

QUALITY



Learn



PAUSE FOR
QUALITY



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Learn from previous experience and apply

Quality design leading to effective construction delivery relies on learning from previous experience and applying that knowledge at the right stages of the project. Lessons learned from past projects, together with examples of proven best practice, provide valuable insight into risks, common issues, successful approaches, and opportunities for continuous improvement.

Reviewing previous experience enables teams not only to avoid repeating defects, inefficiencies, and avoidable safety issues, but also to replicate methods and solutions that have delivered positive outcomes. A structured approach ensures that knowledge is captured, understood, shared, and applied consistently across projects.

Before starting work, teams should:

- Review relevant lessons learned and examples of best practice from previous schemes
- Understand key risks, constraints, requirements and success factors.
- Apply learning and proven approaches to design, planning, and delivery activities
- Consider opportunities to improve on existing practices and drive innovation

Taking time to “Learn – Understand - Apply” supports a proactive approach to quality, promotes continuous improvement and increases the likelihood of achieving safe, efficient, right-first-time outcomes.



Capturing Lessons from Previous Experience

Before starting, ensure that lessons learned from previous projects have been reviewed and understood. Be aware of recurring risks, common defects, and known constraints that may impact delivery.

Reviewing and Communicating Lessons Learned

Lessons must be analysed, understood, and shared to be effective. A structured approach ensures learning is applied consistently across all projects.

Embedding Learning into Delivery

Apply learning by incorporating it into design, planning, and delivery activities. Focus on known risk areas to achieve right-first-time outcomes and avoid repeat issues.

Capture it. Understand it. Apply it.

Capturing Lessons from Previous Experience

As a fundamental element of effective construction delivery and quality management, capturing lessons and best practice from previous experience ensures that both challenges encountered and successful approaches are retained and used to inform future work.

Construction projects are inherently complex, involving multiple interfaces, risks, and stakeholders, making it critical that learning is not lost between phases or across teams.

Without a structured approach, issues such as recurring defects, safety risks, and inefficiencies can persist, while opportunities to replicate proven solutions and innovative practices can be missed. This can result in avoidable impacts on quality, cost, programme, and overall project performance.

By learning from both successes and failures, organisations can drive continuous improvement, reduce risk, enhance delivery outcomes, and embed a culture of excellence across projects and teams.

THIS APPROACH STRENGTHENS DELIVERY BY:



Identifying recurring risks, defects, and inefficiencies



Improving health, safety, and environmental performance



Supporting compliance with standards and contractual requirements
(e.g. CDM, NEC, DMRB)



Providing a robust evidence base for continuous improvement



Enabling better-informed decision-making at all stages of delivery

If experience is not captured, the same mistakes will be repeated.

Reviewing and Communicating Lessons Learned

Captured lessons must be analysed and clearly understood to provide value. A structured review process enables organisations to identify root causes, trends, and opportunities for improvement, ensuring that lessons are meaningful, consistent, and actionable rather than anecdotal.

Learning should be drawn from both formal processes and operational experience across the project lifecycle and communicated effectively to ensure it is adopted beyond individual teams.

Consistent recording and accessible sharing of lessons are essential to maximise their value across current and future schemes.

KEY SOURCES OF LEARNING

Learning should be captured across the project lifecycle to understand risks, issues, and opportunities for improvement.



POST-PROJECT REVIEWS AND COMPLETION REPORTS

Capture performance, outcomes, and lessons for future schemes



NCRs, INCIDENTS AND NEAR MISSES

Highlight risks, failures, and areas for improvement



DESIGN REVIEWS AND TECHNICAL ASSURANCE

Identify issues early where changes are most effective



QUALITY AUDITS, INSPECTIONS AND CHECKS

Provide assurance and identify compliance gaps



STAKEHOLDER AND CLIENT FEEDBACK

Provide insight on performance and expectations



SITE EXPERIENCE AND OPERATIONAL BRIEFINGS

Capture practical, real-time learning from delivery teams



Effective learning combines formal processes with real-world site experience.

Lessons only add value when they are understood and shared.

Embedding Learning into Delivery

The true benefit of lessons learned is realised when they are actively applied to improve future outcomes. Organisations must ensure that learning is embedded into standards, processes, and everyday delivery practices to prevent recurrence of known issues.

Application should focus on early project stages, particularly design and planning, where the ability to influence outcomes, reduce risk, and optimise solutions is greatest.

A structured approach ensures lessons drive measurable improvements and support consistent, right-first-time delivery.

APPLY: TURNING LESSONS INTO BETTER OUTCOMES



The true value of learning is realised when it is actively applied to improve future performance and prevent recurrence of known issues.



UPDATE STANDARDS, SPECIFICATIONS, AND DESIGN GUIDANCE

Ensure improvements and lessons are reflected in the latest requirements.



EMBED LESSONS INTO PROCEDURES, SOPS, AND ASSURANCE PROCESSES

Strengthen systems and workflows to prevent repeat issues.



INCORPORATE LEARNING INTO DESIGN REVIEWS, RISK ASSESSMENTS, AND METHOD STATEMENTS

Apply learning early to reduce risk and improve right-first-time delivery.



SHARE KNOWLEDGE THROUGH BRIEFINGS, WORKSHOPS, AND DIGITAL PLATFORMS

Ensure learning is accessible and understood across teams and projects.



MONITOR IMPLEMENTATION THROUGH AUDITS, KPIs, AND QUALITY CHECKS

Verify that lessons are applied and delivering measurable improvements.



A lesson is only learned when it changes future behaviour and outcomes.

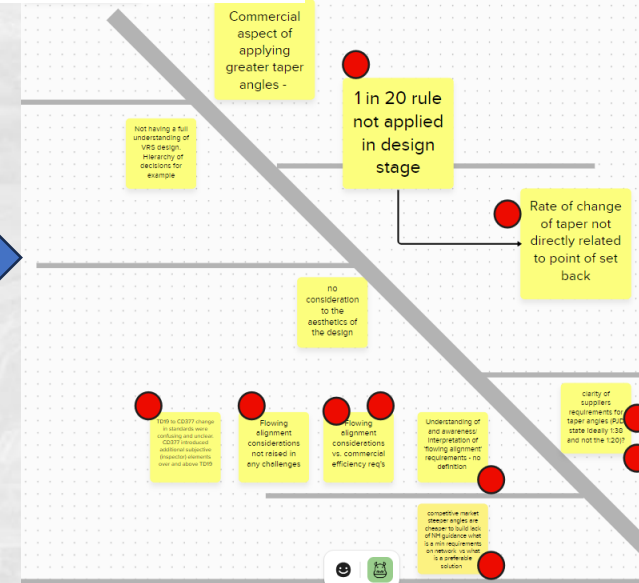
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The Learning Process

The Issue

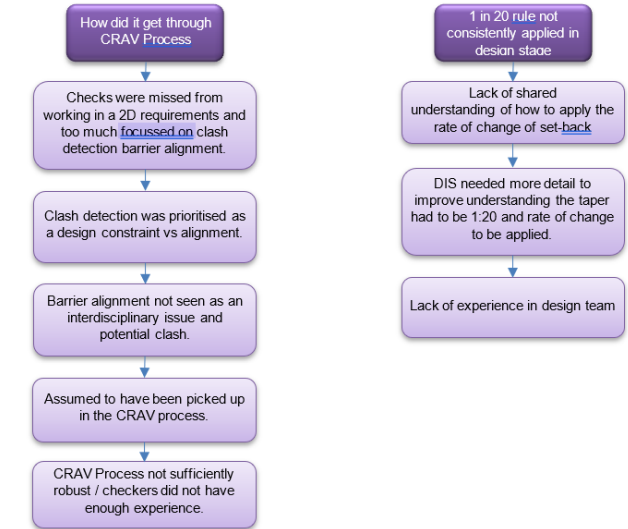


Three instances of concrete central reservation barriers designs that have resulted in 'snake-like' formation which was not to specification. One designed, constructed, demolished, redesigned, and rebuilt. Two were identified prior to construction



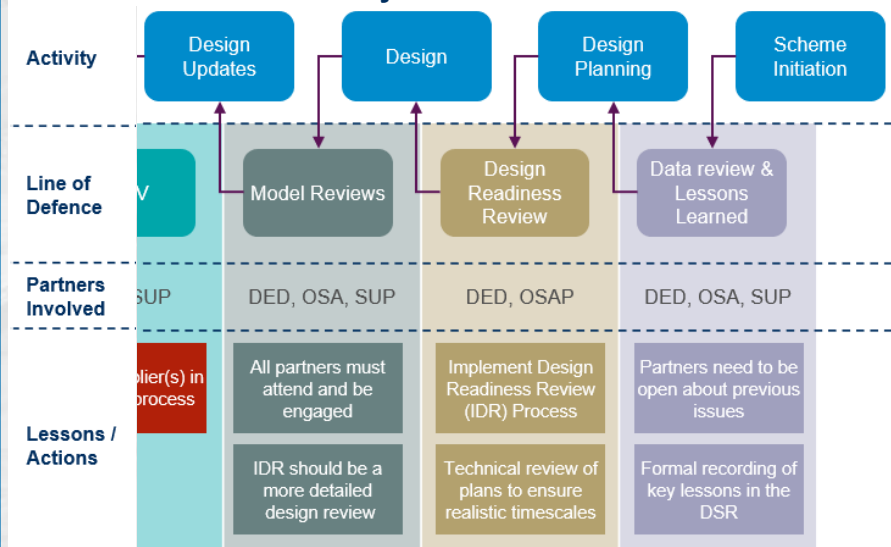
Root cause analysis

Figure 4: Root cause analysis



Identify learning

Lines of Defence and Key Points of Failure



Learn - Induction training for designers

Flowing Alignment

- The minimum rate of change of set-back is specified by the supplier.
- Where possible longer rates of change should be used.
 - At bifurcations this will increase costs, so taper will be site dependant
- Successive changes of direction give a poor appearance; one long taper will give a better outcome than several short tapers
- Alignment should be assessed for aesthetics as well as standards
- The barrier design should not redirect errant vehicles back into traffic



Successive changes of direction

Discussion Points

Consider these questions in a summary wrap-up of the briefing:

- What lessons from previous projects have we not fully applied, and why?
- How can we ensure lessons learned are embedded earlier in the project lifecycle, particularly at design stage?
- What practical changes can we make to improve how lessons are shared and used across teams?
- What opportunities for improvement have we identified?
- Can we work more efficiently?

