Working safely near powerlines in the construction industry

Working near powerlines can be fatal. Touching them or straying into the exclusion zone around them can result in a serious electric shock.
If you must work near powerlines, you should follow these three steps:

1. **Develop a safe system of work before you start**
   - Identify overhead and underground powerlines by consulting maps and/or talking to the property owner and electrical entity.
   - Conduct a site specific risk assessment – think about the type of plant and equipment/tools used, nature and size of loads being moved, site and weather conditions, type of work being done, and set-up and pack-up procedures.
   - Put risk controls in place – the most effective way of controlling the risk is to de-energise the line for the duration of work where there is a risk of contact.

2. **Keep your workers and contractors informed about electrical safety**
   - Induct and train your workers and contractors in safe work procedures, emergency procedures, and exclusion zones (Figure 1).
   - Carefully plan the tasks to be completed near powerlines and work away from them whenever possible, not underneath them.
   - Show your workers the safe distance from an exclusion zone by marking it on the ground.

3. **Avoid going into exclusion zones**
   - Make powerlines and poles visible. Ask your electrical entity for permission to paint power poles and/or have them install markers or flags on the powerlines.
   - Where possible, avoid moving metal-handled equipment, reo bars or scaffolding pipes in the vicinity of powerlines.
   - Use a safety observer to make sure you stay well clear of exclusion zones.
   - Where possible, use insulated or non-conductive tools and equipment.
   - Operators should use a safety observer when, for example, raising their tip trucks, using mobile cranes or assembling scaffolding, to avoid entering exclusion zones.
   - Follow the safety advice given by your electrical entity.

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**Figure 1.**

- **Exclusion zone for unauthorised people**
- **Up to and including 330 kV**
- **Up to 132 kV**

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**Figure 2.**

- **Sag** (vertical drop)
- **Sway** (horizontal movement)