

**2014/15**

# **Constructionarium: A Guide to Project Teams**

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## Welcome

Thank you for participating in Constructionarium.

Constructionarium provides a practical, safe, construction learning experience. This guide is designed to assist you in preparing for your week to ensure that you and your students can get the maximum out of the learning experience.

This document relates to your week whilst on our site at **Bircham Newton, Norfolk**. The full postal address is:

Constructionarium  
National Construction College  
Bircham Newton  
Norfolk  
PE31 6RH

Should you have any queries then please contact myself or one of the Constructionarium team:

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Terry Casbolt	H&S Manager	

We look forward to seeing you on site and for your students to have a safe and enjoyable learning experience.

Regards

Robin Holdsworth  
Scheme Manager

## Introduction

Constructionarium operates on the basis of a triangular partnership between a University or College, Contractor and Consulting Engineering working in partnership to deliver a learning experience to students studying built environment related courses. The unique role each part plays should not be underestimated.

The University provides the theoretical framework and academic rigor. They ensure that students are briefed on the event prior to attending, help the students identify and allocate dedicated team roles; and provide the pastoral care during the event.

The Contractor will bring the practical construction knowledge, costing experience, provide experience personnel to coach the students in their activities, provide project materials, PPE (not boots) and safety management. Whilst the Consulting Engineer, will provide design knowledge, drawing interpretations, project co-ordination and management skills.

The Contractor will become the “**Client**” during the week, holding project review meetings each evening and checking that their project is to time and budget.

To be truly successful, students benefit the most from having **all** elements of the partnership in place and the event is planned into the academic timetable with sufficient opportunity for the three parties to interact with the students before starting their week.

The following will assist you in your event preparation.

### 1. During The Event

Constructionarium seeks to model the activities of a full-scale construction project. Each project team will act as a contracting company for their structure they are to build and hand over the completed structure to the Client at the end of the week (Friday mid-day). The stages in achieving this will be:

#### 1.1 Production of a **tender document** comprising:

- the programme of works for completion of the structure within the allotted time frame;
- a budget price, with justification;
- an overall project method statement;
- a risk assessment for the project as a whole.

This should be completed prior to attending the event. This will be presented by the Project Managers for approval by the Client. The tender will be settled at this meeting, following which, detailed planning of the immediate tasks for the start of construction on can be pursued.

1.2 Monday – Four member of each project team will be involved in Power tool training. They should be identified prior to the week and report to the Resident Site Manager at the Constructionarium site office at 09:00hrs.

#### 1.3 Monday 08:00hrs to Friday 12:00hrs:

**Carry out construction** to completion under the supervision of the Contractor staff to the satisfaction of the Consulting Engineers, who are acting as the client representative.

For each structure, there will be a **daily contract review** (held every evening) at which the construction team will present a progress report on:

- Health and Safety
- Programme
- Cost
- Quality
- Teamwork

to the Client acting as company directors.

1.4 The **hand-over of the completed structure** at midday on Friday will be followed by a final contract review and on-site presentation.

## **2. Roles of the Partnering Triangle**

### **2.1 Contractor:**

- Overall responsibility for construction operations including approval of method statements, risk assessment, Health and Safety, materials and resources.
- Available for advice and guidance on construction activities, including specialist tasks such as setting out Chaining daily contract review.
- Advice is at no cost to the contract.

### **Site supervisors/tradespeople** (blue hats):

Individual specialists, not all are required depending on the project, but can include

- Joiner
- Steel fixer
- Concrete foreman
- Scaffolder
- Plant operator

Available for advice on construction methods and techniques at no cost to contract, or available for work at specified rates.

### **2.2 Consulting Engineers**

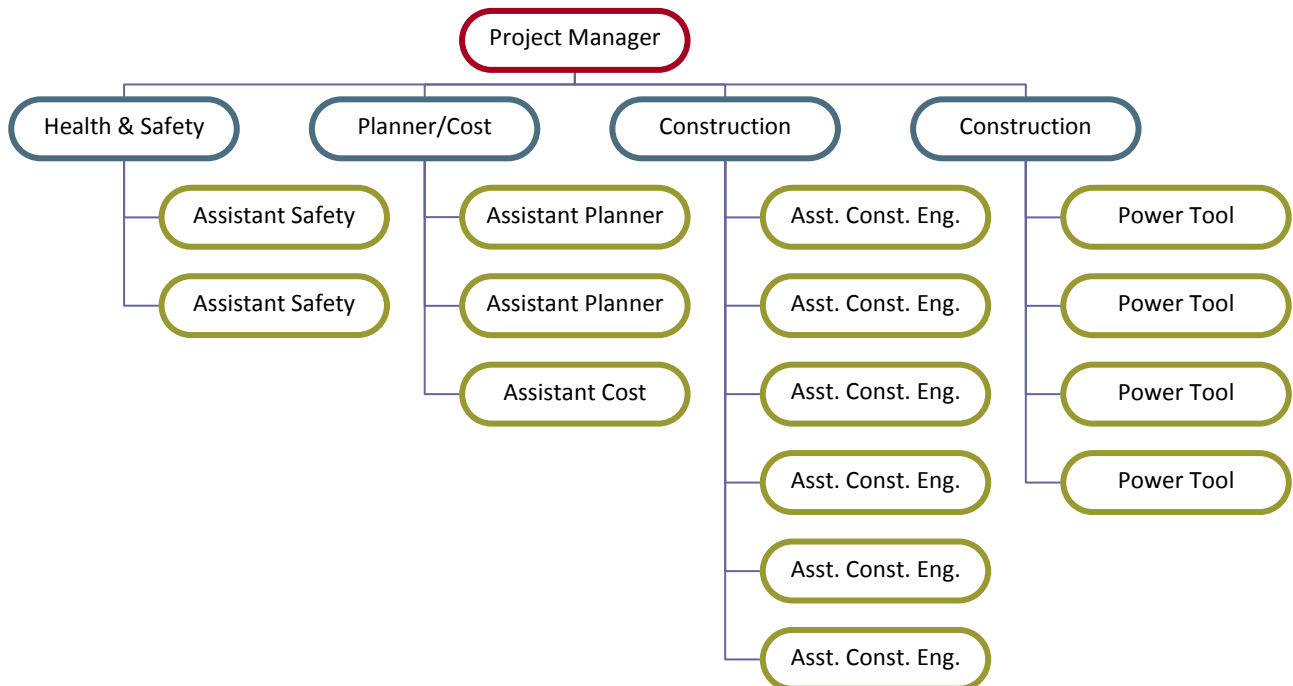
- Monitoring of construction to ensure that works are in accordance with the contract documents (drawings and specifications);
- Ensuring that the contractor's construction sequence does not compromise the design intent;
- Reviewing contractor's designs for miscellaneous items (e.g. anchor fixings etc.);
- Dealing with design issues that arise during the construction process;
- Sign off and acceptance of the completed works.
- Available for advice and guidance on design issues at no cost to contract.

### **2.3 University/College Staff:**

- Responsible for monitoring and assessing the general performance of the construction teams and pastoral care for all students on site.
- Manage poor behaviour/participation of students if required.
- Available for advice on all issues relating to construction and the accommodation at the National Construction College at no cost to contract.

### 3. Role Of The University/College Project Teams:

Depending on the project, there could be between 15-20 students. This number varies depending on University/College. However, the organisation of the project team and the roles to be filled remain the same.



In identifying the team roles, students should look for evidence that there is a strong correlation between the skills required and those that have been demonstrated in previous University/College activities. A brief outline of the responsibilities and skills required are shown on the next page.

	Role	Responsibilities	Skills
1	<b>Project Manager</b>	<ul style="list-style-type: none"> <li>▪ Leadership of project</li> <li>▪ Successful and safe project delivery</li> <li>▪ Cost management</li> <li>▪ Chair of team leaders</li> <li>▪ Main point of contact for Contractor</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strong leadership skills</li> <li>▪ Good communicator</li> <li>▪ Excellent organisation skills</li> <li>▪ Relationship management skills</li> <li>▪ Ability to multi-task</li> </ul>
2	<b>Planner/Cost Manager</b>	<ul style="list-style-type: none"> <li>▪ Project planning</li> <li>▪ Method statements</li> <li>▪ Cost management</li> <li>▪ Materials control and ordering</li> <li>▪ Progress checks</li> <li>▪ Progress records</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strong analytical skills</li> <li>▪ Organisational skills</li> <li>▪ Eye for detail and accuracy</li> <li>▪ Numerical skills</li> <li>▪ Completer finisher</li> </ul>
3	Assistant Planner		
4	Assistant Planner		
5	Assistant Cost Manager		
6	<b>Safety Manager</b>	<ul style="list-style-type: none"> <li>▪ Health and Safety (including maintaining H&amp;S documentation)</li> <li>▪ Risk assessments</li> <li>▪ Production of task sheets</li> <li>▪ If multiple projects are being undertaken, this person should also carry out a daily Safety Inspection on another team.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strong interpersonal skills</li> <li>▪ Resilient</li> <li>▪ Assertive</li> <li>▪ Aware of surrounding environment</li> <li>▪ Eye for detail and accuracy</li> </ul>
7	Assistant Safety Manager		
8	Assistant Safety Manager		
9	<b>Construction Engineer</b>	<ul style="list-style-type: none"> <li>▪ Building the project as specified</li> <li>▪ Quality management</li> <li>▪ Understanding the requirements and drawings</li> <li>▪ Fabrication drawings/sketches</li> <li>▪ Fabrication team management</li> <li>▪ Design calculations</li> <li>▪ Setting out</li> </ul>	<ul style="list-style-type: none"> <li>▪ Attention to detail</li> <li>▪ Good level of English language</li> <li>▪ Communication skills</li> <li>▪ Teamwork</li> <li>▪ Numerate</li> <li>▪ Eye for detail and accuracy</li> </ul>
10	Assistant Const. Engineer		
11	Assistant Const. Engineer		
12	Assistant Const. Engineer		
13	Assistant Const. Engineer		
14	Assistant Const. Engineer		
15	Assistant Const. Engineer		
16	<b>Construction Manager</b>	<ul style="list-style-type: none"> <li>▪ Site organisation</li> <li>▪ Daily attendance register</li> <li>▪ Resource availability and prepare rotas for: <ul style="list-style-type: none"> <li>○ Hand tool operation</li> <li>○ Team hut, staff hut and welfare facilities cleaning</li> <li>○ Tea urn and fresh water provision</li> <li>○ Ambassadors for visitors/press</li> <li>○ End of day site tidy up/return of tools</li> <li>○ Friday clean-up</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Strong organisation</li> <li>▪ Good Interpersonal skills</li> <li>▪ Good communications skills</li> <li>▪ Resilience</li> <li>▪ Teamwork</li> <li>▪ Motivational skills</li> <li>▪ Influencing skills</li> </ul>
17	Trained power tool operator	<ul style="list-style-type: none"> <li>▪ Must have attended and passed NCC training.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Keen eye</li> <li>▪ Steady hand</li> <li>▪ Able to follow instructions</li> <li>▪ Uncompromising in health and safety</li> <li>▪ Works in a tidy and organised manner</li> </ul>
18	Trained power tool operator	<ul style="list-style-type: none"> <li>▪ Must have attended and passed NCC training.</li> </ul>	
19	Trained power tool operator	<ul style="list-style-type: none"> <li>▪ Must have attended and passed NCC training.</li> </ul>	
20	Trained power tool operator	<ul style="list-style-type: none"> <li>▪ Must have attended and passed NCC training.</li> </ul>	

On the next page there is a template to record the team allocation.

University/College: \_\_\_\_\_

PROJECT: \_\_\_\_\_ Date: \_\_\_\_\_

	<b>Role (those in bold are essential and must be filled)</b>	<b>Student Name</b>
1	<b>Project Manager</b>	
2	<b>Planner/Cost Manager</b>	
3	Assistant Planner	
4	Assistant Planner	
5	Assistant Cost Manager	
6	<b>Safety Manager</b>	
7	Assistant Safety Manager	
8	Assistant Safety Manager	
9	<b>Construction Engineer</b>	
10	Assistant Const. Engineer	
11	Assistant Const. Engineer	
12	Assistant Const. Engineer	
13	Assistant Const. Engineer	
14	Assistant Const. Engineer	
15	Assistant Const. Engineer	
16	<b>Construction Manager</b>	
17	<b>Trained power tool operator</b>	
18	<b>Trained power tool operator</b>	
19	<b>Trained power tool operator</b>	
20	<b>Trained power tool operator</b>	