

## Appendix K – Risk Assessment

Likelihood	5	L	M	H	H	H
	4	L	M	M	H	H
	3	L	M	M	M	H
	2	L	L	M	M	M
	1	L	L	L	L	L
		1	2	3	4	5
		Severity				

### Risk Assessment Criteria

#### Severity

- 1 - None or Trivial injury / illness / loss - 1 person at risk.
- 2 - Minor injury. Minor first aid required only - Up to 5 persons at risk.
- 3 - Injury (reportable). Moderate loss - Up to 10 persons at risk.
- 4 - Major injury / severe incapacity. Serious loss. Up to 25 persons at risk.
- 5 - Fatality / incapacity. Widespread loss. - 25 or more persons involved.

#### Likelihood

- 1 - Improbable
- 2 - Remote
- 3 - Possible
- 4 - Likely
- 5 - Almost Certain

When calculating the risk the number of persons exposed and the frequency of exposure to the risk must be taken into account.

Risks that calculate as high MUST have further control measures put into place that reduce the risk BEFORE the activity is carried out.

Medium risk factors should have more control measures introduced where possible to reduce the risk to the lowest possible risk.

Risk	Area							
Hazard	Risk & Identity of Persons Affected	Risk Severity			Control Measures	Remaining Risk Severity		
		S	L	RR		S	L	RR
Uneven ground	Ride may be unlevel. Risk of becoming unstable and overturning on packing blocks. Serious injury or death to participants, operators and nearby public	5	4	H	All work force to be trained and supervisor to have appropriate experience. Ground should be assessed prior to build up Always try to assemble on most level ground Use adequate and sufficient packing blocks Regular visual checks on packing areas by trained personnel, re-pack if and when necessary. To be assembled as per manufacturers operating manual.	5	2	L
Soft ground	Risk of ride leveling/packing points sinking into ground. Ride may become unstable and risk of overturning  Serious injury or death to participants, operators and nearby public	5	3	M	All work force to be trained and supervisor to have appropriate experience. Ground should be assessed prior to build up Always try to build up on most stable ground possible Use adequate and sufficient packing blocks Regular visual checks on packing areas by trained personnel, re-pack if and when necessary To be assembled as per manufacturers operating manual.	5	2	L

Risk	Structural failure							
Hazard	Risk & Identity of Persons Affected	Risk Severity			Control Measures	Remaining Risk Severity		
		S	L	RR		S	L	RR
Failure of welds on base frame	Ride could become unstable and collapse Serious injury or death to participants, operators and nearby public	5	3	M	Daily and periodic checks and maintenance by adequately trained workforce Adequately trained workforce in operation and evacuation of the ride Repair as and when necessary by qualified/competent person Device not to be opened until repairs etc carried out Annual inspection and NDT by RIB <b>Refer to manufacturers instruction</b>	5	2	L
Failure of pins/brackets supporting & connecting main aluminum arms	Main arm could collapse Serious injury or death to participants, operators and nearby public	5	3	M	Daily and periodic checks and maintenance by adequately trained workforce Adequately trained workforce in operation and evacuation of the ride Repair as and when necessary by qualified/competent person Device not to be opened until repairs etc carried out Annual inspection and NDT by RIB <b>Refer to manufacturers instruction</b>	5	1	L
Failure of aluminum arms	Main arm could collapse Serious injury or death to participants, operators and nearby public	5	3	M	Daily and periodic checks and maintenance by adequately trained workforce Adequately trained workforce in operation and evacuation of the ride Repair as and when necessary by qualified/competent person Device not to be opened until repairs etc carried out Annual inspection and NDT by RIB <b>Refer to manufacturers instruction</b>	5	1	L

Risk	Structural failure							
Hazard	Risk & Identity of Persons Affected	Risk Severity			Control Measures	Remaining Risk Severity		
		S	L	RR		S	L	RR
Failure of eye bolts securing bungee to aluminum arms	Failure of eye bolts/eye bolts not assembled correctly. Participant would not be supported by bungee. Risk of falling from height/being thrown from ride. Serious injury to participants	4	3	M	Daily and periodic checks and maintenance by adequately trained workforce Device only to be assembled by competent person in accordance with the manufacturers operating manual. Adequately trained workforce in operation and evacuation of the ride Repair as and when necessary by qualified/competent person Device not to be opened until repairs etc carried out Annual inspection and NDT by RIB <b>Refer to manufacturers instruction</b>	4	2	L
Failure of bungee cord	Participant would not be supported by bungee. Risk of falling from height/being thrown from ride. Serious injury to participants	4	3	M	Daily and periodic checks and maintenance by adequately trained workforce Adequately trained workforce in operation and evacuation of the ride Bungee to meet loading requirements as specified by operating manual and this design review Replace bungee as and when necessary by qualified/competent person Device not to be opened until repairs etc carried out Annual inspection and NDT by RIB <b>Refer to manufacturers instruction</b>	4	1	L

Risk	Structural failure							
Hazard	Risk & Identity of Persons Affected	Risk Severity			Control Measures	Remaining Risk Severity		
		S	L	RR		S	L	RR
Failure of winch rope	Participant would not be supported by bungee. Risk of falling from height/being thrown from ride. Serious injury to participants	4	3	M	Daily and periodic checks and maintenance by adequately trained workforce Adequately trained workforce in operation and evacuation of the ride Winch to meet loading requirements as specified by operating manual and this design review Replace bungee as and when necessary by qualified/competent person Device not to be opened until repairs etc carried out Annual inspection and NDT by RIB <b>Refer to manufacturers instruction</b>	4	1	L
Failure of harness	Main arm could collapse Serious injury or death to participants, operators and nearby public	5	3	M	Daily and periodic checks and maintenance by adequately trained workforce Adequately trained workforce in operation and evacuation of the ride Harness to meet loading requirements as specified by operating manual and this design review Replace as and when necessary by qualified/competent person Ensure harness is correct size for participant. Adequately trained operators to ensure harnesses are fitted correctly Device not to be opened until repairs etc carried out Annual inspection and NDT by RIB <b>Refer to manufacturers instruction</b>	5	1	L

Risk	Structural failure							
Hazard	Risk & Identity of Persons Affected	Risk Severity			Control Measures	Remaining Risk Severity		
		S	L	RR		S	L	RR
Failure of electric winch	Participant would not be supported by bungee. Risk of falling from height/being thrown from ride. Serious injury to participants	4	3	M	Daily and periodic checks and maintenance on electrics and power source, and generator for- water-oil-diesel, by adequately trained workforce Adequately trained workforce in operation and evacuation of the ride Repair as and when necessary by qualified/competent person Device not to be opened until repairs etc carried out Annual inspection, and Electrical test by RIB <b>Refer to manufacturers instruction</b>	4	1	L
Electric shock	Risk of major injury or death to operators, participants and nearby public	5	3	M	All required MCB's and RCD's in place Daily and periodic checks and maintenance on electrics by adequately trained workforce Adequately trained workforce in operation and evacuation of the ride Repair as and when necessary by qualified/competent person Device not to be opened until repairs etc carried out Annual Electrical test by RIB <b>Refer to manufacturers instruction</b>	5	1	L

Risk	Structural failure					Remaining Risk Severity		
Hazard	Risk & Identity of Persons Affected	Risk Severity			Control Measures	Remaining Risk Severity		
		S	L	RR		S	L	RR
High winds	Risk of major injury or death from participant being blown off normal trajectory to overturn of ride	5	3	M	Adequately trained workforce in operation and evacuation of the ride Sufficient checks and maintenance throughout operation by adequately trained persons Device to be operated only in wind speeds as specified by the manufacturer and in the design review. Device to be disassembled in wind speeds greater than 8 m/s. Device to be guy roped down if excessive movement results when not in use	5	1	L
Age of passengers	This type of ride may cause distress to young participants. Young riders may lack the ability to understand the dangers associated with misbehaving on this ride	2	2	L	Adequately trained workforce in operation and evacuation of the ride Injuries etc are not always visible to operator/attendants therefore safety and instructional signage should be clearly visible Operator to give verbal instruction if necessary <b>Refer to manufacturers instruction</b>	2	1	L

This risk assessment report covers the operation of the attraction when used as an amusement device. It is based on an overview of the risks associated with the device. It does not cover detailed component failure. The assessment is based on engineering and operational aspects of the device and does not take into account personal or legislative risks. Each hazard/risk has been reviewed individually to ensure that all required actions have been taken to reduce the risk, so far as reasonably practicable and in line with the manufacturer's recommendation. As there is no statistical data available this risk assessment is based on the experience, judgement and knowledge of the device by the manufacturer Eurojumper and various Owner/Operators. There is a manufacturers operation manual in place for owner/controller reference.

**NB;**

Operation and maintenance should only be carried out by an adequately trained adult after instruction and training from the manufacturer. When the 'Bungee Trampoline' is owned/controlled by anyone other than the manufacturer if there is any part of the assessment or operations manual that they do not understand they should consult the manufacturer as soon as possible.

All maintenance and training should be documented.

The manufacturer's instruction should be followed at all times