

# *NR update for BOF 38*

*Brian Bell*

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# *Current research*

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- BOF initiated
  - Masonry parapet guidance
    - Report published on RLG web site
  - FRP strengthening
    - Separate presentation on behalf of HWU, work on target
- European projects
  - BriFag
    - Work completed and final report about to be delivered to EFCS
  - SmartEN (Marie Curie ITN)
    - Just starting final year
    - NR receiving 2 industrial placements, working in the area of rebar corrosion, shortly

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# *Current research*

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- European projects (cont)
  - CoPatch
    - Due to finish early 2013
    - Fatigue testing underway at Surrey University
  - MAINLINE
    - 2<sup>nd</sup> year just starting, work appears to be well on target
  - Safejoint
    - Final negotiations with EC in hand, project should start later this year
- Domestic projects
  - Fatigue in masonry arches (UWE) – NR, CART, ADEPT
    - Almost finished
  - Development of fibre optic chloride sensor (City Uni)
    - Development continues

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## *Current research*

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- Domestic projects (cont)
  - Development of fibre optic rebar corrosion sensor (City Uni)
    - Prototype sensor developed and under test at Surrey University in conjunction with the SmartEN project
  - Arch bridge capacity (Sheffield & Salford Unis) – NR, ADEPT
    - Work under way
  - Effect of micro climate on metallic corrosion (Surrey Uni)
    - Work delayed due to problems with RA
  - Microwave curing of low energy concrete (UCL, City Uni)
    - Funding just granted by TSB, will start soon

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# *Projects in development*

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- European
  - Probability of detection of fatigue cracks in metallic structures
    - Follow on to BriFag
  - Robust Rail (improving resilience in the light of climate change)
    - Approaches made by University College, Dublin
  - Novel Infrastructure
    - Large project being developed for FP7 2013 work programme
- Domestic
  - ICT enabled engineering
    - Bid currently being evaluated, NR asked late in process to support
  - NEXUS node (follow on to ACTS project)
    - Initial bid unsuccessful, other options being considered

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# *Projects in development*

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- Domestic (cont)
  - From LimesNet and FIF (submitted)
    - DAIMLERS (Digital Asset Information Model for Lifetime Evaluation of Resilience & Sustainability)
    - ENDURE (Embedding durability and sustainability in the life-cycle management and maintenance of assets and infrastructure)
  - From LimesNet and FIF (submission status not known)
    - Auxetic materials for ground and structural engineering
    - Low carbon concrete
    - Material for life
  - From LimesNet and FIF (not submitted)
    - Whole life value programme grant proposal
    - Scour research
    - Arch bridges