ADDENDUM 1

SECTION 11

Overview

This Addendum to Section 11 PAVEMENT DESIGN incorporates a SAMI treatment as an alternative to the previously mandatory Bitumen Crumb Rubber Asphalt for pavements over expansive subgrades.

Implementation

Implementation will be as follows:

- Effective from 15 October 2015 for all new subdivision proposals received by growth area councils on or after that date.
- Transition arrangements can be discussed with the relevant growth area council for any recently approved or current proposals that have been submitted but not yet approved.

In lieu of the bitumen crumb rubber asphalt base course specified in Table 11 for Pavement Types E1 to E4, comprising unbound granular pavements on expansive subgrades, the base course asphalt specified in Table 9 may be used instead.

If the alternative base course asphalt is used, it shall be preceded by a SAMI treatment (strain alleviating membrane interlayer) consisting of a Size 10 sprayed seal using Class S18RF bitumen crumb rubber binder placed at an application rate ≥ 1.8 l/m2 and covered with a light application of pre-coated Size 10 aggregate.

The Class S18RF binder shall be produced using not less than 20 parts of crumb rubber (18%) by mass of binder. The volume of carrier oil used before any cutting oil is added shall not exceed 4 parts by volume of binder.

It is important that there is no loose aggregate remaining on the SAMI surface when the base course asphalt is placed so as to ensure a strong bond between the SAMI treatment and the subsequent asphalt layer. The SAMI treatment shall be preceded by placement of a bituminous prime, and not a primerseal, applied to the underlying unbound base material.

The pavement thicknesses required to be derived from Figure 3, Pavement Design Chart, comprise the combined thicknesses of the asphalt layers and the unbound granular materials. They do not include the thickness of the SAMI layer.

Table 11 A Unbound Granular Pavements with SAMI layer on Expansive Subgrades

	Road Type	Access Lane	Access Place	Access Street 1	Access Street 2
	Pavement Type	**E1**	**E2**	**E3**	**E4**
	Max Permissible DESA (ESA)	**5.0×10^4**	**1.0×10^5**	**5.0×10^5**	**1.0×10^6**
Wearing Course	Size 7 Type L Asphalt (Class 170 binder)	20 mm	--	--	--
	Size 10 Type L Asphalt (Class 170 binder)	--	30 mm	--	--
	Size 10 Type N Asphalt (Class 170 binder)	--	--	30 mm	--
	Size 14 Type N Asphalt	--	--	--	40 mm
Base Asphalt Course	Size 10 Type N Asphalt (Class 170 binder)	30 mm	30 mm	30 mm	--
	Size 14 Type HP Asphalt (Class A10E binder)	--	--	--	40 mm
SAMI	Size 10 S18RF **(Note 1)**	Yes	Yes	Yes	Yes
Bituminous Prime	Prime	Yes	Yes	Yes	Yes
Base **(Note 2)**	Base Material refer Section 11.6.3	140mm	130mm	130mm	110mm
Upper Subbase	Upper Subbase Material refer Section 11.6.3	--	--	(varies)	(varies)
Lower Subbase	Lower Subbase Material refer Section 11.6.3	(varies)	(varies)	(varies)	(varies)
Capping Layer	Type A Capping Layer Material	150 mm	150 mm	150 mm	150 mm

Note 1 Pavement thickness derived from Figure 3 does not include the thickness of the SAMI layer. The thickness of the pavement derived from Figure 3 - should be increased by 10mm to allow for the thickness of the SAMI layer.

Note 2: To accommodate the asphalt layers, SAMI and Base course shown the dimension of the kerb and channel at the lip – shown on the Standard Drawings as 190mm – must be increased to 200 mm from the lip of the tray to the underside of the kerb (or top of subbase).