

COMPANY OVERVIEW



COMPANY WEBSITE

www.breedongroup.com

Breedon Cement is the cement division of the Breedon Group which partially purchased the Lagan Group, including Lagan Cement, in April 2018. Breedon Group operate as three autonomous divisions: Breedon Northern and Breedon Southern are fully-integrated aggregates and downstream products businesses, and Breedon Cement is the UK's only independent cement producer. The Lagan purchase was the Breedon Group's first venture outside the UK, and thanks to all our hard work the acquisition will ensure that the company will grow its position in the market. The Breedon Group, like Lagan, has always been an ambitious

and forward-thinking company. With the addition of Lagan, the Breedon Group will now have two cement plants, around 70 active quarries, 40 asphalt plants, and 200 ready-mix concrete plants in the UK and Ireland. Breedon Group also has seven concrete products plants, a clay products plant, a brick plant, and two slate production facilities in Wales, in addition to six import-export terminals: three for cement, two for bitumen, and one for aggregates.

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OVERVIEW OF THE LEAN INITIATIVE

This case examines the Lean journey of Lagan Cement ("Lagan") which is committed to "being the best in everything it does" and enabling excellence in its people by endeavoring to bring out the best version of each person every day through its winning culture and core principles to ultimately add value to all its customers. Lagan's own Lean journey is founded on its core principle of a "Mindset of Being Even Better" – with "Even" being a recognition of past excellence and "Better" being a

present and future orientated mindset of constructive dissatisfaction to ensure that complacency never enters its DNA. The Lean pillars of Respect for People and Continuous Improvement are a perfect match for the other two core principles of "Culture of Respectful Challenge" and "Can Do/Make it Happen Attitude" which assert that the greatest potential for improvement and innovation lies in frontline employees engaged in daily problem solving and idea implementation.

BACKGROUND TO THE LEAN INITIATIVE

As a formerly privately-owned family-run business, Lagan views its people as its greatest asset and endeavours to be authentic in everything it does. With that in mind, its focus was on simplicity, consistency, and authenticity. The business sets out the vision, mission, and guiding principles for the company, and, with authenticity at the core of what it aims to achieve, it altered the language to be more appropriate to its own business. Vision was replaced with "Destination", Mission was replaced with "Journey", and Guiding Principles was replaced with "Vehicles":

- Our Destination: "To be recognised as being the best at what we do".
- Our Journey: "To bring out the best version of ourselves, everyday".

- Our Vehicles: "Our winning culture by living our Core Principles".

Lagan's core principles are:

- Can-do make-it-happen attitude.
- Be even better mindset.
- Culture of respectfully challenge.

To help achieve the core principle of Be Even Better, Lagan set out on its Lean and Continuous Improvement journey with the ultimate destination "to be recognised as being the best at what we do". This initiative was undertaken via Enterprise Ireland's Lean Transform business support programme and involved Andy Brophy as an Enterprise Ireland approved Lean Service Provider.

LEAN INITIATIVE UNDERTAKEN – LEAN THINKING, TOOLS, TECHNIQUES

Lagan started its Be Even Better journey in early 2016, and had the following as its objectives:

- From an already high baseline attain even higher levels of employee engagement. The Q12 engagement levels were quite high in 2015 and 2016 against sectoral benchmarks, however in striving to be even Be Even Better, the aim was to incrementally increase the overall level of employee engagement.
- Increase overall equipment effectiveness (OEE) by 5% on bottleneck equipment – improve kiln uptime by 5%.
- Release latent capacity across all equipment to meet the needs of a growing market – increase output by 5%.
- Improve communications across the business in real-time

and know how it is doing at a glance.

- Improve energy consumption across the site by 5%.

The journey started with a diagnostic assessment of the current state of the business against 30 "Keys to Operational Excellence", including, for example, Root Cause Analysis, Visual Management, Quick Changeovers, Total Productive Maintenance (TPM).

Tiered Morning Stand-ups – A 3-tier rhythm of morning meetings is now in place across the site. In Tier 1 the frontline team leaders meet at 8:15am to review the previous 24 hours' performance in terms of safety, quality, cost, delivery, and people. Each trade brings a WIN (What's Important Now) card that must be resolved within the shift

to ensure production continuity. In Tier 2 any issues that cannot be resolved at the Tier 1 level are escalated to this middle management team meet at 9:15am. In Tier 3, issues that are Production-Stop-Status are resolved at the Tier 3 level who meet daily at 9:45am on key objectives for the site.

Early interventions included training several Be Even Better practitioners across the site to Yellow Belt level, and then deploying them across teams to focus on a series of pilot improvement projects. One team project was started in the Central Control Room (CCR) to improve process control and real-time reaction to deviations from target in the cement kiln performance. A visual cube was established that has real-time KPIs that are updated manually by the control room technicians, and if they deviate outside control specifications immediate root cause analysis is triggered to stabilise the process. An hourly board measuring target versus actual was also deployed to bring problems to the surface. The team identified the Pareto of recurring problems and developed problem solving troubleshooting flow charts to guide the resolution of recurring downtime problems. The visual cube systems have also been replicated in the cement bagging department, culminating in an improvement of pack line OEE by 10%.

A Lean warehousing wave of improvement projects was deployed in the warehouse focusing on min-max material replenishment levels. A formal 5S workplace organisation programme was initiated in the warehouse. The main benefits to date of this practice range from having large of amounts of obsolete stock dispositioned from the building, to reduced search time for parts and consumables due to greater levels of organisation. The Quarry area of the business benefitted from improvements via the A3 Problem Solving methodology. Line OEE has improved by 8%, overtime costs are substantially reduced, and quarry energy costs are reduced. Lean was piloted in the office with live finance KPIs on a visual cube with weekly stand-up meeting reviews. A selection of wins in Finance include:

- Invoice PO accuracy improved by 20%.
- Payment runs reduced by 50%.
- One A3 project focusing on greater controls on system stock accuracy saved the business over significant savings per year.
- Credit note issuing reduced by 80%.

Finance also piloted a visual idea system for the plant with over 40 ideas implemented in the second half of 2017. This system has spread to all areas of the facility with a total of eight Visual Idea Boards (see Figure 1) across the site resulting in over 300 implemented ideas across the first three months from launch.



Figure 1. Kaizen Teian – Frontline Idea Capture System.

Communications Strategy

Lagan developed a communications strategy for the entire business, the purpose being to make communications more consistent, disruptive, engaging, and effective. The company utilises several channels to communicate with the workforce and keeps the information fresh, action-oriented, and real.

The following list shows the various communication channels:

- 1-2-1 sessions.
- Email.
- Digital Displays.
- Traditional Notice Boards.
- Posters.
- Internal social media (skype for business).
- Quarterly infographics magazine.
- Campaign monitor.
- Quarterly business updates by business managers.
- Yearly business update (videoed) from CEO.
- Morning meetings with each team.
- Tier 1, 2, and 3 meetings.
- “Lagan View Magazine”.

Employee Engagement – Q12 Survey

Since 2003, the company runs its Q12 Engagement Survey twice per year. The Q12 is a long-established and well-renowned engagement survey developed by Gallup. It has 12 questions which provide the company with quantitative and qualitative data on the level of actively-engaged employees within the company. The foundation of the Q12 is based on four key elements that, if implemented, are proven to increase employee engagement. The company refers to these as the “Big Four” and they are:

1. Have you the tools and equipment to do your job?
2. Do you feel valued?
3. Do you feel you belong?
4. Are you learning and growing?

This survey has provided management with substantial data over the years, and enables the company to benchmark its own progress against itself. The most important element of the Q12 is not the survey results, but rather the conversations within the individual teams afterwards wherein each line manager will go through the Q12 results for their team/department and ask how the line manager can “be even better” in delivering on the Big Four elements of the Q12.



Figure 2. Q12 Survey Results.

Great Place To Work Institute

In late 2017, Lagan engaged with the Great Place To Work Institute, a not-for-profit worldwide organisation which has developed a detailed survey to measure the level of trust within an organisation. Lagan believe that trust is at the core of the employee relationship with the company, and this survey provides detailed quantitative and qualitative data on the levels of trust within the company. There are five key areas to measure: Trust, Credibility, Fairness, Camaraderie, and Respect. The most recent survey was carried out in December 2017, and the results were collated and published in February 2018.

Lean Assessment

A baseline Lean Assessment was conducted to provide input into the improvement roadmap – Hoshin Kanri X-Matrix – for 2017 and beyond. This was conducted by the senior

management team and frontline team leaders.

Tiered Morning Meetings

Cascaded morning meetings empowered team members to solve problems at their level and to escalate issues to the next management level where additional support could be provided. This has had the softer benefits of improved cooperation between trades and breaking down of the traditional silo-based mentality. The meetings are 15-minute focused stand-ups in front of the visual KPI cubes, and they help to drive daily problem resolution.

Yellow Belts

Lagan has 15 Staff certified to Lean Management Yellow Belt level, and this group has worked on four yellow belt projects to attain their certifications. Additionally, 10 staff in the warehouse have completed White Belt Certification training and delivered improvement projects on the back of this also. The plan is to train others to White, Yellow, and Green Belt level and deliver additional A3 improvement projects on the back of that capability development.

5S

5S workplace organisation was piloted first in the warehouse. S1: Sort – removed all clutter and obsolete stock and spares; S2: Set-in-Order – arranged the workplace so that everything could be found visually within 30 seconds; S3: Shine – cleaned and inspected; S4: Standardise – embedded new habits of “clean on the go”; S5: Sustain – conduct weekly audits to sustain the gains. The benefits of 5S include reduced workplace risk, less search time and motion in the warehouse, better workflow, and enhanced employee engagement due to an improved work environment. The plan is to deploy 5S

across the site as the Be Even Better journey continues.

A3 Problem Solving

A3 problem solving has been used to get to the root of recurring issues and is now the standard way that the business addresses trouble-shooting, and indeed project management. On one sheet of A3 paper the company covers the business case for making a particular change, how things stand today, our targets, root cause analysis, and action planning along with sustaining controls.

Mindset

Thinking is everything, and ensuring the company has the correct thinking is a constant at Lagan Cement. For the correct mindset to be established in the business, rigour and routine are vital to set the mind free. The Be Even Better Lean journey has allowed the company to create the correct environment to put systems and procedures in place to enable the correct thinking. Creating a safe environment is also very important, because if employees don't feel safe in highlighting problems then problems will never be reported. This comes down to Leadership and how managers show up for their people and the impact they have on the attitude, mood, and behaviour of the individual. The company works hard on developing its Leadership capabilities based on the John Maxwell 5 Levels of Leadership Model and the Lencioni Model for Teamwork. Theoretical models are all well and good, but the difference is in making things happen and one of Lagan's core principles is to “make it happen”, which helps with the mindset. The most important element of “make it happen” is to start with the end in mind and have urgency over perfection. This thinking, or mindset, comes from Leadership, and the Lean rigour and routine has allowed the company Be Even Better.

LEAN INITIATIVE IMPROVEMENTS & IMPACT

The intangible benefits to date of Be Even Better are greater teamwork and collaboration across departments due to increased awareness that value is created horizontally across the business as opposed to specifically within everyone's own department. There are now higher levels of employee involvement through the decentralised company idea boards. People are encouraged to come forward with one small change every month and take the initiative to implement this change themselves with the support of their local area supervisor. Employee recognition is achieved through people seeing their ideas adopted, and implemented ideas are put forward to monthly raffles in each department for vouchers from local businesses. Exceptional ideas are awarded bigger prizes at the company's monthly all staff town hall communication coffee morning.

Safety Concern sheets are now also managed visually through the idea boards, and they move swiftly across Kanban type boards with columns for concerns raised, actioned, and completed. Communication is now more transparent through daily stand-up meetings in each area and via improved visual management across the site through, for example, live LCD screens with metrics and the company newsletter. Root Cause Analysis has improved any recurring issues, and employees now have a standardised approach to tackling complex problems. 5S workplace organisation allows the company to master the basics and ensure that the workplace condition is conducive to safe working. Non-conformances now stand-out due to visual management principles that highlight problems.

Key learnings on the journey to date are:

- People support what they create – involve people and build

buy-in from the start.

- Start small – adopt the inch-wide mile-deep approach and build on the ripple effect as improvement ability develops.
- Count the improvements and advertise your wins – this creates momentum.
- Recognise people for be even better behaviours and results.
- Encourage small ideas from all levels – small improvements have enormous compounding effect over time and can be copied dozens of times across the company.
- Keep score – people like to know how they are doing and the impact that their work has (LCD screens show the benefits of its products and the impact of its local work to the greater whole).
- Structure is important – create a system for improvement including, for example, daily stand-ups, roles and responsibilities, waste walks to visual cubes, and weekly lean steering meeting reviews of projects.

Some key initiative outcomes include:

- No lost time accidents reported in 2017.
- Increase in HS leading indicators, safety concerns, near misses, behavioural safety reports (called “Step In”).
- 10% improvements on process time on bagging line.
- Significant reduction in quarry overtime provided cash benefits.
- Quantifiable improvements in energy consumption provided cash benefits.
- Quantifiable quality improvements and better customer feedback.
- Employee engagement increased by 3% from an already high baseline.