

# Raising the bar of Quality & Compliance in Construction across the Midlands





### Welcome & Introduction

Andrew Carpenter CEO CE Midlands



E:info@cemidlands.org

### **AGENDA**



9.00	Welcome & Introduction - Andrew Carpenter CEO, CE Midlands		
9.15	The CE Midlands Q & C TLG Terms of Reference -Steve Green, BYUK		
9.30	The Clients view of Quality – Julie Bell-Barker, City of Wolverhampton Council		
10.00	The Get It Right Initiative - Emma McNab, Director of GIRI		
10.45	Refreshments & Networking		
11.15	Avoiding Recurring Defects Handbook – Jon Adshead, Mace Group, CQI Consig Chair		
11.45	Digital Tools for on-site Quality Management – Gary Kirk, Viewpoint		
12.15	General Q & A to the panel		
12.45	Conclusion and summary — Steve Green, BYUK		
13.00	Buffet lunch		



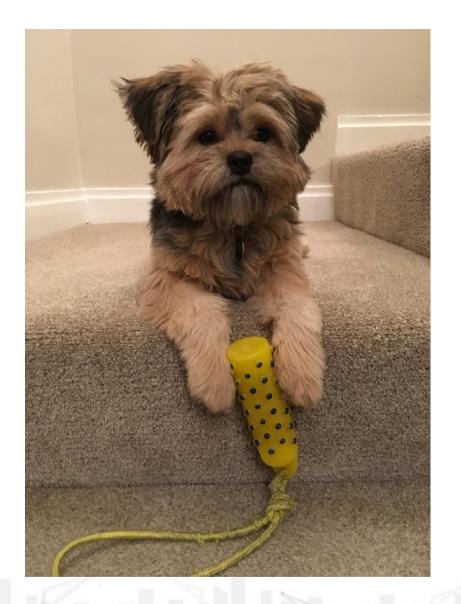


# Quality & Compliance Thought Leadership Group

Steve Green BYUK
CQP MCQI, MCIOB, MaPM
Group Chair



E:info@cemidlands.org















#### Terms of Reference

The Forum has been assembled to help drive Quality & Compliance improvements across the Region.

CE Midlands has charged its Quality & Compliance Forum with **learning the lessons** of the past and harnessing the **new technologies** of the future, to define in **practical terms**, the best practice approach to **improve as built quality**, whether that is delivered through traditional build, modern methods of construction or off-site manufacture.



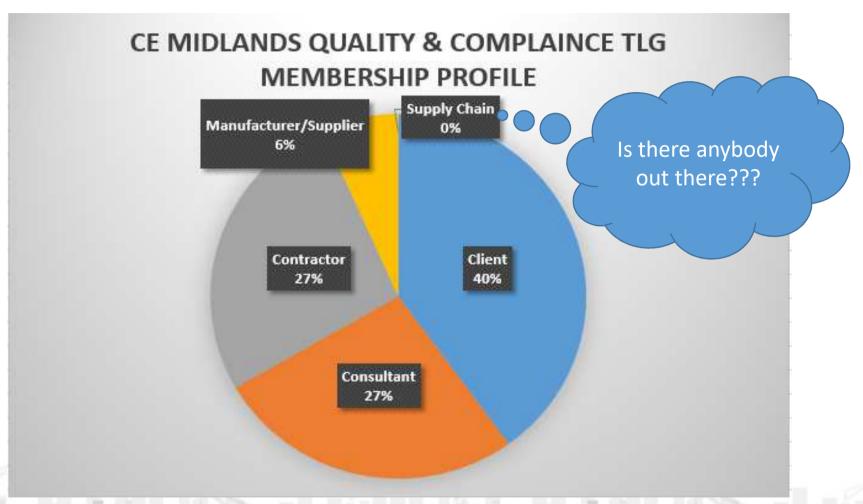
#### Members of the Q & C TLG



Name	Organisation	Name	Organisation
Julie Bell-Barker	City of Wolverhampton Council	Wesley Thomas	LHC
Andrew Carpenter	CE Midlands	Nicola Thompson	Pick Everard
Richard Cymler	Acivico	lan Tipton	Stride Treglown Architecture
Derek Green	WM Housing	Judith Ward	Midland Metro Alliance
Steve Green	Bouygues UK	David Whiteside	T&T/HS2
Philip Hearne	Morgan Sindall	Richard Whittaker	WM Housing
Jeff Morris	Stepnell	Alan Wildsmith	Hadley Group
Marc Preite	Nottingham Trent University		

#### Members of the Q & C TLG







#### **Our Specific Objectives**



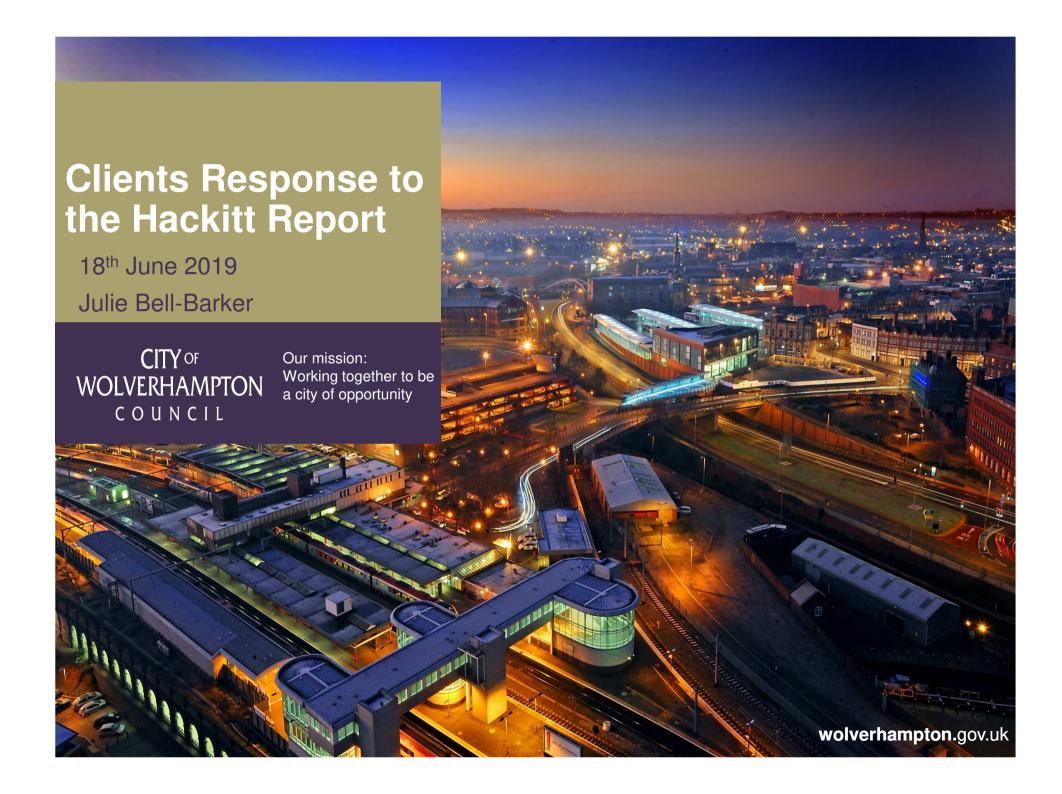
- · To understand and develop the "The Get It Right Initiative" and promote this approach across the industry.
- · To encourage the standardisation of documents, forms and processes across the industry, so that all parties irrespective of their employer, knows the "tool" to be used and its purpose.
- To build a library of "Tips of the trade" videos for those carrying out the works and "what good looks like" videos for those inspecting the works.
- · To create guidance on the adoption of digital quality inspection tools and how to carry out inspections of offsite manufactured products.
- · Understand, Define and then Promote the business benefits of clearly defining Quality to all parties concerned.

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# The Clients View





May 2018 Dame Judith publishes final report.

December 2018 Government response to the Building a Safer Future Report.

Consultation Commenced 6<sup>th</sup> June, Consultation closes 31<sup>st</sup> July (122 Detailed Questions – most require primary legislation).

Consultation document to be published in Autumn 2019.



The recommendations cover the following broad areas;

- 1. The introduction of a new regulatory framework.
- 2. Improving focus on building design, construction and refurbishment.
- 3. Occupation and Maintenance.
- 4. Giving residents a voice.
- 5. Competence.

Other areas covered in the final report include guidance, products, building information and procurement.



**Emerging Scale of Fire Safety/Build Quality Issues** 

**ACM** (Aluminium Composite Material)

**Insulation** (toxic when burnt)

EPS (expandable polystyrene system), HPL (high pressure

laminates) and other none ACM's

**Cavity barriers & Wind Loading** 

**Fire Doors** 

**LPS** (Large Panel Systems)

**Other Compartmentation Issues** 

**Build Defects** (Grenfell packaging still on cladding, no fire stopping etc)

Client Commissioning Impacts & Risks The Building Life Cycle

- New Buildings (Capital Projects)
- Refurb Buildings (Capital Projects)
- New Build Extensions
- Reactive/Responsive Maintenance
- Statutory Compliance Works (Fire, Legionella/Water Hygiene, Asbestos, Electrical etc.)
- Planned Maintenance Works



#### Service Delivery Response/Actions - ahead of legislation

- 1. Renewed emphasis on Service/Build Quality.
- 2. Encourage cultural change.
- 3. Increase accountability & responsibility across the building's whole life cycle.
- **4.** Share Best Practice with other Local Authorities & Industry.
- **5.** Greater Utilisation of Technology, more factory modular construction methods.



#### 1. Renewed Emphasis On Quality

- **Service Delivery** Minimum Service no longer an option, Councils should be leading the way in quality. (end to the race to the bottom).
- Training & Development A renewed emphasis on internal staff
   Training & Development to ensure competence, accredited training
   and experience is suitable and relevant for the role.
- Project Team Capabilities When procuring external consultants, ensure they have the correct competences, accredited training and relevant experience (qualifications, certification etc). Evaluation Criteria 70% quality, 30% cost.
- Principle Contractor Capabilities When procuring the Principle
  Contractor, ensure they have all the right competences, relevant
  experience, skills, certifications, H&S record etc. Evaluation Criteria
  70% quality, 30% cost.



#### 1. Renewed Emphasis On Quality

- Robust Standards & Checking Client Side
   construction quality oversight (e.g. Clerk of Works),
   enhanced robust and rigorous checking and auditing.
   Assurance that all products/materials are installed as
   per the manufactures requirements. More robust
   supply chain standards, checking and auditing by
   Contractors.
- Records & Evidence Auditable and Secure
   Improvements to be made on the management of the buildings life cycle information/data. This will include all design and construction information and any changes that occur during the buildings life cycle (The Golden Thread).



#### 2. Encourage cultural change and increase accountability & responsibility.

**Integrity -** The race to the bottom must be eliminated! Value Engineering and specification/scope reduction could have long term negative consequences, it needs to be sustainable and have longevity (BIM LOD 4). FM Maintenance specialists need to be involved in the design process (Golden Thread).

**Procurement Strategy** – We need to review the procurement strategies and contracts, there needs to be specific areas that state that building safety requirements will not be compromised for cost reduction. There needs to be a holistic approach to Risk.

A More Stringent Accountability Regime – The roles and responsibilities of those commissioning, designing, procuring, constructing and maintaining buildings need to be clearly scoped and defined. Greater accountability over the whole life cycle of the building and the professional team.

Client
Principle Designer
Principle Contractor
Designer (Architect/Engineer)
Sub Contractors

New Duty Holder Regime



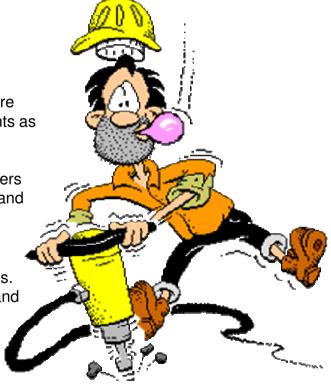
#### 2. Encourage cultural change and increase accountability & responsibility.

**Competence** - Demonstrable competent professionals, contractors and suppliers. Ensuring the right experience, skills, certification. Checks and balances need to be in place.

**Building Regulations** - The Building Regulations (Approved Documents) are often ambiguous and inconsistent. We need to treat the Approved Documents as a minimum attainment and look to go further on Fire Safety.

**Golden Thread** – Increased engagement and transparency of all stakeholders in the delivery processes with a mechanism to capture all feedback, during and after the project completes. Golden Thread of information passed from duty holder to duty holder. Living document that's kept under constant review

**Recruitment & Succession Planning -** Loss of professional and trade skills. Years of Council underfunding by Central Government. We need to upskill and invest. Training through CDP, training courses, information transfer through consultants, attending seminars, conferences and engaging in construction related forums (vital to the understanding of changing Best Practices).



#### 3. Share Best Practice – Strong Teams, Strong Culture

#### Collaboration, Lead by Example -

As a client who both commissions and maintains buildings it is important to promote open transparent collaborate team working.

Challenging and sharing information is a vital part of that Partnering relationship. Cross boundary working with peer reviews and a mechanism for whistleblowing.

#### **Knowledge & Changes in Construction**

Attending seminars, conferences and engaging in construction related forums is vital to understand changing Best Practices.

Clients need to promote and influence culture change across the industry by actively participating in the forums.

**Building Regulations** The Building Regulations (Approved Documents) are often ambiguous and inconsistent. We need to treat the Approved Documents as a minimum attainment and look to go even further on building design (Fire Safety etc)



#### 4. Innovation and technology

**Technology Transfer** – Greater utilisation of technology, more factory modular construction methods to be explored.

**Construction Methods** – Support and champion the development of a more effective testing regime including better and more effective methods for testing building materials, including periodic reviews of test methods.

Expectation that Contractors to have more robust supply chain standards, checking and auditing.







### Summary

- Renewed emphasis on Quality.
- Drive cultural change
- Increase accountability & responsibility across the project teams
- Information Management The Golden Thread (Records & Evidence – Auditable and Secure).

# Empowering the Project Team, championing innovation and increasing accountability





# The Get It Right Initiative

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# Refreshments & Networking Resume @ 11.15 if running to programme!





# **CQI** Consig





LEADING QUALITY FOR 100 YEARS



# Introduction to CQI and the Construction Special Interest Group



#### Who Are We?

The Chartered Quality Institute (CQI) is a global professional body advancing the practice of quality management in all sectors.

The Construction Special Interest Group (ConSIG) has been established as a representative group for quality professionals within the construction industry to advance quality and improvement in the construction industry.



#### The ConSIG vision is:

To advance quality and improvement in the construction industry.



#### Our Strategy

#### We will advance quality by the following activities:

- Engage with like minded industry bodies with the intention of promoting their work and acting as a co-ordination hub.
- Develop and Issue Best Practice guidance.
- Provide opportunities for construction professionals to meet, learn and exchange best practice.
- To publish materials to support the construction quality profession and enhance its competence and standing.
- To support and mentor CQI members engaged in the construction industry.

## () CQI RCA LEADING QUALITY FOR 100 YEARS

#### How we do this

#### The ConSIG is made up of:

#### **Steering Committee**

- Strategy and Direction.
- Secretariat.
- Events Management.

#### **Working Groups (Currently 5)**

- Working Group 1 Body of Knowledge.
- Working Group 2 Cost of Construction Quality.
- Working Group 3 Best Practice Guide.
- Working Group 4 Model Contract Quality Conditions.
- Working Group 5 Construction Quality Competency & Training.

Our Working Groups are open to all and free to join so we would love you to get involved.



**Title** – Construction Quality Knowledge

**Lead** – Mike Buss (Taylor Woodrow)

**Contact** — <u>secretaryconsig@quality.org</u>

**Objective** – To use the expertise in ConSIG to enhance quality competence of all construction personnel

**Progress** – Our articles which are published and regularly updated on the Designing Buildings wiki

https://www.designingbuildings.co.uk/wiki/Home



Title —Cost of Quality

Lead - Dan Keeling

**Contact** - <u>secretaryconsig@quality.org</u>

**Objective** – To examine quality issues which affect the cost of construction projects by focusing on issues post handover

**Progress** – A model has been developed splitting costs into several elements. Studies have been completed on several projects and a report is in preparation. A new client is needed for detailed analysis of projects.



Title - Best Practice Guide

**Lead** – David Whiteside (Turner Townsend)

Contact - secretaryconsig@quality.org

**Objective** – To produce an "Avoiding Common Defects" e-book, that can be used across the industry

**Progress** – Content has been collected from a number of organisations and collated to create one document. A web site has been established; the structure is currently being developed

The link is: <a href="https://prevent-defects.consig.org">https://prevent-defects.consig.org</a>



**Title** – Model Contract Quality Conditions

**Lead** – Jon Elliot (FLO – Tideway)

**Contact** - secretaryconsig@quality.org

**Objective** – To produce Model Contract T&C's for Quality that can be used to support construction and supplier contracts

**Progress** – Contract conditions for several major projects are being compared to determine similarities and differences.



**Title** – Construction Quality Competency and Training

**Lead** – Karen McDonald (Skanska)

**Contact** - <u>secretaryconsig@quality.org</u>

**Objective** – To use the expertise in ConSIG to enhance quality competence of all construction personnel.

**Progress -** We have developed specifications for training construction quality professionals. The courses will be certified and delivered by CQI approved training providers.



#### How to contribute

#### Contact us and get involved today by

- speaking to the working group lead of your choice.
- emailing <u>secretaryconsig@quality.org</u>
- Speaking to any Steering Group Member or the working group lead of your choice.
- Contact the CQI membership team.



### Join the conversation at

Website www.consig.org

Twitter @CQIConSIG

Linked In CQI ConSIG



## Questions / Comments?



## Thank you for listening



### Digital Tools - FieldView





Daniel Wilkinson - Viewpoint

Gary Kirk - Viewpoint Customer

Success

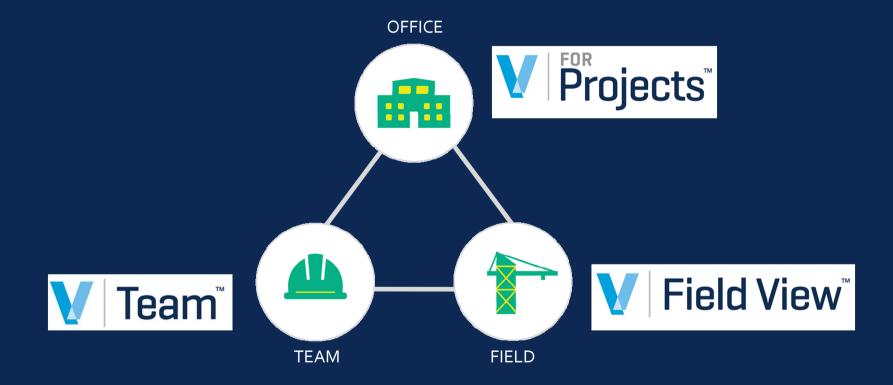


#### Agenda

- Viewpoint
- Field View
- Handling quality through
  - Task
  - Forms
  - Processes
- Live demonstration of Field View handling Quality Processes
- Field View Dashboard
- Questions



#### SOLUTIONS FOR THE ENTIRE CONSTRUCTION LIFECYCLE





# FIELD - Advanced

Consistently manage all site based processes for a single project, a region or an enterprise.

# BENEFITS

Process

Collaboration Coordination

Visibility

Integration

 Defect Management · Snagging

QUALITY ASSURANCE & CONTROL

- Non Conformance Report [NCR]
- Inspections & Test Plans
- Progress Checks & Audits

# HEALTH & SAFETY

- Incident Reporting
- Permits & Certificates
- Inspections & Observations
- · Orientation & On boarding
- Risk Assessments
- Method Statements
  - Tool Box Talks
- · Fire Safety

# PROJECT DELIVERY

- Progress Checks & Photos
- · Clean-Up Notices
  - Material Receipts
- Time Sheets

# Daily Diaries

# COMMISSIONING & HANDOVER

- Final Walkthroughs
- Asset Testing & Acceptance
- Area Handover

### ASSET

- Planned & Reactive
- Maintenance
- Inspections & Surveys
- · Audits

#### **Gary Kirk**

- Customer Success Engineer
- Previously employed as Information Systems Manager at Sir Robert McAlpine
- Support new potential customers to understand benefits of the system(s)
- Ensuring existing customers get the best from our product(s)

• Gary\_kirk@trimble.com



#### Field View - Tasks

- Create your own task types.
- Can be pinned onto plan or added to a location.
- Collect attributes Description, Package , Issued to organization, Photos etc.
- Workflows.
- Automatically distributed to organization.





#### Field View - Forms

- Create your own form templates.
- Determine what questions need to be asked and the expected responses.
- Set mandatory and non mandatory responses.
- Workflows.
- Link To Tasks.



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#### Field View - Processes

- Predefine the tasks that need to happen.
- Assign these process tasks to multiple locations.
- Link to forms.
- View live progress.
- Set rules in the system to ensure relevant quality documentation is complete.

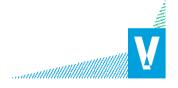






#### **Example of Field View**

- Processes/Forms/Tasks Live Progress/Quality
  - Activities (tasks) are assigned to geometry.
  - Predefining all the tasks that need to happen across each apartment.
  - Forms can be associated with these processes tasks to ensure all relevant QA documentation is collected.
  - Live progress via Field View web interface.
  - Validation forms can be added and completed by Subcontractors to confirm when their work is complete.
  - Organizations are then using this to trigger subcontractor payments.
  - Use the data in progress meetings.
  - Match the location names to the model and show live progress in 3d.



#### **WORLD CLASS IMPLEMENTATION**



"We have been very pleased with our Implementation and process.

We are very confident, that we have the best set-up for LEGO on the system."





#### **WORLD CLASS SUPPORT**

**Support Desk** 



**Online Knowledge Base** 



Releases/ Updates



"All the feedback I receive from my regional centres and from document controllers is that the help desk is an excellent source of information.....

....really exciting team there, really helpful people, knowledgeable and a quick turnaround for closing out any kind of queries we have"



Kirsty Bailey
Business Excellence Advisor
Vinci Construction



#### Questions





### Panel Q & A





### Summary

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# Buffet Lunch Restaurant Ground Floor Enjoy!

Car parking is free, but you need your ticket validating on reception prior to departure

