



## H-S 61.1 – Design Review Checklist - Activity Structures (permanent structures)

Use this checklist as a prompt when reviewing designs for new or modified activity structures, including re-build of existing structures. It is not intended to be an exhaustive checklist – the reviewers need to identify any additional aspect associated with the specific design.

Focus on identifying safety hazards that are specific to the design, where the level of risk can be influenced by the design. Do not confuse design-related hazards with 'routine hazards'; which are associated with any activity structure of this type regardless of their design.

Name of Structure:	Date:	Name of Person leading this review:
Designer:	Site:	Names of other people involved in this review:
Design version ID:	TICK one that best describes the design <input type="checkbox"/> New structure <input type="checkbox"/> Modification of existing structure	

### Part A – Risk context.

Before the design commences, define the requirements of the structure and establish the risk context. This information will be provided to the designer, as well as being used to align stakeholders on what you are wanting to achieve.

Item	NA	Factors to communicate to the designer
1. Surrounding hazards eg powerlines, cliff edges, underground services		
2. Climate, aspect, weather extremes, bush fires		
3. Access to water supply, of appropriate quality		
4. Adverse impact on native flora and fauna		
5. Erosion, flash flooding, ground stability, soil type		
6. Sequencing of activities eg easy to difficult, wet to dry		
7. Slope of ground		
8. Surrounding Trees		

Item	NA	Factors to communicate to the designer
9. Accessibility eg for construction, maintenance, emergency rescue, accessibility for users with physical and intellectual disability		
10. Security eg unauthorised use, vandalism		
11. Natural environment eg protected vegetation		
12. Maintenance limitations – financial / labour / tools		
13. Supervision limitations during operation		
14. PPE limitations		
15. Incident history of similar structures		Review incident statistics from similar structures, both within Scouts and externally
16. What standards (if any) apply to the structure / design including any required accessibility for users with physical and intellectual disability		Designer to confirm
17. Age range of participants/experience of users/ users with physical and intellectual disability		
18. Traffic hazards or pedestrian hazards		

## Part B Risks identified for this specific design.

Focus on identifying safety hazards that are specific to the design, where the level of risk can be influenced by the design. Do not confuse design-related hazards with 'routine hazards'; which are associated with any activity structure of this type regardless of their specific design.

Item	NA	Risks associated with this specific design ie that do not exist with other, equivalent designs	Action / Whom Preferred option - revise the design to eliminate or minimize risk. Otherwise, assign the risk to someone to manage at a later stage eg during construction, operation, maintenance etc
19. Materials selection – cost, strength, durability, aesthetics			
20. Build-up of debris / soil / stagnant water			
21. Construction Hazards <ul style="list-style-type: none"> <li>a. accessibility of location / equipment</li> <li>b. work at height – can this be avoided?</li> <li>c. Nearby obstacles eg overhead powerlines / underground services, cliffs</li> <li>d. modular construction</li> <li>e. weight, size of components</li> <li>f. power supply</li> <li>g. Hot works – welding</li> <li>h. Manual handling</li> </ul>			
22. Structural collapse <ul style="list-style-type: none"> <li>a. Participant volumes – how many at a time</li> <li>b. Weight limitations</li> <li>c. Non-structural surfaces that people might sit, stand on or lean against</li> <li>d. Potential situations where participants might crowd into one space causing weight overload / tip over</li> </ul>			
23. Falling obstacles, exclusion zones			
24. Moving parts – range of swing, crushing hazards, pinch points			
25. Redundancies <ul style="list-style-type: none"> <li>a. Backup strategy if infrastructure fails</li> <li>b. If participant equipment fails</li> </ul>			

Item	NA	Risks associated with this specific design ie that do not exist with other, equivalent designs	Action / Whom Preferred option - revise the design to eliminate or minimize risk. Otherwise, assign the risk to someone to manage at a later stage eg during construction, operation, maintenance etc
<ul style="list-style-type: none"> <li>c. If participant does not comprehend / follow instructions</li> <li>d. Very tall, short, large, small participants</li> <li>e. Varying physical strength of participants</li> <li>f. Room for instructor error</li> <li>g. If participant panics or passes out</li> <li>h. Colour-blindness</li> </ul>			
26. Rough surfaces – corrosion, splinters			
27. Settling/sagging			
28. Slippery surfaces / Lack of foot hold or hand grip			
29. Erosion – anticipated flow of water – wash away soil or soft fall? Consider diversions, bund, retaining walls			
30. Heating of surfaces on hot days			
31. Misuse <ul style="list-style-type: none"> <li>a. Unsupervised / unauthorised use</li> <li>b. Pushing others</li> <li>c. Confusion, misunderstanding instructions</li> <li>d. Concealed areas conducive to self harm / abuse</li> </ul>			
32. Eye - injury hazards eg flicking ropes, dust particles			
33. Slip and trip hazards			
34. Fall from height <ul style="list-style-type: none"> <li>a. fall zone free of obstacles</li> <li>b. soft fall</li> <li>c. position of fall</li> <li>d. impalement</li> </ul>			
35. Usability in varying weather conditions, rain, high wind			

Item	NA	Risks associated with this specific design ie that do not exist with other, equivalent designs	Action / Whom Preferred option - revise the design to eliminate or minimize risk. Otherwise, assign the risk to someone to manage at a later stage eg during construction, operation, maintenance etc
36. Gaps that might entrap head, limbs, hands, fingers, feet			
37. 'Slow' areas, bottlenecks or areas of reduced clearance			
38. Friction – on gear, or on participants			
39. Water – ability to drain, pump or pump out (daily). Environmental impact of drainage			
40. Sharp edges and protruding bolts etc – personal injury or damage to equipment			
41. Entanglement, snarling, strangulation hazards – ropes, harness, clothing, trees etc			
42. Head collisions (consider situations where participants would be looking downwards and not up)			
43. Safe space for participants to wait their turn / appropriate place for instructor(s) to stand			
44. Weathering – UV damage; Shade/Sun			
45. Ease of maintenance <ul style="list-style-type: none"> <li>a. accessibility of location / available transportation</li> <li>b. accessibility &amp; visibility of components</li> <li>c. work at height</li> <li>d. modular construction</li> <li>e. weight, size of components</li> <li>f. power supply</li> <li>g. Hot works – welding</li> <li>h. Manual handling</li> <li>i. components can be visually inspected</li> <li>j. financially feasible</li> </ul>			
46. Danger to wildlife eg entrapment, drowning			
47. Issues with disposal, disassembly			

Item	NA	Risks associated with this specific design ie that do not exist with other, equivalent designs	Action / Whom Preferred option - revise the design to eliminate or minimize risk. Otherwise, assign the risk to someone to manage at a later stage eg during construction, operation, maintenance etc
48. Soft fall –replenishment, possibility of gaps forming, effectiveness in water, washed or blown away			
49. Rebound, vibration			
50. Concealed areas, potential areas for abuse / injured person to remain undetected / self-harm			
51. Drowning, suffocation or engulfment hazards			
52. Fixtures – appropriate & proven methods and materials.			
53. Effect of tree, weed or moss growth			
54. Retrieval of ropes – appropriate method			
55. Ladders and steps – secure, sufficient overhang at top (fixed ladders) or appropriate retrieval procedures (portable)			
56. Emergency Procedures – emergency stops, rescue - how do you get them out in the middle of the activity			
57. Noise- annoyance for neighbours, impeding the audibility of safety instructions			
58. Potential for loss or tearing of clothing leading to unintended body exposure.			
59. Crushing hazards including potential for someone to place their fingers where they might be trodden on			
60. Areas for venomous snakes, spiders to reside / hide			
61. Participants colliding			
62. Accessibility and usability for participants with physical and intellectual disability			
Other:			