



BLACKTOP CONSULTING ENGINEERS

ACN: 098 257 071 ABN: 52 098 257 071
PO Box 1018 Geraldton WA 6531
PHONE : (08) 9921 1878
FAX: (08) 9965 5730

9 July 2009

1300TempFence
PO Box 330
Niddrie Vic 3042

Job No: 09BCE709
Your ref:

Att: Mr Bruce Fouracre

Dear Bruce

Project: 1300TempFence Testing in Accordance with AS4687-2007 Results

Background

Blacktop Consulting Engineers (BCE) have been requested by 1300TempFence to complete testing on temporary fencing to determine compliance with Australian Standard 4687 – 2007 Temporary fencing and hoardings.

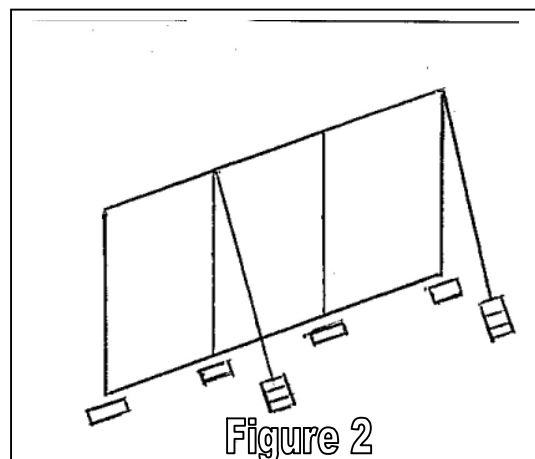
AS4687-2007 stipulates that temporary fencing will be stable under loads likely to be imposed on it. The code stipulates that the following loads shall be considered:

1. Simulated climbing test
2. Impact test
3. Foothold aperture test
4. Wind force overturning test

The erected 1300TempFence panels are shown in Figure 1.

Testing has been completed on fencing erected with a backstay every second fence panel joint. Three counterweights have been installed on the base of each backstay.

A sketch of the temporary fencing panel and backstay layout is shown in Figure 2.



Simulated climbing test

BCE have completed the simulated climbing test as required by AS4687-2007.

Testing was completed on temporary fencing panels installed with a backstay every second panel as shown in Figure 3.

Three counterweights were installed on the base of each backstay.

The fence panel installation was witnessed by BCE as supporting a 65kg load applied for 3 minutes centrally to the middle of the top horizontal frame at a lever arm of 400mm.

The results of testing indicate that the temporary fencing shown in Figure 3 meets the requirements of AS4687-2007 simulated climbing test.



Figure 3

Impact test (Testing completed June 09)

AS4687-2007 requires that the temporary fence panel shall be capable of withstanding a 150 joule impact from a 37kg, 150mm diameter torispherically shaped indenter.

BCE delivered the 150j impact load by swinging the suspended indenter toward the fence panel from a height of 410mm above the impact location on the panel.

A photograph of the panel at the time of impact when the indenter struck the middle of the panel is shown in Figure 4.

Four impact zones were tested in the middle of the panel and adjacent to the infill clamps and fittings as required by AS4687-2007.

The results of testing indicate that the temporary fencing arrangement shown in Figure 1 meets the requirements of AS4687-2007 Impact test.



Figure 4

Foothold aperture test (Testing completed June 09)

AS4687-2007 requires that the temporary fence panel mesh shall have a maximum horizontal clear aperture dimension of 75mm and shall not deform excessively under a downwards load of 1kN when applied for a period of 60 seconds.

Measurement and testing indicate that the temporary fencing arrangement shown in Figure 1 meets the requirements of AS4687-2007 Foothold aperture test.

A maximum deflection of 5mm was measured at the point of load after 55 seconds. The localised area of the panel after load testing is shown in Figure 5.



Wind force overturning test (Testing completed June 09)

AS4687-2007 requires that the temporary fence panel shall be capable of withstanding a force applied horizontally to its middle.

The magnitude of the force is to be equivalent to the regional design wind speed provided by AS4687-2007.

The applied force to the panel is to be calculated in accordance with the requirements of AS1170.2 SAA Loading Code – Part 2 : Wind Loads.

BCE have selected regional wind speed for Wind Region B. The design wind speed provided by AS4687-2007 for this region is 18m/s.

In accordance with AS1170.2:

The design gust wind speed was calculated as 13.8m/s.

The dynamic wind pressure was calculated as 0.11kPa.

The pressure coefficient was taken as 1.2.

The external pressure was calculated as 0.59kPa.

Based on a panel size of 2.4m x 1.8m, and assuming blocked conditions, the resultant wind force applied to the centre of the panel is 0.59kN.

This load was applied to the centre of the panel by scales loaded horizontally.

A photograph taken during the test is provided in Figure 6.

The testing indicates that the temporary fencing arrangement shown in Figure 1 meets the requirements of AS4687-2007 Wind force overturning test.



Figure 6

We trust that this meets with your requirements, however should you require any further assistance, please do not hesitate to contact the undersigned on 99 211 878.

Yours faithfully

Lester Smith
Engineering Manager