CASE STUDY

Sustainable Bus Shelter

Design and prototype of sustainable bus shelters.
INTRODUCTION

In March 2011 Cornwall Council launched a project to improve the quality and sustainability of transport infrastructure through procuring the design of a portfolio of ‘sustainable bus shelters’. This would include the manufacture, erection and assessment of a ‘zero carbon prototype’.

A key deliverable of the procurement would be a Sustainable Bus Shelter ‘Pattern Book’ which would include sufficient information to allow the manufacture, assembly, construction, erection and installation of each shelter design in the most efficient and cost effective way.

In addition to reducing the whole life carbon emissions associated with an individual bus shelter, the project also aimed to demonstrate how the public can be encouraged to use public transport and thereby greatly contributing to the reduction in transport-related carbon emissions.

BACKGROUND

Cornwall has approximately 6,000 bus stops across the county ranging from unmarked ‘hail and ride’ stops in highly rural areas to stops with shelters and Real Time Passenger Information (RTPI) in urban areas, such as the Truro park and ride route. The majority of stops are furnished with at least a flag, pole and timetable. Cornwall Council aims to build on this existing provision and introduce a programme of upgrades based on need and capacity in order to complement the upgrading of infrastructure on key bus corridors that is currently underway.

The ‘Eco Communities’ initiative, a UK Government backed scheme to develop and demonstrate low carbon living in the St Austell area, presented a key opportunity to address the sustainability of transport infrastructure. One of the key themes for the Eco-communities vision is ‘Transport and movement – providing new sustainable choices’. This aims to achieve a ‘highly sustainable transportation network that enhances public transport systems, improves existing networks, encourages alternatives to vehicle-based travel, such as cycling and walking, changing people’s behaviours and travel patterns’.

The creation of bespoke bus shelters that are in keeping with the local environment and landscapes is key to achieving these objectives.

“New product development is something the Council rarely gets involved in. It has been an interesting challenge in this project to work from a blank canvas.”

Mike Shillaber, Procurement Category Lead, Cornwall Council.
The supplier information day proved key to informing the specification for the project. We got a really good idea of what the market potential was in a short period of time.

Mike Shillaber, Procurement Category Lead, Cornwall Council.

**Key details of the procurement**

- **Category:** Street Furniture Design
- **Value:** £60,000
- **Procurement Route:** Open procedure
- **Pre procurement:** PIN on OJEU & Tenders in Cornwall
- **Tender Advertising:** Tenders in Cornwall, OJEU
- **Expressions of Interest:** 15
- **Tenders Received:** 10
- **Evaluation:** Quality 70% Price 30%

**Specification**

The specification required the following:

- Bus shelters should seek to be zero carbon in sourcing, manufacture and operation. The prototype design will provide at least a zero carbon design, endeavouring to provide carbon capture in sourcing and fabrication/manufacture but excluding erection/installation, certification of the zero carbon characteristics is required.
- There should be very low carbon demand in operation.
- Design information should demonstrate the sustainability of each shelter in manufacture, construction, use and decommissioning through considering:
  - the sourcing of materials,
  - their transportation,
  - methods used in production,
  - energy used in sourcing and production,
  - energy used in operation,
  - reuse/recycling/disposal to landfill of materials on decommissioning.

Detailed and rigorous Life Cycle Assessments were not required. Tenderers could propose additional assessments for sustainability.

**Open Invitation to Tender (ITT)**

Tenderers were asked to respond to the following key questions:

1. Describe what makes a safe, secure, useable bus shelter.
2. Many, but not all, of the sustainable bus shelters will be required to house real time passenger information (RTPI) equipment. How would you accommodate this need and the capability to add RTPI to shelters in the future? You should consider the technical issues and the visual appearance of the shelters.
3. How would you define “sustainable” in the context of the design of these shelters?
4. What would influence your development of the emblematic and thematic designs for the sustainable bus shelters?
5. Outline how you would set about designing a sustainable bus shelter with zero carbon credentials. What features might it include? How would you demonstrate these credentials?
AWARD

The successful tenderer scored 84% overall including quality and price. Importantly from a sustainability perspective the successful bidders score of 21/25 on quality and 4.5/5 on the design for zero carbon aspect.

OUTCOME

Although behind schedule the project has delivered a full pattern book and three fully tested prototypes.

“We have external pressures of time and money, but at the same time you don’t want to rush and not be sure you have the product right to take it to the market place. I want it absolutely tested to the Nth degree, to make sure it’s completely foolproof” Matt Sidney, Strategic Transport Manager, Cornwall Council.

More information on Cornwall Council’s responsible procurement policy can be found on www.cornwall.gov.uk/responsibleprocurement