ROUND MOUNTAIN PROJECT
FLAGSTONE CREEK

Fauna Crossing Plan

DWG NO.	DRAWING TITLE	ISSUE	DATE
10941 E 01 FCP A	COVER SHEET	A	08/09/2025
10941 E 02 FCP A	INTRODUCTION AND NOTES	A	08/09/2025
10941 E 03 FCP A	SITE CONTEXT	A	08/09/2025
10941 E 04 FCP A	MITIGATION MEASURES	A	08/09/2025
10941 E 05 FCP A	EXAMPLE FAUNA EXCLUSION FENCING	A	08/09/2025
10941 E 06 FCP A	EXAMPLE KOALA REFUGE POLE DETAIL	A	08/09/2025
10941 E 07 FCP A	EXAMPLE FAUNA CROSSING APPROACH	A	08/09/2025
10941 E 08 FCP A	EXAMPLE FAUNA MOVEMENT SHELF: PART 1	A	08/09/2025
10941 E 09 FCP A	EXAMPLE FAUNA MOVEMENT SHELF: PART 2	A	08/09/2025
10941 E 10 FCP A	EXAMPLE FAUNA LOG CONNECTIVITY: PART 1	A	08/09/2025
10941 E 11 FCP A	EXAMPLE FAUNA LOG CONNECTIVITY: PART 2	A	08/09/2025

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2025/1627

Date: 14 November 2025

Queensland Government

Saunders Havill

PATHWAYS TO SUCCESS

ROUND MOUNTAIN PROJECT - FLAGSTONE CREEK

Fauna Crossing Plan - *Introduction and Notes*

1.0 INTRODUCTION

The Environmental Management Division of **Saunders Havill (SH)** was engaged by **Frasers Property New Beith Pty Ltd** to prepare a Fauna Crossing Plan (FCP) for the proposed works at Flagstone Creek for the Round Mountain Project. The purpose of this plan is to outline mitigation measures to provide detail designs for fauna crossovers in accordance with the DTMR FSTISM - Fauna Sensitive Transport Infrastructure Delivery Manual (dated June 2024) and the Queensland Government Koala-sensitive Design Guidelines (DES 2019).

2.0 BACKGROUND

Habitat fragmentation is defined as a reduction in the continuity of habitat through disturbance or loss. It is largely caused by human activities such as vegetation clearing for agriculture or construction of housing or infrastructure. The impacts of habitat fragmentation on fauna populations are a reduction in habitat area and increased chances of isolations from other populations of the same species. Insufficient habitat size can force individuals to cross roads and cleared landscapes with minimal refuge, and enter territories of other individuals of the same species, or that of predators—ultimately increasing their chances of injury or death. The impact to smaller populations of a sensitive species is usually greater than the impact to larger, highly mobile populations with wide distributions.

The need to implement management practices that reduce isolation of fauna populations and increase the rate of movement across the landscape is essential where the demand for land and infrastructure is causing further fragmentation within the landscape. The protection of native plant diversity in adjacent habitats and provision of vegetated corridors between smaller habitat fragments is essential for sustaining local fauna populations—particularly those that are sensitive or threatened. Further structural and non-structural mitigation measures, including rehabilitation to existing vegetation communities and provision of crossing structures are likely to further facilitate habitat values and movement across the landscape.

3.0 ENVIRONMENTAL SEARCHES AND FIELD SURVEY

A desktop analysis was conducted of Commonwealth, State and Local environmental databases and overlay mapping to inform species that are occurring, or with potential to occur at the subject site, and the species-specific mitigation measures required to assist individuals to traverse the site unimpeded. Desktop analysis searches and field surveys found the following results:

WildNet Species & Sighting Search (Excluding Flying Bird Species)

Scientific name	Common name	NCA status	EPBC status
Amphibian			
Crinia parinsignifera	beeping froglet	C	
Limnodynastes peronii	striped marshfrog	C	
Limnodynastes terraereginae	scarlet sided pobblebonk	C	
Litoria balatus	slender bleating treefrog	C	
Litoria caerulea	common green treefrog	C	
Litoria fallax	eastern sedgefrog	C	
Litoria gracilenta	graceful treefrog	C	
Litoria latopalmata	broad palmed rocketfrog	C	
Litoria nasuta	striped rocketfrog	C	
Litoria peronii	emerald spotted treefrog	C	
Litoria rubella	ruddy treefrog	C	
Mixophyes fasciolatus	great barred frog	C	
Platyplectrum ornatum	ornate burrowing frog	C	
Pseudophryne major	great brown broodfrog	C	
Pseudophryne raveni	copper backed broodfrog	C	
Rhinella marina	cane toad		
Uperoleia fusca	dusky gungan	C	
Uperoleia laevigata	eastern gungan	C	
Uperoleia rugosa	chubby gungan	C	
Fish			
Anguilla sp.			
Hypseleotris compressa	empire gudgeon		
Hypseleotris galii	firetail gudgeon		
Mogurnda adspersa	southern purplespotted gudgeon		
Mammal			
Antechinus flavipes flavipes	yellow-footed antechinus (SEQ)	C	
Antechinus sp.		C	
Austronomus australis	white-striped freetail bat	C	
Bos taurus	European cattle		
Canis familiaris	dog		
Canis familiaris (dingo)	dingo		
Felis catus	cat		
Isoodon macrourus	northern brown bandicoot	C	
Lepus europaeus	European brown hare		
Macropus giganteus	eastern grey kangaroo	C	
Mus musculus	house mouse		
Notamacropus rufogriseus	red-necked wallaby	C	
Ornithorhynchus anatinus	platypus	SL	
Oryctolagus cuniculus	rabbit		
Petauroides volans volans	southern greater glider	E	E
Petaurus australis australis	yellow-bellied glider (southern subspecies)	V	V
Petaurus breviceps sensu lato	sugar glider		
Petaurus norfolcensis	squirrel glider	C	
Petaurus sp.		C	
Phascogale tapoatafa tapoatafa	brush-tailed phascogale	C	
Phascolarctos cinereus	koala	E	E
Pseudocheirus peregrinus	common ringtail possum	C	
Pseudomys gracilicaudatus	eastern chestnut mouse	C	
Pteropus alecto	black flying-fox	C	
Pteropus poliocephalus	grey-headed flying-fox	C	V
Pteropus scapulatus	little red flying-fox	C	
Pteropus sp.	flying-fox	C	
Rattus fuscipes	bush rat	C	
Rattus norvegicus	brown rat		
Rattus rattus	black rat		
Rattus tunneyi	pale field-rat	C	
Sminthopsis murina	common dunnart	C	
Sus scrofa	pig		
Tachyglossus aculeatus	short-beaked echidna	SL	
Trichosurus sp.		C	
Trichosurus vulpecula	common brushtail possum	C	
Vulpes vulpes	red fox		
Wallabia bicolor	swamp wallaby	C	
Reptile			
Amphibolurus muricatus	jacky lizard	C	
Anilios proximus	proximus blind snake	C	
Anomalopus verreauxii	three-clawed worm-skink	C	
Cacophis squamulosus	golden crowned snake	C	
Calyptotis scutirostrum	scute-snouted calyptotis	C	
Carlia pectoralis	open-litter rainbow skink	C	
Carlia vivax	tussock rainbow-skink	C	
Chelodina longicollis	eastern snake-necked turtle	C	
Chelodina sp.		C	
Chlamydosaurus kingii	frilled lizard	C	
Cryptoblepharus pulcher pulcher	elegant snake-eyed skink	C	
Cryptophis nigrescens	eastern small-eyed snake	C	
Ctenotus taeniolatus	copper-tailed skink	C	
Demansia psammophis	yellow-faced whipsnake	C	
Dendrelaphis punctulatus	green tree snake	C	
Diporiphora australis	tommy roundhead	C	
Eulamprus quoyii	eastern water skink	C	
Furina diadema	red-naped snake	C	
Gehyra dubia	dubious dtella	C	
Intellagama lesueurii	eastern water dragon	C	
Lampropholis delicata	dark-flecked garden sunskink	C	
Lygisaurus foliorum	tree-base litter-skink	C	
Morelia spilota	carpet python	C	
Pogona barbata	bearded dragon	C	
Pseudechis porphyriacus	red-bellied black snake	C	
Pseudonaja textilis	eastern brown snake	C	
Tiliqua scincoides scincoides	eastern bluetongue	C	
Tropidonophis mairii	freshwater snake	C	
Varanus gouldii	sand monitor	C	
Varanus varius	lace monitor	C	
Vermicella annulata	bandy-bandy	C	

Likelihood of Occurrence

Scientific Name	Likelihood of Occurrence Analysis	Desktop Likelihood of Occurrence (on-site)	Field Survey Confirmed Likelihood of Occurrence (on-site)	Optimal / Possible Fauna Crossing Structures
Birds: non-flying	No non-flying brid species were observed on site or in WildNet Searches.	Unlikely	Unlikely	Bridge underpass Vegetated Land bridge Culvert Fencing Escape Mechanism
Microbats	No typical roost habitat was identified in the New Beith Site, with no records of caves, mines, rock overhangs or crevices. There are no confirmed local records of uncommon species.	Unlikely	Unlikely	Bridge Underpass Culvert Vegetated Land bridge Canopy connectivity At-grade crossing
Macropods	Macropod species were observed across the New Beith Site. It is possible that macropod species could use the Creek corridor for movement and foraging purposes.	High	Known	Bridge Underpass Culvert Vegetated Land bridge Fencing Escape Mechanism
Koalas	The New Beith Site is highly disturbed through past vegetation clearing and grazing purposes and severe infestations of Lantana camara have also reduced the quality of habitat for this species. Indirect evidence of the species was recorded at some locations across the New Beith Site by the total of 31 SAT surveys and the species has been recorded in the broader area.	High	Known	Bridge Underpass Culvert Vegetated Land bridge Fencing
Possums	Possum species were observed across the New Beith Site. It is possible that possum species could use the Creek corridor for movement and foraging purposes.	High	Known	Bridge Underpass Culvert Vegetated Land bridge Canopy bridge Canopy connectivity Fencing
Gliders	Potential glider habitat is concentrated within the northwest portion of the New Beith Site in Category B (remnant) vegetation. Category X (non-remnant) vegetation provides limited habitat for this species as a result of historical disturbances resulting in a relative lack of suitable old growth trees throughout the site. The presence of gliders in the creek corridor is considered low due to its distance from preferred habitat in the slopes of the New Beith Site. Pests including Red Foxes, Dingos and Domestic Dogs, are current threats to gliders and two of these species were observed on site during field surveys.	Low	Unlikely	Bridge Underpass Vegetated Land bridge Canopy bridge Glider poles Canopy connectivity At-grade crossing
Small mammals	Northern Brown Bandicoot was observed on the New Beith Site. It is possible that small mammal species could use the Creek corridor for movement and foraging purposes.	High	Known	Bridge Underpass Culvert Vegetated Land bridge Canopy bridge Fencing
Semi-aquatic mammals	No semi-aquatic mammals were observed on site. One record of a platypus has been recorded within 5km of the site. It is possible that Amphibian species could use the Creek corridor as habitat and for movement though less likely in disturbed creek areas.	Moderate	Low	Bridge Underpass Culvert
Reptiles	Reptile species were observed across the New Beith Site. It is possible that reptile species could use the New Beith Site for movement and foraging purposes, particularly aquatic and semi aquatic species of reptiles would utilise the creek corridors.	High	Known	Bridge Underpass Culvert Vegetated Land bridge Fencing
Amphibians	Amphibian species were observed across the New Beith Site. It is possible that Amphibian species could use the Creek corridor as habitat and for movement.	High	Known	Bridge Underpass Culvert Vegetated Land bridge Fencing
Fish	It is possible that fish species could use the Creek corridor as habitat and for movement.	Moderate	Moderate	Bridge Underpass Culvert

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References:

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FLAGSTONE CREEK

DRAWING TITLE
FAUNA CROSSING PLAN

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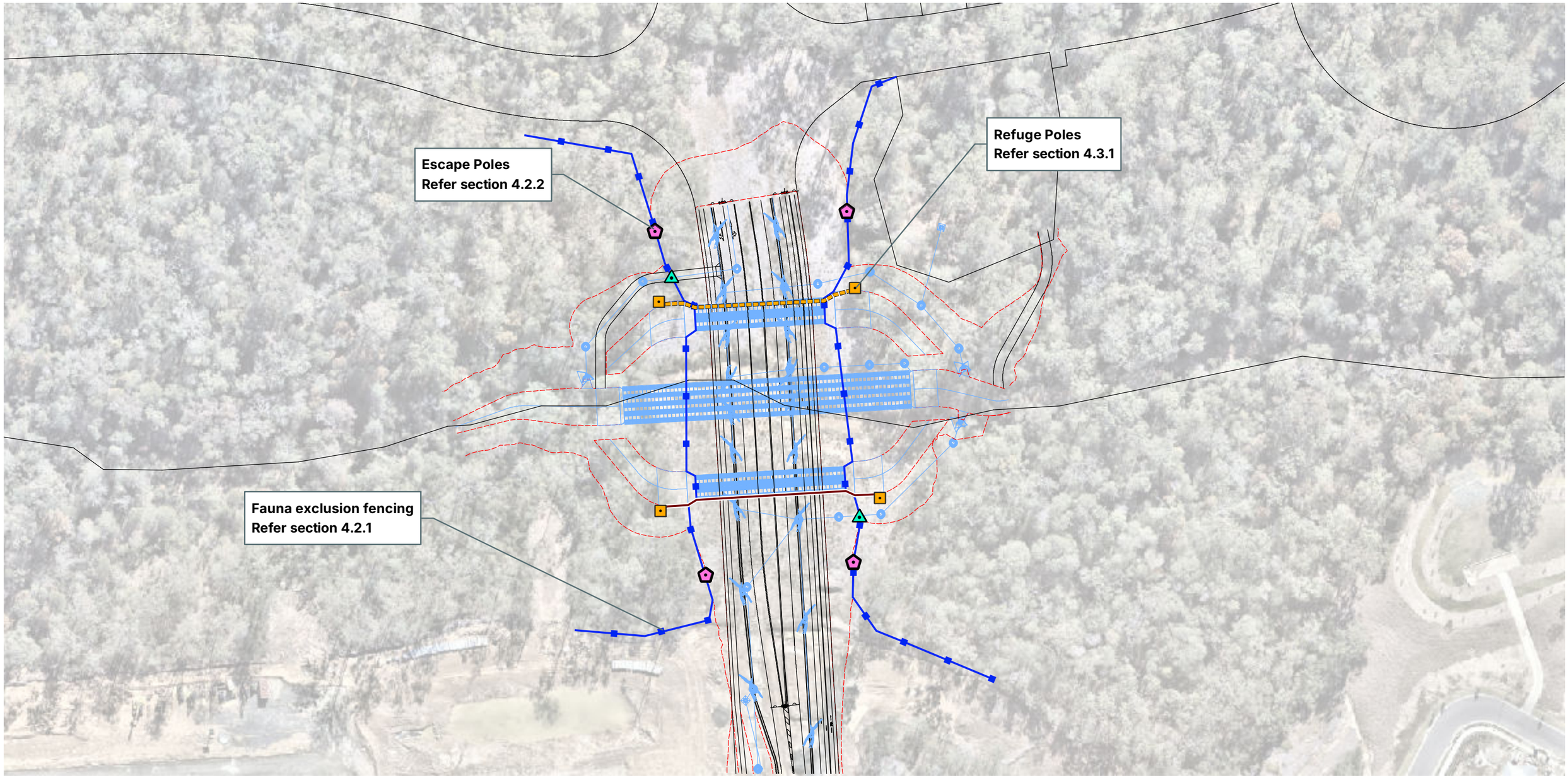
ROUND MOUNTAIN PROJECT - FLAGSTONE CREEK

Fauna Crossing Plan - *Site Context*



LEGEND

- Lot Design
- Stormwater/Culvert Design (Indicative)
- Batter Design
- Fauna Exclusion Fencing (Indicative)
- Fauna Shelving
- Log Connectivity
- Escape Poles
- Refuge Poles
- Indiactive Self-closing Gates

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Fauna Crossing Plan - *Mitigation Measures*

4.0 MITIGATION MEASURES:

In accordance with the DTMR FSTISM - Fauna Sensitive Transport Infrastructure Delivery Manual (dated June 2024)—a range of mitigation measures, including structural and non-structural, barriers and habitat enhancement measures are proposed to enhance fauna habitat values and movement at the subject site. Measures proposed are as follows:

4.1 MITIGATION MEASURES: NON-STRUCTURAL

4.1.1 LOCAL TRAFFIC MANAGEMENT

Local traffic management measures are aimed towards reducing speed and / or the volume of traffic, and increasing fauna awareness of motorists. Examples of measures include signage and lighting.

Local traffic is to be managed on site in accordance with approved traffic engineering plans and measures will be incorporated into road design to enhance safety measures and achieve fauna-sensitive roads within key transition zones onsite. Signage in the focal area and low speed limits throughout the development will be utilised to reduce the risk of vehicle-strike. Final locations and specifications are to be provided in the approved traffic engineering plans.

Image: extracted from FSTISM (2024). Refer to approved traffic engineering plans for final locations and specifications

4.2 MITIGATION MEASURES: BARRIERS

4.2.1 FAUNA EXCLUSION FENCING

Fencing is designed to deter fauna from crossing the road surface and to encourage fauna towards safe crossing passages. Fauna exclusion fencing will be installed from either side of the crossing extending to private landowner property fence, (indicative fencing is shown on sheet 02) to direct and other fauna species' movement to the culvert or other crossing structures. This deters fauna from crossing the road where there will be a high risk of vehicle-strike. Metal sheets will be placed above the culvert to prevent climbing where fencing above culvert is not fauna friendly. Self-closing gates will be installed where necessary (indicative locations area shown on sheet 02) to allow access to bushfire trails.

Image: Fauna exclusion fence to direct fauna towards culvert entrances

4.2.2 ESCAPE POLES

Escape Poles are utilized at the entry and exit points of fauna culverts to allow a variety of species to have a safe escape from roads and provide refuge if unable to escape the road corridor. Escape poles are installed at a minimum of every 200m along a road against fauna exclusion fencing to allow fauna to return unassisted to the vegetated side. Metal sheeting must be installed on the vegetated side of the exclusion fencing to prevent fauna from using the poles to returning to road corridor.

The proposed development will require escape poles installed at the road crossing of the corridor to allow escape from the road corridor once the road is fully constructed. Approximate locations are to be determined by the project fauna spotter catcher, and installation is to be confirmed with EDQ prior to installation. Recommendation for installations must be accompanied by evidence of efficiency.
Refer to SHEET 06 for escape pole example details.

Image: Examples of Escape Poles

4.3 MITIGATION MEASURES: HABITAT ENHANCEMENT

4.3.1 - REFUGE POLES

Refuge Poles are designed to provide various fauna species from predation. The design specifications for these poles vary dependent on the target species. The refuge poles to be installed on this site will follows the below specifications, suitable to Koalas:

- Poles are constructed of long life ecoplank or similar, and not timber or pine log
- Poles are 3-6 meters in height
- Poles have an optimal 200 mm diameter but no more than 500mm

Refuge poles will be placed outside culverts (indicative locations area shown on sheet 02).

Image: Example refuge poles (FSTIDM, 2024)

4.3.2 FAUNA MOVEMENT SHELVING

Fauna movement shelving allows for safe movement of terrestrial fauna at times of low flow through the culvert. Fauna shelving should include:

1. Shelving is to be 500mm wide.
2. Fauna movement shelf and access poles allow wildlife to move through the culvert and avoid or escape ground level predators at each end and at key points through the culvert.
3. Ensure existing vegetation is retained as close as practical to both ends of the culvert to provide shelter for crossing fauna.

Refer to *SHEETs 08, 09 and 10* for fauna movement shelving and approach example details.

Image: Example Fauna Movement Shelves (CoMB, 2016)

4.3.2 FAUNA LOG CONNECTIVITY

Fauna log connectivity allows for safe movement of terrestrial fauna at times of low flow through the culvert. Construction typically consists of hardwood logs raised above flow areas, with access poles to allow wildlife to move through the culvert and avoid or escape ground level predators at each end and at key points through the culvert. Refer to *SHEETs 11 and 12* for fauna log connectivity and approach example details

Image: Example Fauna log connectivity

4.4 MITIGATION MEASURES: STRUCTURAL

4.4.1 CULVERT

Culverts are square, rectangular or half circle in shape and may be purpose built to assist terrestrial and/or aquatic fauna to traverse through as well as to provide water drainage. They are typically precast concrete cells or steel arches. The effectiveness of culverts in providing for fauna movement depends on a number of factors including, but not limited to:

- The substrate used (may be species-specific i.e. concrete, mulch, bare earth).
- Presence of hiding places or escape routes.
- Presence of fauna furniture such as dry ledges and horizontal log bridges.
- Presence of suitable vegetation cover, native plant species, rocks and logs at entrances
- Length of the culvert should be minimised, but depends on the openness / lighting. May require installation of skylights to increase lighting for fauna passage.
- Drainage requirements.
- Monitoring.

Image: A culvert with dry ledges

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Fauna Crossing Plan - *Example Fauna Exclusion Fencing*

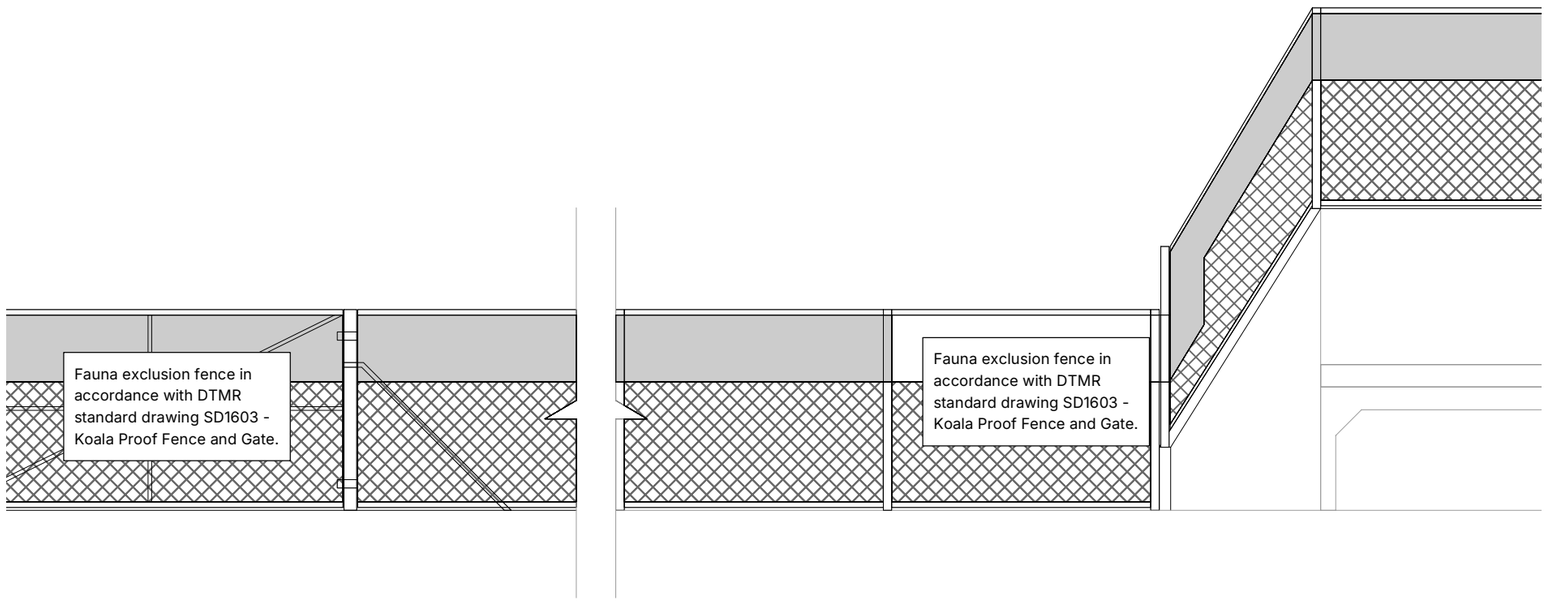

Image: Indicative crossing section with fauna exclusion fencing and metal sheets

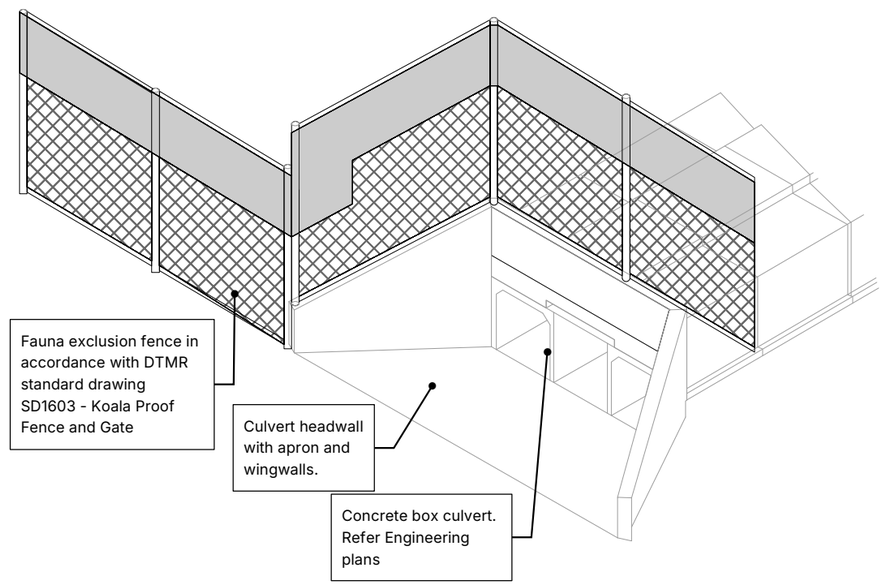

Image: Isometic veiw indicative crossing section with fauna exclusion fencing and metal sheets

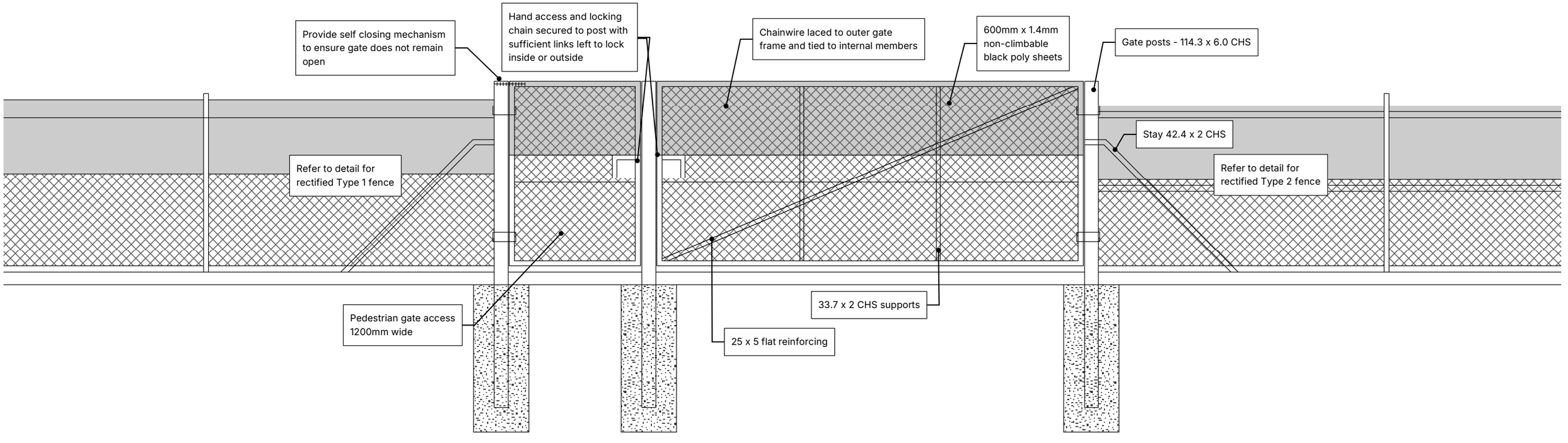

Image: Indicative gate detail for fauna exclusion fencing

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SCALE
NOT TO SCALE

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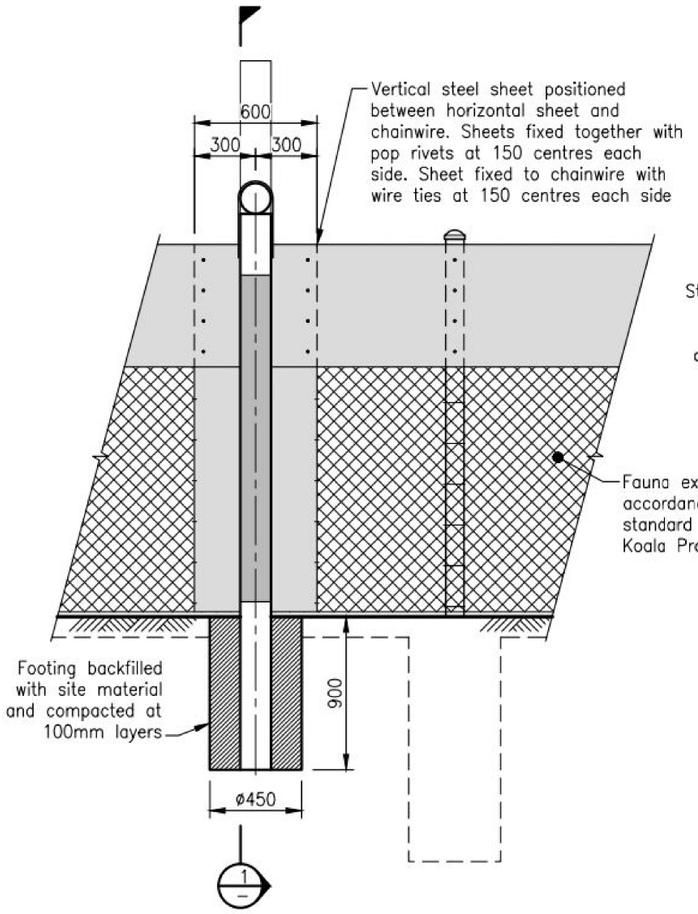
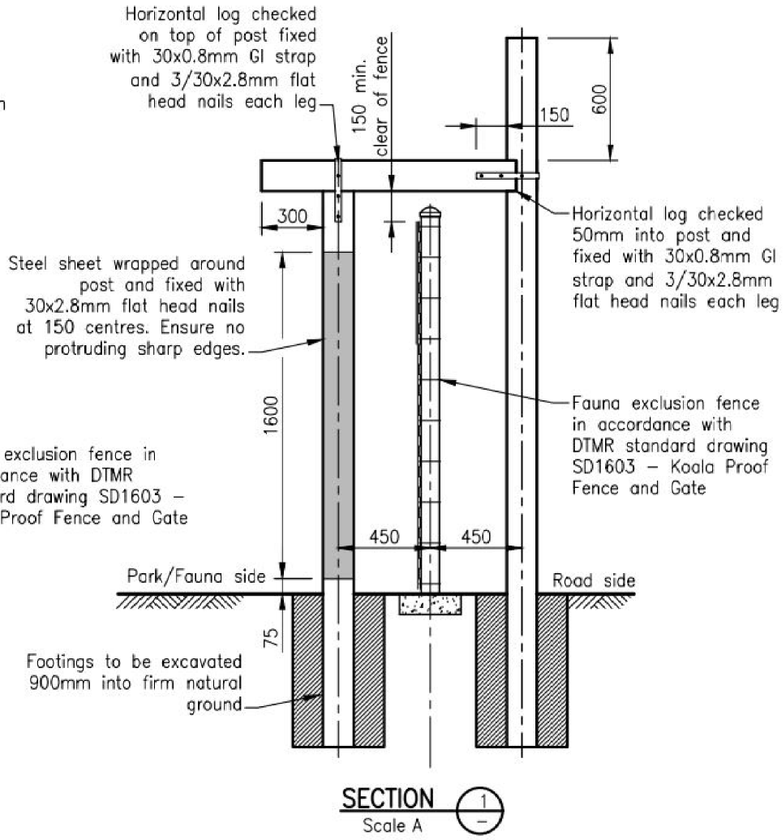
Fauna Crossing Plan - *Example Koala Refuge Pole Detail*



FAUNA EXCLUSION FENCE ESCAPE POLE ELEVATION
Scale A



SECTION
Scale A

EXAMPLE PHOTO
Not to scale

The structural work shown on this drawing is considered to be structurally sound, and suitable for the design loads.

All construction to be as per current Australian Standards and Building Codes, in accordance with MBRC requirements, and in a professional and tradesmanlike manner

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CONSULTING ENGINEERS
P.O. Box 1378
CABOOLTURE 4510
ABN 70 057802490
Office : 07 5495 8444
Mobile : 0418 873 320
RPEQ 3333
Date : 13/09/2017

NOTES:

1. Pine logs to be ø150 and preservative treated to hazard class H4 to AS1604.1 and have a durability class 4 to AS5604.
2. Galvanised steel sheet to be powdercoated or pre-painted to AS2728, the colour shall be 'Mist green' or 'River gum' subject to final approval by superintendent. Sheets shall be 0.42mm BMT.
3. Nails to be treated with 'Zenith-Tufcote' or 'Buildex-Climacoat' or approved equivalent (unless noted otherwise).
4. Pop rivets with aluminium shell and steel stem (large flanged) maximum grip 3.2mm, drill bit No.11 (4.9mm) shall be used.
5. Tie wire shall be 1.57mm green PVC coated galvanised wire unless specified otherwise.

REVISIONS		INIT	DATE
E			
D			
C			
B	Endorsed by Structural Engineer	TC	7/17
A	Structural Design Note Changed	RH	11/16
X	ORIGINAL ISSUE	BW	07/16

SCALES
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Drawn	BW	Date	07/16
Coordinator	PP	Date	07/16

AUTHORISED
SYD JERRAM
07/07/16
Manager Integrated Transport Planning & Design
RPEQ 6872

FAUNA ESCAPE POLES

Moreton Bay Regional Council

DRG No. GI-0520
ORIGINAL SIZE A3
REVISION B

File name: I:\User_Group\Design_Services\Projects\MBRC Standard Drawings\AutoCAD Files\02 - Green Infrastructure\GI-0520b - Fauna Escape Poles.dwg Date: Sep 28, 2017 - 11:07am

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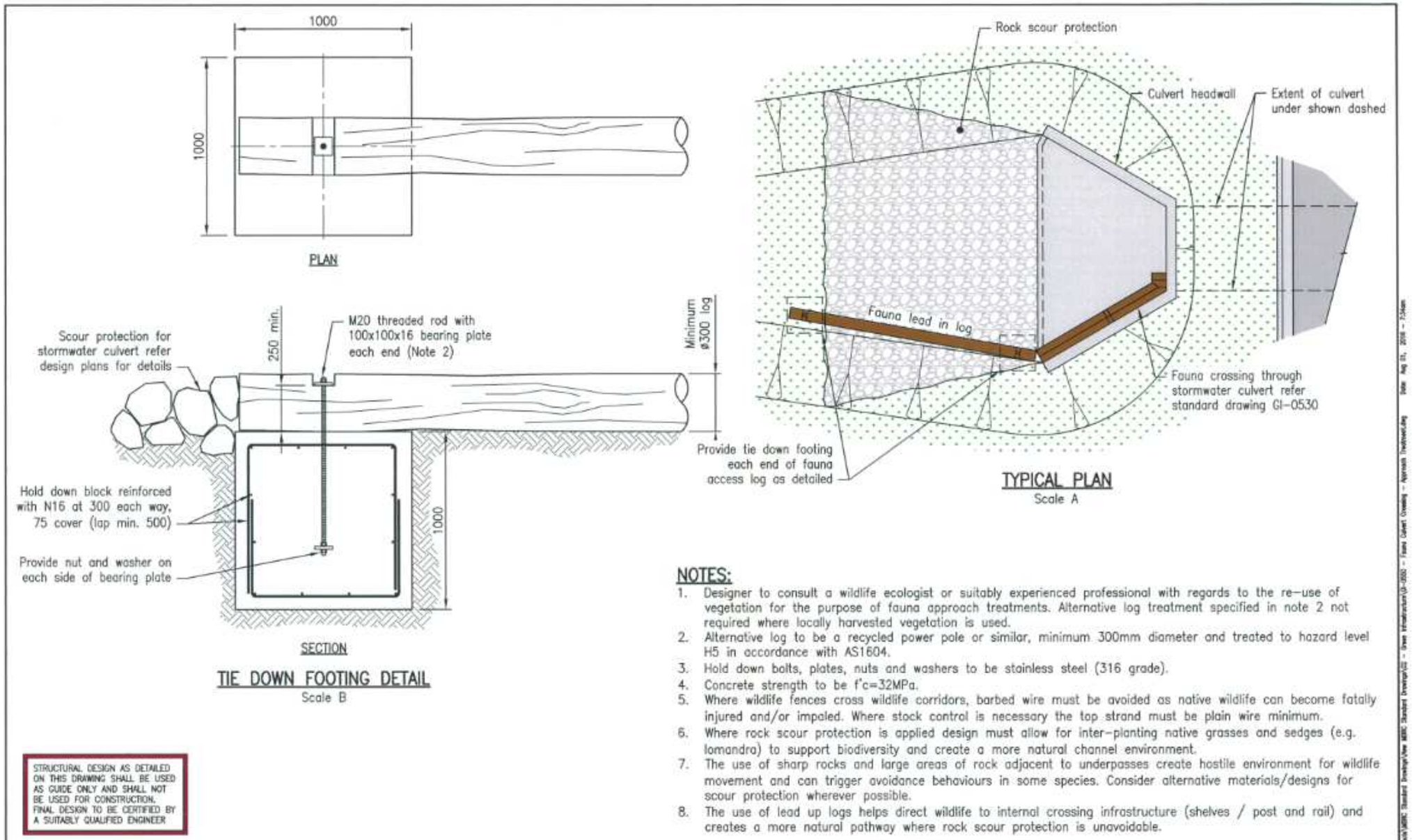
Fauna Crossing Plan - *Example Fauna Crossing Approach*



STRUCTURAL DESIGN AS DETAILED ON THIS DRAWING SHALL BE USED AS GUIDE ONLY AND SHALL NOT BE USED FOR CONSTRUCTION. FINAL DESIGN TO BE CERTIFIED BY A SUITABLY QUALIFIED ENGINEER

NOTES:

1. Designer to consult a wildlife ecologist or suitably experienced professional with regards to the re–use of vegetation for the purpose of fauna approach treatments. Alternative log treatment specified in note 2 not required where locally harvested vegetation is used.
2. Alternative log to be a recycled power pole or similar, minimum 300mm diameter and treated to hazard level H5 in accordance with AS1604.
3. Hold down bolts, plates, nuts and washers to be stainless steel (316 grade).
4. Concrete strength to be f'c=32MPa.
5. Where wildlife fences cross wildlife corridors, barbed wire must be avoided as native wildlife can become fatally injured and/or impaled. Where stock control is necessary the top strand must be plain wire minimum.
6. Where rock scour protection is applied design must allow for inter–planting native grasses and sedges (e.g. lomandra) to support biodiversity and create a more natural channel environment.
7. The use of sharp rocks and large areas of rock adjacent to underpasses create hostile environment for wildlife movement and can trigger avoidance behaviours in some species. Consider alternative materials/designs for scour protection wherever possible.
8. The use of lead up logs helps direct wildlife to internal crossing infrastructure (shelves / post and rail) and creates a more natural pathway where rock scour protection is unavoidable.

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X	ORIGINAL ISSUE	BW	07/16

SCALES
A 1:100
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Drawn	BW	Date	07/16
Coordinator	PP	Date	07/16

AUTHORISED
05/08/16
Manager Integrated Transport Planning & Design
RPEQ 6872

FAUNA CULVERT CROSSING APPROACH TREATMENT LEAD IN LOG

Moreton Bay Regional Council

DRG No. GI-0550

ORIGINAL SIZE A3

REVISION

File name: I:\User_Data\Design_Services\Projects\MBRC Standard Drawings\New MBRC Standard Drawings\GI - Draw Infrastructure\GI-0550 - Fauna Culvert Crossing - Approach Treatment.dwg Date: Aug 01, 2016 - 7:54am

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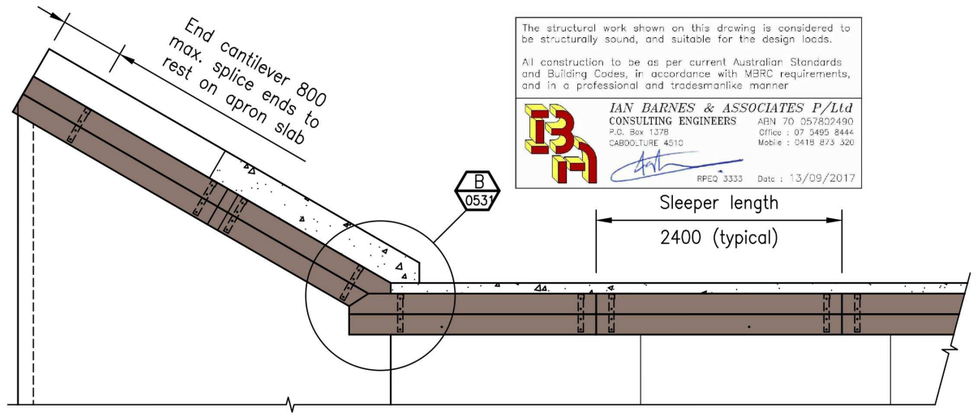
ROUND MOUNTAIN PROJECT - FLAGSTONE CREEK

Fauna Crossing Plan - *Example Fauna Movement Shelf: Part 1*



The structural work shown on this drawing is considered to be structurally sound, and suitable for the design loads.

All construction to be as per current Australian Standards and Building Codes, in accordance with MBRC requirements, and in a professional and tradesmanlike manner

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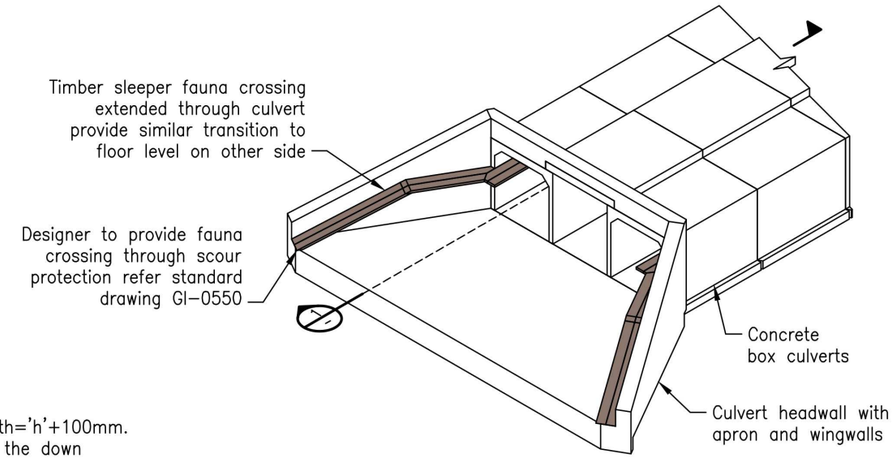
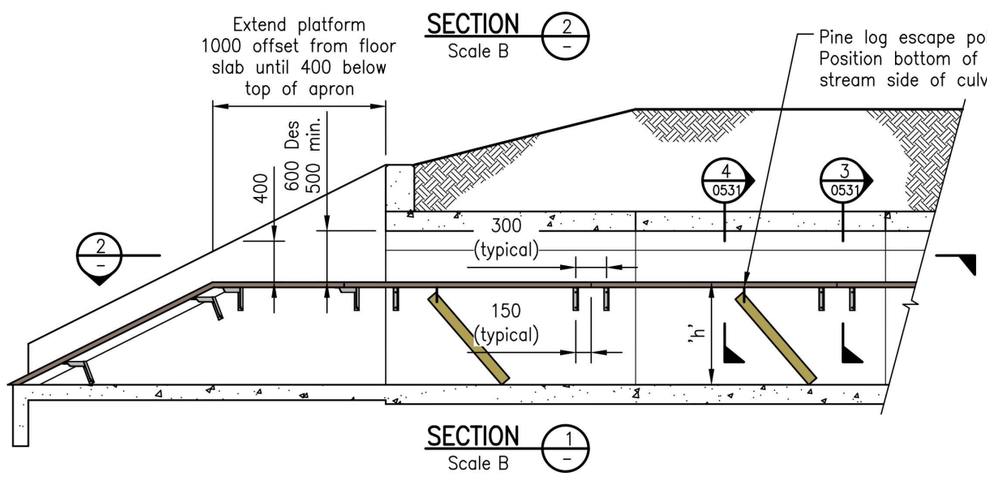
RPEQ 3333 Date : 13/09/2017



ISOMETRIC VIEW
Scale A

SECTION 2 / – Scale B



SECTION 1 / – Scale B

NOTES:

1. Fauna movement shelf and access poles allow wildlife to move through the culvert and avoid or escape ground level predators at each end and at key points through the culvert.
2. Ensure existing vegetation is retained as close as practical to both ends of the culvert to provide shelter for crossing fauna.
3. Where vegetation removal is undertaken for construction, designers should incorporate revegetation planting to support biodiversity and encourage crossing by wildlife.
4. Adequate culvert size is influenced by target fauna species and geographical location. Designers should consult an ecologist or suitably qualified professional with regards to appropriate culvert size for target species.
5. Culverts with heights ≥1800 cater for a greater range of native species and should be used as a minimum for koala. Larger culverts are preferable.
6. Escape poles should be placed at intervals of approximately 3.0m commencing at the ends of the culvert.
7. Timber sleepers shall be 200x50 pine or hardwood and treated to hazard level H5 in accordance with AS1604.
8. Pine logs to be ø100 and preservative treated to hazard class H5 to AS1604.1 and have a durability class 4 to AS5604.
9. Steel sections grade 300 material and hot dipped galvanised after manufacture.
10. Welds to be effected with E48xx or W50x electrodes but not less than that required by AS4100.
11. Bolts, washers, nuts and screws to be treated with 'Zenith–Tufcote' or 'Buildex–Climacoat' or approved equivalent (unless noted otherwise).
12. All bolts shall be fixed with one washer under the turned part.
13. Where double nut has been specified tighten first nut against structure then lock nuts together by tightening in opposing directions

REVISIONS		INIT	DATE
E			
D			
C			
B			
A	Endorsed by Structural Engineer	TC	7/17
X	ORIGINAL ISSUE	BW	07/2016

SCALES
A 0mm 500 1000 1500 2000 1:100
B 0mm 250 500 750 1000 1:50

Drawn	BW	Date	07/16
Coordinator	PP	Date	07/16

AUTHORISED
SYD JERRAM
07/07/16
Manager Integrated Transport Planning & Design
RPEQ 6872

FAUNA MOVEMENT SHELF

Moreton Bay Regional Council

DRG No. GI-0530

ORIGINAL SIZE A3 | REVISION A

File name: I:\User_Group\Design_Services\Projects\MBRC Standard Drawings\AutoCAD Files\02 - Green Infrastructure\GI-0530-GI-0531 - Fauna Movement Shelf.dwg Date: Sep 28, 2017 - 11:10am

Saunders Havill
BOWENHILLS | SPRINGFIELD
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References:

AMENDMENTS

ISSUE	DATE	DESCRIPTION	DRAWN	CHECKED
A	26/08/2025	CLIENT DRAFT	LS	AD

CLIENT
FRASERS PROPERTY NEW BEITH PTY LTD

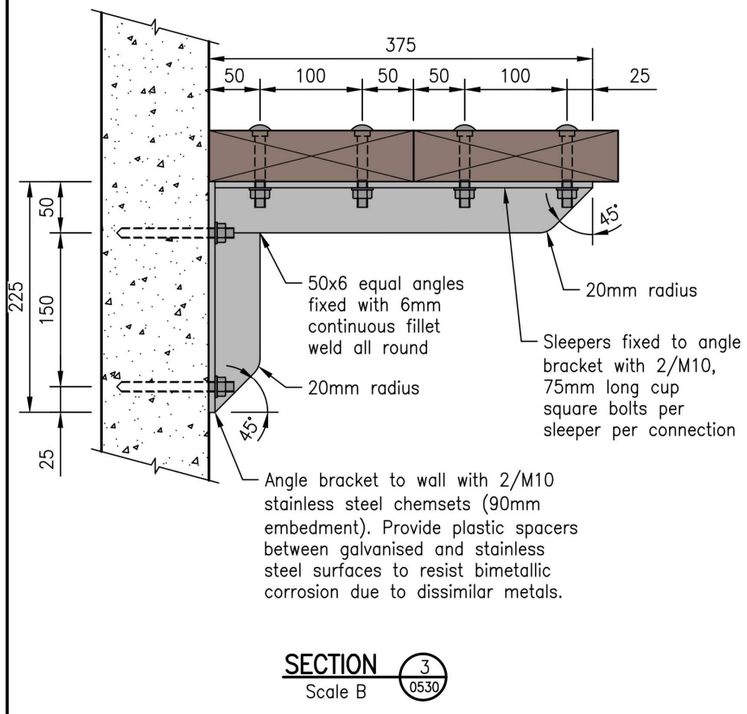
PROJECT
ROUND MOUNTAIN PROJECT
FLAGSTONE CREEK

DRAWING TITLE
FAUNA CROSSING PLAN

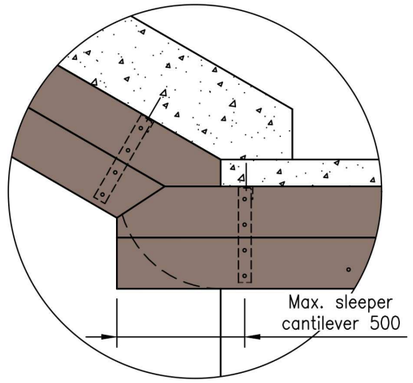
DRAWING NO.
10941 E 08 FCP A

ROUND MOUNTAIN PROJECT - FLAGSTONE CREEK

Fauna Crossing Plan - *Example Fauna Movement Shelf: Part 2*

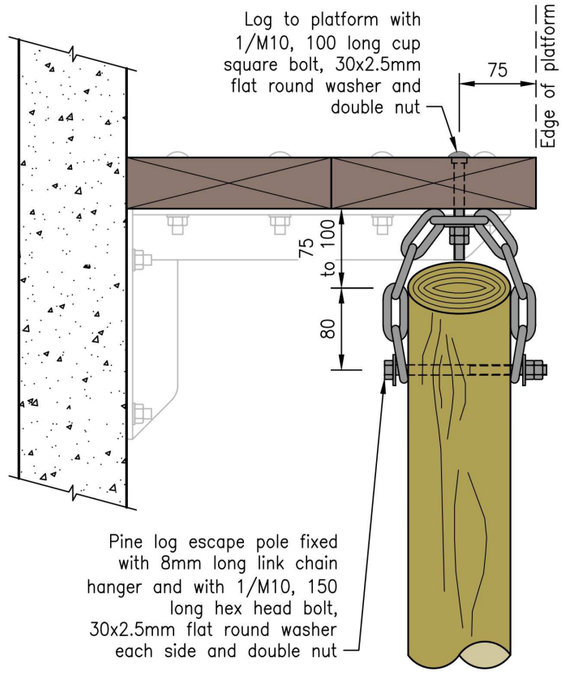


SECTION 3 / 0530
Scale B



DETAIL B / 0530
Scale A

EXAMPLE PHOTO
Not to scale



SECTION 4 / 0530
Scale B

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Date : 13/09/2017

REVISIONS		INIT	DATE
E			
D			
C			
B	Approved by Structural Engineer	TC	7/17
A	MINOR DRAFTING CHANGE	TC	4/17
X	ORIGINAL ISSUE	BW	01/2016

SCALES
A 0mm 100 200 300 400 1:20
B 0mm 25 50 75 100 1:5

Drawn	B.W	Date	07/16
Coordinator		Date	

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RPEQ 6872

FAUNA MOVEMENT SHELF
SHEET 2 OF 2

Moreton Bay Regional Council

DRG No. **GI-0531**

ORIGINAL SIZE A3 | REVISION B

File name: J:\User_Group\Design_Services\Projects\MBRC Standard Drawings\AutoCAD Files\V22 - Green Infrastructure\GI-0530-GI-0531 - Fauna Movement Shelf.dwg Date: Sep 28, 2017 - 11:12am

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References:

AMENDMENTS

ISSUE	DATE	DESCRIPTION	DRAWN	CHECKED
A	26/08/2025	CLIENT DRAFT	LS	AD

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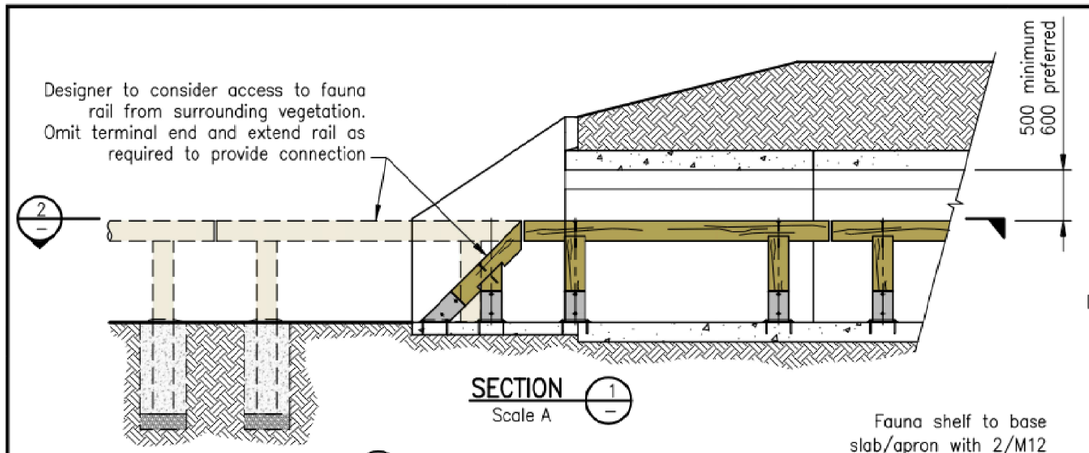
PROJECT
ROUND MOUNTAIN PROJECT
FLAGSTONE CREEK

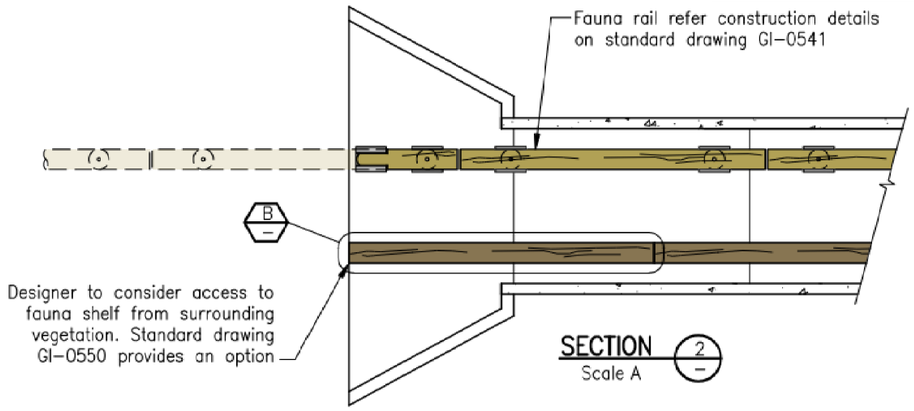
DRAWING TITLE
FAUNA CROSSING PLAN

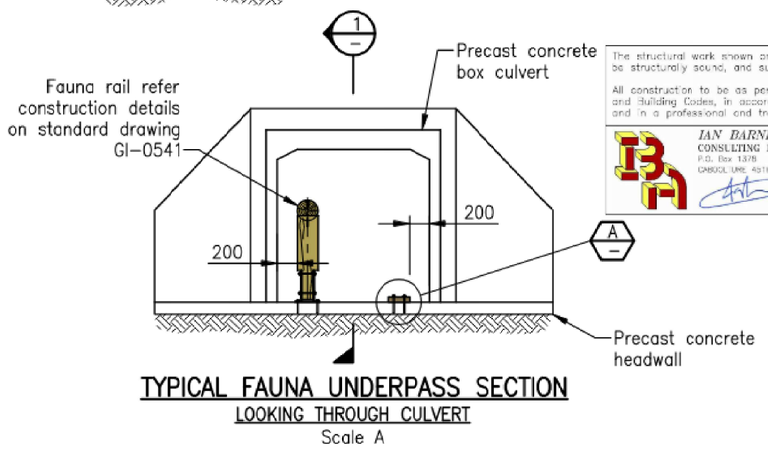
DRAWING NO.
10941 E 09 FCP A

ROUND MOUNTAIN PROJECT - FLAGSTONE CREEK

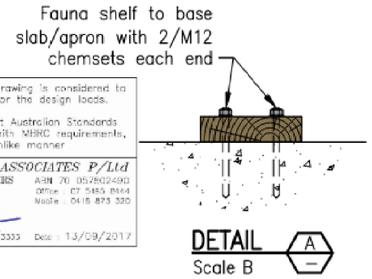
Fauna Crossing Plan - *Example Fauna Log Connectivity: Part 1*

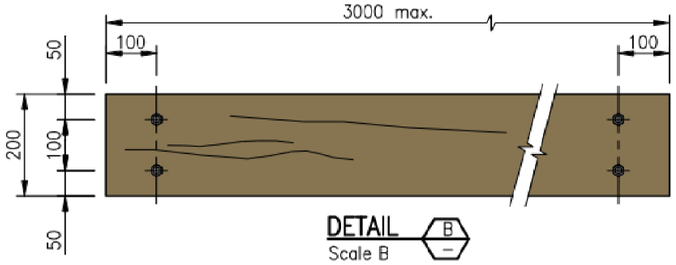






TYPICAL FAUNA UNDERPASS SECTION
LOOKING THROUGH CULVERT
Scale A





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RPEQ 3333 Date : 13/09/2017

NOTES:

1. Fauna rail or fauna shelf provides predator–prey separation for small mammals. It may be used where elevated post and rail cannot be constructed i.e. stormwater culverts. It is also suited to smaller culverts.
2. Adequate culvert size is influenced by target fauna species and geographical location. Designers should consult an ecologist or suitably qualified professional with regards to appropriate culvert size for target species.
3. Culvert size and length influences use by wildlife. Culverts with heights of ≥1800mm cater for a greater range of native species and should be used as a minimum for koala. 3000mm culverts provide greatest advantage for fauna.
4. Fauna underpasses with a length greater than 25.0m may benefit from the inclusion of a lightwell – particularly if the height of the culvert is ≤1500mm.
5. Ensure existing vegetation is retained as close as practical to both ends of the culvert to provide shelter for crossing fauna.
6. Where vegetation removal is undertaken for construction, designers should incorporate revegetation planting to support biodiversity and encourage crossing by wildlife.
7. This type of fauna underpass is not generally intended for stormwater drainage culverts refer standard drawing GI–0530 and GI–0531 for alternate details.
8. Timber sleepers shall be 200x50 pine or hardwood and treated to hazard level H5 in accordance with AS1604.
9. Pine logs to be ø200 and preservative treated to hazard class H5 to AS1604.1 and have a durability class 4 to AS5604.
10. Steel sections grade 300 material and hot dipped galvanised after manufacture.
11. Welds to be 6mm continuous fillet welds and effected with E48xx or W50x electrodes but not less than that required by AS4100.
12. Bolts, washers, nuts and screws to be treated with 'Zenith–Tufcote' or 'Buildex–Climacoat' or approved equivalent (unless noted otherwise). All bolts shall be fixed with one washer under the turned part.
13. Concrete anchors shall be Ramset Chemset 800 series or approved equivalent.

REVISIONS		INIT	DATE
E			
D			
C			
B	Approved by Structural Engineer	TC	7/17
A	Structural Design Note Changed	RH	11/16
X	ORIGINAL ISSUE	BW	07/16

SCALES
A 0mm 250 500 750 1000 1:50
B 0mm 50 100 150 200 1:10

Drawn	BW	Date	07/16
Coordinator	PP	Date	07/16

AUTHORISED
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07/07/16
Manager Integrated Transport Planning & Design
RPEQ 6872

FAUNA CROSSING UNDERPASS SHEET 1 OF 2

Moreton Bay Regional Council

DRG No. **GI-0540**

ORIGINAL SIZE A3 | REVISION B

File name: I:\User_Group\Design_Services\Projects\MBRC Standard Drawings\AutoCAD Files\02 - Green Infrastructure\GI-0540B - Fauna Crossing Underpass.dwg Date: Sep 28, 2017 - 11:20am

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References:

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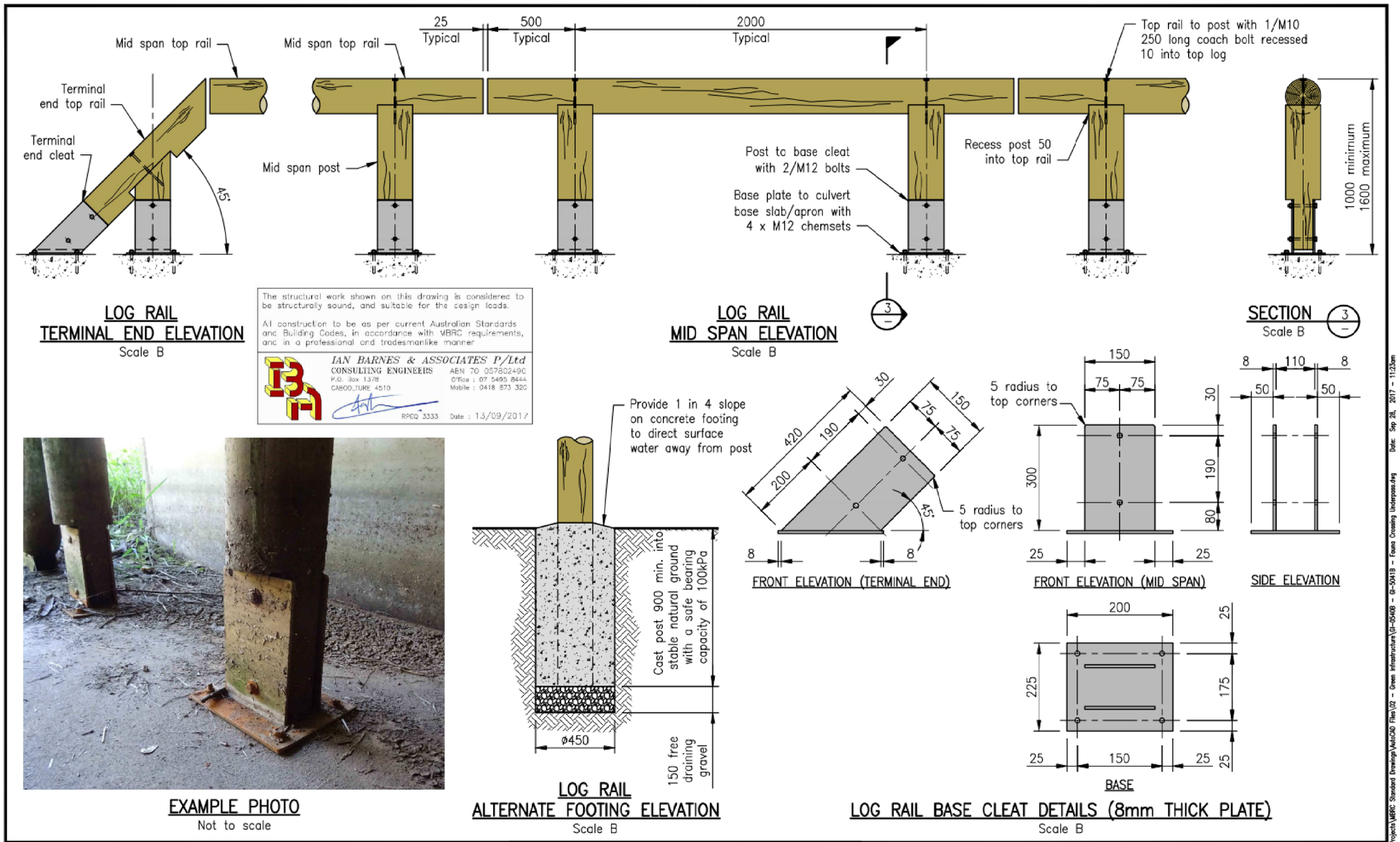
PROJECT
ROUND MOUNTAIN PROJECT
FLAGSTONE CREEK

DRAWING TITLE
FAUNA CROSSING PLAN

DRAWING NO.
10941 E 10 FCP A

ROUND MOUNTAIN PROJECT - FLAGSTONE CREEK

Fauna Crossing Plan - *Example Fauna Log Connectivity: Part 2*



EXAMPLE PHOTO
Not to scale

REVISIONS		INIT	DATE
E			
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C			
B	Approved by Structural Engineer	TC	7/17
A	Structural Design Note Changed	RH	12/16
X	ORIGINAL ISSUE	BW	07/16

SCALES
A 0mm 250 500 750 1000 1:50
B 0mm 25 50 75 100 1:5

Drawn	BW	Date	07/16
Coordinator	PP	Date	07/16

AUTHORISED
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RPEQ 6872

FAUNA CROSSING UNDERPASS SHEET 2 OF 2

Moreton Bay Regional Council

DRG No. GI-0541

ORIGINAL SIZE A3 | REVISION B

File name: E:\User_Group\Design_Services\Projects\VBRC Standard Drawings\AutoCAD Files\02 - Green Infrastructure\GI-0540B - GI-5041B - Fauna Crossing Underpass.dwg Date: Sep 28, 2017 - 11:23am

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References:

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DRAWING TITLE
FAUNA CROSSING PLAN

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