



Safe Animal Evacuation Sites Across NSW: Multi-Hazard Approach for Managing Key Infrastructure and Amenities

Submission to the NSW Independent Flood Inquiry

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1. Introduction

We welcome this opportunity to assist and support the work of the NSW Government. This is a submission by the researchers at the School of Architecture and Built Environment, University of Newcastle, NSW and Bond University, Queensland, to the NSW Independent Flood Inquiry by the NSW Government resulting from the catastrophic 2022 floods across the State.

Our submission draws on our research on developing Climate-Smart Adaptive Resilience and Engagement for Animal Evacuation. The research outcomes so far provide strong evidence that the NSW needs to develop a comprehensive multi-hazard approach for managing disasters from natural hazards including floods, particularly focussing on improving key infrastructure and amenities for ensuring safe animal evacuation (Egbelakin et al 2022).

Our submission addresses the preparation and planning by agencies, government, other entities and the community for floods in NSW, by proposing the adoption of a multi-hazard approach for assessing the hazard and risks vulnerability and upgrading existing Key infrastructure, for responding to animal rescue and evacuation in disaster emergencies.

This submission offers recommendations on appropriate actions to adapt to and prepare a strategy future flood risks to communities and ecosystems. Specifically, we recommend the adoption on a holistic multi-hazard approach that assesses the impact of climate change on different hazards such as flood risk, bushfire, storms etc, including improved planning policy, increased resilience for existing infrastructure and flood defences, as well as community engagement for reducing the impacts of flooding events on the affected communities and primary producers (small business) in NSW.

Authors:

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2. Background

Evacuation in disaster emergencies ensures prompt exit and safety of all occupants, including humans and animals. However, in emergency situations such as the 2022 New South Wales floods, thousands of animals especially native wildlife and large animals including production livestock died due to the lack of pre-disaster preparation of rescue or evacuation centres, and inadequate coordination of efforts among agencies responsible for rescue and evacuation of animals in emergencies. Some of these agencies include Local Land Services, Department of Primary Industries (DPI), Agriculture and Animal Services Functional Area (AASFA), and the Royal Society for the Prevention of Cruelty to Animals (RSPCA) etc.

Animal rescue agencies across the NSW including the RSPCA were overwhelmed with callout demands and emphasised that a vast majority of the demands could not be met, due to inadequate personnel, equipment, and funds (ABC News, March 2022).

Providing shelters for animals during disasters such as floods, bushfires, and storms requires adequate planning and preparedness. Planning for animals in the response and recovery phases of disasters is crucial to mitigate the negative effects that the loss or separation of animals from their owners can have. Evacuation with animals during a disaster event can be challenging and complicated, especially if not planned (Taylor et al., 2017). Existing research suggests that over 50% of livestock owners and community residents are often unsure where they would take their animals to, and a third are unsure if they could take them at all (Gurtner and Parison, 2021).

It is important to ensure that animals are rescued and kept safe during and after disasters, through the provision of safe animal evacuation places across NSW, and to support effective emergency evacuation planning, and build the resilience of key agricultural sector and economies in the region.

3. Key Issues: Potential Animal Safe Sites Lacks Key Infrastructure and Amenities to meet Best Practice and International Standards

Time and again in disaster emergencies in NSW, existing places such as livestock saleyards, regional showgrounds, district pony clubs, dog kennels and catteries have spontaneously been used as evacuation sites. These sites often did not meet the industry best-practice standards to conduct evacuation operations for both the animals and emergency responders. Even in disaster situations, animal care and handling should adhere to the Australian Animal Welfare Standards and Guidelines. The adequacy of the infrastructure, equipment, biosecurity, emergency protocols, and availability of water and feeds should also be considered in animal evacuation pre-disaster preparedness.

The Pilot project conducted by Hunter Local Land Services and University of Newcastle to audit possible facilities for safe sheltering animals across Hunter region in disaster emergencies indicated that several of these facilities require significant upgrades of key infrastructure and amenities at each location to meet acceptable requirements of suitable emergency evacuation centres (see Appendix 1). During the 2022 NSW floods, ten facilities were flooded and unusable. It is possible that some of these facilities are vulnerable to other hazards including cyclone, heatwaves, floods etc. and may not be usable as animal evacuation centres during different disaster emergencies.

Most importantly, Animal safe Places did not appear in any Local Emergency Management Committee planning documents but are used as evacuation sites out of necessity. Many communities were not able to access these safe sites due to inadequate communication among the concerned agencies, primary producers, and the communities. Moreover, the Royal Commission into National Natural

Disaster Arrangements Report (2020), and the NSW Bushfire Enquiry Report (2020) indicated that Animal Safe Places should be identified, with prioritisation of preferred locations built into local emergency evacuation plans. This suggestion from the Commission's report is yet to be implemented till date.

4. Recommendations

4.1 Adopts a Multi-Hazard Assessment Approach for Upgrading Animal Safe Evacuation Sites

Across NSW: A critical, yet underappreciated disaster resilience strategy for increasing safety and emergency excavation practices, is to consider a climate smart multi-hazard approach towards improving the resilience of the Animal evacuation centres. Potential animal safe places should be assessed and upgraded to become resilient to several natural hazard impacts such as floods, bushfire, storms etc Moreover, the growing concerns about the increasing intense impacts of climate change are expected to cause unprecedented and more frequent disastrous events, hence emergency management authorities must act now to provide suitable places to reduce losses during disasters, and ensure that evacuation centres are fit for-purpose.

Conducting the hazards and risks vulnerability and operational assessment of the adequacy of the potential facilities across NSW, will provide the following beneficial outcomes:

- provide necessary information to prioritise mitigation actions for the facilities to meet best-practice standards for safe animal evacuation
- local emergency management officers can use the results and outcomes from the vulnerability assessment of these sites when determining incident-specific priorities and developing response goals. It is worth noting that "these goals" can be interpreted in diverse ways based on the operational requirements of each incident, consequently improving disaster resilience planning for LGAs and at-risk communities.
- provide a basis from which local planners, and animal emergency responders can update the local emergency plan, allocate resources for risk mitigation, enhance community preparedness, and prepare budgets for affordable, on-going emergency planning
- better protect the integral and potentially vulnerable agricultural sector and communities and enable them to thrive in the face of cascading emergencies arising from several natural hazards and risks.

4.2 Establishment of NSW State database for animal-safe places:

A Safe Animal Place register will provide a list of identified facilities that could be used as emergency evacuation sites. The register will include addresses, contact details and operational capacity of each facility. The register should be included in the local EM Plans. Valuable outcomes from establishing the register include:

- the establishment of the NSW database will contribute to the review of NSW Evacuation Management Guidelines, evacuation compliance with updated LEMC guidelines and report to the State Emergency, and ensure that evacuation centres are fit for-purpose
- Contribute to the development of protocols for managing pets and animals in evacuation centres

4.3 Skills Development and Capacity Building for Emergency Animal Welfare: Provide evidence-based training and skills development program to empower operators from the identified animal safe places, to provide volunteer support including evacuation, emergency care of animals and animal welfare during disaster events. This training will help:

- Increase surge staff who can be called up to support evacuation centre management and disaster welfare
- undertaking the training will increase the capacity and expertise to assist in animal safety, before, during and after cataphoric events

4.4 Public Communication and education campaign for safe evacuation of animals:

- Launch public education campaign to help animal owners make informed decisions about early evacuation. This can be tailored to target large and extra-large animal owners including primary producers and communities.
- This campaign would ensure early engagement of animal owners about safe locations for their animals and what to expect in terms of facilities and services available at those places

5. References

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FACILITY CONDITION ASSESSMENT OF ANIMAL SAFE PLACES IN HUNTER REGION



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Document Status

Rev. no	Reviewer		Approved for issue	
	Name	Date	Name	Date
001	A/Prof. Temitope Egbelakin	29/06/2021		
002	A/Prof. Temitope Egbelakin	27/09/2021		
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005	Dr Sandra Carrasco	16/05/2022		

Information Regarding the Scope of the Inspection and Report

Client Agreement: Having had an abstract of the full report format provided to the Client for an opportunity to accept the Purpose, Scope, Terms and Conditions of Inspection, and after having made a booking for the Property Inspection, this full report confirmed the client's instructions to undertake inspections and report on the condition of the property and its significant items at the time of the inspection.

The following statements outline our observations and opinions in relation to the condition of the property as reasonably accessed. It should be noted that this report relates only to that which is readily viewable. No opinion warranty is made on that which cannot be readily seen. The Purpose and Scope of Inspection were defined prior to commencing the collection of data. The scope of the inspection should identify what is to be accomplished by the inspection, so it is suitable for the defined purpose of the inspection. To do this the Client should clearly identify:

- the purpose for collecting performance information; and
- how the information will be used.

The outcome of the scoping stage should also include and co-ordinate with any other inspections or data collection services which might be undertaken concurrently such as defined 'periodic' inspections of plant and safety services in the building (e.g., lift and fire protection). The Client should also institute appropriate arrangements for those specialist service providers to access building asset data and/or any associated information required.

Access

The inspector shall inspect all areas included in the scope of the inspection. The inspector shall not enter or inspect areas where safe unobstructed access is not available. The extent of accessible areas, as defined by the presence of what is safe and reasonable shall be determined by the inspector, based on the conditions encountered at the time of the inspection. If, in the opinion of the inspector, restrictions on access have compromised satisfaction of the purpose of the inspection, a recommendation shall be made as to the necessity to gain access to allow further inspection.

Limitations

This report is limited to a visual inspection that only covered the Readily Accessible Areas of the Building and Site that permitted safe and reasonable access at the time of inspection. The limitations that are expected to be present or that may occur, shall be identified where possible, including concealment of potential defects and any other relevant factor restricting the inspection

Report continuity

Continuity is an important aspect of performance measurement as the performance of a physical asset changes over its life cycle. While 'snapshots' of performance for specific purposes are useful, monitoring trends over time is also important, especially for assessing the performance of a building overall, as opposed to individual components (which may have shorter life spans). Maintaining the continuity of performance information through monitoring enables assessment of the outcome data being critical to the effective evaluation of condition performance information.

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1.0 INTRODUCTION

The purpose of emergency evacuation during a disaster is to ensure prompt exit and safety of all occupants, including humans and animals. However, in emergency situations, humans are frequently given priority for evacuation. Most local councils have identified human evacuation centres (HEC) in their emergency management plans (EMPlan), confirming adequate preparation for humans. Conversely, most EMPlans have little or no provisions for animal evacuation, as it is usually assumed that animal owners would take care of their animals by taking them along to the HECs. These human evacuation places may be safe and adequate for humans, but they are often insufficient for several animals depending on size and type (Chadwin, 2017).

Providing shelters for animals during disasters such as floods, bushfires, and storms requires adequate planning and preparedness. Planning for animals in the response and recovery phases of disasters is crucial to mitigate the negative effects that the loss or separation of animals from their owners can have. During the 2019-2020 bushfires, nearly three billion animals were killed or displaced, and many threatened species and other ecological communities were severely harmed (Royal Commission Report, 2020). Overall, the fires caused billions of dollars in damage to the ecosystem, the economy, animal owners and caused profound social and psychological effects.

The human-animal bond may influence people's decisions during emergencies, including how they respond and when or if they will evacuate. Evacuation with animals during a disaster event can be challenging and complicated, especially if not planned (Taylor et al., 2017). Existing research suggests that over 50% of community residents are often unsure where they would take their animals, and a third are unsure if they could take them at all (Gurtner and Parison, 2021). However, it is important to ensure that animals are rescued and kept safe during and after disasters. Any compromise to animals' safety can result in their loss. For instance, during the summer bushfires of 2019 - 2020, about 13,800 animals were killed, and more than 11,400 animals were treated in designated safe locations (Hunter Local Land Services, 2020). Similarly, several animals died in the March 2021 floods. These high percentages of losses highlight the importance of adequate pre-disaster preparedness for evacuating animals to safe places during disaster events. It also implies the need for ongoing care of animals in safe places during disasters.

Even in disaster situations, animal care and handling should adhere to the Australian Animal Welfare Standards and Guidelines. In addition, the adequacy of the infrastructure, equipment, biosecurity, emergency protocols, and availability of water and feeds should be considered in animal evacuation and welfare. Therefore, it is crucial that facilities meeting these requirements are identified, assessed, and prepared for emergency animal evacuation. Government agencies saddled with these responsibilities are required to take proactive approaches in ensuring the safety and prompt exit of animals in disaster-related events. In this context, the Hunter Local Land Services (HLLS) seeks to identify and reach agreements with the primary facilities' management throughout the region to ensure a timely and systematic response when called upon to provide emergency animal-safe places.

1.1 Context

Local Land Services (LLS), together with the Department of Primary Industries (DPI), act as Agriculture and Animal Services Functional Area (AASFA) in the event of natural disasters such as bushfires and floods. DPI and LLS are designated as the combat agencies for emergency for plant and animal disease occurrences. To provide animal welfare in these circumstances, LLS is often required to provide emergency accommodation for a variety of animals, including commercial and domestic horses, production livestock such as cattle, sheep, goats, alpacas, pigs, etc. and companion animals primarily but not limited to pet cats and dogs. Native wildlife usually becomes the responsibility of wildlife care groups such as Wildlife Information Rescue and Education Services, Agencies like Australian Wildlife Needing Aid and others work under the direction and support of AASFA but are not a priority for this project.

Existing facilities that could provide emergency animal shelter include livestock saleyards, regional showgrounds, and animal facilities. To a lesser degree, district pony clubs, dog kennels and catteries can provide some assistance. Commercial veterinary hospitals and clinics may have temporary cages but are rarely accessible after hours. In larger urban areas, horse, dog, and harness racetrack facilities may be appropriate refuges.

1.2 Project Objectives

This project seeks to understand the links between the human-animal bond, disaster preparedness and resilience, and the recovery of animals in a disaster event. The research objectives are to:

1. Conduct a desktop review of existing shelters across the Hunter region and produce a facility register that will include a list of potential animal evacuation sites (AES);
2. Develop an assessment guideline to evaluate the adequacy of the identified AES in objective 1;
3. Evaluate the physical condition of facilities and services in potential AES and their various elements to determine the type and extent of the maintenance work required to bring the facilities up to the minimum standard for an operational animal evacuation site; and
4. Propose location-specific suggestions for upgrading the AES' facilities to meet minimum requirements for improved disaster preparedness.

1.3 Facilities Locations

The Hunter Local Land Services is the agency responsible for serving the following local government areas (LGA): Lake Macquarie, Newcastle, Port Stephens, Mid Coast, Maitland, Dungog, Singleton, Muswellbrook, and Upper Hunter. Therefore, the facilities assessed are located within these local councils (A list of facilities is shown in Table 1).

2.0 FACILITY REGISTER

The facility register was developed by conducting a desktop scan and review of potential facilities across the Hunter region. The identification was defined by the availability and

suitability of existing facilities, their capacities, and whether they are located within the identified LGA above.

A total of 25 facilities summarised in Table 1 were identified from the desktop review of existing facilities across the Hunter region. These facilities were selected because they meet basic requirements for animal shelters. The desktop review resulted in the development of the animal evacuation site facility register, which is summarised in Table 1. A map of facilities with building names and locations within the Hunter region is provided in Figure 1, and a larger version in Appendix 1.

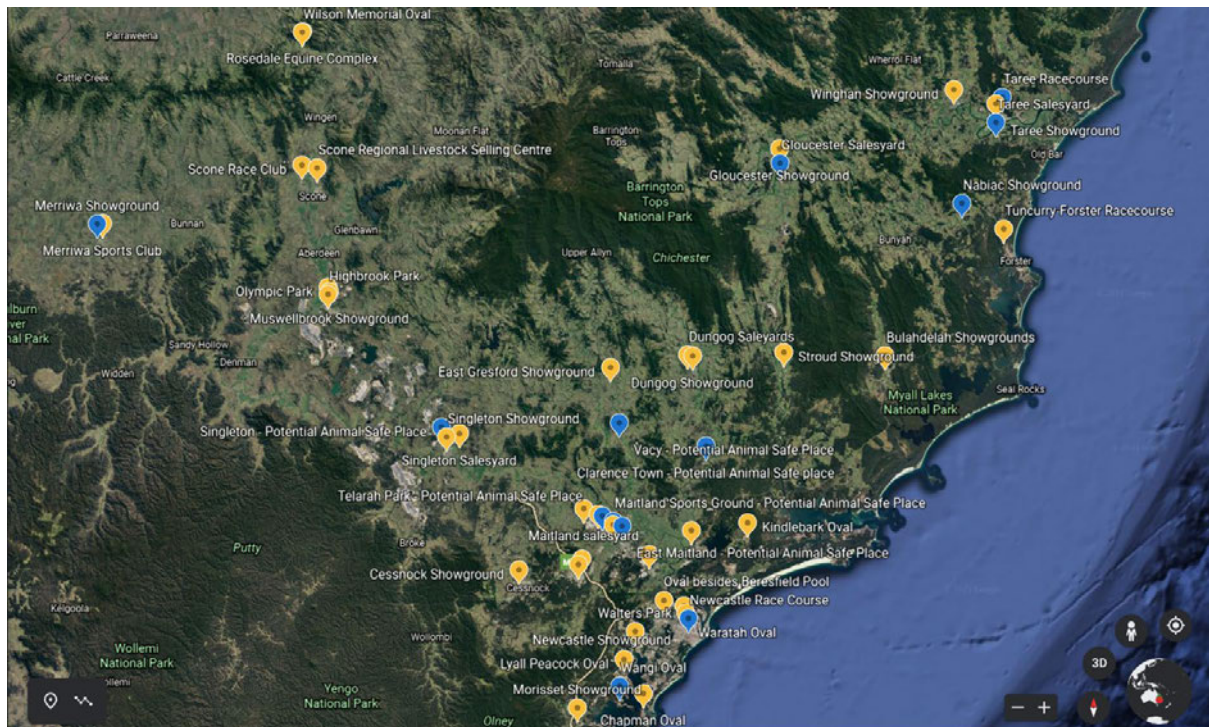


Figure 1: Map showing the location of facilities

The detailed facility register provided in Appendix 2 includes information on some or all the items below for each potential animal evacuation site assessed.

- Inventory, infrastructure condition, and capacity information.
- A condition index determined by the assessor for each building, which communicates the general state of the facility.
- An itemised schedule of recommended maintenance work necessary to bring each facility up to, or maintain it at, the standard required for an animal evacuation sites guideline.

Table 1: List of facilities identified from the facility register

S/N	Location	Address	LGA
Showgrounds			
1.	Cessnock Showground	111 Mount View Road, Cessnock, NSW 2325	Cessnock
2.	Maitland Showground	Cnr Anzac & Blomfield Streets, Maitland, NSW 2320	Maitland
3.	Singleton Showground	32 Bathurst St, Singleton, NSW 2330	Singleton
4.	Merriwa Showground	Dutton Street, Merriwa, NSW 2329	Upper Hunter
5.	East Gresford Showground	Park St East Gresford, NSW 2311	Dungog
6.	Dungog Showground	Chapman Street, Dungog, NSW 2420	Dungog
7.	Bulahdelah Showground	19 Prince St, Bulahdelah, NSW 2423	Mid-Coast
8.	Nabiac Showground	Showground Lane, Nabiac, NSW 2312	Mid-Coast
9.	Gloucester Showground	Showground Road, Gloucester, NSW 2422	Mid-Coast
10.	Taree Showground	24 Muldoon Street, Taree, NSW 2430	Mid-Coast
11.	Wingham Showground	1292 Gloucester Rd, Wingham, NSW 2429	Mid-Coast
12.	Stroud Showground	Bucketts Way, Stroud, NSW 2425/ Cowper Street, Stroud, NSW 2425	Mid-Coast
13.	Muswellbrook Showground	New England Highway, Muswellbrook, NSW 2333	Muswellbrook
14.	Morisset Showground	40 Ourimbah St, Morisset NSW 2264	Lake Macquarie
Saleyards			
1.	Dungog Saleyard	Short St, Dungog, NSW 2420	Dungog
2.	Gloucester Saleyard	Cnr Cemetery Rd & Church St, Gloucester NSW 2422	Mid-Coast
3.	Maitland Saleyard	52 Kyle Street, Rutherford, NSW 2320	Maitland
4.	Nabiac Saleyard	Nabiac Road, Nabiac, NSW 2312 (same as Nabiac showground)	Mid-Coast
5.	Scone Regional Livestock Selling	Muffet St, Scone, NSW 2337	Upper Hunter
6.	Hunter Regional Livestock Exchange	56 Gresford Road Clydesdale NSW 2330	Singleton
7.	Taree Saleyard	7118 The Bucketts Way, Taree, NSW 2430	Mid-Coast
Racecourse			
1.	Manning Valley Racecourse, Taree	Bushland Dr, Taree NSW 2430	Mid-Coast
2.	Newcastle Harness Racing Club	34 Jackson St, Broadmeadow NSW 2292	Newcastle
Animal Shelter / Facility			
1.	Singleton Animal Management Facility	54 Drrying Road, Sedgfield, NSW 2330	Singleton
2.	White Park, Scone	100 Guernsey Street, Scone New South Wales 2337	Upper Hunter

3.0 ASSESSMENT METHODOLOGY

The assessment process is illustrated in five distinct stages in Figure 1 below, which supported the data collection and contributes to planning asset renewal, upgrade, and strategy decision-making about the identified facilities. These processes are discussed briefly in the following subsections.

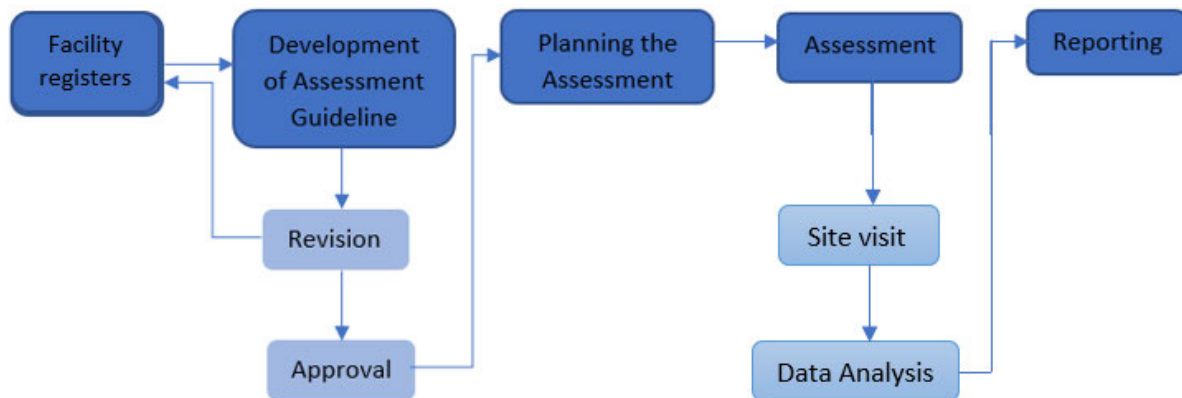


Figure 2: Assessment process

3.1 Desktop Review

During the desktop review stage, an online survey method was used. This stage entailed scanning existing facilities and project-related information resources to gain a broad understanding of the current situation regarding animal evacuation sites. Following careful consideration and consultation with Hunter Land Local Services, 25 facilities were identified to meet the basic needs of animal shelters (see Table 1). The desktop review produced the Facility Register, which helped the project achieve its first objective.

3.2 Development of Assessment Guideline

The information gleaned from the desktop review and other pertinent documents aided in creating an assessment guideline. The guideline focused on different assessment criteria such as site accessibility, animal handling, site emergency protocol and utilities, which are discussed in detail in Section 4.0. The performance metric for measuring the adequacy and suitability of facilities, as well as the requirements of relevant guidelines and policies such as Australian Animal Welfare Standards and Guidelines, biosecurity, and emergency protocols, among others were taken into consideration, and are detailed in Section 5.0.

The assessment guideline was created using both quantitative and qualitative data collection methods. The guideline includes several questions designed to elicit quantitative data. Multiple-choice questions, polar (general) questions, and ranking questions (using a five-point Likert scale, where 1 = Poor, 2 = Fair, 3 = Average, 4 = Good, and 5 = Excellent) are among the question types. Structured interview questions were used for the qualitative aspect to elicit information that the quantitative method did not cover. The interviews included open- and closed-ended questions (see Appendix 1). The assessment guideline was reviewed and pre-tested several times by project team members before it was finally approved to ensure that there were no ambiguities. Expert opinions were also sought to ensure the appropriateness

and completeness of the developed assessment guidelines and the viability of the collected data and information for informed policy and operational decision making. The detailed guideline is provided in Appendix 2.

3.3 Planning the Assessment

This stage involved scheduling and following up on appointments, as well as conducting interviews with key personnel in the organisation of the facilities summarised in Table 1. The contact information for the proposed animal-safe places was obtained first via a simple internet search and then through the referral system. At this stage, logistical issues, including transportation, geographical location, and weather conditions, were considered, and evaluated.

3.4 Condition Assessment of Selected Facilities

Undertaking the onsite facility assessment involves evaluating the physical condition of the facilities, such as infrastructure, equipment, accessibility, animal handling capacity, safety, and so on. Efforts were made to identify and determine the upgrades needed to improve or maintain the condition and capacity of each facility for emergency rescue, as required by the Australian Animal Welfare Standard. The onsite assessments were conducted between January and May 2021, and a total of 25 facilities were evaluated.

Data collection and analysis are two of the most important activities involved in the onsite facility assessment. Over a five-month period, the assessment guideline was used to collect quantitative and qualitative data from the 25 sites. The assessment is useful for ranking the facilities and identifying the facilities' renovation/upgrading needs in order to meet the minimum requirement for animal emergency evacuation facilities. It also aids in documenting the current state of each facility assessed. The information gathered will assist in determining the following:

- Location, including map reference and street address and access to potential safe places for animals in the Hunter region.
- Requirements for traffic management during peak and off-peak periods.
- Availability and condition of yards, loading ramps, water and feed troughs, shade, and shelter.
- Suitability and accessibility of safe places during disasters such as fire or flood or both?
- Number and type of animals that can be accommodated each facility.
- Natural hazard and risks associated with the sites
- Community perception and/or resistance
- Identified defects/issues
- Limitations of the facility's ability to expand its capacity
- An itemised schedule of recommended maintenance work necessary to bring each facility up to, or maintain it at, the condition standard required for an animal evacuation sites guideline
- A condition index determined by the assessor for each building, which communicates the general state of the facility

For quantitative data, descriptive and inferential statistics were used, while content analysis was used for qualitative data. Content analysis enables the extraction of useful information from existing relevant reports. In addition, each facility underwent a preliminary probability

hazard assessment via desktop review to determine its vulnerability to various hazards such as bushfire, flood, and cyclone. A traffic management analysis was completed around each facility to determine accessibility to the sites in the event of a disaster.

3.4.1 Reporting

This report is the primary output of the facility condition assessment and provides the necessary information for ranking or prioritising the facilities for suitability as emergency animal evacuation sites. The report also provides an objective review of the facilities' condition and identifies upgrades and renovation requirements for each of them.

4.0 ASSESSMENT CONSIDERATIONS

The assessment guideline considered factors such as site accessibility, animal handling, site emergency protocol, and utilities to ensure the safety of animals and the facility's suitability as emergency animal evacuation sites. These factors are critical to a facility's eventual designation as an animal safe place, and they also contribute to an efficient and safe emergency evacuation process. The factors evaluated are divided into 10 themes, which are discussed in the following subsections.

4.1 Site Accessibility and Traffic Management

Site access and traffic management can be defined as the safe ingress and egress of people and vehicles to and from the facility. Key parameters for measuring activities associated to site access and traffic management include:

- *Ease of accessibility* – A designated animal- safe place should be easily accessible during a disaster. Access road(s) and alternative routes should include an unobstructed path connecting all accessible elements and spaces with the site and surrounding environments. The accessibility should be considered resilient in the event of a disaster guaranteeing easy and rapid access.
- *Proximity of the site to human evacuation facilities (HEF)* – The facility's proximity to a HEF would allow animal owners to check on their animals while taking refuge in the HEF. It could also increase their confidence in the safety of their stock.
- *Vulnerability* – As a place of refuge for evacuation, animal-safe places should be located in areas with little or no vulnerability to natural hazards such as bushfires, floods, and storms.
- *Shelter for animals* – The availability of both covered and uncovered shelters for various animal sizes and types is critical when determining potential animal-safe places.
- *Perimeter fencing* – Adequate perimeter fencing is necessary to ensure the animals' safety and prevent unauthorised entry.
- *Storage facility* – The availability of storage facilities such as hay sheds is an important factor to consider when determining an animal-safe place. A storage facility would aid in the security of feed, equipment, and other machinery needed for the smooth operation of animal evacuation and welfare process.
- *Loading/unloading bays* – Time is crucial in the event of disasters, especially for rapid animal evacuation. Therefore, the availability of loading/unloading bays or ramps would assist in the quick disembarking of stocks.

- *Vehicle decontamination* – A potential animal-safe place should have a space where vehicles (trucks, cars, buses) can be decontaminated to reduce the risk of animal disease and for biosecurity reasons.
- *Parking* – This is a necessary requirement for an animal safe place because animals will most likely be transported to the location. As a result, ample parking spaces, particularly for trucks and long vehicles, are required.
- *Traffic management* – Due to the potential large number of vehicles that are likely to arrive at the site, there is a need for ease of handling multiple vehicles at once. This should be carefully considered in order to avoid congestion at the facility and ensure a free flow of traffic throughout the community.
- *All-weather access* – To handle the large number of vehicles entering and exiting during disasters, a potential animal-safe place would need to have all-weather access and stabilised ground.
- *Alternate transport route* – An alternate transportation route would not only help with vehicle movement, but it would also help with prompt/timely evacuation, operations, and logistics.
- *Safe turning area* – A safe turning area is required for traffic turning and manoeuvring.

4.2 Animal Handling

Priority should be given to the facility's ability to accommodate animals of various sizes (small, medium, large, and extra-large). Similarly, the availability of covered and uncovered animal shelters, as well as animal handling facilities such as crushes, yards, pens, sheds, scales, fodder bins, and feed troughs, is critical. When determining a safe animal place, the availability of a quarantine space/area and the potential injury or hazard for animals must be considered. Preferred facilities should be able to provide an estimate of space availability for various animal sizes.

4.3 Infrastructure and Signages

In any evacuation setting, the facility's structural adequacy is generally regarded as important. As a result, it should also be considered in animal safe places. The facility's structural adequacy, particularly the shed, stables, and building components such as the roof, wall, fence, drain, pipes, and roads, is critical to keeping the site safe for animals and workers.

Furthermore, the availability of signage for fire safety equipment such as extinguishers, blankets, hose reels, sprinklers, signage, smoke alarms/detectors, and emergency and exit signs would improve evacuation planning and preparedness. In addition, the availability of office space(s) for profiling or registration of animals and their owners would enhance operational efficiency of the LLS.

4.4 Utilities

4.4.1 Power/Electrical and Communication

There is a need for adequate lighting inside and outside of buildings and around the facility for the safety and security of animals and personnel. Accessible electrical installations and fittings must be safe for use, and the availability of an alternate or emergency power backup system would ensure continuous power supply even if the facility experienced a power outage due to a disaster. Communication is critical in the event of a disaster, and as such, the

availability of telecommunications facilities such as telephones and internet, as well as a public address system, would have a significant impact on the entire process.

4.4.2 Water and Gas

Water is essential for survival and should always be available onsite. Water supply and distribution channels are also important in ensuring the safety of animals and humans on the site. The availability of gas and various types of fittings may be beneficial to the facility's smooth operation.

4.4.3 Communication: emergency information and warnings

Emergency information¹ refers to emergency alerts and other information distributed to affected communities before and during a natural disaster. To reach the public about the availability and capacity of animal-safe places in a timely manner, the facility should have a diverse range of distribution methods, such as roadside signs, the emergency alert system, apps, broadcast media, as well as social media platforms.

4.5 Site Emergency Protocol

Site emergency protocols such as an evacuation plan, safety protocol, emergency communication system, and emergency controls for flood, fire, storm, and disease outbreak are critical. All relevant information should be easily accessible in a potential animal-safe place. It could aid in quickly bringing any emergency under control and providing an escape route if necessary.

4.6 Health and Medical

The availability of an isolation area for sick animals (outdoor and indoor spaces), first aid kits, a first aid officer on site, and a site medical emergency plan are all essential provisions and checks under health and medical requirements. These would ensure that any health or medical issues are addressed as soon as possible.

4.7 Solid Waste Management

The effective management of waste generated onsite is vital for the health and well-being of both animals and site personnel. As a result, there should be adequate disposal, storage, separation, and receptacles onsite.

4.8 Animal Destruction, Decontamination and Disposal

Animal destruction, decontamination, and disposal refers to removing an animal following a thorough examination by a veterinary doctor in order to prevent the animal from suffering excruciating pains as a result of a disaster event, injury/accident, or disease outbreak. This process must be carried out in accordance with the rules and guidelines, and under a controlled environment. The availability of equipment, personnel, and potential areas for destruction, decontamination, and disposal should all be considered when determining a safe animal place.

4.9 Hygiene and Environment

The environment should be safe and healthy for both humans and animals. The importance of hygiene in maintaining good health and well-being cannot be overstated. As a result, there is a need for adequate environmental care, particularly features such as waterways,

vegetation, and soil. Furthermore, it is critical to ensure that runoffs from decontamination areas, drainage or effluent, and solid waste do not pose any potential health and environmental risks. More so, the availability of toilets, showers, toilet supplies, and hand-washing stations should be considered when locating an animal-safe place.

4.10 Natural Hazards and Risks Vulnerability

Natural disasters like bushfires, flooding, and storms affect both humans and animals. The impact of hazards, particularly on animals, could be catastrophic, with long-term economic consequences for the country. More importantly, the psychological effects of losing animals or stocks as a result of a disaster event may have long-term adverse effects on owners. Therefore, effective risk-mitigation strategies, such as animal/stock evacuation, are critical for reducing vulnerability to risk. Furthermore, in order to avoid another disaster, facilities that will be used as animal evacuation centres must be in good condition. A standardised relative rating system has been developed to assess the condition of the facilities, as shown in Table 2. The vulnerability of the facilities to bushfires and flooding is critical to the evacuation procedure. Since the purpose of the evacuation is to transport the animal to safety, it is critical to ensure that the facilities do not pose a risk due to their vulnerability to bushfire or flooding.

Table 2: Condition ratings

Condition	Description
A	The facility is well maintained and in high standard (exceeds requirements)
B	The facility would require some cosmetic work (meets requirements)
C	The facility would require some minor work (suitable with additional equipment)
D	The facility would require major works (major works required)
E	The facility is in bad condition and not habitable (below requirements)
Risk priority	Description
1	Bushfire (The facility not suitable for use during bushfire)
2	Flooding (The facility not suitable for use during flooding)

5.0 RESULTS OF ASSESSED FACILITIES

The assessment provides a large amount of data about the condition of each facility. The condition was scored on a five-point Likert scale, 1 to 5 (i.e., 1 = Poor; 2 = Fair; 3 = Average; 4 = Good; 5 = Excellent). Similarly, "Not Available" (NA) was used when a condition or factor was unavailable. In conjunction with closely related assessment considerations, the raw score for each facility is presented in relevant tables.

5.1 Participation

The assessment included all 25 facilities in the Hunter region, including 14 showgrounds, seven saleyards, two racecourses, and two animal facilities spread across nine local councils. Upper Hunter Shire local council clearly has the most facilities as shown in Table 3.

Table 3: Number of facilities per local councils

	Local Government Areas								
	Cessnock	Maitland	Singleton	Upper Hunter Shire	Dungog	Mid-Coast	Muswellbrook	Lake Macquarie	Newcastle
Facility	1	2	3	3	3	10	1	1	1

On behalf of the showground committee, a representative from each of the 14 showgrounds, ranging from show committee presidents to grounds caretakers, participated in the assessment (see Figure 3). Participants in the assessment of saleyards ranged from managers to owners, with managers representing racecourses and animal facilities. All participants were asked to participate on a voluntary basis.

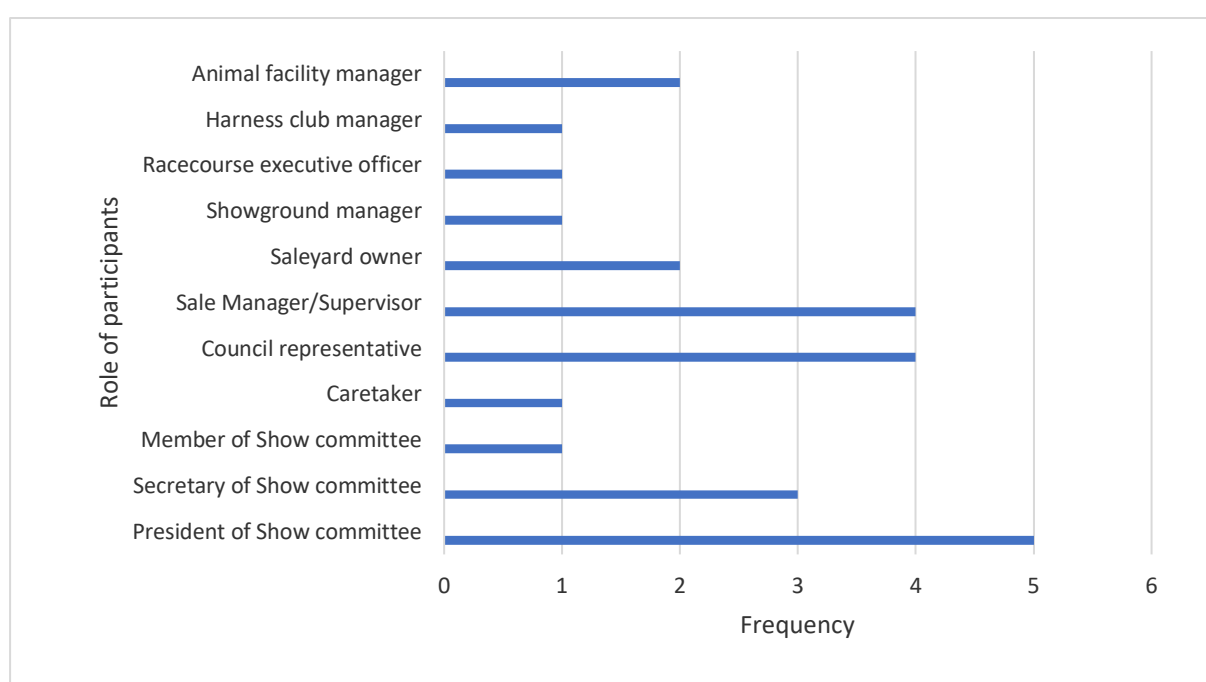


Figure 3: Roles of participants

5.2 Facilities

5.2.1 Ownership

Seven of the fourteen showgrounds are owned by local councils, six by the public trust (Agricultural society), and one is privately owned and operated. Three of the seven saleyards are privately owned, while the city council owns the remaining four. The racecourse and harness club are owned by a public trust and a not-for-profit organisation, respectively. The two animal facilities are owned by the council.

5.2.2 Use of the facility

Of the 25 facilities assessed, generally no approval is required for the facilities to be used for emergencies evacuation purposes, except for the Singleton Showground, which would require the approval of the board/committee to use the site as an animal safe place. The

implication of using a facility without waiting for approval is that it allows a faster evacuation process, which is a time-sensitive activity. The sooner the evacuation begins, the safer both the animals and their owners will be. The showgrounds are currently used for shows, camping, and recreation activities, whereas the saleyards are primarily used for livestock sales and animal holding. The racecourse and harness club are used for both race and non-race functions, while the animal facility is used to temporarily house animals.

5.2.3 Engaging Via Memorandum of Understanding (MOU)

Prior to use, fifteen (60%) of the 25 facilities assessed would require a signed memorandum of understanding (MOU) with the Hunter Local Land Service. The remaining 40% would not require an MOU (see Table 4 for list of facilities requiring MOU). A signed MOU ensures that the facility and the HLSS understand what is expected of them, which will improve the evacuation process in the long run. Those facilities that needed an MOU were asked to provide information about their terms and conditions. Table 5 contains the list of terms and conditions to be considered prior to using the facilities.

Table 4: MOU requirements

S/N	Facility	MOU Required?	
		Yes	No
1	Bulahdelah Showground		X
2	Cessnock Showground	✓	
3	Dungog Saleyard	✓	
4	Dungog Showground		X
5	East Gresford Showground		X
6	Gloucester Saleyard	✓	
7	Gloucester Showground	✓	
8	Hunter Regional Livestock Exchange	✓	
9	Maitland Saleyard		X
10	Maitland Showground	✓	
11	Manning Valley Racecourse, Taree		X
12	Merriwa Showground		X
13	Morrisset Showground		X
14	Muswellbrook Showground	✓	
15	Nabiac Saleyard		X
16	Nabiac Showground		X
17	Newcastle Harness Racing Club	✓	
18	Scone Regional Livestock Selling	✓	
19	Singleton Animal Management Facility	✓	
20	Singleton Showground	✓	
21	Stroud Showground	✓	
22	Taree Saleyard	✓	
23	Taree Showground		X
24	White Park, Scone	✓	
25	Wingham Showground	✓	
Total		15	10

Table 5: Conditions for MOU

S/N	Conditions for consideration in MOU	Comments
1	Animal feeding	Who will provide hays/animal feed?
2	Reimbursement for using the facility	Will the facility management be reimbursed for costs incurred (such as water and electricity) during use?
3	Length of use	How long will the facility be used? Will the activity prevent regular users/clients from accessing the facility?
4	Tagging of stock	Who will be responsible for tagging animals? The owner or HLLS?
5	Medical assistance for animals	Will the facility be responsible for providing a veterinary doctor?
6	Contact details of animal owners	Who will store the contact details of animal owners?
7	Who will look after the animals?	Will HLLS deploy their staff to look after the animals or the facility will be responsible for that?
8	Who will be responsible for damages?	In the event of damages to the yard, stables, or other parts of the facility, who will be responsible for repairs?
9	What benefits are in for the facilities	What do the facilities stand to gain in allowing their yards, stables, and pens to be used?
10	Insurance	Who will pay for the insurance?
11	Maintenance Protocol/procedure	Will there be a maintenance protocol or procedure in place during the evacuation n process?
12	What cost will be covered by HLLS?	Will the facility be responsible for any cost?
13	Which part of the facility will be used?	Will the exercise use the whole or part of the facility?

5.2.4 Previous use of the facility for emergency evacuation

As part of the assessment process, participants were asked if their facilities had previously been used for emergency animal shelter or safe places. Notably, 84% of the facilities had previously been used, as shown in Table 6. For example, the Maitland showground has been used twice in the last 12 months. During the 2019/2020 bushfire season, it was used to house animal stocks from Woodville and Buchanan. . Furthermore, the level of opposition from community members to the use of the facilities for animal emergency shelter was sought. The results show that community members have very little resistance, implying that the community accepts.

Table 6: Previous use of the facilities

Facility	Level of usage					Resistance from community members
	1	2	3	4	5	
Bulahdelah Showground			X			Very weak
Cessnock Showground				X		
Dungog Saleyard		X				
Dungog Showground			X			
East Gresford Showground		X				
Gloucester Saleyard			X			
Gloucester Showground				X		
Gooch Agencies – Taree Saleyard		X				
Hunter Regional Livestock Exchange	X					
Maitland				X		
Maitland Saleyard				X		
Manning Valley Racecourse, Taree			X			

Merriwa Showground		X				
Morisset Showground		X				
Muswellbrook Showground		X				
Nabiac Saleyard		X				
Nabiac Showground		X				
Newcastle Harness Racing Club		X				
Scone Saleyard	X					
Singleton Animal Management Facility	X					
Singleton Showground				X		
Stroud Showground		X				
Taree Saleyard						X
White Park, Scone	X					
Wingham Showground			X			

Key: 1 = Never been used; 2 = Rarely used; 3 = Used sometimes; 4 = Used most times; 5 = Used every time

5.3 Animal handling

One of the most important characteristics of the facilities evaluated is their ability to hold and handle animals in accordance with the Australian Animal Welfare Standards and Guidelines. This emphasises the importance of assessing each facility's potential capacity, the types of spaces available, and the conditions of those spaces. The assessment results indicate that the number and type of animals that each facility can handle varies depending on the size and space available (see Table 7).

Table 7: Size and estimated number of animals per facility

S/N	Facility	Large		Medium		Small	
		Horse	Cattle	Sheep	Goat	Dog/Cat	Poultry
1	Bulahdelah Showground	80	50	Y	Y	N	N
2	Cessnock Showground	20	40	15	15	Y	20
3	Dungog Saleyard	15	35	N	N	N	N
4	Dungog Showground	80	35	Y	Y	Y	25
5	East Gresford Showground	60	40	N	N	N	20
6	Gloucester Saleyard	200	400	N	N	N	10
7	Gloucester Showground	60	250	Y	Y	Y	Y
8	Hunter Regional Livestock Exchange	100	3000	2000	2000	Y	30
9	Maitland Saleyard	100	2000	100	100	Y	N
10	Maitland Showground	80	30	50	50	Y	100
11	Manning Valley Racecourse, Taree	100	N	N	N	N	N
12	Merriwa Showground	80	30	Y	Y	Y	20
13	Morisset Showground	60	20	Y	Y	Y	20
14	Muswellbrook Showground	100	400	100	100	Y	Y
15	Nabiac Saleyard	20	30	Y	Y	Y	20
16	Nabiac Showground	20	30	Y	Y	Y	20
17	Newcastle Harness Racing Club	110	10	N	N	N	N
18	Scone Regional Livestock Selling	30	1500	N	N	N	N
19	Singleton Animal Management Facility	N	N	Y	Y	Y	20
20	Singleton Showground	100	50	Y	Y	Y	144

21	Stroud Showground	50	500	Y	Y	Y	200
22	Taree Saleyard	500	1000	2000	2000	N	N
23	Taree Showground	105	50	50	50	150	50
24	White Park, Scone	100	30	Y	Y	N	N
25	Wingham Showground	60	40	Y	Y	N	N

Key: Y = Yes; N = No

Table 8 indicates the availability and condition of some animal handling equipment and considerations such as hay/feed shed, wash bay, quarantine space and water and feed troughs. The availability of a hay shed allows for the storage and preservation of animal food in fresh state. Sixteen (64%) of the facilities accessed have hay sheds in varying states of repair, ranging from average to excellent. Similarly, 56% of the facilities have wash bays (with conditions ranging from average to excellent) where trucks or vehicles can be washed down to prevent the spread of any disease outbreak.

The findings show that animal handling equipment are available in all the facilities, but their condition varies. A dedicated space for animal quarantine is currently unavailable in seven (28%) of the facilities. However, there are areas that can be used for this purpose if the need arises. As shown in Table 8, only five (20%) of the 25 facilities lack water and feed troughs. The condition of the water and feed troughs in those facilities where they are available is either average or good, and they may require renovation or replacement where necessary.

Table 8: Assessment of animal handling equipment and space

S/N	Facility	Animal handling equipment/space			
		Hay/feed shed	Wash bay	Quarantine space	Water/Feed trough
1	Bulahdelah Showground	4	1	4	4
2	Cessnock Showground	2	3	NA	NA
3	Dungog Saleyard	2	2	4	4
4	Dungog Showground	4	4	4	4
5	East Gresford Showground	4	4	4	NA
6	Gloucester Saleyard	1	4	3	4
7	Gloucester Showground	2	2	3	3
8	Hunter Regional Livestock Exchange	2	4	2	4
9	Maitland Saleyard	1	4	4	4
10	Maitland Showground	3	4	3	4
11	Manning Valley Racecourse, Taree	5	4	NA	4
12	Merriwa Showground	3	1	3	NA
13	Morrisset Showground	3	3	3	4
14	Muswellbrook Showground	2	4	4	4
15	Nabiac Saleyard	3	1	NA	3
16	Nabiac Showground	3	1	NA	4
17	Newcastle Harness Racing Club	3	2	3	4
18	Scone Regional Livestock Selling	5	4	4	4
19	Singleton Animal Management Facility	1	1	NA	NA
20	Singleton Showground	4	2	2	4
21	Stroud Showground	4	1	4	NA

22	Taree Saleyard	1	3	4	3
23	Taree Showground	3	3	NA	4
24	White Park, Scone	4	1	NA	3
25	Wingham Showground	4	4	4	4

1 = Poor; 2 = Fair; 3 = Average; 4 = Good; 5 = Excellent; NA = Not Available

5.4 Site accessibility

Identifying evacuation routes, including any impediments and alternatives if primary routes become inaccessible, is a critical consideration in evacuation planning. Road closures during a disaster can be caused by various factors, including flooding, proximity to a bushfire front, and hazardous trees. Table 9 shows the access road(s), primary evacuation routes, and alternate routes for each facility.

Table 9: Site access and evacuation routes

S/N	Facility	Site Access		
		Access road(s)	Primary evacuation route(s)	Alternative route(s)
1	Bulahdelah Showground	Prince Street	<ul style="list-style-type: none"> Myall Street Jackson Street Stuart Street 	<ul style="list-style-type: none"> Myall Street Jackson Street Stuart Street
2	Cessnock Showground	Mount View Road	<ul style="list-style-type: none"> Barrett Avenue Condon Avenue Sports Avenue 	<ul style="list-style-type: none"> Barrett Avenue Condon Avenue Sports Avenue
3	Dungog Saleyard	Short Street	NA	NA
4	Dungog Showground	Abelard Street	<ul style="list-style-type: none"> Mary Street Chapman Street 	<ul style="list-style-type: none"> Mary Street Chapman Street
5	East Gresford Showground	Park Street	NA	NA
6	Gloucester Saleyard	Cemetery Road & Church Street	<ul style="list-style-type: none"> Tate Street Clement Street 	<ul style="list-style-type: none"> Tate Street Clement Street
7	Gloucester Showground	Showground Rd	Thunderbolts Way	Thunderbolts Way
8	Hunter Regional Livestock Exchange	Gresford Road	NA	NA
9	Maitland Saleyard	Kyle Street	NA	NA
10	Maitland Showground	Blomfield Street	<ul style="list-style-type: none"> Evans Street Louth Park Road 	<ul style="list-style-type: none"> Evans Street Louth Park Road
11	Manning Valley Racecourse, Taree	Racecourse Drive	Lawson Crescent	Lawson Crescent
12	Merriwa Showground	Dutton Street	<ul style="list-style-type: none"> Mackenzie Street Golden Highway 	<ul style="list-style-type: none"> Mackenzie Street Golden Highway
13	Morisset Showground	Ourimbah Street	<ul style="list-style-type: none"> Freemans Drive Jamerin Way Awaba Street 	<ul style="list-style-type: none"> Freemans Drive Jamerin Way Awaba Street
14	Muswellbrook Showground	New England Highway & Rutherford Road	Maitland Street	Maitland Street
15	Nabiac Saleyard	Showground Lane	Nabiac Street	Nabiac Street
16	Nabiac Showground	Showground Lane	Nabiac Street	Nabiac Street
17	Newcastle Harness Racing Club	Jackson Street	<ul style="list-style-type: none"> Denney Street Styx Creek 	<ul style="list-style-type: none"> Denney Street Styx Creek

			• Ailsa Road	• Ailsa Road
18	Scone Regional Livestock Selling	Muffet Street	NA	NA
19	Singleton Animal Management Facility	Dyrring Road	NA	NA
20	Singleton Showground	Bathurst Street	• Gas Street • Church Street	• Gas Street • Church Street
21	Stroud Showground	Cowper Street	• Briton Ct Road • Milbrook Road	• Briton Ct Road • Milbrook Road
22	Taree Saleyard	Bucketts Way	NA	NA
23	Taree Showground	Muldoon St	NA	NA
24	White Park, Scone	Guernsey Street	• Guernsey Street • Kingdon Street	• Guernsey Street • Kingdon Street
25	Wingham Showground	Gloucester Road	• Skinner Street • Rouse street	• Skinner Street • Rouse street

NA = Not Available

Table 10 presents the current state and condition of the site access of the facilities assessed. Although access to most of the saleyards are private property, indicating that there would be access restrictions. They are, however, available for use in the event of disaster by contacting the owners or managers. Access to the showgrounds (as a public facility) is unrestricted but may be limited by locked gates and building/facilities where necessary and applicable. It is not surprising that all the facilities have suitable access and egress. Quite a few (16%) of the facilities do not have disability access, and the condition of those that do ranges from fair to good.

Table 10: Condition of site access

S/N	Facility	Site Access			
		Unauthorised entry	Fencing	Suitable access & egress	Disability access
1	Bulahdelah Showground	1	4	4	4
2	Cessnock Showground	1	2	4	2
3	Dungog Saleyard	1	1	4	NA
4	Dungog Showground	2	4	4	4
5	East Gresford Showground	1	4	4	4
6	Gloucester Saleyard	3	1	4	4
7	Gloucester Showground	1	2	3	4
8	Hunter Regional Livestock Exchange	3	2	4	4
9	Maitland Saleyard	1	1	4	4
10	Maitland Showground	4	3	4	NA
11	Manning Valley Racecourse, Taree	4	4	4	4
12	Merriwa Showground	1	4	4	4
13	Morisset Showground	3	4	3	3
14	Muswellbrook Showground	4	2	3	2
15	Nabiac Saleyard	1	3	3	4
16	Nabiac Showground	1	3	4	2

17	Newcastle Harness Racing Club	2	1	4	4
18	Scone Regional Livestock Selling	4	5	4	4
19	Singleton Animal Management Facility	4	4	4	4
20	Singleton Showground	3	4	4	3
21	Stroud Showground	1	4	4	2
22	Taree Saleyard	1	1	4	NA
23	Taree Showground	1	3	4	NA
24	White Park, Scone	4	4	4	4
25	Wingham Showground	1	4	4	4

1 = Poor; 2 = Fair; 3 = Average; 4 = Good; 5 = Excellent; NA = Not Available

5.5 Traffic Management

In the event of a disaster, the flow of traffic to and from an emergency animal-safe place would increase. This implies the need for efficient traffic management around the facility, the availability of alternate transport routes or back streets, and safe turning or maneuvering areas for trucks to ease traffic flow. The findings indicate that, with the exception of Gooch Agency (Taree Saleyard) and Hunter Regional Livestock Exchange, traffic can be effectively managed across all facilities (Table 11). Similarly, with the exception of Dungog saleyard, all weather access (access to the facility during all-weather types) ranges from average to excellent. Six of the 25 facilities lack alternate transportation routes or back streets (names of alternate routes are listed in Table 9), which may impede the free flow of traffic during emergency evacuations. All of the facilities, however, have a safe turning or maneuvering area for trucks, though their condition ranges from fair to good. .

Table 11: Traffic Management

S/N	Facility	Traffic Management			
		Traffic management	All weather access	Alternate transport route	Safe turning & manoeuvring
1	Bulahdelah Showground	4	3	4	2
2	Cessnock Showground	4	4	4	4
3	Dungog Saleyard	4	1	NA	3
4	Dungog Showground	4	4	4	4
5	East Gresford Showground	4	4	NA	4
6	Gloucester Saleyard	4	4	4	3
7	Gloucester Showground	4	4	NA	4
8	Hunter Regional Livestock Exchange	2	4	4	4
9	Maitland Saleyard	4	4	NA	4
10	Maitland Showground	4	4	4	4
11	Manning Valley Racecourse, Taree	4	4	2	4
12	Merriwa Showground	4	4	4	4
13	Morisset Showground	4	3	4	4
14	Muswellbrook Showground	4	4	4	4
15	Nabiac Saleyard	4	3	4	3
16	Nabiac Showground	4	3	4	3

17	Newcastle Harness Racing Club	4	3	4	4
18	Scone Regional Livestock Selling	4	5	NA	4
19	Singleton Animal Management Facility	4	4	4	4
20	Singleton Showground	4	4	4	4
21	Stroud Showground	4	4	4	4
22	Taree Saleyard	2	4	NA	4
23	Taree Showground	4	4	4	4
24	White Park, Scone	4	4	3	4
25	Wingham Showground	4	4	4	4

1 = Poor; 2 = Fair; 3 = Average; 4 = Good; 5 = Excellent; NA = Not Available

5.6 Infrastructure

Infrastructure is a critical component in the effective performance of LLS duties. According to the results summarised in Table 12, all of the facilities assessed have an office space in good condition and can be used to profile and register animal owners and their stocks. This would improve the LLS's smooth operation and effective management of the evacuation processes. Furthermore, the condition of stables and pens (where applicable) was assessed, and the results show a range of conditions ranging from poor to good (see Table 12). This indicates the need for renovation, particularly for those classified as fair and average, in order to keep animals and workers safe on the site.

On the other hand, four of the facilities lack storage space for Agriculture and Animal Services Functional Area (AASFA) equipment, whereas the others have fair to good storage. The availability of a storage facility for AASFA equipment would help the process by alleviating the stress of material logistics.

Table 12: Condition of infrastructure

S/N	Facility	Condition of Infrastructure		
		Office space	Storage for AASFA	Stables/Pens
1	Bulahdelah Showground	4	4	4
2	Cessnock Showground	4	4	2
3	Dungog Saleyard	4	4	2
4	Dungog Showground	4	4	4
5	East Gresford Showground	4	4	3
6	Gloucester Saleyard	4	4	4
7	Gloucester Showground	4	1	3
8	Hunter Regional Livestock Exchange	4	3	4
9	Maitland Saleyard	4	3	4
10	Maitland Showground	4	4	4
11	Manning Valley Racecourse, Taree	4	4	4
12	Merriwa Showground	4	4	4
13	Morisset Showground	4	4	3
14	Muswellbrook Showground	4	4	4
15	Nabiac Saleyard	4	1	3

16	Nabiac Showground	4	4	3
17	Newcastle Harness Racing Club	4	4	3
18	Scone Regional Livestock Selling	4	4	2
19	Singleton Animal Management Facility	4	4	4
20	Singleton Showground	4	4	4
21	Stroud Showground	4	4	4
22	Taree Saleyard	4	1	2
23	Taree Showground	4	4	4
24	White Park, Scone	4	4	4
25	Wingham Showground	4	4	3

1 = Poor; 2 = Fair; 3 = Average; 4 = Good; 5 = Excellent

5.7 Utilities

Utilities such as lighting and communication aid in the efficient operation of the facilities. According to the results (Table 13), all of the facilities have good mobile phone reception for all network providers except East Gresford Showground, which is only available to Telstra. Interior lighting was good in 84% of the facilities as at the time of assessment, with two facilities having fair and poor interior lighting. In terms of external lighting, 68% of the facilities had good lighting around the sites, two had average lighting, three had fair lighting, and the other two had poor lighting. Interior and exterior lighting both provide some level of safety and, as such, should be adequate. The public address system (PAS) facilitates communication within and outside of the facility. Only 4% of the facilities had an excellent PAS, 76% had a good communication system, and the remaining three had an average PAS.

Table 13: Utilities and communication

S/N	Facility	Utilities & Communication				
		Inside lighting	Outside lighting	PAS	Mobile reception	Social media
1	Bulahdelah Showground	4	4	4	3	Y
2	Cessnock Showground	4	4	4	4	Y
3	Dungog Saleyard	4	1	1	4	Y
4	Dungog Showground	4	4	4	4	Y
5	East Gresford Showground	4	4	4	4	Y
6	Gloucester Saleyard	4	3	3	4	N
7	Gloucester Showground	4	4	2	4	Y
8	Hunter Regional Livestock Exchange	4	3	4	4	Y
9	Maitland Saleyard	4	4	3	4	Y
10	Maitland Showground	2	2	4	4	Y
11	Manning Valley Racecourse, Taree	4	4	4	4	Y
12	Merriwa Showground	4	4	4	4	Y
13	Morriset Showground	4	4	4	4	Y
14	Muswellbrook Showground	4	2	2	4	Y
15	Nabiac Saleyard	2	2	3	4	Y

16	Nabiac Showground	2	2	3	4	Y
17	Newcastle Harness Racing Club	4	4	4	4	Y
18	Scone Regional Livestock Selling	4	4	4	5	Y
19	Singleton Animal Management Facility	4	4	4	4	N
20	Singleton Showground	2	4	2	4	Y
21	Stroud Showground	4	4	4	4	Y
22	Taree Saleyard	4	4	4	4	Y
23	Taree Showground	4	4	4	4	Y
24	White Park, Scone	4	4	4	4	Y
25	Wingham Showground	4	4	4	4	Y

1 = Poor; 2 = Fair; 3 = Average; 4 = Good; 5 = Excellent; Y = Yes; N = No

5.8 Hazard and Risks Vulnerability Assessment

Participants were asked about the potential risks of using their facility for emergency animal shelter in the event of a disaster. Table 5 summarises the findings. According to the findings, disease outbreak and flooding are the top two potential risks, while infrastructure damage and dam breakage are the bottom two. However, the participants' assessment of these risks varies from very low to high (Table 14), implying that the majority of the facility can be used in the event of a disaster. Based on the facilities' assessment, the level of risk in 18 are very low or low and in six the risk level is moderate. Only in one facility the risk level is considered high (see Table 14). Therefore, most of the facilities can be suitable for being used as animal-safe places in a disaster.

Table 14: Potential risks and their level

Risk	Level of risk				
	Very low	Low	Moderate	High	Extreme
Flood		<ul style="list-style-type: none"> Dungog Showground Taree Showground Stroud Showground Merriwa Showground 	<ul style="list-style-type: none"> Bulahdelah Showground Singleton Showground Cessnock Showground Morisset Showground 		NA
Disease outbreak	Wingham Showground	Gloucester Showground	<ul style="list-style-type: none"> Singleton Saleyard Maitland Saleyard 	Scone Saleyard	NA
None		<ul style="list-style-type: none"> Gloucester Saleyard East Gresford Showground Taree Saleyard Muswellbrook Showground Nabiac Showground 			NA

		<ul style="list-style-type: none"> • Nabiac Saleyard • Maitland Showground • Newcastle Harness Racing Club • White Park • Manning Valley Racecourse 			
Infrastructure Damage		Dungog Saleyard			NA
Dam breakage		Scone Saleyard			NA

5.9 Previous disasters

Participants were asked if their facilities had previously been affected by a disaster such as a fire, flood, or storm. The findings indicate that some of the facilities have been flooded in the past. The major disasters that have impacted the facilities, as shown in Table 15, are floods and storms.

Table 15: Previous disasters across the sites

Facility	Disaster	When	Extent of damage	Mitigation measures
Stroud Showground	Flood (300mm of rain in 12 hours)	2015	Five buildings were lost Damage to ring fence	Nothing – flat showground on a flood plain
Maitland Showground	Flood			State government built a level bank
East Gresford Showground	Storm	April 2015	Substantial loss of the entire southern perimeter fence	Construction of a drainage system that collects water to by-pass the facility
Singleton Showground	Storm	1996	All the roofs	None
Dungog Showground	Flood	2015	Ground was flooded	Pipes have been installed to channel water into the dam
Morisset Showground	Flood	2020	Ground was flooded	None

5.10 Hygiene and Waste Management

As shown in Table 16, each of the 25 facilities assessed has a gender-based toilet. However, 84% are in good condition, while the remaining 16% are in average condition. In terms of waste management, the sorting of waste generated on site as well as the availability of collection receptacles were assessed. According to the findings, 20% of respondents do not sort their waste, while 8% have a sufficient number of collection receptacles. Five (20%) of the facilities have an average number of collection receptacles, while the remaining 52% are quite good in terms of waste sorting and an adequate number of receptacles.

Table 16: Hygiene and waste management

S/N	Facility	Hygiene & Waste Management	
		Gender-based toilet	Waste separation
1	Bulahdelah Showground	3	4
2	Cessnock Showground	4	1
3	Dungog Saleyard	4	1
4	Dungog Showground	4	4
5	East Gresford Showground	4	1
6	Gloucester Saleyard	3	4
7	Gloucester Showground	4	4
8	Hunter Regional Livestock Exchange	4	2
9	Maitland Saleyard	4	4
10	Maitland Showground	4	4
11	Manning Valley Racecourse, Taree	4	4
12	Merriwa Showground	4	3
13	Morrisset Showground	4	4
14	Muswellbrook Showground	4	2
15	Nabiac Saleyard	3	3
16	Nabiac Showground	3	3
17	Newcastle Harness Racing Club	4	4
18	Scone Regional Livestock Selling	4	4
19	Singleton Animal Management Facility	4	3
20	Singleton Showground	4	1
21	Stroud Showground	4	4
22	Taree Saleyard	4	4
23	Taree Showground	4	4
24	White Park, Scone	4	4
25	Wingham Showground	4	1

1 = Poor; 2 = Fair; 3 = Average; 4 = Good; 5 = Excellent

6.0 Prioritisation of Facilities

The results of facility prioritisation based on an assessment of their condition and risk vulnerability are shown in Table 17. The results show that 76% of the facilities are classified as "C," (refer to Table 2 for classification), indicating that they are suitable to be used as emergency animal-safe places but would require some additional equipment such as mobile pens and yards. Similarly, 8% of the facilities are classified as "D," implying that they are fit for use but would require major work, such as stable refurbishment, to be completed. It is worth noting that 16% of the facilities evaluated meet the minimum requirements of Australian Animal Welfare Standards and Guidelines and can be used with or without minor cosmetic work. This suggests that facilities classified as "C" or "D" undergo urgent renovation or remedial work to bring them up to standard in time for the bushfire and flood seasons. On the other hand, 44% of the facilities are vulnerable to bushfires, implying that they cannot be used during a fire disaster, and 24% are vulnerable to flooding. Similarly, 8% of the facilities

are vulnerable to both bushfire and flooding, implying that they are unfit for animal evacuation during disasters. This discovery has the potential to assist HLLS in determining which facilities can be used with or without renovation. It could be used as a guide to determine which facilities could be used in the event of flooding or wildfires. It will also help animal owners make informed decisions about where to take their animals in the event of a disaster.

Table 17: Prioritisation of facilities

S/N	Facility	Condition and risk		
		Condition	Risk priority	Rank
1	Bulahdelah Showground	B	-	1
2	Cessnock Showground	C	1	8
3	Dungog Saleyard	D	-	23
4	Dungog Showground	C	1	8
5	East Gresford Showground	C	2	18
6	Gloucester Saleyard	C	-	5
7	Gloucester Showground	C	1	8
8	Hunter Regional Livestock Exchange	C	1	8
9	Maitland Saleyard	C	1	8
10	Maitland Showground	C	2	18
11	Manning Valley Racecourse, Taree	C	2	18
12	Merriwa Showground	C	1	8
13	Morisset Showground	D	1 & 2	25
14	Muswellbrook Showground	C	2	18
15	Nabiac Saleyard	C	1	8
16	Nabiac Showground	C	1	8
17	Newcastle Harness Racing Club	C	-	5
18	Scone Regional Livestock Selling	C	1	8
19	Singleton Animal Management Facility	B	1	3
20	Singleton Showground	C	-	5
21	Stroud Showground	C	1 & 2	24
22	Taree Saleyard	C	1	8
23	Taree Showground	C	2	18
24	White Park, Scone	B	-	1
25	Wingham Showground	B	2	4

Key: A – Exceeds requirements; B – Meets requirements; C – Suitable with additional equipment; D – Major works required (consider other locations). 1 – Not suitable during bushfire; 2 – Not suitable during a flood

6.1 Facility upgrade

The renovation or upgrade requirement for each facility to meet the minimum requirements of the Australian Animal Welfare Standards and Guidelines was identified as part of the assessment (see Assessment Summary for details). The following are the renovation or upgrading needs that are common to all of the facilities assessed (NB: This is not an exhaustive list – refer to the assessment summary of each site for details):

- ✓ Renovation of stables, cattle yards, and increased size or quality of yards
- ✓ Provision of feed and water troughs
- ✓ Upgrade of perimeter fencing
- ✓ Provision of storage facilities
- ✓ Provision of loading and unloading facilities
- ✓ Renovation of existing cages (where present) to accommodate dogs and cats
- ✓ Provision of alternate power e.g., generator
- ✓ Provision of portable yards to create an isolation or quarantine area for animals

7.0 Next Steps

- Establishment of a National/State database for animal-safe places.
- Development of a guideline for Animal Safe Place (ASP) like the guideline for Neighbourhood Safe Place (NSP).
- Public education campaign to help animal owners make informed decisions about early evacuation. This can be tailored to target large and extra-large animal owners.
- Identification and communication with vulnerable animal owners in each local council
- Education on the level of disaster protection that each facility (e.g., Showground, Saleyards and Animal pound) can provide.
- Early engagement of animal owners about safe locations for their animals and what to expect in terms of facilities and services available at those places.
- Specific training that focuses on the role, responsibilities and expected functions of LLS, WELFAC and LEMO during a disaster.

Recommendations for Future Work

- Schedule of maintenance works that would form part of a building condition assessment report).
- Develop Evacuation Planning guidelines for Animals

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