

# CLIP

## A regional building contractor used CLIP to reduce the amount of waste & improve productivity on site



*“CLIP offered us the tools and methodologies to help us make the improvements in productivity on site that we wanted”*

*Ken Rawe of Shaylor Construction*

initiative called ‘Achieving Construction Excellence’ (ACE). However, we soon realised that applying best practice initiatives on site could potentially bring large benefits as well.

We found out about CLIP from the internet, and invited the team to give a presentation. CLIP offered us the tools and methodologies to help us make the improvements in productivity on site that we wanted.

### What our aims & expectations were

We decided to use CLIP on a project big enough to allow us to analyse our processes and then make improvements. Our Contracts Manager Chris Brown was keen to introduce it onto one of his projects to see what could be achieved.

This project involves the construction of a community facility to serve the local area. It contains a primary care centre, offices, library and other facilities all linked by a central atrium. There is a mix of construction methods used, from steel frame to traditional brickwork.

The main aims of the CLIP programme were to reduce waste, and increase efficiency throughout the construction process.

#### **The team expected to:**

- Reduce the fit out time by around 10%
- Make improvements that could be spread to other projects.

above: blockwork and roof going up on site  
below: contract manager and project team discussing the project plan on the visual management board



### THE PROJECT

Blakenall Village Centre

**CLIENT:**  
New Deal for Communities

**CONTRACTOR:**  
Shaylor Construction Ltd

Ken Rawe of Shaylor Construction tells how CLIP helped them to reduce the amount of re-work, and improve site management on a large project involving a wide range of sub-contractors.

### VIEW FROM THE CONTRACTOR

#### Background to the project

We are a new build and refurbishment contractor, operating in the West Midlands area. We undertake a wide variety of works, within both the private and public sectors.

We put a strong emphasis on quality, and we have adopted the ‘Egan’ principles to partnering which is proving successful with our current clients.

#### What attracted us to the CLIP programme

At Shaylor we have recognised the benefits of a modern approach to the construction process. To drive this culture through the company we developed and implemented an

*By using CLIP...  
“We are still on course to finish four weeks ahead of the original schedule, and we calculated that by changing their approach the fitters could have reduced the time it took to fit one conduit by 25%”*

## How the CLIP process worked for us

At our 'pre-diagnostic' workshop with the CLIP engineer we looked at all the site activities. We realised we could make the biggest savings by focusing on the 1st and 2nd mechanical fix, and the building's finishes. We collected data on the trades working on these areas by viewing and measuring site processes.

With the help of the CLIP engineer, we videoed each of the trades in action. Then we reviewed the film and suggested how working methods could change to become more productive. Some teams were sceptical of this process, and did not react positively to the feedback. Those that did change instantly started to become more productive.

The CLIP workshops throughout the project gave our team the tools and the techniques to go away and look for improvements.

For example, we held a number of detailed meetings with the M&E sub-contractors to discuss how we could remove waste from the sequence of works. One of the early meetings realised a saving in time and labour by the M&E subcontractors developing shared bracketry for the services.

We developed a visual management board that showed the next week's plan to improve communication. The trades could then organise themselves more effectively to meet it. They also marked off the work they had completed on the site drawings, so we always knew where we were.

To save more time we started to standardise many of our routine processes. For example, we have developed a new best method for marking out the chasing for conduits from ideas put forward by the workforce. These were captured by sticking post-it notes on the site boards.

We are now taking the lessons we have learned here across to a project refurbishing student accommodation for Birmingham University. We want to get everyone involved on the project to develop the CLIP mindset.

## How we benefited from this initiative

Despite an eight week weather delay, we are still on course to finish four weeks ahead of the original schedule. We will just miss our target to reduce the fit out time by 10%, but the savings we have made were down to using CLIP.

All of the mechanical and electrical works finished ahead of target. We calculated that by changing their approach the fitters could have reduced the time it took to fit one conduit from 10 minutes to 7.5 minutes, a time saving of 25%. We are also going to set up visual management boards on other projects, as the concept was so successful on this one.

Our contracts manager found that he was able to spend more time focusing on important decisions during the construction works, rather than overseeing re-works. He was delighted by how much easier the job becomes when you don't have to spend any of your time managing conflict.

## How we plan to use the skills & lessons learned

Further improvements could have been picked up if we had run a CLIP workshop before we started on site. It just proves how vital it is to get the right people together at the right times, to discuss how best to tackle a project. This is where you can make real savings and remove waste.

To embed CLIP into the way you work get everyone on site participating. As an introduction, all of our contract managers have been briefed on the successes at Blakenall.

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*Chris Brown of Shaylor Construction*

My advice is to start by using CLIP on a suitably sized project, where there are trades and services that you use regularly on other sites. Be committed, and investigate up front where you can produce the biggest benefits.

## LEARNING POINTS

- Run a CLIP workshop before you start work on-site, and get your sub-contractors involved early on. This will allow you to make the biggest improvements possible.
- To save time and reduce waste see how many of your processes you can standardise. Ask your workforce for their comments, and spread any improvements you make across your company.
- Get your sub-contractors together to prevent duplication of work and conflict on site. This leaves your management team with more time to focus on running the project more effectively.
- Appoint a manager who recognises the benefits of CLIP and is willing to put the effort in to get the results.
- You will get the best results from CLIP on a project that is big enough to allow you to analyse your processes and make improvements.
- To improve communication between the trades, develop a visual management board that shows the exact position of the project and the plan for the weeks ahead.

## JARGON BUSTING BOX

### ■ **7Ws – look for seven wastes that can never be added value:**

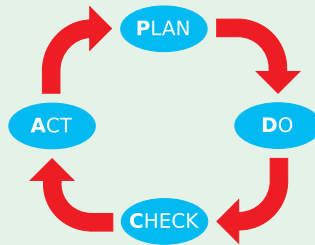
- Motion    ■ Transport
- Waiting    ■ Overproduction
- Defects    ■ Unnecessary inventory
- Inappropriate work or processing.

### ■ **5Cs – check these to lay the foundations for continuous improvement:**

- **Clear out** – separate the essential from the non-essential
- **Configure** – a place for everything, and everything in its place
- **Clean & check** – assess the current condition of the environment
- **Conformity** – ensure standard easily maintained
- **Custom & Practice** – ensure everyone follows the rules.

### ■ **THE PLAN-DO-CHECK-ACT (PDCA) CYCLE –**

a way of thinking which encourages continuous improvement



### ■ **THE CLIP – ‘standard structured approach’ – which is made up of four main stages:**

- **Pre-diagnostic** – setting the aims and training the team in lean tools and techniques
- **Diagnostic** – practically applying the tools to analyse the situation
- **Improvement activity** – looking at the data for opportunities to improve processes
- **Follow up** – identify barriers to success and set improvement actions in place.

### ■ **VISUAL CONTROL –**

a major part of the CLIP process is to use visual tools to display data, highlight improvements and record ideas. These include:

- **Key Performance Indicators** – are the measure of performance of activities that are critical to the success of an organisation
- **Pareto Chart** – a comparative bar chart that shows the number of defects for each chosen area of work, and the cumulative total of defects over the whole project
- **Fishbone Diagrams** – are used to identify the possible causes of problems. Start by defining the problem to be investigated and write it down. Then draw lines (bones) to represent each cause that runs into it. Finally you can brainstorm what is actually the cause of the problem
- **Priority Matrix** – a quadrant chart used to prioritise which improvement areas to focus on first. For example, you can place activities that will have a high impact at a low cost in one quadrant and focus on these first.

## GETTING HELP

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