

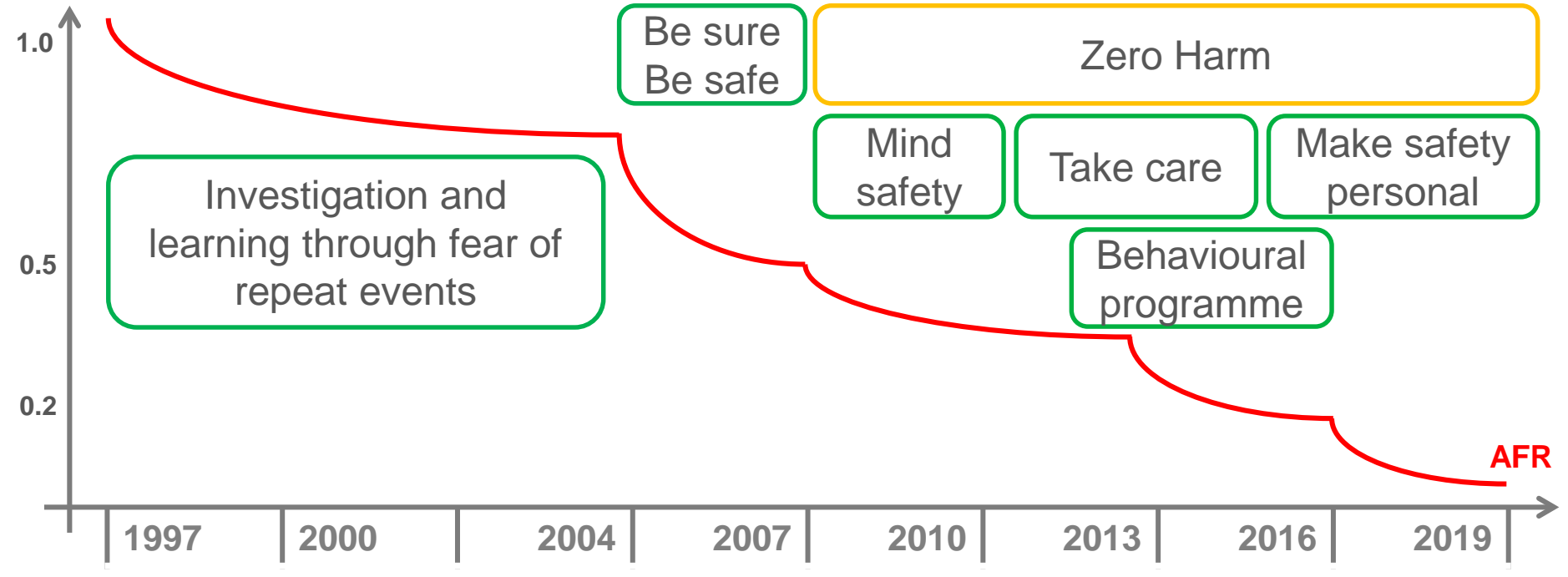


Learning and Improving – the industry partner view
Andy Smith, Operations Director

Andy Smith, Operations Director



My health and safety journey



Innovation in Power Transmission

1928



1950

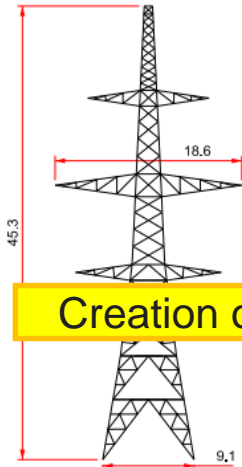


2013



Innovation in Power Transmission

2005



Creation of the iPhone

2008



2010

Design development of SSE400

2013



Innovation in Power Transmission





Fort Augustus to Fort William overhead line refurbishment project

£43m

44km

**156
towers**

**115
people**

Fort Augustus to Fort William overhead line refurbishment



Political
interest



Carbon core
conductor



Single circuit
live



Emergency
return to
service



Proximity to
A82



Challenging
access

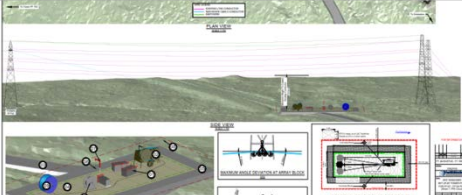
Learning and improving

Scope of Works Cont.

Each single pole to be reconstructed with ACCC. This is due to the load bearing capabilities of section one and will allow more poles to be spanned with a minimal increase of installed conductor load on the existing towers.

The following items are being completed:

- Installation of approximately 200m of new Access Roads and 500m of Access Tracks (logistics being into construction stage and final delivery). Additional work on segments of Work Areas, Gate Posts, MSP Pads and Existing Fencing.
- Underpinning about 100-200m overtopping on various formations.
- Splicing on the line poles to be highlighted pole to convert 60kV pole to 110kV pole and also poles to show the main break to be highlighted, temporary 110kV poles to increase cable installed before 2022 and covering connections from the current 110kV B.P.C. Ground to make the On-Stage poles at 2022.
- Installation of three new towers and the removal of 100 redundant structures (2001 tower 2 100kV tower).
- Replace the Existing Earthing with a new 240kV GPOK (Equipment Support 44 Tons) and Tap to Insulators.
- Replace the Existing Conductor System with an ACCC 'Norsk Cast' Conductor (approx 44 Tons).
- Steel Strengthening and be replacement. Structural tower members condition repairs and replacement (where applicable).
- Foundation condition audit for all structures.



Strong and consistent leadership



New equipment



Dedicated additional resource



One team approach

Something strange happened!



Teambuilding



Community
engagement



Pride in our work

What could be supporting or driving this approach?



- Digital progressive assurance
- Mobile devices for paperless working

Supervisor
development
programme

Mental health
awareness

Observation
app

So how do we power improvement?



Proper engagement of our people drives improvement



Innovation and technology can be a distraction

What could be supporting or driving this approach?

- Digital progressive assurance
- Mobile devices for paperless working
- Supervisor development programme
- Mental health awareness
- Observation app

11

Connecting the workforce to the business every day

Balfour Beatty

Connecting supervisors positively creates lasting change

So how do we power improvement?

- We know that if we expect the best in people we will usually be proved right
- Why would this not apply to people who refurbish transmission lines or work in utilities and construction?
- How do we provide the environment where they can be trusted and empowered to think and thrive?
- We must trust our people and meaningfully connect them to our business



Balfour Beatty