









# **Table of Contents**

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# **Introduction**

The New Heights activity is one of the most popular activities on camp. It gives campers the opportunity to try a variety of physical and emotional challenges. As instructors, it is important that we have gone through the required training with an outside assessor such as RCD (1997 - 2009) or ISRT (2010 -Present ) before using the course with a group of campers. This manual will help you to familiarise yourself with the equipment we use here at Barretstown and also some considerations to be taken seriously when working on a ropes course with children and adults. We will also look at how we use therapeutic recreation in the New Heights activity in order to comply with the philosophy and mission of Barretstown. Before we go into detail on therapeutic recreation we must first understand about comfort zones.

Barretstown uses a 'challenge by choice' principle in all the activities we run at camp. This means that campers will never be pushed into something or forced into doing an activity/exercise which they feel strongly about not doing. They will choose their own level of participation and challenge.

#### **Comfort Zones**

Each individual has three levels of comfort which we call 'zones' at camp; a comfort zone, a stretch zone and a panic zone. You are in your comfort zone when you are doing the things you love i.e. reading, listening to music, watching TV etc. This is a zone you enjoy being in. You enjoy both the activity you are doing and the environment you are doing it in.

The next zone is known as your 'stretch zone'. This is a zone where you feel you are being challenged in some way. You are not as comfortable as you were in your comfort zone but you still feel like you can cope with where you are and carry on doing what you are doing. Each person's stretch zone is different because we all have different levels of comfort. What seems like a challenge to one person may be no problem to the other. Some people have a fear of flying whereas others are quite comfortable in an aeroplane. This is the zone we want





our campers to be in. We want them to challenge themselves and put themselves in their stretch zone. This is the zone where you learn that you can overcome challenges, be successful and fell good about yourself. This is the zone where self esteem grows and campers realise their potential. The same applies to adults.

The final zone is the 'panic zone'. This zone is the last place we want anyone to be in at camp. Camp is a safe, fun and positive environment. When you find yourself in your panic zone you feel scared, unsure about what is going on. You question yourself and the people around you. You become stressed out and you find yourself making quick decisions to get yourself back to your comfort zone. At no point throughout the duration of camp should campers or staff find themselves in their panic zone.

By ensuring campers choose their own level of challenge we avoid placing them in their panic zone. They decide their level of participation and their level of challenge depending on their own level of comfort. As staff, we then try to help them overcome the challenges they have set for themselves. We do this by creating a safe and fun activity and, recognising the individual success which each camper obtains through taking part in an activity at some level.

As well as the physical challenge of putting on the PPE, climbing the ladder or even climbing the course there is a huge emotional challenge for campers to overcome at the course also. The feeling of being nervous, anxious, unsafe and unsure of what is going on is a huge challenge to overcome. The campers are placing total trust in both the instructors and the equipment therefore it is important to be empathetic towards them. We can do this by remembering a time when we were in our stretch zone and what it felt like. What would have made us more comfortable at the time? Between doing this and keeping communication open between the instructor and the camper we can ensure that emotional challenges are overcome.







#### **General Operating Procedures**

- Each new Heights Activity leader must be belay trained and assessed by either a qualified Barretstown staff member (certificate for training the trainer) or an external training company. Assessments are always carried out by an external training company to promote best practice and ensure we are working with the most up to date guidelines for operating a ropes course. Staff are trained and assessed every year.
- The New Heights programme is designed for children ages 7 and up. However with specialised equipment used and developmental levels this may change to children aged 6 and up (to be taken on a case to case basis) as long as the children fit the PPE and have parental supervision. Each participant must be old enough to understand the safety rules and operating procedures.
- A ratio of 3 qualified instructors to every group of 20 campers will be maintained during climbing activities. There will also be a minimum of 4 Cara's attached to a group of 20.
- The New Heights staff use walkie talkie's at the course to have communication should there be an emergency or should vital information need to be communicated.
- Staff and campers alike must be orientated to the safety procedures before they step on the course.
- Helmets are to be worn at all times by all participants. Helmets are provided to all participants.
- Harnesses must be worn at all times by all participants. Harnesses are provided to all participants.
- Closed toed shoes must be worn when climbing the course.
- The New Heights activity leaders are responsible for supervising the campers and staff while visiting the ropes course.
- The summer staff are trained in basic PPE (personal protective equipment) which includes putting on and taking off harnesses and helmets. A brief overview is given prior to each climbing session to reinforce the procedures.
- If there is a climber with physical limitations, the New Heights activity leaders or climbers may request assistance on the course.
- The course is off limits to all staff and campers when activities are not in session.
- All equipment is stored in a dry, locked storage shed when activities are not in session.
- Equipment checks are done at the end of each session and equipment use is logged and recorded at the end of each session and season.





• Equipment is replaced based on the manufacturer's guidelines or when it is deemed unsafe for use by the New Heights Activity Leaders.

#### **Supervision**

- There must be at least 3 qualified instructors with the appropriate training and certification to supervise the 'New Heights' activity. The instructor is responsible for the safety of the children and staff who are visiting the course.
- All activity groups will be accompanied by Cara's who will support and supervise campers during the New Heights Activity. A typical activity group size at camp is made up of 16 children with up to 7 Cara's attached for support and supervision. A minimum of 3 Cara's must be with each activity group at all times and staff must adhere to supervision ratios.
- A minimum of 3 Cara's must be with each activity group at all times A Barretstown Nurse must be on call by walkie talkie at all times during activities

#### Safety Rules

- Closed toed shoes must be worn along with a helmet, chest harness and waist harness.
- Helmets must be worn by everyone standing on the course i.e. interpreters, Cara's etc.
- Participants who are not climbing must not walk on the course while others are climbing. There are woodchips which clearly indicate the boundaries of the course.
- A ratio of 3:20 New Height's staff to campers must be maintained.
- The ropes course is certified for use every year.
- The New Heights Activity leaders are certified every year.
- All summer staff are trained in the use of PPE during staff orientation and prior to each climbing session.

#### **Controlled Access**

- No one is permitted on the ropes course when activities are not in session.
- All equipment is stored in a locked and dry storage unit when activities are not in session.
- All ladders are locked down to a ground anchor and all tracer cords are safely tied off when activities are not in session.





## **Emergency procedures**

#### Fire Alarm

When you hear the fire alarm at the stables the steps you take are very straight forward.

- 1. Ensure all campers are safely off the course before the group begins to move together toward the assembly point
- 2. All but 2 high ropes instructors should escort the group along with the Cara's to the assembly point.
- 3. When arriving at the front of the castle please notify the support team member taking attendance that two of your team has stayed back at the course for safety reasons.
- 4. Line up accordingly and await further instructions from the support team.

#### **Medical Emergency**

In the event of a medical emergency you should;

- 1. Contact the medical centre immediately
- 2. Remove the rest of the group if possible to the low ropes area or dining hall if necessary.
- 3. Remain calm and wait for medical help to arrive.

#### **Missing Camper**

When you hear a call over the walkie talkie that 'the red folder has gone missing' you must;

- 1. Safely ensure all campers are off the ropes course and close down the activity area
- 2. Volunteer Cara's escort the group to the dining hall while the full time staff meet at the cottage coordinators office.
- 3. Check in with the support team and await further instructions

#### Weather condition Emergencies





- 1. Heavy Rain: Take campers off the course and seek cover in the shed. If the rain continues move the group to the all-weather back up location.
- 2. High Winds: Take campers off the course and seek cover in the shed. If the rain continues move the group to the all-weather back up location.
- 3. Ice and heavy frost: Do not use the course if the climbing elements have been affected by snow or ice.

#### **Ropes Equipment**



Ground Anchor's



Tracer Cords



Ladder's



Low stretch static Climbing Rope (50m)





Aluminium Karabiners (Twist Gate and Screw Gate)



Half Gate Karabiner



Steel Karabiner



Gri-Gri



An ATC or Bug



A Sling







PPE Set



Waist Harness



Chest Harness



Helmet



Ground Cables/Runner Cables





#### **Equipment**

During training we ensure all our Instructors are familiar with the equipment used in the New Heights Activity. Staff are trained in the function, construction, inspection and maintenance of such equipment.

**N.B.** Although participants should be familiar with all the equipment used on the ropes course it should be stressed that (due to changing standards and operating procedures) the manufacturers recommendations should always be observed over and above any information given in this document.

#### **Rope**

At this ropes course we use 2 types of rope. The first one is low stretch static rope and the other one is Dynamic rope. The sizes of these ropes are 10.5mm in diameter. Our rope lengths vary depending on the element. We get our rope on drums and cut it to the required length. Ropes are classified as PPE. Knots weaken rope by 25-45% depending on the knot. You can put 4 of the same knot in a rope and it will not weaken the rope by 4 times, just the once. We have all our rope labelled with different coloured tape at the ends. This means we use the same rope for the element all the time and this helps us to **log**(see page ) our equipment.

#### Low Stretch Static rope

We use this rope for the majority of our elements on the course. We use it for the Catwalk, Hi-all aboard, Incline log, Peg climb, Jacobs's ladder, Parafan, Tree climb, Zip line and Minizip line. This rope has a stretch of about 7% under load. All our low stretch rope is white in colour.





#### **Dynamic Rope**

We use dynamic rope on the trapeze element; it's the only element that we use this rope on. This is a red rope and stands out from the rest of the ropes as they are all white. This rope has a stretch of about 14% under load. The reason we use this for the trapeze is that when they jump for the trapeze and if they miss the trapeze, the stretch will be a little bit more thus putting less G-force into their harness and making it a little more comfortable.

#### **Karabiners**

Karabiners are also known as "Krabs" Universal means of attachment.

#### Construction

Karabiners are made of steel or aluminium-alloy. Steel is more appropriate and particularly when in contact with wire rope.

There are a variety of different types such as Screw Gate, Twist lock and half gate karabiner

#### Strengths

The strongest part of the karabiner and where the load should be applied is at the ends of the karabiner along the spine of the karabiner. The gate of the karabiner must be securely locked at all times.

Our karabiners have a breaking load of 2400kg – 2700kg when the Karabiner is locked.

When the karabiner is unlocked it can only hold only 700kg. If the load is on the gate or the opposite side it can only hold 600kg

You should never **3** - way load a karabiner unless designed for that purpose.

#### Screw down and <u>NEVER</u> Screw up

When we are tightening the karabiners we always make sure we are screwing down and never screwing up. We ensure that the karabiner is **gravity loaded** so this means that with the vibrations that the karabiner will tighten and not loosen.

#### Aluminium Screw gate and Twist lock Karabiners

We use these types of karabiners when we are belaying; we commonly use the screw gate more often than the twist lock karabiners. We never use aluminium karabiners on steel wires or on any steel as it would wear the karabiner away very quickly





#### **Steel Karabiners**

Steel Karabiners are generally heavier and are stronger than aluminium karabiners. We only use steel karabiners on steel. We would use them on the Catwalk and Incline Log elements and when we attach the 2 rungs of Jacobs's ladder on.

#### Half Gate karabiners

We use these karabiners when we have to lobster claw (see page ) up the pole to do any maintenance on the course or to set up the parafan or zip-line.

#### **Zip Wire Trolley**

We use this trolley for our mini zip line and our big zip line. This is for 10mm wires and should not be used on any bigger or smaller wires.

#### Slings

We use our slings for our semi-direct belay system. The sling will connect to our harness and then connect to the anchor on the ground. The slings will keep us grounded. We also use our slings to connect our chest harness to our waist harness for the Parafan and Zip line elements. Our slings vary from 15mm to 25mm wide of flat construction. Our slings are pre sewn and the loop sizes are 120cm or 240cm. Slings are usually of Static nature rather than Dynamic. Slings are extremely strong and can hold up to 2500kgs.

#### Inspections, Maintenance & Care

- Should be inspected at the end of every session
- Slings showing wear should be discarded
- Susceptible to same things as rope and should therefore be cared for similarly
- Slings are classified as PPE

#### Harnesses

At Barretstown we have 2 different types of harnesses. We have a Chest harness and a Waist harness

#### Construction

• Our harnesses are made from sewn broad tape and have buckles to adjust size

#### **Use of Harnesses**





• At Barretstown when belaying the campers we use a waist harness in conjunction with a chest harness to eliminate inverting and risks associated with inversions

# **Ropes Elements**



The Catwalk





The Incline Log



The Jacob's ladder



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The High All-Aboard







Storage Shed





#### The Climbs

The 'New Heights' course at Barretstown is 40ft high structure mainly comprised of vertical wooden poles. The course is used as part of Barretstown's Therapeutic recreation programme whereby campers and adults are given the opportunity to challenge themselves through partaking in an activity. This activity presents many different challenges to participants and like all activities here at Barretstown it is operated under the 'challenge by choice' principle. The emotional safety of both campers and adults is equally as important as their physical safety when at Barretstown. At the 'New Heights' course we can offer both campers and adults the opportunity to try a potentially difficult and/or frightening challenge in an atmosphere of support and care. We also recognise the individual successes which occur at an activity like this. Everything from putting on a helmet, to climbing the ladder, to jumping for the trapeze is recognised and supported.

The course has 7 different climbs and offers a choice of multi-participant elements and individual elements.

- The Incline Log (Primarily an individual element)
- The Catwalk (Primarily an individual element)





- The Trapeze (An Individual element)
- The Peg Climb (An Individual element)
- The Powerfan (An Individual element)
- The High All-Aboard (Multi-participant element)
- The Jacob's ladder (Multi-participant element)

Below is a description for all the elements at Barretstown and things to be considered when working on the course. The equipment used to set up all the elements is kept in a dry storage shed located at the course and is recorded after every use. It is important when dealing with personal protective equipment (PPE) and climbing equipment that the manufacturer's specifications are adhered to with regard to proper storage and the lifespan of equipment. On average harnesses need to be replaced every 3 years as do the climbing ropes we use on the course but these timelines may vary.

#### The Incline Log

Set-Up:
1 x Steel Karabiner
1 x Sling
2 x Aluminium Karabiners
1 x Belay device (an ATC or a Gri-Gri)
1 x Low Stretch Static Climbing Rope (50mts)
1 x Chain Hoist

#### **Description: (Photo's attached)**

- The Incline log is lowered using the chain hoist right to the ground. Where the log meets the ground is the starting point for the climber.
- On this element the instructor is using a semi direct belay system and will move along with the climber as the traverse across the incline log and the wire cables.
- The climber will use the staples to climb from the end of the log to the wire cable. Once at the cable they will traverse back across in the direction they came up the log using the static rope on the course for balance (not their own climbing rope)





- The final part involves climbing up the staples to the second wire cable and traversing across again using the hanging vines for balance. Once the climber has traversed the whole distance across they are asked to return to the middle of the wire cable to be lowered down.
- A climber can be lowered at any point if they feel like they do not want to continue.

- On this element the instructor will be moving on the ground while the climber is traversing the course. It is important to make sure the climbers rope does not become tangled on the ground.
- Instructors should be in constant communication with the climber. This will give them a good indication of the comfort levels of the climbers as they climb the course.
- When lowering the climber to the ground; make sure you lower them down on your side of the wire cables and incline log. Before the climber sets off be sure to remind them of this so that they can look out for it when they are descending. Lower the climber in a controlled manner.

#### The Catwalk

#### Set-Up:

x Steel Karabiner
 x Sling
 x Aluminium Karabiners
 x Belay device (an ATC or a Gri-Gri)
 x Low Stretch Static Climbing Rope (50mts)

#### **Description: (Photo's attached)**

- A ladder is used on this element to get the climber to the first log of the Catwalk. From there they will be able to use the staples to climb higher up the course once they have traversed across. It is important that the instructor moves at the same pace as the climbers to avoid a dragging sensation for the climber.
- On this element the instructor is using a semi direct belay system and will move along with the climber as they traverse across the logs.





- There are three logs at different heights on this element. Each log is 10ft apart. Once the climber has traversed across the third log the element is finished and then they are asked to return to the middle of the log to be lowered down.
- A climber can be lowered at any point if they feel like they do not want to continue.

- On this element the instructor will be moving on the ground while the climber is traversing the course. It is important to make sure the climbers rope does not become tangled on the ground.
- Instructors should be in constant communication with the climber. This will give them a good indication of the comfort levels of the climbers as they climb the course.
- When lowering the climber to the ground; make sure you lower them down on your side of the logs. Before the climber sets off be sure to remind them of this so that they can look out for it when they are descending. Lower the climber in a controlled manner.

# The High All-Aboard

#### Set-Up: (per climber)

- 1 x Ground anchor
- 1 x Sling
- 2 x Aluminium Karabiners
- 1 x Belay device (an ATC or a Gri-Gri)
- 1 x Low Stretch Static Climbing Rope (50mts)

#### **Description: (Photo's attached)**

• A ladder is used on this element to get the climber to the first climbing peg of the High All-Aboard pole. From there they will be able to climb higher up the pole. The instructor **will not be moving** with the climber this time as they are attached to a ground anchor through a semi direct belay system.





- Once the climber has reached the flat board on top of the pole they can climb up and stand on the board. If there is more than one climber participating then they should only start to climb once the previous climber is safely standing on the board.
- This activity can cater for up to 4 climbers at a time. Each of them is belayed from a different ground anchor. At Barretstown we have found that because of the number of instructors working on the course you will realistically get two people up at most while other elements are open.
- A climber can be lowered at any point if they feel like they do not want to continue.

- On this element the instructor will be belaying from a fixed ground anchor.
- Instructors should be in constant communication with the climber. This will give them a good indication of the comfort levels of the climbers as they climb the course.
- When climbers are ready to come down ask them to step off toward you at the corner of the board. This will prevent a pendulum swing when they step off. Lower the climber in a controlled manner.

# The Trapeze

#### Set-Up:

- 1 x Ground anchor
- 1 x Sling
- 2 x Aluminium Karabiners
- 1 x Belay device (an ATC or a Gri-Gri)
- 1 x Dynamic rope (50mts)

#### **Description: (Photo's attached)**

A ladder is used on this element to get the climber to the first climbing peg of the Trapeze pole. From there they will be able to climb higher up the pole. The instructor will not be moving with the climber this time as they are attached to a ground anchor through a semi direct belay system.





- Once the climber has reached the top of the pole they must try to stand up on the pole and get themselves into a steady position. When they are ready to jump for the Trapeze bar they count down 3, 2, 1 and then jump.
- As the climber jumps to catch the bar the instructor will take in any slack which appears in the rope. This prevents the climber from dropping a few meters should they miss the Trapeze bar.
- A climber can be lowered at any point if they feel like they do not want to continue.

- On this element the instructor will be belaying from a fixed ground anchor.
- Instructors should be in constant communication with the climber. This will give them a good indication of the comfort levels of the climbers as they climb the course.
- It is important for the climber to count down their jump so the instructor in ready to take in the slack on the rope. Once the climber is ready to come down they simply let go of the bar and are lowered down in a controlled manner.

# The Jacob's Ladder

#### Set-Up: (per climber)

- 1 x Ground anchor
- 1 x Sling
- 4 x Steel Karabiners (to attach extra ladder rungs)
- 2 x Aluminium Karabiners
- 1 x Belay device (an ATC or a Gri-Gri)
- 1 x Low Stretch Static Climbing Rope (50mts)

#### **Description: (Photo's attached)**

• Attach the bottom two rungs of the ladder to allow campers to climb. The instructor **will not be moving** with the climber this time as they are attached to a ground anchor through a semi direct belay system.





- On this element up to 4 climbers can go at the same time, 2 on either side of the ladder. This is a team challenge so climbers are allowed to help each other up the rungs but they must not grab each others climbing ropes.
- The objective is to get all climbers to the top rung of the ladder. The can do this by using each other for balance, lifting each other up or pulling each other up. The further up the ladder the group of climbers go the further apart the rungs of the ladder are. This makes the climb more difficult the higher they go.
- A climber can be lowered at any point if they feel like they do not want to continue.

- On this element the instructor will be belaying from a fixed ground anchor.
- Instructors should be in constant communication with the climber. This will give them a good indication of the comfort levels of the climbers as they climb the course.
- When lowering the climbers be sure to lower them one at a time so that climbing ropes don't get tangled. Lower the climber in a controlled manner. Once you are finished with the element be sure to detach the bottom rungs of the ladder to ensure no one can use it when the course is closed.

#### The Peg Climb

#### Set-Up:

- 1 x Ground anchor
- 1 x Sling
- 2 x Aluminium Karabiners
- 1 x Belay device (an ATC or a Gri-Gri)
- 1 x Low Stretch Static Climbing Rope (50mts)

#### **Description: (Photo's attached)**

• The climber decides how many pegs to use before they start. Once they have chosen their amount they can start from the very bottom. The pegs are always stored in the locked shed to prevent people using the element when the course is closed. The





instructor **<u>will not be moving</u>** with the climber this time as they are attached to a ground anchor through a semi direct belay system.

- The climber climbs the pole using the pegs for his/her hands and feet. They must bring the pegs with them as they climb. Once at the top the climber can sit on the flat board or stand on it. When they are ready to come down they simply step off.
- When the climber is at the top they can simply drop their pegs to one side of the pole once the instructor says it's safe to do so. They can then be lowered down.
- A climber can be lowered at any point if they feel like they do not want to continue.

# Considerations

- On this element the instructor will be belaying from a fixed ground anchor.
- Instructors should be in constant communication with the climber. This will give them a good indication of the comfort levels of the climbers as they climb the course.
- When climbers are ready to come down ask them to step off toward you at the corner of the board. This will prevent a pendulum swing when they step off. Lower the climber in a controlled manner.

# <u>PPE orientation – sign off list</u>

Staff	Name	Date of Orientation	Orientation	Signature
(printed)			completed	
			(Please tick	
			accordingly)	
			Yes No	





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Yes No
Yes No

This document indicates that the names listed above have been through the Personal Protective Equipment Orientation at the ropes course and have been shown the proper procedure when getting all items of PPE onto and off of campers who attend the activity.

#### **Equipment log – Per season**

	Session	Total						
	1	2	3	4	5	6	7	
Powerfan								
Jacobs Ladder								
All Aboard								
Trapeze								
Catwalk								
Incline log								





Peg Climb				
Tree Climb				
Kit 1				
Kit 2				
Kit 3				
Kit 4				
Kit 5				
Kit 6				
Kit 7				
Kit 8				
Kit 9				
Kit 10				
Kit 11				
Kit 12				
Kit 13				
Kit 14				
Kit 15				
Kit 16				

# **Ropes log – Per session**

Day/Block	Parafan	Trapeze	Catwalk	Incline	Peg	Tree	All	Jacobs Ladder
				Log	Climb	Climb	Aboard	
<b>Wednesday</b>								
Block 1 + 2								
Block $3 + 4$								
<b>Thursday</b>								
Block 1 + 2								
Block $3 + 4$								



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<u>Friday</u>				
Block $1+2$				
Block $3 + 4$				
<b>Saturday</b>				
Block $1+2$				
Block $3 + 4$				
Sunday				
Block $1+2$				
Block $3 + 4$				
<b>Monday</b>				
Block $1+2$				
Block $3 + 4$				
<b>Tuesday</b>				
Block $1+2$				
Block $3 + 4$				
Wednesday				
Block $1+2$				
Block $3 + 4$				
Total				

# <u>Kit log – per session</u>

		r		r	r	r		r								
Day/Block	Kit															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<u>Wednesday</u>																
Block $1+2$																
Block $3+4$																
<b>Thursday</b>																
Block $1+2$																



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-			 					
Block $3 + 4$								
<u>Friday</u>								
Block $1+2$								
Block $3+4$								
<u>Saturday</u>								
Block $1+2$								
Block $3 + 4$								
Sunday								
Block $1+2$								
Block $3+4$								
Monday								
Block $1+2$								
Block $3+4$								
Tuesday								
Block $1+2$								
Block $3 + 4$								
<u>Wednesday</u>								
Block $1+2$								
Block 3 + 4								
Total								

