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Subsea cables explained

The undersea fibre that carries almost all of Australia's international data

The key idea: the internet travels by sea

Nearly all of Australia's international internet traffic (banking, cloud services, video calls, AI) travels through subsea fibre-optic cables on the ocean floor. Satellites carry only a tiny fraction. These cables are among the most important infrastructure Australia has and most people never see them.

What they are

A subsea cable is a bundle of optical fibres, armoured and laid on (or buried in) the seabed; in deep water it is only about the diameter of a garden hose. Each modern cable can carry enormous capacity, measured in hundreds of terabits per second. Cables come ashore at **landing stations**, small, secure coastal facilities, then connect into land networks.

What's happening now

Australia's cable map is growing quickly. A new domestic route, **SMAP** (Sydney–Melbourne–Adelaide–Perth, about 5,000 km), came into service in 2026, adding a subsea backbone between the capitals. Internationally, new systems are planned to land in Australia over the next few years, including Google-backed routes through Darwin to Asia and the United States. More routes also mean **resilience**: if one cable is damaged (ship anchors and fishing are the usual causes), traffic can reroute.

Who decides

Nationally: the ACMA issues installation permits and declares protection zones around cables of national significance; environmental approval sits under the EPBC Act. **State:** coastal and planning approvals for landing sites and shore crossings. **Local:** councils deal with the (usually modest) onshore works.

What good practice looks like

- Landing sites chosen and assessed with community and environmental input.
- Clear information about what a landing station is and isn't (they are small and quiet; not data centres).
- Protection zones communicated clearly to fishers and marine users, with maps.
- Marine environmental effects independently assessed and published.

Questions to ask

Where exactly will the cable come ashore and what onshore works are involved? What protection zone will apply and how does it affect fishing or anchoring? What happens at end of life? Is removal or retirement planned and funded?

Want to know more? The ACMA publishes information on submarine cable protection; your state planning authority and the proponent publish project detail. This sheet is general information, not legal or planning advice; a specific proposal is confirmed by qualified assessment.