

NRA Reference: Cooktown IGA Preclear_L01

27 October 2023

Graham Cornett
110 Relesah Drive
Ningi QLD 4511

Attention: Graham Cornett, Kwikbridge Pty Ltd

Dear Graham

RE: 81 Savage Street, Cooktown Pre-clearance Assessment

The Cook Shire Council (CSC) has made an Information Request (dated 19 September 2023)¹ in response to a Development Permit for Material Change of Use application² (DA). The DA proposes the construction of a shopping centre, comprising a supermarket, liquor store and laundry³ at 81 Savage Street, Cooktown (Lot 212 on C17915 (the project site)).

Background and scope

NRA Environmental Consultants (NRA) prepared a desk-based ecological assessment to address Item 7 of the Information Request relevant to biodiversity values (**Attachment 1**). NRA has subsequently been commissioned by Kwikbridge Pty Ltd (Kwikbridge) to address the following recommendations relevant to field verification of biodiversity values.

1. A pre-clearance survey should be undertaken by a licenced spotter catcher/ecologist. Should animal breeding places be identified, these should be managed in accordance with an approved Species Management Program.
2. The unmapped drainage feature should be characterised by an ecologist or environmental scientist and relevant approval requirements identified.

To address these recommendations, NRA's scope of works was as follows.

- Undertake an ecological pre-clearance assessment to verify ecological values.
- Characterise the unmapped drainage feature within the project site to determine whether it provides for fish passage⁴.

¹ Provided in email correspondence from Alan Irvin, Associate Director, PPA, to Lindsay Popple, Senior Ecologist, NRA, on 21 September 2023.

² Development Application number DA/4677.

³ 2022-072 Cooktown – Cornetts Supermarket proposal plans dated 25 August 2023, KwikBridge Pty Ltd, provided in email correspondence from Alan Irvin, Associate Director, PPA, to Lindsay Popple, Senior Ecologist, NRA, on 21 September 2023.

⁴ Assessment of the drainage feature relevant to stormwater and site drainage (Items 23 to 27 of Information Request) is not included in the scope of works.

•Á Y ggf 'ur geku0

–Á Y ggf u'rkungf 'wvf gt 'vj g'P cvkqpcn'Y ggf u'qhi'P cvkqpcn'Uki phiepeg'rkv*Y qP U: 'S wggpurcpf "Biosecurity Act 4236'cpf lqt 'vj g'EUE "Biosecurity Plan 2022–2026¹⁰'y gt g'r t gupv'qp 'uks0C 'rkv' qh'vj gug'ur geku'cpf 'vj gk'tgi wrcvt { 'lncwu'ctg'r tqxkf gf 'kp' **Table 20**

Table 1: Fauna species observed within the project site

Species name	Common name	NC Act status ¹	EPBC Act status ²
<i>Geopelia humeralis</i>	Dct/uj qwrf gt gf "F qxg"	Ngcuveqpegtp"	/"
<i>Cracticus mentalis</i>	DrcenlDwej gtdk f "	Ngcuveqpegtp"	/"
<i>Dacelo leachii</i>	Dnwg/y lpi gf "Mjqnædwttc"	Ngcuveqpegtp"	/"
<i>Carlia longipes</i>	Erqugf /rkxgt "Tclpdqy 'unikpn'	Ngcuveqpegtp"	/"
<i>Myzomela obscura</i>	F wunf "J qpg{ gcvgt"	Ngcuveqpegtp"	/"
<i>Philemon buceroides</i>	J gro gvgf "Hlctdkf "	Ngcuveqpegtp"	/"
<i>Gerygne magnirostris</i>	Ncti g/dkngf "I gt i qpg"	Ngcuveqpegtp"	/"
<i>Vanellus miles</i>	O cungf "Ncr y lpi "	Ngcuveqpegtp"	/"
<i>Cinnyris jugularis</i>	Qrkxg/dcengf "Uwpdkf "	Ngcuveqpegtp"	/"
<i>Centropus phasianinus</i>	Rj gcucpvEqwecnl	Ngcuveqpegtp"	/"
<i>Trichoglossus moluccanus</i>	Tclpdqy "Nqtkngv"	Ngcuveqpegtp"	/"
<i>Lalage leucomela</i>	Xctkfg "Vtkngt"	Ngcuveqpegtp"	/"
<i>Coracina papuensis</i>	Y j kg/dgnkfg "Ewemq/uj tkng"	Ngcuveqpegtp"	/"
<i>Melithreptus albogularis</i>	Y j kg/vj tqcvgf "J qpg{ gcvgt"	Ngcuveqpegtp"	/"
<i>Stomiopera flava</i>	[gmjy "J qpg{ gcvgt"	Ngcuveqpegtp"	/"
<i>Oriolus flavocinctus</i>	[gmjy "Qtkng"	Ngcuveqpegtp"	/"

³Etkkccm{ 'Gpf cpi gtgf . 'Gpf cpi gtgf . 'Xwpgtcdng'cpf 'P get 'Vj tgcvgpgf 'ur geku'cu'rkungf 'wvf gt 'vj g'S wggpurcpf "Nature Conservation Act"³; ; 40"

⁴Etkkccm{ 'Gpf cpi gtgf . 'Gpf cpi gtgf . 'Xwpgtcdng'cpf lqt 'O ki tcvt { 'ur geku'cu'rkungf 'wvf gt 'vj g'Ego o qpy genj "Environment Protection and Biodiversity Conservation"Act 3; ; ; "

Table 2: Weeds observed during the pre-clearance assessment

Species name	Common name	WoNS ¹	Biosecurity Act ²	CSC Priority ³
<i>Ageratum conyzoides</i>	Dkm{ i qcv'Y ggf "	-	-	-
<i>Azadirachta indica</i>	P ggo "Vtgg"	-	-	-
<i>Centrosema molle</i>	Egptq"	/"	/"	/"
<i>Chloris inflata</i>	Rwtr rgvr "Ej rqtlu"	/"	/"	/"
<i>Crotalaria goreensis</i>	I co dc"Rgc"	/"	/"	/"
<i>Lantana camara</i>	Ncpxpc"	✓"	Ecvgi qt { "5"	✓"
<i>Leucaena leucocephala</i>	Ngwecgpc"	/"	/"	✓"
<i>Macroptilium atropurpureum</i>	Uktctq"	/"	/"	/"
<i>Megathyrsus maximus</i>	I wpgc'I tcuu"	/"	/"	/"
<i>Melinis repens</i>	Tgf "pcvnl' I tcuu"	/"	/"	/"
<i>Mimosa pudica</i>	Ugpukxg'Rrcpv"	/"	/"	/"
<i>Scoparia dulcis</i>	Ueqr ctkc"	/"	/"	/"
<i>Sphagneticola trilobata</i>	Ukpi cr qtg'F cku{ "	/"	/"	/"
<i>Stylosanthes scabra</i>	Uf m"	/"	/"	/"
<i>Urena lobata</i>	Wtgpcc"Y ggf "	/"	/"	/"

³Y ggf u'qhi'P cvkqpcn'Uki phiepeg=✓/ø'lpf lecvu'ur geku'rkungf 'cu'Y qP U"

⁴Nkungf 'wvf gt 'vj g'S wggpurcpf Biosecurity Act 4236'cu<Tguntlevgf 'O cwgt'Ecvgi qt { "3.'Ecvgi qt { "4.'Ecvgi qt { "5." Ecvgi qt { "6.'Ecvgi qt { "7."qt'Ecvgi qt { "8=or Prohibited Matter"0"

⁵Nkungf 'cu'c'":Rtktk{ 'kpxcukxg'Rrcpv'wvf gt 'vj g'EUE "Biosecurity Plan 2022–2026, EqqmUj ktg'Eqwpek'Eqqmjy p0"

" "

" "

³²EUE "4244."Cook Shire Council Biosecurity Plan 2022–2026, EqqmUj ktg'Eqwpek'Eqqmjy p0"

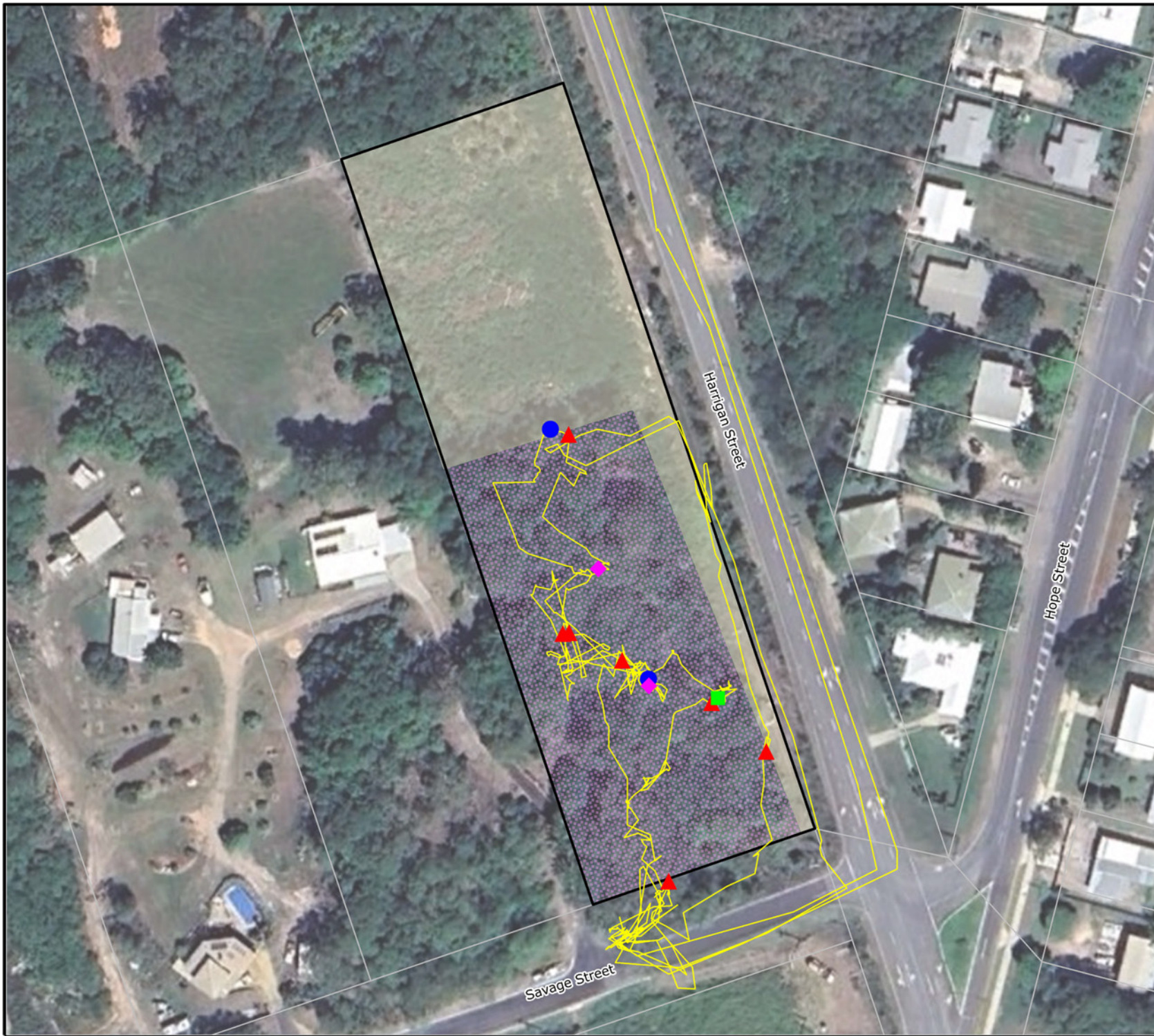
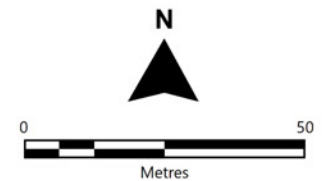


Figure 1: Ecological pre-clearance assessment

Project: 81 Savage Street, Cooktown
Pre-clearance Assessment

- Lot 212 C17915
- Cadastral boundary
- NRA survey track
- Ground-truthed Regional Ecosystem
3.12.7
- Non-remnant
- Vegetation assessment site
- T/NT flora observations
- ◆ Cooktown Orchid (*Dendrobium bigibbum*)
- Potential animal breeding place
- ▲ Hollow-bearing tree
- Megapode mound



Source: DoR 2023, Google Earth 2023

NRA Ref: 483002
Date: October 2023



T:_AAA\483\WOR\483002\483002_EcologicalAssmt_231027.WOR



Plate 1: Vegetation assessment site (RE 3.12.7) facing north



Plate 2: Vegetation assessment site (RE 3.12.7) facing east



Plate 3: Vegetation assessment site (RE 3.12.7) facing south



Plate 4: View from eastern boundary of project site facing west towards non-remnant vegetation



Plate 5: Mature Cooktown Orchid growing on *Corymbia tessellaris* at approximately 1.5 m



Plate 6: Small Cooktown Orchid growing on *Corymbia tessellaris* at approximately 1.7 m



Plate 7: Tree hollow in *Eucalyptus brassiana*



Plate 8: Tree hollow in *Corymbia tessellaris*



Plate 9: Megapode mound



Plate 10: Drainage feature headwater origin at rock filtration stormwater diversion on southern side of Savage Street



Plate 11: Stormwater diversion on southern side of Savage Street directing waters to northern side of Savage Street and into project site



Plate 12: Pipe outlet at upstream ill-defined swale depression within the project site



Plate 13: Legacy brush-matting and pipe within upstream swale depression



Plate 14: Rock bund intersecting swale depression ca 50 m downstream from Savage Street



Plate 15: Steeply terraced rock wall (2 m high) is a waterway barrier for fish passage (facing upstream with swale depression above wall)



Plate 16: Drainage feature facing downstream from rock wall with defined banks and riparian habitat



Plate 17: Example of legacy water diversion structures within the project site



"











"

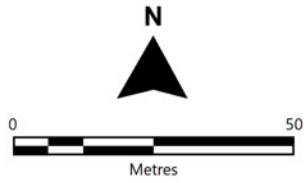


"

Figure 2: Drainage feature observations

Project: 81 Savage Street, Cooktown
Pre-clearance Assessment

-  Lot 212 C17915
 -  Cadastral boundary
 -  NRA survey track
 -  Drainage feature
- Drainage feature observation
-  Pipe outlet and legacy brush-matting
 -  Bund
 -  Rock wall (fish barrier)
 -  Surface water diversion



Source: DoR 2023, Google Earth 2023

NRA Ref: 483002
Date: October 2023



T:_AAA\4831\WOR\483002\483002_Drainage_231026.WOR

Recommendations for impact management Á

Vj g'hqmny kpi "o cpci go gpv"o gcuwt gu'ctg'r tqr qugf "vq'tgf weg"vj g'tkum'qh'ko r cevu'vq'hmqc"cpf "hcwpc" f wtkpi "vj g'eqput wevkqp"r j cug0'

"

Recommendation 1: Qdvckp'c'Rtqvgevgf "RrppvErngctkpi "Rgto k'r tkqt "vq'erngctkpi "qh'xgi gvcvkpp" y kj k"322"o "qh"vj g"Eqqmny p"Qtej kf "qdugtxcvkqpu0'Vj g"Rtqvgevgf "RrppvErngctkpi "Rgto k'Cr r rdecvkp'o wuv'dg'uwdk kwgf "vq'vj g'S vggpurcpf " F gr ctvo gpv'qh'Gpxktqpo gpv'cpf "Uelgpeg"y kj "cp"ko r cev'O cpci go gpv' Rrpp'vj cvf gvcuk'j qy 'ko r cevu'vq'Eqqmny p'Qtej kf u'y knidg'o loko kug 0'

Recommendation 2: Qdvckp'c'Nqy /tkum'Ur geku'O cpci go gpv'Rtqi tco 'Itqo 'vj g'S vggpurcpf " F gr ctvo gpv'qh'Gpxktqpo gpv'cpf "Uelgpeg'r tkqt "vq'cmny "co r gt kpi "y kj " r qvppvkn'cpko cndtggf kpi "r rnegu0"

Recommendation 3: C"rnegpegf "ur qwgt"ecvej gt lgeqmi kuv'y j q"j qrf u"c"Fc co ci g"O kki cvkpp" Rgto k'uj qwf "cwgpf "erngctkpi "cevxxkkgu0'

Recommendation 4: C"eqpvkpi gpe{ 'r rcp'uj qwf "dg'kp'r rneg'uj qwf 'y krf rkg'dg'kpcf xgt vgpv' " kplwtgf "f wtkpi "qr gtcvkqpcnly qtmu0'

Recommendation 5: Eqput wevkqp" uj qwf " dg" vpf gt vngp" kp" ceeqtf cpeg"y kj " vj g" r tqlgev' Gpxktqpo gpv'nO cpci go gpv'Rrpp0'

"

"

[qwtu'lkpegt gn' "

NRA Environmental Consultants



O gi cp'I tkz'k'
Ugpkqt'Dqvcpkuv"

Encl: Attachment 1 – Ecological Assessment
Attachment 2 – Vegetation Assessment Record
CC: Alan Irvine; alan@propertyprojectsaustralia.com.au, Marcus McNee; marcus@propertyprojectsaustralia.com.au, Info Mailbox; Info@propertyprojectsaustralia.com.au

© Natural Resource Assessments Pty Ltd
This document is the property of Natural Resource Assessments Pty Ltd. Apart from any use as permitted under the Copyright Act 1968, all other rights are reserved. Unauthorised use of this document in any form whatsoever is prohibited.

0Eæ&@ ^} cÁKÁ
Ò&| | * ãæÁE••^••{ ^} cÁ

NRA Reference: Cooktown IGA EcoAssessment_L03

39"Qevqdtg"4245"

Rtqr gtv\ 'Rtqlgeu'CWwtcrk"
Ngxgn3.'83: 'Dtwpuy lemUtggv"
P gy "Hcto "6227"S NF "

Attention: Alan Irvin, Associate Director

F gct "Cmp"

RE: Cooktown IGA Ecological Assessment

Vj g"EqqmUj ktg"Eqwpek"EUe+j cu"o cf g"cp"Kphqto cvkqp" Tgs wguv" f cvgf "3; "Ugr vgo dgt"4245+3"lp"
tgur qpug"vq" c'F gxgnr o gpvCr r tqxcn'cr r rkecvkp"o cf g'ht' yj g'r tqr qugf 'uj qr r kpi 'egpvtg.'eqo r tkulpi "
c'lwrgto ctngv.'hks wqt'lwqtg'cpf 'rwpf t { "cvUcxi g'Utggv.'Eqqmcy p" Nqv'434'qp'E39; 37"vj g'r tqlgev"
ukg+0P TC'Gpxkqpo gpvcrEqpuwncpvu" P TC +y cu'eqo o kukqpgf "d { 'Rtqr gtv\ 'Rtqlgeu'CWwtcrk"qp"
dgi ch'qh" My kmtdkfi g" Rv\ "Nvf "vq" r tqxkf g" c" f gum'dcugf "geqmi kcn'cuuguu gpv'cf f tguulpi "kgo "9"
*Dkqf kxgtukv\ + "qh" yj g" kphqto cvkqp" tgs wguv\ Vj ku" tgr qt v' uwr gtugf gu" cpf " tgr ngeu" cm" r tgxkquw"
f qewo gpvcvqp" r tgr ctgf 0"

Ecological assessment

C" f gum'dcugf "cuuguu gpv'y cu"wpf gtvcngp"vq" kf gpvkh\ "yj g"dkqf kxgtukv\ "cpf "geqmi kcn'xcn'gu"qh'yj g"
r tqlgev'ukg'y kj 'tghgtgpeg"vq" yj g'hqmqy kpi 'kphqto cvkqp0"

- A Eqo o qpy gcnj "Environment Protection and Biodiversity Conservation Act 3; ; ; "GRDE" Cev"
Rtqvgevgf "O cwgtu"Ugctej "Vqqn"RO UV+"F EEGGY "4245+"Appendix A+"
•A O cwgtu"qh"Ucvg" Gpxkqpo gpvcrUki pkkcepeg"gpvcrn'tgr qt v" F GU"4245c+"Appendix B+"
•A Tgi wrcvgf "Xgi gvcvqp"O cpci go gpv'O cr "F qT"4245c+"Appendix C+"
•A S wggpurcpf "Nature Conservation Act 3; ; 4"PE" Cev"Rtqvgevgf "Rrcpw" Hqtc"Uwtxg\ "Vtki i g"
O cr "F GU"4245d+"Appendix D+"
•A Y kf P gv'f cvdcug" F GU"4245e+"- c'tgr qt v'y cu'f gpv'cvgf "hqt"cp"ctgc"y kj lp"7"no "qh" c" r qlpv"
egpvcn'vq" yj g'r tqlgev'ctgc"Appendix E+"
•A Cvcu"qh"Nkxkpi "CWwtcrk" f cvdcug" CNC"4245+"o"ur gekgu"ur gekk"tgeqtf u"
•A Tgi kqpcn'Gequ\ ugo "TG"o cr r kpi "F qT"4245d+"cpf "f guetkr vqp" f cvdcug" F GU"4245f +"
•A S wggpurcpf "y cvgty c { u'ht' y cvgty c { "dcttktg" y qtm" F CH"4238+"
•A xgi gvcvqp"o cpci go gpv'y cvgteqwtug"cpf "f tckpci g'hgcwtg"o cr "F qT"4244+"

_____ "

3"Rtqxkf gf "lp" go cki'eqttgur qpf gpeg"htqo "Cmp" Kxlp."Cuqekcvg" F ktgevt. "RRC."vq" Nkpf uc { "Rqr r ng."Ugplqt"
Geqmi kuv.P TC."qp"43"Ugr vgo dgt"42450"

4"2022-072 Cooktown - Cornetts Supermarket" r tqr qucn'r rpu" f cvgf "47" Cvi wuv"4245."My kmtdkfi g" Rv\ "Nvf ."
r tqxkf gf "lp" go cki'eqttgur qpf gpeg"htqo "Cmp" Kxlp."Cuqekcvg" F ktgevt. "RRC."vq" Nkpf uc { "Rqr r ng."Ugplqt"
Geqmi kuv.P TC."qp"43"Ugr vgo dgt"42450"

Table 2: T/NT&M fauna with moderate to high likelihood of occurring at project site

Species name	Common name	NC Act status	EPBC Act status
<i>Apus pacificus</i>	Hqtn/vckrgf "Uy khv"	Ur gekri'Ngcuw' Eqpegtp"	O ki tcvqt { "
<i>Cuculus optatus</i>	Qtlkpvri'Ewenqg"	Ur gekri'Ngcuw' Eqpegtp"	O ki tcvqt { "
<i>Erythrotriorchis radiatus</i>	Tgf 'I quj cy ni'	Gpf cpi gtgf "	Gpf cpi gtgf "
<i>Hipposideros diadema reginae</i>	F kcf go 'Ngch/pqugf 'Dcv'	P gct'Vj tgevgpgf "	/"
<i>Hipposideros semoni</i>	Ugo qpa'Ngch/pqugf 'Dcv'	Gpf cpi gtgf "	Xwpgtcdrg"
<i>Hirundapus caudacutus</i>	Y j kg/vj tqcvf 'P ggf rgvkni'	Xwpgtcdrg"	Xwpgtcdrg" O ki tcvqt { "
<i>Macroderma gigas</i>	I j quv'Dcv'	Gpf cpi gtgf "	Xwpgtcdrg"
<i>Ninox rufa meesi</i>	Twhqwu'Qy ni'	P gct'Vj tgevgpgf "	/"
<i>Rhinolophus robertsi</i>	I tgevgt 'Ncti g/gtcf "	Gpf cpi gtgf "	Xwpgtcdrg"
<i>Saccolaimus saccolaimus nudicluniatu</i>	Dctg/two r gf 'Uj gcvj vcki'Dcv'	Gpf cpi gtgf "	Xwpgtcdrg"
<i>Tiliqua scincoides intermedia</i>	P qtvy gtp'Dmvgvpi vg"	Etklecm{ " Gpf cpi gtgf "	/"
<i>Tyto novaehollandiae kimberli</i>	O cunvf 'Qy ni'	Xwpgtcdrg"	Xwpgtcdrg"

Vj gug"ur geku"j cxg"j g"r qvrvkni'vq"htci g"cdqvg"qt"kp"j g"r tqlgev'ukg"qp"qecukpp0'P q"VIP V(O " hwpv'ur geku'ctg"gzr gevfg "v'wug'j g'ukg'ht' dtggf kpi . 'qt'ht' tqukpi 'qp'c'tgi wct'dcuku0'Vj g'r tqlgev' ukv'ku'r ctvf "engctgf 'cpf 'ku'wprkng' "v'eqpvk'ko r qtvcv'j cdkc'vt'uw'htekpv't guqwt'egu'v'w'r qt'v'j g" rkg'e{ erq'qh'j gug"ur geku0"

Waterways and wetlands

P q"y cvty c { u."y cvteqwtugu"qt"y gvrvf u"ctg"o cr r gf "d{ "F CH"*4238+."F GU"*4245d+."F E EGGY " *4245+."F qT"*4244+"cpf "F T F O Y " *4245+"vq"qewt"kp"j g"r tqlgev'ukg0'J qy gxgt."cp"wpv cr r gf " f tckpci g'hcwvtg'r cuugu'j tqwi j "j g'ukg"*Appendix F³-0'Vj g'xcnvg"qh'j ku'f tckpci g'hcwvtg'ht'hu j " r cuuci g'ku'wpeqphko gf 0'

Potential impacts to ecological values

Vj g'r tqr qugf "f gxgnr o gpv'y knltguwv'kp"j g'tgo qxcn'qh'cr r tqzko cvng{ "3"j c'qh'xgi gcvk'p'y kj kp"j g" r tqr qugf "r tqlgev'ukg"cpf "j gtg"ku"c"r qvrvkni'ht"o qtvrk{ "qh"hwpc"f wtkpi "engctkpi "y qtm0'Vj g" tgeqo o gpf cvkpu'kp"j g'hqmy kpi "ugev'qp'ctg'kpvgf gf "v'b cpci g'j g'tkum'cpf "cxqkf "hwpc"o qtvrk{ " y j gtg'r tcevecdrg0'

Ko r ceu'vq"tgi kqpcn'dkqf kxgtuk{ "f vg"vq"j g'r tqr qugf "f gxgnr o gpv'ctg"cpv'ekr cvgf "v'dg"pgi rki kdr0' P q"VIP V'htc'ur geku'ctg"gzr gevfg "v'dg"ko r cevgf "d{ "j g'r tqr qugf "y qtm0'VIP V(O "hwpc"ur geku" j cv'j cxg'dggp'kf gp'k'kf "cu"j cxkpi "c"o qf gtcv'vq"j ki j "rkn'j qqf "qh'qewt'gpeg'cv'j g'r tqlgev'ukg" ctg'wprkng' "v'dg"ko r cevgf "kh'j g'tgeqo o gpf gf "o cpci go gpv'o gcuw'gu'r tqxkf gf "kp"j g'hqmy kpi " ugev'qp'ctg'ko r ngo gpvgf 0'

Vj g'r qvrvkni'ht'f kutw v'kp"vq'hu j "r cuuci g'cuuqekv'f "y kj "j g'wpo cr r gf "f tckpci g'hcwvtg'tgs wkt'gu' hwt'j gt'cuuguu gpv0'

_____ "

⁵"Rtqxkf gf "kp"go clri'eqttgur qpf gpeg"htqo "Crp"Kxlp."Cuuqekv'F ktgev't."RRC"vq"Nkpf uc{ "Rqr r ng."Ugplqt" Geqmi kuv'P T C."qp"34'Qevqdtg"42450'

Recommendations for impact management

Vj g'hqmny kpi 'b cpci go gpv'bo gcwv'gu'ctg'r tqr qugf 'v'q'tgf weg'vj g'r qv'p'k'cnko r cevu'q'VIP V(O 'h'wpc" ur gelgu'f wtkpi 'vj g'eqputw'ekp'r j cug'0

Recommendation 1: C" r tgergctkpi " uwtxg{ " uj qwf " dg" wpf gtvngp" d{ " c" r'egpegf " ur qwgt" ecvej gt lgeqmi kuv'Uj qwf " cpko cn'dtggf kpi " r'negu" dg" kf gpv'k'gf . "vj gug" uj qwf " dg" o cpci gf " kp" ceeqtf cpeg" y kj " cp" cr r tqxgf " Ur gelgu" O cpci go gpv'Rtqi tco 0

Recommendation 2: Vj g'wpo cr r gf 'f'ctkpci g'hgcwv'g'uj qwf "dg'ej ctcevt'k'gf'd{ 'cp'geqmi kuv' qt" gpv'k'qpo gpv'cn' uelgp'kuv' cpf " tgr'xcpv' cr r tqx'cn' tgs'v'k'go gpv' k'f gpv'k'gf 0

Recommendation 3: C" r'egpegf " ur qwgt" ecvej gt lgeqmi kuv'uj qwf " cwgp'f " cpf lqt" dg" qp" ecm' f wtkpi 'er'gctkpi " cev'k'k'ku'0

Recommendation 4: C" eqp'kpi gpe{ 'r'ncp'uj qwf " dg" kp' r'neg'uj qwf 'y k'f r'k'g' dg" k'pcf xgt'gpv'k'f " kplw'gf " f wtkpi " qr gtc'v'k'p'cn'y qtm'0

Recommendation 5: Eqputw'ekp' uj qwf " dg" wpf gtvngp" kp" ceeqtf cpeg" y kj " vj g' r tqlgev' Gpv'k'qpo gpv'cn' O cpci go gpv'R'ncp'0

"

[qwtu'ukpegt gn' "

NRA Environmental Consultants



Cpi gn'pc'Dqwgv'

Gpv'k'qpo gpv'cn'Uelgp'kuv'

Encl:

Appendix A – EPBC Act Protected Matters Report

Appendix B – Matters of State Environmental Significance Environmental Report

Appendix C – Regulated Vegetation Management Map

Appendix D – Protected Plants Flora Survey Trigger Map

Appendix E – WildNet species list

Appendix F – Unmapped drainage feature (Reel Planning on behalf of Cook Shire Council, 11 October 2023)

© Natural Resource Assessments Pty Ltd

This document is the property of Natural Resource Assessments Pty Ltd. Apart from any use as permitted under the Copyright Act 1968, all other rights are reserved. Unauthorised use of this document in any form whatsoever is prohibited.

References

CNC" 4245." *Atlas of Living Australia.*" Eqo o qpy gcnj " Uekpvhle" cpf " Kpf wutkcn' Tgugctej " Qti cplucvkqp."Ecpdgttc."xkgy gf "4; "Ugr vgo dgt"4245.">"j wr u-ly y y QrcQti Qwl"@

Dktf Nkg"Kpvtpcvkpcn'4237." *Species factsheet: Charadrius leschenaultia.*"xkgy gf "8"Cwi wuv'4237." >j wr -ly y y Qlktf rkhgQti @

EUE"423: ." *Cook Shire Council Planning Scheme 2017 Version 2.0 Overlay Map.*"Eqqm'Uj ktg" Eqwpekn'49'Lwn'423: 0

FCH" 4238." *Queensland waterways for waterway barrier works, 15 July 2016.*" S wggpurcpf " Fgr ctwo gpv'qh'Ci tlewnwtg'cpf "Hkuj gtku."Dtkudcpg0

FEEGGY "4245." *EPBC Act Protected Matters Report.*"Eqo o qpy gcnj "Fgr ctwo gpv'qh'Eriko cvg" Ej cpi g." Gpgti {" vj g" Gpxktqpo gpv" cpf " Y cvgt." xkgy gf " 4; " Ugr vgo dgt" 4245." >j wr u-ly y y Qpxktqpo gpv' qxQw@

fgrJ q{q.'L'Gmkw.'C.'Ej tkwkg.'FC'('Ucti cvcn'L3; ; 8." *Handbook of the Birds of the World: Hoatzin to Auks.*"N{pz'Gf lekqpu."Dctegrupc0

FGU" 4245c." *Matters of State Environmental Significance Environmental Report.*" S wggpurcpf " Fgr ctwo gpv' qh' Gpxktqpo gpv" cpf " Uekpeg." Dtkudcpg." xkgy gf " 4; " Ugr vgo dgt" 4245." >j wr u-ly y y Gpxktqpo gpv' gu@ f' QxQw@

FGU"4245d." *Protected Plants Flora Survey Trigger Map for Lot 212 on Plan C17915.*"S wggpurcpf " Fgr ctwo gpv'qh'Gpxktqpo gpv'cpf "Uekpeg."xkgy gf "4; "Ugr vgo dgt"42450

FGU"4245e." *WildNet Species List.*"S wggpurcpf "Fgr ctwo gpv'qh'Gpxktqpo gpv'cpf "Uekpeg."xkgy gf "4; " Ugr vgo dgt"42450

FGU"4245f." *Regional Ecosystem Description Database (Version 13).*"S wggpurcpf "Fgr ctwo gpv'qh' Gpxktqpo gpv'cpf "Uekpeg."Dtkudcpg0

FqT" 4244." *Vegetation management watercourse and drainage feature map (1:100000 and 1:250000) – Queensland except South East Queensland Version 6.0, 8 September 2022.*"S wggpurcpf " Fgr ctwo gpv'qh'Tguqwtegu0

FqT"4245c." *Tgi wcvgf "Vegetation Management Map for Lot 212 on plan C17915,"*S wggpurcpf " Fgr ctwo gpv'qh'Tguqwtegu."xkgy gf "4; "Ugr vgo dgt0

FqT"4245d." *Vegetation Management Regional Ecosystem Map (Version 12.02), 3 April 2023,*" S wggpurcpf "Fgr ctwo gpv'qh'Tguqwtegu0

FTFOY "4245." *Watercourse identification map – watercourses – Queensland, 1 September 2023.*" S wggpurcpf "Fgr ctwo gpv'qh'Tgi kqpcn'Fgxgr o gpv.'Ocpwxcwtkpi "cpf "Y cvgt0

O ctej cpv."U'(" 'J ki i kpu."RL'k'gf u'3; ; 5." *Handbook of Australian, New Zealand and Antarctic Birds. Volume 2 – Raptors to Lapwings.*"Qzhqtf "Wpkxgtuk'{"Rtguu."Ogrdqwtpg."Xkqvtkc0

Rk| g{."I "(" 'Mpli j v."H'4234." *The Field Guide to the Birds of Australia.*;"v"gf p."J ctr gt"Eqm'ku" Rwdikuj gtu."U'fpg{0

"

0E] ^} å ã Á Á
Ò Ú Ó Ô Á & Á ! [c ^ & c ^ å Á æ c ^ ! • Á
Ü ^] [! c Á Á



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 29-Sep-2023

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar)	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	30
Listed Migratory Species:	26

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	30
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	1
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	None
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Species

[\[Resource Information \]](#)

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name

Threatened Category

Presence Text

BIRD

[Calidris canutus](#)

Red Knot, Knot [855]

Endangered

Species or species habitat may occur within area

[Calidris ferruginea](#)

Curlew Sandpiper [856]

Critically Endangered

Species or species habitat known to occur within area

[Charadrius leschenaultii](#)

Greater Sand Plover, Large Sand Plover [877]

Vulnerable

Species or species habitat known to occur within area

[Erythrotriorchis radiatus](#)

Red Goshawk [942]

Endangered

Species or species habitat known to occur within area

[Falco hypoleucos](#)

Grey Falcon [929]

Vulnerable

Species or species habitat likely to occur within area

[Hirundapus caudacutus](#)

White-throated Needletail [682]

Vulnerable

Species or species habitat known to occur within area

[Limosa lapponica baueri](#)

Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]

Vulnerable

Species or species habitat known to occur within area

[Numenius madagascariensis](#)

Eastern Curlew, Far Eastern Curlew [847]

Critically Endangered

Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Probosciger aterrimus macgillivrayi Palm Cockatoo (Australian) [67033]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Tyto novaehollandiae kimberli Masked Owl (northern) [26048]	Vulnerable	Species or species habitat may occur within area
FISH		
Stiphodon semoni Opal Cling Goby [83909]	Critically Endangered	Species or species habitat may occur within area
FROG		
Litoria dayi Australian Lace-lid, Lace-eyed Tree Frog, Day's Big-eyed Treefrog [86707]	Vulnerable	Species or species habitat likely to occur within area
MAMMAL		
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat known to occur within area
Hipposideros semoni Semon's Leaf-nosed Bat, Greater Wart-nosed Horseshoe-bat [180]	Vulnerable	Species or species habitat may occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Mesembriomys gouldii rattoides Black-footed Tree-rat (north Queensland), Shaggy Rabbit-rat [87620]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Pteropus conspicillatus Spectacled Flying-fox [185]	Endangered	Species or species habitat may occur within area
Rhinolophus robertsi Large-eared Horseshoe Bat, Greater Large-eared Horseshoe Bat [87639]	Vulnerable	Species or species habitat likely to occur within area
Saccolaimus saccolaimus nudicluniatus Bare-rumped Sheath-tailed Bat, Bare-rumped Sheath-tail Bat [66889]	Vulnerable	Species or species habitat known to occur within area
Xeromys myoides Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
Bruguiera x hainesii Haines's Orange Mangrove [91351]	Critically Endangered	Species or species habitat likely to occur within area
Dendrobium johannis Chocolate Tea Tree Orchid [13585]	Vulnerable	Species or species habitat likely to occur within area
Leichhardtia araujacea [91900]	Critically Endangered	Species or species habitat known to occur within area
Myrmecodia beccarii Ant Plant [11852]	Vulnerable	Species or species habitat likely to occur within area
Vappodes phalaenopsis Cooktown Orchid [78894]	Vulnerable	Species or species habitat known to occur within area
REPTILE		
Egernia rugosa Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
SHARK		

Scientific Name	Threatened Category	Presence Text
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area
Listed Migratory Species [Resource Information]		
Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat known to occur within area
Sternula albifrons Little Tern [82849]		Species or species habitat may occur within area
Migratory Marine Species		
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area
Monarcha frater Black-winged Monarch [607]		Species or species habitat known to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat may occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Monarcha frater Black-winged Monarch [607]		Species or species habitat known to occur within area overfly marine area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Sternula albifrons as Sterna albifrons Little Tern [82849]		Species or species habitat may occur within area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat known to occur within area overfly marine area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area

Reptile

Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
Great Barrier Reef Coast	Marine Park	QLD

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact us](#) page.

[© Commonwealth of Australia](#)

Department of Climate Change, Energy, the Environment and Water

GPO Box 3090

Canberra ACT 2601 Australia

+61 2 6274 1111

Appendix B:
Matters of State Environmental
Significance Environmental Report



Queensland Government

Department of Environment and Science

Environmental Reports

Matters of State Environmental Significance

For the selected area of interest
Lot: 212 Plan: C17915

Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the point of interest.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and field survey may be required to validate values on the ground.

Please direct queries about these reports to: Planning.Support@des.qld.gov.au

Disclaimer

Whilst every care is taken to ensure the accuracy of the information provided in this report, the Queensland Government makes no representations or warranties about its accuracy, reliability, completeness, or suitability, for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which the user may incur as a consequence of the information being inaccurate or incomplete in any way and for any reason.



Table of Contents

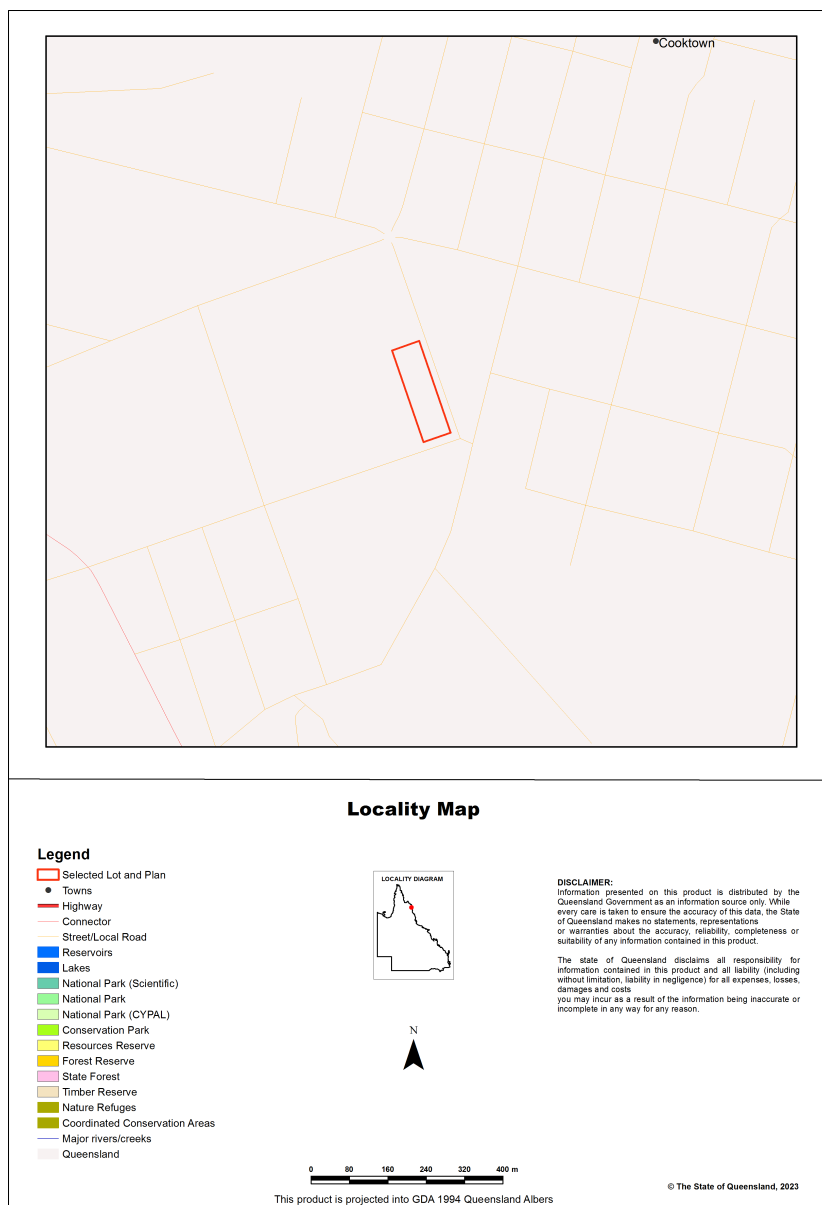
Assessment Area Details	4
Matters of State Environmental Significance (MSES)	5
MSES Categories	5
MSES Values Present	6
Additional Information with Respect to MSES Values Present	7
MSES - State Conservation Areas	7
MSES - Wetlands and Waterways	7
MSES - Species	7
MSES - Regulated Vegetation	9
Map 1 - MSES - State Conservation Areas	11
Map 2 - MSES - Wetlands and Waterways	12
Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals	13
Map 3b - MSES - Species - Koala habitat area (SEQ)	14
Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)	15
Map 4 - MSES - Regulated Vegetation	16
Map 5 - MSES - Offset Areas	17
Appendices	18
Appendix 1 - Matters of State Environmental Significance (MSES) methodology	18
Appendix 2 - Source Data	19
Appendix 3 - Acronyms and Abbreviations	20

Assessment Area Details

The following table provides an overview of the area of interest (AOI) with respect to selected topographic and environmental values.

Table 1: Summary table, details for AOI Lot: 212 Plan: C17915

Size (ha)	1.22
Local Government(s)	Cook Shire
Bioregion(s)	Cape York Peninsula
Subregion(s)	Starke Coastal Lowlands
Catchment(s)	Endeavour



Matters of State Environmental Significance (MSES)

MSES Categories

Queensland's State Planning Policy (SPP) includes a biodiversity State interest that states:

'The sustainable, long-term conservation of biodiversity is supported. Significant impacts on matters of national or state environmental significance are avoided, or where this cannot be reasonably achieved; impacts are minimised and residual impacts offset.'

The MSES mapping product is a guide to assist planning and development assessment decision-making. Its primary purpose is to support implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations. Similarly, the SPP biodiversity policy does not override or replace specific requirements of other Acts or regulations.

The SPP defines matters of state environmental significance as:

- Protected areas (including all classes of protected area except coordinated conservation areas) under the *Nature Conservation Act 1992* ;
- Marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the *Marine Parks Act 2004* ;
- Areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008;
- Threatened wildlife under the *Nature Conservation Act 1992* and special least concern animals under the Nature Conservation (Wildlife) Regulation 2006;
- Regulated vegetation under the *Vegetation Management Act 1999* that is:
 - Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems;
 - Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems;
 - Category R areas on the regulated vegetation management map;
 - Regional ecosystems that intersect with watercourses identified on the vegetation management watercourse and drainage feature map;
 - Regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map;
- Strategic Environmental Areas under the *Regional Planning Interests Act 2014* ;
- Wetlands in a wetland protection area of wetlands of high ecological significance shown on the Map of Queensland Wetland Environmental Values under the Environment Protection Regulation 2019;
- Wetlands and watercourses in high ecological value waters defined in the Environmental Protection (Water) Policy 2009, schedule 2;
- Legally secured offset areas.

MSES Values Present

The MSES values that are present in the area of interest are summarised in the table below:

Table 2: Summary of MSES present within the AOI

1a Protected Areas- estates	0.0 ha	0.0 %
1b Protected Areas- nature refuges	0.0 ha	0.0 %
1c Protected Areas- special wildlife reserves	0.0 ha	0.0 %
2 State Marine Parks- highly protected zones	0.0 ha	0.0 %
3 Fish habitat areas (A and B areas)	0.0 ha	0.0 %
4 Strategic Environmental Areas (SEA)	0.0 ha	0.0 %
5 High Ecological Significance wetlands on the map of Referable Wetlands	0.0 ha	0.0 %
6a High Ecological Value (HEV) wetlands	0.0 ha	0.0 %
6b High Ecological Value (HEV) waterways	0.0 km	Not applicable
7a Threatened (endangered or vulnerable) wildlife	1.14 ha	93.4%
7b Special least concern animals	1.14 ha	93.4%
7c i Koala habitat area - core (SEQ)	0.0 ha	0.0 %
7c ii Koala habitat area - locally refined (SEQ)	0.0 ha	0.0 %
7d Sea turtle nesting areas	0.0 km	Not applicable
8a Regulated Vegetation - Endangered/Of concern in Category B (remnant)	0.0 ha	0.0 %
8b Regulated Vegetation - Endangered/Of concern in Category C (regrowth)	0.0 ha	0.0 %
8c Regulated Vegetation - Category R (GBR riverine regrowth)	0.0 ha	0.0 %
8d Regulated Vegetation - Essential habitat	1.14 ha	93.4%
8e Regulated Vegetation - intersecting a watercourse	0.0 km	Not applicable
8f Regulated Vegetation - within 100m of a Vegetation Management Wetland	0.0 ha	0.0 %
9a Legally secured offset areas- offset register areas	0.0 ha	0.0 %
9b Legally secured offset areas- vegetation offsets through a Property Map of Assessable Vegetation	0.0 ha	0.0 %

Additional Information with Respect to MSES Values Present

MSES - State Conservation Areas

1a. Protected Areas - estates

(no results)

1b. Protected Areas - nature refuges

(no results)

1c. Protected Areas - special wildlife reserves

(no results)

2. State Marine Parks - highly protected zones

(no results)

3. Fish habitat areas (A and B areas)

(no results)

Refer to **Map 1 - MSES - State Conservation Areas** for an overview of the relevant MSES.

MSES - Wetlands and Waterways

4. Strategic Environmental Areas (SEA)

(no results)

5. High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values

(no results)

6a. Wetlands in High Ecological Value (HEV) waters

(no results)

6b. Waterways in High Ecological Value (HEV) waters

(no results)

Refer to **Map 2 - MSES - Wetlands and Waterways** for an overview of the relevant MSES.

MSES - Species

7a. Threatened (endangered or vulnerable) wildlife

Values are present

7b. Special least concern animals

Values are present

7c i. Koala habitat area - core (SEQ)

Not applicable

7c ii. Koala habitat area - locally refined (SEQ)

Not applicable

7d. Wildlife habitat (sea turtle nesting areas)

Not applicable

Threatened (endangered or vulnerable) wildlife habitat suitability models

Species	Common name	NCA status	Presence
<i>Boronia keysii</i>		V	None
<i>Calyptorhynchus lathami</i>	Glossy black cockatoo	V	None
<i>Casuarius casuaris johnsonii</i>	Sthn population cassowary	E	None
<i>Crinia tinnula</i>	Wallum froglet	V	None
<i>Denisonia maculata</i>	Ornamental snake	V	None
<i>Litoria freycineti</i>	Wallum rocketfrog	V	None
<i>Litoria olongburensis</i>	Wallum sedgefrog	V	None
<i>Macadamia integrifolia</i>		V	None
<i>Macadamia ternifolia</i>		V	None
<i>Macadamia tetraphylla</i>		V	None
<i>Melaleuca irbyana</i>		E	None
<i>Petaurus gracilis</i>	Mahogany Glider	E	None
<i>Petrogale persephone</i>	Proserpine rock-wallaby	E	None
<i>Pezoporus wallicus wallicus</i>	Eastern ground parrot	V	None
<i>Phascolarctos cinereus</i>	Koala - outside SEQ*	E	None
<i>Taudactylus pleione</i>	Kroombit tinkerfrog	E	None
<i>Xeromys myoides</i>	Water Mouse	V	None

*For koala model, this includes areas outside SEQ. Check 7c SEQ koala habitat for presence/absence.

Threatened (endangered or vulnerable) wildlife species records

Scientific name	Common name	NCA status	EPBC status	Migratory status
<i>Numenius madagascariensis</i>	eastern curlew	E	CE	Y
<i>Limosa lapponica baueri</i>	Western Alaskan bar-tailed godwit	V	V	Y
<i>Charadrius leschenaultii</i>	greater sand plover	V	V	Y

Special least concern animal species records

Scientific name	Common name	Migratory status
<i>Numenius phaeopus</i>	whimbrel	Y
<i>Actitis hypoleucos</i>	common sandpiper	Y
<i>Pluvialis fulva</i>	Pacific golden plover	Y
<i>Pluvialis squatarola</i>	grey plover	Y

Shorebird habitat (critically endangered/endorsed/vulnerable)

Not applicable

Shorebird habitat (special least concern)

Not applicable

**Nature Conservation Act 1992 (NCA) Status- Endangered (E), Vulnerable (V) or Special Least Concern Animal (SL). Environment Protection and Biodiversity Conservation Act 1999 (EPBC) status: Critically Endangered (CE) Endangered (E), Vulnerable (V)*

Migratory status (M) - China and Australia Migratory Bird Agreement (C), Japan and Australia Migratory Bird Agreement (J), Republic of Korea and Australia Migratory Bird Agreement (R), Bonn Migratory Convention (B), Eastern Flyway (E)

To request a species list for an area, or search for a species profile, access Wildlife Online at:

<https://www.qld.gov.au/environment/plants-animals/species-list/>

Refer to **Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals**, **Map 3b - MSES - Species - Koala habitat area (SEQ)** and **Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)** for an overview of the relevant MSES.

MSES - Regulated Vegetation

For further information relating to regional ecosystems in general, go to:

<https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/>

For a more detailed description of a particular regional ecosystem, access the regional ecosystem search page at:

<https://environment.ehp.qld.gov.au/regional-ecosystems/>

8a. Regulated Vegetation - Endangered/Of concern in Category B (remnant)

Not applicable

8b. Regulated Vegetation - Endangered/Of concern in Category C (regrowth)

Not applicable

8c. Regulated Vegetation - Category R (GBR riverine regrowth)

Not applicable

8d. Regulated Vegetation - Essential habitat

Values are present

8e. Regulated Vegetation - intersecting a watercourse**

(no results)

8f. Regulated Vegetation - within 100m of a Vegetation Management wetland

Not applicable

Refer to **Map 4 - MSES - Regulated Vegetation** for an overview of the relevant MSES.

MSES - Offsets

9a. Legally secured offset areas - offset register areas

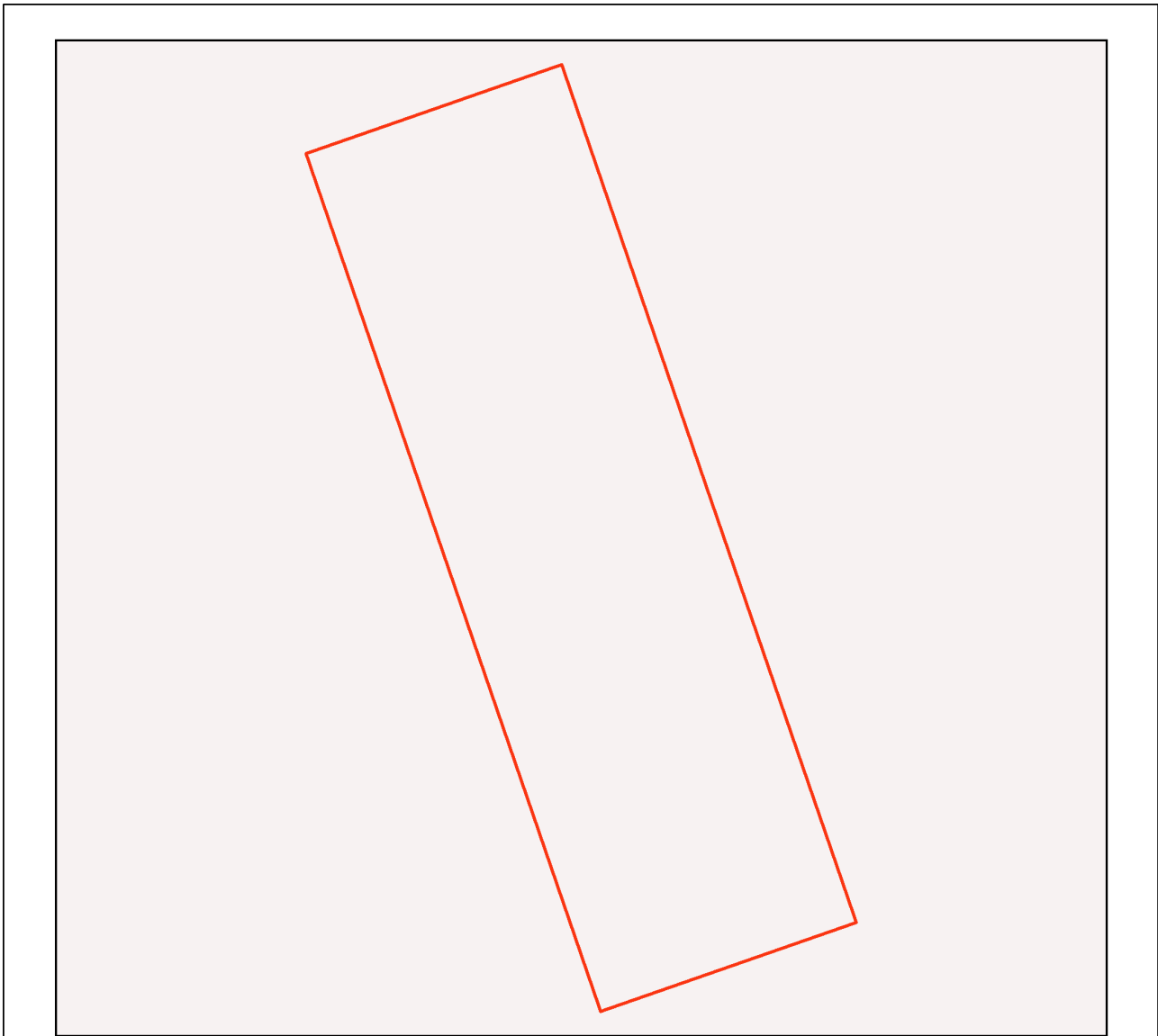
(no results)

9b. Legally secured offset areas - vegetation offsets through a Property Map of Assessable Vegetation

(no results)









Refer to **Map 5 - MSES - Offset Areas** for an overview of the relevant MSES.

Map 1 - MSES - State Conservation Areas



MSES - State Conservation Areas

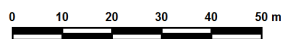
Area of Interest

-  Selected Lot and Plan
-  Towns
-  Freeways/Highways
-  Secondary roads
-  Major rivers/creeks
-  Protected area (estates, nature refuges, special wildlife reserves)
-  Declared fish habitat area (A and B areas)
-  Marine park (highly protected)



Information presented on this product is distributed by the Queensland Government as an information source only. While every care is taken to ensure the accuracy of this data, the State of Queensland makes no statements, representations or warranties about the accuracy, reliability, completeness or suitability of any information contained in this product.

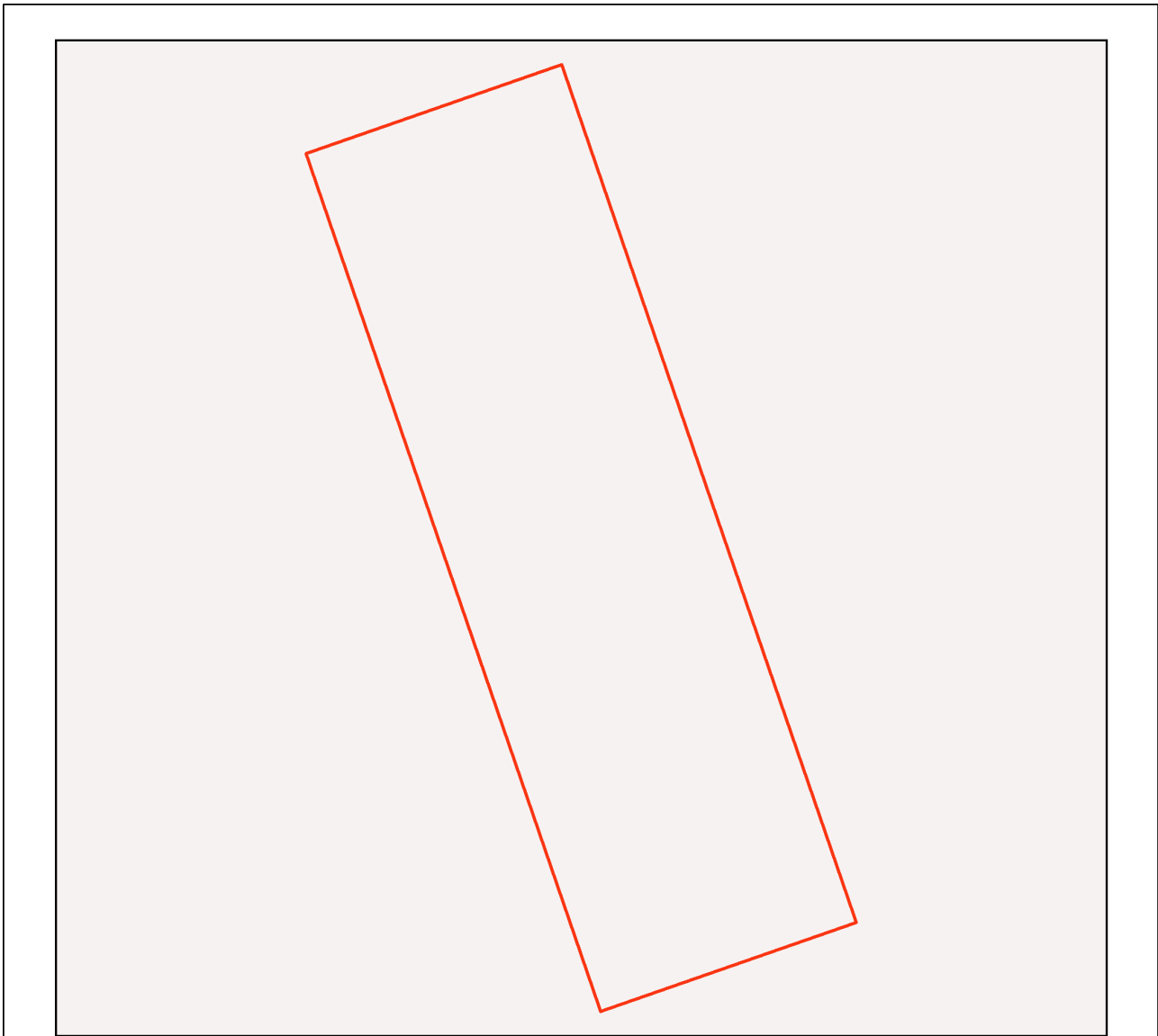
The state of Queensland disclaims all responsibility for information contained in this product and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.



© The State of Queensland, 2023










This product is projected into GDA 1994 Queensland Albers

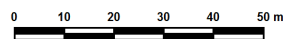
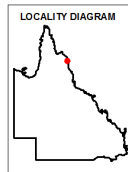
Map 2 - MSES - Wetlands and Waterways



MSES - Wetlands and Waterways

Area of Interest

-  Selected Lot and Plan
-  Towns
-  Freeways/Highways
-  Secondary roads
-  Major rivers/creeks
-  Declared high ecological value waters (watercourse)
-  Strategic environmental area (designated precinct)
-  Declared high ecological value waters (wetland)
-  High ecological significance wetlands



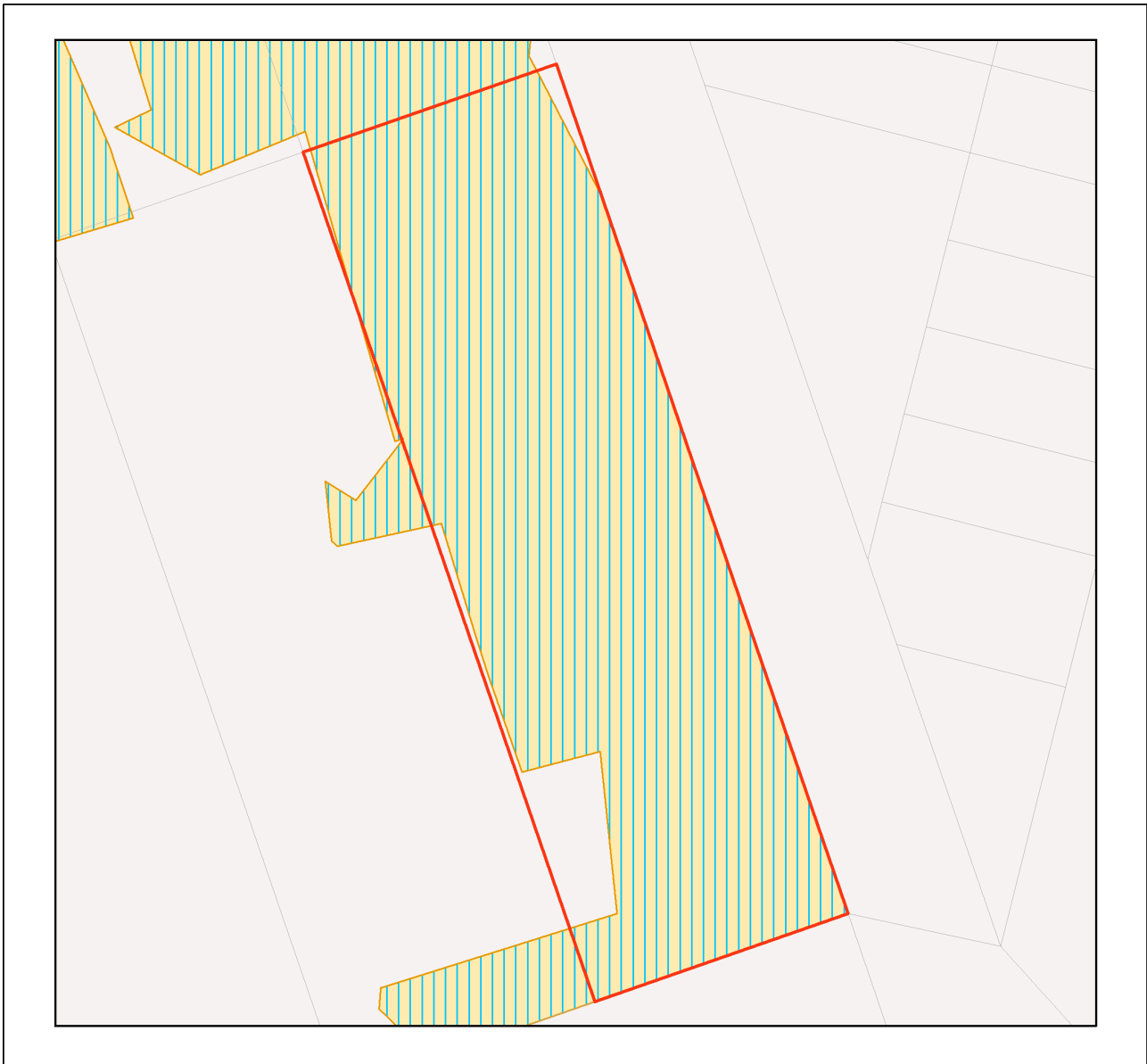
Information presented on this product is distributed by the Queensland Government as an information source only. While every care is taken to ensure the accuracy of this data, the state of Queensland makes no statements, representations or warranties about the accuracy, reliability, completeness or suitability of any information contained in this product.

The state of Queensland disclaims all responsibility for information contained in this product and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

© The State of Queensland, 2023

This product is projected into GDA 1994 Queensland Albers

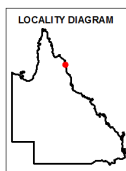
Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals



MSES - Species Threatened (endangered or vulnerable) wildlife and special least concern animals

Area of Interest

- Selected Lot and Plan
- ▲ Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Wildlife habitat (special least concern)
- Wildlife habitat (endangered or vulnerable)



Information presented on this product is distributed by the Queensland Government as an information source only. While every care is taken to ensure the accuracy of this data, the state of Queensland makes no statements, representations or warranties about the accuracy, reliability, completeness or suitability of any information contained in this product.

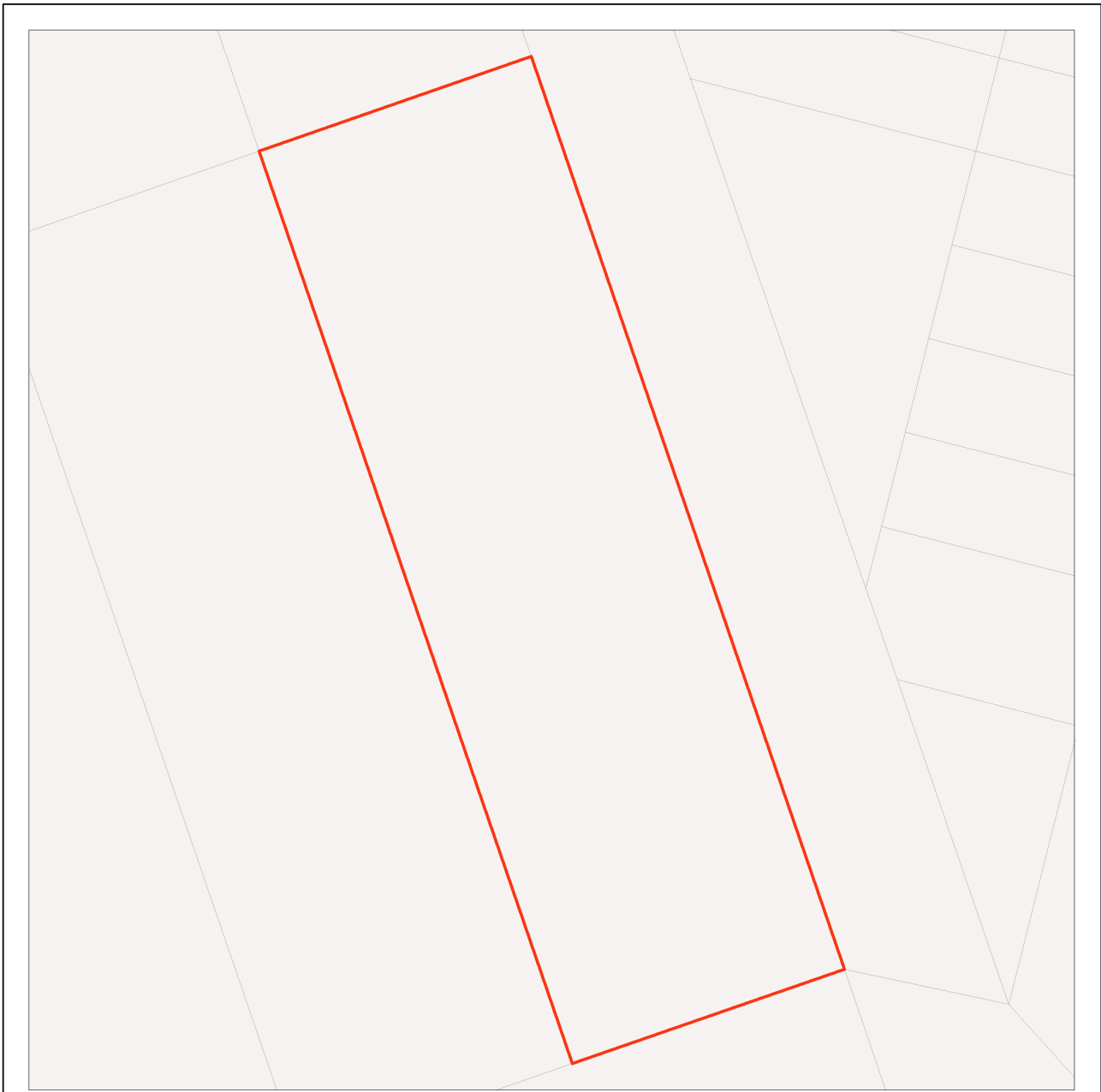
The state of Queensland disclaims all responsibility for information contained in this product and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.



This product is projected into GDA 1994 Queensland Albers

© The State of Queensland, 2023

Map 3b - MSES - Species - Koala habitat area (SEQ)



MSES - Species Koala habitat area (SEQ)

Area of Interest

- Selected Lot and Plan
- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Koala habitat area (core)
- Koala habitat area (locally refined)



While every care is taken to ensure the accuracy of this product, the Department of Environment and Science acting on behalf of the State of Queensland makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the data being inaccurate or incomplete in any way and for any reason. Due to varying sources of data, spatial locations may not coincide when overlaid.

The represented layers for SEQ 'koala habitat area-core' and 'koala habitat area- locally refined' in MSES are sourced directly from the regulatory mapping under the Nature Conservation (Koala) Conservation Plan 2017. Whilst every effort is made to ensure the information remains current, there may be delays between updating versions. Please refer to the original mapping for the most recent version. See <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping>

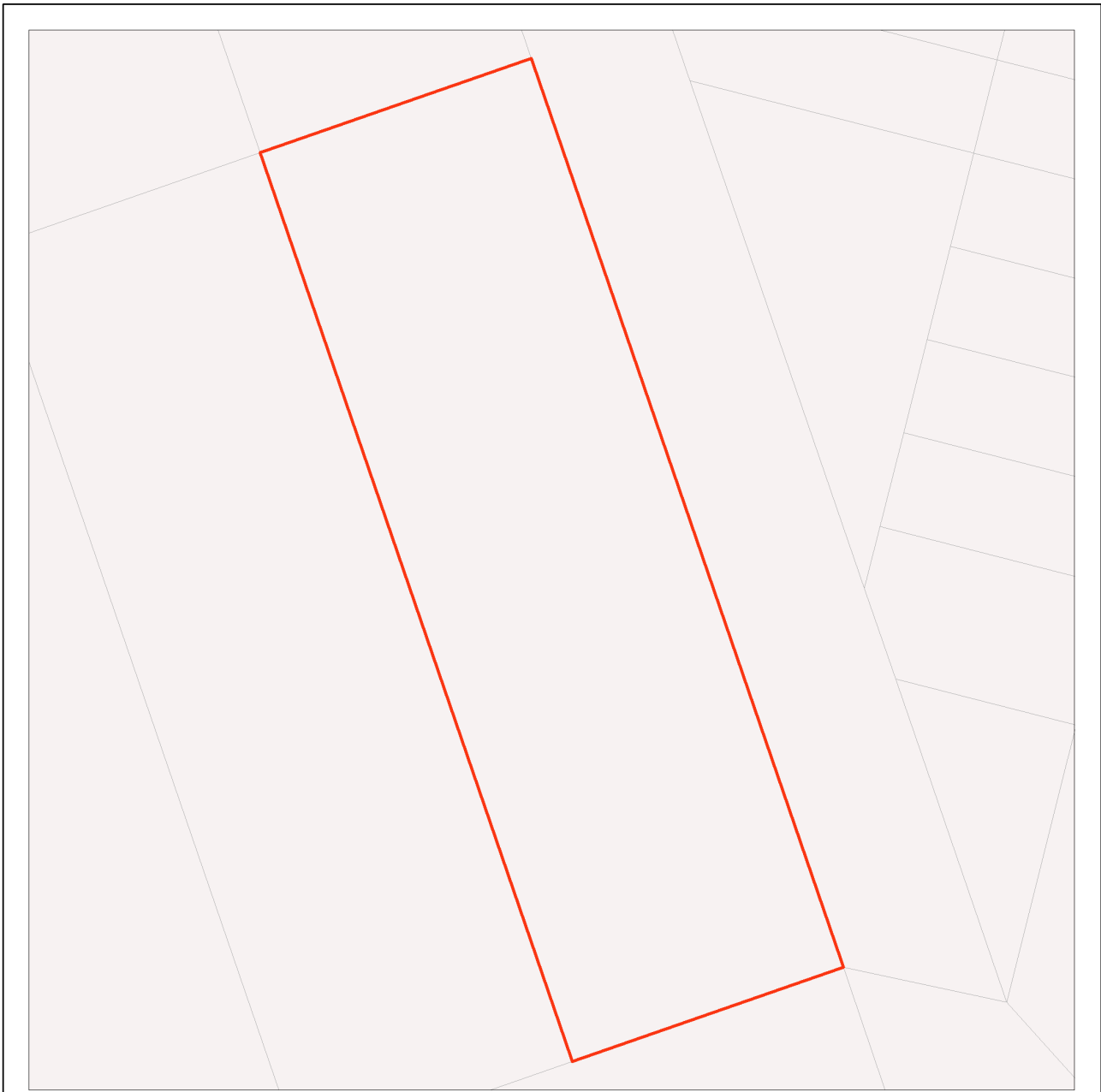
The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.



© The State of Queensland, 2023

This product is projected into GDA 1994 Queensland Albers

Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)



MSES - Wildlife habitat (sea turtle nesting areas)

Area of Interest

- Selected Lot and Plan
- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Wildlife habitat (sea turtle nesting areas)

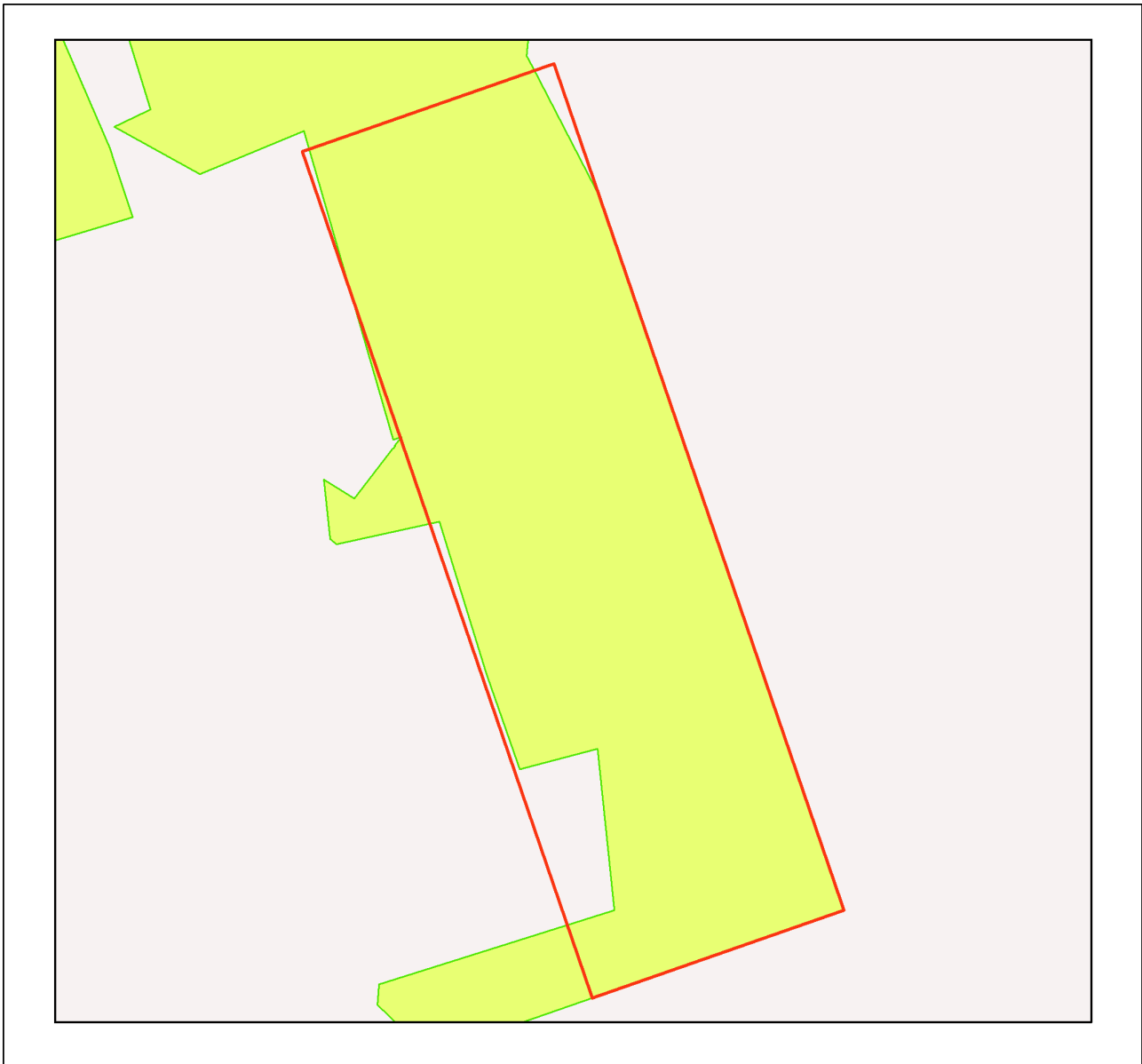


While every care is taken to ensure the accuracy of this product, the Department of Environment and Science acting on behalf of the State of Queensland makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the data being inaccurate or incomplete in any way and for any reason. Due to varying sources of data, spatial locations may not coincide when overlaid.

MSES mapping of sea turtle nesting areas identifies beaches where the recorded number of turtle nests are over 1% of the turtle species or genetic stock. The linework is also deliberately extended along nearby rocky coastlines and headlands to recognise that significant numbers of nesting adults and hatchlings can become disoriented by light pollution from development on rocky coastlines and headlands while navigating offshore from nesting beaches.



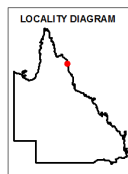
Map 4 - MSES - Regulated Vegetation



MSES - Regulated Vegetation

Area of Interest

- Selected Lot and Plan
- ▲ Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Regulated vegetation (intersecting a watercourse)
- Regulated vegetation (100m from wetland)
- Regulated vegetation (category B - endangered or of concern)
- Regulated vegetation (category C - endangered or of concern)
- Regulated vegetation (category R - GBR riverine)
- Regulated vegetation (essential habitat)



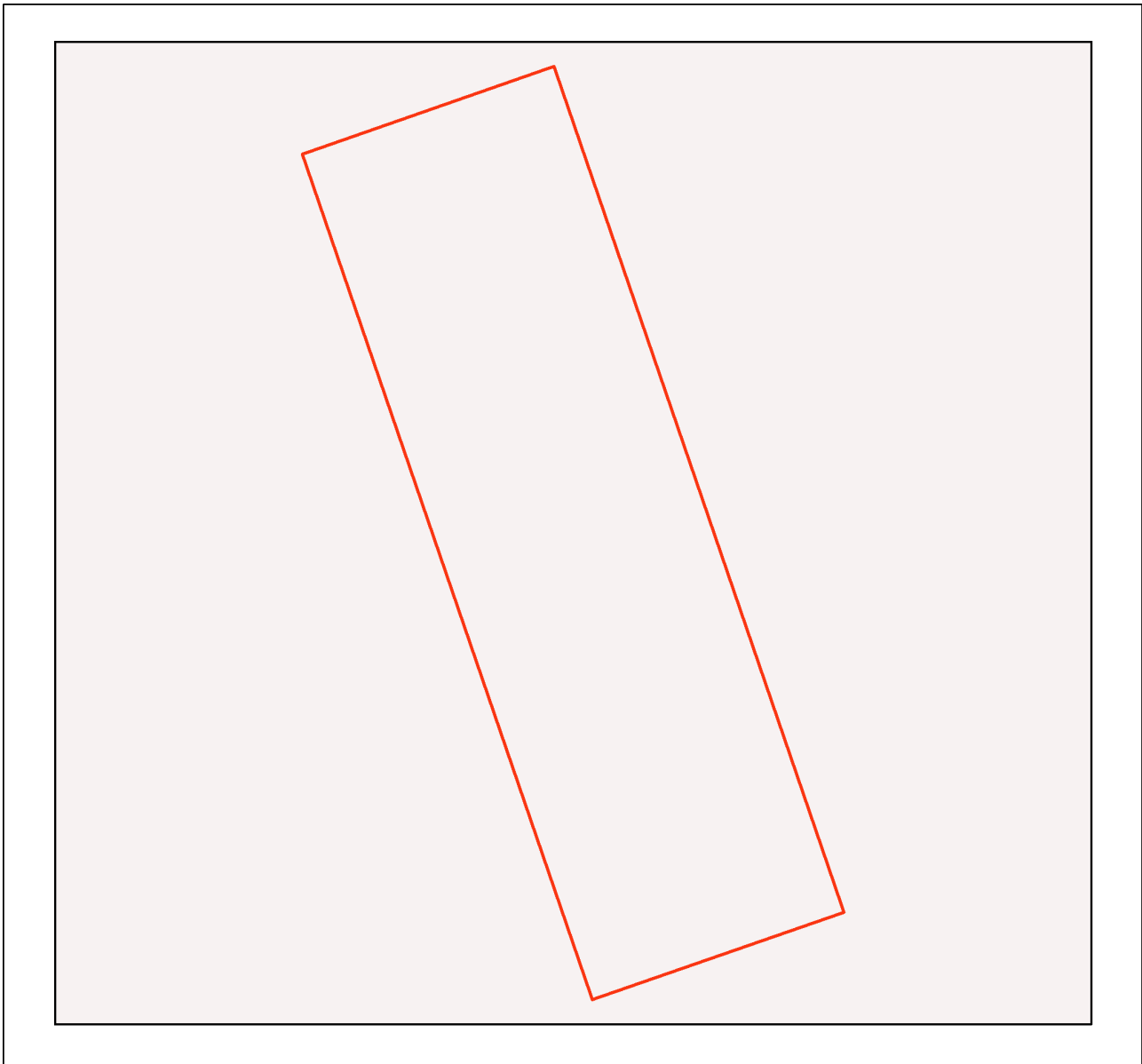
Information presented on this product is distributed by the Queensland Government as an information source only. While every care is taken to ensure the accuracy of this data, the state of Queensland makes no statements, representations or warranties about the accuracy, reliability, completeness or suitability of any information contained in this product.

The state of Queensland disclaims all responsibility for information contained in this product and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

© The State of Queensland, 2023








This product is projected into GDA 1994 Queensland Albers

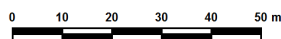
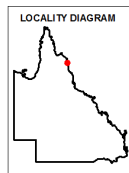
Map 5 - MSES - Offset Areas



MSES - Offsets

Area of Interest

-  Selected Lot and Plan
-  Towns
-  Freeways/Highways
-  Secondary roads
-  Major rivers/creeks
-  Legally secured offset area (offset register)
-  Legally secured offset area (vegetation offsets)



Information presented on this product is distributed by the Queensland Government as an information source only. While every care is taken to ensure the accuracy of this data, the State of Queensland makes no statements, representations or warranties about the accuracy, reliability, completeness or suitability of any information contained in this product.

The state of Queensland disclaims all responsibility for information contained in this product and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

© The State of Queensland, 2023

This product is projected into GDA 1994 Queensland Albers

Appendices

Appendix 1 - Matters of State Environmental Significance (MSES) methodology

MSES mapping is a regional-scale representation of the definition for MSES under the State Planning Policy (SPP). The compiled MSES mapping product is a guide to assist planning and development assessment decision-making. Its primary purpose is to support implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations. Similarly, the SPP biodiversity policy does not override or replace specific requirements of other Acts or regulations.

The Queensland Government's "Method for mapping - matters of state environmental significance for use in land use planning and development assessment" can be downloaded from:

<http://www.ehp.qld.gov.au/land/natural-resource/method-mapping-mses.html> .

Appendix 2 - Source Data

The datasets listed below are available on request from:

<http://qldspatial.information.qld.gov.au/catalogue/custom/index.page>

- Matters of State environmental significance

Note: MSES mapping is not based on new or unique data. The primary mapping product draws data from a number of underlying environment databases and geo-referenced information sources. MSES mapping is a versioned product that is updated generally on a twice-yearly basis to incorporate the changes to underlying data sources. Several components of MSES mapping made for the current version may differ from the current underlying data sources. To ensure accuracy, or proper representation of MSES values, it is strongly recommended that users refer to the underlying data sources and review the current definition of MSES in the State Planning Policy, before applying the MSES mapping.

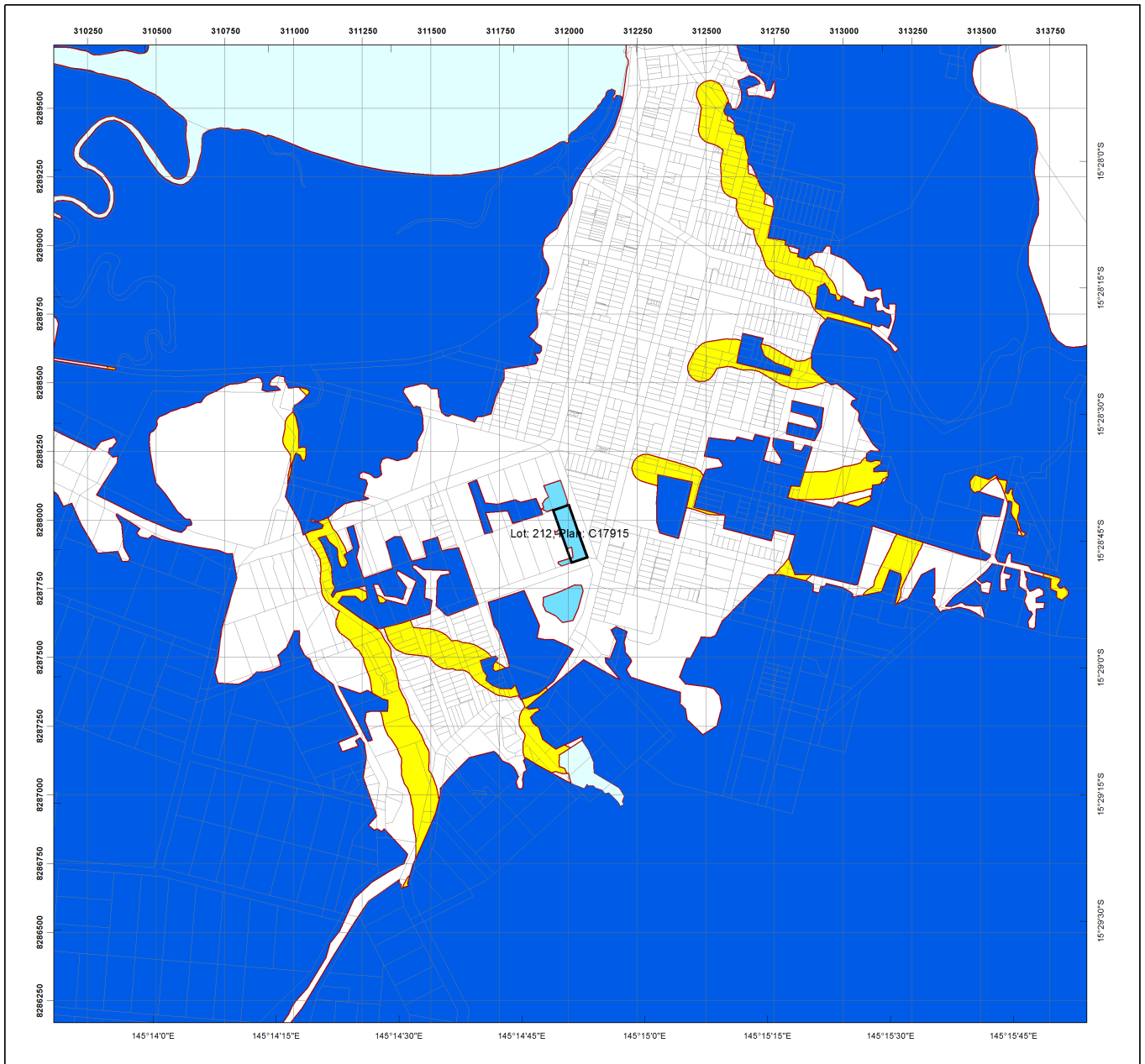
Individual MSES layers can be attributed to the following source data available at QSpatial:

MSES layers	current QSpatial data (http://qspatial.information.qld.gov.au)
Protected Areas-Estates, Nature Refuges, Special Wildlife Reserves	- Protected areas of Queensland - Nature Refuges - Queensland - Special Wildlife Reserves- Queensland
Marine Park-Highly Protected Zones	Moreton Bay marine park zoning 2008
Fish Habitat Areas	Queensland fish habitat areas
Strategic Environmental Areas-designated	Regional Planning Interests Act - Strategic Environmental Areas
HES wetlands	Map of Queensland Wetland Environmental Values
Wetlands in HEV waters	HEV waters: - EPP Water intent for waters Source Wetlands: - Queensland Wetland Mapping (Current version 5) Source Watercourses: - Vegetation management watercourse and drainage feature map (1:100000 and 1:250000)
Wildlife habitat (threatened and special least concern)	- WildNet database species records - habitat suitability models (various) - SEQ koala habitat areas under the Koala Conservation Plan 2019 - Sea Turtle Nesting Areas records
VMA regulated regional ecosystems	Vegetation management regional ecosystem and remnant map
VMA Essential Habitat	Vegetation management - essential habitat map
VMA Wetlands	Vegetation management wetlands map
Legally secured offsets	Vegetation Management Act property maps of assessable vegetation. For offset register data-contact DES
Regulated Vegetation Map	Vegetation management - regulated vegetation management map

Appendix 3 - Acronyms and Abbreviations

AOI	- Area of Interest
DES	- Department of Environment and Science
EP Act	- <i>Environmental Protection Act 1994</i>
EPP	- Environmental Protection Policy
GDA94	- Geocentric Datum of Australia 1994
GEM	- General Environmental Matters
GIS	- Geographic Information System
MSES	- Matters of State Environmental Significance
NCA	- <i>Nature Conservation Act 1992</i>
RE	- Regional Ecosystem
SPP	- State Planning Policy
VMA	- <i>Vegetation Management Act 1999</i>

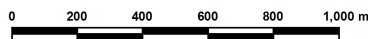
Appendix C:
Regulated Vegetation
Management Map



Regulated Vegetation Management Map

Legend

- Selected Lot and Plan
- Category A area (Vegetation offsets/compliance notices/VDecs)
- Category B area (Remnant vegetation)
- Category C area (High-value regrowth vegetation)
- Category R area (Reef regrowth watercourse vegetation)
- Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
- Water
- Other land parcel boundaries



This product is projected into:
 GDA 1994 MGA Zone 55

Disclaimer:

While every care is taken to ensure the accuracy of this product, the Department of Resources makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

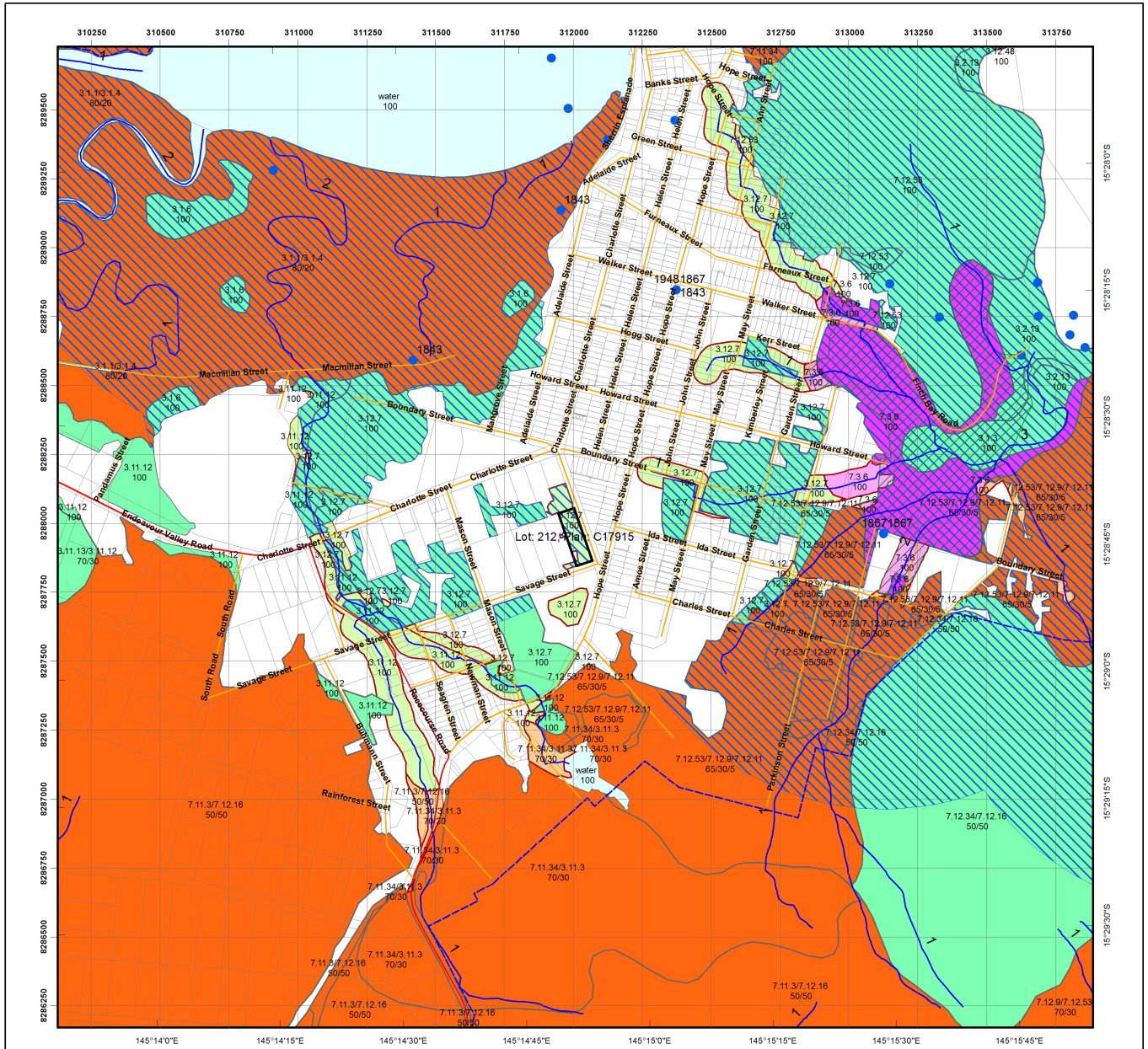
Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: www.resources.qld.gov.au or contact the Department of Resources.

Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.

This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.

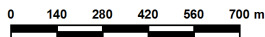
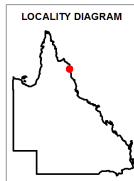




Vegetation Management Supporting Map

Legend

- Selected Lot and Plan
- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C or R area containing endangered regional ecosystems
- Category C or R area containing of concern regional ecosystems
- Category C or R area that is a least concern regional ecosystem
- Category X area
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map (Stream order shown as black number against stream where available)
- Highway
- Connector
- Street/Local Road
- National Parks, State Forest and other reserves
- Other land parcel boundaries



This product is projected into:
 GDA 1994 MGA Zone 55

Labels for Essential Habitat are centred on the area of enquiry.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

Disclaimer:
 While every care is taken to ensure the accuracy of this product, the Department of Resources makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you may incur as a result of the product being inaccurate or incomplete in any way and for any reason.

Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: www.resources.qld.gov.au or contact the Department of Resources.

Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.

Vegetation Management Act 1999 - Extract from the essential habitat database

Essential habitat is required for assessment under the:

- State Development Assessment Provisions - State Code 16: Native vegetation clearing which sets out the matters of interest to the state for development assessment under the *Planning Act 2016*, and
- Accepted development vegetation clearing codes made under the *Vegetation Management Act 1999*

Essential habitat for one or more of the following species is found on and within 1.1 km of the identified subject lot/s on the accompanying essential habitat map.

This report identifies essential habitat in Category A, B and Category C areas.

The numeric labels on the essential habitat map can be cross referenced with the database below to determine which essential habitat factors might exist for a particular species.

Essential habitat is compiled from a combination of species habitat models and buffered species records.

The Department of Resources website (<http://www.resources.qld.gov.au>) has more information on how the layer is applied under the State Development Assessment Provisions - State Code 16: Native vegetation clearing and the *Vegetation Management Act 1999*.

Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated.

Essential habitat, for protected wildlife, means a category A area, a category B area or category C area shown on the regulated vegetation management map-

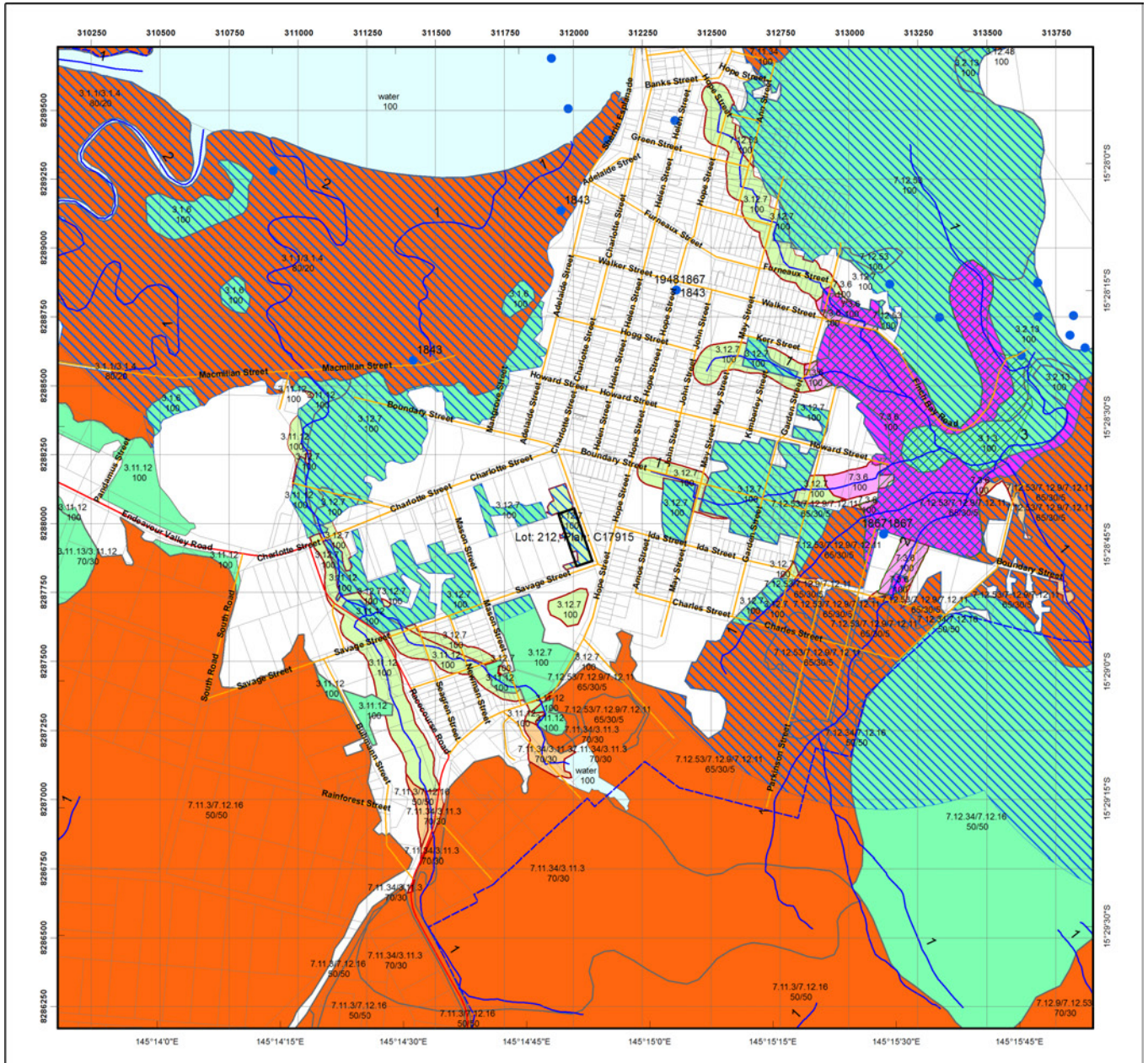
- 1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database; or
- 2) in which the protected wildlife, at any stage of its life cycle, is located.

Protected wildlife includes critically endangered, endangered, vulnerable or near-threatened native wildlife prescribed under the *Nature Conservation Act 1992*.

Essential habitat in Category A and/or Category B and/or Category C

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
1843	<i>Numenius madagascariensis</i>	eastern curlew	E	Foraging on soft, intertidal mudflat, with a preference for broad flats, often in sheltered areas near mangroves and estuaries/creeks, also on sandflats and occasionally ocean beaches, rock platforms and coral reefs. Roost on saltflat, saltmarsh, mangroves, reef flat, sandy spits and grassland near water.	Sea level to 100m.	Sand, sandy mud and mud substrates.	Associated with coastlines and wetlands.
1867	<i>Limosa lapponica baueri</i>	Western Alaskan bar-tailed godwit	V	Foraging on large intertidal mudflat/sandflat, banks in estuaries, inlets, bays and coastal lagoons; also saline wetlands, saltmarsh, sandy beach, rock platform and coral reef-flat. Roost on sandy beach/spit and near saltmarsh.	Sea level to 100m.	Sand and mud substrates.	Associated with coastlines and wetlands.
1948	<i>Charadrius leschenaultii</i>	greater sand plover	V	Foraging on intertidal mudflats, sandbank, sandy/shelly/muddy beaches, rock platforms, coral reefs and tidal lagoons. Roost on sandspit, beach, lagoons edge, rocky points, coastal saltmarsh and claypan.	Sea level to 100m.	Sand and mud substrates.	Associated with coastlines and wetlands.

Label	Regional Ecosystem (mandatory unless otherwise specified)
1843	2.1.1, 2.1.2, 2.1.3, 2.1.4, 2.1.5, 3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.1.5, 3.1.6, 7.1.1, 7.1.2, 7.1.3, 8.1.1, 8.1.2, 8.1.3, 8.1.4, 11.1.1, 11.1.2, 11.1.3, 11.1.4, 12.1.2, 12.1.3
1867	2.1.1, 2.1.4, 2.1.5, 3.1.6, 7.1.2, 7.1.3, 8.1.2, 8.1.3, 8.1.4, 11.1.1, 11.1.2, 11.1.3, 12.1.2, 12.1.3
1948	2.1.1, 2.1.4, 2.1.5, 3.1.6, 7.1.2, 7.1.3, 8.1.2, 8.1.3, 8.1.4, 11.1.1, 11.1.2, 11.1.3, 12.1.2, 12.1.3



Vegetation Management Supporting Map

Legend

- Selected Lot and Plan
- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C or R area containing endangered regional ecosystems
- Category C or R area containing of concern regional ecosystems
- Category C or R area that is a least concern regional ecosystem
- Category X area
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map (Stream order shown as black number against stream where available)
- Highway
- Connector
- Street/Local Road
- National Parks, State Forest and other reserves
- Other land parcel boundaries



0 140 280 420 560 700 m

This product is projected into:
 GDA 1994 MGA Zone 55

Labels for Essential Habitat are centred on the area of enquiry.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

Disclaimer:
 While every care is taken to ensure the accuracy of this product, the Department of Resources makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMVAS applications. For further information go to the web site: www.resources.qld.gov.au or contact the Department of Resources.

Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.

Vegetation Management Act 1999 - Extract from the essential habitat database

Essential habitat is required for assessment under the:

- State Development Assessment Provisions - State Code 16: Native vegetation clearing which sets out the matters of interest to the state for development assessment under the *Planning Act 2016*, and
- Accepted development vegetation clearing codes made under the *Vegetation Management Act 1999*

Essential habitat for one or more of the following species is found on and within 1.1 km of the identified subject lot/s on the accompanying essential habitat map.

This report identifies essential habitat in Category A, B and Category C areas.

The numeric labels on the essential habitat map can be cross referenced with the database below to determine which essential habitat factors might exist for a particular species.

Essential habitat is compiled from a combination of species habitat models and buffered species records.

The Department of Resources website (<http://www.resources.qld.gov.au>) has more information on how the layer is applied under the State Development Assessment Provisions - State Code 16: Native vegetation clearing and the *Vegetation Management Act 1999*.

Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated.

Essential habitat, for protected wildlife, means a category A area, a category B area or category C area shown on the regulated vegetation management map-

- 1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database; or
- 2) in which the protected wildlife, at any stage of its life cycle, is located.

Protected wildlife includes critically endangered, endangered, vulnerable or near-threatened native wildlife prescribed under the *Nature Conservation Act 1992*.

Essential habitat in Category A and/or Category B and/or Category C

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
1843	<i>Numenius madagascariensis</i>	eastern curlew	E	Foraging on soft, intertidal mudflat, with a preference for broad flats, often in sheltered areas near mangroves and estuaries/creeks, also on sandflats and occasionally ocean beaches, rock platforms and coral reefs. Roost on saltflat, saltmarsh, mangroves, reef flat, sandy spits and grassland near water.	Sea level to 100m.	Sand, sandy mud and mud substrates.	Associated with coastlines and wetlands.
1867	<i>Limosa lapponica baueri</i>	Western Alaskan bar-tailed godwit	V	Foraging on large intertidal mudflat/sandflat, banks in estuaries, inlets, bays and coastal lagoons; also saline wetlands, saltmarsh, sandy beach, rock platform and coral reef-flat. Roost on sandy beach/spit and near saltmarsh.	Sea level to 100m.	Sand and mud substrates.	Associated with coastlines and wetlands.
1948	<i>Charadrius leschenaultii</i>	greater sand plover	V	Foraging on intertidal mudflats, sandbank, sandy/shelly/muddy beaches, rock platforms, coral reefs and tidal lagoons. Roost on sandspit, beach, lagoons edge, rocky points, coastal saltmarsh and claypan.	Sea level to 100m.	Sand and mud substrates.	Associated with coastlines and wetlands.

Label	Regional Ecosystem (mandatory unless otherwise specified)
1843	2.1.1, 2.1.2, 2.1.3, 2.1.4, 2.1.5, 3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.1.5, 3.1.6, 7.1.1, 7.1.2, 7.1.3, 8.1.1, 8.1.2, 8.1.3, 8.1.4, 11.1.1, 11.1.2, 11.1.3, 11.1.4, 12.1.2, 12.1.3
1867	2.1.1, 2.1.4, 2.1.5, 3.1.6, 7.1.2, 7.1.3, 8.1.2, 8.1.3, 8.1.4, 11.1.1, 11.1.2, 11.1.3, 12.1.2, 12.1.3
1948	2.1.1, 2.1.4, 2.1.5, 3.1.6, 7.1.2, 7.1.3, 8.1.2, 8.1.3, 8.1.4, 11.1.1, 11.1.2, 11.1.3, 12.1.2, 12.1.3

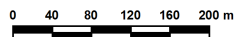
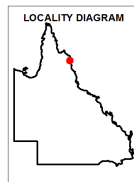
Appendix D:
Protected Plants Flora Survey
Trigger Map



Protected Plants Flora Survey Trigger Map

Legend

- Selected Lot and Plan
- High risk area
- Other land parcel boundaries.
- Freeways / motorways / highways
- Secondary roads / streets



This product is projected into:
GDA 1994 Queensland Albers

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

Land parcel boundaries are provided as locational aid only.

This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Science at palm@des.qld.gov.au

Disclaimer:
While every care is taken to ensure the accuracy of the data used to generate this product, the Queensland Government makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaim all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damages) and costs which might be incurred as a consequence of reliance on the data, or as a result of the data being inaccurate or incomplete in any way and for any reason.

Protected plants flora survey trigger map

The protected plants flora survey trigger map identifies 'high risk areas' where threatened and near threatened plants are known to exist or are likely to exist. Under the *Nature Conservation Act 1992* (the Act) it is an offence to clear protected plants that are 'in the wild' unless you are authorised or the clearing is exempt, for more information see [section 89](#) of the Act.

Please see the Department of Environment and Science webpage on the [clearing of protected plants](#) for information on what exemptions may apply in your circumstances, whether you may need to undertake a flora survey, and whether you may need a protected plants clearing permit.

Updates to the data informing the flora survey trigger map

The flora survey trigger map will be reviewed, and updated if necessary, at least every 12 months to ensure the map reflects the most up-to-date and accurate data available.

Species information

Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the [Queensland Spatial Catalogue](#), the Department of Environment and Science does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of Environment and Science webpage on the [clearing of protected plants](#) for more information.

Appendix E:
WildNet Species List



Queensland Government

WildNet species list

Search Criteria: Species List for a Specified Point
Species: All
Type: All
Queensland status: Rare and threatened species
Records: All
Date: All
Latitude: -15.4788
Longitude: 145.2476
Distance: 5
Email: angelina@natres.com.au
Date submitted: Friday 29 Sep 2023 14:22:49
Date extracted: Friday 29 Sep 2023 14:30:02

The number of records retrieved = 21

Disclaimer

Information presented on this product is distributed by the Queensland Government as an information source only. While every care is taken to ensure the accuracy of this data, the State of Queensland makes no statements, representations or warranties about the accuracy, reliability, completeness or suitability of any information contained in this product.

The State of Queensland disclaims all responsibility for information contained in this product and all liability (including liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

Information about your Species lists request is logged for quality assurance, user support and product enhancement purposes only.

The information provided should be appropriately acknowledged as being derived from WildNet database when it is used. As the WildNet Program is still in a process of collating and vetting data, it is possible the information given is not complete. Go to the WildNet database webpage (<https://www.qld.gov.au/environment/plants-animals/species-information/wildnet>) to find out more about WildNet and where to access other WildNet information products approved for publication. Feedback about WildNet species lists should be emailed to wildlife.online@des.qld.gov.au.

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Accipitridae	<i>Erythrotriorchis radiatus</i>	red goshawk		E	E	6/3
animals	birds	Apodidae	<i>Hirundapus caudacutus</i>	white-throated needletail		V	V	1
animals	birds	Burhinidae	<i>Esacus magnirostris</i>	beach stone-curlew		V		7/1
animals	birds	Casuariidae	<i>Casuaris casuarius johnsonii</i> (southern population)	southern cassowary (southern population)		E	E	1
animals	birds	Charadriidae	<i>Charadrius leschenaultii</i>	greater sand plover		V	V	42
animals	birds	Charadriidae	<i>Charadrius mongolus</i>	lesser sand plover		E	E	9
animals	birds	Scolopacidae	<i>Calidris ferruginea</i>	curlew sandpiper		CR	CE	3
animals	birds	Scolopacidae	<i>Limosa lapponica baueri</i>	Western Alaskan bar-tailed godwit		V	V	42
animals	birds	Scolopacidae	<i>Numenius madagascariensis</i>	eastern curlew		E	CE	59
animals	birds	Turnicidae	<i>Turnix olivii</i>	buff-breasted button-quail		CR	E	2/1
animals	insects	Lycaenidae	<i>Hypochrysops apollo apollo</i>	Apollo jewel (Wet Tropics subspecies)		V		2
animals	mammals	Dasyuridae	<i>Dasyurus maculatus gracilis</i>	spotted-tailed quoll (northern subspecies)		E	E	1
animals	mammals	Emballonuridae	<i>Saccolaimus saccolaimus nudicluniatas</i>	bare-rumped sheath-tail bat		E	V	1/1
animals	mammals	Hipposideridae	<i>Hipposideros diadema reginae</i>	diadem leaf-nosed bat		NT		1
animals	mammals	Hipposideridae	<i>Hipposideros semoni</i>	Semon's leaf-nosed bat		E	V	2/1
animals	mammals	Megadermatidae	<i>Macroderma gigas</i>	ghost bat		E	V	1
animals	mammals	Rhinolophidae	<i>Rhinolophus philippinensis</i>	greater large-eared horseshoe bat		E	V	1
animals	reptiles	Crocodylidae	<i>Crocodylus porosus</i>	estuarine crocodile		V		4
plants	land plants	Leguminosae	<i>Acacia solenota</i>			E		3/3
plants	land plants	Orchidaceae	<i>Eulophia zollingeri</i>			V		1/1
plants	land plants	Rubiaceae	<i>Randia audasii</i>			NT		1/1

CODES

I - Y indicates that the taxon is introduced to Queensland and has naturalised.

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*.

The codes are Extinct (EX), Extinct in the Wild (PE), Critically Endangered (CR), Endangered (E), Vulnerable (V), Near Threatened (NT), Special Least Concern (SL) and Least Concern (C).

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*.

The values of EPBC are Extinct (EX), Extinct in the Wild (XW), Critically Endangered (CE), Endangered (E), Vulnerable (V) and Conservation Dependent (CD).

Records - The first number indicates the total number of records of the taxon (wildlife records and species listings for selected areas).

This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.




This number is output as 999 if it equals or exceeds this value.

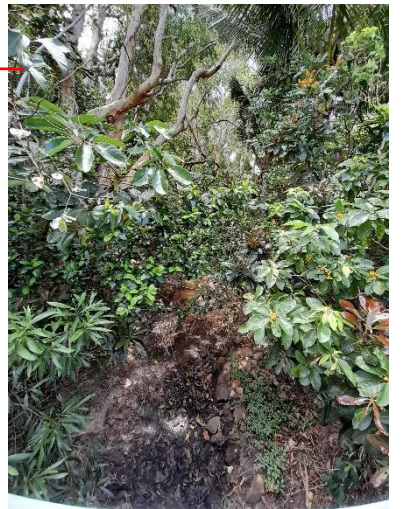
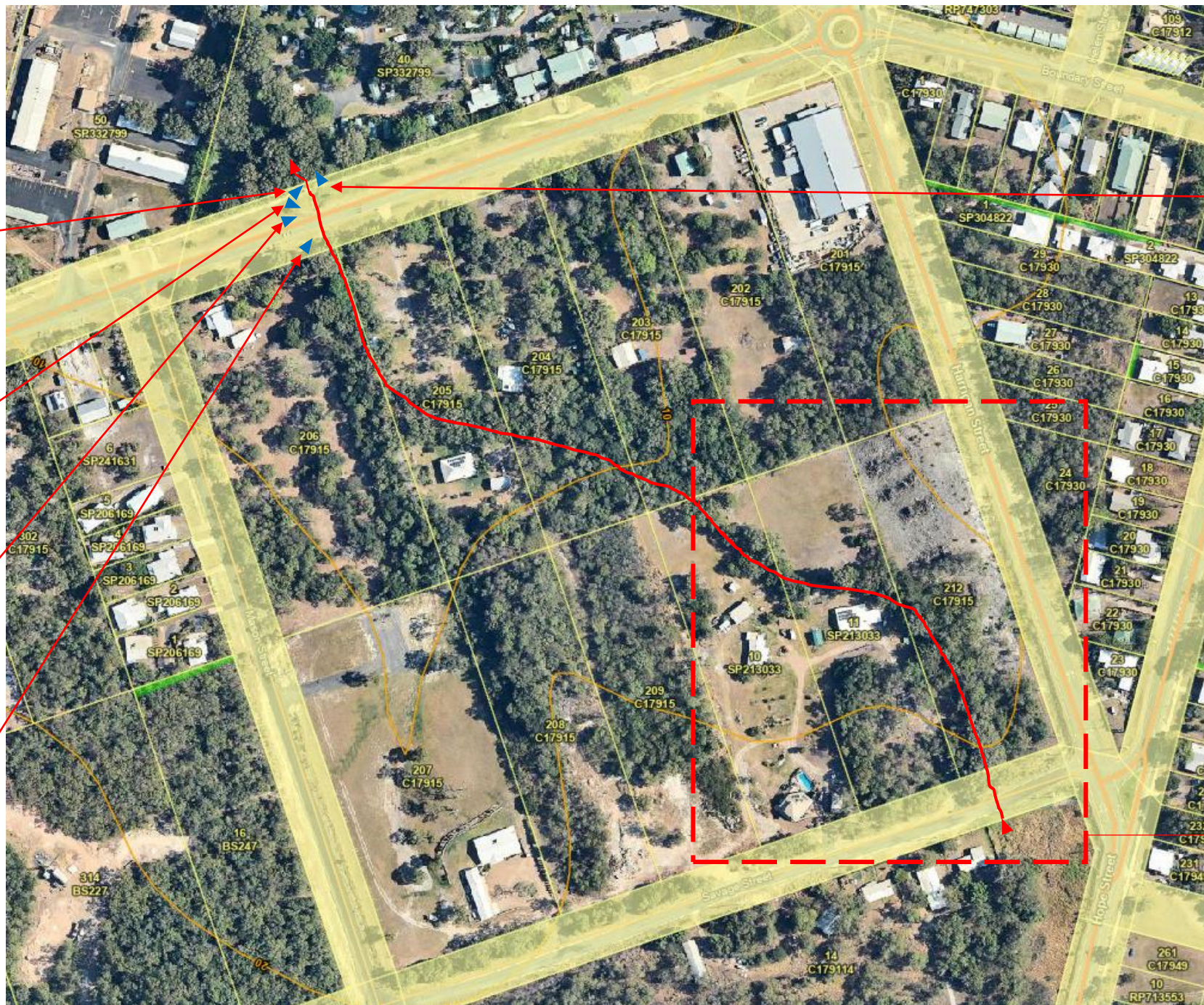
Appendix F:
Unmapped drainage feature
(Reel Planning on behalf of Cook
Shire Council, 11 October 2023)

N



LEGEND




-  Direction of photograph
-  Direction of water flow
-  Approximate Creek profile



Callout 01



LEGEND

-  Direction of photograph
-  Direction of water flow
-  Approximate Creek profile

START OF SITE PHOTOGRAPHS
ALONG CREEK PROFILE

END OF SITE PHOTOGRAPHS
ALONG CREEK PROFILE

Callout 01



Attachment G
Vegetation
Assessment Record

VEGETATION MAPPING RECORDING FORM Project: _____: _____ Site No. 1
 VR. No: _____ Bio: _____ Map sheet

Level 2°(A) 3°(D) Detail sp. list A: Complete B: Woody Date 20 10 2023

D.Posn A: GPS B: topo/photo Precision: ± _____ m Recorder: _____

Locality: CORNER OF SAVAGE ST & BUCHAN RD COOK MARRIAGE ST, COOKTOWN

Site context (description) NON-REMANANT WOODLAND WITH MATURE TREES AND REGROWTH ON MINOR RIPARIAN CORRIDOR, DOMINATED BY EUC-BRASSIATA

General notes ORNAMENTAL SPECIES PRESENT (MANGOSTEEN, CYCARPS, PALMS), PARTLY CLEARED IN NORTH

Community area: A: site only B: <1 C: 1-5 D: 5-20 E: 20-50 F: >50ha Mapped: Yes No MUR
 Community width: A: <35 B: 35-75 D: 75-150 E: 150-300 m F: not linear Ref. Site: Yes

ZONE	EASTING	NORTHING	LATITUDE	LONGITUDE
			<u>152840</u>	<u>1451452</u>

Landform				Slope			Altitude
Situation*	Element*	Eros Pattern*	Pattern*	Type*	Slope (°)	Aspect	
					°	°	

Site Sketch/Notes:
PHOTOS 53-55 EUCALYPTUS BRASSIATA, CORYMBIA TESSULARIS, EUCALYPTUS CALBRIA, ATRACTOCARPUS, ELYTAROPHLOM CALOKOSTACMYS, MELICOPTE, MONTA AZOBOLEUM, ACACIA SPP., PANDANUS PRESENT ON GRANITE, NO MAPPING IS CONDUCT.

Soils						Geology				
Source	Reliability	Code*	Add Data	ISB/MU	Colour*	Texture*	Source	Reliability	Code*	Map Unit
I. Map E. Cutting B. Core S. Surface	High Med Low ^d		+		<u>GRAY</u>	<u>COARSE</u>	I. Map E. Cutting B. Core C. Outcrop	High Med Low ^d		
Description/notes <u>TYPICAL COARSE GRANNED, DERIVED FROM GRANITE.</u>						Description/notes <u>GRANITE BOULDEROUS PLAINS</u>				

Specht Structure Code _____ Litter%: 85 Rock %: 15 Bare ground%: 0 Cryptogam %: 0

Rainforest Structural complexity: S X C Leaf Size: Leaf fall: Flor. comp. M S X In. Gr Forms:

Photo: Dig Sli. Pri. B&W No: _____ Roll: _____ Map Unit No: _____ uveg _____ RE: 3.12.7

Site No:

Disturbance	Proportion *	Age*	Height*	Disturbance	Number	Disturbance	
Storm damage	0 1 2 3	1 2	X	Logging	# 100%	Grazing	1; No 2; Present
Roadworks	0 1 2 3	1 2	X	Ringbarking /thinning	# HISTORICAL	Feral digging	1; No 2; Yes
Fire	0 1 2 3	1 2	1 2 3 4	Extensive clearing	1; No 2; Yes MODERATE	Floods	DRAINAGE FORMED
Salinity	0 1 2 3	X	X	Weeds	Cover %: 0	Remnant	No or blank
*Prop: 0=0; 1=<1; 2= 1-5; 3=>5% *Age: 1; 1-3 yrs (short term impacts still evident) 2; > 3 yrs *Fire height 1=<1; 2= 1-6; 3= 6-12; 4=>12m				Erosion		Type; 0=none; 1=sheet; 2=rill; 3=gully; 4=tunnel; 5=stream; 6=mass Severity; 1=minor; 2=moderate; 3 = severe	

Crown Cover calculations										
	5 m.	10 m.	15 m.	20 m.	25 m.	30 m.	35 m.	40 m.	45 m.	50 m.

Structural Summary: Record 'Individual Covers' for Tertiary sites only

AND DENSE SPARSE RAJAHONG
CANOPY
AND DENSE
FQ

Stratum	Med. Canopy Height	Range in strata height	Total Crown Cover	Key Species	Individual Covers	Individual Covers	
Emergent							
Tree 1	12			EUCALYPTUS BRASSIANT			
	10			COLUMBIA TOSCALPUS			
	9			WELBYRUS CREBRUS			
Stratum	Med. Can. Height	Range in strata heights	Total Crown Cover	Key Species	Individual Covers	Key species	Individual Covers
Tree 2	7	6-8	40%	ALPHEGOMIA BRYTANOPALAMM MELIA AZOPORUM		PANDANUS	
Tree 3							
Shrub 1		1.5-3 m	50%	PITOSPORUM DIOCARPUS LATIFOLIUS ATRACTOCARPUS			
Shrub 2							
Ground							

~25%



Environmental Approval & Compliance Solutions

Cairns Office:

Level 1, 320 Sheridan Street, PO Box 5678 Cairns QLD 4870

P: 61 7 4034 5300

Townsville Office:

Suite 2A, Level 1, 41 Denham Street, PO Box 539 Townsville QLD 4810

P: 61 7 4796 9444

www.natres.com.au • nra@natres.com.au