UKOPA

United Kingdom Onshore Pipeline Operators' Association

IWG Update

October 2015

Grant Rogers

Infringement Working Group Chairman

IWG Membership

Current membership comprises:

Grant Rogers (Chairman)	- Wales & West Utilities
Helen Berry	- Health and Safety Executive
David Brown	- Essar
Geoff Glover	- SABIC
Phil Rowlands	- Esso
Ken Smith	- BP
Phil Taylor	- BPA
Colin Ballentine	- Shell
Jerome Kenneth	- Northern Gas Networks
Daniel Ingham	- National Grid (UKD)
Walter Gaffney	- Scotia Gas Networks
Martin Davey	- Scotia Gas Networks
Robert Stockley	- National Grid (UKT)
Richard Howard	- National Grid (UKT)

Update

- Annual Report
- Current Plans

Infringement Database

- The following companies are registered to provide records for the UKOPA infringement database:

- BP
- BPA (inc. part Shell)
- ~~Centrica~~
- ConocoPhillips*
- E-On*
- Essar (inc. part Shell)
- Esso Petroleum
- Humbly Grove Energy*
- IGas
- Ineos
- Mainline Pipelines Ltd
- Manchester Jetline
- ~~Marchwood Power~~
- National Grid
- Northern Gas Networks
- OPA
- SABIC UK Petrochemicals
- Scotia Gas Networks
- Shell Expro
- Total UK (LOR)
- Wales & West Utilities
- ~~Wingas~~

- 3 companies marked with an asterisk provided 'nil' reports and the 3 companies struck through provided no return for the 2014 report

Infringement Report

- The second draft of the 2014 report is currently with the IWG for comment
- The report is in a revised format, with the following key changes:
  - Addition of an Executive Summary
  - Detail of A1 infringements appears towards the front of the report
  - Some information moved into appendices – e.g. the rating matrix, IWG membership, etc
  - ‘Future Plans’ and ‘Plans for the Next Year’ is combined into one section reflecting a rolling plan
- Following IWG comments and any amendments the report will be passed to the Board for approval to publish

2014 IWG Report Summary

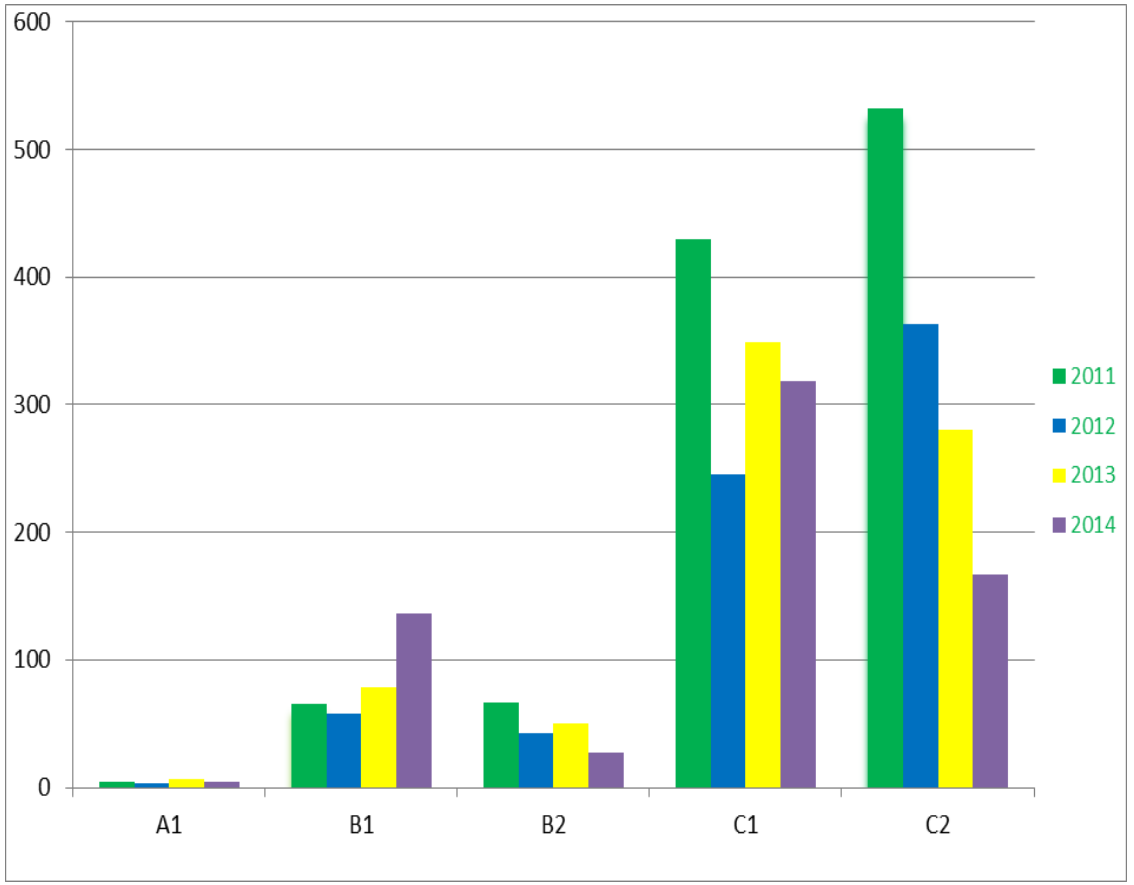
- There is a marked decrease in overall infringements from 764 in 2013 to 675 in 2014
- 4 instances of A1 ‘ Actual Damage’ infringements
- 23 instances of damage related to actual or attempted product theft are included as A1 infringements, but are identified separately as ‘Malicious Damage’
- Data quality continues to improve, but there is still is a significant number of ‘unknown’ data entries, e.g. 13% of all reported infringements list the 3rd Party as unknown

2014 IWG Report Summary

- The application of current filtering and weighting methodology does provide a ‘top ten’ but no clear repeat infringers to target
- This may be a demonstration of previous success at targeting frequent infringers
- The remaining stand-out area is agriculture
- Members are encouraged to share learning throughout the year with UKOPA members particularly from:
  - A1 Actual Damage events (x4)
  - B1 & B2 Serious Potential for Damage events (x163)

2014 IWG Report Main Findings

- Distribution between learning events, near-miss and more serious incidents as expected (except C2)
- Decrease to 675 events in 2014, related to C2 reduction, further reduces rolling average



2014 IWG Report Main Findings

- Reduction in A1 (actual damage) infringements from 7 in 2013 to 4 in 2014
- Operators affected were OPA (CLHPS) and NG (UKD)
- None of the works that resulted in damage events had previously been notified to the operator
- One was found by aerial patrol, the other three don't specify how they were found
- One was in development land, two were in highway verge and one was adjacent to a waterway

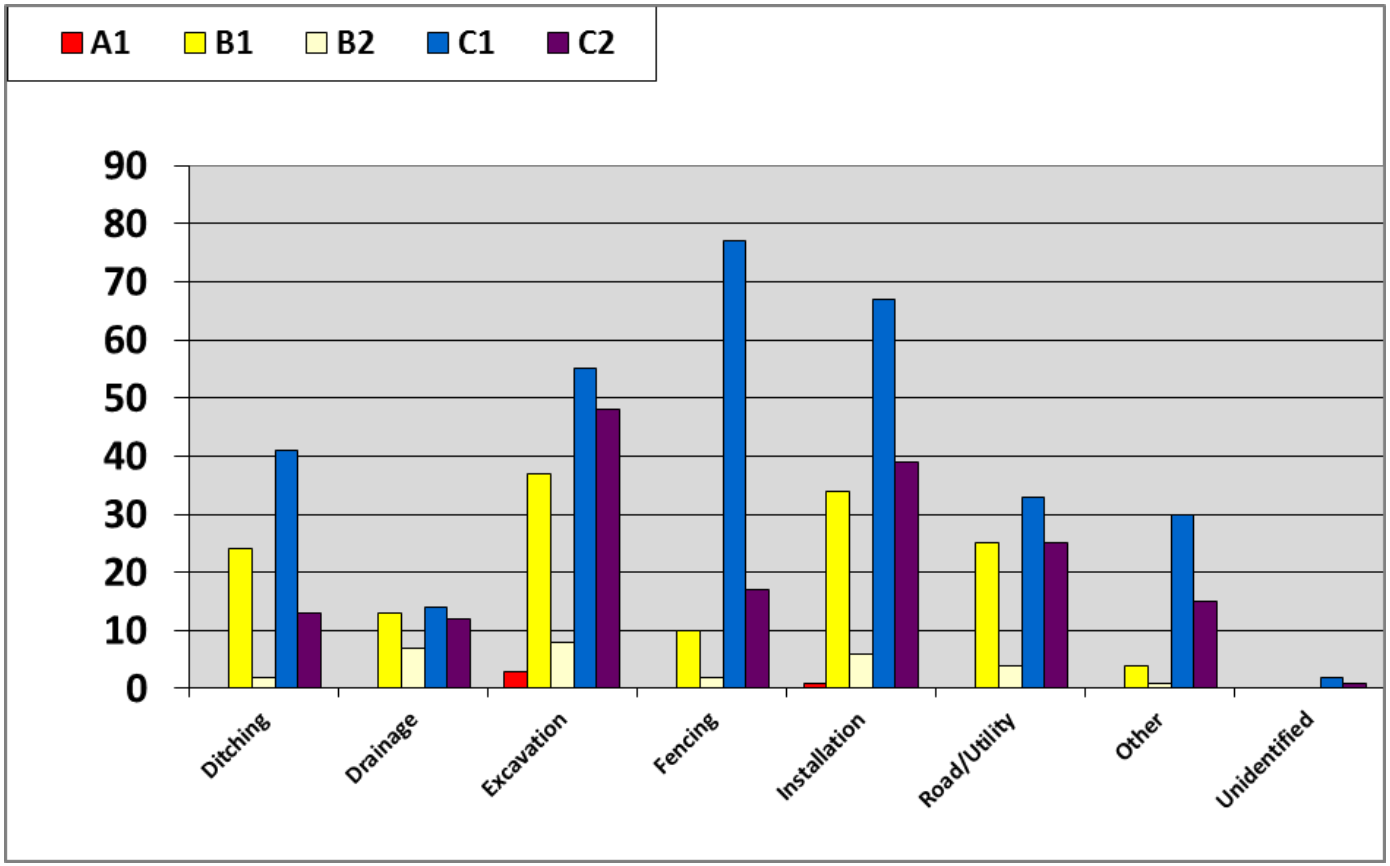
5 Year Rolling Average

	2010	2011	2012	2013	2014	Average
A1	1	4	3	7	4	3.8
B1	69	66	58	78	136	81.4
B2	66	67	43	50	27	50.6
C1	258	430	245	349	318	320
C2	184	532	363	280	167	305

- Marked increase in B1 infringements (relatively high potential for damage & within the easement)
- Marked decrease in B2 infringements (relatively high potential for damage & outside the easement) shows a marked decrease
- Marked decrease in C2 infringements is due to an almost complete absence of this category from the largest contributor's data
- All three issues are being investigated prior to publication

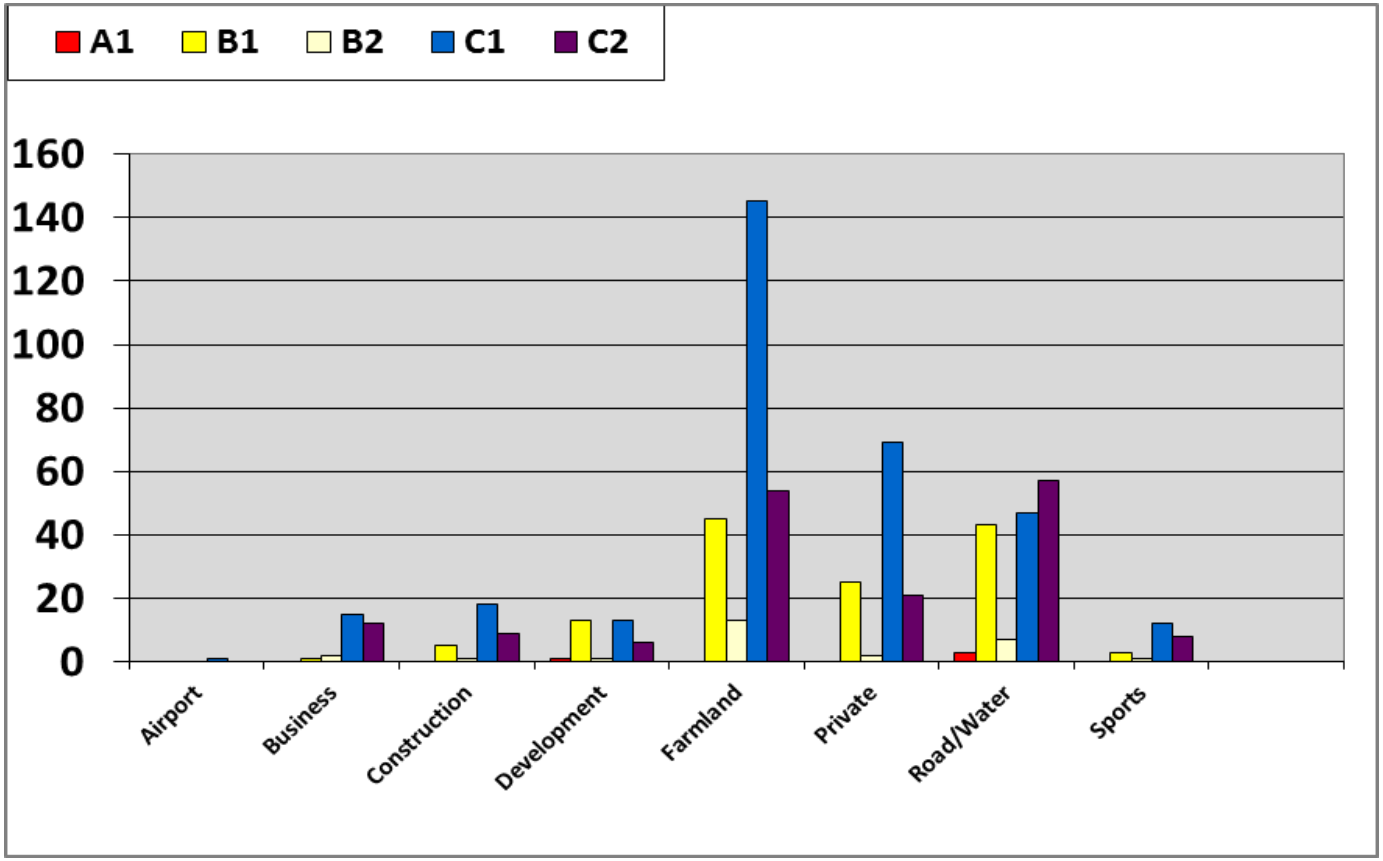
2014 Statistics

Infringements by reported activity



- ‘Activity unknown/not specified’ has been virtually eliminated in 2014 due to continuing data quality improvements

2014 Statistics
Infringements by Location



- Infringements in agricultural land and private land continue to be the most significant again in 2014

Good Practice Guides

- The IWG has been tasked to write three Good Practice Guides
- 'Avoiding 3rd Party Damage'
  - Provision of Plant Information
  - Pipeline Locating
  - Supervision of 3rd Party Activities
  - Proactive Activities to Prevent 3rd Party Damage
  - Data Collection and Analysis
  - Audit
- First full draft produced by sub-group and circulated to IWG for comments

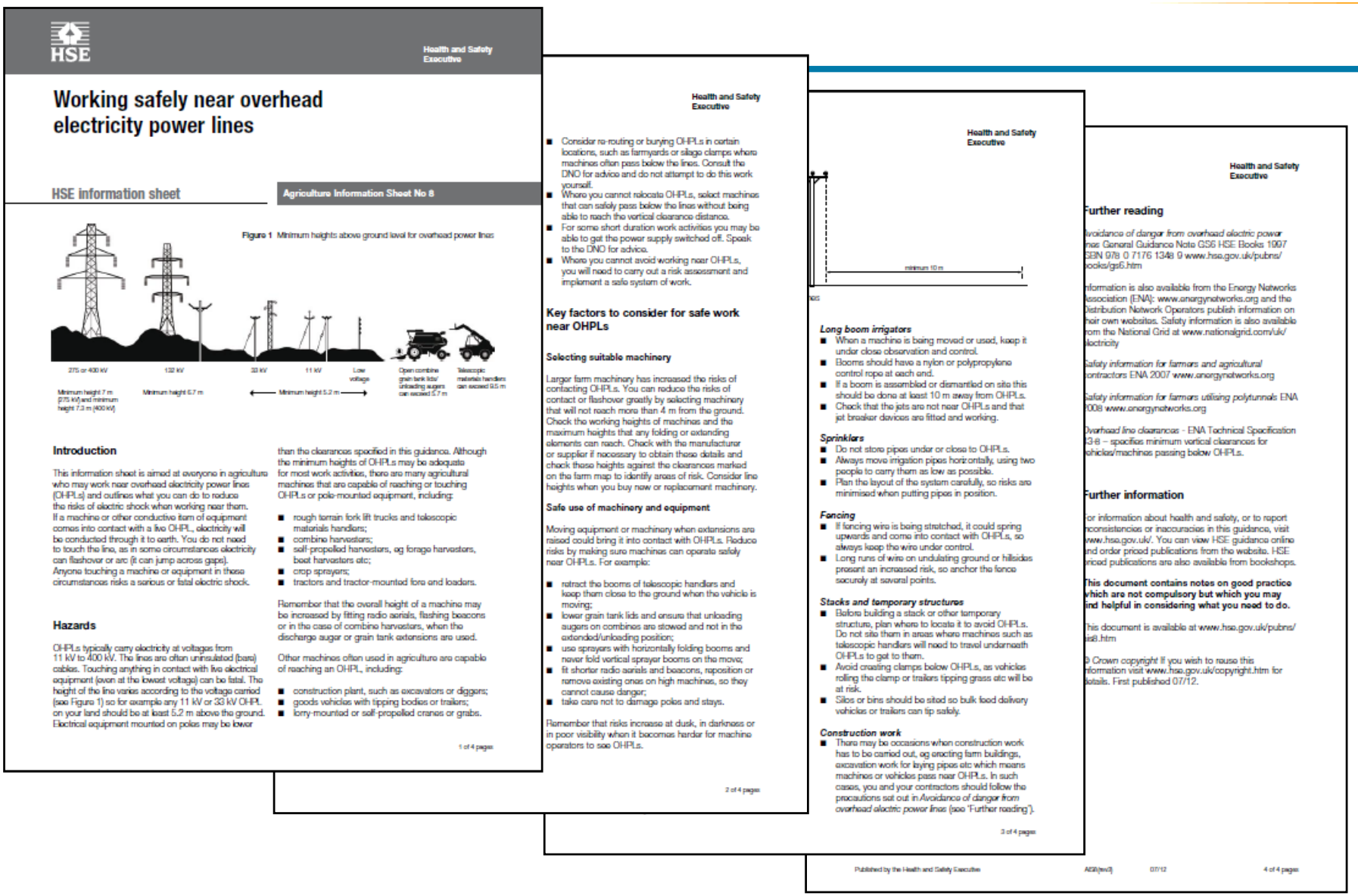
Good Practice Guides

- ‘Requirements for the Siting and Installation of Wind Turbines in the Vicinity of Buried Pipelines ’
  - Overview of UK Pipelines
  - Design Considerations (for turbines)
  - Requirements Pre-construction
  - Construction
  - Post Construction
  - Ongoing Operations
- First full draft produced by sub-group and circulated to IWG for comments
- ‘Requirements for the Siting and Installation of Solar Farms in the Vicinity of Buried Pipelines’
  - Will be adapted from the Wind Turbine document and cover the specific issues

Agriculture update

- Contact established with Alastair Mitchell from HSE's Agriculture Safety Team
- Based on discussion IWG are developing a HSE style Agricultural Information Sheet (AIS) for Pipelines
- Similar to existing AIS for working safely near overhead electricity power lines
- Initially to be branded a UKOPA document to provide information and safety advice to farmers and agricultural contractors
- Aspiration that it will be adopted and issued as a HSE publication when their time/resources allowed

HSE Agriculture Information Sheet



HSE

Health and Safety Executive

Working safely near overhead electricity power lines

HSE information sheet

Agriculture Information Sheet No 8

Figure 1 Minimum heights above ground level for overhead power lines

Introduction

This information sheet is aimed at everyone in agriculture who may work near overhead electricity power lines (OHPLs) and outlines what you can do to reduce the risks of electric shock when working near them. If a machine or other conductive item of equipment comes into contact with a live OHPL, electricity will be conducted through it to earth. You do not need to touch the line, as in some circumstances electricity can flashover or arc (it can jump across gaps). Anyone touching a machine or equipment in these circumstances risks a serious or fatal electric shock.

Hazards

OHPLs typically carry electricity at voltages from 11 kV to 400 kV. The lines are often uninsulated (bare) cables. Touching anything in contact with live electrical equipment (even at the lowest voltage) can be fatal. The height of the line varies according to the voltage carried (see Figure 1) so for example any 11 kV or 33 kV OHPL on your land should be at least 5.2 m above the ground. Electrical equipment mounted on poles may be lower than the clearances specified in this guidance. Although the minimum heights of OHPLs may be adequate for most work activities, there are many agricultural machines that are capable of reaching or touching OHPLs or pole-mounted equipment, including:

- rough terrain fork lift trucks and telescopic materials handlers;
- combine harvesters;
- self-propelled harvesters, eg forage harvesters, beet harvesters etc;
- crop sprayers;
- tractors and tractor-mounted fore end loaders.

Remember that the overall height of a machine may be increased by fitting radio aerials, flashing beacons or in the case of combine harvesters, when the discharge auger or grain tank extensions are used.

Other machines often used in agriculture are capable of reaching an OHPL, including:

- construction plant, such as excavators or diggers;
- goods vehicles with tipping bodies or trailers;
- lorry-mounted or self-propelled cranes or grabs.

- Consider re-routing or burying OHPLs in certain locations, such as farmyards or silage clamps where machines often pass below the lines. Consult the DNO for advice and do not attempt to do this work yourself.
- Where you cannot relocate OHPLs, select machines that can safely pass below the lines without being able to reach the vertical clearance distance.
- For some short duration work activities you may be able to get the power supply switched off. Speak to the DNO for advice.
- Where you cannot avoid working near OHPLs, you will need to carry out a risk assessment and implement a safe system of work.

Key factors to consider for safe work near OHPLs

Selecting suitable machinery

Larger farm machinery has increased the risks of contacting OHPLs. You can reduce the risks of contact or flashover greatly by selecting machinery that will not reach more than 4 m from the ground. Check the working heights of machines and the maximum heights that any folding or extending elements can reach. Check with the manufacturer or supplier if necessary to obtain these details and check these heights against the clearances marked on the farm map to identify areas of risk. Consider line heights when you buy new or replacement machinery.

Safe use of machinery and equipment

Moving equipment or machinery when extensions are raised could bring it into contact with OHPLs. Reduce risks by making sure machines can operate safely near OHPLs. For example:

- retract the booms of telescopic handlers and keep them close to the ground when the vehicle is moving;
- lower grain tank lids and ensure that unloading augers on combines are stowed and not in the extended/unloading position;
- use sprayers with horizontally folding booms and never fold vertical sprayer booms on the move;
- fit shorter radio aerials and beacons, reposition or remove existing ones on high machines, so they cannot cause danger;
- take care not to damage poles and stays.

Remember that risks increase at dusk, in darkness or in poor visibility when it becomes harder for machine operators to see OHPLs.

Long boom irrigators

- When a machine is being moved or used, keep it under close observation and control.
- Booms should have a nylon or polypropylene control rope at each end.
- If a boom is assembled or dismantled on site this should be done at least 10 m away from OHPLs.
- Check that the jets are not near OHPLs and that jet breaker devices are fitted and working.

Sprinklers

- Do not store pipes under or close to OHPLs.
- Always move irrigation pipes horizontally, using two people to carry them as low as possible.
- Plan the layout of the system carefully, so risks are minimised when putting pipes in position.

Fencing

- If fencing wire is being stretched, it could spring upwards and come into contact with OHPLs, so always keep the wire under control.
- Long runs of wire on undulating ground or hillsides present an increased risk, so anchor the fence securely at several points.

Stacks and temporary structures

- Before building a stack or other temporary structure, plan where to locate it to avoid OHPLs. Do not site them in areas where machines such as telescopic handlers will need to travel underneath OHPLs to get to them.
- Avoid creating clamps below OHPLs, as vehicles rolling the clamp or trailers tipping grass etc will be at risk.
- Silos or bins should be sited so bulk feed delivery vehicles or trailers can tip safely.

Construction work

- There may be occasions when construction work has to be carried out, eg erecting farm buildings, excavation work for laying pipes etc which means machines or vehicles pass near OHPLs. In such cases, you and your contractors should follow the precautions set out in *Avoidance of danger from overhead electric power lines* (see 'Further reading').

Further reading

Avoidance of danger from overhead electric power lines General Guidance Note GS6 HSE Books 1997 ISBN 978 0 7176 1348 9 www.hse.gov.uk/pubns/books/gs6.htm

Information is also available from the Energy Networks Association (ENA): www.energynetworks.org and the Distribution Network Operators publish information on their own websites. Safety information is also available from the National Grid at www.nationalgrid.com/uk/electricity

Safety information for farmers and agricultural contractors ENA 2007 www.energynetworks.org

Safety information for farmers utilising polytunnels ENA 2008 www.energynetworks.org

Overhead line clearances - ENA Technical Specification 43-8 – specifies minimum vertical clearances for vehicles/machines passing below OHPLs.

Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This document contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

This document is available at www.hse.gov.uk/pubns/agis8.htm

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Thank you for listening

Questions?