



Client Buckingham Group Contracting for Segro PLC

Project Description This infrastructure project was constructed to open up the development of an area adjacent to the A45 and Coventry Airport where Jaguar Land Rover are located. This new development creates a technology park for automotive suppliers and other associated activities.

The infrastructure development introduced new slips road from the A45 into this new development and included an landmark cable stayed bridge. The project also included an integral bridge over the adjacent River Sowe, a box culvert over the River Sherbourne and Reinforced earth retaining walls.

- Cass Hayward Role(s)**
- Conceptual design of landmark bridge
 - Detailed design of cable stayed bridge
 - Detailed design of integral bridge with precast prestressed W beams
 - Detailed design of reinforced concrete box culvert
 - Detailed design of reinforced earth retaining walls

- Project Statistics**
- Landmark structure comprised 90m Ladder bridge deck, 35m high "H" shaped tower leaning forward at 15 degrees and 16No locked coil strands.
 - Main deck supported on bearings on piled abutment at one end and on large pad footing on other end comprising supports for integral deck end; intermediate pier and tower & cable anchors. The later two items incorporated post anchors.
 - Integral 33m River Sowe deck comprising 8No W Precast Prestressed Concrete beam supported on 8No reinforced concrete columns at each end on a pile cap.
 - River Sowe bridge is square at one end and skewed by 7degrees at other end with width varying from 25m to 32m.
 - Insitu reinforced concrete box culvert with a clear opening of 11m.

- Special Features**
- Complex construction sequence analysis involving multi phase deck movement including jacking sequences, launch on SPMT and cable tuning.
 - Multi level reinforced earth approach structures.
 - Columns supporting River Sowe bridge located within precast concrete manhole rings to allow movement.
 - Temporary diversion of River Sherbourne to allow construction of new bridge