

Risk Assessment – Mobile Climbing Wall



Primary Assessor: Nick Lake SPA					
Approved By: Nick Lake SPA (Partner), Neil Harrington (Partner)					
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Relevant references: Extreme Engineering British Mountaineering Council Climbing Wall Manual Mountain Leader Training England SPA & CWA Syllabus					
Definitions:					
VX	VerticalXtreme or its partners, and/or by Nick Lake (SPA) where appropriate				
Wall	The Mobile Climbing Wall, including the trailer where relevant, in the vertical position unless specified otherwise				
Instructor	Persons minimum SPA qualified and having passed the VX training and assessment				
Operator	Authorised person having passed VX training & assessment to operate Wall under Instructor supervision				
Staff	Instructors / Operators				
People	Persons participating in the activity (other than operators)				
Face	Climbing wall (front)				
Landing Zone	Immediate (maximum) area that climbers land within				
Safety Area	Whole area barriered off minimum 8' radius from the face				
Attended/Unattended	by Instructor or Operator				
All	All persons on the activity, including those queuing or in the general vicinity of the wall where appropriate				
Severity:	4 - Extreme	Likelihood:	4 - Certain	Severity x Likelihood Risk Level (Total Score)	
	3 - Severe		3 - Probable		(13-16) HIGH
	2 - Major		2 - Possible		(9-13) MED-HIGH
	1 - Minor		1 - Unlikely		(5-9) MEDIUM
				(1-4) LOW	

Hazard and harmful effect	To Whom	Initial risk level			Control measures to reduce risk	Control risk level		
		S	L	R		S	L	R
<u>Transportation</u>								
Towing – accident	All	4	2	8	<ul style="list-style-type: none"> • Only towed by Nick Lake (retired ADI, Member IAM) or Neil Harrington only. • Appropriate class licences held and additional driver training and assessment undertaken. • Vehicle to be driven within road traffic regulations • Towing vehicle-Nissan Terrano 2.7TDI “VU06 VUG”. Low ratio gearing for low speed manoeuvring (less than 1 mph) in pedestrian zones with staff walking in front wearing high visibility jackets. • Towing capacity 2800kg verses Wall weight 1800kg, MOT'd and fully comprehensive insurance. • Amber double strobe roof mounted and front grill amber/white strobe lights used when manoeuvring • Physical safety: Heavy Duty Tow ball, 2 x safety Wires, automatic “loss” brake cable. • Regular inspection of road worthiness. 	3	1	3
<u>General</u>								
People unsupervised on wall causing injury	All	3	2	6	<ul style="list-style-type: none"> • Barriers used to fence off the wall • Belays locked • Staff to ensure all items stowed away correctly in locked cabinets 	2	1	2
Slips trips or falls	All	1	3	3	<ul style="list-style-type: none"> • Staff to ensure that no one runs around in the safety area. • People waiting are behind barriers, or in harness area. • All equipment to be kept safe and tidied away from the safety area. • If area becomes too slippery e.g. rain, then activity to be suspended. • Adequate footwear to be worn by all as prerequisite for attendance, detailed on the safety notices. • Staff to monitor and control personnel and work area. • Particular attention to ground and weather conditions on day of event. 	1	1	1
Inclement weather	All	4	2	8	<ul style="list-style-type: none"> • Instructor to obtain weather forecast for day of activity and assess weather risk. Be prepared to suspend, change or postpone event if conditions inappropriate • Avoid exposing skin to sunlight • Monitor weather condition throughout event and act accordingly. 	2	1	2
Injury as a result of improper behaviour	All	2	2	4	<ul style="list-style-type: none"> • Safety signs displayed at all times • All climbers briefed before activity • All instructors to hold current recognised First Aid certificate • No person to be under the influence of, or have consumed alcohol or drugs • People removed if necessary 	2	1	2

Hazard and harmful effect	To Whom	Initial risk level			Control measures to reduce risk	Control risk level		
		S	L	R		S	L	R
<u>Activity</u>								
Hair, fingers, Jewellery or clothing getting trapped in the Karabiner	All	1	3	3	<ul style="list-style-type: none"> Safety notices displayed at all times highlight risk issues and prevention measures All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to clip/unclip correctly/appropriately Long hair tied back with a hair band/tucked in Loose clothing or jewellery removed as appropriate (including belly button piercings) Only staff to use Karabiners 	1	1	1
Incorrect harness fitting	All	4	2	8	<ul style="list-style-type: none"> All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to harness correctly/appropriately Second check of harness by person clipping into belays 	4	1	4
Injury / Fall from height	All	4	2	8	<ul style="list-style-type: none"> Safety notices displayed at all times highlight risk issues and prevention measures Pre-climb instructions given with on warming up techniques/limitations/not overstretching All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to ensure harness & Karabiners fitted correctly/appropriately Second check of harness by person clipping into belays All equipment complies with CE / UIAA standards where appropriate and used only in line with manufacturer recommendations. Weight restriction maximum 17.5 stones Wall to be operated in line with VX published set-up procedures All instructors to hold current recognised First Aid certificate No person to be under the influence of, or have consumed alcohol or drugs 	1	1	1
Falling Object	All	3	2	6	<ul style="list-style-type: none"> Safety notices displayed at all times highlight risk issues and prevention measures All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to VX at all time to identify and deal with correctly/appropriately ie removal of items that may realistically fall from pockets/persons Wall to be operated in line with VX published set-up procedures 	2	1	2
Inversion	All	3	1	3	<ul style="list-style-type: none"> All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to harness correctly/appropriately Persons with low centre of gravity to be fitted with additional chest harness / full body harnesses 	1	1	1

Hazard and harmful effect	To Whom	Initial risk level			Control measures to reduce risk	Control risk level		
		S	L	R		S	L	R
<u>Activity</u>								
Climber in difficulties (Emotional)	All	2	2	4	<ul style="list-style-type: none"> Pre-climb instructions given Staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to give effective/correctly/appropriate instruction to reassure each climber or effect rescue All staff to be competent independent climbers 	1	2	2
Climber in difficulties (Physical)	All	2	2	4	<ul style="list-style-type: none"> Pre-climb instructions given All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to give effective/correctly/appropriate instruction to each climber or effect rescue All staff to be competent independent climbers 	1	2	2
Wires becoming tangled	All	2	2	4	<ul style="list-style-type: none"> Safety notices displayed at all times highlight risk issues and prevention measures All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to monitor position and likely routes of climbers Pre-climb instructions given with identification of individual coloured routes 	1	1	1
Harness / Karabiner failure	All	4	1	4	<ul style="list-style-type: none"> Equipment in line with VX published set-up procedures, all staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to ensure harness/Karabiners in satisfactory condition & operating correctly and procedure for fault reporting including inspection of all equipment before every session and regularly by instructors on at least an hourly basis thereafter and adjusted/replaced as necessary Second check of harness by person clipping into belays All equipment complies with CE / UIAA standards where appropriate and used only in line with manufacturer recommendations. All equipment to be replaced in line with manufacturers recommendations or sooner if appropriate Weight restriction maximum 17.5 stones 	4	1	4
Risk of slipping due to loose or slippery hand holds	All	2	2	4	<ul style="list-style-type: none"> Daily inspection by operator, tightened as necessary and during activity by trained operator. If on grass, groundsheet under wall and covering landing area to prevent mud on holds, and under harness fitting area. Holds cleaned regularly with power washer Activity stopped if too wet 	1	1	1
Climber Standing on another's fingers	All	2	4	8	<ul style="list-style-type: none"> Pre climb briefing, individual prominent coloured routes, staff monitoring / giving clear instructions 	2	1	2

Hazard and harmful effect	To Whom	Initial risk level			Control measures to reduce risk	Control risk level		
		S	L	R		S	L	R
<u>Activity</u>								
Auto belay failure	All	4	1	4	<ul style="list-style-type: none"> All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to recognise faulty belay (including oil levels & pressures) and remove from operation. All equipment complies with appropriate standards and checked regularly, cables replaced annually. Operated in line with manufactures operating instructions. Weight restriction maximum 17.5 stones Each Belay is independent and operates on fail safe basis Staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to ensure Wall to be operated in line with VX published set-up procedures including checking of belay system before each session and at regular intervals thereafter 	4	1	4
Staff being accused of, or acting in an in appropriate manner (safeguarding)	All	3	1	3	<ul style="list-style-type: none"> All staff are personally known to both VX partners for at least five years DBS Checks acquired All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to give effective/correctly/appropriate instruction to each climber Minimal physical contact at all times Appropriate verbal communication only Harnesses to be fitted at arms length and in view of another staff member, parents to “dress” as appropriate. 	1	1	1
Climber getting “hitched” on holds	All	4	2	8	<ul style="list-style-type: none"> Helmets <u>not</u> worn per manufacturers & HSE recommendation to prevent strangulation on descent. Loose clothing or jewellery removed as appropriate, flares tucked into socks or elastic banded Safety notices displayed at all times highlight risk issues and prevention measures All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to ensure no clothing becomes loose 	2	1	2
Climber landing on another/barrier/trailer	All	2	3	6	<ul style="list-style-type: none"> Pre-climb instructions given, any participants not listening are re-instructed or excluded as required All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to give effective/correctly/appropriate instruction to each climber Belay jacks covered by plastic bins Wall to be operated in line with VX published set-up procedures Whole area barriered off at 8’ providing a safety area, no one within landing zone area except instructors / operators who are trained to look up. All Climbers waiting on the activity stand on distinctive yellow waiting mat 	1	2	2

Hazard and harmful effect	To Whom	Initial risk level			Control measures to reduce risk	Control risk level		
		S	L	R		S	L	R
<u>Activity</u>								
Manual Belay Failure	All	4	1	4	<ul style="list-style-type: none"> All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to recognise faulty rope / belay attachment / Karabiner and remove from operation. All equipment complies to appropriate standards and checked regularly, rope replaced annually or sooner if damaged Weight restriction maximum 20 stones Staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to ensure Wall to be operated in line with VX published set-up procedures including checking of belay system before each session and at regular intervals thereafter 	2	1	2
Manual Belay Injury/Fall	All	4	1	4	<ul style="list-style-type: none"> All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time in correct belaying techniques, including supervising other people using belays. Maximum of one manual belay to be rigged/in operation per VX / VX Staff Any third party belayer to be supervised on a one to one basis by VX / VX Staff, with VX / VX Staff operating as second belay at all times. All third party belayers to be physically and mentally capable of operating a manual belay under supervision as above. VX / VX Staff to remove any belayer with insufficient skills or exhibiting misconduct 	2	1	2
<u>Wall structure</u>								
Injury setting up/ taking down	Staff	4	1	4	<ul style="list-style-type: none"> Wall to be operated in line with VX published set-up procedures 	4	1	4
Wall being lowered whilst in use	All	4	2	8	<ul style="list-style-type: none"> Wall to be operated in line with VX published set-up procedures i.e. remote control is locked away with key held by staff 	4	1	4

Hazard and harmful effect	To Whom	Initial risk level			Control measures to reduce risk	Control risk level		
		S	L	R		S	L	R
<u>Wall structure</u>								
Wall being pulled over / Structural collapse	All	4	1	4	<ul style="list-style-type: none"> • Wall to be operated in line with VX published set-up procedures • Wall independently inspected for structural integrity April 2011. Passed. • Pre-climb instructions given to all before activity • Safety notices displayed at all times highlight risk issues and prevention measures • All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time including correct procedures for wall operation in line with VX published set-up procedures including lowering of Wall during storm conditions, during long periods of heavy rain, in winds gusting to/exceeding 30 MPH, or electrical storms • The wall design ensures stability of the wall maximum 3 degrees from vertical, wind speed monitored via anemometer maximum 30 mph. • Any defects found then wall must not be used until rectified by a suitable qualified • No structural alterations can be undertaken by persons other than a suitable qualified engineer • All equipment complies with relevant standards where appropriate and used only in line with manufacturer recommendations. • Weight restriction maximum 17.5 stones 	4	1	4
Wall Fatigue	All	4	1	4	<ul style="list-style-type: none"> • All staff trained and assessed / regularly reassessed by VX and supervised by SPA and/or VX at all time to recognise potential faults including belays, hand holds, steel framework, running gear, hydraulics, karabiners and cables. • Belays, hand holds, steel framework, running gear, hydraulics, karabiners and cables checked on each event before usage and recorded on log. • All equipment complies with appropriate standards and checked regularly, cables replaced annually. • Welds inspected in line with manufactures recommendations. • Wall is stored inside, is not subject to heat/sun/rain. 	4	1	4