# Exercise Accumulate

* + 1. **Pre-requisites.**  This is an outdoor, first-class cadet consolidation exercise, requiring the full teaching of the following subjects:
       1. Radio communications
       2. Map reading
       3. HeartStart
       4. The Royal Air Force
       5. Initial expedition training
       6. Basic pioneering (cadets will need to construct a Spanish Windlass lashing – lesson plan at Annex B)
    2. **Time.** 1 x 90 minute session
    3. **Location.** This exercise should take place over four locations:
       1. HQ/briefing area
       2. Casualty receiving centre – at least 50m square and flat
       3. Cache
       4. Pick-up point A – ideally by a river
       5. Pick-up point B – ideally

All locations should be around 500m from one another, and joined by easily passable and navigable paths.

* + 1. **Personnel.** 
       1. *Cadets.* A minimum of six cadets.
       2. *DS.* At least one CFAV or Cdt SNCO to act as exercise controller (EXCON) and one to act as logistics DS. As this can be a complex exercise additional DS may be useful.
    2. **References.** Nil
    3. **Dress.** No 3
    4. **Stores.**

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| * + - 1. Tent | *1 per 3 cadets* |
| * + - 1. Radios | *1 per 3 cadets, plus 1 for EXCON* |
| * + - 1. Torch (if conducted during hours of darkness) | *At least 1 per 3 cadets* |
| * + - 1. Stretcher | *1* |
| * + - 1. Casualty mannequin | *At least 1* |
| * + - 1. Broomstick to act as an antenna | *1* |

* + - 1. All equipment listed on the mast instructions (Annex A)
      2. Cadets are to carry notepads and pens
    1. **Preparation.**
       1. Check operation of radios
       2. Check pioneering kit
       3. Check other stores
       4. Create cache (tents and stretcher)
       5. Place casualty
    2. **Revision.**
       1. Map scales
       2. DRABC
       3. Tent pitching principles

#### Brief

* + 1. ***Objectives*.** This exercise provides a framework to practise a combination of skills from first class training, including:
       1. *Map reading*
       2. *Initial expedition training*
       3. *Radio communications*
       4. *First aid*
       5. *Security*
       6. *Basic pioneering*
    2. ***Situation.*** The civil war in Birmingham has caused a severe humanitarian situation. Refugees are leaving the city in large numbers, with some using the river to flee to Marlborough – this is severely stretching local authorities and has led to lawlessness. You are part of a UN force deployed to the country as part of a stabilisation operation.
    3. ***Mission.*** You are to ESTABLISH a casualty receiving centre with helicopter handling facilities in order to PROVIDE basic care and casualty forwarding.
    4. ***Execution.***
       1. *Concept of operations.* 
          1. UNHQ have provided a cache of useful equipment to assist with this task.
          2. You are to establish a casualty receiving facility including:

Basic shelter for refugees

An area to land Puma helicopters

A mast to mount the supplied antenna

* + - * 1. Once the facility has been set up, you are to report to UNHQ and await further orders.
      1. *Coordinating instructions*
         1. Cache is at [cache grid ref]
         2. The Puma requires an open area of 50m in diameter, with a flat, hard ground area 35m in diameter.
         3. The mast is to be built according to the supplied instructions.
      2. *Administration and logistics.* 
         1. The team is to carry the following:

All radios

The equipment listed on the mast instruction sheet (Annex A)

The antenna

Each cadet is to carry a notepad and pen

Torches (if issued)

* + - 1. *Command and signal*
         1. Radios are to be set to \_\_\_\_\_\_\_\_\_\_
         2. Standard squadron callsigns are to be used, appended as follows:

Excon SUNRAY

UNHQ STARLIGHT

Cadet team is to be MIKE-ONE. If splitting into teams, then additional teams are to be MIKE-TWO, MIKE-THREE, etc.

* + 1. **Conduct.** Once the cadets have set up the facility using the tents and pioneering kit, a radio message is to be sent to the effect that a casualty has arrived at pick-up point A. An additional casualty can be positioned at pick-up point B. Walking wounded can also be included depending on numbers available. Casualties should include non-breathing and breathing-unresponsive.
  1. to Exercise ACCUMULATE

### Mast instructions

Spanish windlass lashings

Guy lines (x3)

**Equipment**

3 x small pine poles

3 x 10ft ropes

3 x tent pegs

5 x 3 ft ropes

2 x 6” dowels

* 1. to Exercise ACCUMULATE

#### Spanish Windlass Lashing Lesson

1. **Time.** 1 x 40 minute period
2. **References.** Nil
3. **Stores.** 
   1. Lengths of cord for knot tying practice*2 per student and 4 per demonstrator*
   2. Thin pine poles *1 per student and 2 per demonstrator*
   3. 6" rods for tensioning lashings *1 per student and 2 per demonstrator*
4. **Preparation.** Lay out helmets, poles, rods and rope lengths ready for issue
5. **Introduction.** *Explain.* Lashing is a technique for joining rigid objects together, and can be broken down into two broad categories:
   1. *In-line.* In-line lashing is the joining of two objects together to form a continuous line.
   2. *Angle.* Perpendicular lashing is the joining of two objects at a significant angle to each other.

This lesson covers in-line lashing.

1. **Objectives.** By the end of this lesson, you are to demonstrate:
   1. Tying a reef knot
   2. Joining two poles together using a Spanish Windlass lashing
2. **The sheet bend.** *Explain and demonstrate.*The sheet bend is used to join two lines together – it can be used on lines of differing thickness if needed.
   1. Create a bight in the end of one of the ropes to be tied.
   2. Take the second rope and tuck it up through the bight.
   3. Pass the working end beneath the bight.
   4. Tuck the working end beneath itself in such a way that both short ends are located on the same side of the completed knot

*Practise tying sheet bends.*

1. **The reef knot.** *Explain and demonstrate.*  The reef knot is a versatile binding knot – note that it should never be used as a bend (to join two lines together) as it is insufficiently stable.
   1. Bring two ends of the same cord together, in this case left over right.
   2. Tie a half-knot and see how the two entwined knot parts spiral to the left, anticlockwise.
   3. Bring the two ends back together, but this time right over left.
   4. Tie a second half-knot. Note that the two entwined parts helix to the right, anticlockwise the opposite of the first half-knot

*Practise tying reef knots.*

1. **Spanish windlass lashing.** *Explain and demonstrate.* The Spanish windlass is a technique for tightening a rope, which can be used to in-line lash two or more poles or planks together.
   1. *Principles. Explain.* The key to successful in-line lashing is to provide:
      1. Multiple joining points
      2. High tension on the joining ropes/cords
   2. *Step 1.* Position the objects to be joined together with an overlap of 10-20% of the total length of the longest, in a position where all sides can be easily accessed – prop them up if necessary.
   3. *Step 2.* Tie a loop (joining with a sheet bend) around the two objects to be joined close to the end of the overlap, and insert a tensioning rod into the loop.
   4. *Step 3.* Turn the tensioning rod to tighten the rope.
   5. *Step 4.* Tie the tensioning rod into place to prevent it from moving, using a reef knot.
   6. *Step 5.* Repeat steps 2, 3 and 4 at the other end of the overlap).
   7. *Single lashing.* If only tying one lashing, it should be at the end of the overlap nearest the end of the lower plank.
   8. *Smooth lashing.* If a smooth underside/top-side is required, the tensioning rods can both be placed on the same side of the plank, although it may require a longer overlap.
2. *Practice lashing on the pine poles*
3. **End of lesson drill.**
   1. *Summary of key points.* When lashing in-line, overlap and tension are required for a good join
   2. *Questions to and from the class*
   3. *Final practice if time permits*
   4. *Look forward to next lesson*

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| Reef knot | Square knot.svg  Sheet bend |

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| Lashing Step 1  In-line lashing step 1 | Lashing Step 2  In-line lashing step 2 |
| Lashing Step 3  In-line lashing step 3 | Lashing Step 4  In-line lashing step 4 |
| Lashing Step 5  In-line lashing step 5 | Lashing Finished  In-line lashing finished (repeated on other side) |