

Constructing Excellence

Lean Construction Last Planner

Implementation Programme 2023

Driving Business and Project Excellence



1 Introduction

Lean Construction and its associated tool, The Last Planner System (LPS) have been highly successful in the New Zealand infrastructure environment.

Take-up of the concepts began in 2009 when Constructing Excellence NZ first introduced the concepts into New Zealand. Since then, many projects have reported a range of benefits, not least the Manukau Harbour Crossing project completing 7 months ahead of schedule, one part of Waterview coming in three months early and one large contractor reporting a 30% increase in profitability since using Last Planner.

Organisations such as Link Alliance, Rymans Construction, Fulton Hogan, Fletcher Construction, Waka Kotahi, Piritahi, Kainga Ora, Hawkins, Downer, and Naylor Love all use the Last Planner System regularly, often as a standard approach for their projects.

The Last Planner System (LPS) is a methodology which empowers a collaborative culture of planning and enables a team to manage programme risk on a daily basis.



2 Benefits

Benefits are often surprisingly quick to be realised and are usually tangible and measurable. Typical benefits include:

- Waste is targeted, owned, and identified across the full range of people working on a project.
- Productivity is measured and tangibly improves within weeks.
- The method fosters a collaborative approach which enables people to work in an enjoyable environment of Trust, Openness & Honesty.
- The project team becomes integrated, each individual gains a better understanding of their part in the overall project and importantly how their performance impacts others.
- Delays are mitigated or if introduced to a project in delay, it can substantially help to get the project back on track.
- Communication is improved significantly.
- “Fire-fighting” is dramatically reduced.
- Profitability increases for supply chain members whilst other important performance criteria such as completing to time and budget improve.
- The team gains a better understanding of project risks and manages them on a daily basis as part of a collaborative team.
- Winning teams of suppliers are developed which encourage them to stay together for the future.

3 The Approach

From experience, we have designed a package of activity which is aimed at achieving a fast and thorough take-up of the principles and ensures that the team stays on track to reach the project goals.

1. **An initial fact-finding meeting** and recommendations for implementation tailored to the project or programme. (1 to 2 hours with project leader and planner(s)).
2. **A Collaborative Programming Workshop (Start-Up Workshop):**
A knowledge transfer session which includes the establishment of a collaborative programme and the first 'Weekly Production meeting'. (Half to one day workshop).
The session includes Delivery of world class training in the concepts of Lean Construction (Module used from NZQA Level 6 Academy of Construction Excellence Diploma)
3. **Full administration set-up** including a tracking tool and chasing up of each participant (subs and consultants etc) to fully engage them in the process and capture their data.
4. **Weekly administration:** For as short or as long as you need during the life of the project. We recommend 5 to 6 weeks to get everyone used to the weekly production planning process.
5. **Health Check and Advisory:** Two to three follow-up visits at production meetings, (normally 2 to 3 weeks apart) to check all is on track, working well and advise on any additional opportunities for improvement. (1 hour each)
6. **Ongoing weekly advice/tips/suggestions** as appropriate following the LP meetings via email. (As required)
7. **Full Review** (Optional) This includes a final visit at project close with full report on lessons learned/case study. (Time depends on project)
8. **Administration Training and Handover:** Once you are ready, this involves one of our team working with your administrator to hand over the process and ensure they are trained to deliver.
9. **Lessons Learned:** This includes a full benefits review with your team and your client. Tailored to each project, the outputs can include a customer and stakeholder survey, lessons learned report and a full case study.

4 Investment

Our standard fees for the programme described are set out below:

1. Pre-planning (meeting or telecom) setup and preparation for 2. below - \$2250.
2. Collaborative Foundation Workshop – 1 day and utilising the interactive Villego model - \$6450 depending on project size (based on 15 participants and facilitators).
3. Collaborative Pull Plan – ½ day – defines the whole teams relationship and constraints for each's task set inside the Master Programme build sequence and to achieve the next significant Milestone - \$3225.
4. Administration Set-Up. Includes setting up an annual spreadsheet the 7-week Wall Board set for each participant and writing up their initial week - \$1450.
5. Weekly Production Meeting (WPM) Administration – Includes chasing data and a formal training session for the WPM Chair and participants in use of Wall Boards, Post Its or digital data sheets - \$750 – week 2, \$550 per week thereafter.
6. Health Check and Advisory: Follow-up checks including performance reports - \$1250 per production meeting. (Travel time in Auckland is included, charged at \$150 per hour outside of Auckland).
7. Ongoing weekly advice/tips/suggestions - \$Included with above.
8. Provision of Scores Excel Tracking tool including customisation to the project and operate for 6 weeks - \$2250.
9. Administration training and handover (including Tracking Tool) - \$2250.
10. Final Visit, lessons learned review and case study report - \$ as per proposal as each project is unique.

A typical full implementation fee will be in the region of:

\$20k to \$24k + GST & disbursements

depending on the size and complexity of the project or programme of projects (e.g., NOC contract). (See Section 7 for Terms and Conditions). Our fees have been proven to be repaid within the first 3 months of the project through removal of waste and time savings on the project and its administration. By the end of the project the investment can be repaid in excess of ten times the original amount

5 Endorsements and References

We are happy to provide reference contact details if required of individuals using or having used Lean Construction and Last Planner on their projects and in their businesses.

We have also produced a number of case studies which describe the process working in live projects.

To date, every project which Constructing Excellence has helped to implement Last Planner has been on time or early, even when there have been significant delays at the outset of implementation. Some comments from users are:

“I have worked with Constructing Excellence for more than 3 years mainly in the delivery of Last Planner but more recently in the introduction of Lean Construction. Last Planner has been a very successful planning tool at Victoria Park and also here at Waterview. The introduction of Lean has had the biggest influence on reducing waste and improving efficiency across the project. Amanda delivers in a relaxed but professional manner and gets full participation from her audience.”

“Having completed the Diploma Managerial Excellence in Engineering and Construction through Constructing Excellence this has given me the confidence and skills to make great changes in the way we reduce waste improve efficiency and develop teams. This has by far been the most influential training I’ve had and the results from this project are proof of how effective it can be.” **Callum McCorquodale, FCCAK, Well-Connected Alliance**

“Last Planner has made a huge impact and the results speak for themselves. When you came in and ran the initial workshop the project was running six weeks behind programme due to consent delays and inclement weather hindering progress.

We managed to pull back four of the six weeks and finish Stage One two weeks behind programme. A huge achievement! We have had great buy in from all our sub-contractors and your presentation in that initial workshop was perfectly pitched to get everyone’s participation. After the workshop we found your visits to site over the next three weeks were invaluable too. Working with the site team to implement the processes, and generally supporting them in the practical rollout of Last Planner helped immensely and has given them the vision that things can always be done better. **Craig Davison, CM Stanley Group**

“Last Planner is great. It seems similar to good construction practices but gets much better results through a few simple but fundamental tweaks. The forethought that goes into the short-term planning not only helps with the programme but also health, safety and quality whilst measuring your performance and reasons for not achieving planned activities helps you to improve through the life of the project rather than wait for the next one. The increased communication that stems from this method can also lead to better understanding and relationships across the project. I see great potential for this to be used in a myriad of complex situations, not just on construction sites.” **Hannah Hyde, NZTA (now Waka Kotahi)**

'Last Planner has been an outstanding help in bringing our projects in on time' Fulton **Hogan, Auckland**

"We would not have delivered this project nor made our margin without last Planner" Higgins, **Wellington**

"Our Hunua 4 project has embraced last planner and is producing great results in a very challenging and evolving project environment. **Andy Spittal, Watercare, Auckland**

"The Last Planner tool works. This tool produces bottom line results by including and communicating to all levels & designations of construction delivery and operations. Highly recommended." **James Worthington, Worthington Contractors, Christchurch**

Constructing Excellence have a long history of providing high value training in the construction industry and particularly in Fletchers. Starting with Last Planner at Dowse to Petone Amanda and her team demonstrated an easy learning style that connected with all levels of the team. The simple messaging enabled the team to immediately see value and in the long run bring back a tight programme ahead of schedule.

This training has been repeated many times and in recent years expanded to Lean Construction (of which Last Planner forms part of). The easy to understand material and interactive games enable the key principles to be communicated effectively across all levels. It is from this training and continued consultation that Waterview recently won the Fletcher Building Construction Group 'Best Site Improvement Award'. **Darron Monaghan, FCCAK, M2PP, Wellington.**

6 Fees

Terms & Conditions

Invoices will be issued pre-training and are due on a 7 Day term.

All investments are exclusive of GST and excludes disbursements and travel costs. These disbursements are expected to be minimal. This proposal should be read in conjunction with the previous proposal terms and conditions.

The booking and administration of third-party travel (and related expense re-imburement) is not covered by this proposal; however, this could be included by agreement as a scope change. CE have provided this service elsewhere.

Fees

A typical full implementation fee will be in the region of \$20k to \$24k+GST depending on the size and complexity of the project or programme of projects (e.g., NOC contract). All fees are exclusive of GST and travel expenses. For Auckland, the fees include travel time. Outside of Auckland, travel time is charged at \$150 per hour.

7 Resources

Amanda Warren, our Lean Construction facilitator is New Zealand's leading authority on Lean Construction and the tool Last Planner. Amanda regularly teaches Lean Construction in addition to facilitating implementation of the principles on a wide variety of projects. Amanda operates a team of highly skilled Lean practitioners. Her specialist skill is in Project Rescue for projects running over time. She has an extensive record of helping late projects gain back time and deliver to the planned milestones.



About Constructing Excellence NZ Limited

Constructing Excellence aims to achieve a step change in construction value, productivity, & customer service.

Through focused programmes in Innovation, Best Practice Knowledge, Productivity and Engagement, Constructing Excellence has developed strategies to deliver the process, product and cultural changes that are needed to drive major productivity improvements in the sector.

Constructing Excellence focuses upon and establishes new thresholds of performance based on cross industry networking and collaboration combined with a strong regional engagement strategy. Tools have been developed which offer industry the capability to change its image and improve performance exponentially.

Whilst beginning life in the UK in 1998, via a series of MOUs, Constructing Excellence is fast becoming a worldwide network of knowledge sharing organisations. Constructing Excellence NZ is a hands-on organisation that delivers complementary services across New Zealand.

Vision

For the NZ construction industry to realise maximum value to all clients, end users and stakeholders and exceed their expectations through the consistent delivery of world-class products and services.

Mission

To deliver initiatives, tools & services which influence & assist individuals, corporates, and the industry to achieve excellence in construction.

Constructing Excellence achieves its mission.

By working with key industry stakeholder groups from construction clients through to specialist trades & material suppliers through a range of industry initiatives aimed at catalysing innovative processes, strategic business improvement, advanced systems, and state of the art technologies.

“To have a skilled team on every project, working to a common management system using tools to provide a consistent approach to best practice and best profit”

Extract from presentation by Costain on their IBP programme – UK Study Tour CCG Oct 2006

Constructing Excellence NZ Limited

Team

Tim Warren, Managing Partner



Tim is a Director of CE, a Chartered Civil Engineering and Fellow of the ICE by background.

Tim is an executive level programme / project manager who has led tangible performance improvement through multi-million-pound design and construction projects across the aviation, highways, retail, and research/defence type sectors in both New Zealand and overseas. With a background in civil engineering has the ability to engage with technical and commercial leaders across a major client base and unite often disparate groups in the delivery of a profitable construction solution.

Amanda Warren, Partner,



Amanda is our Lean Construction and Last Planner expert is available to carry out this service.

Amanda is New Zealand's leading expert in Last Planner, Lean Design & Construction and has played a key role in introducing and

establishing Lean principles and tools, in particular, Last Planner across the New Zealand construction industry.

Amanda is a past, (founding) Industry Chair of LCI NZ, (Lean Construction NZ). She teaches Lean Construction regularly to the industry.

As Project Coach, Amanda has assisted many 'project rescues' for projects in distress as well as helping project teams to realise better value and efficiencies through innovation and empowerment of Lean tools and principles.

Some examples of projects that have successfully used Lean Construction tools to drive out waste and improve efficiencies are Waterview, M2PP, Hunua 4, Sky City, Lincoln Road, KiwiRail Electrification, MHX, Dowse to Petone, Victoria Park Tunnel, Auckland Airport, plus many more.

Renée Ray, Programme Manager



Our Programme Manager is Renée Ray. Renée spent her early career within the legal profession working within top law firms in Auckland and Christchurch. Renée's years of experience in the construction industry means that she brings all her training and project management skills together in helping the industry to flourish in line with the vision and values of Constructing Excellence NZ. Combined with her project coordination skill set and education experience. Renée brings a unique set of 'out of sector' skills delivering knowledge to lift project performance.

Lara Tookey, Training Consultant



Lara currently works as a Senior Tutor at Massey University. Lara has previously taught in South Africa, Singapore, Glasgow, and New Zealand, in both education institutions and corporate enterprises. She has also developed and delivered bespoke company specific courses as required. Lara received the Tertiary Teaching Excellence Award from Ako Aotearoa National Centre for Tertiary Teaching Excellence in 2015, presented by Hon Steven Joyce Minister for Tertiary Education.