



<b>Client</b>	IM Properties Group
<b>Project Description</b>	<p>Peddimore is a brand-new employment location on the east side of Birmingham. The development includes infrastructure such as roads, footpaths and cycle routes with a new 60m landmark footbridge over the A38 dual carriageway.</p> <p>Designed by Cass Hayward the 60m single span footbridge is a tied bowstring arch. It is formed using a pair of steel circular hollow section, 12m in height, that incline inwards towards each other. The deck is 4.6m wide with square hollow section stringers and a transversely stiffened deck plate. The deck is carried by stainless steel bar hangers set out in a spoke like pattern.</p> <p>The deck provides a 4m wide unsegregated route for shared use by pedestrians and cyclists. Lighting is integral with the parapet top rail.</p> <p>Cass Hayward considered various possibilities for this footbridge and the bowstring option was selected by the client. The design commission then went on to include the Approval in Principle document and detailed design of the footbridge and its foundations. The design to tender included an installation methodology. During the construction phase Cass Hayward were employed by the main contractor, Winvic, to assess the effects of the construction on the permanent works.</p>
<b>Cass Hayward Role(s)</b>	<ul style="list-style-type: none"> <li>• Options study report with indicative costings</li> <li>• Approval in Principle and detailed design of footbridge and its foundations</li> <li>• Design included assessment of dynamics for pedestrian comfort</li> </ul>
<b>Project Statistics</b>	<ul style="list-style-type: none"> <li>• An essential infrastructure feature of the employment development project</li> <li>• Installation of the footbridge by tandem crane lift followed by SPMT transport during single overnight closure of the A38</li> </ul>
<b>Special Features</b>	<ul style="list-style-type: none"> <li>• 60m all steel footbridge with 4m width between parapet for shared use by pedestrians and cyclists</li> <li>• Painted steel arch and chords with un-painted weather resistant steel forming the soffit of the deck immediately over the A38</li> <li>• 90 tonnes weight of footbridge assembled and site welded on temporary trestles. Installed using Self Propelled Modular Transporter system during short closure of the A38</li> <li>• Finite element modelling using LUSAS to assess the dynamic performance of the footbridge under pedestrian loading, and effects of hanger bar removal.</li> </ul>