

# Case Study

## Goodwood Festival of Speed 2015 - Mazda

by CAPITA Property and Infrastructure



**Artist:** Gerry Judah

**Architects and Engineering:** CAPITA P & I

**Client:** Goodwood Festival of Speed 2015

**Location:** Goodwood House, Chichester, UK

**Project Description:** Each year, the centrepiece lawn in front of the main Goodwood House showcases a breath-taking sculpture for the annual Goodwood car show, designed by Gerry Judah, Architecture and Engineering by CAPITA P&I and Fabrication by Littlehampton Welding Ltd.

“ Using Advance Design enabled us to import the model geometry using BIM swiftly and smoothly. Loads and combinations were assessed making easy dynamic analysis of this complex model. ”

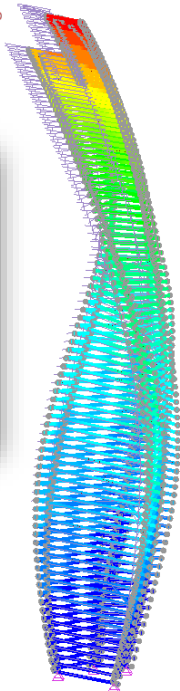
**Hooman Baghi, Principal Structure Engineer**

**CAPITA** | Property and infrastructure

### The Challenge

- To tackle the instability of a combined, twisted and bent cantilevered steel structure
- Consider and compare several loadcases and load combinations. Analysis was key
- Importing the geometry into an appropriate design package using BIM was an issue

USER view  
Analysis: 152 (1x1 GJ+1x2 CAR)+0.7x(3 WX+1)  
Linear element: D Planar element: D  
Local axes



### User Benefits

- Smooth geometry using BIM
- Dynamic analysis ran swiftly and calculated several loadcases
- Able to directly export model for fabrication
- Less resource, faster solution, time saved and tight programme achieved

### The Solution

- A vigorous interrogation of the 3D model and analysis was carried out
- Several independent models were developed to correctly assess the structural behaviour

