

# *Non-technical skills for chainsaw operations*

Safety in the forestry context

*Non-technical skills: the social  
(interpersonal) and cognitive (thinking) skills  
necessary for safe and effective work  
performance*

The skill categories and elements presented here were developed via an interview study with 25 UK chainsaw operators, supervisors & managers.

The following pages will present each skill category and associated elements.

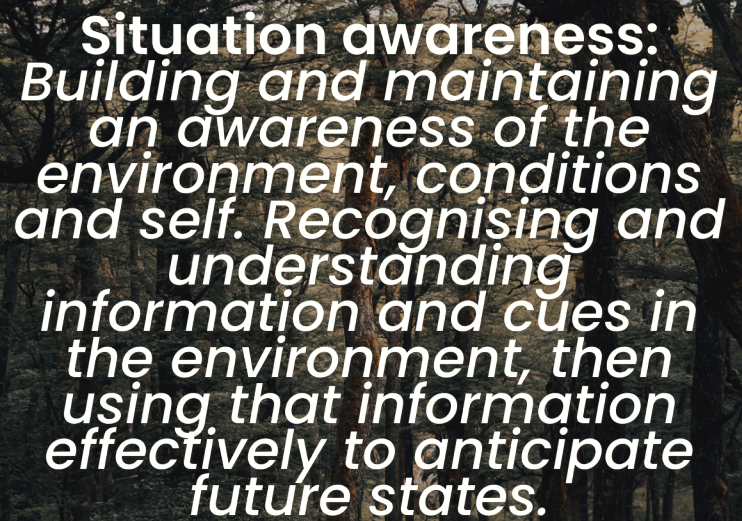
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**Gathering information:** Seeking information relevant to the worksite, planned workforce and felling operation.

**Understanding the situation:** Recognising and interpreting environmental cues to develop an accurate mental picture of the situation that enables appropriate action (e.g. recognises tree is rotten).

**Anticipating future events:** Predicting what might happen next according to both action and in-action (e.g. predicting direction of tree fall).



**Situation awareness:**  
*Building and maintaining an awareness of the environment, conditions and self. Recognising and understanding information and cues in the environment, then using that information effectively to anticipate future states.*



**Decision-making:** *Reaching an appropriate judgement about a situation, selecting the most appropriate actions and managing risk.*

**Managing risk:** Evaluating a situation to identify potential risks and hazards, then acting to mitigate or remove those hazards to facilitate safe working (e.g. close work zone to public)

**Identifying and selecting options:** Generating and evaluating multiple potential options in order to select the safest, and most appropriate, course of action. (e.g. selects appropriate cutting technique)

**Providing and maintaining standards:** Supporting safety through ensuring protocols are adhered to, safety equipment is present and work is of a good quality (e.g. ensures PPE is present and worn).

**Planning:** Developing strategies and methods to achieve task completion, and protect worker safety, prior to the start of each activity (e.g. plans access routes, communication techniques for remote locations).

**Preparing:** Activities to ready self and worksite for operations (e.g. assembles critical equipment)

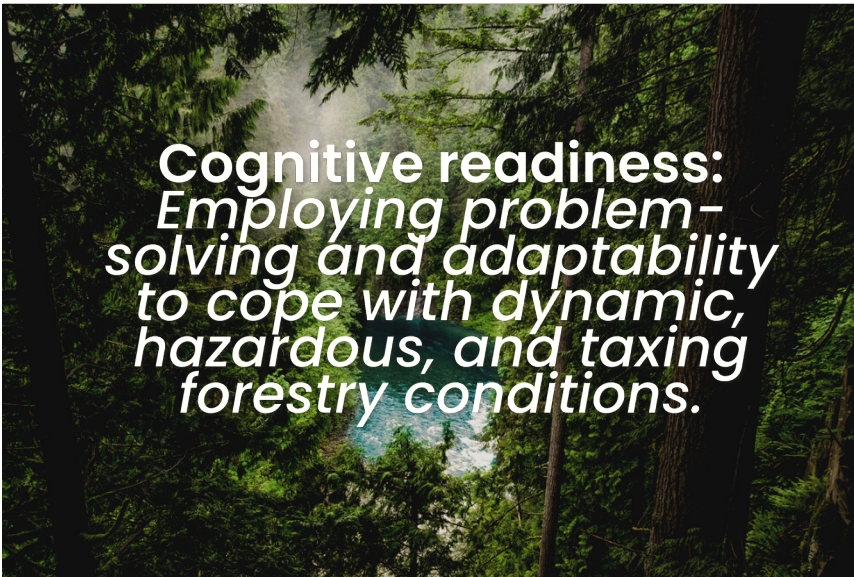


**Task management:**  
*Organising activities and resources to maintain safety and quality standards. Planning and preparing for a task ahead of time.*



**Adapting to conditions:** Altering actions to suit changes in the environment, ability to switch focus and activity both in response to environment and in order to achieve goal (e.g. alters planned cut to suit tree conditions)

**Applying problem-solving:** Identifying an issue within felling operations and applying multiple approaches / using a range of equipment, to find a safe solution.



**Cognitive readiness:**  
*Employing problem-solving and adaptability to cope with dynamic, hazardous, and taxing forestry conditions.*



**Teamwork & communication:** *Sharing information, goals and understanding to facilitate working well with others. Combining activities and effort to reach a shared goal safely and effectively.*

**Co-ordinating with others:** Working successfully with others to achieve a shared goal (e.g. coordinating banks people and chainsaw operators).

**Sharing tasks / supporting teammates:** Interacting with others to ensure tasks are shared appropriately, including asking for help when needed and providing support to others.

**Sharing insights / approaches:** Open discussion of current and past tasks to enable knowledge and learning from adverse events to be shared across the team.

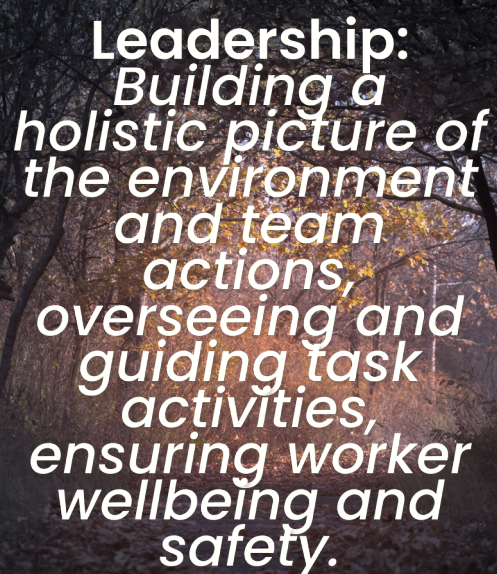
**Exchanging information:** Ensuring everyone is aware of overall task progress, has the relevant information to complete their own task and has the required site knowledge (hazards).

**Directing / guiding task behaviours:** Making sure the team has all they need to complete the task, including providing additional support to meet task goals / adhere to protocol.

**Worker / workload management:** Placing workers appropriately, ensuring task is within competency of team, as well as providing opportunities to gain experience / consolidate.

**Monitoring staff:** Developing a holistic view of each worksite in order to provide tailored supervision and support to workers.

**Developing psychological safety:** Encouraging workers to speak up, discuss their own ideas about task approach, bring up any issues.



**Leadership:**  
*Building a holistic picture of the environment and team actions, overseeing and guiding task activities, ensuring worker wellbeing and safety.*