

### **What is a CREST Award?**

A CREST Award is given by the British Science Association to students who use their talents and knowledge to complete a science, technology, engineering or maths project. For every student that gets a CREST Award, it's something to celebrate.

### **A CREST Award for the Sustainable Communities CREST Challenge demonstrates:**

- That you understand how design and engineering processes work
- That you demonstrated the skills to:
  - Plan a project
  - Do the research behind it
  - Carry it out in a methodical way
  - Draw sensible conclusions from your work
  - Understand the science and engineering behind your project
  - Produce an outcome that meets the brief, or be able to give good reasons why it doesn't meet the brief
  - Communicate your project to the companies you worked with, and to other audiences too
  - And, you'll have shown initiative in managing your project, and creativity in solving problems

These skills are all ones that employers look for – ask the company hosting your site visit.

### **Once you get your CREST Award, it can lead to other things:**

- Once you've got your CREST Award, you can join the CREST alumni network. Go to [www.britishscienceassociation.org/CRESTalumni](http://www.britishscienceassociation.org/CRESTalumni) to find out more.
- You can also keep up with CREST Awards on Facebook – search for our page and like us!
- Want to show off your project again, meet some fantastic scientists and engineers, and maybe even get to go to national and international science and engineering fairs? Bring your project to your local Big Bang Regional Fair. You can find out where your nearest fair will take place at: [www.thebigbangfair.co.uk/nearme](http://www.thebigbangfair.co.uk/nearme)



## TEAM BRIEF

Congratulations on taking up the Challenge of planning a housing development. We hope you enjoy the Challenge, and learn a lot from it. So, what do we want you to do?

### The Situation

Your newly-formed company, for which you need to choose the name, has been asked by a client to develop a housing plan for a 2000m<sup>2</sup> (roughly half an acre) site.

- The client wants a housing development of 10 homes.
- The site's southern edge runs along a dual carriageway, with a junction already in place at the south western corner of the site.
- Along the eastern edge of the site, a single carriageway two-way road runs to the nearest town, half a mile to the north.
- To the north and west of the site is previously used (brownfield) land, currently undeveloped, owned by the client. The land is clean and suitable for all uses, and the client currently has no plans for it.
- Under the Government's new drive for sustainable homes, the client has agreed with the local authority and the Woodland Trust that your plans will be approved if the development's homes use at least three sustainable materials in the structure and at least three techniques or adaptations which will make the homes more sustainable to run.

### What does the client want?

- The client wants the houses to be a mixture of homes with 2-5 bedrooms, and be a mix of single floor, two floor and three floor designs. The site must include 10 homes.
- The site must include:
  - One parking space and a one-car garage for each home, and road access to these
  - All roads must have pavements on both sides
  - At least one garden for each home
  - A path round the four sides of the outside of each home
  - An appropriate area of community green space to provide a focus for this new community
- To satisfy the local authority, the site and the homes on it must include:
  - At least three sustainable building materials
  - At least three techniques or adaptations which will make the homes more sustainable to run



**To complete the Challenge, your company needs to produce:**

- A site plan, on a scale of 1cm to 2m, so the site fits neatly onto an A3 sheet of paper
- A proposal that describes your site plan, and also identifies how your plan meets the client's needs. This doesn't have to be a written report - it can be, but it can also be a video including each member of the team talking about their work, a PowerPoint presentation with a voice-over recording, or any other format which gets the message across in a business-like way
- A copy of your project plan (critical path analysis) that you used to complete the Challenge

To get your CREST Award, we also need a short (half page) reflective report from **each member of the company team**. This should include:

- What your role in the team was, and what tasks you completed
- What new skills and knowledge you learned

**Good luck and enjoy the Challenge!**

