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| **Activity:** | Aerial Runway | **Location:** | Off-Site | **Last review date:** | December 2022 | **Produced by:** | Alex Windows (Section Leader) |
| **Next review date:** | December 2025 | **Quality Assured by:** |  |

* POR 9.78 High Ropes Activities - <https://www.scouts.org.uk/por/9-activities/#9.78>
* POR 9.80 Temporary High Ropes Activities - <https://www.scouts.org.uk/por/9-activities/#9.80>
* TSA High Ropes Guidance - <https://www.scouts.org.uk/volunteers/running-your-section/programme-guidance/general-activity-guidance/roped-activities/high-ropes/>
* TSA Aerial Runway Code - <https://www.scouts.org.uk/volunteers/running-your-section/programme-guidance/general-activity-guidance/roped-activities/aerial-runway-code/>

“The main difference within high ropes is that zip wires will generally use a harness system to attach to the zip wire, often using a simple belay system to exit the activity (meaning they are classed as high ropes), while an **aerial runway will generally have a seat for participants to sit on (meaning they are not classed as high ropes)**. Another factor which can differentiate the system is the material used for the **main line, in an aerial runway this is a rope** and in a zip wire this is a metal wire.” - FS120423, July 2011

**Statements below highlighted in bold are extracted from the Aeral Runway Code** (FS120423, July 2011), some statements may have been altered from the original.

| **What are the hazards?** | **What are the risks?** | **Who is most at risk?** | **What control measures will be put in place?** |
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| **Terrain and Location** | Tripping / Falling.Sprains / Strains. | Young people. | * A leader should check for hazards in the build area before commencing the activity.
* **Natural features like trees and the slope of the ground will determine the length of run and the speed of descent.**
* **The height and angle of the slope should allow for a safe and steady descent.**
* Young people should wear suitable footwear, such as hiking boots, as advised by leaders.
* A leader should assess the weather risk before and during the session and consider if the activity should continue.
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| **Manual Handling**  | Lifting heavy items.Strains etc.Back or other muscular injuries. | Young people. | * Leaders should check that the project they are planning that the type of equipment and technique is appropriate for the age of the young people.
* Young people should be shown the correct method to carry, lift, and store equipment.
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| **Construction and Dismantling** | Fingers, feet, or other body parts trapped between or under poles. | All. | * Leaders should give everyone participating in the activity a safety briefing.
* **The planning, construction and use of an aerial runway should be directed and constantly supervised by a responsible and competent adult member**
* Everyone involved should be made aware of this plan and if there are any ongoing changes.
* Give all participants appropriate training on tying lashings, moving, and supporting structures.
* Young people should be encouraged/advised to work together and support each other and the structures.
* **The main rope (line) can be run between two trees or between two tripods. If using trees, they should be checked to ensure that they are suitably sturdy for the proposed purpose.**
* Untie and dismantle the structure in a sensible order to ensure that it is safely lowered.
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| **Equipment** | Personal injuries, rope burns, cuts, bruises, abrasions, puncture wounds, eye damage. | All. | * **Ensure that all equipment** (e.g. ropes, spars, staves and blocks) **is checked prior to and regularly during use to ensure that it is fit for purpose**, report or fix any damaged or faulty equipment.
* **It is good practice to keep a written log relating to the use of the equipment, this should include date of purchase, usage, inspections carried out and maintenance, along with method of disposal for time-expired or damaged equipment.**
* Ensure equipment is stored safely, where it cannot fall or roll onto people.
* Equipment should be dried before storage to prevent the growth of mould or mildew.
* Leaders should be aware of the allergies of participants, especially when using natural materials such as manila rope.
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| **Testing** | Impact with pioneering equipment.Crush injuries.Lacerations.Fractures. | Adults. | * **Testing the system is a responsibility of the person in charge of the activity.**
* Leaders should check that knots are lashings are correct and tight enough to support structures.
* **Before the system is used it should be fully tested, putting the system under higher strain that that of the passengers using the system.**
* **Tests must be under the supervision of a competent adult and with plenty of spotters throughout the system to identify any issues and report back to the person in charge.**
* **After all these tests, all knots, lashings, anchorages, pickets and so on should be thoroughly inspected.**

**Seat*** **Attach a temporary rope to the empty seat. Starting at the top of the run, a vigorous bouncing strain from ground level should be applied. This should be repeated throughout the entire length of the run, especially around the mid-point where maximum sag in the main rope will be experienced.**
* **The seat should then be drawn to a convenient point and loaded with at least two five gallon containers full of water. This load represents a body weighing approximately 50 kilos (choose an appropriate weight for those intending to use the system). At the mid-point of the runway, the sag in the main rope under load must not allow the feet of a passenger to strike the ground. If this happens, adjust the tension on the main rope.**
* **The loaded seat should then be drawn to the top of the runway. The speed of descent and the main braking system should now be tested. The load should be brought to a stop short of the lower sheer legs or tripod with an adequate margin of safety. At the same time, the elasticated shock cord should not be allowed to extend beyond twice its natural length.**

**Braking*** **The main braking system should be disconnected, and the emergency brake tested, again using a loaded seat running from the top of the runway. The position of the emergency brake operators, if used, should be marked so that there is no tendency to drift towards the bottom of the runway during normal operation.**
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| **Braking**  | Stop in an emergency.Collision with Ground. | All. | * **It is important to have a robust braking system on the runway, allowing the passenger to come to a stop gently.**
* **The main brake must bring the travelling block to a steady stop, no system which brings an immediate stop is suitable.**
* **An emergency brake is also required allowing manual braking if the main brake fails, preventing any collision with the end of the system.**
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| **Fall from height** | Personal injuriesLacerations.Fractures. | Young people. | * **If working at height in the construction of the runway appropriate precautions must be taken to limit risk.**
* Leaders should fully brief all participants who will be off the ground.
* Use spotters when participants are off the ground.
* Ensure the structure is secure enough to whole the weight of the people who will stand on the structure.
* When standing on structures, consider the people below you, especially when climbing off the structure.
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