

## GCE Design and Technology Graphics Product (A2)

### Exemplar Commentary 1

#### Title: Waterbus Shelter

#### Unit: 6GR04

3D Architectural Model

2D Advertising leaflet/ poster

#### Criteria A:

##### Research and Analysis

The analysis is detailed and areas around the problem are discussed at length. A client appears to be involved and is consulted at various points. Sustainability is considered and it is felt at an appropriate level. The research however is a little too selective and a number of key issues are not considered, the site for instance is key to the sizing and positioning of the shelter, important ergonomic considerations are not looked at. (Mark range 3-4)

##### Product Specification

The specification clear, realistic and connected to the research. It initially relates to the 3d element, but the 2d element specification is offered later. The points being made lack justification and there are important omissions from the spec, such as the site and various safety issues in relation to access etc. Sustainability is discussed however and as a higher order skill, along with connection to the research, accesses the top box in this case. (Mark Range 4-6)

##### Design

Alternative designs are offered that are realistic, workable and have some detail. The specification points are addressed and the client is involved. It is evident that some of the detail connects with the research information. However there is no evidence of the design of any 2d element, a key aspect of this submission. (Mark Range 7-10).

##### Review

The work is reviewed by the candidate and their personal point of view is offered. Client or user group input is also supplied and this goes some way to accessing the higher assessment category. However there is only a full review of the specification for two of the design suggestions. (Mark Range 3-4)

## Development

The work is developed through the individual consideration of the design of each sub-system in the proposal. Traditional 3d and CAD modelling is offered with some good 2d design modelling for the leaflet. This said much of the CAD work here is of a presentational nature, rather than using it as a tool for exploring alternatives. The overall addition of technical aspects is good, the use of research being added at this point adds an air of realism, but the design only moves on in minor ways and apart from the addition of the seating design the development section is a little like a plan for manufacture with minor changes in design. The addition/involvement of client feedback is thin to say the least. **(Mark Range 7-10)**

## Communicate

The presentation techniques used are well applied and enhance the understanding of the designs. CAD is used expertly and in various forms. Annotation is full and detailed access to the top assessment criteria seems obvious, but there is not enough information for a third party to make this model so it can only access the low end of the top criteria. **(Mark Range 4-6)**

## Planning

A detailed plan is offered with health and safety considerations and quality control (not justified though), but there is a distinct lack of time being applied to the chart. Later there is a more generalised planning layout with larger blocks of time applied to it this allows us to consider it for assessment in the higher assessment criteria, just. **(Mark Range 4-6)**

## Use of Tools/Equipment

The tools and processes used are clearly listed and justified; the practical work is supported in the photographs offered documenting the manufacture. Health and safety issues are covered in some detail. A relatively complex model has been made using too small a range of manufacturing techniques for this level. But the work is accurately made and the components need to be carefully planned to interact with each other. There is too heavy a reliance upon laser cutter and too many repeat processes being demonstrated for the product to access the very highest mark categories here. Over reliance upon one advanced manufacture technique like this is usually going to prevent access to the highest category but in this case the components need to be planned and manufactured very accurately to interact with each other and there is credit in the use of Photoshop for the manufacture of the 2d element. **(Mark Range 7-9)**

## Quality.

The product appears to have been well made, but the over use of laser cutting (a fool proof quality outcome) has not allowed the assessment of many other processes to be taken into account. The 2d element is manufactured as a leaflet, produced via a CAD package; the general rule of thumb is that products use around 50% CAM output and 50% more traditional skills. There are some hand skills in use and upon closer inspection it is apparent that these have not been applied with a great deal of precision and accuracy. Hence access to the 'high quality' assessment criteria is not possible. **(Mark Range 11-16)**

### **Complexity/Level of demand**

The task has a degree of demand in the planning and the layout of the component parts, but there are too many repeated skills and an over dependence on one manufacturing technique. Due to a minimal range of advanced skills demonstrated and too much repartition the product cannot access the top assessment criteria. (Mark Range 4-6)

### **Testing/Evaluating**

Tests are not conducted and therefore not justified either. The evaluation is limited to the opinions of the designer and the client feedback. However modifications are offered and there is some life cycle analysis. As these are higher assessment category skills we can assess the work in the top category just. (Mark Range 7-10)