

A Report focussing on:

Subcontractor Management and Coordination



Prepared for:

Juan A. Ferriz Papi

Created by:

M Evans

Date completed:

8th November 2017

Table of Contents

	Page Number
1.0 Executive Summary	3
2.0 Terms of reference	3
3.0 Procedure	3
4.0 Findings	4
5.0 References	10
6.0 Appendices	11

1. Executive Summary

Subcontractor management is known to be a major issue to solve in complex construction scenarios. This report explores how subcontractors should be managed and the quality processes that should be developed for this purpose, or in which subcontractors are involved. The report will revolve around the whole project life cycle defining how subcontractors participate in the stages and how a project manager has to plan and coordinate. To conclude a justification will be made for the solutions chosen in line with the criteria given.

2. Terms of Reference

The principal focuses are:

2.1 To describe how subcontractors should be managed.

2.2 To understand the quality process implements in subcontractor planning and coordination.

2.3 To define how subcontractors participate in each stage of the project life cycle.

2.1.1 The report was constrained by the information given and researched with the need to complete by 9th January 2018.

3. Procedure

This section identifies the research sources used. The research included secondary sources on the subjects of subcontracting, management and project management from websites and text books set out in the references and bibliography.

3.1 University notes also provided background to the research.

4 Findings

Subcontracting is used widely within the construction industry. It's the activity in which the main contractor 'subs' out a specific tasks and activities for other contractors to carry out. More often than not, subcontractors undertake work that the contractor cannot do but for which the main contractor is responsible for. Anon. (2017). For example, a housing developer may hire a subcontractor to undertake the ground work element of a development site. Similarly, the developer may hire another subcontractor to lay services. As you can see subcontractors tend to specialise in one area of the field, which enables tasks to be carried out simultaneously and to a high level of quality.

I believe that contractors and subcontractors work hand in hand. This is backed up by an online article where by they refer the contractor as the manager of the project, serving as the hub of communication and organisation and the subcontractors are the work force who complete the task in hand. Anon. (2017a).

The use of subcontracting in construction projects is known to be very advantageous. Some of the advantages have been summarised in the table below;

<u>Advantages</u>	<u>Reasoning</u>
Cost Saving	Subcontracting for labour or specialised services generally has a higher hourly rate than a contractor would normally pay their employees. But they're not responsible for the employee's social security, medical care, unemployment taxes and health insurance. Also, when subcontracting, considerable savings are generated by tax, insurance and employee training thus making it more cost effective to hire subcontractors than hiring employees of their own. Myers, C. (2018).
Increased Productivity	Introducing specialist subcontractors can increase productivity. It allows the contractor to focus on a larger volume of work whilst meeting tight deadlines. Subcontracting is also beneficial when the main contractor lacks capacity. It allows you to use the services of another company for a given project that exceeds the company's current capacity. Filion, E. (2016).
Quality Product/Service	From first-hand experience dealing with subcontractors, you can see that the quality of work is to a higher standard. Not only are they representing their own company, they are representing the main contractor. An online articles backs

	this where Emilie Filion suggests that It's a subcontractors 'mission' to listen to the clients/main contractors needs and to deliver a quality product that meets the criteria, expectations budget and deadlines. Filion, E. (2016).
Reduced Risks	Larger construction projects carry a greater risk. Although the main contractor takes charge, but because the responsibility over a specific task of the project is passed to a subcontractor, the risks are divided. Markgraf, B. (2018).

On the other hand, subcontracting has few disadvantages some of which have been listed below;

- By relying on subcontractors, the business does not acquire or develop skills in-house
- The main contractor has less control as certain responsibilities are handed over to the subcontractors.
- As explained above, subcontractors generally cost more (per hour) than direct staff. Permanent staff may resent subcontractors being paid more money for doing a similar task.
- Although subcontractors are perceived experts in the field, it's not a guarantee that they will meet the main contractor's standards. They may not appreciate the business culture and may lack the motivation and commitment of permanent staff.

Anon. (2014).

As you can see evidently the advantages of subcontracting is more powerful than the disadvantages and these are the reasons why subcontracting is widely used within the construction industry.

With regard to the project life cycle, subcontracting becomes paramount in the early stages. The table below explains each step in further detail;

<u>Stage</u>	<u>Is Subcontracting is Used?</u>	<u>Notes</u>
Stage 1 – Inception/Feasibility	N/A	N/A
Stage 2 – Concept Design	Yes - Tender and selection process	In construction, the main tender process is generally for the selection of the contractor that will construct the works. Anon. (2017b).
Stage 3 – Pre-construction		
Stage 4 – Procurement and Construction	Yes – Subcontractors enter into an agreement and proceed to construct in line with the contract.	An initial meeting is usually held to mark the beginning of the project and to communicate responsibilities to the subcontractors. Through-out this stage, subcontractors are continually

		managed and organised by the project/construction manager. Riddell, T. (2017).
Stage 5 – Commissioning and Hand over	Yes – Subcontractors work right through to the end of the project life cycle.	At this stage it allows the main contractor and subcontractor to evaluate, document and learn from the project, contracts are ended and project successes and failures are reported. Riddell, T. (2017).

With reference to the RIBA plan of work which has been set out in appendix A, subcontractors are involved from stage 3 to 6.

Subcontracting has a huge effect on the execution of a construction project. Online resources suggest that the subcontractors aren't chose on purely price. Their ability to deliver a project on time, within budget, and to the required quality and safety standards is equally important. Anon. (2015).

A report written by Lew Yoke-Lian reviews subcontracting in practice within the construction industry. It advises that selecting the right subcontractor does not always guarantee the success of a construction project. Managing, coordinating and monitoring of subcontracted work during the construction stages is essential. Yoke-Lian, L. (2012).

Managing subcontractors plays a crucial role within the project life cycle. Subcontractors are managed by the main contractor. They are viewed by the client as an extension of the main contractor and failure by the subcontractor can adversely affect the company's reputation. They ensure that their performance meets the project's safety and quality requirements, and that work is in accordance with the project's schedule and specifications. I have listed below some of the key points to note when managing subcontractors;

- The Contractor must ensure that the subcontractor understands their;
 - Scope of work
 - Responsibilities
 - Payment Contract
- The Contractor must also make sure that subcontractor:
 - Complies with health and safety requirements
 - Completes work to a good level of quality
 - Works in line with the projects schedule
- The Contractor must ensure that subcontractors are kept up-to-date with the latest drawing packages. Subcontractors must acknowledge receipt of the drawings and information issued.

- Regular meetings should be held with all subcontractors to discuss safety, quality, project progress and scheduling.
- The subcontractor must be paid in accordance with the contract.

Netscher, P. (2015).

Failure to manage subcontractors properly often leads to disputes, claims, project delays, substandard work and even accidents. This leads to project failure, often resulting in all parties losing money and the client getting their project late which negatively impacts the contractor's reputation. Netscher, P. (2015).

Coordinating subcontractors and ensuring quality is a role carried out by the project/construction manager. A project manager's responsibility is to deliver projects on time and in budget by planning, coordinating and organising resource and risk. They track completed work, set deadlines and delegate tasks. Harrin, E. (2017). Quality control ensures that the products and service complies with the main contractor/client's requirements. One way of controlling quality is by inspection. It's prudent to constantly review subcontractors work to ensure that the correct level of quality is being achieved. Other quality processes such as quality audits, quality management systems, TQMs may also be used.

Some solutions to help improve the practice and quality of subcontracting management have been listed below;

- Communication – Having had previous experience with subcontractor management, I believe that if all parties have the ability to share information in a efficient manner, then problems can be solved efficiently and effectively. A clear line of communication can prevent any chance of reduced productivity. While it is important to communicate information to other parties, it is equally important to listen and understand what others have to say. One-sided conversations will prove ineffective in the construction industry because each party has valuable information that should be shared among everyone involved. Flynn, C. (2009).

Another valuable tool to improve communication is to create a plan for all to understand and follow. By presenting each party with the opportunity to understand what actions are necessary, subcontractors can improve upon their communication. The simple action of a construction manager creating a plan can significantly benefit the overall project due to the subsequent actions of subcontractors. Flynn, C. (2009). In my work place, we have recently introduced an 'Action Plan' map which is displayed in all site cabins. This map changes throughout the life of the project and has had positive feedback from all trades.

- Relationships - A valuable prevention to dilemmas that may arise is the formation of positive relationships between management and subcontractors. The creation of this relationship

enables many aspects of the managerial process to be improved upon including teamwork and trust. Flynn, C. (2009).

- Rewards and Incentives – The client or the main contractor can often reward subcontractors for their enhanced performance in delivering projects early or under budget. Anon. (2000). According to an article written by Christopher J. Flynn, to reward subcontractors for their impressive results, is one of the most effective means monetarily. If project management decides to engage in a reward system, it should be established prior to project commencement. Agreeing to this idea before a project begins prevents any future debates regarding the appropriate amount that should be awarded. A reward system may motivate subcontractors to perform beyond their own expectations. Flynn, C. (2009).
- Training – It's a good practice to train subcontractors so that they are competent to carry out the required tasks. By teaching subcontractors the most efficient way to perform their tasks, and educating them on the overall goal of the project, results have the opportunity to greatly improve. Flynn, C. (2009). Also, organisations that engage contractors and subcontractors have the responsibility under the Health and Safety Law to protect them from harm caused by company work activities. Anon. (2015).
- Meetings – It is essential to schedule regular meetings. Meetings allow management and subcontractors the ability to communicate and coordinate required work. A record of meeting minutes should be issued to all parties. Minutes record meeting decisions, which make them a useful review document as it can measure the project progress. They also act as an accountability tool because they make it clear whose duty is to perform which action. Anon. (2018).

Personally I believe that these methods of controlling and coordinating subcontractors is crucial to implement on large complex construction sites. It promotes increased productivity, good quality of work, improved working relationships, cost savings and ultimately achieving the project goal. Unsuccessfully managing subcontractors can have a detrimental effect on any organisation. Poor management of subcontractors can lead to over spending and delays which can damage the company's reputation. In order to prevent this from happening, quality measures need to be in place and reviewed frequently in each stage of the construction life cycle.

5 References

Anon. (2017). Using contractors and subcontractors

Available: <https://www.nibusinessinfo.co.uk/content/difference-between-contractors-and-subcontractors>.

Last accessed 22nd Dec 2017.

Anon. (2017a). What Are Contractors and Subcontractors?

Available: <https://www.rocketlawyer.com/article/what-are-contractors-and-subcontractors-cb.rl>.

Last accessed 22nd Dec 2017.

Myers, C. (2018). Advantages & Disadvantages of Subcontracting.

Available: <https://yourbusiness.azcentral.com/advantages-disadvantages-subcontracting-3673.html>.

Last accessed 7th Jan 2018.

Filion, E. (2016). What are the Benefits of Subcontracting?.

Available: <https://blog.cognibox.com/en/blog/benefits-subcontracting>.

Last accessed 7th Jan 2018.

Markgraf, B. (2018). Advantages & Disadvantages of Subcontracting.

Available: <http://smallbusiness.chron.com/advantages-disadvantages-subcontracting-50575.html>.

Last accessed 7th Jan 2017

Anon. (2014). The Disadvantages of Subcontracting.

Available: <https://www.gilatools.com/blog/disadvantages-subcontracting/>.

Last accessed 7th Jan 2018.

Anon. (2017b). Tender Process for Construction Projects.

Available: https://www.designingbuildings.co.uk/wiki/Tender_processes_for_construction_contracts.

Last accessed 7th Jan 2018.

Riddell, T. (2017). 5 Stages of Project Management.

Available: <https://esub.com/5-stages-project-management-understanding-construction-projects-life-cycle/>.

Last accessed 7th Jan 2018.

Anon. (2015). Managing subcontractors on your construction project. What you should consider.

Available: <http://www.pn-projectmanagement.com/construction-management-blog/managing-subcontractors-on-your-construction-project-what-you-should-consider>.

Last accessed 7th Jan 2018.

Yoke-Lian, L. (2012). Review of Subcontracting Practice in Construction Industry . . 1 (1), p442-443.

Netscher, P. (2015). Managing your subcontractors. Ensuring your project is successful.

Available: <https://www.linkedin.com/pulse/managing-your-subcontractors-ensuring-project-paul-netscher>.

Last accessed 7th Jan 2018.

Harrin, E. (2017). The Project Manager's Role.

Available: <https://www.thebalance.com/what-a-project-manager-does-all-day-3963577>.

Last accessed 7th Jan 2018.

Flynn, C. (2009). Solutions to Alleviate Problems from Subcontractor Management. . 1 (1), p1-2.

Anon . (2000). SETTING INCENTIVES AND SHARED SAVING SCHEMES.

Available: <http://constructingexcellence.org.uk/wp-content/uploads/2015/03/D6Disc-inc.pdf>.

Last accessed 7th Jan 2018.

Anon . (2015). Working with contractors.

Available: <http://www.healthyworkinglives.com/advice/Legislation-and-policy/Workplace-Health-and-Safety/working-with-contractors>.

Last accessed 7th Jan 2018

Anon . (2018). Five Reasons Why Meeting Minutes Are Important.

Available: <https://www.allbusiness.com/five-reasons-why-meeting-minutes-are-important-4113272-1.html>.

Last accessed 7th Jan 2018.

6. Appendices

Appendix A – RIBA Plan of Work

www.ribaplanofwork.com									
The RIBA Plan of Work, 2013 organises the process of building, designing, constructing, maintaining, operating and using building projects into a number of key stages. The content of stages may vary or overlap to suit specific project requirements. The RIBA Plan of Work, 2013 should be used solely as guidance for the preparation of detailed professional services contracts and building contracts.									
Stages	0	1	2	3	4	5	6	7	
Tasks	Core Objectives	Strategic Definition	Preparation and Brief	Concept Design	Developed Design	Technical Design	Construction	Handover and Close Out	In Use
Procurement Variable task bar	Identify client's Business Case and Strategic Brief and other core project requirements.	Develop Project Objectives, including Quality Objectives and Project Outcomes, Sustainability Aspirations, Project Budget, other parameters or constraints and develop Initial Project Brief. Undertake Feasibility Studies and review of Site Information.	Prepare Project Roles Table and Contractual Tree and continue assembling the project team.	Prepare Concept Design, including outline proposals for structural design, building services systems, outline specifications and preliminary Cost Information along with relevant Project Strategies in accordance with Design Programme. Agree alterations to brief and issue Final Project Brief.	Prepare Developed Design, including coordinated and updated proposals for structural design, building services systems, outline specifications and Cost Information and Project Strategies in accordance with Design Programme.	Prepare Technical Design in accordance with Design Responsibility Matrix and Project Strategies to include all architectural, structural and building services information, specialist subcontractor design and specifications in accordance with Design Programme.	Onsite manufacturing and on-site construction in accordance with Design Programme and resolution of Design Queries from site as they arise.	Handover of building and completion of Building Contract.	Undertake In Use Services in accordance with Schedule of Services.
Programme Variable task bar	Initial considerations for assembling the project team.	Establish Project Programme.	Review Project Programme.	Review Project Programme.	Review Project Programme.	Review Project Programme.	Review Project Programme.	Review Project Programme.	Review Project Programme.
(Town) Planning Variable task bar	Pre-application discussions.	Pre-application discussions.	Pre-application discussions.	Pre-application discussions.	Pre-application discussions.	Pre-application discussions.	Pre-application discussions.	Pre-application discussions.	Pre-application discussions.
Suggested Key Support Tasks	Review Feedback from previous projects.	Prepare Handover Strategy and Risk Assessments.	Agree Schedule of Services, Design Responsibility Matrix and Information Exchanges and prepare Project Execution Plan including Technology and Communication Strategies and consideration of Common Standards to be used.	Consider Construction Strategy, including outline fabrication, and develop Health and Safety Strategy.	Review and update Project Execution Plan, including Change Control Procedures.	Review and update Sustainability, Maintenance and Operational and Handover Strategies and Risk Assessments.	Prepare and submit building Regulations submission and any other third party submissions requiring consent.	Review and update Sustainability Strategy and implement Handover Strategy, including agreement of information required for future projects.	Carry out activities listed in Handover Strategy including Feedback for use during the future life of the building or on future projects.
Sustainability Checkpoints	Sustainability Checkpoint – 0	Sustainability Checkpoint – 1	Sustainability Checkpoint – 2	Sustainability Checkpoint – 3	Sustainability Checkpoint – 4	Sustainability Checkpoint – 5	Sustainability Checkpoint – 6	Sustainability Checkpoint – 7	Sustainability Checkpoint – 7
Information Exchanges (at stage completion)	Strategic Brief	Initial Project Brief	Concept Design including outline structural and building services design, associated Project Strategies, preliminary Cost Information and Final Project Brief.	Developed Design, including the coordinated architectural, structural and building services design and associated Cost Information.	Completed Technical Design of the project.	Completed Construction and Health and Safety Strategies.	Completed Handover and Close Out.	Completed In Use Services.	Completed In Use Services.
UK Government Information Exchanges	Not required.	Required.	Required.	Required.	Not required.	Not required.	Required.	As required.	As required.

*Variable task bar - In meeting a bespoke project or further specific RIBA Plan of Work 2013 for a specific task to be selected from a number of options.

© RIBA