

LSAA Conference 2009

Abstract : From Structurflex Ltd

“THE FARM “ ANISH KAPOOR.

An overview of the design process, manufacture and installation of the first permanent outdoor Tensioned membrane “Sculpture “ designed by artist Anish Kapoor. The project echo’s a similar work by Kapoor – “Marsyas” that was exhibited in the Tait Modern,s turbine hall in 2002.

The objective of the project was to design, fabricate and install a tensioned membrane “sculpture” as defined by Anish Kapoor, to provide a permanent horizontally supported work of art to complement an outdoor art gallery comprising some 22 works. This new sculpture for the collection was to be based on a scale and design texture, appropriate to the 1000 acre private property. The project is located on the out skirts of Auckland, New Zealand.

The structural goal of the project was to design an end supported horizontal tension membrane structure capable of withstanding the high topographical terrain exposure coefficients instigated by fierce ocean driven winds from the Tasman sea, considering the structures orientation across the prevailing wind direction. The tension Membrane Sculpture stands 25 metre tall and has a clear unsupported span of 85 metres. With the ends being supported by 2 vertical Structural steel ellipse with the major axis being 90 degrees rotated to each other.

We review the design process spanning some 4 years from conception to execution considering the very specific requirements by the Artist and private owner. Also the considerations for the Membrane long term stability and specific materials required to achieve minimal development creep.

Reviewing the key points of the project we also address the issues of steel procurement, steel manufacture, transportation and site access, membrane analysis details testing and the overall installation of membrane and structural steel.

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