Rural land uses can generally coexist well with National Grid lines, provided that minimum safe separation distances are met. However, some activities, such as irrigating, burning off or spreading fertiliser, will need to be managed to ensure the existing lines aren’t adversely affected. Likewise, it is important that the lines do not adversely affect landowners/users. Some rural buildings and structures can be compatible with National Grid lines – a hay shed or horticultural structure can generally be worked around. Buildings involving intensive activities such as factory farming barns, commercial greenhouses and dairy sheds should not be located in the National Grid Yard. Similarly, large-scale buildings such as packing sheds should not occur in the National Grid Yard.

Forestry and tree-based horticulture will often need greater setbacks than other rural land uses to ensure adequate electrical separation as the trees grow.

What are the issues?

Most rural and forestry land use issues were discussed in Section 2 of this guide. To recap, matters of relevance to rural and forestry land use include:

- increased risks of electrical hazards – buildings or vegetation too close to lines and structures
- risks to the National Grid network – faults and power outages as a result of electric hazards
- the need to maintain access to the lines and support structures
- the need to keep most types of buildings and some activities such as irrigation and fertiliser drops outside the National Grid Yard.
How can these issues be managed?

Ensure a clear corridor

Locate farm sheds, hay barns and other buildings and structures away from National Grid lines support structures. This will also help ensure vehicle access to the towers or poles is maintained. Within the National Grid Yard, intensive activities like milking sheds, indoor poultry/pig farms or similar buildings should be avoided. Utility buildings like hay sheds or equipment sheds are acceptable provided NZECP 34 requirements are met.

Ensure that any forestry plantings, shelterbelts and horticultural tree crops maintain the separation distances required by the Tree Regulations and provide for vehicle access to lines for inspection and maintenance. However, be aware that tall-growing trees (although they may comply with the Tree Regulations) could still cause a hazard if they fall on a line or tower. Ensure that trees cannot fall within 4 metres of a National Grid line.

Avoid potential electrical hazards

Long runs of metal and wire fencing parallel to the National Grid lines will need to be broken up with either non-conductive sections or by inserting insulators. Without this, hazardous voltages can be transferred along the fence or other structure. NZECP 34 sets out separation distances for fencing from towers or poles. For example, all fencing must also be kept more than 5 metres from a pole or tower, and where possible, the fencing should run perpendicular to the direction of the conductors.
Ensure NZECP 34 safe separation distances for all activities and buildings. In particular, note safe distances for buildings, earthworks and mobile plant such as irrigators. Keep irrigators and other spray units well away from the lines, towers and poles. Adjust nozzles to make sure they are not spraying onto the conductors, jets are turned off when the boom passes by the towers and the boom stays well clear of the conductors. There are different minimum approach distances for mobile plant depending on the voltage of the line. If you are unsure, it is recommended you keep all mobile plant at least 6 metres clear of National Grid lines at all times. Contact Transpower for further guidance on your specific situation.

The lines may also pose a hazard to helicopters and planes that are topdressing or spraying. Make sure the exact location of the lines is marked on the flight map, and if possible, avoid spraying or topdressing in patterns that require the flight path to cross the line. Fly parallel to the line whenever possible. It is safest to cross a line at a tower rather than mid-span.
Quick tip...essentials

Plan your PLANTING

remembering that vegetation grows and falls over. In either case make sure you keep vegetation from growing into or falling onto National Grid lines.