



# Helicopter Inspection Service

electricity safety, quality and continuity inspection

An airborne inspection service developed specifically to assist network operators to meet the requirements of the Electricity Safety, Quality and Continuity Regulations (ESQC) easily, accurately and cost-effectively.

## Benefits

- The most cost-effective way to comply with ESQC Regulations
- Faster and more efficient than foot patrols
- More comprehensive, more accurate and more consistent information
- Avoids the safety and land access issues of foot patrols
- Includes GPS technology for accurate tower identification
- Results assessed by experienced staff and provided on simple spreadsheets
- Permanent photographic records provide compliance with legal and regulatory obligations
- Provides reliable information to help justify and prioritise remedial work

## ESQC regulations

The Electricity Safety, Quality and Continuity Regulations 2002/6 are designed to ensure the quality and continuity of supply to customers, while minimising any risk that the distribution network may present to members of the public.

These regulations require that any network operator shall, so far as is reasonably practicable, inspect their network with sufficient frequency that they are aware of any action that may be needed to ensure compliance with the regulations. In the case of overhead lines, network operators are also required to maintain a record of these inspections for at least ten years, together with a record of any recommendations arising from the inspection.

## Helicopter inspection

EA Technology's airborne ESQC/Safety Inspection Service is the fastest, most accurate and most economical way of meeting the requirements of these regulations. Focusing purely on the safety, regulatory and third-party risk aspects of tower inspection, the ESQC/Safety Inspection allows network operators to check the safety and security of all the overhead electricity distribution lines on their network quickly and easily, without incurring the higher costs of a more detailed inspection.

EA Technology can also provide a range of specialised aerial inspection services, including a Full Tower Condition Assessment. This provides a comprehensive breakdown of the condition of each tower, including a prediction of the remaining useful life and recommendations for refurbishment, making it a powerful tool for long term asset management and strategic decision making. A separate datasheet is available on request describing this service.



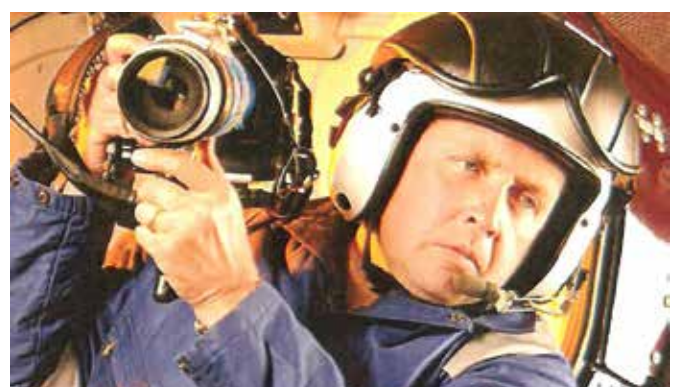
## Traditional safety inspection methods

Traditionally, foot patrols have walked the length of distribution lines to perform a visual inspection of tower safety and signage from the ground. However, such patrols are laborious, time consuming and far from cost-effective. What's more, they are often hindered by physical obstacles such as fences, ditches and rivers, along with the need to obtain access permission from landowners.

These foot patrols may report their findings in handwritten notes, on a Dictaphone or using a hand-held computer, and naturally this creates huge variability in the quality of the information gathered, with no means of cross-checking for verification or to correct any errors or omissions.

More often than not, foot patrols report by exception, which means that only significant defects are recorded. However, since there are growing regulatory and legal requirements for network operators to maintain records that can demonstrate that specific features on a structure were in a sound and safe condition when it was last inspected, this level of reporting may no longer be enough to meet your obligations.

There are also additional safety risks with remote working, especially when a single person is carrying out the inspection. Further in times of limited manpower, low priority routes may not be inspected in time to comply with the regulations.





## An efficient, cost-effective solution

EA Technology's Helicopter Inspection Service has been designed to overcome all of the limitations of foot patrols, making it easy to ensure your network complies fully with the ESQC Regulations.

Our airborne inspections combine the skills of a trained visual observer with those of a cameraman recording high-resolution photographs, to give you a detailed, expert and verifiable assessment of each tower.

The observer captures information that is best determined using the naked eye - such as land use, land type, risk of third party interference and conductor tree encroachment - recording this data consistently and accurately using a special touch-screen interface designed by EA Technology for use in the helicopter.

At the same time, the cameraman captures a small number of high-resolution images of the whole tower, as well as images of critical parts around the base including warning signs and anti-climbing devices. These photos contain a far greater level of detail than it is possible to see using the naked eye from the helicopter.

## Onboard recording equipment

To ensure consistency and accuracy, all information captured by both the observer and the cameraman is stored on EA Technology's aviation-approved onboard recording equipment.

GPS technology is used to provide a moving map display and a flying route strip-map, both pre-programmed with all the tower positions. Every photograph is then position tagged using GPS technology for easy identification, ensuring that each image can be geo-referenced back to a specific tower.

## Assessment and analysis

Following the flight, all images are examined by EA Technology's experienced staff, who perform a detailed assessment of each of the elements required in the ESQC Regulations.



## Output

The visual and photographic elements recorded for each route are then merged and presented in a custom-designed spreadsheet.

Each feature is graded and colour coded to illustrate its status, with hyperlinks providing immediate access to the associated images directly from the spreadsheet.

Whilst the information captured may vary slightly from one client to another, it will typically include an assessment of the following:

- Land type and use
- Risk of third party interference
- Major defects
- Tree encroachment within span
- Vegetation growth around tower footings
- Condition of safety and warning signs and anti-climbing devices
- Evidence of vandalism or illegal attachments

All spreadsheets and images are provided on a portable USB hard drive, allowing the results to be viewed on virtually any PC or Laptop.

# Global footprint

EA Technology provide products, services and support for customers in 90 countries, through our offices in Australia, China, Europe, Singapore, UAE and USA, together with more than 40 distribution partners



## Our Expertise

We provide world-leading asset management solutions for power plant and networks.

Our customers include electricity generation, transmission and distribution companies, together with major power plant operators in the private and public sectors.

Our products, services, management systems and knowledge enable customer to:

- Prevent outages
- Assess the condition of assets
- Understand why assets fail
- Optimise network operations
- Make smarter investment decisions
- Build smarter grids
- Achieve the latest standards
- Develop their power skills

Safer, Stronger,  
Smarter Networks

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