



## *Climbers Association of Western Australia (CAWA)*

# **CAWA Code of Bolting**

dated 11 August 2022

The CAWA Code of Bolting establishes the standards required to be adopted in Western Australia in regard to developing and bolting rock climbing routes. This code applies to bolting and re-bolting, and the term 'bolting' includes re-bolting.

1. Persons considering bolting or altering rock faces should ascertain who owns or manages the area ie a private landowner or government department (currently DBCA). For new crags, CAWA should be approached for advice.
2. Bolts may only be used on new routes where there is no possibility of arranging any form of traditional protection, such as slings, nuts and cams. However, if traditional protection would only represent a small portion of the overall pitch eg less than 20%, and the intended bolting is consistent with the established ethic of the area, then bolts may be more suitable. If in doubt, contact CAWA.
3. Bolting is to be carried out only by persons who have sufficient experience and competence in outdoor climbing, placing of traditional protection and bolt installation. Good judgement is required when placing bolts, and this can only be developed from long and diverse climbing experience. Practising placing bolts is not to be carried out at climbing areas or on natural rock features.
4. Bolts for new routes are to be installed beyond reach from established routes.
5. Bolts should be visually unobtrusive, especially in areas visited by the non-climbing public. The bolt installer should be discreet and use the least conspicuous method of bolting and installation and minimise the number of bolts, consistent with safe practice.
6. Modifications to rock are not acceptable for the purpose of creating climbing holds, as they destroy the natural quality of the rock face. This includes, but is not limited

to, gluing or bolting additional holds onto the rock, and drilling or chipping out holds in the rock.

7. Only fixtures and materials of sufficient strength and durability are to be used:
  - 7.1. Deformation-installed (“bash-in”) carrot bolts (“carrots”) and pitons are not to be installed.
  - 7.2. Glued-in machine bolts (GIMBs) are only acceptable in areas that are frequented by the non-climbing public eg hikers, or on the tops of cliffs for route access due to their limited visual impact.
  - 7.3. All bolts placed within 5km of the coast or in areas with high exposure to salt or other corrosive effects eg Kalbarri National Park, are to be made of a minimum of stainless steel 316 or higher alloy grades. Bolts in other areas are to be made from stainless steel of 304 or higher alloy grades. Expansion bolts are not to be placed in areas exposed to high salinity, sea spray or waves unless specialty removable expansion bolts.
  - 7.4. Minimum bolt diameter is to be 10mm for threaded bar and 8mm for unthreaded bar.
  - 7.5. Expansion bolts are not to be placed in limestone or other rock deemed of insufficient strength (some WA Sandstone).
  - 7.6. Any carrots, pitons and old bolts deemed to be of insufficient strength can be replaced by new bolts. A reasonable effort should be made to contact the first ascensionist, however no permission from the first ascensionist need be obtained for this action.
  - 7.7. Purpose made and rated bolting materials for climbing (or equivalent) are to be used except where paragraph 7.2 applies.
8. All glue must be pure epoxy type glue suitable for outdoor use and installation in a damp or wet substrate. Glue use and bolt installation is to be as per the manufacturer instructions including hole preparation (if applicable).
9. All bolts must be checked by the installer after installation and prior to use to confirm successful installation. For glue-in bolts, attempts must be made at the site to prevent any person from using the bolts eg marking the route or bolts with ‘danger tape’, as a warning until glue setting is confirmed.
10. Regarding bolt spacing
  - 10.1. Bolt spacing of indoor climbing routes is not to be used as a measurement to determine bolt spacing of outdoor climbing routes. The standards and requirements for artificial and commercial climbing walls does not apply to the ethics and values on natural rock and cliffs.
  - 10.2. The maximum bolt spacing on any new routes is to be such that the climb is considered safe by most climbers competent at the grade and style of the

route. Bolt spacing is to be consistent with the ethic of the area and the route description is to be adequate to inform climbers. The route developer is to take into consideration other climbers' abilities, statures and experience.

- 10.3. Where an existing bolted route does not comply with paragraph 10.2 and there is a risk of a serious ground fall, bolts may be added to the climb to prevent that risk. Additional bolts may only be installed once approval has been granted by the first ascensionist or the CAWA committee. Due consideration is to be given to the nature of established routes and ethic of the area, and any warnings or route descriptions should be considered as alternatives to additional bolts.
11. Wherever the cliff top or descent path is subject to erosion, new routes are to be equipped with lower-offs
12. Bolts are not to be added to existing climbs or to boulder problems. Existing routes should not be interfered with in any way without the permission of the first ascensionist. However, items 2 to 11 have priority over this item.
13. Arguments about bolting by referring to past practices are not considered valid. For example, areas with existing carrot bolts are not to have more of them added.
14. No new bolts are to be placed:
  - 14.1. Anywhere on Bluff Knoll and Coyanarup peak (the peak adjacent to Bluff Knoll) in the Stirling Ranges National Park.
  - 14.2. The Gap, Natural Bridge and the Blowholes near Albany and cliffs directly adjacent to the Z-bend lookout at Kalbarri.
  - 14.3. Any area designated by CAWA, climbing guidebooks or management authorities.
  - 14.4. Without the permission of any private landowners.
15. In addition to paragraphs 1 - 14, where applicable, the following paragraphs apply to re-bolting (the replacement of existing bolts) on rock climbing routes:
  - 15.1. Prior to re-bolting, the bolt replacer should inform CAWA of intentions including the route name and bolting materials to be used. If applicable / available, CAWA may be able to provide bolting materials and / or approve reimbursement of some costs through the re-bolting fund.
  - 15.2. Old bolts, should be extracted from the rock so existing holes can be used for new bolts thereby minimising further damage to the rock. Serious damage to the rock or drilling of more holes specifically to remove bolts is not to occur.
  - 15.3. In accordance with paragraphs 1 - 14, the bolt replacer should assess if existing bolt positions are suitable, existing rock is secure and existing anchors or lower-offs are practical. If existing holes or rock are not suitable for new

bolts, then a new hole can be drilled in the near vicinity which retains the original nature of the route.

- 15.4. In accordance with paragraph 2, bolts should not be replaced if traditional protection is available.
- 15.5. Once the re-bolting is complete, the bolt replacer is to provide CAWA with the details including if successful or not, any issues and an updated description. If prior approval was granted, the bolt replacer should provide CAWA with receipts and bank details for reimbursement of associated costs.