Small parcels of land near National Grid lines can be developed for residential use, provided the necessary safety and operational considerations are taken into account and the required safe separation distances are met. In many cases, this can be achieved if development is set back beyond the outer edge of the National Grid Yard.

If proposals are well considered from the outset, the impacts of the lines can be reduced and the effects of the development on the lines can be well managed.

What are the issues?
Residential development (in particular, dwellings) located too close to National Grid lines can result in a number of issues for both the lines and the development. These issues were discussed in detail in Section 2 of this guide. To recap, matters of relevance to small-scale residential development include:

- increased risks of electrical hazards to people and dwellings
- risks to the National Grid network – faults and power outages as a result of electrical hazards
- the need to keep sensitive activities and almost all other buildings outside the National Grid Yard
- the need to maintain access to the lines (including their support structures)
- noise, visual and other effects of the lines and inconvenience of landowners/occupiers.

What are National Grid Yards?
The National Grid Yard is the area beneath and immediately next to National Grid lines (including their support structures). Incompatible activities and land uses need to be set back from National Grid lines as they can compromise the ongoing operation, maintenance, upgrading and development of the National Grid or the safety of those living or working around it.

For these reasons, Transpower seeks a 12 metre setback either side of the centreline of a National Grid line and 12 metres in any direction from the outer edge of a National Grid line structure. This is reduced to a 10 metre setback where the line is a single concrete/wooden pole line, although the distances from the structures remain the same.
How can these issues be managed?

**Ensure a clear National Grid Yard**

When planning new residential dwellings or extensions to existing dwellings, ensure that they are located outside of the National Grid Yard – 12 metres either side of the centreline (or 10 metres for a single concrete/wooden pole line) and 12 metres in any direction from the outer edge of the support structure. The National Grid Yard is explained in Section 3 of this guide.

In built-up urban areas, accessory buildings such as sheds or garages can be located in the National Grid Yard if necessary. However, access to the lines and towers/poles must still be preserved and the setbacks in NZECP 34 complied with:

- Houses that are entirely within the National Grid Yard may be retained but they cannot be extended within it.
- Houses that are partly within the National Grid Yard may be able to be extended outside the National Grid Yard.

Old dwellings within the National Grid Yard can be replaced, providing they retain the same footprint and scale. Where possible, they should be relocated outside the National Grid Yard as much as possible.

New dwellings can be added outside the National Grid Yard, where the existing site layout allows.
Larger sites usually give more scope, but even standard sites can be redeveloped effectively.

Sites can be redeveloped, replacing an existing dwelling or intensifying by adding more dwellings (with or without subdivision). All dwellings must be located outside the National Grid Yard.
Comply with NZECP 34

In addition to the National Grid Yard, buildings and structures must also comply with the minimum safe clearance requirements in NZECP 34. Sometimes, NZECP 34 requirements require setbacks or clearances that may overlap or be greater than the National Grid Yard.

NZECP 34 specifies minimum safe separation distances for people, buildings/structures, mobile plant and earthworks from National Grid lines (including their support structures). The construction methodology also needs to be considered (i.e., how things are built and erected) – construction activities must also comply with NZECP 34, not just the finished product.

The safe distances specified in NZECP 34 differ depending on the voltage of the line, the position of the support structures, the length of the span crossing your site and the topography.

Preserve access to the lines and towers/poles

Ensure that you carefully plan the location of dwellings and any other structures (such as garages or fences) so that they do not restrict vehicle access to the lines (and any of their support structures that are on site). This access is important and is required for inspections and maintenance of lines (and their support structures).
Screen dwellings from the lines

In some circumstances, planting close to your house can help screen views of nearby lines. For screening purposes, it is usually more effective to plant closer to houses than to a support structure. Planting closer to houses also avoids potential problems with trees not meeting the requirements of the Electricity (Hazards from Trees) Regulations 2003.

Section 10 of this guide provides additional advice on planting near National Grid lines.

Site layout

Any potential visual impacts of the lines can be reduced by early planning taking into account the presence of the lines (and their support structures).

Development can be oriented away from the lines (or their support structures) or to look under lines at views beyond. Gardens within the National Grid Yard can become the focus of close views from main windows.

Building design and orientation

When deciding where entranceways and windows should be placed in a new house, consider where views of the line are and noise from the line. Consider smaller windows, double glazing or acoustic glass where bedroom windows are close to and/or facing the line. If an outlook is not important, consider the use of opaque glass.
You can still use the land under the lines

The land under the lines and within the National Grid Yard can be used effectively and well if the development is carefully designed. The space can be utilised for outdoor living including gardens, lawns, paved areas or car parking or driveways. Garages and structures such as utility sheds can be considered within the National Grid Subdivision Corridor on a case-by-case basis and subject to NZECP 34 compliance.

Views of towers tend to be more dominant than views of conductors only.