
***"I love the Rolling Hills from
Goombungee to Macclagan."***

Community feedback – Love Your Local Landscapes engagement Jan 2021



Farmland near Cutella

Image: Cameron Baxter - highly commended 'Love Your Local Landscapes' photography competition 2021



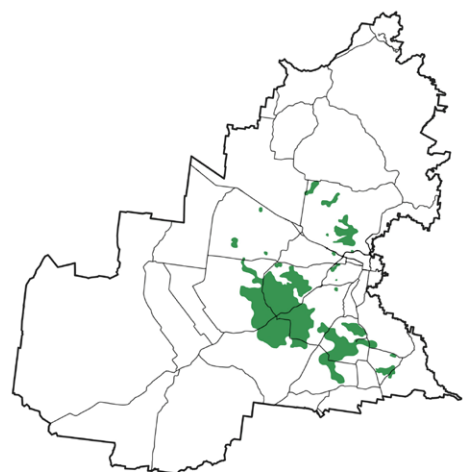
LCT C: DARLING DOWNS FORESTED PEAKS AND RIDGELINES

Location and boundaries

This landscape type is located in the central part of the Toowoomba Region, associated with the steep basaltic hills and mountains that are bounded by the basalt uplands (LCT B).

There are eighteen LCAs of this type in the Toowoomba Region:

- Bloodwood Hill (LCA C1)
- Turkey Hill and Boah Peak (LCA C2)
- Kelvinhaugh Hills (LCA C3)
- Kingsthorpe, Gowrie and Goombungee Hills (LCA C4)
- The Sugar Loaf (LCA C5)
- Gowrie Mountain (LCA C6)
- Gowrie Junction Hill (LCA C7)
- Wellcamp Hills (LCA C8)
- Sugarloaf (LCA C9)
- Bunkers Hill (LCA C10)
- Mount Irving (LCA C11)
- Mount Maria and Bald Hill (LCA C12)
- Mount Haystack (LCA C13)
- Pittsworth Hills (LCA C14)
- Greenmount Hills (north) (LCA C15)
- Greenmount Hills (south) (LCA C16)
- Ascot Hills (LCA C17)
- Pilton Hills (LCA C18)



Location of LCT C within the Toowoomba Region

Key landscape character attributes

Natural landscape elements

- Typically vegetated, generally consisting of mountain coolibah open woodland, dominated by mountain coolibah (*Eucalyptus orgadophila*), Queensland Blue Gum (*E. tereticornis*), white box (*E. albens*) and yellow box (*E. melliodora*) (RE, 2020).
- Some evidence of clearing for agricultural uses, particularly on the lower slopes.
- Steep hills, mountains and slopes of basalt hills and mesas, varying from relatively shallow at the base to steep (15-45% slope).
- Elevated landscape feature situated within the broader Open Undulating Farmed Basaltic Uplands (LCT B), with elevations typically between 500-700m AHD.
- Major soils are vertosols. Chromosols occur to a very limited extent associated with Turkey Hill and Boah Peak (LCA C2) and the Kelvinhaugh Hills (LCA C3).

Settlement and land use

- Generally limited development, with the exception of isolated rural residential properties that are typically situated on the footslopes of hills or on top of low hills, with some peri-urban developments in the vicinity of Gowrie Junction, Glencoe and Charlton.
- Limited presence of infrastructure, typically limited to vertical elements associated with telecommunications infrastructure or the Air Traffic Radar near Oakey.
- Contains the Mount Kent Observatory, which is not open to the public.
- Dominated by natural and agricultural land uses, particularly grazing on native vegetations, with limited public access with the exception of areas managed by Council for recreation such as Mount Kingsthorpe Bushland Park.
- Contains limited rail and road infrastructure, except that associated with peri-urban development or private properties.

Key landmarks and features

- Peaks are often distinctive and are identifiable local landmarks e.g. Gowrie Mountain.
- Often presence of unique basalt screes (RE, 2020).
- Contour banks are used on the lower slopes to control erosion.



The forested peaks, mesas and ridgelines provide a scenic background to the Darling Downs

Identified scenic values, key views and view corridors

- Forested peaks and ridgelines associated with basaltic hills and mesas and waterways that are within this LCT were identified as having very high or high scenic amenity value (8-10) in the TRSAS (refer Part C).
- These findings are supported by the *Scenic Amenity Study* undertaken by Conics for Council in 2009 which identified the 'mesas, hills and mountains across the central plains' as having regionally significant scenic amenity value.
- The scenic value of these mesas and hills is also noted in the *Mapping Matters of Local Environmental Significance (MLES) for the Toowoomba Region* report published in 2020 by Redleaf Environmental.
- Relatively inaccessible landscape, with the exception of areas containing residential development (near Gowrie Junction, Kingsthorpe, Gowrie Mount, Charlton and Glencoe) and Mount Kingsthorpe, which provides a walking trail to the summit that provides multiple viewing opportunities, particularly views towards landscapes associated with:
 - LCT A - Elevated Ridges and Plateaus.
 - LCT C - Darling Downs Forested Peaks and Ridgelines.
- Important views to these peaks from scenic lookouts include:
 - Views from Mount Kingsthorpe to Gowrie Mountain (C6), The Sugar Loaf (C5), Mount Storey (within C4) and more distant views towards Bloodwood Hill (C1), Turkey Hill and Boah Peak (C2), Kelvinaugh Hills (C3), Wellcamp Hills (C8), Westbrook Sugarloaf (C9), Bunkers Hill (C10), Mount Irving (C11), Mount Maria and Bald Hill (C12), Mount Haystack (C13) and the Pittsworth Hills (C14).
 - Views from South Summit Lookout within Mount Peel Bushland Park to Gowrie Mountain (C6), Wellcamp Hills (C8), Westbrook Sugarloaf (C9), Bunkers Hill (C10) and more distant views to Bloodwood Hill (C1), Mount Irving (C11), Mount Haystack (C13), the Pittsworth Hills (C14), the Greenmount Hills (north) (C15) and the Greenmount Hills (south) (C16).
 - Views from North Summit Lookout, Westbrook Lookout and to a lesser extent Drayton Lookout within Mount Peel Bushland Park to Gowrie Mountain (C6).
 - Views from Panoramic Drive Lookout to the Greenmount Hills (north) (C15) and Greenmount Hills (south) (C16).

Scenic lookouts and routes

- Views to this LCT are possible from the national *Adventure Way*, *Warrego Way*, *Australia's Country Way* and local *Open Plains Country Drive*, *Great Bunya*, *Farmers Country* and *Steele Rudd* scenic routes.

Experiential landscape qualities

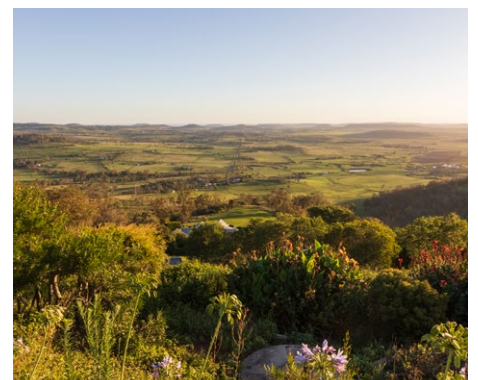
- Provide open expansive views across the surrounding landscape from the summit of accessible peaks.
- LCT C provides distinctive and prominent features within the broader landscape context (LCT B), that contribute to the scenic amenity of the Toowoomba Region and act as local landmarks.



Central banks are used to control erosion trail within Mount Kingsthorpe Bushland Reserve



View southeast from South Summit Lookout within Mount Peel Bushland Park



View southeast from Panoramic Drive Lookout

Landscape Character Areas

There are eighteen LCAs of this type within the Toowoomba Region. While while geographically different, many of these have common characteristics, including:

- Generally they are tertiary basalt plateau remnants associated with the Main Range Volcanics, with the exception of minor areas of arenite-mudrock (Jurassic shales and sandstones) associated with the Marburg Subgroup that occur near Goombungee (within LCA C3) and some areas around Scrubby Mountain, Mount Rolleston and Mount Russell on the western extent of LCA C14 associated with the Walloon Subgroup.
- The major soils are vertosols (grey-brown and grey clays or clay loams and black self-mulching cracking clays (at lower elevations), with isolated occurrences of chromosols (hard pedal red duplex soils) within LCA C2 and LCA C3.
- Typically the lower slopes have been extensively cleared, with remnant vegetation being highly fragmented and limited to the steep upper slopes and peaks.
- Predominant land use is grazing on native vegetation that occurs on the upper slopes, while dryland cropping occurs on the lower slopes.
- In rural areas, rural residential properties are often situated on the boundary of these two land uses and, to a lesser extent, on top of low hills.
- Generally, there is very limited public access to these peaks.

A brief description of each LCA and, where relevant, how it differs from the above general characteristics is provided below.

Bloodwood Hill Darling Downs Forested Peaks and Ridgelines (LCA C1)

This LCA contains landscapes associated with Bloodwood Hill (450m AHD), which is situated to the west of Jondaryan. Key relevant features of this LCA include:

- Remnant vegetation in this area is relatively intact and comprised of eucalypt woodlands to open forests (RE 11.9.2) (State of Queensland, 2020).
- An existing gravel pit, radio tower and several rural residential properties are situated on the eastern side of the hill.
- Bloodwood Hill is a relatively distinctive, flat-topped hill that contributes to the setting of Jondaryan and scenic amenity of the area, including views from the Warrego Highway (A2) and LCT B.



View towards Bloodwood Hill from Jondaryan

Turkey Hill and Boah Peak Darling Downs Forested Peaks and Ridgelines (LCA C2)

This LCA contains landscapes associated with Turkey Hill (536m AHD) and Boah Peak (532m AHD) (including a series of small low unnamed hills to the north of Boah Peak) which are situated to the north of Oakey, near the New Acland Coal Mine. Key relevant features of this LCA include:

- This area has been extensively cleared and remnant vegetation is limited to very small areas of rainforest and scrub (RE 11.8.3) that have very low levels of connectivity (State of Queensland, 2020).
- There are two existing gravel pits.
- There is an Air Traffic Radar (ATR) situated on Turkey Hill that is accessed via a public easement.
- Turkey Hill acts as a local landmark and wayfinding device due to the presence of the ATR, while Boah Peak is particularly distinctive due to its conical form. These hills collectively contribute to the scenic amenity of the area, including views from the Oakey-Cooyar Road (SR68) and LCT B.

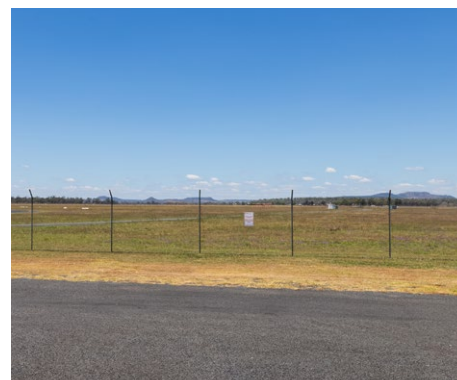


View towards Turkey Hill from Acland-Silverleigh Road

Kelvinhaugh Hills Darling Downs Forested Peaks and Ridgelines (LCA C3)

This LCA contains landscapes associated with a cluster of unnamed hills with elevations of up to 540m AHD which are situated to the northeast of Oakey and southwest of Goombungee, and are traversed by Kingsthorpe-Haden Road and several local roads. Key relevant features of this LCA include:

- Remnant vegetation is generally comprised of eucalypt open woodlands to open forests (RE 11.8.4, 11.8.5 and 11.8.5a) but also includes areas of eucalypt open forests to woodlands on floodplains (RE 11.3.4), rainforest and scrubs (RE 11.8.3) and acacia dominated open forests, woodlands and shrublands (RE 11.5.2a) (State of Queensland, 2020).
- Peri-urban development has occurred in the northern most part of this area adjacent the Goombungee Golf Course.
- Some of these hills have very distinctive forms, and collectively they contribute to the scenic amenity of the area, particularly views from the Australian Army Flying Museum at Oakey.



View towards the Kelvinhaugh Hills from the Australian Army Flying Museum



View to Mount Kingsthorpe (LCA C4) from Kingsthorpe-Silverleigh Road



View to The Sugar Loaf (LCA C5) from Mount Kingsthorpe Summit



View to Gowrie Mountain (LCA C6) from O'Mara Road



Elevated view to Gowrie Mountain (LCA C6) from Hilltop Drive

Kingsthorpe, Gowrie and Goombungee Hills Darling Downs Forested Peaks and Ridgelines (LCA C4)

This LCA contains landscapes associated with a cluster of hills and peaks including Mount Storey (688m AHD), Mount McGregor (572m AHD), Mount Muniganeen (614m AHD) and Mount Kingsthorpe (610m AHD) situated between Kingsthorpe, Gowrie, Meringandan and Meringandan West. Key relevant features of this LCA include:

- Remnant vegetation is generally comprised of eucalypt open woodlands to open forests (RE 11.8.5a) but also includes isolated occurrences of tussock grasslands, forblands (RE 12.8.15 and 11.8.11) areas of eucalypt open forests to woodlands on floodplains (RE 11.3.4). Rainforest and scrubs (RE 11.8.3) occur on some peaks, particularly Mount Kingsthorpe and Mount Storey (State of Queensland, 2020).
- Peri-urban development has occurred on the tops or hillslopes of several of the peaks in this area.
- There are several public parks situated within this area that provide opportunities for recreation, including Mount Kingsthorpe Bushland Park and the Mount Kingsthorpe Walk that provides access to the summit which provides expansive views across the surrounding landscape.
- These peaks act as local landmarks and wayfinding tools and contribute to the setting of Kingsthorpe, Gowrie, Meringandan and Meringandan West. In addition, they collectively contribute to the scenic amenity of the area, including views from the Warrego Highway (A2) and outskirts of Toowoomba.

The Sugar Loaf Darling Downs Forested Peaks and Ridgelines (LCA C5)

This LCA contains landscapes associated with The Sugar Loaf (561m AHD), which is situated to the northwest of Kingsthorpe. Key relevant features of this LCA include:

- Remnant vegetation is comprised of eucalypt open woodlands to open forests (RE 11.8.5) (State of Queensland, 2020).
- The Sugar Loaf has a very distinctive form and contributes to the setting and scenic amenity of the area, including views from Kingsthorpe and the summit of Mount Kingsthorpe.

Gowrie Mountain Darling Downs Forested Peaks and Ridgelines (LCA C6)

This LCA contains landscapes associated with Gowrie Mountain (676m AHD), which is situated to the south of Kingsthorpe and the Warrego Highway (A2). Key relevant features of this LCA include:

- Remnant vegetation is comprised of eucalypt open woodlands to open forests (RE 11.8.5) (State of Queensland, 2020).
- Peri-urban development has occurred on the western hillslopes and peak.
- There are two Council owned parcels associated with each peak, however there is currently no public access to these locations.
- Gowrie Mountain has a very recognisable form comprised of two distinctive peaks joined by a saddle and is a distinctive landmark. It contributes to the scenic amenity of the area, including views from the Warrego Highway (A2), the summit of Mount Kingsthorpe, scenic lookouts within Mount Peel Bushland Park, Kingsthorpe, Gowrie and the outskirts of Toowoomba.



View to the hills behind Gowrie (LCA C4) from Junction Street



View to Gowrie Junction Hill from Gowrie-Birnam Road



View to the Wellcamp Hills (LCA C8) from Drayton-Wellcamp Road



View to the Wellcamp Hills (LCA C8) from Bunkers Hill School Road



View to Bunkers Hill (LCA C10) from Wyreema-Athol Road

Gowrie Junction Hill Darling Downs Forested Peaks and Ridgelines (LCA C7)

This LCA contains landscapes associated with an unnamed hill bounded by Ganzer Road with elevations of up to 610m AHD, which is situated to the south of Gowrie and to the north of the Warrego Highway (A2). Key relevant features of this LCA include:

- Remnant vegetation comprised of eucalypt open woodlands to open forests (RE 11.8.4) (State of Queensland, 2020).
- This hill contributes to the setting and scenic amenity of the area, including views from the Warrego Highway (A2), Gowrie and the outskirts of Toowoomba and Highfields.

Wellcamp Hills Darling Downs Forested Peaks and Ridgelines (LCA C8)

This LCA contains landscapes associated with a cluster of unnamed hills with elevations of up to 610m AHD, which are situated between Toowoomba Wellcamp Airport and Toowoomba, to the east of the Toowoomba Bypass (A39). The hill to the west of the Toowoomba Bypass (A39) was excluded from this area as it has been extensively modified by mining activities. Key relevant features of this LCA include:

- Remnant vegetation comprised of eucalypt open woodlands to open forests (RE 11.8.5 and 11.8.5a) (State of Queensland, 2020).
- Some peri-urban development has occurred along Kim Road and Acton Vale Stud Road.
- A mobile phone base station is situated on the southernmost hill.
- These hill contributes to the setting and scenic amenity of the area, including views from the Toowoomba Bypass (A39), scenic lookouts within Mount Peel Bushland Park and the outskirts of Toowoomba (including Westbrook).

Sugarloaf (LCA Darling Downs Forested Peaks and Ridgelines C9)

This LCA contains landscapes associated with the Westbrook Sugarloaf (600m AHD), which is situated to the west of Westbrook, east of the Toowoomba Bypass (A39) and north of Toowoomba-Athol Road (A139). Key relevant features of this LCA include:

- Remnant vegetation is comprised of eucalypt open woodlands to open forests (RE 11.8.5) (State of Queensland, 2020).
- The Westbrook Sugarloaf contributes to the setting and scenic amenity of the area, including views from the Warrego Highway (A2), Toowoomba-Athol Road (A139), scenic lookouts within Mount Peel Bushland Park and the outskirts of Toowoomba (including Westbrook).

Bunkers Hill Darling Downs Forested Peaks and Ridgelines (LCA C10)

This LCA contains landscapes associated with Bunkers Hill (633m AHD), which is situated to the southwest of Westbrook, south of Toowoomba-Athol Road (A139). Key relevant features of this LCA include:

- Remnant vegetation is comprised of eucalypt open woodlands to open forests (RE 11.8.5) (State of Queensland, 2020). The tree canopy is very open and sparse on this hill.
- Bunkers Hill contributes to the setting and scenic amenity of the area, including views from Toowoomba-Athol Road (A139), scenic lookouts within Mount Peel Bushland Park and the outskirts of Toowoomba.



View to the Wellcamp Hills (LCA C8) and Westbrook Sugarloaf (LCA C9) from South Summit Lookout within Mount Peel Bushland Park



View to Mount Irving (LCA C1) from Jondaryan-Mount Tyson Road



View to Mount Maria and Bald Hill (LCA C12) from West Prairie Road



View to Mount Haystack (LCA C14) from Aubigny Church Road



View to the Pittsworth Hills (LCA C14) from Brookstead-Norwin Road within LCT G

Mount Irving Darling Downs Forested Peaks and Ridgelines (LCA C11)

This LCA contains landscapes associated with Mount Irving (463m AHD), which is situated to the north of Mount Tyson, east of Jondaryan-Mount Tyson Road. Key relevant features of this LCA include:

- Remnant vegetation is comprised of eucalypt open woodlands to open forests (RE 11.8.5a) (State of Queensland, 2020).
- Mount Irving is a distinctive peak that rises sharply from the surrounding agricultural plains and contributes to the scenic amenity of the area, including views from Toowoomba-Cecil Plains Road and Oakey-Pittsworth Road (SR68).

Mount Maria and Bald Hill Darling Downs Forested Peaks and Ridgelines (LCA C12)

This LCA contains landscapes associated with Mount Maria (426m AHD) and Bald Hill (404m AHD), which are situated to the northwest of Mount Tyson. Key relevant features of this LCA include:

- The lower slopes of Mount Maria and the majority of Bald Hill have been extensively cleared, with remnant vegetation limited to the upper slopes and tops of the hills. Remnant vegetation is comprised of eucalypt open forests to woodlands on floodplains (RE 11.3.4) and smaller areas of tussock grasslands, forblands (RE 11.8.11) (State of Queensland, 2020).
- Some quarrying has occurred on the eastern slopes of Bald Hill. There is no public access to Mount Maria or Bald Hill.
- Mount Maria and Bald Hill are the most western lying peaks within this LCT and contribute to the scenic amenity of the area as they provide a local point of interest that breaks up the broader surrounding flood plain.

Mount Haystack Darling Downs Forested Peaks and Ridgelines (LCA C13)

This LCA contains landscapes associated with Mount Haystack (528m AHD), which is situated to the northeast of Mount Tyson, south of Toowoomba-Cecil Plains Road. Key relevant features of this LCA include:

- Remnant vegetation is comprised of eucalypt open woodlands to open forests (RE 11.8.5) (State of Queensland, 2020).
- An existing radio tower is situated on Mount Haystack.
- Mount Haystack contributes to the scenic amenity of the area, including views from Toowoomba-Cecil Plains Road.

Pittsworth Hills Darling Downs Forested Peaks and Ridgelines (LCA C14)

This LCA contains landscapes associated with a cluster of hills and peaks including Mount Wyangapinni (679m AHD), Parkers (675m AHD), Parkers Hill (566m AHD), Mount Russell (499m AHD), Mount Taylor (534m AHD), Mount Tyson (482m AHD) Mount Edgecombe (413m AHD), Mount Little (552m AHD), Majuba Hill (599m AHD), Dummies Mountain (609m AHD), Mount Watson (612m AHD), Mount Mallard (594m AHD), Scrubby Mountain (532m AHD), Scrubby Mountain South (537m AHD), Gentlemen's Seat (543m AHD), Woolly Butt (498m AHD), Broxburn Sugarloaf (566m AHD) and Millers Mountain 568m AHD). These peaks and hills surround Pittsworth and Southbrook. Key relevant features of this LCA include:

- Remnant vegetation is generally comprised of eucalypt open woodlands to open forests (RE 11.8.4, 11.8.5 and 11.8.5a) but also includes eucalypt dry woodlands on inland depositional plains (RE 11.9.2) in the northern part of the area around Mount Tyson, while rainforest and scrubs (RE 11.8.3) occur in the vicinity of Mount Wyangapinni (State of Queensland, 2020). Isolated occurrences of acacia dominated open forests, woodlands and shrublands (RE 11.9.5 and 11.9.10) and tussock grasslands, forblands (RE 11.8.11) and Callitris woodlands to open forests (RE 11.8.9) also occur.
- There are several public parks situated within this area that provide opportunities for recreation, including Irongate Conservation Park and the Irongate Walking Circuit that provides opportunities for bush walking and nature appreciation. McEwan State Forest has no visitor facilities or designated walking tracks, however may provide opportunities for informal recreation.
- These peaks collectively contribute to the scenic amenity of the area, including views from the Gore Highway (A39), Oakey-Pittsworth Road (SR68), Pittsworth-Felton Road and views from LCT B and LCT G.

Greenmount Hills (north) Darling Downs Forested Peaks and Ridgelines (LCA C15)

This LCA contains landscapes associated with a cluster of unnamed hills and peaks with elevations of up to 630m AHD, which are situated to the north of Greenmount and to the southeast of Cambooya. Key relevant features of this LCA include:

- Remnant vegetation is generally comprised of eucalypt open woodlands to open forests (RE 11.8.5) and includes a small area containing RE 12.8.16 that is listed as 'of concern' (State of Queensland, 2020).
- These peaks collectively contribute to the scenic amenity of the area, including views from the New England Highway (A3), Toowoomba-Karara Road, Cambooya-Connection Road, Greenmount Connection Road and views from Greenmount, Cambooya and LCT B and LCT G.



View to the Greenmount Hills (north) (LCA C15) from Greenmount-Etonvale Road

Greenmount Hills (south) Darling Downs Forested Peaks and Ridgelines (LCA C16)

This LCA contains landscapes associated with a cluster of hills and peaks including Mount Rubieslaw (673m AHD), Mount Perkins (581m AHD), Mount Kent (623m AHD), Kent (627m AHD), Rocky Point (593m AHD), Mount Sibley (677m AHD) and Mount Molar (590m AHD). These peaks and hills are situated to the north of Clifton and surround Pittsworth and south, east, west and northwest of Greenmount. Key relevant features of this LCA include:

- Remnant vegetation is generally comprised of eucalypt open woodlands to open forests (RE 11.8.5) and includes some areas containing RE 12.8.16 and 12.8.17 that is listed as 'of concern' (State of Queensland, 2020).
- There are isolated residential properties on top of Rocky Point and the hill behind Greenmount (which also has a telecommunications mast).
- The Mount Kent Observatory is situated within this area, however is not open to the public.
- These peaks collectively contribute to the scenic amenity of the area, including views from the New England Highway (A3), Toowoomba-Karara Road, Greenmount Connection Road, Felton-Clifton Road, Clifton-Leyburn Road, Nobby Connection Road and views from Greenmount, Nobby and LCT B and LCT G.



View to the Greenmount Hills (south) (LCA C16) from Greenmount-Nobby Road

Ascot Hills Darling Downs Forested Peaks and Ridgelines (LCA C17)

This LCA contains landscapes associated with a two distinctive unnamed hills with elevations of up to 630m AHD which are situated on Greenmount-Hirstvale Road. Key relevant features of this LCA include:

- Remnant vegetation is comprised of eucalypt open woodlands to open forests (RE 11.8.4, 11.8.8 and 12.3.9) (State of Queensland, 2020).
- There is a rural residential property situated on top of the eastern most hill.
- These peaks have very distinctive forms and contribute to the scenic amenity of the area, particularly views from Greenmount-Hirstvale Road and LCT B and LCT C.



View to the Ascot Hills (LCA C17) from Greenmount-Hirstvale Road

Pilton Hills Darling Downs Forested Peaks and Ridgelines (LCA C18)

This LCA contains landscapes associated with a cluster of hills and peaks including Nevilton (556m AHD), The Nob (541m AHD) and the Pilton Sugarloaf (657m AHD), with elevations of up to 630m AHD which are situated to the southwest of Pilton and dissected by Gatton-Clifton Road (SR80). Key relevant features of this LCA include:

- Remnant vegetation which is comprised of eucalypt open woodlands to open forests (RE 11.8.5, 11.8.8 and 12.3.9) (State of Queensland, 2020).
- There is no public access to these hills with the exception of the Darling Downs Zoo, which is a regional tourist attraction.
- These peaks have very distinctive forms and contribute to the scenic amenity of the area, particularly views from Gatton-Clifton Road (SR80) and LCT B.



View to the Pilton Hills (LCA C18) from Gatton-Clifton Road (SR80)

***"I love the Basalt hills from
Drayton to Nobby."***

Community feedback – Love Your Local Landscapes engagement Jan 2021



On top of Gowrie Mountain looking west towards Jondaryan
Image: Joanna Johnson - 'Love Your Local Landscapes' photography competition entry 2021



LCT D: FORESTED SANDSTONE HILLS WITH OUTCROPS

Location and boundaries

This landscape type is located in the northern part of the Toowoomba Region, near Goombungee, and is associated with a small, unique area that contains forested sandstone hills and ridges.

This area is bounded to the north and east by steep, elevated landscapes within LCT A and to the south and west by the basalt uplands (LCT B) and the upper parts of alluvial valleys associated with Spring Creek and Doctor Creek (LCT G).

There is only one LCA of this type in the Toowoomba Region:

- Goombungee Hills (LCA D1)

Key landscape character attributes

Natural landscape elements

- Typically vegetated, predominately characterised by Spotted Gum (*Corymbia citriodora*) woodland (RE 11.10.1) on sandstone ridges.
- Some evidence of clearing for agricultural uses, particularly on the lower slopes of hills and adjacent areas of alluvium along Spring Creek and Doctors Creek (within LCT G). The transition between cleared and vegetated areas is generally sharp and often associated with sandstone scarps.
- Gently undulating plains and crests and hillslopes of undulating rises and low to moderately high hills with some steep slopes, scarps and sandstone ridges (2-45% slope).
- Elevated landscape situated between the broader Open Undulating Farmed Basaltic Uplands (LCT B) and Elevated Ridges and Plateaus (LCT A), with elevations typically between 500-600m AHD.
- Major soils are sodosols, while some instances of chromosols also occur adjacent to LCT B.

Settlement and land use

- Generally limited development, with the exception of isolated rural residential properties.
- Limited presence of infrastructure including telecommunications infrastructure.
- Dominated by agricultural land uses, particularly grazing on native vegetations, with some limited occurrences of dryland cropping.
- Pechey-Maclagan Road intersects the southern boundary of this LCT. This area contains several local roads and roads associated with private properties.

Key landmarks and features

- Contains frequent sandstone outcrops.
- Small dams occur along drainage lines.
- Isolated rural farmsteads.



Location of LCT D within the Toowoomba Region



Sandstone outcrops are a distinctive element of LCT D

Identified scenic values, key views and view corridors

- Forested sandstone hills and waterways within this LCT were identified as having very high or high scenic amenity value (8-10) in the TRSAS (refer Part C).
- Relatively enclosed and inaccessible landscape, with views towards this landscape limited to views from public roads.

Scenic lookouts and routes

- No scenic drives traverse this LCT, however the local *Farmers Country* scenic route passes in close proximity to this LCT.

Experiential landscape qualities

- Generally feels very enclosed and is afforded a sense of remoteness due to limited views to other areas from within this LCT.
- A remarkable and unique landscape that differs from other landscapes found in the Toowoomba Region.



Spotted Gum (*Corymbia citriodora*) woodlands



View to vegetated hills showing grazing land in foreground



View from Kingsthorpe-Haden Road (within LCT A) towards LCT D

Landscape Character Areas

Goombungee Forested Sandstone Hills with Outcrops (D1)

There is only one LCA within this LCT, which contains landscapes associated with the sandstone hills that occur near Goombungee. Key relevant features of this LCA include:

- The surface geology is exclusively comprised of areas of arenite-mudrock associated with the Marburg Subgroup (State of Queensland, 2020).
- This area is divided by the Oakey Creek and Myall Creek catchments, which are all part of the Condamine River catchment. Key waterways include Spring Creek, which dissects this area.
- Rainfall in this area is typically between 650 and 700 mm/yr, with areas in the east adjacent the Great Dividing Range receiving more rainfall than areas to the west.
- Major soils are sodosols (hard pedal yellow duplex soils), while some small areas of chromosols (red pedal red duplex soils) occur adjacent LCT B.
- Generally clearing in this area has been limited to the lower slopes of hills, and remnant vegetation is relatively intact.
- Remnant vegetation is dominated by large areas of eucalypt woodlands to open forests, particularly Spotted Gum (*Corymbia citriodora*) woodland (RE 11.10.1), and some very limited and isolated areas of acacia dominated open forests, woodlands and shrublands (State of Queensland, 2020).
- There are some limited areas of high-value regrowth vegetation.
- Predominant land use is grazing on native vegetation. Small farm dams also occur, typically along drainage lines. This area contains isolated rural properties.
- There are no formal recreation facilities in this area.
- This area is noted as being of regional significance for its biodiversity values (DES, 2018) and is also noted as being of local significance as it "*contains intact regional ecosystems with a floristically diverse heath understorey on unusual geological formations*" (RE, 2020).



Small rural farm dams



View along Goombungee-Kilburnie Road



Spotted Gum (*Corymbia citriodora*) woodlands with sandstone outcrops



View across LCT G from the southern part to the northern part of LCA D1



Spotted Gum (*Corymbia citriodora*) woodlands



Sandstone outcrops and scarps



LCT E: STEEPLY UNDULATING FOOTHILLS AND VALLEYS

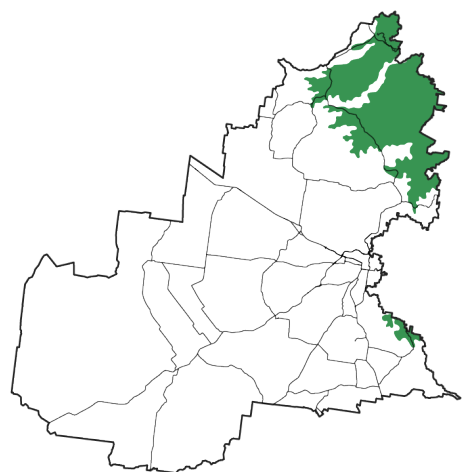
Location and boundaries

This landscape type is located in the northern and eastern parts of the Toowoomba Region, associated with the steeply undulating foothills and valleys to the east of the Great Dividing Range.

These steeply undulating foothills and valleys are bounded to the west by LCT A, and to the east by landscapes within the Lockyer Valley, Somerset and South Burnett local government areas.

There are five LCAs of this type in the Toowoomba Region:

- Cooyar Creek Steeply Undulating Foothills and Valleys (LCA E1)
- Emu Creek Steeply Undulating Foothills and Valleys (LCA E2)
- Maronghi and Ivory Creek Steeply Undulating Foothills and Valleys (LCA E3)
- Cressbrook Creek Steeply Undulating Foothills and Valleys (LCA E4)
- Ma Ma Creek Steeply Undulating Foothills and Valleys (LCA E5)



Location of LCT E within the Toowoomba Region

Key landscape character attributes

Natural landscape elements

- Historically cleared for settlement and agriculture such as grazing, crops and forestry, existing vegetation is dominated by eucalyptus woodlands and open forests, including areas of remnant vegetation and regrowth.
- There are some isolated areas of remnant rainforests and scrubs, particularly associated with elevated areas containing basalts and other volcanic geologies, and often characterised by the presence of Hoop Pine (*Araucaria cunninghamii*).
- There are relatively large contiguous areas of wet eucalypt open forests associated with higher rainfall areas near Crows Nest, Hampton, Perseverance, Palmtree and Ravensbourne with LCA D3 and D4).
- Creeks and drainage lines within alluvial plains typically contain narrow fringing eucalyptus woodland dominated by Queensland Blue Gum (*Eucalyptus tereticornis*), River She-oak (*Casuarina cunninghamiana* subsp. *cunninghamiana*) and Weeping Bottlebrush (*Callistemon viminalis*).
- Contains both rolling hills to steep, sub-mountainous landscapes associated with the foothills of the Great Dividing Range, Cooyar Range, Blackbutt Range, Anduramba Range and Main Range (15-45%+ slope), and the lower-lying areas associated with the waterways and valleys within the Brisbane River and Lockyer Creek catchments (0-15% slope).
- Contains both elevated and low landscapes associated with the upper and lower slopes of the eastern parts of, with elevations between 150m-550m AHD.
- Major soils are tenosols and sodosols, while smaller areas of vertosols and ferrosols also occur.

Settlement and land use

- Generally a sparsely settled landscape containing isolated farmsteads, with the exception of urban and rural residential areas associated with the settlements.
- Contains Crows Nest, Cooyar and Yarraman.
- Dominated by natural and agricultural land uses, particularly grazing on native vegetations, with some limited areas of dryland and irrigated cropping on terraced valley plains within the upper parts of Cooyar and Emu Creek.
- Contains large areas of plantations, predominantly Hoop Pine (*Araucaria cunninghamii*) and some exotic pine, as well as managed native forests (DES, 2020).
- Key roads that traverse this landscape include the D'Aguilar Highway (A17), New England Highway (A3), Esk-Hampton Road (SR85) and Gatton-Clifton Road (SR80).
- Contains dam infrastructure including large water supply infrastructure associated with Lake Perseverance and the Lake Cressbrook.
- Parts of this LCT are traversed by high voltage electricity transmission lines.

Key landmarks and features

- Iconic tree species including Bunya Pine (*Araucaria bidwillii*), Bottle Trees (*Brachychiton rupestris*), Grass Trees (*Xanthorrea* spp.) and Weeping Bottlebrush (*Callistemon viminalis*) along waterways.
- National parks, including Crows Nest NP, which is a tourism attraction and offers outdoor recreation opportunities.
- Large dams used for water supply (Lake Cressbrook and Lake Perseverance).
- Large sandstone and granite boulders.



Picturesque rural valleys are surrounded by elevated ridgelines associated with the Great Dividing Range

Identified scenic values, key views and view corridors

- Vegetated peaks, elevated ridges, steeply undulating foothills and valleys, waterways and large water supply dams such as Lake Perseverance and Lake Cressbrook that are within this LCT were identified as having very high or high scenic amenity value (8-10) in the TRSAS (refer Part C).
- These findings are supported by the *Scenic Amenity Study* undertaken by Conics for Council in 2009 which identified Lake Perseverance as having regionally significant scenic amenity value.
- Expansive, elevated views are experienced when heading down the range towards valley floors towards other parts of this LCT.
- Parts of this LCT (in particular LCA E1) have strong visual connectivity to landscapes within the Western Downs and South Burnett regions, including the forested uplands associated with the Bunya Mountains which are noted for their scenic amenity value.
- Parts of this LCT (in particular LCA E3 and LCA E4) have strong visual connectivity to landscapes within the Somerset region, including areas noted as having high scenic amenity value. This includes elevated areas in the vicinity of Lake Cressbrook and Dwongwar SF, associated with Perkins Knob (387m AHD), Mount Sevastopol (530m AHD), and Round Mountain (459m AHD), to the south of and visible from Esk-Hampton Road (SR85), including in the vicinity of Ravensbourne NP, associated with Biarra Range and Sugarloaf (544m AHD), in the vicinity of Ringbarked Hill (471m AHD) and in the vicinity of Bernarkin SF.
- Parts of this LCT (in particular LCA E5) have strong visual connectivity to landscapes within the Lockyer Valley region, including parts of the Great Dividing Range which are noted for their scenic amenity value.
- Views from valley floors to elevated ridgelines and peaks associated with LCT A are often possible. This provides a sense of enclosure which is intensified in the upper parts of valleys.
- Views to peaks within this LCT from valley floors are also important, particularly views from LCA C2 to elevated landscapes associated with Pechey Knob (656m AHD), Mount Japheth (664m AHD), Mount Ham (658m AHD) and Mount Shem (632m AHD).

Scenic lookouts and routes

- The national *Australia's Country Way* and local *Dams Tour* and *High Country* scenic routes and several identified motorcycle roads traverse this LCT.
- This LCT contains four scenic lookouts that provide broad expansive views across the surrounding landscape (including landscapes within adjacent LGAs) including Lake Perseverance Lookout, Dams Lookout, Crows Nest Falls and Koonin Lookout.
- The D'Aguiar Highway (A17), part of which is part of the *Australia's Country Way* scenic route and an identified motorcycle road, provides a key region gateway to the Toowoomba Region from both the South Burnett and Somerset regions.
- Gatton-Clifton Road (SR80), which is an identified motorcycle road is a key regional gateway to the Toowoomba Region from the Lockyer Valley region.
- The Valley Road, Bluff Road, Maria Creek Road and Sebestapool Road all provide other minor gateways to the Toowoomba Region from the Burnett region and Somerset region.

Experiential landscape qualities

- Generally feels very remote and often views are contained by surrounding ridgelines.



Ma Ma Creek Valley



Cooyar Creek Valley



Emu Creek Valley

Landscape Character Areas

Cooyar Creek Steeply Undulating Foothills and Valleys (LCA E1)

This LCA contains landscapes within Cooyar Creek sub-catchment, which forms part of the Upper Brisbane River catchment. Key relevant features of this LCA include:

- The surface geology is highly variable, and includes basalt associated with the Main Range Volcanics, arenite-mudrock associated with the Marburg Subgroup, arenite associated with the Helidon Sandstone, mixed sedimentary rocks and mafites associated with both the Maronghi Creek Beds and Tarong Beds (DES, 2020) and areas of Quaternary alluvium. To the east of Yarraman granitoid associated with the Taromeo Igneous Complex and mafites associated with Gilla Volcanics occur.
- The main waterway in the area is Cooyar Creek, the headwaters of which start on the Great Diving Range, while the headwaters of its two largest tributaries, Yarraman Creek and Rocky Creek start on the Cooyar Range (refer LCA A).
- Rainfall in this area is typically between 700 and 800 mm/yr, with elevated areas in the east and associated with the Cooyar Range and Blackbutt Range receiving more rainfall than the valley and the Great Dividing Range to the west. As a result, the upper parts of these waterways are generally ephemeral, while in the mid catchment the underlying igneous rocks (including extrusive volcanics and granites) often results in waterways are near permanent, contain waterholes and are incised into the landscape (DES, 2020).
- Major soils are tenosols (bleached sands and shallow bleached loams), while small areas of sodosols (hard pedal red duplex soils and hard pedal mottled-yellow duplex soils), vertosols (brown and red self-mulching cracking clays) and ferrosols (red smooth-ped earths) also occur.
- Generally this area has been extensively cleared and remnant vegetation is extremely fragmented. Remnant vegetation includes areas of eucalypt woodlands to open forests, eucalypt open forests to woodlands on floodplains and isolated areas of rainforests and scrubs (State of Queensland, 2020). The Palms NP contains an area of palm rainforest that is spring fed (DES, 2020).
- Predominant land use is grazing on native vegetation, with some limited dryland and irrigated cropping on the flats, particularly in the vicinity of Kooralgin along Cooyar Creek and near Yarraman along Yarraman Creek. Production and plantation forestry also occurs, however is typically more strongly associated with LCT A. This LCT contains Yarraman and Cooyar, as well as isolated rural properties and peri-urban areas.
- There are several public parks in the vicinity of Yarraman, including Yarraman Station and Weir Park that has picnic facilities and amenities. This park also provides opportunities for bush walking and camping and is situated on the Brisbane Valley Rail Trail.
- Yarraman SF contains Rogers Park which is a popular picnic and day-use area, and provides opportunities for bush walking, four-wheel-driving, trail bikes, horses and cycling along formed roads within the forest. Pidna NP and Pidna SF have no visitor facilities or designated walking tracks, however power line easements and formed roads provide access for informal nature-based recreation including bush walking and mountain biking. There is a private purpose built motocross facility near The Palms NP that provides camping.
- The D'Aguilar Highway (A17) provides a key gateway to the Toowoomba Region from both the South Burnett and Somerset regions.



Cooyar Creek, near Cooyar



Cooyar Creek, near Kooralgin



Cattle grazing near Cooyar Creek



Undulating open grazing land



Cropping near Cooyar Creek, showing the Mount Binga Range in the background



View to Grass Trees (*Xanthorea* sp.) along a tributary of Emu Creek



View from Pierces Creek Road across the Emu Creek Valley



View towards Emu Creek from Pierces Creek Road showing Bottle Brush (*Callistemon* sp.)



View from Pierces Creek Road towards Pechey Knob (656m AHD), Mount Japheth (664m AHD) and Mount Shem (632m AHD)



View across the upper Emu Creek Valley where cropping occurs

Emu Creek Steeply Undulating Foothills and Valleys (LCA E2)

This LCA contains landscapes within the Emu Creek sub-catchment, which forms part of the Upper Brisbane River catchment. Key relevant features of this LCA include:

- The surface geology is highly variable, however is predominately defined by its hard underlying geologies. This includes granitoid associated with the Taromeo Igneous Complex, Woolshed Mountain Granodiorite, Crows Nest Granite, Eskdale Granodiorite and Djuan Tonalite and mixed sedimentary rocks and mafites associated with both the Maronghi Creek Beds and Tarong Beds and Sugarloaf Metamorphics (DES, 2020). In the upper part of the catchment, west of basalt associated with the Main Range Volcanics, arenite-mudrock associated with the Marburg Subgroup, arenite associated with the Helidon Sandstone, and areas of Quaternary alluvium occur.
- The main waterway in the area is Emu Creek, the headwaters of which start on the Great Diving Range (DES, 2020) (refer LCA A). Due to the underlying geology, in upper parts of the catchment there are areas of alluvium, whilst in the middle and lower catchment Emu Creek is relatively confined, and generally characterised by gorges, waterholes and boulder bed streams (DES, 2020).
- Rainfall in this area is typically between 700 and 800 mm/yr, with elevated areas in the east and associated with the Blackbutt Range receiving more rainfall than the valley and the Great Dividing Range to the west; intense rainfall events can result in high flows, particularly through gorge sections.
- Major soils are tenosols (bleached sands and shallow bleached loams and shallow friable loams with rough-ped fabric) and sodosols (hard pedal red duplex soils), while small areas of vertosols (brown and red self-mulching cracking clays) and ferrosols (red smooth-ped earths) also occur.
- Vegetation in this LCA has predominantly been cleared, with the exception of some isolated vegetated patches remaining on hills and elevated areas and that contained within gorges. Remnant vegetation includes areas of eucalypt woodlands to open forests, eucalypt open forests to woodlands on floodplains, isolated areas of rainforests and scrubs and acacia dominated open forests, woodlands and shrublands (State of Queensland, 2020). The Palms NP contains an area of palm rainforest that is spring fed (DES, 2020). There are contiguous strips of riparian vegetation which differs in width due to land use.
- Predominant land use is grazing on native vegetation, with some dryland and limited irrigated cropping on the flats, particularly in the vicinity of St Aubyn and Coalbank along Emu Creek and Bum Bum Creek. This LCA is sparsely settled and contains isolated rural properties.
- There are no public recreation facilities within the area, however the Bicentennial National Trail does pass through this area, following Waterhole Gully Road. This trail is accessible to bush walkers, cyclists and horse riders and a public camp ground is provided near the Emu Creek crossing. Whilst not within the Toowoomba Region, Bernarkin SF provides outdoor recreation opportunities and two public camping and day-use areas situated on Emu Creek to the immediate north of this area.
- Valley Road provides a minor gateway to the Toowoomba Region from Blackbutt, a town within the South Burnett region.

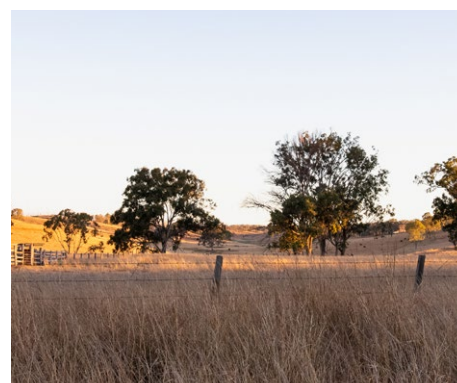
Maronghi and Ivory Creek Steeply Undulating Foothills and Valleys (LCA E3)

This LCA contains landscapes within the upper reaches of the Maronghi and Ivory Creek sub-catchments, which form part of the Upper Brisbane River catchment. Key relevant features of this LCA include:

- The surface geology is predominately defined by granitoids associated with the Eskdale Granodiorite and to a lesser extent, the Crows Nest Granite (DES, 2020). To the southern extent of this area there are some areas of mixed sedimentary rocks and mafites associated with the Sugarloaf Metamorphics (DES, 2020). Bluff Mountain is a distinctive intrusive basalt peak and known as 'The Bluff'.
- The main waterways in the area are Maronghi Creek, Anduramba Creek (which flows into Ivory Creek) and Maria Creek which is a tributary of Maronghi Creek. The headwaters of these creeks drain east off the basalt of the Anduramba Range near Bluff Mountain (521m AHD) (DES, 2020) (refer LCA A). Due to the underlying geology, these waterways are relatively confined, and generally characterised by incised channels, waterholes and gullies subject to erosion (DES, 2020).
- Rainfall in this area is typically between 750 and 850 mm/yr, with elevated areas associated with the Anduramba Range receiving more rainfall than other parts of the catchment.
- Major soils are sodosols (hard pedal red duplex soils).
- Vegetation in this LCA has predominantly been cleared, with the exception of some isolated vegetated patches remaining on hills and steep, elevated areas associated with the Anduramba Range and along waterways. Remnant vegetation includes areas of eucalypt woodlands to open forests and eucalypt open forests to woodlands on floodplains (State of Queensland, 2020).
- Predominant land use is grazing on native vegetation. Small farm dams occur along drainage lines. This LCA is sparsely settled and contains isolated rural properties.
- There are no public recreation facilities within the area, however the Bicentennial National Trail does pass through this area, following Waterhole Gully Road. This trail is accessible to bush walkers, cyclists and horse riders and a public camp ground is provided near the Maria Creek crossing.
- The Bluff Road, Maria Creek Road and Sebestapool Road provide minor gateways to the Toowoomba Region.



View from Maria Creek Road towards Maria Creek



View across the rural landscape



View along Maria Creek Road near the boundary to the Somerset region



View from Maria Creek Road across the rural landscape



View towards regrowth vegetation associated with a tributary of Maria Creek



View towards Cressbrook Creek Dam and the Somerset region from the edge of the Toowoomba Region



View from the New England Highway (A2) towards landscapes within the upper parts of the Cressbrook Creek Valley near Crows Nest



View from Esk-Hampton Road (SR85) towards landscapes associated with Perseverance Creek



View of Crows Nest Creek from the Applegum Walk

Cressbrook Creek Steeply Undulating Foothills and Valleys (LCA E4)

This LCA contains the upper parts of the Cressbrook Creek sub-catchment, which form part of the Upper Brisbane River catchment. Key relevant features of this LCA include:

- The surface geology is varied, and is predominately defined by granitoids associated with the Crows Nest Granite and Eskdale Granodiorite, while there are some areas of mixed sedimentary rocks and mafites associated with the Sugarloaf Metamorphics (DES, 2020). In upper parts of the catchment, near Crows Nest and Hampton there are Arenite associated with Helidon Sandstone, Arenite-mudrock associated with the Marburg Subgroup and some limited areas of mixed volcanic and sedimentary rocks associated with the Cressbrook Creek Group.
- The main waterways in the area are Cressbrook Creek, Crows Nest Creek and Bald Hills Creek and Perseverance Creek, the headwaters of which start on the Great Diving Range (refer LCA A).
- Rainfall in this area is typically higher than the rest of the Toowoomba Region, and is typically between 800 and 900 mm/yr, with rainfall increasing to the south and east. Due to the steep topography and underlying geology, creeks tend to be narrow, incised, and generally have rocky bases (DES, 2020). These creeks drain into Lake Perseverance and Lake Cressbrook.
- Major soils are tenosols (bleached sands, shallow bleached loams and shallow friable loams with rough-ped fabric) and sodosols (hard pedal red duplex soils and hard pedal mottled-yellow duplex soils).
- Whilst vegetation within the upper parts of the catchment near Crows Nest and Hampton that are less steep have been extensively cleared for agricultural land uses, the extent of vegetation is generally good throughout other parts of this area and includes large areas of remnant vegetation and regrowth. Remnant vegetation includes areas of eucalypt woodlands to open forests, eucalypt open forests to woodlands on floodplains and wet eucalypt open forests, while there are pockets of rainforest in higher reaches of the sub-catchment (State of Queensland, 2020).
- Predominant land uses are grazing on native vegetation and nature conservation, with large parts of the area protected within Crows Nest NP, which provides opportunities for bush walking and camping. Private land in the area also plays an important role in conserving significant areas of remnant vegetation, including areas such as Dingo Mountain Park. Some dryland cropping occurs to the west of Crows Nest. Small farm dams occur throughout the area, particularly in areas that support grazing and cropping. This LCA contains Crows Nest and rural residential properties and development, including peri-urban development and several short-stay accommodation options and wedding venues.
- There are several public parks in the vicinity of Crows Nest, including Bullocky's Rest and Hartmann Park, which provide bush walking trails (including the Applegum Walk), picnic shelters and tables and amenities.
- There are also additional opportunities for outdoor recreation including at:
 - Crows Nest NP - bush walking, camping, picnic tables BBQ facilities, amenities and scenic lookouts.
 - Lake Cressbrook - paddle sports, boating, fishing, bush walking, camping, picnic shelters and tables, BBQ facilities and amenities etc.
 - Lake Perseverance - bush walking, camping, picnic shelters and tables, BBQ facilities, a playground, amenities and scenic lookouts. Perseverance Aquatic Club facilitates some organised water-based activities.
 - Dingo Mountain Park.

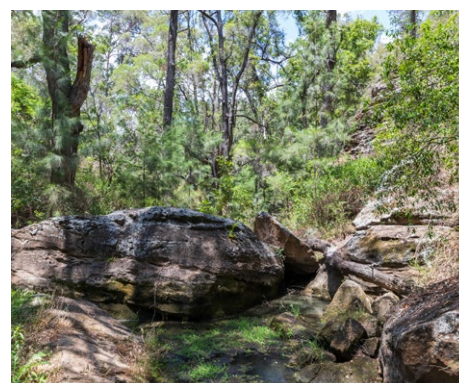
Ma Ma Creek Steeply Undulating Foothills and Valleys (LCA E5)

This LCA contains the upper parts of the Ma Ma Creek sub-catchment, which forms part of the Lockyer Creek catchment. Key relevant features of this LCA include:

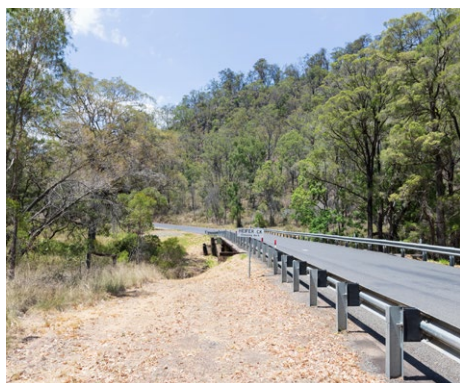
- The surface geology is predominately defined by arenite-mudrock associated with the Walloon Subgroup and Marburg Subgroup.
- The main waterways within the area are Ma Ma Creek and Heifer Creek, the headwaters of which start in the Great Dividing Range and are very steep (refer LCA A). This generally results in high water run-off, extremely rapid water flows and confined channels that appear 'gorge' like in places.
- Rainfall in this area is lower than in other parts of this LCT, and is typically around 750 mm/yr.
- Major soils are tenosols (shallow friable loams).
- Some historic clearing has occurred within this area to support agricultural land uses, however it has been relatively limited due to the steep terrain. Remnant vegetation is dominated by eucalypt woodlands to open forests, with some areas of eucalypt open forest to woodlands on floodplains and isolated patches of rainforests and scrubs and wet eucalypt open forests. There are significant areas of regrowth.
- Predominant land use is grazing on native vegetation, with some very limited cropping that occurs along Gatton-Clifton Road (SR80). Small farm dams occur along drainage lines. This LCA is sparsely settled and contains isolated rural properties.
- There are no public recreation facilities within the area, however the Heifer Creek Camp ground is situated in close proximity to the boundary of the local government area.
- Gatton-Clifton Road (SR80) provides a local gateway to the Toowoomba Region from the Locker Valley region.



Typical road bridge infrastructure



Large sandstone outcrops within Lagoon Creek



View along Gatton-Clifton Road (SR80) near Heifer Creek Crossing No. 5



Mount Tyson
Image: Inge Gajczak - 'Love Your Local Landscape'



Lagoon Creek Road towards isolated mesteads



photography competition entry 2021

View from Macginley Road towards Main Paradise Range and Twin Hills (628m AHD) within the Lockyer Valley region



View along Gatton-Clifton Road (SR80), a local gateway to the Toowoomba Region



LCT F: ALLUVIAL FLOODPLAIN RIPARIAN CORRIDOR

Location and boundaries

This landscape type is located throughout the central and western parts of the Toowoomba Region, associated with the Condamine River and its major tributaries that flow from their headwaters in the Great Dividing Range through the basaltic uplands and across the alluvial floodplain areas.

The upper parts of these waterways are bounded by LCT B, while their lower reaches are contained by LCT G.

There are five LCAs of this type in the Toowoomba Region:

- Condamine River Alluvial Floodplain Riparian Corridor (LCA F1)
- Hodgson Creek Alluvial Floodplain Riparian Corridor (LCA F2)
- Kings Creek Alluvial Floodplain Riparian Corridor (LCA F3)
- Oakey Creek Alluvial Floodplain Riparian Corridor (LCA F4)
- Myall Creek Alluvial Floodplain Riparian Corridor (LCA F5)

Note: These major waterways have many tributaries that have not been included within LCT F, however should be considered as relevant.



Location of LCT G within the Toowoomba Region

Key landscape character attributes

Natural landscape elements

- The extent and quality of vegetation along waterways varies, with some having relatively intact riparian vegetation while others are denuded. This typically corresponds to adjacent land uses and landform, with upper areas of these waterways tending to be more intact than lower lying areas which are more constrained.
- There are some isolated instances where floodplain vegetation has been left relatively intact or revegetated (e.g. near Bowenville Reserve).
- Areas of remnant vegetation are typical of the Queensland blue gum, river red gum and Moreton Bay Ash woodland vegetation communities (DNR, 1999).
- Associated with watercourses, drainage lines and associated terraces.
- There are high levels of erosion and the profile of waterways varies, from shallow waterways to waterways that are steeply incised with high banks and large headcuts (e.g. Gowrie Creek and the Condamine River).
- Headwaters of these waterways start within the Great Dividing Range, and have been excluded from this LCT and are considered within LCT A.
- These waterways and their associated floodplains (LCT G) experience both minor and major flood events that occur relatively frequently.
- Major soils are vertosols.

Settlement and land use

- Generally very limited development immediately adjacent waterways, with the exception of in the vicinity of Oakey where Oakey Creek passes through the town.
- Many of these waterways are situated in close proximity to settlements, including:
 - Quinalow and Maclagan, which are situated adjacent Myall Creek and are subject to flooding.
 - Cecil Plains, which is situated on higher ground to the west of the Condamine River so is flood immune.
 - Cambooya, which is bounded to the north by Hodgson Creek and experiences some flooding, particularly in the west of the township.
 - Clifton, which is situated between Kings Creek and one of its major tributaries, Spring Creek on higher ground, so is flood immune.
- Land uses adjacent these waterways are dominated by agricultural land uses, particularly dryland and irrigated cropping and grazing on native vegetation.
- These waterways and their natural water flows have been extensively modified by dams, weirs and water extraction for town water supply and irrigation.
- They are traversed in parts by rail and road infrastructure, which often provides viewing opportunities which are otherwise quite limited.

Key landmarks and features

- There are no specific landmarks associated with this LCT.
- Modifications including weirs and irrigation infrastructure.



During periods of low flow, persistent waterholes can still be discovered along the Condamine River

Identified scenic values, key views and view corridors

- The Condamine River and its major tributaries that are within this LCT were identified as having very high or high scenic amenity value (8-10) in the TRSAS (refer Part C). It is likely that other waterways across the Toowoomba Region not included within LCT F would also have high or very high scenic value.
- 'Visual recreation' and 'cultural, spiritual and ceremonial values' are noted as being an environmental values associated with the Condamine River that require protection and are relevant to this study (State of Queensland, 2020).
- Close views to waterways and water are generally limited to road crossings or publicly accessible locations such as reserves.
- The key value of this LCT is the role it plays in contributing to the backdrop of views from LCT G and the sense of visual enclosure it affords to the otherwise vast floodplain.

Scenic lookouts and routes

- The national *Adventure Way* and *Warrego Way* and local *Open Plains Country Drive*, *Steele Rudd*, *Farmers Country* and *Great Bunya Country* scenic routes traverse this LCT.

Experiential landscape qualities

- Generally a relatively inaccessible landscape, most notable when crossed via road infrastructure.

Heritage elements

Queensland Heritage Register

- Jondaryan Homestead (600635)



Oakey Creek at Bowenville Reserve



Rail Bridge crossing of the Condamine River (north branch)



Oakey Creek near Jondaryan-Mount Tyson Road crossing

Landscape Character Areas

There are five LCAs of this type within the Toowoomba Region associated with the major waterways that are part of the Condamine River catchment. These waterways have several common characteristics, including:

- Their surface geology is comprised of Quaternary alluvium (State of Queensland, 2020).
- Their headwaters start within the Great Dividing Range*.
- Rainfall is typically between 600 and 750 mm/yr, with elevated areas associated with the Great Dividing Range receiving more rainfall than areas to the west. The area around Myall Creek has the lowest average rainfalls in the Toowoomba Region, receiving less than 600mm/yr. in some parts.
- These waterways and their associated floodplains (LCT G) experience both minor and major flood events that occur relatively frequently.
- Major soils associated with these major waterways and their alluvial terraces are black self-mulching cracking clays (BRS, 2009).
- These waterways have been extensively modified, with modifications to waterways including roads and associated bridge infrastructure, dams, weirs and irrigation infrastructure.
- Water from these waterways is used for town water supply and irrigation throughout the Toowoomba Region.
- Whilst many waterways naturally experience low flows during dry periods, natural flows have been significantly altered due to the presence of numerous dams and weirs, and the extraction of water by industry, irrigation and other land uses (State of Queensland, 2019).

A brief description of each LCA and, where relevant, how it differs from the above general characteristics is provided below.

* The headwaters of these waterways are generally steep and have been excluded from this LCT as they are considered within the broader context of LCT A.



Camp ground at Passmore Reserve situated on the banks of the Condamine River.

Condamine River Alluvial Floodplain Riparian Corridor (F1)

This LCA is associated with the main channels of the Condamine River and its riparian corridor, which is within the Condamine River catchment. Key relevant features of this LCA include:

- The Condamine River is the largest waterway within the Toowoomba Region, and is comprised of its main channel and its north branch, which diverges from the main channel downstream of Ellangowan and re-joins the main branch near Cecil Plains.
- It has several tributaries including Hodgson Creek (LCA F2) and Kings Creek (LCA F3).
- The headwaters of the Condamine River start within the Great Dividing Range near Mount Superbus (1372m AHD) which is within the Southern Downs region.
- The river has several anabranches and off-stream wetlands that are connected during high-flow events (State of Queensland, 2011). Generally flows are intermittent and the river experiences extended periods of low or no flow during dry periods, resulting in a disconnected main channel and persistent waterholes that occur along its length. These waterholes are identified as High Ecological Value Waters as they provide aquatic habitat during extended periods of low or no flow and (State of Queensland, 2019).
- Extensive clearing within the adjacent floodplain (LCT G) has resulted in a very narrow area of remnant vegetation associated with the river channel that, while narrow, is generally relatively contiguous.
- Remnant vegetation is dominated by eucalypt open forests to woodlands on floodplains, generally dominated by Queensland Blue Gum (*Eucalyptus tereticornis*) and/or River Red Gum (*Eucalyptus camaldulensis*) woodland (RE 11.3.25 and 11.3.5) while Poplar Box (*Eucalyptus populnea*) woodlands (RE 11.3.2) also occur and are the dominant vegetation type near the confluence of the Condamine River and Hodgson Creek (State of Queensland, 2020). Fringing eucalypt woodlands associated with RE 11.3.25 are noted as being a matter of local environmental significance (RE, 2020).
- Areas of high-value regrowth vegetation are very limited and generally the age of existing vegetation is very mature, with large amounts of dieback, high levels of senescence and limited recruitment of succession planting.
- The predominant land uses that occur adjacent the Condamine River are dryland and irrigated cropping, while grazing on native vegetation occurs, but to a much lesser extent.
- Several weirs are located along the river including the Cecil Plains Weir, Nangwee Weir, Wando Weir, Melrose Weir, Lemon Tree Weir, Yarramalong Weir and Talgai Weir.
- Water from the river is used for town water supply and irrigation.
- The Condamine River is generally inaccessible, with the exception of Passmore Reserve and Yarramalong Weir that are free public camp grounds located on the banks of the river.
- This area contains several MSES including:
 - MSES regulated vegetation (essential habitat)
 - MSES regulated vegetation (100m from wetland)
 - MSES high ecological significance wetlands
 - MSES regulated vegetation (defined watercourse)
 - MSES wildlife habitat (special least concern animal)
 - MSES regulated vegetation (category B - endangered or of concern)
 - MSES regulated vegetation (category C- endangered or of concern)



Yarramalong Weir



Yarramalong Weir camp ground



The Condamine river (north branch) at Blanchview Road crossing



The Condamine River near Leslie Bridge Road crossing

Hodgson Creek Alluvial Floodplain Riparian Corridor (F2)

This LCA is associated with the main channel of Hodgson Creek and its riparian corridor. Hodgson Creek is a tributary of the Condamine River and is situated within the Hodgson Creek sub-catchment. Key relevant features of this LCA include:

- Hodgson Creek has several tributaries, including Emu Creek and Umbiram Creek.
- The headwaters of Hodgson Creek start within the Great Dividing Range near Bald Hill (643m AHD), northeast of Cambooya.
- Extensive clearing within the adjacent floodplain (LCT G) and basaltic uplands (LCT B) has resulted in a highly denuded waterway, with almost no remnant vegetation, generally limited to a very small area of Poplar Box (*Eucalyptus populnea*) (RE 11.3.2) woodlands near the confluence of the Condamine River (State of Queensland, 2020).
- There are no areas of high-value regrowth vegetation.
- Predominant land use that occurs adjacent Hodgson Creek is dryland cropping, while irrigated cropping and grazing on native vegetation does also occur, but to a much lesser extent.
- Hodgson Creek is generally inaccessible, with the exception of two public parks within Cambooya situated on the banks of the creek - Rolleston Park and Paterson Memorial Park.
- This area contains some small areas containing MSES including:
 - MSES regulated vegetation (defined watercourse)
 - MSES regulated vegetation (category B - endangered or of concern)
 - MSES regulated vegetation (category C - endangered or of concern)



Hodgson Creek near Clifton Road crossing showing weir infrastructure



Hodgson Creek near Pittsworth-Felton Road Crossing (upstream of weir)



Hodgson Creek near Paterson Memorial Park, Cambooya



Hodgson Creek near confluence with the Condamine River



Hodgson Creek near Pittsworth-Felton Road crossing (downstream of weir) showing typical road infrastructure



View towards Kings Creek from Gatton-Clifton Road (SR80)



View towards Kings Creek and Kuhn Road crossing



Kings Creek near Clifton-Leyburn Road crossing

Kings Creek Alluvial Floodplain Riparian Corridor (F3)

This LCA is associated with the main channel of Kings Creek and its riparian corridor. Kings Creek is a tributary of the Condamine River and is situated within the Kings Creek sub-catchment. Key relevant features of this LCA include:

- Kings Creek has several tributaries, including Spring Creek, Budgee Creek and Back Creek.
- The headwaters of Kings Creek start within the Great Dividing Range near Glen Rock SF (within the Lockyer Valley region), southeast of Pilton.
- Extensive clearing within the adjacent floodplain (LCT G) and basaltic uplands (LCT B) has resulted in a highly denuded waterway, with almost no remnant vegetation, generally limited to a very small area of Poplar Box (*Eucalyptus populnea*) (RE 11.3.2) woodlands near the confluence of the Condamine River (State of Queensland, 2020).
- There are no areas of high-value regrowth vegetation.
- The predominant land uses that occur adjacent Kings Creek are dryland and irrigated cropping, while grazing on native vegetation does also occur, but to a much lesser extent.
- Kings Creek is generally inaccessible, and there are no public parks or reserves situated on its banks.
- This area contains several MSES including:
 - MSES regulated vegetation (defined watercourse)
 - MSES regulated vegetation (category B - endangered or of concern)



Kings Creek near Kuhn Road crossing



Spring Creek (a tributary of Kings Creek) near Clifton and the Shannon Road crossing

Oakey Creek Alluvial Floodplain Riparian Corridor (F4)

This LCA is associated with the main channel of Oakey Creek and its riparian corridor. Oakey Creek is a tributary of the Condamine River and is situated within the Oakey Creek sub-catchment. Key relevant features of this LCA include:

- Oakey Creek has several tributaries, including Gowrie Creek, Westbrook Creek, Cooby Creek, Gomaren Creek, Meringandan Creek, Bloodwood Creek and Lagoon Creek.
- The headwaters of Oakey Creek start within the Great Dividing Range, east of Oakey.
- The floodplain of Oakey Creek floods less frequently than that of the Condamine River due to the topography of the floodplain and the presence of a natural levee along the creek (State of Queensland, 2011).
- There is a spring in the main channel of Oakey Creek at Bowenville (State of Queensland, 2011).
- Extensive clearing within the adjacent floodplain (LCT G) and basaltic uplands (LCT B) has resulted in a highly denuded waterway, with very limited remnant vegetation, associated with small areas of Poplar Box (*Eucalyptus populnea*) (RE 11.3.2, 11.3.17) woodlands and Isolated occurrences of native grasslands dominated by Queensland Bluegrass (*Dichanthium sericeum*) and/or *Astrebela* spp. (RE 11.3.21), which are noted as being of State biodiversity significance (DES, 2018).
- There are some very limited areas of high-value regrowth vegetation.
- The predominant land uses that occur adjacent Oakey Creek are dryland and irrigated cropping and grazing on native vegetation, as well as residential and industrial land uses where the creek passes through Oakey.
- Several weirs are located along Oakey Creek including the Oakey Creek Weir.
- Oakey Creek is generally inaccessible, with the exception of Bowenville Reserve (a free public camp ground) and public parks within Oakey that are located on the banks of the river within the Oakey Creek Linear Corridor.
- This area contains some small areas containing MSES including:
 - MSES regulated vegetation (defined watercourse)
 - MSES wildlife habitat (endangered or vulnerable)
 - MSES wildlife habitat (special least concern animal)
 - MSES regulated vegetation (category B - endangered or of concern)
 - MSES regulated vegetation (category C - endangered or of concern)



Oakey Creek near Bridge Street (A21) crossing showing road and rail bridge infrastructure



Oakey Creek near Rotary Park within the Oakey Creek Linear Corridor



Oakey Creek near Jondaryan-Evanslea Road crossing



Oakey Creek near Jondaryan-Mount Tyson Road crossing



Oakey Creek at Bowenville Reserve showing high value regrowth vegetation, interpretive signage and water extraction occurring



View towards Myall Creek and Bowenville-Moola Road crossing



View towards remnant vegetation (RE 11.8.15) along Myall Creek from Brymaroo-Irvingdale Road



Myall Creek near Bowenville-Moola Road crossing showing remnant vegetation associated with RE 11.8.15, an endangered vegetation community

Myall Creek Alluvial Floodplain Riparian Corridor (F5)

This LCA is associated with the main channel of Myall Creek and its riparian corridor. Myall Creek is a tributary of the Condamine River and is situated within the Myall Creek sub-catchment. Key relevant features of this LCA include:

- Myall Creek has several tributaries, including Cain Creek/Spring Creek.
- The headwaters of Myall Creek start within the Great Dividing Range near Mount Mocatta (825m AHD), north of MacLagan.
- While clearing within the adjacent floodplain (LCT G) and basaltic uplands (LCT B) has impacted the extent of remnant vegetation, vegetation along Myall Creek and its terraces is generally more intact when compared to other creeks within this LCT, and includes some areas of Poplar Box (*Eucalyptus populnea*) (RE 11.8.15) woodlands and isolated occurrences of native grasslands dominated by Queensland Bluegrass (*Dichanthium sericeum*) and/or *Astrebela spp.* (RE 11.3.21), which are noted as being of State biodiversity significance (DES, 2018).
- There are some areas of high-value regrowth vegetation.
- The predominant land uses that occur adjacent Myall Creek are dryland cropping and grazing on native vegetation, while some limited irrigated cropping and residential land uses occur near Quinalow and MacLagan, which are situated adjacent Myall Creek.
- Myall Creek is generally inaccessible, and there are no public parks or reserves situated on its banks.
- This area contains some small areas containing MSES including:
 - MSES regulated vegetation (defined watercourse)
 - MSES wildlife habitat (endangered or vulnerable)
 - MSES regulated vegetation (category B - endangered or of concern)
 - MSES regulated vegetation (category C- endangered or of concern)
 - MSES regulated vegetation (essential habitat)
 - MSES regulated vegetation (100m from wetland)



View to vegetation along Myall Creek from Dalby-Cooyar Road near MacLagan



View to Myall Creek from Pechey-MacLagan Road in Quinalow



LCT G: ALLUVIAL FLOODPLAIN CROPLAND

Location and boundaries

This landscape type is located in the central western part of the Toowoomba Region, to the west of the Toowoomba plateau and basaltic uplands, associated with the alluvial valleys and fertile floodplains of the Condamine River catchment.

The alluvial floodplain is predominately bounded to the south and west by LCT G, and to the north and east by LCT B. A small area southwest of Clifton interfaces with LCT H.

There are three LCAs of this type in the Toowoomba Region:

- Condamine River Alluvial Floodplain Cropland (LCA G1)
- Oakey Creek Alluvial Floodplain Cropland (LCA G2)
- Myall Creek Alluvial Floodplain Cropland (LCA G3)



Location of LCT G within the Toowoomba Region

Key landscape character attributes

Natural landscape elements

- Sparsely vegetated, with vegetation limited to roadside shelter belts, gardens associated with isolated rural homesteads and riparian corridors.
- Some areas of remnant vegetation typical of Poplar Box (*Eucalyptus populnea*) or Queensland Blue Gum (*E. tereticornis*) open woodland vegetation communities, along with some relatively small, isolated areas containing endangered native grasslands (DNR, 1999).
- Limited areas of Poplar Box (*Eucalyptus populnea*) and Moreton Bay Ash (*Corymbia tessellaris*) woodland with Wilga (*Geijera parviflora*) near Myall Creek (DNR, 1999).
- Broad, flat to very gently sloping alluvial plains and gently sloping valley floors. Typically < 1%, with lower slopes on the edges of the plain and within alluvial valleys between 2-4% slope.
- Moderately elevated landscape associated with the upper Condamine River catchment, generally situated between 300-500m AHD.
- Few landscape features, with the exception of localised depressions associated with waterways and instances where riparian vegetation is intact, particularly associated with the Condamine River (refer LCT F).
- Major soils are vertosols.
- This LCT is prone to extensive flooding.

Settlement and land use

- Generally a sparsely settled landscape, with the exception of residential areas associated with settlements and isolated rural farmsteads.
- Contains Brookstead and Oakey, whilst Cecil Plains, Bowenville, Jondaryan, Cambooya, Greenmount, East Greenmount and Clifton are all situated on the edge of this LCT within LCT B.
- Dominated by agricultural land uses, particularly dryland and irrigated with some isolated occurrences of grazing on native vegetation.
- Traversed by significant rail and road infrastructure, including the Gore Highway (A39), Warrego Highway (A2), New England Highway (A2) and rail infrastructure associated with the West Moreton System, South Western System and Cecil Plains Branch Railway.
- Presence of water bores for extraction of ground water for agriculture, industrial, stock, domestic and town water supply (Oakey and Brookstead).
- Presence of large rural water storage dams (generally ring tanks), which are more common in areas that support irrigated cropping.

Key landmarks and features

- Large agricultural infrastructure such as silos and agricultural sheds, that act as local landmarks (e.g. Brookstead silos).
- Large irrigation dams and infrastructure.
- Isolated rural farmsteads, typically with gardens.
- Jondaryan Woolshed tourist complex.



A variety of crops are grown across the floodplain, which varies with the season

Identified scenic values, key views and view corridors

- Waterways and dams that are within this LCT were identified as having very high or high scenic amenity value (8-10) in the TRSAS (refer Part C). It is however likely that many dams identified in GIS mapping would in reality not contribute to the scenic amenity of this LCT, due to the nature of their construction (often ring tanks) and limited accessibility of views to water.
- Views towards surrounding forested peaks and ridgelines and elevated native forests contribute to the scenic amenity of this LCT and assist with knowing where you are in an otherwise disorientating landscape, particularly views towards landscapes associated with:
 - LCT C - Darling Downs Forested Peaks and Ridgelines.
 - LCT J - Brigalow Belt Forested Peaks and Ridgelines.
 - LCT K - Elevated and Undulating Native Forests.
- Views towards vegetated riparian corridors provide some visual containment within an otherwise very open landscape, whilst also contributing to the scenic amenity of this LCT (refer LCT E).
- Very distant views to elevated ridges associated with the Great Dividing Range, including the Bunya Mountains (which are not within the Toowoomba Region but do contribute to the scenic amenity of this LCT) (refer LCT A).



Endangered native grasslands can be found throughout the floodplain

Scenic lookouts and routes

- The national *Adventure Way*, *Australia's Country Way*, *Warrego Way* and local *Open Plains Country Drive*, *Great Bunya*, *Farmers Country* and *Steele Rudd* scenic routes traverse this LCT.
- There are no formal scenic lookouts within the LCT, however several scenic lookouts within the Toowoomba Region provide views over this LCT, e.g. Mount Kingsthorpe.
- The Warrego Highway (A2) is a key regional approach to the Toowoomba Region from the Western Downs region, but does not act as a distinctive gateway.

Experiential landscape qualities

- Generally feels very open and expansive.
- Often a 'mirage' effect can be experienced which contributes to sense of vastness.
- The experience of this landscape varies throughout the year, depending on crop management and seasonality (e.g. ploughed and fallow land versus crops ready for harvest, such as fields of sorghum and sunflowers).

Heritage elements

Queensland Heritage Register

- Jondaryan Woolshed (600633)

Heritage Places (Toowoomba Regional Planning Scheme)

- 4411 Toowoomba-Karara Road, Ellangowan (2/FEL/0068)



Sorghum crop with distant views to elevated hills beyond



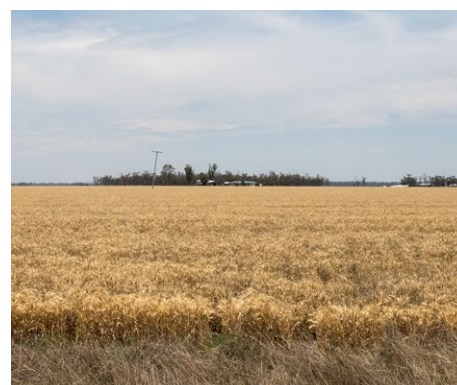
Highly fertile soils of the floodplain

Landscape Character Areas

Condamine River Alluvial Floodplain and Valley Floor Cropland (LCA G1)

This LCA contains the alluvial areas contained with the floodplains and valley floors associated with the Condamine River, Hodgson Creek and Kings Creek and their catchments. Key relevant features of this LCA include:

- The surface geology varies slightly across this LCA, and includes Quaternary Alluvium (associated with areas adjacent the Condamine River, Kings Creek and their tributaries), Quaternary Colluvium (associated with areas adjacent Hodgson Creek and near Mount Tyson) and Late Tertiary - Quaternary Poorly Consolidated Sediments on the outer edges of the floodplain in the vicinity of Brookstead, Cecil Plains, Nangwee and near Bowenville.
- Generally receives a significant amount of rainfall, with higher rainfall in the east and lower rainfall in the west. The average annual rainfall at Cambooya is 721mm, while in Cecil Plains it is 665mm (Bureau of Meteorology, 2021).
- The dominant soils within this LCA generally consist of vertosols (deep black and grey cracking clays with bleached sands or loams over brown or black clays), which are cropped extensively and comprises perhaps the most important agricultural portion of the area (DNR, 1999 and State of Queensland, 1975). Soils in the vicinity of Brookstead vary slightly, and consist of deep, grey, cracking clays (DNR, 1999 and State of Queensland, 1975).
- The land use in this LCA is dominated by agricultural land uses, particularly dryland and irrigated farming, with some intensive areas irrigated cropping, particularly between Cecil Plains and Brookstead adjacent the Condamine River.
- Residential development is limited to that associated with Brookstead, and isolated rural homesteads within the floodplain.
- Generally feels very open and expansive, with the exception of areas associated with the Hodgson Creek and King Creek valleys that are visually contained by LCT B and have some views to LCT C, or areas in close proximity to riparian vegetation associated with LCT F.
- Often a 'mirage' effect can be experienced in broader parts of the floodplain which contributes to sense of vastness.



Typical isolated rural homestead within the floodplain surrounded by agricultural fields



Scarred Poplar Box Trees (*Eucalyptus populnea*) at Passmore Road Reserve



Sunflower Fields near Cambooya

Image: Chris Hicks - highly commended 'Love Your Local Landscapes' photography competition 2021



Looking towards Gowrie Mountain and Mount Kingsthorpe from LCA G2



Vegetated hills provide visual interest and reduce sense of scale



Black earths and vegetated tree belts along Myall Creek



Large scale mosaic of arable cropland

Oakey Creek Alluvial Floodplain and Valley Floor Cropland (LCA G2)

This LCA contains the alluvial areas contained with the floodplain and valley floor associated with Oakey Creek and its catchment. Key relevant features of this LCA include:

- The surface geology varies slightly across this LCA and includes Quaternary Alluvium (associated with areas adjacent the Oakey Creek and its tributaries), Quaternary Colluvium (associated with areas adjacent Oakey Creek west of Bowenville) and Late Tertiary - Quaternary Poorly Consolidated Sediments on the outer edges of the floodplain in the vicinity of Bowenville, Jondaryan and upper parts of the valley near Goombungee.
- Generally receives a significant amount of rainfall, with the average annual rainfall at Oakey, Jondaryan and Bowenville being 611mm, 633mm and 633mm respectively.
- The dominant soils associated with the lower reaches of Oakey Creek (west of Jondaryan) are vertosols (deep black and grey cracking clays with bleached sands or loams over brown or black clays) which are cropped extensively, whilst areas in the vicinity of Oakey consist of chromosols (predominantly red or brown loams over red or brown clays) (DNR, 1999 and State of Queensland, 1975).
- The land use in this LCA is dominated by agricultural land uses, particularly dryland and irrigated farming, with some intensive areas irrigated cropping, grazing on native vegetation and isolated areas where intensive animal husbandry occurs.
- There is existing and emerging residential development associated with Oakey and isolated rural homesteads within the floodplain.
- Generally lower sense of expansiveness compared to LCA G1, due to proximity and visual interest provided by elevated landscapes associated with LCT B and LCT C (particularly LCA C1 - C6) and riparian vegetation associated with LCT F.

Myall Creek Steeply Undulating Foothills and Valleys (LCA G3)

This LCA contains the alluvial areas contained with the floodplain and valley floor associated with Myall Creek and its catchment. Key relevant features of this LCA include:

- The surface geology of this LCA is comprised almost exclusively of Quaternary Alluvium (associated with areas adjacent the Myall Creek and its tributaries), with some areas of Late Tertiary - Quaternary Poorly Consolidated Sediments and limited areas of Walloon Coal Measures and Main Range Volcanics in the vicinity of Bowenville.
- Generally receives a significant amount of rainfall, with the average annual rainfall in lower parts of the catchment being around 640mm and upper parts of the catchment near MacLagan being around 610mm.
- Soils adjacent Myall Creek area typically comprised of chromosols (bleached clay loams over black, grey or brown clays (hard-setting, texture-contrast soils) which are generally more suitable for improved or native pastures, whilst soils in areas northwest of Bowenville consist of vertosols (deep, grey, cracking clays), that area less suited to cropping than other parts of this LCT (DNR, 1999 and State of Queensland, 1975).
- The land use in this LCA is dominated by agricultural land uses, particularly dryland farming and grazing on native vegetations, with some very limited areas of irrigated cropping, which generally exist to support intensive animal husbandry that occurs throughout this area.
- Residential development is limited to isolated rural homesteads within the floodplain.
- Generally lower sense of expansiveness due to proximity and visual interest provided by elevated landscapes associated with LCT B and riparian vegetation associated with LCT F.



LCT H: SHELVING ALLUVIAL FARMLAND MOSAIC

Location and boundaries

This landscape type is located in the southwestern part of the Toowoomba Region, to the west of the alluvial floodplain associated with the Condamine River, associated with the shelving alluvial farmland between Cecil Plains and Millmerran.

The shelving alluvial landscape is predominately bounded to the northeast by LCT G, and to the southeast by LCT L, LCT J and LCT I.

There is one LCA of this type in the Toowoomba Region:

- Cecil Plains and Millmerran Shelving Alluvial Farmland Mosaic (LCA H1)



Location of LCT H within the Toowoomba Region

Key landscape character attributes

Natural landscape elements

- Somewhat vegetated, with dense vegetation along roadside shelter belts, riparian corridors and drainage lines. Northern parts of this area contain patches of remnant and regrowth vegetation that contribute to a farmland mosaic.
- Flat to gently undulating plains to low rises (0-15% slope).
- Moderately elevated landscape associated, generally situated between 350-450m AHD, with the lowest elevations in the north associated with the Condamine River and its floodplain.
- Major soils include sodosols and kurosols.
- Parts of this area adjacent the Condamine River and its tributaries are prone to flooding.

Settlement and land use

- Generally a sparsely settled landscape, with the exception of residential areas associated with settlements.
- Contains Cecil Plains and some peri-urban development associated with Millmerran.
- Dominated by agricultural land uses, particularly grazing on native vegetation, dryland farming and intensive animal husbandry, with some smaller areas of irrigated farming (associated with feedlots and piggeries).
- Presence of some large rural water storage dams (generally ring tanks), associated with areas that support irrigated cropping.
- Contains the Commodore Peak Mine.
- Contains the Millmerran Power Plant and is traversed by high voltage electricity transmission lines.
- Traversed by significant rail and road infrastructure, including the Gore Highway (A39), Toowoomba-Cecil Plains Road, Millmerran-Cecil Plains Road and non-operational rail infrastructure associated with the South Western System and Cecil Plains Branch Railway.

Key landmarks and features

- Large irrigation dams and infrastructure.
- Scattered areas of remnant and regrowth vegetation.



Patches of vegetation encroach upon agricultural areas

Identified scenic values, key views and view corridors

- Contiguous tracts of vegetation in more elevated parts of this LCT along with waterways and dams that are within this LCT were identified as having very high or high scenic amenity value (8-10) in the TRSAS (refer Part C). It is however likely that many dams identified in GIS mapping would in reality not contribute to the scenic amenity of this LCT, due to the nature of their construction (often ring tanks) and limited accessibility of views to water.
- Where available, views towards nearby forested peaks and ridgelines associated with LCT K contribute to the scenic amenity of this LCT.
- Where available, views towards adjacent elevated native forests provide a backdrop and contribute to the scenic amenity of this LCT (refer LCT K).
- Views towards vegetated riparian corridors provide some visual containment, whilst also contributing to the scenic amenity of this LCT (refer LCT E).

Scenic lookouts and routes

- The regional level *Rural Getaway* tourist drive and local *Open Plains Country Drive* scenic route traverse this LCT.
- There are no formal scenic lookouts within the LCT, however two nearby scenic lookouts provide views over this LCT; Commodore Peak Lookout and the summit of Mount Basalt.

Experiential landscape qualities

- Northern parts generally feel very remote and enclosed, due to strong shelterbelts along field boundaries and road and limited residential development.
- Southern parts and areas where irrigated cropping occurs have similarities to LCT G.

Heritage elements

Queensland Heritage Register

- All Saints Anglican Church and Cemetery Yandilla (600722)

Heritage Places (Toowoomba Regional Planning Scheme)

- 6942 Gore Highway (A39), Millmerran (2/MIL/0176)



Pigs foraging in fields near Domville



Large open dryland cropping adjacent the Condamine River



Scattered trees and open grazing land

Landscape Character Areas

Cecil Plains and Millmerran Shelving Alluvial Farmland Mosaic (H1)

There is only one LCA within this LCT, which contains landscapes associated with the shelving alluvial farmland that occurs between Cecil Plains and Millmerran, to the west of the Condamine River floodplain. Key relevant features of this LCA include:

- The surface geology is comprised of areas of colluvium, with some areas of sedimentary rock associated with the Kumbarilla beds occurring within the western extents of the area (State of Queensland, 2020).
- This area is within the Condamine River catchment. Key waterways include Crawlers Creek, Pine Creek and Back Creek which generally flow in a northeasterly direction towards the Condamine River.
- Rainfall is relatively consistent across the area and typically around 650 mm/yr, with more elevated areas near Millmerran receiving slightly more rainfall than other areas.
- Major soils include sodosols (hard pedal mottled-yellow duplex soils and hard pedal black duplex soils) and kurosols (sandy pedal mottled-yellow duplex soils) (BRS, 2009).
- Generally clearing in this area has been extensive, with the exception of areas north of Millmerran adjacent Kumbarilla SF, Dunmore SF and Western Creek SF, where there are patches of remnant vegetation that are relatively intact.
- Remnant vegetation is dominated by large areas of eucalypt dry woodlands on inland depositional plains and floodplains (RE 11.3.2, 11.3.4, 11.3.14, 11.3.18, 11.5.1, 11.5.1a and 11.5.4), while areas of eucalypt woodlands to open forests also occur in more elevated areas (RE 11.5.20 and 11.7.4). Callitris woodland - open forests (11.5.4a) occur within the western extents of the area adjacent Kumbarilla SF, Dunmore SF and Western Creek SF. Some very limited and isolated areas of acacia dominated open forests, woodlands and shrublands (RE 11.3.17, 11.3.25 and 11.4.3) also occur (State of Queensland, 2020).
- There are some areas of high-value regrowth vegetation, particularly within the northern parts of the area.
- Predominant land uses are grazing on native vegetation, dryland cropping and intensive animal husbandry, with some smaller areas of irrigated cropping (associated with feedlots and piggeries).
- Some large rural water storage dams and small farm dams also occur.
- This area contains isolated rural properties and Cecil Plains.
- There are no formal recreation facilities in this area.



Wilkin Road north of Cecil Plains



Large dryland cropping areas with remnant vegetation occurring along waterways



Speers Creek near Owens Scrub Road showing remnant vegetation associated with RE 11.3.2/11.3.25.



Splitters Creek near Millmerran-Cecil Plains Road crossing showing remnant vegetation associated with RE 11.3.25/11.3.14



Unnamed upper tributary of Grasstree Creek near The Turkey Road showing remnant vegetation associated with RE 11.3.2/11.4.3, an endangered vegetation community.



Extensive view across LCT H from Millmerran-Cecil Plains Road



LCT I: FORESTED AND GRAZED TRAPROCK AND SANDSTONE HILLS

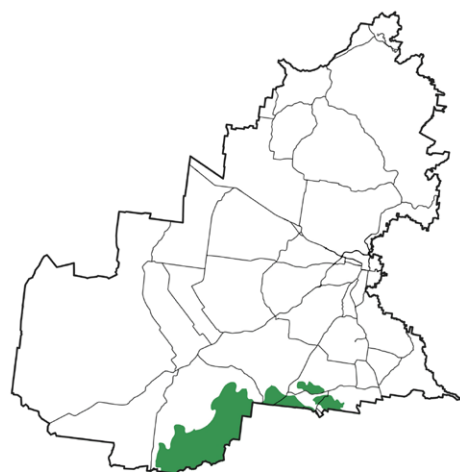
Location and boundaries

This landscape type is located in the southern part of the Toowoomba Region, adjacent the boundary to the Southern Downs region and associated with the northern extent of forested and grazed traprock and sandstone hills that extend south towards Stanthorpe.

The forested and grazed traprock hills landscape is bounded to the north by LCT J, LCT H, LCT G and LCT, while the southern boundary is formed by the local government area boundary.

There are three LCAs of this type in the Toowoomba Region:

- Stonehenge Forested and Grazed Traprock and Sandstone Hills (LCA I1)
- Ellangowan Forested and Grazed Traprock and Sandstone Hills (LCA I2)
- Sandy Camp Forested and Grazed Traprock and Sandstone Hills (LCA I3)



Location of LCT I within the Toowoomba Region

Key landscape character attributes

Natural landscape elements

- Relatively vegetated, with clearing limited to more gently undulating areas suitable for grazing.
- Some relatively large and contiguous areas of remnant vegetation containing narrow leaved Ironbark (*Eucalyptus* spp.), Bull Oak (*Allocasuarina luehmannii*), Cypress Pine (*Callitris* spp.), Rusty Gum (*Angophora costata*) and Poplar Box (*E. populnea*) open forest, with smaller areas of Ironbark (*Eucalyptus* spp.) and Brown Box (*E. brownii*) woodland with Grey Box (*Eucalyptus microcarpa*), Yellow Box (*E. melliodora*), Fuzzy Box (*E. conica*) and Wattles (*Acacia* spp.) (DNR, 1999).
- Rises and undulating to low hilly terrain on broad gently sloping to flat areas (0-15% slope), with low often gravel-strewn ridges and small hilly areas of rock outcrops (DNR, 1999 and BRS, 2009).
- Moderately elevated landscape associated with the upper Condamine River catchment, generally situated between 300-500m AHD.
- Major soils include sodosols, as well as small areas of vertosols and tenosols. These soils are of low to moderate fertility, which are not suitable for cultivation (State of Queensland, 1975).
- In addition, the steep topography, stoniness and dispersive nature of soils further limits cultivation within this area (State of Queensland, 1975).

Settlement and land use

- Generally a sparsely settled landscape, with the exception of isolated rural farmsteads.
- Dominated by agricultural land uses, particularly low intensity grazing of native pastures which occurs on lower slopes, whilst natural vegetation remains on many of the steeper areas (State of Queensland, 1975), including within the small area of Bringalily State Forest that falls within the Toowoomba Region.
- Generally not suitable for cropping, with limited suitability for establishing and grazing sown pastures on the lower sloping, deeper soils.
- Contains very limited road infrastructure, limited to graded dirt roads.

Key landmarks and features

- Contains waterways with riverine wetland or fringing riverine wetland (RE 13.3.4).
- Contains Yallamundi Lagoon, a large natural water body.
- Contains the historical township of Kooroongarra.
- Contains the historic Stonehenge Station.
- Quite a visibly distinctive stony and rocky landscape.



Forested and grazed traprock hills in the southern part of the Toowoomba Region

Identified scenic values, key views and view corridors

- Contiguous tracts of vegetation in more elevated parts of this LCT, in particular in the vicinity of Stonehenge and Kangaroo Mountain (514m AHD), Yallamundi Lagoon, waterways and dams that are within this LCT were identified as having very high or high scenic amenity value (8-10) in the TRSAS (refer Part C). It is however likely that many dams identified in GIS mapping would in reality not contribute to the scenic amenity of this LCT, due to the nature of their construction (often ring tanks) and limited accessibility of views to water.
- Expansive views towards forested undulating hills associated with this LCT, including south towards Bringalily State Forest and areas around Mount Bodumba (624m AHD) within the Goondiwindi Regional Council local government area.
- Some glimpsed views to LCT A from northern parts of this LCT.

Scenic lookouts and routes

- This area does not contain any scenic lookouts and is not traversed by any scenic routes.

Experiential landscape qualities

- Generally feels very remote and isolated.



Native forests are dominant on hillsides



Canning Creek near Kooroongarra



Historical township of Kooroongarra

Landscape Character Areas

Stonehenge Forested and Grazed Traprock and Sandstone Hills (LCA 11)

This LCA is associated with the traprock and sandstone hills in the vicinity of Stonehenge and Kangaroo Mountain (514m AHD). Key relevant features of this LCA include:

- The surface geology is predominately comprised of arenite-mudrock associated with the Marburg Subgroup and sedimentary rock associated with the Texas beds that extend south and east into the Southern Downs region, with some areas of colluvium occurring in lower lying areas adjacent Canning Creek and Speers Creek (State of Queensland, 2020).
- This area is within both the Condamine River and Macintyre Brook catchments. Key waterways include Canning Creek which flows in a southwesterly direction towards the Macintyre Brook and Speers Creek, which flows in a northerly direction towards Grasstree Creek, a tributary of the Condamine River.
- Rainfall is relatively consistent across the area and typically between 600-650 mm/yr, with more elevated areas in the south adjacent the local government area boundary and areas in the east receiving slightly more rainfall than other areas.
- Major soils include sodosols (hard pedal mottled-yellow duplex soils and, to a lesser extent hard pedal black duplex soils) as well as small areas of vertosols (grey self-mulching cracking clays) and tenosols (dense loams) (BRS, 2009).
- Generally clearing in this area has been limited to more gently undulating areas suitable for grazing, and there are large contiguous areas of remnant vegetation, particularly associated with steeper areas and areas with poor soils.
- Remnant vegetation is dominated by large areas of eucalypt woodlands to open forests (RE 11.7.4, 11.9.9a, 13.3.4, 13.11.3, 13.11.3a, 13.11.3b and 13.11.8), while areas of eucalypt dry woodlands on inland depositional plains also occur in lower lying areas (RE 11.3.2, 11.5.1, 11.5.1a, 11.5.4). Some very limited and isolated areas of acacia dominated open forests, woodlands and shrublands (RE 11.4.3) and eucalypt open forests to woodlands on floodplains also occur (RE 11.3.4) (State of Queensland, 2020).
- There are some areas of high-value regrowth vegetation, particularly within the eastern part of the area.
- Predominant land use is grazing on native vegetation, while some limited dryland cropping and irrigated perennial horticulture occurs adjacent Canning Creek and Speers Creek.
- Contains Yallamundi Lagoon and small farm dams also occur.
- This area contains isolated rural properties.
- A small area of Bringalily SF is within this area. Bringalily SF has no visitor facilities or designated walking tracks, however formed roads provide access for informal nature-based recreation.



Canning Creek near Stonehenge Road crossing looking towards endangered remnant vegetation associated with RE 13.3.4



Stonehenge Station and historic site



White Box, Narrow-leaved Ironbark, Queensland Blue Gum and Callitris woodlands (RE 11.9.9a)



View east towards elevated hills and endangered remnant vegetation associated with RE 13.11.3 from Nyora Road



Cominos Olive Groves on Stonehenge Road



Looking towards LCA I2 from Clifton-Leyburn Road



Narrow-leaved ironbark woodland (RE 11.9.9)



Looking west towards LCA I3 from Clifton-Boundary Road



Looking south to LCA I3 and LCA I1 from Clifton-Leyburn Road

Ellangowan Forested and Grazed Traprock and Sandstone Hills (LCA I2)

This LCA is associated with a small area of traprock and sandstone hills in the vicinity of Ellangowan, which is situated to the north of the Condamine River, Kings Creek and Clifton-Leyburn Road. Key relevant features of this LCA include:

- The surface geology is predominately comprised of arenite-mudrock associated with the Marburg Subgroup and Walloon Subgroup, while small areas of basalt associated with the Main Range Volcanics also occur (State of Queensland, 2020).
- This area is within the Condamine River catchment, and does not include any key waterways, however includes several minor watercourses that drain in a southerly direction towards the Condamine River and Kings Creek, which are situated to the immediate south of this area.
- Rainfall is relatively consistent across the area and typically between 650-670 mm/yr.
- Major soils include sodosols (hard pedal mottled-yellow duplex soils) and to a lesser extent vertosols (black self-mulching cracking clays) (BRS, 2009).
- Generally clearing in this area has been limited to more gently undulating and lower lying areas adjacent waterways that are suitable for grazing. There are large, relatively contiguous areas of remnant vegetation.
- Remnant vegetation is dominated by large areas of eucalypt woodlands to open forests (RE 11.9.9) and to a lesser extent acacia dominated open forests, woodlands and shrublands (RE 11.5.2a), while some limited areas of eucalypt dry woodlands on inland depositional plains also occur in lower lying areas (RE 11.3.2 and 11.9.7) (State of Queensland, 2020).
- There are no areas of high-value regrowth vegetation.
- Predominant land use is grazing on native vegetation, while some limited dryland cropping and intensive animal husbandry occurs in lower lying areas and on lower hillslopes.
- Contains small farm dams.
- This area contains the Clifton Golf Club and isolated rural properties.
- There are no public recreation facilities within this area.

Sandy Camp Forested and Grazed Traprock and Sandstone Hills (LCA I3)

This LCA is associated with a small area of traprock and sandstone hills in the vicinity of Sandy Camp, which is situated to the south of Kings Creek, north of Dalrymple Creek and is traversed by Ryeford-Pratten Road. Key relevant features of this LCA include:

- The surface geology is predominately comprised of arenite-mudrock associated with the Marburg Subgroup and a small area of sedimentary rock associated with the Texas beds (State of Queensland, 2020).
- This area is within the Condamine River catchment, and does not include any key waterways, however includes several minor watercourses that drain in a northerly direction towards the Kings Creek and a southeasterly direction towards Dalrymple Creek.
- Rainfall is relatively consistent across the area and typically around 670 mm/yr.
- Major soils include sodosols (hard pedal mottled-yellow duplex soils) and to a lesser extent vertosols (black self-mulching cracking clays) (BRS, 2009).
- Generally clearing in this area has been limited to more gently undulating and lower lying areas adjacent waterways that are suitable for grazing. There are large, relatively contiguous areas of remnant vegetation.
- Remnant vegetation is dominated by large areas of eucalypt woodlands to open forests (RE 11.9.9) and to a lesser extent acacia dominated open forests, woodlands and shrublands (RE 11.5.2a) (State of Queensland, 2020).
- There are some large areas of high-value regrowth vegetation.
- Predominant land use is grazing on native vegetation, while some limited dryland cropping in lower lying areas and on lower hillslopes.
- Contains small farm dams.
- There are no public recreation facilities within this area.



LCT J: OPEN ELEVATED UNDULATING FARMLAND MOSAIC

Location and boundaries

This landscape type is located in the southern part of the Toowoomba Region, associated with the open elevated undulating farmland mosaic to the south of Millmerran.

This area is bounded to the northeast by LCT H, to the southeast by LCT I and to the west by LCT L. The Goondiwindi region forms the southern boundary of this LCT.

There is one LCA of this type in the Toowoomba Region:

- Bringalilly Open Elevated Undulating Farmland Mosaic (LCA J1)

Key landscape character attributes

Natural landscape elements

- Generally extensively cleared, with vegetation limited to roadside shelter belts, riparian corridors and drainage lines and small, isolated patches vegetation.
- Gently undulating plains and dissected low hills, rises and ridges (2-15% slope) with flat areas associated with key waterways (0% slope).
- Moderately elevated landscape associated, generally situated between 300-500m AHD, with higher elevations associated with areas adjacent LCT K.
- Major soils include vertosols, sodosols, tenosols and rudosols.

Settlement and land use

- Generally a sparsely settled landscape, with the exception of residential and peri-urban development associated with Millmerran.
- Dominated by agricultural land uses, particularly grazing on native vegetation and dryland cropping.
- Presence of rural water storage dams.
- Contains significant mining operations including the Commodore Peak Mine, as well as the Millmerran Power Station.
- Traversed by significant rail and road infrastructure, including the Gore Highway (A39) and Millmerran-Inglewood Road and non-operational rail infrastructure associated with the South Western System.

Key landmarks and features

- Contains agricultural infrastructure such a windmills, grain stores and agricultural sheds, that contribute to the rural character.
- Contour banks are used on slopes to control erosion.
- Small dams and infrastructure.
- Peaks associated with LCT K.



Location of LCT J within the Toowoomba Region



View across the open undulating farmland showing a diverse array of land use activities

Identified scenic values, key views and view corridors

- Small areas of vegetation in more elevated parts of this LCT, waterways and dams that are within this LCT were identified as having very high or high scenic amenity value (8-10) in the TRSAS (refer Part C). It is however likely that many dams identified in GIS mapping would in reality not contribute to the scenic amenity of this LCT, due to the nature of their construction (often ring tanks) and limited accessibility of views to water.
- Views towards surrounding forested peaks and ridgelines and elevated native forests contribute to the scenic amenity of this LCT, particularly views towards landscapes associated with:
 - LCT K - Brigalow Belt Forested Peaks and Ridgelines.
 - LCT L - Elevated and Undulating Native Forests.
- Views towards vegetated riparian corridors within this LCT provide some visual containment within an otherwise very open landscape, whilst also contributing to the scenic amenity of this LCT.

Scenic lookouts and routes

- The regional level *Rural Getaway* tourist drive and local *Open Plains Country Drive* scenic route, along with several other local drives around Millmerran traverse this LCT.
- There are no formal scenic lookouts within the LCT, however two nearby scenic lookouts provide views over this LCT; Commodore Peak Lookout and the summit of Mount Basalt.

Experiential landscape qualities

- Generally feels very open and expansive and rolling hills provide long viewing opportunities.
- Generally visually accessible, particularly from main roads, however has limited public recreation opportunities with the exception of parks associated with Millmerran.
- Dependant upon views to LCT K and LCT L for character and visual amenity.



Back Creek near Millmerran Power Plant showing remnant vegetation associated with RE 11.3.2



Millmerran Power Station



View towards Commodore Peak Mine from Commodore Peak Lookout

Landscape Character Areas

Bringalilly Open Elevated Undulating Farmland Mosaic (J1)

There is only one LCA within this LCT, which contains landscapes associated with the open elevated undulating farmland mosaic that occurs to the south of Millmerran. Key relevant features of this LCA include:

- The surface geology is generally comprised of areas of Quaternary colluvium and sedimentary rock associated with the Kumbarilla beds, with some areas of arenite-mudrock associated with the Walloon Subgroup and Marburg Subgroup, sedimentary rock (MG-Ts), and some minor areas of Quaternary alluvium situated along the lower parts of Bringalilly Creek, Nicol Creek and Mingimarny Creek (State of Queensland, 2020).
- This area is within the Condamine River, Macintyre Brook and Weir River catchments. Key waterways include Bringalilly Creek, Nicol Creek and Mingimarny Creek, which are tributaries of Canning Creek which flows in a southerly direction towards the Macintyre Brook, Bora Creek which flows in a northwesterly direction towards Western Creek, a tributary of the Weir River and Back Creek that flows in a northeasterly direction towards Millmerran and the Condamine River.
- Rainfall is relatively consistent across the area and typically between 620-670 mm/yr, with more elevated areas near Millmerran receiving slightly more rainfall than other areas.
- Major soils include vertosols (grey self-mulching clays) and sodosols (hard pedal mottled-yellow duplex soils), with smaller areas of tenosols (bleached sands with a colour B horizon), kurosols (Sandy pedal mottled-yellow duplex soils) and rudosols (firm shallow siliceous loams) occurring in the western part of the area adjacent LCT L (BRS, 2009).
- Generally clearing in this area has been extensive, and the extent of remnant vegetation is limited to isolated patches of vegetation along waterways and adjacent LCT L.
- Remnant vegetation in this area is varied and includes:
 - Isolated patches of eucalypt dry woodlands on inland depositional plains and floodplains (RE 11.3.2, 11.3.4, 11.3.14, 11.3.18, 11.3.25 11.5.1, 11.5.1a and 11.5.4)
 - Isolated patches of eucalypt woodlands to open forests (RE 11.5.20 and 11.7.4).
 - Callitris woodland - open forests (11.5.4) occur within the western extents of the area adjacent Wondul Creek SF.
 - Some isolated areas of acacia dominated open forests, woodlands and shrublands (RE 11.9.5 and 11.4.3) also occur (State of Queensland, 2020).
- There are some areas of high-value regrowth vegetation, particularly along waterways.
- Predominant land uses are grazing on native vegetation and dryland cropping, with some smaller areas of intensive animal husbandry and irrigated cropping (associated with areas of alluvium near Bringalilly Creek).
- This area contains significant mining operations including the Commodore Peak Mine and Chandlers Quarry, a small quarry is situated in the southern part of this area, as well as the Millmerran Power Station.
- Some large rural water storage dams and small farm dams also occur.
- This area contains isolated rural properties and the regional town Millmerran.
- There are no formal recreation facilities in this area.



Bringalilly Creek near Boola Creek Road crossing



Cattle grazing near Nicol Creek Road



Stony and undulating open grazing and dryland cropping lands



Bora Creek near the Gore Highway (A39) crossing, showing endangered remnant vegetation associated with RE 11.9.5



Open, elevated grazing lands



Bringallily Creek near Boola Creek Road crossing showing remnant vegetation associated with RE 11.3.2



LCT K: BRIGALOW BELT FORESTED PEAKS

Location and boundaries

This landscape type is located in the southern part of the Toowoomba Region, to the south of Millmerran.

These peaks are contained within the broader undulating landscape associated with LCT J.

There are three LCAs of this type in the Toowoomba Region:

- Captains Mountain and Commodore Peak Brigalow Belt Forested Peaks (K1)
- Mount Domville and Mount Emlyn Brigalow Belt Forested Peaks (K2)
- Pine Hill Brigalow Belt Forested Peaks (K3)

Key landscape character attributes

Natural landscape elements

- Typically vegetated, generally consisting of eucalypt woodlands to open forests (RE 11.7.4, 11.8.2a, 13.12.5, 11.9.9a and 11.9.5) or small areas of rainforest and scrubs (RE 11.8.3) on elevated peaks, while some smaller areas of eucalypt dry woodlands on inland depositional plains (RE 11.3.18, 11.3.4, 11.4.10 and 11.5.1) and acacia dominated open forests, woodlands and shrublands RE 11.3.25, 11.4.3, 11.7.4, 11.9.5 and 11.9.7) also occur on the lower slopes and foothills (State of Queensland, 2020).
- Some evidence of clearing for agricultural or extractive uses, particularly on the lower slopes and associated with LCA K2.
- Generally associated with steep hills, mountains and slopes of basalt hills and mesas, varying from relatively shallow at the base to steep (15-45% slope) with the exception of LCA K3, which is a granite outlier.
- Elevated landscape features situated within the broader Open Elevated Farmland Mosaic (LCT J), with elevations typically between 400-600m AHD, with Mount Domville being the highest point at 644m AHD.
- Major soils include vertosols, while some areas of sodosols also occur.

Settlement and land use

- Generally limited development, with the exception of isolated rural residential properties that are typically situated on the footslopes of hills.
- Limited presence of infrastructure, limited to vertical elements associated with telecommunications infrastructure on Mount Domville.
- Dominated by natural and agricultural land uses, particularly grazing on native vegetation and production forestry, with limited public access with the exception of access to Commodore Peak Lookout and Mount Basalt Reserve, which is managed by Council.
- Includes the Captains Mountain Key Resource Area (KRA) (No. 163) which is situated on the western slopes of Commodore Peak and the Lavelle Road Quarry (Site no. 544665).
- Is traversed by the Gore Highway (A39) and Koorongarra Road, as well as several other local roads and roads associated with private properties.

Key landmarks and features

- Peaks are often distinctive and are identifiable local landmarks e.g. Mount Domville.
- Often presence of unique basalt screes (RE, 2020).
- Contour banks are used on the lower slopes to control erosion.



Location of LCT K within the Toowoomba Region



View from Mount Basalt towards Millmerran State Forest

Identified scenic values, key views and view corridors

- Forested peaks and ridgelines associated with basaltic hills and mesas that are within this LCT were identified as having very high or high scenic amenity value (8-10) in the TRSAS (refer Part C).
- These findings are supported by the *Scenic Amenity Study* undertaken by Conics for Council in 2009 which identified the 'isolated peaks of Captains Mountain and Commodore Peak' as having regionally significant scenic amenity value.
- Relatively inaccessible landscape, with the exception of the Commodore Peak Lookout and Mount Basalt Reserve, which provides a walking trail to the summit that provides panoramic views towards other parts of this LCT as well as landscapes associated with LCT H, LCT I, LCT J and LCT L.
- More distant views are also possible from the summit of Mount Basalt towards landscapes associated with LCT A, LCT B, LCT C, LCT F and LCT G.
- Important views to these peaks from scenic lookouts include:
 - Views from Commodore Peak Lookout to Mount Domville, Mount Basalt and Mount Emlyn, within LCA K2).
 - Views from the summit of Mount Basalt within Mount Basalt Reserve to Commodore Peak (including West Ridge and South Ridge) with LCA K1, towards Mount Domville, Mount Emlyn with LCA K2 and towards Pine Hill, with LCA K3.
- Other important views to consider include:
 - Views from the summit of Mount Basalt within Mount Basalt Reserve towards LCT C, in particular Mount Russell, Mount Taylor, Mount Wyangapinni, Parkers, Mount Mallard, Scrubby Mountain, Gentlemans Seat and Mount Rubieslaw which are within LCA C15 and Mount Kent, Mount Sibley and Kent which are within LCA C16.

Scenic lookouts and routes

- Views to this LCT are possible from the local *Open Plains Country Drive* scenic route.
- This LCT contains two scenic lookouts that provide broad expansive views across the surrounding landscape (including landscapes within adjacent LGAs) including Commodore Peak Lookout and the summit of Mount Basalt within Mount Basalt Reserve.

Experiential landscape qualities

- Provide open expansive views across the surrounding landscape from the summit of Mount Basalt.
- Are distinctive and prominent features within the broader landscape context (LCT J), that contribute to the scenic amenity of the Toowoomba Region and act as local landmarks.
- Are visible from a long distance, with views possible from several other LCTs.



View north from Mount Basalt, within Mount Basalt Reserve (LCA K2)



View to Mount Domville (LCA K2) from within LCT J



View towards forested ridgelines associated with Commodore Peak and West Ridge (LCA K1)

Landscape Character Areas

There are three LCAs of this type within the Toowoomba Region, described below.

Captains Mountain and Commodore Peak Brigalow Belt Forested Peaks and Ridgelines (LCA K1)

This LCA contains landscapes associated with Commodore Peak (613m AHD), West Ridge, South Ridge, Captains Mountain (609m AHD) and Domville SF, which are situated to the southwest of Millmerran, to the west of Millmerran-Inglewood Road, and traversed by the Gore Highway (A39). Key relevant features of this LCA include:

- Captains Mountains and Commodore Peak are tertiary basalt plateau remnants associated with the Main Range Volcanics, surrounded by sedimentary rock associated with the Kumbarilla beds (State of Queensland, 2016).
- The major soils associated with Captains Mountains are moderately shallow grey cracking clays, while the major soils associated Commodore Peak are dark shallow porous loamy soils, shallow friable clays and shallow cracking clays. Red friable earths and shallow dark cracking clays also occur at lower elevations (BRS, 2009).
- Remnant vegetation associated with these peaks is relatively intact and generally comprised of eucalypt woodlands to open forests (RE 11.7.4, 11.8.2a), with some smaller areas of eucalypt dry woodlands on inland depositional plains (RE 11.5.1) and acacia dominated open forests, woodlands and shrublands (RE 11.3.25, 11.7.4, 11.9.5 and 11.9.7) that occur on the lower slopes and foothills (State of Queensland, 2020).
- There are some areas of high-value regrowth vegetation.
- Predominant land use is grazing on native vegetation, while dryland cropping and perennial horticulture occurs on the lower slopes.
- The Captains Mountain KRA is situated on the western slopes of Commodore Peak.
- Domville SF is situated on the eastern side of Commodore Peak and has no visitor facilities or designated walking tracks.
- Generally this area has limited public access, with the exception of Commodore Peak Lookout at the base of Commodore Peak which provides elevated views towards LCT J, including the Commodore Mine and the Millmerran Power Station.
- These landscapes contribute to the setting of Millmerran and scenic amenity of the area, including views from the Gore Highway (A39), Millmerran-Inglewood Road, Mount Basalt Reserve and LCT J, LCT H and LCT G.



View towards West Ridge (LCA K1) from the Gore Highway (A39)



View towards Commodore Peak (LCA K1) from Millmerran-Inglewood Road



View from Commodore Peak Lookout towards LCT J, the Commodore Mine and Millmerran Power Station



View towards South Ridge (LCA K1) from Commodore Peak Road



View towards Commodore Peak and West Ridge from near Millmerran

Mount Domville and Mount Emlyn Brigalow Belt Forested Peaks and Ridgelines (LCA K2)

This LCA contains landscapes associated with Mount Domville (644m AHD) and Mount Emlyn (591m AHD) (including Mount Basalt which is within the Council owned and managed Mount Basalt Reserve) which are situated to the south of Millmerran, to the east of Millmerran-Inglewood Road. Key relevant features of this LCA include:

- Mount Domville, Mount Emlyn and Mount Basalt are tertiary basalt plateau remnants associated with the Main Range Volcanics (State of Queensland, 2016).
- The major soils are moderately shallow grey cracking clays that occur on peaks and upper slopes, while some dark cracking clays and various alkaline soils occur at lower elevations (BRS, 2009).
- This area has been extensively cleared and remnant vegetation is limited to very small areas of rainforest and scrubs (RE 11.8.3) on elevated peaks and isolated areas of acacia dominated open forests, woodlands and shrublands on lower slopes (RE 11.3.25, 11.4.3 and 11.5.20) that have very low levels of connectivity (State of Queensland, 2020).
- There are some limited areas of high-value regrowth vegetation.
- Predominant land use is grazing on native vegetation, while dryland cropping occurs on the lower slopes. The Lavelle Road Quarry is within this area.
- There are several communication towers situated on Mount Domville that is accessed via a public easement (however is not accessible to the public).
- Mount Basalt Reserve and the and the Mount Basalt Walking Circuit provides access to the summit which provides panoramic views across the surrounding landscape.
- Mount Emlyn is on private property and is not publicly accessible.
- These peaks (in particular Mount Domville due to its distinctive form) and the landscapes associated with them act as local landmarks and wayfinding devices. These peaks collectively contribute to the scenic amenity of the area, including views from Millmerran-Inglewood Road, Mount Basalt Reserve and LCT J, LCT H and LCT G.



View towards Mount Basalt (LCA K2) from Kooroongarra Road



View towards Millmerran Power Plant (within LCT J) from the Mount Basalt Walking Circuit



View towards Commodore Peak (LCT K1) from the summit of Mount Basalt (LCT K2)



View towards Mount Domville (LCT K2) from LCT J



Basalt columns on the ridge of Mount Basalt (LCT K2)



View from Millmerran SF towards Mount Domville (LCA K2)



Millmerran SF access track (LCT K3)



Vegetation on granite at Pine Hill



Granite within Millmerran SF (LCT K3)

Pine Hill Brigalow Belt Forested Peaks and Ridgelines (LCA K1)

This LCA contains landscapes associated with Pine Hill (504m AHD) and Millmerran SF, which are situated to the south of Millmerran, to the east of Millmerran-Inglewood Road. Key relevant features of this LCA include:

- Pine Hill is a granite outcrop associated with PRg-MG unit. It is bounded to the north by areas of colluvium (MG-TQs) and to the south by arenite-mudrock (Jurassic shales and sandstones) associated with the Marburg Subgroup (State of Queensland, 2016).
- The major soils are moderately shallow grey cracking clays that occur on peaks and upper slopes, while some dark cracking clays and various alkaline soils occur at lower elevations. Hard pedal mottled-yellow duplex soils also occur in the southern part of the area (BRS, 2009).
- Remnant vegetation is relatively intact and generally comprised of eucalypt woodlands to open forests (RE 13.12.5, 11.9.9a and 11.9.5), with some smaller areas of eucalypt dry woodlands on inland depositional plains (RE 11.3.18, 11.3.4, 11.4.10) and acacia dominated open forests, woodlands and shrublands (RE 11.9.5) that occur on the lower slopes and foothills of Pine Hill (State of Queensland, 2020).
- Predominant land use is production forestry/land within State forest.
- Most of the area falls within Millmerran SF, which has no visitor facilities or designated walking tracks.
- The area is unique in that it is a "*topographic isolate of granite outcropping with a disjunct New England Tableland ecosystem outlier (13.12.5) encapsulated by Brigalow Belt ecosystems on sandstone*" (DES, 2018).
- Pine Hill and the vegetated landscapes associated with Millmerran SF contribute to the scenic amenity of the area, particularly views from Millmerran-Inglewood Road, Mount Basalt Reserve and LCT J.
- This area is noted as being of regional significance for its biodiversity values (DES, 2018).



View towards Pine Hill and Millmerran SF (LCT K3) (LCT K1) from the summit of Mount Basalt (LCT K2)



View from Millmerran SF towards Mount Emlyn (LCA K2)