



COMMUNITY INFORMATION SHEET

Heat & the heat island

What happens to all the heat a data centre produces? — a plain-English guide

What's the concern?

Computers turn electricity into heat, and a data centre rejects a lot of it, continuously. People ask whether this warms the surrounding area or the ground, and whether the heat could be put to use.

The facts

There are two effects. The *surface heat island* is warm air from cooling equipment, with dark roofs and hardstand, raising local temperatures — plumes can extend beyond the boundary. The *subsurface heat island* is heat slowly warming soil and groundwater; it builds up and is hard to reverse. Much of the waste heat can instead be reused — for district heating, horticulture or industry — measured by the Energy Reuse Factor (ERF).

What good practice looks like

- An assessment of heat rejection and, for larger sites, the thermal plume (including near any aerodrome).
- Heat-island mitigation: cool or green roofs, shade and landscaping, and light-coloured, permeable surfaces.
- Avoiding warm-water or heat discharge to the ground; ground-temperature monitoring where groundwater is sensitive.
- A genuine waste-heat reuse assessment for larger facilities.

Questions you can ask

- How much heat is rejected, and where does the warm air or water go?
- What heat-island mitigation is proposed, and is ground temperature monitored?
- Will any of the waste heat be reused?

Want to know more? Your local council, the EPA Tasmania and ARPANSA publish further information. This sheet is general information, not medical, legal or planning advice; figures are indicative and a specific proposal is confirmed by qualified assessment.