

**Manual**

**Traffic and Road Use Management  
Volume 3 – Signing and Pavement Marking**

**Part 8: Wildlife Signing Guidelines**

**November 2020**

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## 1 Purpose

This document is intended to provide guidance on:

- establishing a uniform statewide application of signage and pavement marking for wildlife treatments
- the provision of wildlife warning signs
- the provision of wildlife information signs
- the evaluation process undertaken for approval to install such signs on state-controlled roads, and
- alternatives to wildlife signage to reduce animal mortality rates.

Wildlife warning and information signs include signs for a variety of native animals.

This document also provides guidance for the specific use of:

- green retroreflective raised pavement markers (RRPMs) in conjunction with wildlife conservation area signs
- supplementary signs for the RSPCA's injured animal phone number 1300 ANIMAL
- fauna aerial bridge signs
- high-impact wildlife signs
- vehicle-activated devices
- threshold pavement marking for wildlife conservation areas
- signs for significant wildlife conservation areas (SWCAs).

This document defines the signing and pavement marking treatment options for wildlife that are approved for use within Queensland: see sign library in Section 18. Alternative or innovative treatment options may be appropriate in certain circumstances. The Traffic Engineering Practice Team ([trafficengineering.support@tmr.qld.gov.au](mailto:trafficengineering.support@tmr.qld.gov.au)) must be consulted prior to the installation of signs not yet approved for use in Queensland.

Using this document and the Department of Transport and Main Roads *Manual of Uniform Traffic Control Devices* (MUTCD), a consistent and standardised approach to the treatment of wildlife issues throughout Queensland should be achieved. A uniform approach to the treatment of wildlife issues is considered critical to enhancing the modification of driver behaviour and achieving the desired results for both road users and wildlife.

It is important to note that wildlife signs and pavement marking alone are not sufficient in reducing wildlife mortality rates, and alternative treatments discussed in this document should be considered.

## 2 Glossary

**Table 2 – Definition table**

Term	Definition
1300 ANIMAL	RSPCA call centre phone number to report animal welfare emergencies, including assistance when encountering injured animals on the road
Hotspot	A location where there is a known roadkill problem
Migratory animals	Animals that inhabit a region on a seasonal or short-term nature
MUTCD	Manual of Uniform Traffic Control Devices
QPWS	Queensland Parks and Wildlife Services
RAMSAR	Is a short term for the 'Convention on Wetlands of International Importance', originally signed in 1971 in the town of Ramsar, Iran
RCP	Road Corridor Permit
RIM	Road infrastructure Manager, either the Transport and Main Roads District office or the Local Government
RRPM	Raised retroreflective pavement marker
RSPCA	The Royal Society for the Prevention of Cruelty to Animals
SWCA	Significant Wildlife Conservation Area
Traffic speed	The greater of either the 85 <sup>th</sup> percentile speed or the posted speed

## 3 Background

Wildlife signs covered under this document are generally installed in advance of an area of a roadway where there is an increased likelihood of an encounter with wildlife. An encounter on the roadway can create a dangerous situation for both the road users and the wildlife, which may result in a fatality. The signs are used to alert road users to take caution while driving in these areas to prevent loss of control or serious injuries resulting from a collision.

Additional background information for wildlife signage (types and function) is provided in appendices A and B.

#### 4 Wildlife sign installation assessment criteria

The Road Infrastructure Manager (RIM) shall evaluate any requests received for the installation of wildlife warning or wildlife information signs. This assessment shall take into consideration, but is not limited to, the information in this document, including the following:

- a) type of animal (species / native / conservation status)
- b) size of animal (warning or information sign)
- c) local animal population
- d) movement habits of the animal (fast / slow / predictable)
- e) nature of occupation of the area (seasonal / nocturnal)
- f) frequency at which animals cross or are on the road
- g) time of crossings (day or night, dusk or dawn)
- h) visibility of the animal to the road user (animal size / street lighting)
- i) do the animals cross the road at a small, localised area or over a long length of the road?
- j) the habitat adjacent the road (roadside environment) and does this change over the length of area being assessed?
- k) traffic speed
- l) traffic volume (particularly during times the animals are crossing or on the road)
- m) number and severity of officially recorded wildlife-related crashes
- n) information on animal mortality along the road section
- o) whether drivers are unlikely to expect the animal to be crossing or be on the road at this location
- p) what other wildlife warning signs are in the area and have they been effective in reducing crashes involving animals or animal mortality rates?
- q) are there any other wildlife-friendly road environment features installed or that could be installed / recommended (canopy bridges, underpasses, land bridges, wildlife fencing, and so on)?
- r) whether the animal or colony of animals is endangered or considered environmentally significant to the area
- s) does the animal reside within an established wildlife conservation area?
- t) is the location defined as a wildlife movement corridor?

Other factors to consider include:

- The placement of signs should not increase the hazard to either the wildlife, the environment or the road user.
- The placement of signs should have a beneficial impact on the wildlife without a negative road safety effect.

- The frequency and severity of previous crashes is important.
- Any changes to land usage adjacent to the road corridor must be considered.

The RIM may recommend the following actions based on the information currently provided and available:

- installation of a wildlife warning sign;
- installation of a wildlife information sign;
- signs are not warranted at this time.

It is important to note that wildlife warning and information signs are not specifically intended to perform an animal preservation role and research to date indicates that they are not particularly effective for this purpose. If the preservation of animals is considered to be critical for the survival of the local animal population, alternative traffic management and animal management treatments will be required (signs alone are not adequate). These alternative treatments are discussed in Section 16 of this document.

If wildlife warning signs or wildlife information signs are warranted, they must be installed in accordance with this document and the MUTCD Part 2.

## **5 Wildlife warning signs (W5-49-Q01)**

Wildlife warning signs should be provided in areas where the presence of animals along the road path is likely and signs have been assessed as per Section 4. If a wildlife warning sign is to be erected, it shall comply with the requirements in Section 5.1 and the recommendations in Section 5.2.

Refer to Appendix B for information on current wildlife warning signs.

### **5.1 Requirements**

Typically, only one single wildlife warning sign will be required. Where there are two species within an area, two symbolic signs may be installed on a single post and the sign for the animal posing the greatest hazard to vehicles or occupants is installed above. No more than two wildlife warning signs, excluding supplementary plates, shall be installed on a single post. If more than two wildlife warning signs are required at the one location, the following options are available:

1. install one warning sign 'WILDLIFE' (W5-49-Q01) instead of symbolic warning signs, or
2. install two symbolic signs on the one post, indicating the two animals that pose the greatest hazard to vehicles or occupants.

Wildlife warning signs may be duplicated and repeated as necessary. Typically, wildlife warning signs shall be black symbolic animals on a Class 400 retroreflective yellow background.

The sizes of wildlife warning signs shall be:

- Size A: 600 x 600 mm, for traffic speed equal to or less than 60 km/h
- Size B: 750 x 750 mm, for traffic speed 70 km/h or 80 km/h
- Size C: 900 x 900 mm, for traffic speed equal to or more than 90 km/h.

### **5.2 Recommendations**

Wildlife warning signs should not be provided for migratory animals. Temporary wildlife warning signs may be more appropriate; see Section 5.3. Wildlife must frequently encroach onto the roadside in



localised areas during time periods where there is a significant traffic volume or where drivers are unlikely to expect them to warrant the installation of signs.

Wildlife warning signs should be continually assessed for their need and relevance. Signs that are no longer applicable should be removed.

The actual advance warning distance (or location) for wildlife warning signs cannot be determined accurately because of the random nature of animals along the road. The signs should be located prior to the area where the animals are likely to be encountered. If the presence of animals is expected over a distance exceeding 1 km, then the supplementary plate 'NEXT ... km' (W8-17-1) should be used. If the animals are present over a long distance, the wildlife warning signs may be repeated (if warranted) at intervals of not less than 5 km.

### **5.3 Temporary wildlife warning signs (TC2021)**

Temporary wildlife warning signs (TC2021 series) may be used as described in their notes. These signs may be used where there have been recent sightings of wildlife, especially koalas and cassowaries, in a localised area as a temporary short-term wildlife warning sign.

These signs may be installed by Queensland Parks and Wildlife Services (QPWS) officers or other agencies in accordance with the requirements of a relevant road corridor permit (RCP). Refer to the sign library in Section 17 for examples of temporary wildlife warning signs.

### **5.4 High-impact wildlife warning signs (TC1621 and TC1622)**

High-impact wildlife warning signs (TC1621 and TC1622) consist of a white target board with a green border and incorporate an animal warning sign with various supplementary plates or a combination of plates. The white target board provides a good contrast to the green background effect of trees, improving sign conspicuity. Refer to the sign library in Section 17 for examples of high-impact wildlife warning signs.

High-impact wildlife warnings signs should be used selectively at hotspot locations or areas with significant conservation value. These signs may be used in conjunction with SWCA signs to highlight hotspots within the conservation area.

Green RRPMS and / or threshold pavement marking may be used in conjunction with high-impact wildlife warning signs located within SWCAs to highlight areas of greater significance or where vehicle / animal collisions are significantly overrepresented. Refer to Section 8 for installation details of SWCA threshold pavement marking. Refer to Section 9 for installation warrants for green RRPMS.

## **6 Supplementary plates for wildlife warning signs**

Where a supplementary plate (such as 'NEXT ... km' (W8-17-1) or SLOW DOWN (TC1608) is warranted, it shall be installed directly under the lowest wildlife warning sign. If the RSPCA's 1300 ANIMAL (TC1547) supplementary plate is also warranted at the same location, it should be installed beneath any other supplementary plates. Where TC1547 is to be installed, all other supplementary plates are to match the width of TC1547.

When the 'NEXT ... km' (W8-17-1) supplementary plate is used with a wildlife warning sign, it is important to determine the section of road where the risk of an animal vehicle collision is high. Wildlife warning signs may be repeated (if warranted) at intervals of not less than five kilometres. It may also be appropriate to select specific locations and sign short, individual lengths of road where the risk of an animal / vehicle collision is greatest.

The 'NEXT ... km' (W8-17-1) supplementary plate shall not be used with wildlife information signs or with SWCA signs. For SWCA signs (see Section 12), the distance of the conservation area along the road is indicated on the main sign.

Note: The 'NEXT ... m' (W8-17-2) supplementary plate may be substituted in all cases for the 'NEXT ... km' (W8-17-1) supplementary plate.

### **6.1 *Advisory speed signs***

Advisory speed limit signs may be used with the warning sign in accordance with Clause 4.5.4.4 of the MUTCD Part 2.

## **7 *Vehicle-activated devices***

Vehicle-activated devices incorporate a radar device that activates when a vehicle is travelling above a pre-set speed threshold and may be used as an alternative to passive signs.

These devices may be used where:

- there is an increased risk of animal / vehicle collisions; or
- due to elevated impacts with animals.

These devices may be either vehicle-activated flashing lights (wig-wags) or vehicle-activated signs.

### **7.1 *Vehicle-activated flashing lights***

Vehicle-activated flashing lights must be installed with a radar device capable of detecting vehicle speeds that activate the flashing of the lights in a wig-wag arrangement. The devices are to be used with high-impact wildlife warning signs (Section 5.4) to enhance sign conspicuity. The flashing lights shall operate alternately when activated by an approaching vehicle which is exceeding a nominated speed within the prescribed times of operation or during set times when animals are likely to be encountered. The flashing lights will continue to flash until the vehicle speed reduces to below the nominated speed or the vehicle continues past the sign.

Refer to the sign library in Section 17 for examples of signs with vehicle-activated flashing lights.

Vehicle-activated flashing light signs should be used selectively at critical locations where high-impact wildlife warning signs need enhancement to improve driver compliance with lower speeds.

### **7.2 *Vehicle-activated signs***

Vehicle-activated signs (see example in Figure 7.2 following) may be used where the presence of animals along the road is expected and there is a poor compliance with the posted speed.

**Figure 7.2 – Example vehicle-activated signage for wildlife zones**



These devices are installed with a radar device capable of detecting vehicle speeds and shall be pre-set with the posted speed limit. The relevant animal symbol displayed on the sign must be easily understood by drivers. When a vehicle is detected, the sign shall activate as follows:

- Vehicle at or below the posted speed limit: device shall activate and cycle between a green symbolic of the animal and the message 'THANK YOU'. Cycle shall be between 1–2 seconds.
- Vehicle above the posted speed limit: device shall activate and cycle between a red symbolic of the animal and the message 'SLOW DOWN'. Cycle shall be between 1–2 seconds.

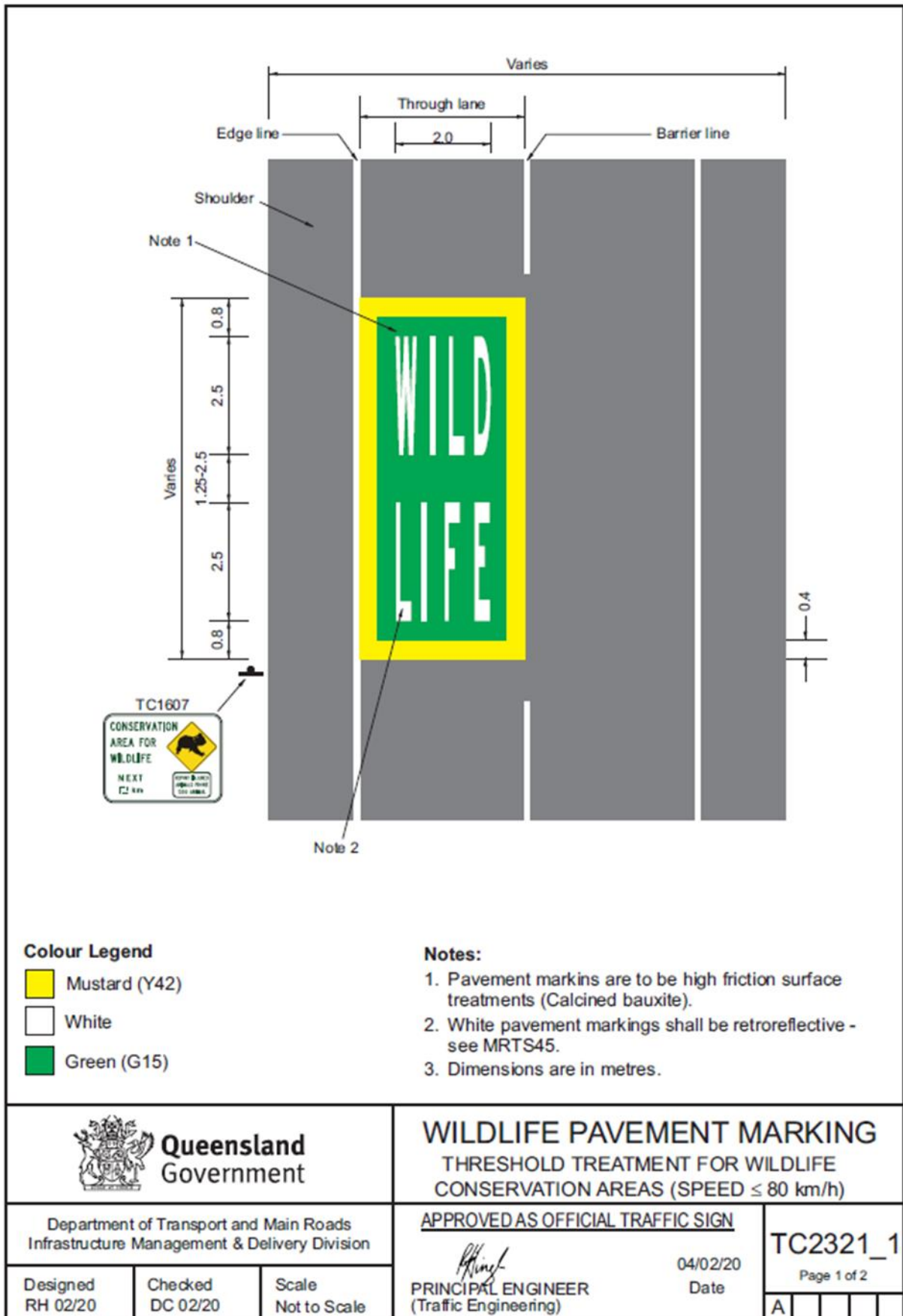
## **8 Wildlife threshold pavement marking (TC2321)**

Wildlife threshold pavement marking may be used to identify the start of signed SWCAs. The purpose of threshold treatments is to complement the entry signs into a SWCA and shall bear the words 'WILD LIFE' and shall be installed in accordance with Clause 5.5.2 of the MUTCD Part 2.

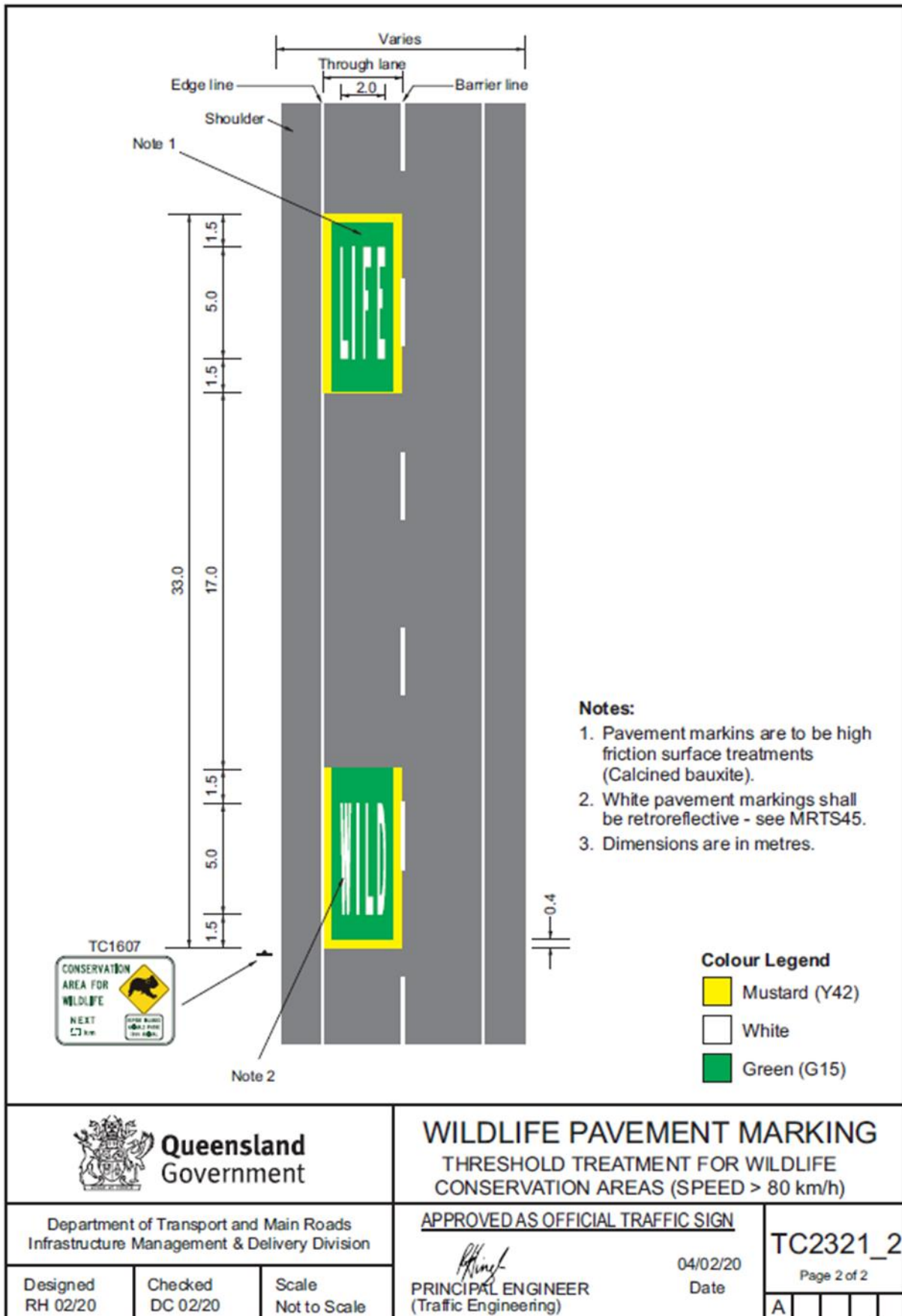
Wildlife threshold treatments shall meet the skid resistance requirements of Transport and Main Roads' Technical Specification MRTS45 and shall consist of a green background with a yellow border constructed with skid resistant materials. This treatment must be installed in conjunction with SWCA signs and may also be installed with high-impact wildlife warning signs (see Section 5.4). Green RRPMS should also be installed at all threshold treatments; see Section 9.

The wildlife threshold treatment may be installed on both high-speed (>80 km/h) and low-speed (≤80 km/h) roads. Threshold treatments should not be used on multi-lane arterial roads. Overuse of the threshold treatment is discouraged. Example wildlife threshold pavement marking layouts are provided in figures 8(A) and 8(B) following.

**Figure 8(A) – TC2321\_1 Threshold treatment for wildlife conservation areas in low-speed zones ( $\leq 80$  km/h)**



**Figure 8(B) – TC2321\_2 Threshold treatment for wildlife conservation areas in high-speed zones (>80 km/h)**



## 9 Retroreflective raised pavement markers

RRPMs, when installed, must be installed in accordance with this document and the MUTCD Part 2. Green RRPMs may be used in conjunction with SWCA signs and are intended to be a 'high-impact'-type measure. Green RRPMs shall not be installed with wildlife information signs.

Green RRPMs placed to identify SWCAs must meet the following requirements:

- a) must only be installed where SWCA signs are located
- b) must not be installed on motorways
- c) must be bi-directional and installed adjacent to the road edge line on both sides of the road
- d) must be installed with bi-directional white RRPMs installed on the centre line at the locations and spacing as specified in the MUTCD Part 2
- e) must only be installed over the length of road defined by SWCA signs
- f) must not be installed on roads or in locations where they may pose a hazard to other road users, such as cyclists
- g) must be placed 25–50mm clear of painted lines and located on the traffic side of the line for lane widths of 3.5m and above and be placed outside the painted line for lane widths less than 3.5m
- h) green RRPMs must have a minimum spacing of 48m and not exceed a spacing of 96m; spacing (m) shall be uniform over the length of the area defined by the SWCA
- i) if existing RRPMs (red or white) are installed, and green RRPMs are also to be installed, the existing RRPMs (red or white) are to be retained and must be installed at the locations and spacing specified by the MUTCD Part 2 – this may require reinstatement or replacement of existing RRPMs (red or white) so green RRPMs may then be installed on the edge lines at spacings as specified previously
- j) if red RRPMs are to be installed on the edge line with green RRPMs, the locations and spacing for the red RRPMs must be as specified in the MUTCD Part 2
- k) once the RRPMs are installed, the road is to be inspected (at regular intervals) and maintenance of the RRPMs conducted as required
- l) green RRPMs no longer warranted must be removed.

## 10 Wildlife information signs

Wildlife warning signs should not be installed for small animals that are unlikely to cause any property damage or personal injury during a collision.

Wildlife information signs consist of a green legend on a white background (Class 400 material), are rectangular in shape and consist of a green legend displaying 'CARE FOR OUR WILDLIFE', with a green animal symbol. The distance supplementary plates 'NEXT ... km' (W8-17-1) or 'NEXT ... m' (W8-17-2) must not be used in conjunction with a wildlife information sign.

Refer to Section 4 of this document for information on assessing the need for a wildlife information sign on the roadway. If a wildlife information sign is to be erected, it shall comply with the requirements in Section 10.1. Additional considerations should be given to aspects in Section 10.2.

### **Requirements**

Wildlife information signs shall indicate only one animal species that is likely to be present. If there are different types of animals encroaching on the roadside within an area and wildlife information signs are required for multiple animal species, only the animal most at risk from traffic strikes shall be provided.

No more than one wildlife information sign is to be installed at any one location; however, wildlife information signs may be duplicated on multi-lane divided roads.

Wildlife information sign installation shall comply with this document and the MUTCD Part 2. The sizes of wildlife information signs shall be:

- Size A: 750 x 600 mm, where traffic speeds are at or less than 80 km/h.
- Size B: 900 x 720 mm, where traffic speeds are greater than 80 km/h.

### 10.1 Recommendations

The following recommendations apply to wildlife information signs:

- signs should not be provided for migratory animals
- signs should be provided where the presence of animals along the road is expected
- signs should be continually assessed for their need and relevance
- signs that are no longer applicable should be removed.

Wildlife information signs should not be erected on the same post as wildlife warning signs. If wildlife information signs are justified in locations where wildlife warning signs exist (or are proposed), the effect of these additional signs on driver behaviour must be considered. Wildlife warning signs take precedence over wildlife information signs. Signs should be located where the animals are likely to be encountered and not too far in advance.

## 11 Injured animal contact phone number signs (TC1547)

The RSPCA has a statewide 1300 number for animal welfare emergencies (1300 ANIMAL) and aims to progress this as one national number for the reporting of wildlife emergencies. Additional background information on the development and application of the RSPCA's 1300 ANIMAL number is provided in Appendix D.

The 1300 ANIMAL (TC1547) supplementary plate should only be installed under a wildlife warning or wildlife information sign. The wildlife warning or wildlife information signs must be assessed and installed (if warranted) in accordance with this document and the MUTCD. The 1300 ANIMAL supplementary plate must not be used as a stand-alone sign. Transport and Main Roads has developed a 1300 ANIMAL (TC1547) supplementary plate to support this initiative, see note on the TC sign for guidance on its use.

**Figure 11 – Examples of '1300 ANIMAL' supplementary plate applications**



## 12 Significant wildlife conservation area signing (W5-49-Q01)

In defining areas suitable for SWCA signs and the higher-impact treatments available, the following criteria should be used. Above all, the likelihood of an animal / vehicle collision should be considered:

- An objective in the *Nature Conservation Act 1992* is the dedication and declaration of areas representative of the biological diversity, natural features and wilderness of the state as protected areas. The classes of protected areas to which this Act applies are:
  - a) national parks (scientific)
  - b) national parks
  - c) national parks (Aboriginal land)
  - d) national parks (Torres Strait Islander land)
  - e) national parks (recovery)
  - f) conservation parks
  - g) resources reserves
  - h) nature refuges
  - i) coordinated conservation areas
  - j) wilderness areas
  - k) World Heritage management areas
  - l) international agreement areas.
- SWCA signs and other higher-impact treatments may also be considered where the following applies:
  - a) the 'conservation' status must be related to wildlife and not to other issues, such as scenic value or flora, and
  - b) the area is classed as a protected area (as defined previously) or by one of the following:
    - i. land within state forests, timber reserves or dedicated as a reserve (or protected area) for environmental purposes under the *Land Act 1994*
    - ii. a World Heritage Area under the World Heritage Convention
    - iii. an area supporting a critically-endangered or endangered ecological community in the list established under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
    - iv. a declared RAMSAR wetland under the EPBC Act
    - v. an area of high nature conservation value under the *Vegetation Management Act 1999*
    - vi. an area, other than state-controlled land, identified in a local government's planning scheme as an area that has special environmental significance for native wildlife.

**Note:** Not all SWCAs automatically qualify for signs.



SWCAs may warrant the installation of wildlife conservation area identification signs (TC1607), signed as a general area or with a specific animal depicted on the sign. To warrant the installation of SWCA signs, the wildlife present must first qualify for the installation of wildlife warning signs; see Section 5. Where warranted, the animal symbolic warning sign of the more prevalent animal in the area should be used; however, the generic 'WILDLIFE' warning sign (W5-49-Q01) may be used on the SWCA sign in lieu of a specific animal warning sign.

SWCA signs should be erected as close as possible to the boundary of the conservation area but must be placed so that they do not compete with other traffic control devices or pose a safety hazard to road users. SWCA signs are made up of a green legend on a white background and incorporate an animal warning sign and the 1300 ANIMAL supplementary plate. Refer to the sign library, see Section 17.

As the SWCA signs incorporate the 1300 ANIMAL, the RSPCA must be contacted before the sign is erected to ensure it has sufficient approved carers in those locations to service the signed area; see Section 11.

Green RRPMS and / or threshold pavement marking may be used in conjunction with SWCA signs where warranted; see sections 8 and 9. SWCA signs and associated threshold pavement markings and RRPMS should only be installed at locations to highlight areas of greater wildlife significance or where vehicle / animal collisions are significantly overrepresented.

### ***12.1 Significant wildlife conservation corridors signing***

As part of the declaration of SWCAs, significant wildlife corridors may also be established or defined. Wildlife corridors do not warrant the installation of SWCA signs but may be signed by using wildlife warning or wildlife information signs.

## **13 Fauna aerial bridge (canopy bridge) signs (TC1576)**

Fauna aerial bridges or canopy bridges are structures that are primarily used by tree-dwelling animals, such as possums, to travel between trees above the road surface, thereby avoiding the risk of being struck by vehicles. TC1576 signs should be erected in advance of the first aerial bridge, repeated as required at intervals of not less than five kilometres and duplicated where required on each side of multi-lane divided roads.

## **14 Requests for wildlife warning and wildlife information signs**

Requests for wildlife warning and wildlife information signs on state-controlled roads should be forwarded to the District office for consideration. If the request relates to an animal for which a standard sign exists, the District shall determine whether such signs are necessary and, if so, install the signs in accordance with this document and the MUTCD Part 2. If the request relates to an animal not currently depicted by a standard sign, and the District has determined that the sign is required, a request should be made as per Section 15.

Requests for wildlife warning and wildlife information signs on local roads should be forwarded to the relevant local government authority (LGA). It is recommended that local governments also use this document when assessing applications for wildlife signage. If the request relates to an animal not currently depicted by a standard sign, and the LGA has determined that the sign is required, a request should be made as per Section 15.

## 15 Treatments (signs or pavement marking) not included in this document

If a treatment proposed for use is not included in this document or the MUTCD Part 2, the following application must be made before the new wildlife treatment may be installed:

1. a statement giving the detailed nature of the problem
2. a detailed description of the proposed wildlife sign or pavement marking treatment, including illustrations as required
3. an outline of the reasons the proposed sign or pavement marking treatment is required, including the expected benefits
4. details of what was trialled, and the assessment conducted, if other approved wildlife sign or pavement marking treatments have already been trialled and found ineffective
5. information outlined in steps 1–4 is to be forwarded to Transport and Main Roads and marked for the attention of the Principal Engineer (Traffic Engineering), Traffic Engineering Practice Unit, Engineering and Technology Branch via email [trafficengineering.support@tmr.qld.gov.au](mailto:trafficengineering.support@tmr.qld.gov.au)
6. Transport and Main Roads will assess the application including consultation with other traffic authorities or environmentalists as required.

## 16 Information on other engineering treatments for wildlife

Transport and Main Roads has developed a *Fauna Sensitive Road Design* series which is available on the Transport and Main Roads Technical Publications webpage at <https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications>. Volume 1 of this series discusses the effectiveness of engineering structures and management practices that are presently adopted for road projects to reduce animal mortalities and help facilitate fauna movement. Volume 2 documents findings from field research (from Australia and overseas) into treatments provided to reduce vehicle / wildlife interactions.

Some of the engineering treatments for wildlife (other than signs and pavement marking) include:

- wildlife fencing
- dual purpose culverts (lower section for water with a raised dry section for fauna)
- purpose built culverts (for wildlife only – for example, cassowaries)
- canopy rope bridges (for possums)
- glider poles (for gliders)
- land bridges (for land-based animals, such as koalas, wallabies, and so on).

### 16.1 Special speed limits for wildlife zones

Reduced speed limits within wildlife zones are not recommended as a treatment for animal hotspots. The Department of Transport and Main Roads has previously carried out an extensive trial of reduced speed limit on roads in koala habitat areas. The study found that speed reductions were considered unnecessary and were subsequently disregarded by road users with no decrease in the number of reported koala deaths; see Appendix E for more details.










For further information on speed limits, please contact [saferroads@tmr.qld.gov.au](mailto:saferroads@tmr.qld.gov.au).








## **17 Wildlife sign library**






The wildlife sign library provides an overview of the wildlife signs available and approved for installation on Queensland roads. For installation warrants and recommendations, please refer to the previous sections of this document and any notes on the sign design drawings.





Table 17 – Wildlife sign library

Sample	Description	Sign No
<b>Wildlife warning signs</b>		
	Kangaroo / Wallaby	W5-29
	Camel	W5-44
	Wild Horse	W5-46
	Deer	TC1454
	Emu	W4-45
	Cassowary	TC9866
	Wombat	W5-48
	Koala	W5-47
	WILDLIFE	W5-49-Q01








Sample	Description	Sign No
<b>Wildlife information signs</b>		
	Tree kangaroo	TC2296_10
	Ducks	TC2296_2
	Possum	TC2296_3
	Lizard	TC2296_4
	Echidna	TC2296_5
	Small bird	TC2296_6
	Turtle	TC2296_7
	Snake	TC2296_8
	Koalas	TC2296_1


Sample	Description	Sign No
	Lyrebird	TC2296_9
	Kangaroo	TC2296_11
<b>Injured animal contact phone number sign</b>		
	1300 ANIMAL Supplementary plate only <b>(Not to be installed separately)</b>	TC1547
	CARE FOR OUR ISLAND'S WILDLIFE	TC2095
<b>Supplementary signs</b>		
	NEXT ... km Supplementary plate	W8-17-1
	NEXT ... m Supplementary plate	W8-17-2
	SLOW DOWN Supplementary plate (must only be installed under Wildlife Warning signs where W8-17 is not required) This supplementary plate should not be used on high-speed (>70 km/h) roads	TC1608

Sample	Description	Sign No
<b>Fauna aerial bridge sign</b>		
	<p>Fauna Aerial Bridge (Possum Canopy Bridge)</p>	<p>TC1576</p>
<b>Wildlife conservation area signs</b>		
	<p>Wildlife Conservation Area (Koala)</p> <p>Note: The diamond wildlife warning sign may be substituted for any animal-specific wildlife warning sign or the generic 'WILDLIFE' sign, W5-49-Q01</p>	<p>TC1607</p>
<b>High impact wildlife warning signs</b>		
	<p>Wildlife Warning Sign with Target Board (Koala)</p> <p>Note: The diamond wildlife warning sign may be substituted for any animal-specific wildlife warning sign.</p> <p>The 'SLOW DOWN' supplementary plate may be substituted for either distance supplementary plate (W8-17).</p>	<p>TC1621</p>
	<p>Wildlife Warning Sign with Target Board and 1300 ANIMAL (Koala)</p> <p>Note: The diamond wildlife warning sign may be substituted for any animal-specific wildlife warning sign.</p> <p>The 'SLOW DOWN' supplementary plate may be substituted for either distance supplementary plate (W8-17).</p>	<p>TC1622_1 ('B' and 'C' size) preferred sizes ('A' size should only be used when space is limited)</p>
	<p>Wildlife Warning Sign with Target Board and 1300 ANIMAL (Koala)</p> <p>Note: The diamond wildlife warning sign may be substituted for any animal-specific wildlife warning sign.</p> <p>The 'SLOW DOWN' supplementary plate may be substituted for either distance supplementary plate (W8-17)</p>	<p>TC1622_1 ('A' size only) non-preferred size Should only be used where space is limited</p>

Sample	Description	Sign No
	<p>Wildlife Warning Sign with Target Board, 1300 ANIMAL (Koala) and Direction arrow for T-intersections</p> <p>Note: The diamond wildlife warning sign may be substituted for any animal-specific wildlife warning sign.</p> <p>The 'SLOW DOWN' supplementary plate may be substituted for either distance supplementary plate (W8-17)</p>	<p>TC1622_3 ('A' size only) non-preferred size Should only be used where space is limited.</p>
	<p>Wildlife Warning Sign with Target Board</p> <p>Note: The diamond wildlife warning sign may be substituted for any animal-specific wildlife warning sign.</p> <p>The 'SLOW DOWN' supplementary plate may be substituted for either distance supplementary plate (W8-17).</p>	<p>TC1918_1</p>
	<p>Wildlife Warning Sign with Target Board</p> <p>Note: The diamond wildlife warning sign may be substituted for any animal-specific wildlife warning sign. The 'SLOW DOWN' supplementary plate may be substituted for either distance supplementary plate (W8-17).</p>	<p>TC1918_2</p>
<b>Vehicle-activated flashing lights with high impact wildlife warning sign</b>		
	<p>Wildlife Warning Sign with vehicle-activated flashing lights</p> <p>Note: The diamond wildlife warning sign may be substituted for any animal-specific wildlife warning sign</p>	<p>TC1921</p>



Sample	Description	Sign No
<b>Temporary wildlife signs</b>		
 <p>A rectangular sign with a green border. The text reads: "WILDLIFE PROTECTION TRIAL AREA", "JUN 2008 - DEC 2011", "NEXT 2 km", and "REPORT INJURED ANIMALS PHONE 1300 ANIMAL". It features two diamond-shaped icons: a cassowary on the left and a kangaroo on the right.</p>	<p>WILDLIFE PROTECTION TRIAL Project</p>	<p>TC1678</p>
 <p>A yellow rectangular sign with a black border. The text reads: "BEWARE" at the top, a silhouette of a cassowary in the center, and "RECENT CROSSINGS" at the bottom.</p>	<p>Recent Crossings (Cassowary)</p>	<p>TC2021_1</p>
 <p>A yellow rectangular sign with a black border. The text reads: "TAKE CARE" at the top, a silhouette of a koala in the center, and "RECENT CROSSINGS" at the bottom.</p>	<p>Recent Crossings (Koala)</p>	<p>TC2021_2</p>
 <p>A yellow rectangular sign with a black border. The text reads: "TAKE CARE" in large, bold letters.</p>	<p>TAKE CARE multi-message sign</p>	<p>TC2021_3</p>
 <p>A yellow rectangular sign with a black border. The text reads: "RECENT CROSSINGS" in large, bold letters.</p>	<p>RECENT CROSSINGS multi-message sign</p>	<p>TC2021_4</p>
 <p>A yellow square sign with a black border. It features a silhouette of a cassowary.</p>	<p>Cassowary multi-message sign</p>	<p>TC2021_5</p>
 <p>A yellow square sign with a black border. It features a silhouette of a koala.</p>	<p>Koala multi-message sign</p>	<p>TC2021_6</p>

Sample	Description	Sign No
<b>Special conditional wildlife signs</b>		
	Cassowary – 50 km/h	TC1196

## **Appendix A: Additional wildlife signage information**

### **A1 Background Information**

Traditionally, signs indicating animals on roads have been installed to warn road users of a potential hazard to themselves, not for the protection of the animals. This is in accordance with well-accepted practices. More recently, warning signs are being installed in response to concerns about the safety of wildlife. The community may naturally be concerned about the safety of animals, in particular, smaller species, when they see them on the road. As a result, members of the public are approaching RIMs asking for signs to be installed in the belief that these warning signs will alter driver behaviour by indicating the presence of animals on the road and, thereby, reducing the animal fatality rate.

Wildlife warning and information signs are not specifically intended to perform an animal preservation role and research to date indicates that they are not particularly effective for this purpose. If the preservation of animals is considered to be critical for the survival of the local animal population, other traffic management and animal management treatments will be required (signs alone are not adequate).

### **A2 Warning signs**

Warning signs alert road users in advance of a dangerous situation (that may or may not be expected or visible), so that road users may use caution, reduce speed or make a manoeuvre in the interest of their safety, the safety of passengers and / or the safety of other road users.

Warning signs indicate the geometric conditions of the road or hazard ahead, such as the changes in alignment or on the approach to an intersection; however, they lose their effectiveness if overused. Their use should be restricted to the minimum required for the safety of all road users.

- A road user may see a particular warning sign but decide that the hazard is insignificant and there is no need to slow down or alter driving behaviour. In this situation, there is a possibility that the warning sign's credibility is reduced and future responses to this sign will be similar or diminish further over time.
- If the warning sign indicates a situation that does not currently exist, the road user may ignore this warning sign in the future, not only at this location, but also at other installations of this sign.

Misuse of warning signs may affect driver behaviour in acknowledging and responding to the warning message as necessary. Every individual situation should be assessed to determine the need for a warning sign which should only be installed where there is a valid reason.

## **Appendix B: Types of current wildlife and animals requiring wildlife warning signs**

### ***B1 General***

Traditionally, Transport and Main Roads has only installed wildlife warning signs to warn of animals that can cause significant damage or loss of control to passenger vehicles or personal injury to vehicle occupants resulting from a collision.

When a vehicle comes into contact with large animals, such as camels, kangaroos, wild horses, deer, emus, cassowaries and wombats, there is a high likelihood of both injury to the animal and damage to the vehicle. In trying to avoid these animals, motorists may run off the road and / or collide with other vehicle(s) or roadside objects, causing injury to occupants and damage to vehicles. These risks may warrant the installation of wildlife warning signs for large animals.

As wildlife warning signs have been found to be ineffective in changing driver behaviour to protect small animals, Transport and Main Roads has developed wildlife information signs to address community concern for animals such as tree kangaroos, ducks, possums, lizards, echidnas and small birds (refer to Section 8).

As an endeared national symbol of Australia and very vulnerable to traffic, koalas are considered a special case, and, when signs are warranted, wildlife warning signs are appropriate for koalas.

### ***B2 Large birds (including emus and cassowaries)***

Wildlife warning signs shall only be provided for birds that cannot fly (emus and cassowaries) or birds which are large enough (such as wedge-tailed eagles) to cause significant damage to vehicles or personal injury to occupants if involved in a vehicle collision.

In some circumstances, such as the presence of ducks in an area, there may be a strong community perception that wildlife warning signs are needed. Such use is discouraged as these signs have not been proven to be effective in altering driver behaviour or compliance or in reducing the number of bird fatalities. Wildlife information signs may be considered for ducks if they meet the criteria outlined in this document.

### ***B3 Kangaroos***

Wildlife warning signs indicating the presence of kangaroos (W5-29) shall be assessed and installed if warranted in accordance with this document and the MUTCD. Wildlife warning signs indicating the presence of kangaroos should not be installed in extensive or remote areas kangaroos inhabit regularly or where the presence of kangaroos should be expected. The 'KANGAROO' (W5-29) warning sign should be used to warn drivers of sections of road on which kangaroos are likely to be a hazard. The sign should be used in conjunction with a 'NEXT ... km' (W8-17-1) supplementary plate.

Repeater signs along the road should only be required if the roadside environment has changed.

Wildlife warning signs for kangaroos should have a fluorescent yellow background colour due to their increased activity at dawn and dusk.

### ***B4 Wallabies***

Wildlife warning signs indicating the presence of wallabies shall be assessed and installed if warranted in accordance with this document and the MUTCD. There is no specific warning sign for wallabies – where wildlife warning signs are warranted for wallabies, the 'KANGAROO' (W5-29) warning sign shall be used.

### **B5     *Wombats***

Wildlife warning signs indicating the presence of wombats (W5-48) shall be assessed and installed if warranted in accordance with this document and the MUTCD.

### **B6     *Koalas***

Wildlife warning signs indicating the presence of koalas shall be assessed and installed if warranted in accordance with this document and the MUTCD. Where the requirements are met, the 'KOALA' (W5-47) warning sign should be used to warn drivers of sections of road on which koalas are likely to be a hazard. The sign should be used in conjunction with a 'NEXT ... km' (W8-17-1) supplementary plate. Repeater signs along the route should only be required if the roadside environment has changed. Wildlife warning signs for koalas should have a fluorescent yellow background colour due to their increased activity at dawn and dusk.

The 'KOALA' (W5-Q08) warning sign has been superseded by a new design (W5-47) showing a 'walking' rather than an 'at rest' symbol. There is no need for a wholesale replacement of the superseded sign. The superseded sign should be replaced with the new sign as dictated by maintenance needs.

### **B7     *Other wildlife***

In areas where there are wild horses, camels, deer or other large animals, the relative wildlife warning signs shall be assessed and installed if warranted in accordance with this document and the MUTCD.

## Appendix C: Motorist behaviour and action

The installation of wildlife warning signs, wildlife information signs and other treatment options included in this document are intended to modify driver behaviour in areas where wildlife may be encountered. It is crucial to understand the effects of the signs and treatment items on drivers and allow road authorities to provide consistent information on the role drivers may play in reducing animal mortality on the road.

Wildlife warning and wildlife information signs installed along the road are intended to warn motorists that animals may be on, or crossing, the road at any time at this location. There are steps that a motorist can take to reduce the number and severity of crashes involving animals on the road, reducing the cost of vehicle repairs, possible personal injury and saving wildlife.

A motorist can reduce the risk to themselves, and to wildlife, by:

- slowing down and being able to stop or give way when animals are on the road or roadside – animals are not 'road smart' and may cross without warning.
- watching out for animal warning signs and other animal advisory signs and reacting accordingly by slowing down and being prepared to stop if required
- being aware of following traffic if required to brake heavily for animals
- always keeping control of the vehicle and trying not to swerve wildly – swerving to miss an animal on the road may cause a crash
- trying to pass (if possible) behind an animal that is on or crossing the road
- scanning the roadside ahead for animals, especially at dawn and dusk when animals are more active.

Some other points a motorist should be aware of include:

- Some animals may respond to the sound of a vehicle's horn. If animals are on the road ahead or moving towards the road, slow down and sound the horn. Care must be taken when using the horn as animals on the side of the road may be startled by the noise and respond erratically by suddenly crossing the road in front of vehicles.
- High beam may temporarily dazzle (freeze) wildlife as nocturnal creatures have very sensitive vision. If animals are on the road ahead, the temporary dimming of the vehicles' headlights may allow the animal time to recover and move off the road.
- The key points to remember when an animal is on, or approaching, the road is to slow down, briefly dim headlights and sound the horn.

What to do if a vehicle hits an animal:

- Stop (only if safe to do so) and check the animal's condition. This may be done from a distance, especially if the motorist is unsure of an injured animal's potential reactions.
- Report an injured animal to the RSPCA animal welfare emergency phone service by phoning 1300 ANIMAL (1300 264625).
- A dead or injured animal may be carrying a baby in its pouch. It is not recommended that motorists check an animal's pouch for a baby that has survived. This is best done by wildlife experts.

- All animal / vehicle collisions should be reported to 1300 ANIMAL. A dead animal will need to be removed from the roadside as other animals may be attracted to it. The reporting of all incidents also allows a record to be kept of when and where animals are being hit and which species is involved.

## **Appendix D: Background information on the injured animal contact phone number signs (RSPCA's 1300 ANIMAL number)**

Transport and Main Roads has been reluctant in the past to erect signs displaying contact numbers for groups that care for injured wildlife. This has mainly been due to the high number of different contact details and potential changes of details on such signs.

The RSPCA has developed and is operating a statewide easily-remembered 1300 number for animal welfare emergencies and is supported by Transport and Main Roads.

The 1300 ANIMAL number is both an initiative of and operated by the RSPCA.

The 'ANIMAL' corresponds with alphanumeric numbers on a phone keypad (264625) making it very easy to remember. All calls to 1300 ANIMAL are directed to the RSPCA call centre, which operates 24 hours a day, seven days a week to coordinate assistance / rescue based on the RSPCA's wildlife carer database.

The RSPCA database will enable the call centre operator to match the animal type with a suitable and approved carer in a nearby location to the caller. This system will not only assist with the delivery of care to injured animals but will also provide a high-profile service for those who find injured animals and are unsure of what action to take.



## Appendix E: Special speed limits for wildlife zones

To encourage the highest possible levels of voluntary compliance with speed limits, Queensland's MUTCD Part 4 aims to ensure that speed limits throughout the state are consistent and credible.

Accordingly, the MUTCD Part 4 contains some important objectives and principles, including:

- the need to contribute to road safety, mobility and amenity on public roads by providing a credible system of speed limits that is compatible with the speed environment
- the need to ensure that a speed limit will not be so low that a significant number of road users ignore it, and
- the need to ensure that speed limits maintain a balance between a road user's perception of the speed environment and encourages voluntary compliance from all road users.

The operating speed of vehicles along a section of road may be influenced by a range of factors that vary over time, including weather events, lighting, road surface condition and the presence of animals within the road reserve; however, the MUTCD Part 4 states that such factors should not be considered in the determination of speed limits.

If the speed limit on any road is seen as unreasonably low by motorists or if motorists cannot see a reason for the lower speed limit, it can lead to low compliance with the speed limit. This lack of credibility at one location may lead to a more widespread disregard of speed limits on other roads, which may result in adverse effects on road safety.

Transport and Main Roads has previously carried out an extensive trial of reduced speed limit on roads in koala habitat areas. The study found that there was no significant change in operating speeds, even with police enforcement. Road users generally disregarded the reduced speed limit and, consequently, there was no observed reduction to the number of reported koala deaths and injuries.

The results of the trial do not support a general imposition of lower speed limits in areas where wildlife is likely to be encountered on roads. Rather, they suggest that any speed reduction, without suitable compliance from road users, will not result in a reduction to the number of koala fatalities. The results of the trial appear to confirm the validity of the objectives and principles contained in the MUTCD Part 4. The current speed limit review process in the MUTCD Part 4 requires a full evaluation of the road environment and crash history in determining the recommended posted speed limit. As such, there are no plans to modify the requirements of this process to include specific wildlife criteria when assessing / reviewing speed limits.

For further information on speed limits, please contact [saferroads@tmr.qld.gov.au](mailto:saferroads@tmr.qld.gov.au).

