AS 2316.1.2:2021

Australian STANDARD®

STANDARDS Australia

# Artificial climbing structures and challenge courses

## Part 1.2: Safety requirements and test methods for bouldering structures

AS 2316.1.2:2021

This Australian Standard® was prepared by SF-047, Artificial Climbing Structures. It was approved on behalf of the Council of Standards Australia on 23 June 2021.

This Standard was published on 30 June 2021.

The following are represented on Committee SF-047:

Australian Amusement Leisure and Recreation Association
Australian Camps Association
Boulder Gyms Australia
Christian Venues Association
Engineers Australia
Indoor Climbing Industry Australia
Outdoor Council of Australia
Scouts Australia
Sport and Recreation Victoria

This Standard was issued in draft form for comment as DR AS 2316.1.2:2020.

**Keeping Standards up-to-date**

Ensure you have the latest versions of our publications and keep up-to-date about Amendments, Rulings, Withdrawals, and new projects by visiting:
www.standards.org.au

ISBN 978 1 76113 428 9

# Artificial climbing structures and challenge courses

## Part 1.2: Safety requirements and test methods for bouldering structures

First published as AS 2316.1—2009.
Revised and redesignated as AS 2316.1.2:2021.

# Preface

This Standard was prepared by the Standards Australia Committee SF-047, Artificial Climbing Structures to supersede in part AS 2316.1—2009, *Artificial climbing structures and challenge courses, Part 1: Fixed and mobile artificial climbing and abseiling walls*.

The objective of this document is to provide designers, manufacturers, proprietors and operators with requirements and guidance specific to the design, construction, operation and maintenance of artificial bouldering structures used for bouldering in order to maximize the protection of health and safety for both operators and users.

This document forms part of the AS 2316.1 series. The series will consist of the following three Parts:

AS 2316.1.1, *Artificial climbing structures and challenge courses, Part 1.1: Safety requirements and test methods for belayed artificial climbing and abseiling structures*

AS 2316.1.2, *Artificial climbing structures and challenge courses, Part 1.2: Safety requirements and test methods for bouldering structures* (this document)

AS 2316.1.3, *Artificial climbing structures and challenge courses, Part 1.3: Safety requirements and test methods for climbing holds*

The document acknowledges that in a variety of environments, residential/recreational camps, climbing gyms and schools, artificial bouldering structures have a significant percentage of clients that bring their own equipment to perform the activities which requires maintenance and appropriate storage. Where this occurs, it introduces risk for both the user and operator.

The terms “normative” and “informative” have been used in this document to define the application of the appendix to which they apply. A “normative” appendix is an integral part of a document, whereas an “informative” appendix is only for information and guidance.

# Contents

## Introduction

This document is concerned with the design, construction, testing and operation of artificial bouldering structures. Bouldering structures originated from the desire to simulate the bouldering challenges encountered in the recreational pursuit of rock climbing in a manner accessible to the general public. Bouldering solely on artificial structures is now considered to be a recreational pursuit in its own right, as well as being recognized internationally as a sport and as a valuable training or learning tool by education institutions and employers.

The management of risk in the sport and recreation of bouldering is a responsibility for both the user and the operator. Operators should provide a facility which is designed and built to be as safe as reasonably practicable without entirely removing the desired challenge. Users should conform to usage advice supplied by the operator as part of the agreement to use the facility.

It is recognized that bouldering has inherent risks and risk-taking is an essential feature of this sport and recreation activity. An aim of artificial bouldering structures is to provide an environment where people of all ages and abilities can practise bouldering skills and the chance to encounter risks as part of a stimulating and challenging learning environment.

Artificial bouldering structures should aim at managing the balance between the need to offer risk and the need to keep users safe from serious harm. It is recognized that injuries will occur. Sprained wrists and ankles may be considered acceptable risks whereas spinal, neck and head injuries by comparison would be unacceptable to users.

Adequate and appropriate maintenance of facilities should be performed in a timely manner.

This document has been developed to ensure that all associated infrastructure and equipment meets nominated criteria.

Adherence to this document should limit harm to those involved in incidents that are associated with human error and prevent incidents associated with equipment of structure failure, i.e. provide a safer environment to pursue the activity of bouldering.

# Australian Standard®

## Artificial climbing structures and challenge courses

## Part 1.2: Safety requirements and test methods for bouldering structures

## Section 1 Scope and general

### 1.1 Scope

#### 1.1.1 General

This document specifies the minimum requirements for the design, construction, operation, supervision levels, maintenance and testing of artificial bouldering structures and associated components.

#### 1.1.2 Inclusions

This document includes fixed, indoor and outdoor structures and facilities used for bouldering.

#### 1.1.3 Exclusions

This document excludes —

(a) belaying (refer to AS 2316.1.1);

(b) climbing holds (refer to AS 2316.1.3);

(c) natural surfaces with artificial holds and/or belay points;

(d) playground equipment (refer to AS 4685);

(e) structures associated with bungy jumping activities (refer to AS/NZS 5848);

(f) theatrical and stunt work;

(g) mobile artificial climbing structures [refer to AS 3533 (series)];

(h) inflatable climbing structures;

(i) deep water solo climbing structures; and

(j) ball and foam pits.

### 1.2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document:

NOTE Documents for informative purposes are listed in the Bibliography.

AS 1657, *Fixed platforms, walkways, stairways and ladders—Design, construction and installation*

AS 2316.1.1, *Artificial climbing structures and challenge courses, Part 1.1: Safety requirements and test methods for belayed artificial climbing and abseiling structures*

AS 2316.2.1, *Artificial climbing structures and challenge courses, Part 2.1: Flying foxes and challenge ropes courses—Construction and safety requirements (EN 15567-1:2007, MOD)*

AS 3600, *Concrete structures*

AS 4100, *Steel structures*