

## Overhead powerline safety

### Purpose:

To promote safe working practices when working near overhead powerlines (OHPLs).

### Why:

To reduce the risk of injury or fatality when working near overhead powerlines. 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.

### TIAH Capability Framework area:

This aligns with the knowledge and skills in the Health and Safety area.

<https://tiah.org/tiah-capability-framework>

### Talk leader instructions:

- Prepare to do the talk in a suitable/quiet location with no distractions
- Consider using some of the resources as part of the talk, e.g. showing a video
- Engage with participants, ask questions and give everyday examples
- Conclude with a brief review
- Get everyone to sign the form. Make sure to write the name of the farm and the date. Keep a copy in your Health and Safety records
- Ensure all participants have access to a copy of this document to refer to once the session has finished. This could be electronic and emailed or printed

### Notes:

## Background

According to the HSE, on average, two people are killed and many more injured from contact with OHPLs each year. You don't need to be in contact with OHPLs to receive an electric shock, as in certain circumstances, electricity can 'jump gaps' if machinery or equipment gets too close.



Optional – Show this short farm safety animation 'Be Bright Stay Safe' from UK Power Networks

<https://www.youtube.com/watch?v=9D23yG12f10>

## Main learning points



Farm machinery is getting taller and bigger, increasing the risk of cable strikes.

The safest option is to avoid OHPs altogether, but if you need to work near them, you should plan your job carefully, understand the risks, and follow safe working practices.

**REMEMBER:** working in low light, darkness, and poor visibility can increase the risk.

### Helping you keep safe when working near OHPLs:

1. Assess the risk: Know where the OHPLs are on the farm you're working on. Ask your manager/farm owner for a map that shows where they are
2. Make sure you know the working heights permitted under each span of the OHPLs and next to each structure, as these can vary – these should also be marked on the map
3. Risks can be reduced if activities are carried out at a minimum horizontal distance of 10m
4. Know the maximum height and vertical reach of the machine you're working in. If you're unsure of this, ask your manager/farm owner or refer to the manufacturer's handbook
5. If working with telescopic handlers, retract booms and keep close to the ground
6. Lower grain tank lids and ensure that unloading augers on combines are not in the extended/unloading position
7. Use sprayers with horizontally folding booms and never fold vertical sprayer booms on the move
8. Be aware of radio aerials and beacons
9. Know what to do if you come into contact with an OHPL

For a full list of risks associated with different activities and machinery types, refer to HSE Agriculture information sheet No. 8 – Working safely near overhead electricity powerlines <https://www.hse.gov.uk/pubns/ais8.pdf>

## Notes:

## Suggestions/ ideas:

**Optional task** – Ask your team to demonstrate the two most effective ways to exit a cab if they were to make contact with an OHPL. You can use the tractor cab, a low step elsewhere on your farm, or a platform to do this.

It's good for your team to practice this, as they can choose the most comfortable method if they find themselves in this situation.

1. **Bunny hop:** Jump well clear of the cab as far as possible and make large bunny hops with your feet close together.
2. **Bounding strides:** Jump well clear of the cab as far as possible with your feet together, then make long bounding strides.

Remember: Move as far away as possible from the machinery, and don't touch any part of the machinery or powerline.

## Discussion points



10 minutes

### Q: What type of activities could pose a risk when working near OHPs?

- Stacking bales, fertiliser bags, potato boxes, or other materials
- Operating rain or slurry guns
- Moving irrigation pipes or long boom irrigators
- Erecting steel-framed structures or temporary structures such as polytunnels
- Using machinery with tipping bodies, such as trailers or lorries
- Working on top of combines or other high machinery
- Moving long/tall equipment such as ladders, irrigation pipes, or scaffolding
- Operating lifting equipment such as telehandlers
- If wire fencing is being stretched, it can spring upwards

What else can you think of?

### Q: What else could be done to keep you and others safe?

- Ask for a map of where the lines are on the farm. This can be obtained from the Distribution Network Operator (DNO), or you can mark the lines on your farm map
- Select machines that can safely pass below the lines without being able to reach the vertical clearance distance
- Make sure temporary staff or contractors are also aware of where the OHPs are and provide them with a map
- Consult the DNO to see if OHPs can be relocated or buried in other areas
- Use alternative machinery where possible
- If you can't avoid working near OHPs, ensure you have done a risk assessment and followed a safe system of work. Ask your manager if you're unsure about this

### Q: What should you do if you come into contact with an OHPL?

- Call 105 and ask for them to disconnect the supply. The 105 number applies to all DNOs.
- Download the What3words app to your phone. That way, you can easily be located in an emergency
- If you're able to, try to lower any raised parts and drive well clear of the line
- Stay in the cab. But if you need to get out, jump well clear, and DON'T touch the machine and ground together at any point
- Stay clear and warn others not to approach
- Don't touch any wires
- Ask the DNO to disconnect the supply: Even if the line appears dead, this may be a temporary power supply trip that can reconnect without warning, so don't touch it or any part of the machine at any time
- Never touch an OHPL brought down by machinery or has fallen, e.g., in a storm.
- Don't try to disentangle equipment until you have received confirmation that the line has been made safe

Summary/Wrap-up

 1 minute

Electrocution from OHPLs can kill. Therefore, before you carry out any work near an OHPL, you must be fully aware of the risks, how to reduce these, and what to do in an emergency.

Resources:

- UK Power Networks: Be Bright Stay Safe: <https://www.youtube.com/watch?v=9D23yG12f10>
- HSE: Agriculture information sheet No. 8: Working safely near overhead electricity powerlines: <https://www.hse.gov.uk/pubns/ais8.pdf>
- National Grid: Farming safety: <https://www.nationalgrid.co.uk/customers-and-community/health-and-safety/farming-safety>
- Farm Safety Foundation: Working with overhead powerlines <https://www.yellowwellies.org/working-with-overhead-powerlines/>
- Energy Networks Association: Look Out Look Up - Overhead Lines Safety Film <https://www.youtube.com/watch?v=b6StdYQCyvK>

Toolbox Talk participants

Toolbox Talk: **Overhead powerline safety**

Name of farm .....Date .....

Talk leader name.....

| Name | Signature | Date |
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