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Civils Assessments Framework Agreement – Impact of COVID-19

Agenda

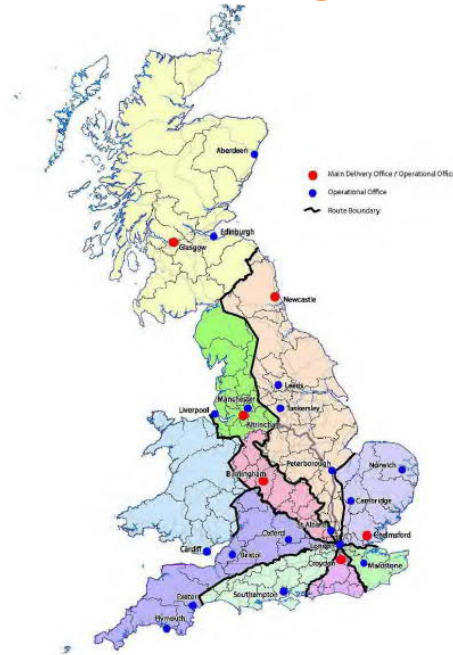
- Introduction to CAFA
- Impact of COVID 19 - Challenges
- Impact of COVID-19 - Mitigation
- Summary

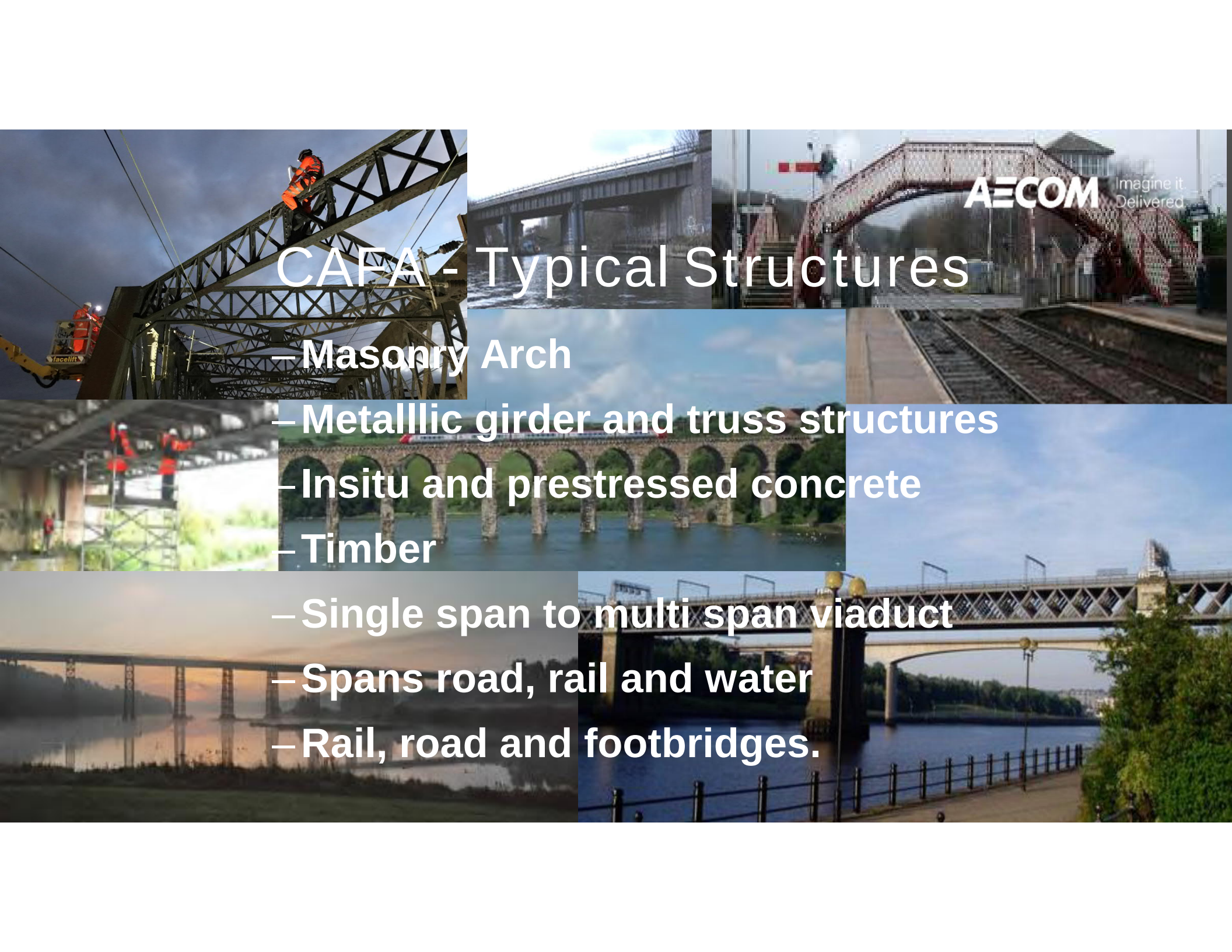
Civils Assessments Framework Agreement - CAFA

- Network Rail's Bridge Assessment Framework
- Network Rail own 32,000 bridges over 8 routes
- AECOM involved with assessment frameworks for 20 years carrying out up to 500 inspections and assessments per year.

Civils Assessments Framework Agreement (CAFA).

- AECOM delivering CAFA nationwide.
- Delivery from multiple offices
- Inspections range from Kent to Wick



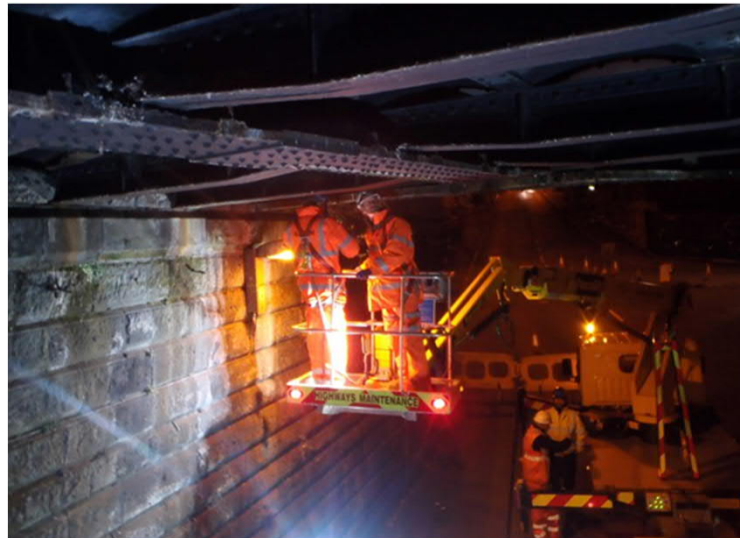


CAFA - Typical Structures

- Masonry Arch
- Metallic girder and truss structures
- Insitu and prestressed concrete
- Timber
- Single span to multi span viaduct
- Spans road, rail and water
- Rail, road and footbridges.

CAFA - Typical Access Techniques

- Ladders
- MEWP - Road and RRV
- Underbridge Unit
- Roped Access
- Pontoon
- Scaffold
- Confined Space
- Drone



CAFA – Typical Work Cycle

Planning



Inspection

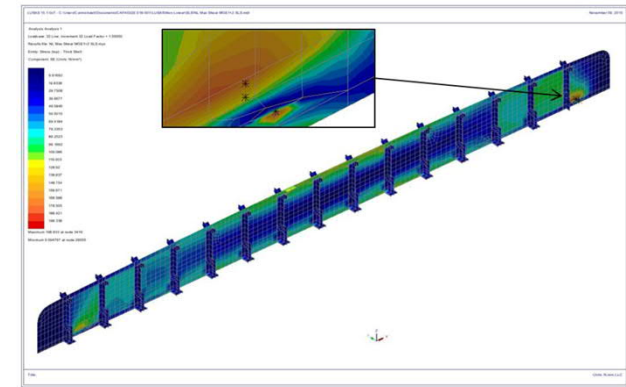
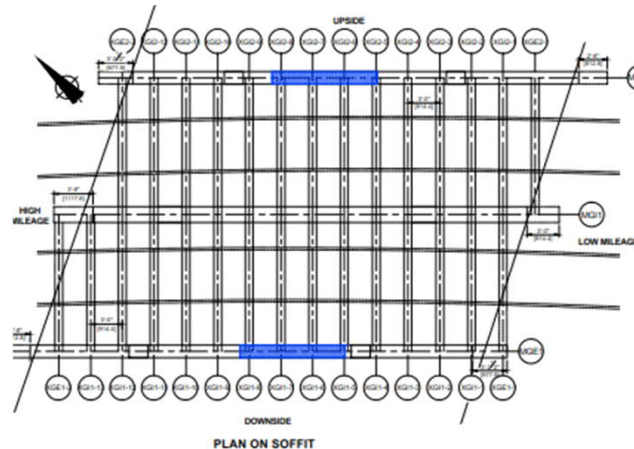
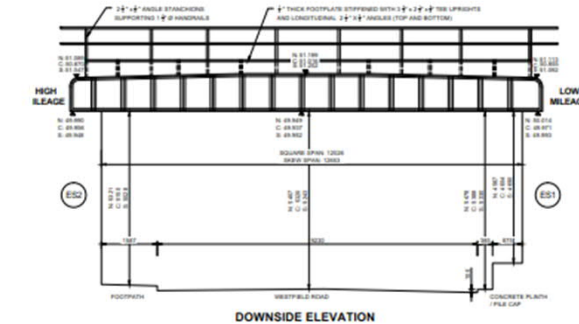


Condition Report



Assessment Report

- Inspection critical to release downstream work.
- Inspections for CP6 Year 2 start April/May



Impact of COVID 19 - Challenges

Key Dates

- 16th March – UK Government briefing to work from home where possible.
- 23rd March – Formal introduction of lockdown 'Stay at Home' message
- 23rd March – UK Housing Minister Robert Jenrick confirmed work on site could continue.

6:38

Builders in the UK can carry on working

After some confusion, the UK's housing minister posted this update. In short, builders can work if necessary - but must practise social distancing.



Impact of COVID 19 - Challenges

Heading into the unknown....Initial Questions/Challenges

- Are we allowed to continue with inspections?
- Can we continue to carry out inspections safely?
- Can we continue to travel safely?
- How will vehicles be cleaned?
- Do we have enough hand sanitiser/anti bacterial wipes/PPE?
- Establishing team communications – remote working
- Interpretation of government advice
- How to maintain social distancing travelling and on site.
- How to maintain hygiene on site.
- Need to complete inspections to provide downstream work for team

Impact of COVID 19 - Challenges

Developing clarifications and response

- UK Government confirmed construction works could continue.
- Network Rail (and Highways England) confirmed that maintenance works including bridge inspections are essential works.
- NR Scotland confirm inspection work was essential infrastructure work.
- AECOM Coronavirus Project Guidance issued
- Sanitiser, wipes and masks sourced.
- CAFA specific Coronavirus RAMS developed
- Programme of daily remote coordination meetings established.
- Fortnightly update meetings with Network Rail in addition to daily calls.
- Essential works letters provided to inspection teams.

Impact of COVID 19 - Challenges

Key Challenges

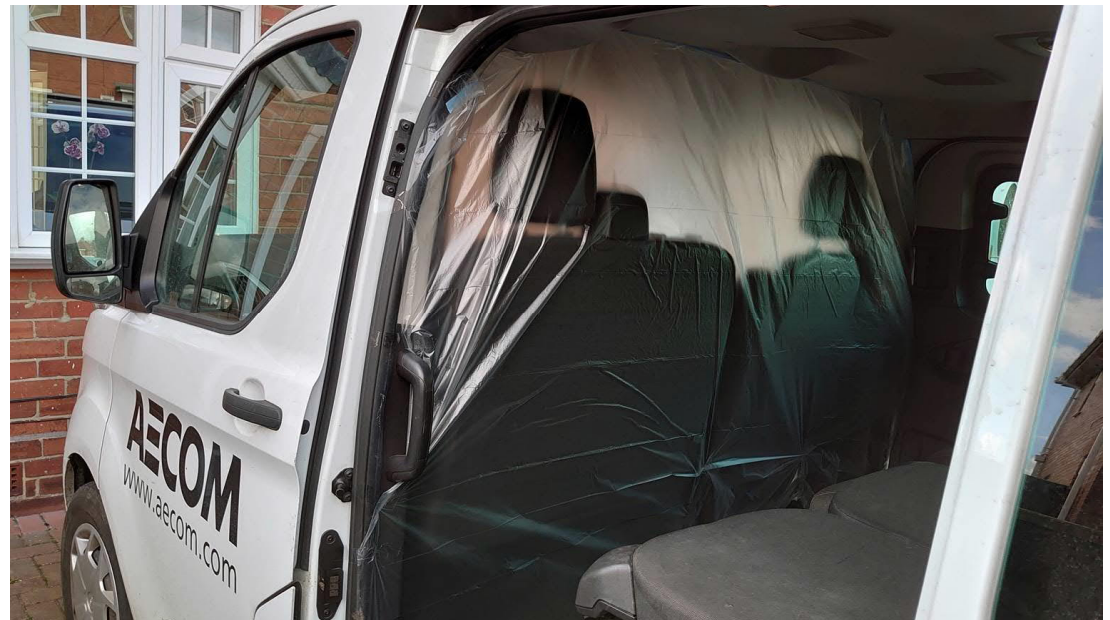
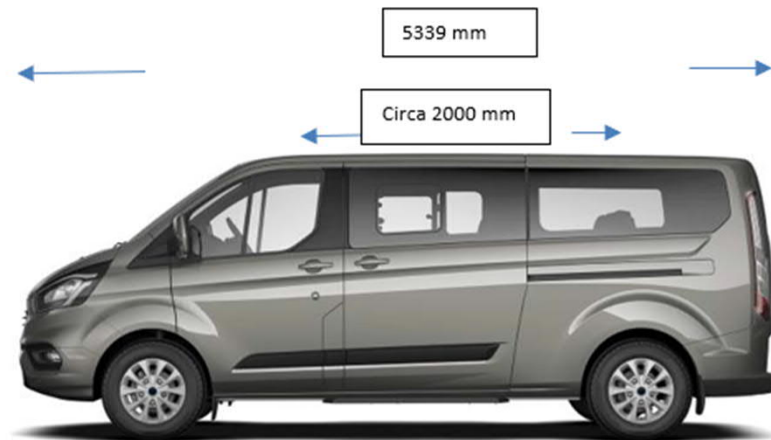
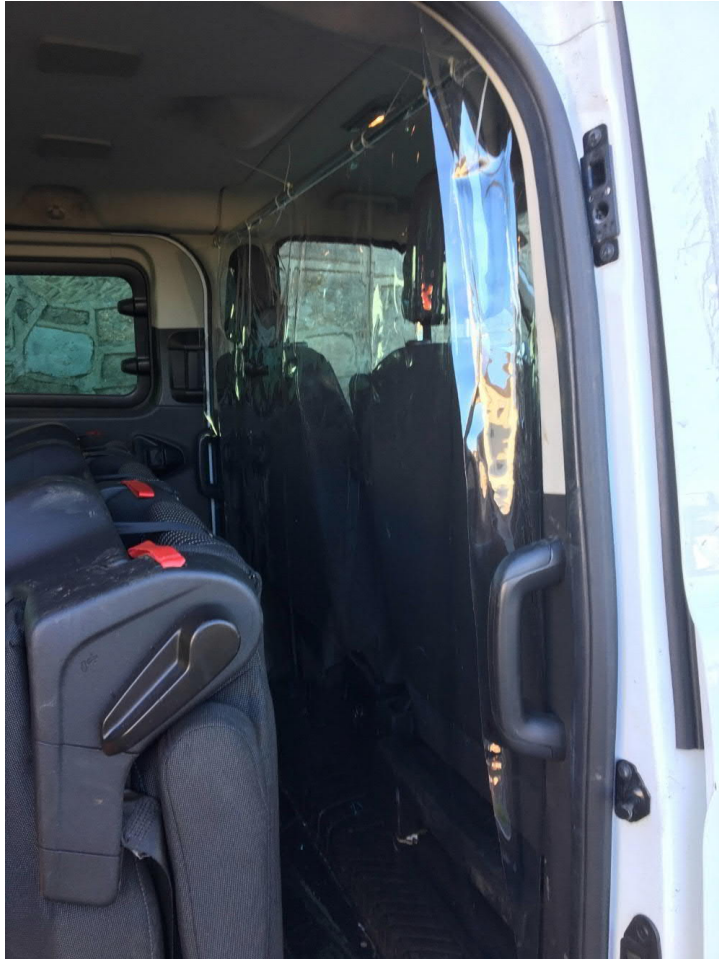
- Planning - Accommodation, Welfare facilities
- Travel – Complying with social distancing for travel
- Inspections – Complying with social distancing on site – briefings, structure access (use of ladders, scaffolds, MEWPS, rope access), hygiene on site, subcontractors.

Impact of COVID 19 - Mitigation

Travel/Accommodation

- Use of single occupancy vehicles where possible.
- Where not possible e.g. Northern Scotland use People Carriers with barrier to maintain social distancing – max 2 per vehicle
- Accommodation - closure of major hotel chains – move to use of self catering accommodation. All accommodation to have separate bedrooms/bathrooms.
- Welfare facilities – Identifying 24 hour service stations where possible or provision of welfare vans.

Impact of COVID 19 - Mitigation



Impact of COVID 19 - Mitigation

Changes to Inspection Techniques

- Ladders – Methods adopted for single person use – ballast bags used to foot ladder.
- Ladders – Where necessary masks used where 2 people required for ladder set up.
- MEWP's – Max one person in the basket – operated from below.
- Briefings – No wet sign in
- Inspection teams – Fixed pairs to minimise cross contamination.



CAFA Scotland Inspections

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- 4 structures inspected in 1 week in Inverness/Fort William
- Team of 2 inspection engineers
- 9 seater van prepared with internal barrier and equipment.
- Vehicle breakdown at Perth
- Switch to van and car to maintain social distancing
- Banavie Swing Bridge – Shared line block with Network Rail.
- Separate work at low mileage/high mileage then swap.
- Pick up repaired van on return journey



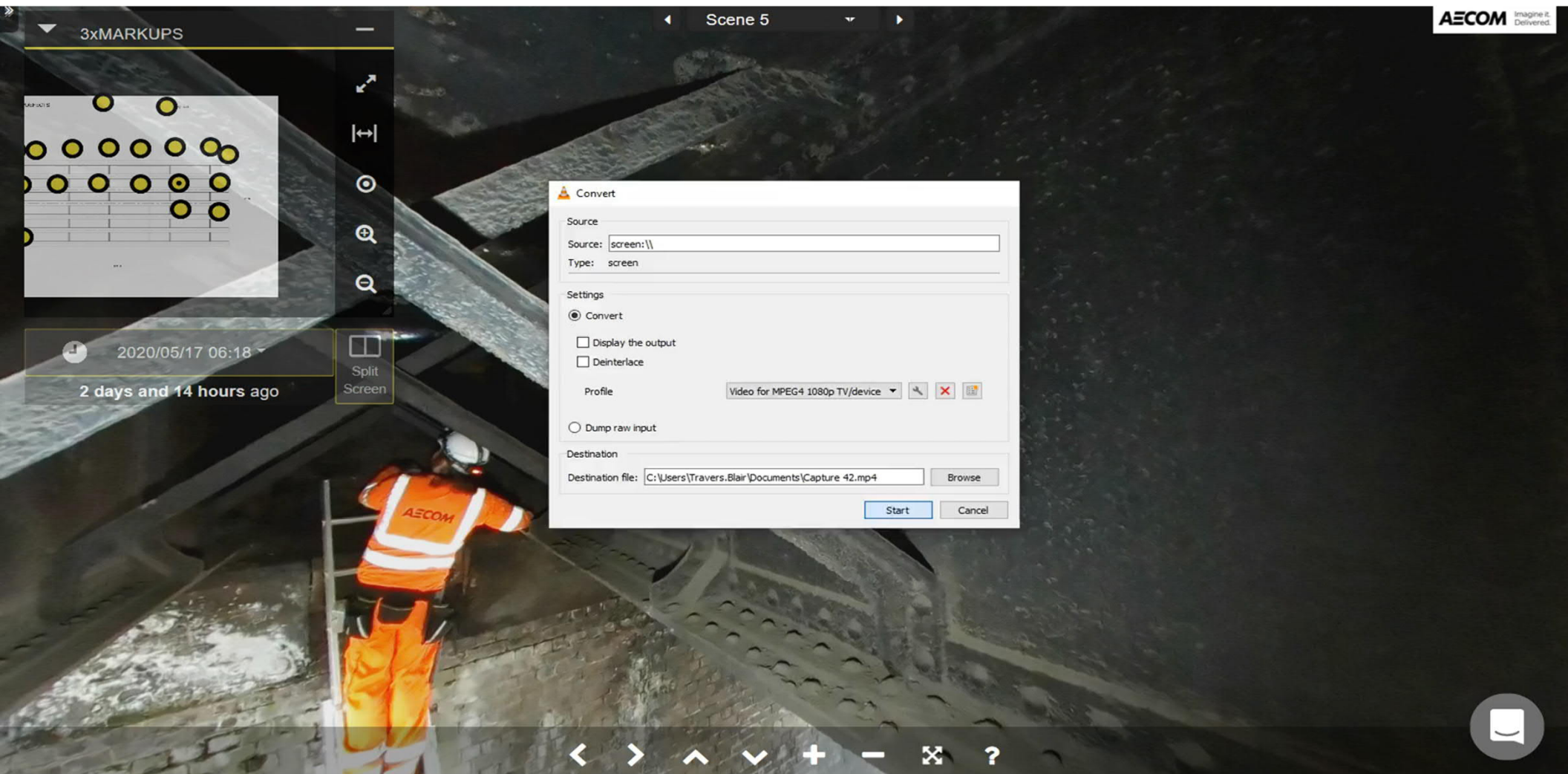
Impact of COVID 19 - Mitigation

Reality Capture Techniques

- Use of 360° degree cameras.
- 1No. 360° view > 20No. 2D views
- Reduced time for photo capture and also for inspection of hard to access areas.
- Use of cameras for site reconnaissance visits to improve planning.
- Feedback that repeat visits avoided due to more efficient photographic capture on site.



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Impact of COVID 19 – Mitigation – Reality Capture Techniques

Impact of COVID 19 Inspection Summary

- 117 bridge inspections completed since 16th March.
- 2500 hours on site
- Sites from Kent to Northern Scotland

Compare 2019 with 2020

- 2019 wk 1-7: 67 inspections, 2500 hours on site
- 2020 wk 1-7: 97 inspections, 2350 hours on site
- Focus on simpler structures, smaller inspection teams, easier social distancing mitigation.



Impact of COVID 19 Final Points

- First two weeks of lockdown challenging but COVID 19 and remote working processes now embedded.
- Progress on site inspections maintained and similar to previous years.
- True impact not on site works but on office based work – planning, reporting tasks likely to be less efficient – extent of impact on efficiency currently under review.