



# **Navigation for Paddlers**

## **Sample Programme and Session Plans**

## **BCAB Navigation for Paddlers Module**

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This document provides an example of the British Canoeing Awarding Body (BCAB) Navigation module and the accompanying plans for the 6 activities.

Tutors are required to obtain, understand and consider the participants' current understanding, knowledge, and the craft and environment that they paddle. This can be done prior to activity 1 through introductions or part of a more formal process.

#### **Notes:**

1. Tutor to participant ratio is maximum 1:8.
2. A [module specific eLearning](#) is also available to learners, which could be considered as an appropriate method of a learner accessing the information or used to compliment delivery.
3. Tutors are required to consider the aspirations of the learners and develop their knowledge appropriately in the context of where they are paddling. For aspirants Leaders that want to operate on the sea, additional methods and practices may need to be covered.
4. If delivering using a blended approach, (on and off the water), Tutors are required to obtain an understanding of water confidence and ability in the environment that will be used. This can be done through introductions or part of a more formal process.

The main focus for the Tutor is to ensure all participants are able to contribute, explore and practice. The 3-hour module does not take into account introductions, information gathering, administration, or any logistics, the timings provided are for the delivery of the activities.

All activities are interactive sessions, discussing and using resources, exploring and practising the knowledge to better understand on and off the water navigation techniques and strategies to aid decision making and planning.

### **Participant prerequisites**

- There are no prerequisites for this module.
- Tutors should check participants' suitability to attend the course, as well as having appropriate mechanisms for anyone under 18.

### **Venue**

The Navigation for Paddlers module can be delivered online, blended or face to face, of which tutors should ensure all participants are able to engage throughout.

### **Course duration**

The Navigation for paddlers module is a minimum of a 3-hour programme that consists of 6 activities, which can be delivered in one session or modularly.

## Navigation for Paddlers Module

Activity	Time	Activity Outline
<a href="#">Activity 1</a>	45 minutes	Introduction <ul style="list-style-type: none"> <li>• How navigation fits into trip planning</li> </ul>
<a href="#">Activity 2</a>	30 minutes	Navigation by expectation - handrailing <ul style="list-style-type: none"> <li>• What is handrailing and how is it used on the water</li> <li>• Resources for planning</li> <li>• Applying it in different environments</li> </ul>
<a href="#">Activity 3</a>	25 minutes	Collecting features and estimating time <ul style="list-style-type: none"> <li>• Collection features and their use estimating time when paddling</li> <li>• Working out paddling speeds</li> </ul>
<a href="#">Activity 4</a>	25 minutes	Aiming off and attack points <ul style="list-style-type: none"> <li>• Aiming off and attack points and their combined use on the water</li> </ul>
<a href="#">Activity 5</a>	25 minutes	Bearings and grid references <ul style="list-style-type: none"> <li>• What is a bearing and how do we use them</li> <li>• What is a grid reference</li> </ul>
<a href="#">Activity 6</a>	30 minutes	Short crossings in tidal waters <ul style="list-style-type: none"> <li>• Where and when might we need to do this and how we will achieve it</li> </ul>

## Navigation for Paddlers Module

### Activity 1

<b>Activity Title:</b>	Introduction
<b>Time:</b>	45 minutes
<b>Activity Outline:</b>	
<ul style="list-style-type: none"> <li>• How navigation fits into trip planning</li> <li>• Planning for navigation - off the water</li> </ul>	
<p><b>Delivery:</b> This module is designed to be activity based, with practical tasks and examples - these can be found in the eLearning module or Providers can produce their own materials and resources. It is envisaged that the following will be covered through blended learning, rather than several standalone individual sections. How the activities are blended will be dependent on the experience and outcome requirements of the group.</p> <p><b>How navigation fits into trip planning:</b></p> <p>Suggested activity to set the scene. Put the follow list in order of importance:</p> <ul style="list-style-type: none"> <li>• Weather</li> <li>• Type of craft paddled</li> <li>• Experience of group</li> <li>• Experience of leader</li> <li>• Fitness</li> <li>• Difficulty of launching and landing</li> <li>• Number of places to buy ice cream and coffee</li> <li>• Toilets</li> <li>• Car parks</li> <li>• Nature</li> </ul> <p>There are no wrong answers, the list can be in any order, however, some may need more thought through than others Learners need to understand that before we learn about navigation, we need to understand the factors that will impact or guide our decisions of where we might paddle. Essentially what do we want out of</p>	

our day?

Question the group, consider where learners are currently getting their information to aid with trip planning? Fill gaps in knowledge and share potential examples:

- OS Maps
- Nautical Charts
- Guidebooks
- Apps - Navionics, Boaty, Tides Planner etc.
- Memory Map Online - Charts
- Google maps
- Bing Maps

Suggested Activity - Scenario based exercise.

The Navigation for Paddlers eLearning uses Derwent Water.

Scenario.

The group: 4 friends all relatively new to paddling. Two paddle SUPs and two paddle Sit on Top kayaks. They all have buoyancy aids and waterproof pouches for their phones and they paddle in shorts and t-shirts unless it's cold and then they put on a sweatshirt.

The weather: It is a sunny Spring Day in mid-March and there is a fresh southerly breeze gusting to Force 4.

The venue: The group checked the Go Paddling website and decided that they wanted to paddle around Derwent Water in the Lake District as none of them had paddled there before.

Navigation experience: One of the group has completed their bronze DofE 10 years ago and has google maps on their phone.

Possible questions to explore with the group:

- Does this seem like a sensible trip?
- What are the factors or considerations?
- If you are advising against the trip, what needs to change to make it a viable trip?

This is an example. Tutors can use the Go Paddling website to identify a trip suitable for the group. This might be an actual trip the group may complete or an entirely fictional trip.

## Navigation for Paddlers Module

### Activity 2

<b>Activity Title:</b>	Navigation by Expectation - handrailing
<b>Time:</b>	30 minutes
<b>Activity Outline:</b>	
<ul style="list-style-type: none"> <li>• What is handrailing and how is it used on the water</li> <li>• Resources for planning</li> <li>• Applying it in different environments</li> </ul>	
<b>Delivery:</b>	
<p>It is envisaged that the following will be covered through the exploration of practical examples.</p> <p><b>What is handrailing and how is it used on the water:</b></p> <p>Learners understand handrailing is the identification of key points along a trip so you know where you are throughout the journey. This can be useful in an emergency situation where you have to get off the water unexpectedly and need to know where you are. More typically, it helps us enjoy our trip by identifying points of interest, places to stop for lunch, toilets, car parks etc.</p> <p><b>Resources for planning:</b></p> <p>Suggested Activity</p> <p>Planning has to start somewhere and the internet is a great place to start. Introduce learners to the Go Paddling website, if not already familiar, and identify a trip the group might like to do.</p> <p>Using an online OS mapping site e.g., Bing Maps, the group can identify key identification features to create a navigational story for that trip.</p>	



**Applying it in different environments:**

Suggested Activity

Following on from the above activity, pick a contrasting trip to compare. In the Navigation for Paddlers eLearning, the examples given are a river trip and a coastal out and back trip to contrast.

Note: Tutors are to put the “reality” into the conversations depending on the experience of the group. For example, on a river, it may have high tree lined banks so identifying something like a church spire 1km from the river, on paper might look idea, but in reality may not be visible from the water. Whereas a bridge over the river is almost impossible to miss.

## Navigation for Paddlers Module

### Activity 3

<b>Activity Title:</b>	Collecting features and estimating paddling time
<b>Time:</b>	25 minutes
<b>Activity Outline:</b>	
<ul style="list-style-type: none"> <li>• Collection features and their use estimating time when paddling</li> <li>• Working out paddling speed</li> </ul>	
<b>Delivery:</b> It is envisaged that the following will be covered through the exploration of practical examples.	
<b>Collection features and estimating time:</b>	
<p>Collection Feature - a really obvious (almost) impossible feature to miss, such as a bridge over a river, the London Eye on the Thames, etc. These are great as they let you work out exactly where you are but you can also use them to work out how fast you are traveling in real time and compare it to your planned estimated travel time.</p> <p>Suggested activity:</p> <p>You are paddling as a group down a canal. Your planning has told you there is only 1 bridge on this section and that is 2 km from your launch point.</p> <p>It takes you 30 mins to reach the bridge - how fast are you traveling?</p> <p>The whole trip is 10 km and you've planned for a 30 min break. What time will you arrive at the get out point if you launched at 10am?</p> <p>Note: A good habit to get into is to review your trip timings - you might have estimated that the group would travel at 2 km per hour - which would double the amount of time taken for the trip.</p>	

## Working out paddling speed

### General Estimates of Speeds and Distances to help with planning

#### Speeds

- New paddlers - general purpose SUPs, kayaks and canoes - approximately 2-3 km per hour.
- Weekend paddlers that paddle once or twice a month - general purpose SUPs, SoT kayaks and canoes - approximately 4 km per hour.
- Keen paddlers out once a week in or on touring/expedition craft i.e sea kayaks, touring/race SUPs, tandem canoes - approximately 5-6kmph.

#### Distance

- New Paddlers - 6 - 10km
- Weekend Paddlers - 8 - 15 km
- Keen Paddlers - 20+ Km

This is a very rough guide - distances and speeds will be determined by individual and group trip objectives. For example on a really fun, intricate section of coast with lots of rocks, caves and gullies to explore - an experienced group of sea kayakers might take 3 hours to paddle 3 km. On another day the same group might do a 40 km open crossing to an offshore island.

NOTE: don't forget your speed will be affected by wind and tide in coastal areas - revisit the tides and weather module to help with your planning.

### Suggested activity based on the above information:

A new paddler paddles for 2 hours. What is the approximate expected distance paddled with no help or hinder from tides or wind?

How far would an experienced fit paddler travel at the same time?

What might you need to consider if you had the two types of paddler on the same trip?

Possible areas to explore:

The new paddler gets exhausted or put off paddling trying to keep up.

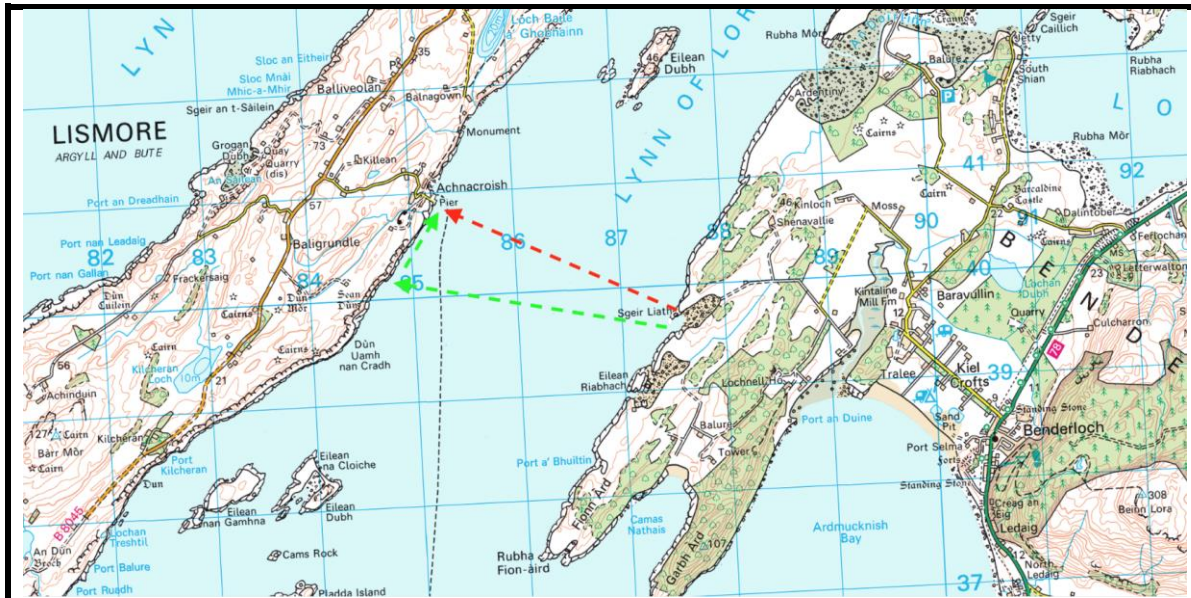
Experienced paddler gets bored.

The group gets split (rarely a good idea).

## Navigation for Paddlers Module

### Activity 4

<b>Activity Title:</b>	Aiming off and attack points
<b>Time:</b>	25 minutes
<b>Activity Outline:</b>	
<ul style="list-style-type: none"> <li>• Aiming off and attack points and their combined use on the water</li> </ul>	
<b>Delivery:</b>	
<p>It is envisaged that the following will be covered through the exploration of practical examples.</p> <p><b>Aiming off and attack points and their combined use on the water:</b></p> <p>Suggested Activity - this resource is available on the Navigation for Paddlers eLearning. Providers can use the following example or create their own material based on the group's experience and needs.</p> <p>When crossing sections of open water, it can be really useful to have something to aim for. This is called an attack point or feature - something to head for and keep you on track.</p> <p>In the example below, we have just finished lunch on the beach at Sgeir Laith and want to cross to the pier at Achnacroish on Lismore.</p> <p>This is where aiming off is really useful (the green dotted arrows). We could take a bearing that will deliberately put us to the South of the pier. Meaning that when we arrive at the island we turn right and follow the coast until we find the pier.</p>	



### Applying the principle:

Plan a trip using the following information.

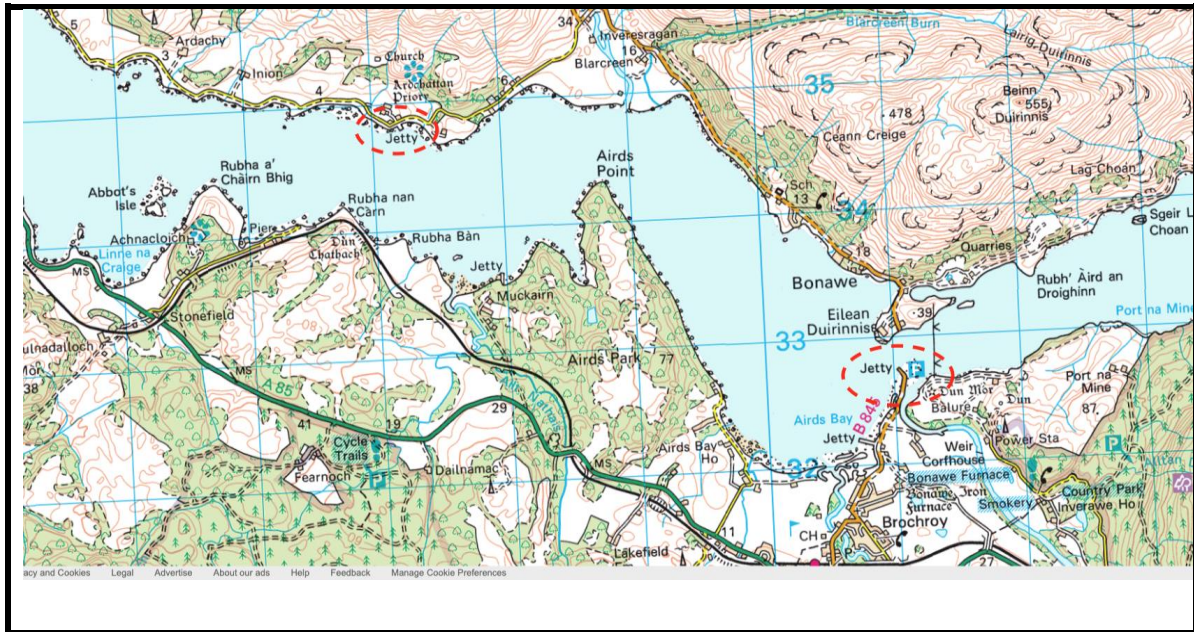
Weather - dry with light winds

Tide - little to no tide

Group - Weekend paddlers in/on general purpose craft.

Launch and land from the jetty in Airds Bay - make a crossing to Ardchattan, around Abbot's Isle and return to the start.

- What would be your navigational strategies?
- How long will the trip take?
- How far is the trip?





## Navigation for Paddlers Module

### Activity 5

<b>Activity Title:</b>	Bearings and Grid references
<b>Time:</b>	25 minutes
<b>Activity Outline:</b>	
<ul style="list-style-type: none"> <li>• What is a bearing and how do we use them?</li> <li>• What is a grid reference</li> </ul>	
<b>Delivery:</b> It is envisaged that the following will be covered through the exploration of practical examples.	
<b>Activity:</b>	
<p>Providers to facilitate a discussion of the need for bearings and grid references in the time of electronics, GPS and the internet. Phone/watch location, what3words and postcodes have replaced the need to provide grid references in an emergency. Modern GPS with real time location features have largely supplanted the need to take bearings and use compasses.</p> <p>Discuss with the group why we should learn this. Possible answers could include that people paddle to get away from technology, batteries die and devices get lost or broken. It would be useful to have back up skills, these skills help with the planning of more complex trips and open crossings. Ultimately it is for individuals to decide how they want to navigate on the water.</p>	
<b>Taking a bearing</b>	
<p>This is best explored with a practical demonstration followed by an opportunity for learners to try for themselves.</p> <p>Providers to ensure that they cover both:</p> <ul style="list-style-type: none"> <li>• Taking a bearing on a map</li> <li>• Using a compass to take a bearing on the ground</li> </ul>	

**Grid references**

This is best explored with a practical demonstration followed by an opportunity for learners to try for themselves. Four figure and six figure grid references should be explored with the learners.



## Navigation for Paddlers Module

### Activity 6

<b>Activity Title:</b>	Short crossings in tidal waters
<b>Time:</b>	30 minutes
<b>Activity Outline:</b>	
<ul style="list-style-type: none"> <li>Where and when might we need to do this and how we will achieve it.</li> </ul>	
<b>Delivery:</b> It is envisaged that the following will be covered through the exploration of practical examples. This is an introduction to the notion that we, as paddlers, may encounter areas of tidal flow we need to cross, rather than paddle, with or against. This is covered in the <a href="#">Tides Module</a> .	
<b>Suggested Activity</b>	
<p>Work through the example on the navigation for paddlers e-learning module to check current level of knowledge and understanding - providers to complete any gaps in current understanding.</p> <p>Applying the knowledge...</p> <p>Then using a range of charts and maps invite learners to plan (with support if needed) a couple of short crossings making sure they are able to:</p> <ul style="list-style-type: none"> <li>Identify a setting off point (possibly a grid reference)</li> <li>the distance to their destination</li> <li>how long it will take</li> <li>a course to steer (bearing)</li> <li>Any previously covered navigational techniques i.e, aiming off, collecting features etc.</li> </ul>	