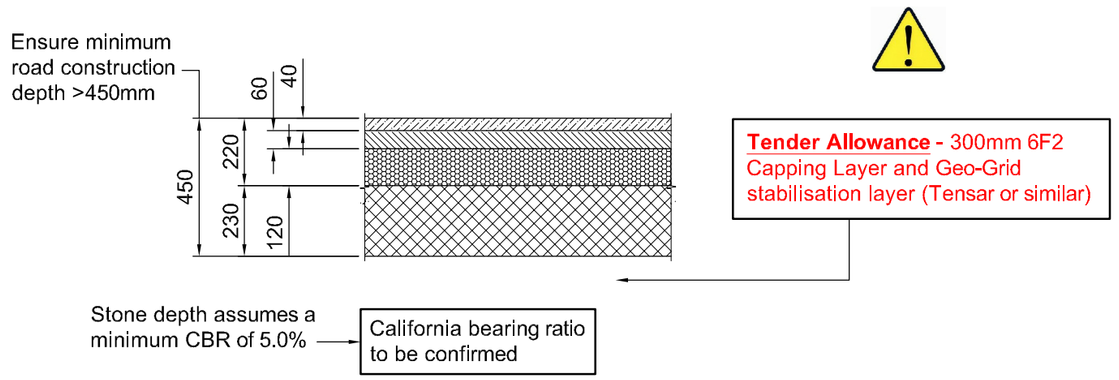
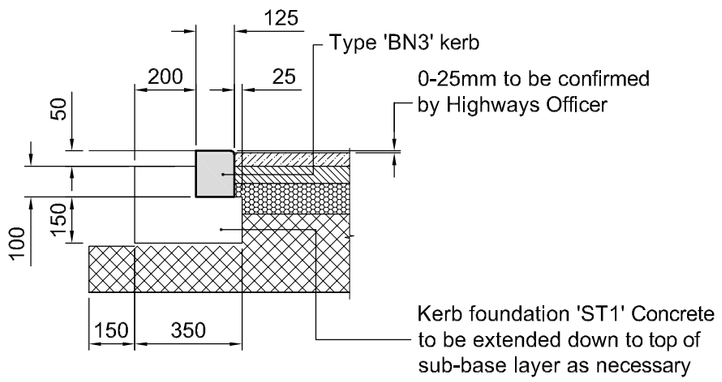
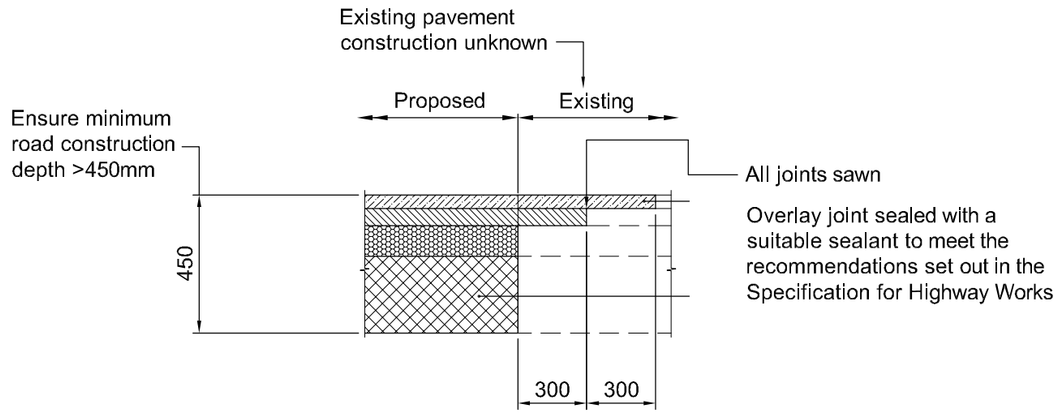



Access Road (Adopted Entrance) - Access Road
(Scale 1:20) Table 25




Edge Kerb Detail
(Scale 1:20)




Pavement Detail - Intersection of Proposed and Existing
Detail to be agreed with Highways Engineer
(Scale 1:20)

**Table 25: Flexible Carriageway Construction Materials and Thicknesses (Residential Estate)**

| Layer | Material | Local Distributor Road | Residential Access Road | Shared surface road |
|---|---|---|---|---|
| sub-grade improvement layer (capping) | Class 6F2 | Thickness dependent upon CBR value of the subsoil see Table 26 | | |
| Sub-base | Granular Sub-base Type1 | Thickness dependent upon CBR value minimum thickness 180mm & increased to give total construction thickness of 450mm on frost susceptible sub-grades | | |
| Base Course | Dense Macadam | 120mm | 120mm | 70mm |
| | Rolled Asphalt | 120mm | 120mm | 70mm |
| Binder Course | Dense Macadam | 60mm | 60mm | 60mm |
| | Rolled Asphalt | 60mm | 60mm | 60mm |
| Surfacing Course | Rolled Asphalt (design mix) BS EN 13108-4 | 50mm | 45mm | n/a |
| | Rolled Asphalt (recipe mix) BS EN 13108-1 | n/a | 40mm | 40mm |
| Thin Surfacing Course | Thin surfacing course systems may be used where appropriate however they must comply with SHW Clause 942 and Appendix 7/1. They must have British Board of Agreement HAPAS Roads and Bridges Certificate. | | | |

## General

All materials and workmanship shall be in accordance with the National Assembly for Wales Specification for Highway Works (SHW) and amendments current at the time of design, subject to any qualifications or restrictions detailed in this document.

All materials to be approved by Local Council Highway Engineer

## Road Construction

1. Roads shall consist of a foundation and a pavement.
2. The foundation shall comprise subgrade (original or stabilised ground), 6F2 capping layer where necessary and sub-base.
3. The pavement shall comprise bituminous roEYCase and surfacing.
4. Minimum total construction (foundation plus pavement) where the subgrade is frost-susceptible shall be 450 mm for industrial estate roads and 400 mm for residential roads.

## California Bearing Ratio and Frost Susceptibility Testing

1. The thickness of the foundation shall depend upon the strength of the subgrade, as measured by the California bearing ratio test, subject to certain limitations dependent upon the frost susceptibility of the subgrade.
2. The California bearing ratio of the subgrade shall be measured, either in-situ to BS 1377: Part 9, or in the laboratory to BS 1377: Part 4.
3. In-situ tests and samples for laboratory determination shall be taken below any desiccated layers and at least 0.6m below the ground level prevailing at the time of the testing/sampling.
4. Compaction in the laboratory shall be using the 2.5kg rammer, in three layers with 62 blows per layer for cohesive soils or using the vibratory hammer method for granular soils.
5. Frost susceptibility testing of either sub-base or granular subgrades should be to BS 812: Part 124: 1989 as amended by Clause 705 SHW.
6. Granular subgrades can be taken as non frost susceptible if the percentage of material passing the 63 micron BS test sieve is less than 10 per cent, when tested in accordance with BS 1377: Part 2.
7. In the case of cohesive subgrades the thickness of construction would normally be such that frost susceptibility would not be an issue.

## Density and Air Voids

1. All areas of dense bitumen macadam and binder course shall have compaction tested by the percentage refusal density test (SHW Clause 1.19 and 927.1). The trial area, however, is not necessary.
2. All areas of surface course shall have compaction tested by the determination of air voids value, with cores cut and tested to the requirements of BS 598: Part 100: 1987 and BS 589: Part 104:1989. Air voids values to be achieved shall be as follows:
   Close graded bitumen macadam surface course 6 ± 4%
   30% and 35% stone content HRA wearing course 4 ± 2%

## Testing

1. The Contractor shall provide appropriate sampling and testing certificates of approval from a NAMAS accredited laboratory of all material laid as and when required by a representative of the Head of Transport and Infrastructure
2. Sand patch testing to be carried out as detailed in the National Assembly for Wales Specification for Highway Works (SHW)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Client<br>**Mr and Mrs R Burrows** | Project<br>**Gate Farm, Caersws, Powys, SY17 5RE** | Drawing Title<br>**Standard Details** | Drawing Number<br>**GFC-ENA-XX-XX-DR-C-3000** | | | | | |
| | | | Purpose of Issue<br>**Preliminary** | | | | | |
| | | | Revision<br>**P1** | P1 | 15.06.21 | DRB | DRB | Preliminary Drawing Issue |
| | | | Status<br>**P** | Rev | Date | Drn | Chk | Details |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