

GIRI QUALITY ALERT PROFORMA

We are trialling a system for GIRI members to share key quality issues and the steps taken to prevent recurrence.

Please use this proforma to submit details of a quality problem you have experienced and the steps you have taken to prevent it recurring. All submissions will be anonymised and issued to all members as a GIRI Quality Alert. Submissions will be monitored to allow trends to be identified and reported to the membership.

This form should take around 5-10 minutes depending on the complexity of the issue.

Once you have completed the form, please email to admin@getitright.uk.com

TITLE:

CONCRETING IN HOT WEATHER

1. Where did/might the quality issue occur? (eg planning phase, design office, on site, in supply chain)

On site

2. What conditions are needed for it to occur, if applicable? (eg hot weather. heavy rain etc)

Hot weather.
Concrete supply issues may also lead to higher concrete temperatures through the use of fresher cement.

3. What did/might happen? (description of events up to and including the error itself)

Hot weather in the summer can affect the quality of in-situ concrete and it is important to monitor the temperature of concrete during pours.

4. What was/might be the outcome/error?

- Higher concrete temperatures mean a faster setting time. Therefore the time to place, compact, and finish concrete is reduced.
- Concrete is at risk of thermal cracking when it is placed and the heat of hydration raises the internal temperature of the concrete. Concrete is also at greater risk of cracking when subject to changes in temperature, for example, when it is placed on a hot day following a cool night.
- The concrete surface will dry faster as the rate of hydration increases, which can lead to a premature finish being applied. The bleed water that is trapped can cause de-bonding of the top surface and delamination/flaking.
- The risk of cold joints increases in hot weather.

5. What preventative measures have been/should be employed to prevent recurrence?

- Consider whether pours can be delayed until temperatures drop, or rescheduled to cooler periods of the day.
- Take extra cube samples.
- Plan the pour carefully to minimise waiting time on site.
- Prepare well for curing, with adequate supplies of straw/hessian/chemical agents, etc.

- Consider smaller pours to minimise the risk of cold joints
- Ensure you have a suitable place for curing cube samples that does not exacerbate the problem.
- Always consult your design team before making any changes to the concrete mix

6. Who should be involved in implementing the measures/monitoring compliance?

Site engineers and foremen, concrete subcontractor

7. With what frequency would you expect this error to occur, if preventative action is not taken?
(tick one)

	Rarely
x	Occasionally
	Often

8. Can you give any indication of time/money/waste that would be saved/eliminated each time the error is avoided?

Depends on size of pour, but even with small pours if concrete does not reach the required strength or suffers excessive cracking the time, cost and effort required to break it out and recast is considerable and could have a serious impact on programme.