

CAMBRIDGE UNIVERSITY ENGINEERING DEPARTMENT

BRIDGE DESIGN CHALLENGE

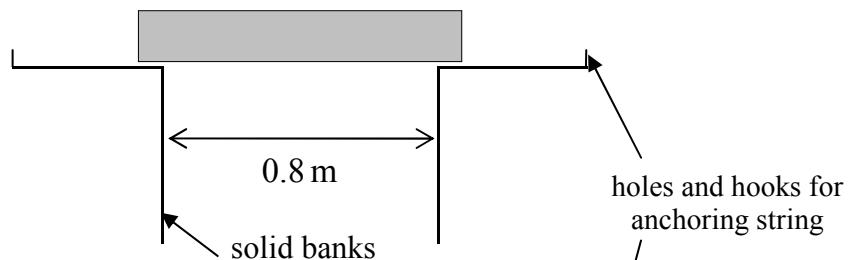
Your team is competing with several others for the contract to design and build a new bridge in a high-profile location. The client placing the order will be visiting today and your team has been asked to develop a model to demonstrate your proposed design. The client will judge the competing designs on the basis of:

- The maximum load it can support at mid span
- The maximum load divided by the weight of the bridge (a measure of efficient use of materials)
- Aesthetic appeal

1. DESIGN REQUIREMENTS

- The bridge must span a gap of 0.8m
- The bridge must be of a single span design
- The deck (walkway) width must be between 0.1m (minimum) and 0.2m (maximum)

Side View



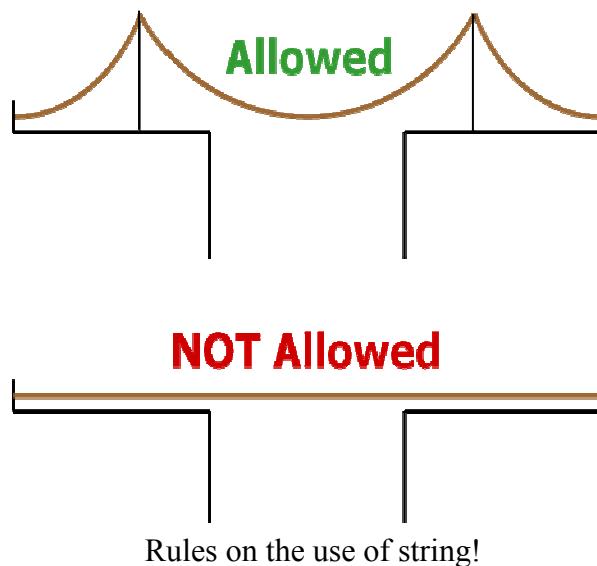
Plan View



Not to scale

2. MATERIALS

• Thick cardboard sheet	1 off
• Thin cardboard sheet	1 off
• A4 paper	unlimited within reason
• String	can be used to simulate cables (see below), not to be used for lashings
• Masking tape	for tube manufacture and box edge reinforcement only
• Nuts and bolts	



3. EQUIPMENT

- Scissors
- Stanley knife
- Hole punch
- Steel safety ruler
- 3m tape measure
- Tube roller (used for making rolled paper tubes)
- Hot glue gun
- General tool kit – spanner, screwdriver, hand drill

ACKNOWLEDGEMENTS

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SCA Packaging Ltd.
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