|  |  |  |  |
| --- | --- | --- | --- |
|  | 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 ꙱ New structure ꙱ 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 |  |  |
| 1. Climate, aspect, weather extremes, bush fires |  |  |
| 1. Access to water supply, of appropriate quality |  |  |
| 1. Venomous snakes, spiders |  |  |
| 1. Erosion, flash flooding, ground stability, soil type |  |  |
| 1. Sequencing of activities eg easy to difficult, wet to dry etc |  |  |
| 1. Slope of ground |  |  |
| 1. Surrounding Trees |  |  |
| 1. Access for construction, maintenance, emergency rescue |  |  |
| 1. Security – eg unauthorised use, vandalism |  |  |
| 1. Natural environment, protected areas |  |  |
| 1. Maintenance limitations – financial / labour / tools |  |  |
| 1. Supervision limitations during operation |  |  |
| 1. PPE limitations |  |  |
| 1. Incident history of similar structures |  | Review incident statistics from similar structures, both within Scouts and externally |
| 1. What standards (if any) apply to the structure / design |  | Designer to confirm |
| 1. Any special purposes eg – use by people with disabilities |  |  |
| 1. Age range of participants/experience of users |  |  |
| 1. 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 |
| --- | --- | --- | --- |
| 1. Materials selection – cost, strength, durability, aesthetics |  |  |  |
| 1. Build-up of debris / soil / stagnant water |  |  |  |
| 1. Construction Hazards    1. accessibility of location / equipment    2. work at height – can this be avoided?    3. Trees    4. overhead powerlines / underground services    5. modular construction    6. weight, size of components    7. power supply    8. Hot works – welding    9. Manual handling    10. Nearby hazards – cliffs, steep gradient |  |  |  |
| 1. Structural collapse    1. Participant volumes – how many at a time    2. Weight limitations    3. Non-structural surfaces that people might sit, stand on or lean against    4. Potential situations where participants might crowd into one space causing weight overload / tip over |  |  |  |
| 1. Falling obstacles |  |  |  |
| 1. Moving parts – range of swing, crushing hazards, pinch points |  |  |  |
| 1. Redundancies    1. Backup strategy if infrastructure fails    2. If participant equipment fails    3. If participant does not comprehend / follow instructions    4. Very tall, short, large, small participants    5. Varying physical strength of participants    6. Room for instructor error    7. If participant panics or passes out    8. Colour-blindness |  |  |  |
| 1. Rough surfaces – corrosion, splinters |  |  |  |
| 1. Settling/sagging |  |  |  |
| 1. Slippery surfaces / Lack of foot hold or hand grip |  |  |  |
| 1. Erosion – anticipated flow of water – wash away soil or soft fall? Consider diversions, bund, retaining walls |  |  |  |
| 1. Heating of surfaces on hot days |  |  |  |
| 1. Misuse    1. Unsupervised / unauthorised use    2. Pushing others    3. Confusion, misunderstanding instructions    4. Self harm / threat of self harm |  |  |  |
| 1. Eye - injury hazards eg flicking ropes, dust particles |  |  |  |
| 1. Slip and trip hazards |  |  |  |
| 1. Fall from height    1. fall zone free of obstacles    2. soft fall    3. position of fall    4. impalement |  |  |  |
| 1. Usability in varying weather conditions, rain, high wind |  |  |  |
| 1. Gaps that might entrap head, limbs, hands, fingers, feet |  |  |  |
| 1. ‘Slow’ areas, bottlenecks or areas of reduced clearance |  |  |  |
| 1. Friction – on gear, or on participants |  |  |  |
| 1. Water – ability to drain, pump or pump out (daily) |  |  |  |
| 1. Sharp edges and protruding bolts etc – personal injury or damage to equipment |  |  |  |
| 1. Entanglement, snarling, strangulation hazards – ropes, harness, clothing, trees etc |  |  |  |
| 1. Head collisions (remember to consider situations where participants would be looking downwards and not up) |  |  |  |
| 1. Safe space for participants to wait their turn / appropriate place for instructor(s) to stand |  |  |  |
| 1. Weathering – UV damage; Shade/Sun |  |  |  |
| 1. Ease of maintenance    1. accessibility of location / available transportation    2. accessibility & visibility of components    3. work at height    4. modular construction    5. weight, size of components    6. power supply    7. Hot works – welding    8. Manual handling    9. components can be visually inspected    10. financially feasible |  |  |  |
| 1. Danger to wildlife eg entrapment, drowning |  |  |  |
| 1. Issues with disposal, disassembly |  |  |  |
| 1. Soft fall –adequacy, replenishment, possibility of gaps forming, effectiveness in water, washed or blown away |  |  |  |
| 1. Rebound, vibration |  |  |  |
| 1. Concealed areas, potential areas for abuse / injured person to remain undetected / self-harm |  |  |  |
| 1. Drowning, suffocation or engulfment hazards |  |  |  |
| 1. Fixtures – appropriate & proven methods and materials. |  |  |  |
| 1. Effect of tree, weed or moss growth |  |  |  |
| 1. Retrieval of ropes – appropriate method |  |  |  |
| 1. Ladders and steps – secure, sufficient overhang at top (fixed ladders) or appropriate retrieval procedures (portable) |  |  |  |
| 1. Emergency Procedures – emergency stops, rescue - how do you get them out in the middle of the activity |  |  |  |
| 1. Noise |  |  |  |
| 1. Potential for loss of clothing or tearing |  |  |  |
| 1. Crushing hazards including potential for someone to place their fingers where they might be trodden on |  |  |  |
| 1. Areas for venomous snakes, spiders to reside / hide |  |  |  |
| 1. Participants colliding |  |  |  |