

No.	Competencies	ADS 1	ADS 2	ADS 3	ADS 4	ADS 5
	<b>Applicable to:</b>	<b>Dogs</b>	<b>Dogs</b>	<b>Rats</b>	<b>Either</b>	<b>Either</b>
<b>1</b>	<b>THE BROAD MINE ACTION SECTOR AND CONTEXT</b>					
<b>1.1</b>	<b>Context</b>					
1.1.1	Broadly understand the global and national mine action context	x	x	x	x	x
1.1.2	Recognize the most relevant sector stakeholders, globally/in the country	x	x	x	x	x
1.1.3	Understand how mines/UXO are laid/distributed	x	x	x	x	x
1.1.4	Explain and categorize different types of terrain, including ADS limitations	x	x	x	x	x
1.1.5	Maintain general knowledge of EO identification processes (size, shape, colour, casing features, markings, explosive contents, operating principles)	x	x	x	x	x
1.1.6	Understand and explain the broader components of mine action				x	x
1.1.7	Be familiar with relevant national legislation				x	x
1.1.8	Understand EO regulations/restrictions in the country	x	x	x	x	x
1.1.9	Understand basic IMAS terminology				x	x
1.1.10	Understand the basic principles of quality management (QC/QA)				x	x
<b>1.2</b>	<b>Land release process</b>					
1.2.1	Understand the basic principles of land release, including NTS, TS, clearance, land classification principles and terminology	x	x	x	x	x
1.2.2	Understand the practical difference between NTS, TS and clearance	x	x	x	x	x
1.2.3	Understand how separate mine action activities are interlinked as part of a toolbox approach	x	x	x	x	x
1.2.4	Understand the role of animals in that toolbox	x	x	x	x	x

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<b>2</b>	<b>ANIMAL KNOWLEDGE BASE</b>					
<b>2.1</b>	<b>Anatomy, physiology and behaviour</b>					
2.1.1	Understand and recognize species-specific behaviour patterns (some examples are basic animal drives, including hunt, prey, retrieve, tracking, rank, pack, play, activity, fight, guard, survival, food, reproduction, grooming, signs of pain and distress)	x	x	x	x	x
2.1.2	Understand and recognize species-specific communication especially regarding the development of aggression or other behaviour problems	x	x	x	x	x
2.1.3	Have basic knowledge about the animal anatomy and senses	x	x	x	x	x

2.1.4	Have advanced knowledge about the animal anatomy and senses				x	x
2.1.5	Understand/recognize factors that can affect the sensing system of animals	x	x	x	x	x
2.1.6	Understand how animals cope with climatic variations	x	x	x	x	x
2.1.7	Understand relevant physical capabilities and limitations of animals	x	x	x	x	x
<b>2.2</b>	<b>Odours and olfaction</b>					
2.2.1	Understand what odour is in general and what explosive odours are specifically	x	x	x	x	x
2.2.2	Recognize and identify factors that influence odour availability	x	x	x	x	x
2.2.3	Understand the principles of scent perception	x	x	x	x	x
2.2.4	Understand the environmental influences on scent detection, including the effects of rain, sun, temperature, humidity, wind, flooding, landslides, etc.	x	x	x	x	x
2.2.5	Understand the olfactory system of the relevant animal species and how it works	x	x	x	x	x
2.2.6	Understand internal and external factors that limit the sense of smell of the relevant animal species	x	x	x	x	x
<b>2.3</b>	<b>Preventive health care, illnesses and treatment</b>					
2.3.1	Understand and apply the necessary care to ensure the welfare of the specific animal species (at minimum 5 freedoms)	x	x	x	x	x
2.3.2	Understand and demonstrate observational skills in monitoring behavioural issues that may be caused by underlying medical problems	x	x	x	x	x
2.3.3	Understand the requirements when setting up permanent and temporary kennels				x	x
2.3.4	Know which vaccinations are required at what intervals				x	x
2.3.5	Understand all relevant dietary issues, including water	x	x	x	x	x
2.3.6	Fully understand and be able to apply the occupational health plan (including regular health and weight checks, checks during operations and recognition and correct action on discovery of any health issue)	x	x	x	x	x
2.3.7	Attend and graduate from basic first aid course with demonstrated ability to provide basic first aid to staff and animals	x	x	x	x	x
2.3.8	Understand and demonstrate correct casualty evacuation procedures	x	x	x	x	x
2.3.9	Know how to handle the animal during a veterinary examination	x	x	x	x	x
<b>2.4</b>	<b>Animal learning and training principles</b>					
2.4.1	Understand fundamental principles of animal learning, including habituation, sensitization, imprinting, social learning, classical and operant conditioning	x	x	x	x	x

2.4.2	Understand classical conditioning and recognize it in behaviour patterns	x	x	x	x	x
2.4.3	Understand how to apply classical conditioning in training (routines, clicker, etc.)	x	x	x	x	x
2.4.4	Understand operant conditioning principles and its four quadrants (positive and negative reinforcement, positive and negative correction)	x	x	x	x	x
2.4.5	Understand operant conditioning in practice and correctly identify stimulus, behaviour and consequence in behaviour patterns	x	x	x	x	x
2.4.6	Understand how to apply positive reinforcement to achieve successive approximation (shaping) of desired behaviour	x	x	x	x	x
2.4.7	Understand how to apply positive reinforcement (using both primary and secondary reinforcers) to maintain motivation for the learned behaviour	x	x	x	x	x
2.4.8	Understand and know how/when to apply various reward schedules	x	x	x	x	x
2.4.9	Understand the risks of the use of aversives to achieve behaviour change	x	x	x	x	x
2.4.10	Understand cuing and how to minimize/eliminate risk of it	x	x	x	x	x
2.4.11	Understand how to measure progress towards changed behaviour				x	x
<b>2.5</b>	<b>Training and testing fields</b>					
2.5.1	Understand the requirements for preparing test fields as per IMAS				x	x
2.5.2	Prepare/maintain training and test fields for ADS				x	x
2.5.3	Understand (odorants) cross-contamination issues (theory) and specialized handling required to prevent (address) the problem					x
2.5.4	Understand and comply with all principles of handling and storage of training samples including protective clothing/gloves/contact surfaces and effective cleaning				x	x
2.5.5	Demonstrate effective cleaning and handling of test equipment and test samples/items				x	x
2.5.6	Ensure efficient replacement and disposal of training and test substances				x	x
2.5.7	Prepare, manage and store records related to training/testing fields, including training aids, layout of training site, location of and content in training boxes				x	x
<b>2.6</b>	<b>Initial training</b>					
2.6.1	Carry out an effective training needs analysis (TNA)				x	x
2.6.2	Select suitable animals for training (recognize typical species-specific character traits)				x	x
2.6.3	Prepare/maintain/execute training plans for ADS with clearly defined milestones and performance indicators (including obedience)					x

2.6.4	Understand how to increase the ability of animals to generalize to different quantities of a target substance				x	x
2.6.5	Understand how to increase the ability of animals to generalize to a range of odours similar to training samples				x	x
2.6.6	Conduct training for correct indication by ADS				x	x
2.6.7	Conduct MDR string system training			x	x	x
2.6.8	Conduct MDD long-/short-leash training	x	x		x	x
2.6.9	Conduct MDD technical survey deployment training (TSD)		x		x	x
2.6.10	Conduct MDD/TSD obedience training	x	x			
2.6.11	Demonstrate the use of track-and-trace systems carried by the animal		x		x	x
2.6.12	Know the handling and marking principles and requirements in ADS accreditation following IMAS 07.31	x	x	x	x	x
2.6.13	Demonstrate the use of air/ground temperature and wind speed measurement devices	x	x	x	x	x
2.6.14	Capable of handling dog–dog and dog–human aggression with minimal injuries to dogs, self and staff	x	x		x	x
<b>2.7</b>	<b>Testing and accreditation</b>					
2.7.1	Design, prepare and implement the testing and accreditation of ADS				x	x
2.7.2	Understand and demonstrate the principles of blind testing				x	x
2.7.3	Demonstrate practical handler skills	x	x	x	x	x
2.7.4	Design, prepare a plan for the collection/analysis of training/test data				x	x
2.7.5	Design, prepare and manage periodic re-testing/accreditation as required				x	x
<b>2.8</b>	<b>Maintenance and refresher</b>					
2.8.1	Provide realistic, practical, safe and objective training advice to ADS				x	x
2.8.2	Plan and implement ongoing maintenance and remediation training as appropriate	x	x	x	x	x
2.8.3	Design, prepare and implement refresher training for ADS				x	x
2.8.4	Maintain dog obedience through training	x	x		x	x

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<b>3</b>	<b>WORK SITE PROCEDURES</b>					
<b>3.1</b>	<b>Operational deployment</b>					
3.1.1	Graduate from a manual deminer course and be certified as deminer	x	x	x	x	
3.1.2	Graduate from a first aid course (humans/animals)	x	x	x	x	x

3.1.3	Understand and participate in ADS-supported MEDEVAC training before deployment	x	x	x	x	x
3.1.4	Demonstrate correct actions in case of accidents	x	x	x	x	x
3.1.5	Demonstrate the required leadership and management skills for preparing and managing ADS units during operations				x	x
3.1.6	Conduct the safety and operational brief of ADS units before daily deployment				x	x
3.1.7	Know how to visually survey designated boxes/lanes and tactically plan the deployment of ADS				x	x
3.1.8	Supervise all aspects of operational activity involving the use of ADS				x	
3.1.9	Fully understand all relevant SOPs and operational deployment procedures, opportunities and constraints of animal teams after training has been completed	x	x	x	x	x
3.1.10	Understand and demonstrate how to use SOPs	x	x	x	x	x
3.1.11	Understand and demonstrate all operational ADS deployment techniques	x	x	x	x	x
3.1.12	Demonstrate correct selection of baselines as a result of wind direction, the length of the box/panel side and other geographical features	x	x	x	x	x
3.1.13	Understand the important factors that lead to a decrease in performance during operations, such as reinforcement frequency, environmental circumstances and signs of distress	x	x	x	x	x
3.1.14	Understand how to mitigate decrease in performance during operations, by planning and implementing appropriate measures throughout the operational period				x	x
3.1.15	Understand when to rotate and rest ADS and provide water/food/shade	x	x	x	x	x
3.1.16	Take immediate corrective action on observation of drills and/or ADS unit performance that falls below the required standard as per the SOP				x	x
3.1.17	Demonstrate correct action on animal indication of a target	x	x	x	x	x
3.1.18	Correctly record ADS performance during and after work				x	x
3.1.19	Demonstrate how to fill the daily logbook	x	x	x	x	x
3.1.20	Demonstrate how to write daily, and periodical ADS reports				x	x
<b>3.2</b>	<b>Safety</b>					
3.2.1	Understand the worksite's layout and marking system, as per the SOP	x	x	x	x	x
3.2.2	Understand the medical evacuation system	x	x	x	x	x
3.2.3	Understand the worksite's chain of command	x	x	x	x	x
3.2.4	Understand PPE requirements/regulations. Show correct use	x	x	x	x	x
3.2.5	Know how to minimize animal risk during operations	x	x	x	x	x
3.2.6	Understand transport regulations for animals and staff				x	x

3.2.7	Enforce working-safety distances appropriate to the worksite's risk				x	x
3.2.8	Assess the risk of tripwires or other obstacles to the safe deployment of ADS				x	x
3.2.9	Understand and demonstrate the correct action on target indication	x	x	x	x	x
3.2.10	Terminate search if animals lack concentration/motivation or dogs scratch the surface during indications				x	
3.2.11	Understand how to prepare and mark access lanes	x	x	x	x	x
3.2.12	Demonstrate compliance with the safety standards of the ADS organization	x	x	x	x	x
3.2.13	Inspect and monitor ADS units (equipment, outfit, fitness for work) before and during work				x	x
3.2.14	Demonstrate the appropriate deployment of ADS units relative to different situations and scenarios				x	x
3.2.15	Understand and demonstrate applicable worksite layout and marking systems	x	x	x	x	x
3.2.16	Assess the terrain prior to deployment of ADS				x	x
3.2.17	Ensure correct QC/QA of the work of ADS units				x	x
3.2.18	Transport, handle and store explosives used for training as per the SOP	x	x	x	x	x