



Landscape & Water Management



STREAM REHABILITATION & WATERWAY DESIGN

Our Services

Hydrobiology provides advice, conceptual designs and monitoring programs for river restoration, rehabilitation and reinstatement projects. Examples include river diversions for infrastructure projects, natural channel designs for urban streams, and river improvement strategies for degraded riverine ecosystems. We have experience at a range of scales, from small ephemeral systems to large tropical rivers, in Australia and overseas.

Skills and Techniques

Successful stream rehabilitation relies upon understanding the complex interplay between physical processes and landscape features at different spatial and temporal scales. This includes an appreciation of fluvial geomorphology (including bed and bank stability), landform erosion and sedimentation processes, hydrology and in-stream hydraulics and ecosystem processes. A range of international guidelines, mostly from the USA, UK and Australia, and case studies are available to assist this process for different types of application.

We employ a range of techniques to assist with river restoration, rehabilitation and design studies, including:

- Field-based geomorphological mapping, supported by remote imagery analysis to define riverine landforms and features at different spatial scales;
- Desk-based hydraulic and sediment transport analyses to link hydraulics to fluvial processes;
- Linking of flow processes to ecological outcomes;
- Hydraulic verification of designs using velocity and stream power analyses to achieve a stable channel form;
- Mapping and re-instatement of habitat values is also an important part of the design process.

Applications

- Stream diversions
- River reinstatement
- Natural channel design
- Stable channel design advice for infrastructure projects
- Advice on environmental flows for ecological outcomes



BRISBANE

PO BOX 2050 Milton Qld 4064

Phone 61 7 3368 2133

PERTH

PO BOX 6917 East Perth WA 6892

Phone 61 8 9221 7555

info@hydrobiology.biz

www.hydrobiology.biz