

Sunshine Coast Constraints Analysis and Comparative Assessment of three designated Investigation Areas post 2031

Prepared for
Stockland

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CH2M HILL Australia Pty Ltd
Level 19, 215 Adelaide Street
Brisbane, QLD, Australia, 4000

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Appendix A Constraints mapping

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Acronyms and Abbreviations

| | |
|---------------------|--|
| ACH Act | <i>Aboriginal Cultural Heritage Act 2003</i> |
| AHC Act | <i>Australian Heritage Council Act 2003</i> |
| AHD | Australian height datum |
| ASS | acid sulphate soils |
| CID | community infrastructure designation |
| DEHP | Department of Environment and Heritage Protection |
| DNRW | Department of Natural Resources and Water |
| DTMR | Department of Transport and Main Roads |
| EPBC Act | <i>Environmental Protection and Biodiversity Conservation Act 1999</i> |
| EP Act | <i>Environmental Protection Act 1994</i> |
| ha | hectare |
| IDAS | Integrated Development Application System |
| km | kilometre |
| Land Act | <i>Land Act 1994</i> |
| Land Protection Act | <i>Land Protection (Pest and Stock Route Management) Act 2002</i> |
| m ³ | cubic metres |
| m | metre |
| Native Title Act | <i>Native Title Act 1993</i> |
| NC Act | <i>Nature Conservation Act 1992</i> |
| QH Act | <i>Queensland Heritage Act 1992</i> |
| QHC | Queensland Heritage Council |
| RE | regional ecosystem |
| SCL Act | <i>Strategic Cropping Land Act 2011</i> |
| SCL | Strategic Cropping Land |
| SEWPaC | Department of Sustainability, Environment, Water, Population and Communities |
| SP Act | <i>Sustainable Planning Act 2009</i> |
| SPP | State Planning Policy |
| SP Regulation | <i>Sustainable Planning Regulation 2009</i> |
| SPRP | State Planning Regulatory Provision |
| VM Act | <i>Vegetation Management Act 1999</i> |
| Water Act | <i>Water Act 2000</i> |
| Water Regulation | <i>Water Regulation 2002</i> |

Executive summary

The ultimate findings of this study were that:

- Halls Creek generally complies with the Strategic Directions and regional policies that are identified in the SEQRP and are relevant to developing greenfield areas.
- The Halls Creek area is already cleared and in single ownership making it ready for development when required post-2031. Development in this area could be efficiently serviced by infrastructure as an extension of the adjacent Aura community.
- Halls Creek does not have sufficient land capacity to meet all the 25,000 greenfield dwellings required by 2041;
- Halls Creek could only accommodate 40% of the future Greenfield demand required on the Sunshine Coast between 2031-2041
- The Beerwah/Caloundra South Corridor does have the land capacity to accommodate the 25,000 dwellings required, However, there are barriers to much of it being available to meet the SEQRP planning horizon post-2031 with a long term licence currently in place to HQPlantations.
- The Beerwah/Caloundra South Corridor is a challenging area to develop due to existing land use and tenure arrangements, environmental challenges it poses to the Pumicestone Passage and its location away from established urban areas and existing/planned infrastructure.
- The Beerwah/Caloundra South Corridor has the potential to provide a longer term development option requiring significantly more time for the land tenure, infrastructure and environmental challenges facing its development to be resolved

In view of these findings the recommendation of this study is that both the Halls Creek and Beerwah/Caloundra South Corridor Identified Growth Areas be retained in future South East Queensland Regional Plan updates.

Project Objectives

The regional plan designates two Identified Growth Areas (Halls Creek and Beerwah/Caloundra South Corridor) on the Sunshine Coast that could provide land for the extra 25,000 dwellings. The Sunshine Coast Council has also identified the Canelands area as worthy of further investigation for urban development.

In order to determine which of the Identified Growth areas is most appropriate for future longer- term urban development the regional plan outlines a process for assessing their suitability.

The purpose of this current study is to identify the potential of each of the three identified growth areas to meet the future needs (post 2031) for greenfield urban development land on the Sunshine Coast. This has been done by:

- Firstly, analysing the constraints to developing each investigation area for urban purposes and then identifying the area of land potentially suitable for urban development that remains; and
- Secondly, assessing how the developable land performs against the South East Queensland Regional Plan 2009-2031 policies that apply to development of greenfield areas in order to identify the challenges and opportunities for each area.

Project findings

The initial analysis (Section 4) identified ten types of relevant constraints that make land unsuitable for urban development (e.g. flood prone land or excessively steep land). By amalgamating these constraints for each area it was concluded that for:

- Halls Creek Investigation Area there was approximately 660 ha of developable land; (Note, more detailed investigations have been undertaken identified up to 780ha could be developed)
- Beerwah/Caloundra South Corridor Investigation Area there was approximately 2,260 ha of developable land; and
- Canelands Investigation Area there was no unconstrained land available for development.

The analysis concluded that there was no unconstrained land within the Canelands Investigation Area, which was constrained due to a number of factors such as flooding and the extent of Class A Agricultural Land. It was therefore determined that this Investigation Area be excluded from the next stage of the study.

The South East Queensland Regional Plan 2009-2031 policies relevant to developing greenfield areas were identified and amalgamated into three criteria groupings for assessment namely; Land Use (5), Infrastructure (4) and Environment (9). The results of this assessment (Section 5) identified the following opportunities and challenges for the remaining two Investigation Areas in meeting the SEQRP Strategic Directions relevant to developing greenfield areas.

Halls Creek Investigation Area

The developable land within the Halls Creek Investigation Area is mostly (85%) cleared and is used for low intensity grazing. Development for urban purposes would have minimal impact on biodiversity or rural production values of the Sunshine Coast.

Halls Creek would form an extension of the Aura (formerly Caloundra South) community allowing for coordination and timely delivery of key trunk infrastructure and community services. This infrastructure is already committed infrastructure to be provided by the Aura development. The proximity to Aura provides the opportunity to achieve similar smart growth outcomes by extending the high quality active and public transport networks constructed there into Halls Creek. The regular shape of the developable area within Halls Creek makes for efficient servicing by active and public transport networks which will reduce car dependency.

Halls Creek will benefit from and support the existing and proposed investment in transport infrastructure particularly related to the Aura development. Transport infrastructure that will be in place for Aura and that can easily be extended into Halls Creek includes Bells Creek Road and interchange and priority bus routes. Halls Creek will also provide significant extra patronage to support these bus routes and the Aura CAMCOS station.

The developable land within the Halls Creek Investigation Area does not have sufficient capacity to contain all the 25,000 new dwellings required for the Sunshine Coast in the longer term, but it does present a logical sequence of land use and infrastructure development. Other opportunities presented by this Investigation Area include:

- Flood free land with potential for rehabilitating the existing wetland to provide a water quality buffer to the Pumicestone Passage
- Developable area in a single ownership and with freehold title ensuring no native title issues
- No cultural heritage issues.

Beerwah/Caloundra South Corridor Investigation Area

The developable area with this Investigation Area is mostly used for plantation forestry. While development of this land will have little impact onsite biodiversity values there would be a significant impact on rural production values through the loss of the forestry resource.

These plantation resources are currently under a long term licence to the HQPlantations Pty Ltd Group (expires 2109), which poses a challenge to the area being available within the SEQRP 2041 planning horizon with issues such as land tenure and compensate to be resolved.

The Beerwah/Caloundra South Corridor Investigation Area is currently isolated from most existing or proposed social and development infrastructure. This will present a challenge and cost to creating the new community.

The presence of a CAMCOS station at Beerwah East (although not committed at present) provides the opportunity for a focus for higher density development and smart growth outcomes. However, the irregular shape of the developable area and uncertainty on finding commitment to deliver the rail means that walkable communities and high quality public transport networks will be difficult to achieve and car dependency is likely to be greater.

As this Investigation Area is a new development front, most of the transport infrastructure required to connect with the existing networks is not currently existing or planned. New transport infrastructure required will include the Beerwah East CAMCOS station, road interchanges and road intersections, as well as a new bus network.

The developable land within Beerwah/Caloundra South Corridor has the potential to cater for 25,000 dwellings. However, there are other challenges to developing the area including:

- Leasehold tenure of state land which may give rise to native title issues.
- Part of the Investigation Area drains directly into Coochin Creek. Any sediment runoff during construction or unanticipated release from the urban area has the capacity to flow directly into the creek and then into Pumicestone Passage. The creek discharges into 'The Skids' area of Pumicestone Passage, which is the most susceptible part of the passage to water quality impacts because of its shallow depths, long retention times and tidal confluence.
- The remainder of the Investigation Area drains into the Bells Creek South catchment, which runs through Aura and Pelican Waters developments. Significant on site mitigation will be required for water quality and flooding to ensure downstream impacts are avoided.

1. Introduction

1.1 Project context

For the past 30 years the Sunshine Coast has experienced strong and consistent population growth. This level of growth is expected to continue at around 2.1% per annum from 2011 to 2031 (Queensland Government Population Projections, 2013) and beyond. According to the Queensland Government's South East Queensland Regional Plan 2009-2031 (SEQRP) Fact Sheet (DSDIP, July 2014) this level of growth will drive the need for an extra 55,000 dwellings in greenfield areas on the Sunshine Coast by 2041.

Based on current estimates the dwelling capacity of existing greenfield areas on the Sunshine Coast is around 30,000 dwellings. This capacity includes the Priority Development Area (PDA) of Caloundra South (now formally known and herein referred to as Aura) and the Master Planned Area of Palmview, existing developed lots and undeveloped residential land within the urban footprint. An additional 25,000 Greenfield dwellings will therefore, need to be provided by 2041 to cater for the projected demand. Further greenfield land will be required beyond that timeframe. In accordance with the current SEQRP, these dwellings must be created within the designated Identified Growth Areas (IGAs) on the Sunshine Coast.

In order to sustain the potential future population growth on the Sunshine Coast, any future development would likely need to include in a planned development the following; residential, retail, commercial, community and health facilities, schools, employment land, open space, recreation and conservation land.

The other option to meet the region's future growth would be infill development within existing urbanised areas on the Coast. There is already significant resistance from the Sunshine Coast community for further infill development such as high rise building and densification which will continue to place additional pressure on greenfield sites to provide additional dwellings. This type of development has historically not made a significant contribution to dwelling supply on the Sunshine Coast.

The SEQRP sets out strategic directions which establish the broad policy framework for achieving the Regional Vision and intended growth management outcomes for South East Queensland. The strategic directions that are relevant to developing new greenfield areas include;

- Containing urban development to protect biodiversity and rural production lands;
- Ensuring coordinated and timely delivery of social and development infrastructure;
- Achieving smart growth outcomes through mixed uses and higher densities that support:
 - Walkable communities,
 - Public transport, and
 - Reduced car dependency;
- Efficiency of existing and proposed investment in transport by better sequencing of land use and transport approaches; and
- Defining the extent and character of regional communities using inter-urban breaks to frame and contain the urban area.

1.2 Sunshine Coast Identified Growth Areas

The SEQRP designates two IGAs for urban development post-2031 for the Sunshine Coast that are to be considered in terms of both employment and residential growth;

- Caloundra South (Halls Creek - herein referred to as the **Halls Creek Investigation Area**)
- Beerwah/Caloundra South Corridor IGA (herein referred to as **Beerwah/Caloundra South Corridor Investigation Area**).

A third SEQRP listed IGA for the Sunshine Coast (Beerwah) is only designated for consideration in terms of future employment growth. As such it was not included for comparison in this study.

The **Halls Creek Investigation Area** is situated south of the Caloundra South Priority Development Area, between the Bruce Highway and the Pumicestone Passage. Previously a pine plantation, more than 85% of the site was cleared in the early 1960s's and is now used for cattle grazing. The site is primarily owned by the property group Stockland. The area is listed in the Sunshine Coast Planning Scheme 2014 as an IGA as it relates to the SEQRP, however it is not listed as a Sunshine Coast Council (SCC) area for further investigation.

The **Beerwah/Caloundra South Corridor Investigation Area** is located to the west of the Caloundra South Priority Development Area, across the Bruce Highway on predominantly state-owned land. The majority of this parcel of land is currently leased on a 99 year arrangement with the UQ Plantatation Group (expires 2109) as an active pine plantation of approximately 4,000 ha in area. The area is also listed in the Sunshine Coast Planning Scheme 2014 as an area for further investigation.

In addition to the three IGAs identified for further investigation in the SEQRP, the Sunshine Coast Planning Scheme 2014 lists another region known as the **Finland Road/Mudjimba West Further Investigation Area**, for further investigation for employment development. This area and the vast tract of land that extends north from the Maroochy River to Coolum, and west to Bli Bli (hereafter referred to as the **Canelands Investigation Area**) has been identified by Council as worthy of further consideration for future urban growth. This land is held in multiple ownerships and, as the name suggests, has historically been used for sugar cane farming.

The location and extent of the IGAs is shown in Figure 1.1. A more detailed summary of each Investigation Area is provided in Section 3.

1.3 Purpose of this study

The SEQRP states that further investigation of these IGAs or other identified areas is necessary to determine if they can be seriously considered to accommodate this long-term residential and employment growth.

The purpose of this study is to present the results of a site constraints analysis and comparative assessment for the three areas that have been identified in either the SEQRP or the Sunshine Coast Planning Scheme 2014 as potential future urban development areas.

The study will:

- Analyse the constraints to development affecting each IGA and determine which parts of the IGA are suitable for urban development. Constraints are identified from SEQRP and Sunshine Coast Planning Scheme 2014 provisions.

- Using the principles identified in the SEQRP that are relevant to new greenfield areas, undertake a comparative assessment of the challenges and opportunities involved in developing each IGA to meet future population growth on the Sunshine Coast beyond 2031.

To inform the decision on which Investigation Area(s) are most appropriate for future development, the SEQRP stipulates that consideration must be given to each areas' ability to:

- comply with the Urban Footprint principles and requirements within the Sunshine Coast sub-regional narrative;
- assist in the delivery and performance of infrastructure (including public transit) to the Sunshine Coast community;
- protect environmental values;
- achieve urban consolidation and self-containment;
- achieve coordinated delivery of infrastructure; and
- achieve high environmental performance.

In addition to these requirements, development within the Investigation Areas will need to demonstrate:

- sufficient demand for further urban land within the sub-region;
- accessibility to a public transit service;
- achieving compliance with the Urban Footprint principles;
- achieving world leading environmental performance for any urban development and related infrastructure;
- materially assisting in the provision of infrastructure for the southern Sunshine Coast community;
- demonstrated high levels of employment self-containment; and
- coordinated delivery of infrastructure.

1.4 Development on the Sunshine Coast at 2031

As previously indicated the three Investigation Areas are being considered to accommodate urban growth on the Sunshine Coast beyond the timeframe of the current SEQRP, post-2031. In order to provide a realistic assessment of the development issues for each Investigation Area when they come to be developed, sometime between 2031 and 2041 assumptions must be made about the state of development at that time, particularly in the surrounding areas.

The comparative assessment of the Investigation Areas in this study is based on the following assumptions:

- If one or more of the Investigation Areas are to be developed it is assumed they would be included in the urban footprint under the South East Regional Plan by this time.
- Halls Creek Investigation Area – land is still cleared and currently used for grazing purposes.
- Beerwah/Caloundra South Corridor Investigation Area – land is still used predominantly for plantation timber together with other agricultural and tourism/recreation activities.

- Caloundra South PDA – significant development of the area including the Regional Activity Centre, major roads, trunk infrastructure, bus network, community services and recreation facilities.
- Beerwah – some progress in developing the Regional Activity Centre and surrounding employment activities.
- Bells Creek Arterial is connected from the Bruce Highway to Caloundra Road with a direct connection to Halls Creek.
- CAMCOS – rail link from Beerwah to Maroochydore constructed with station at Aura but not yet at Beerwah East.
- Other areas – Maroochydore Principal Activity Centre established and operational, priority bus corridors and transit corridors operating, Regional Business and Industry Park developed and Sunshine Coast Enterprise Corridor elements operating.

1.5 Limitations of this study

This current study is limited to the assessment of what is the most suitable site for development of a new residential community, based on current existing technical information.

It was beyond the scope of this study to undertake further technical assessments where deficiencies or gaps in information to inform this comparative analysis were determined.

It is acknowledged that the information currently available for each of the Investigation Areas is disparate in purpose, type and level of assessment.

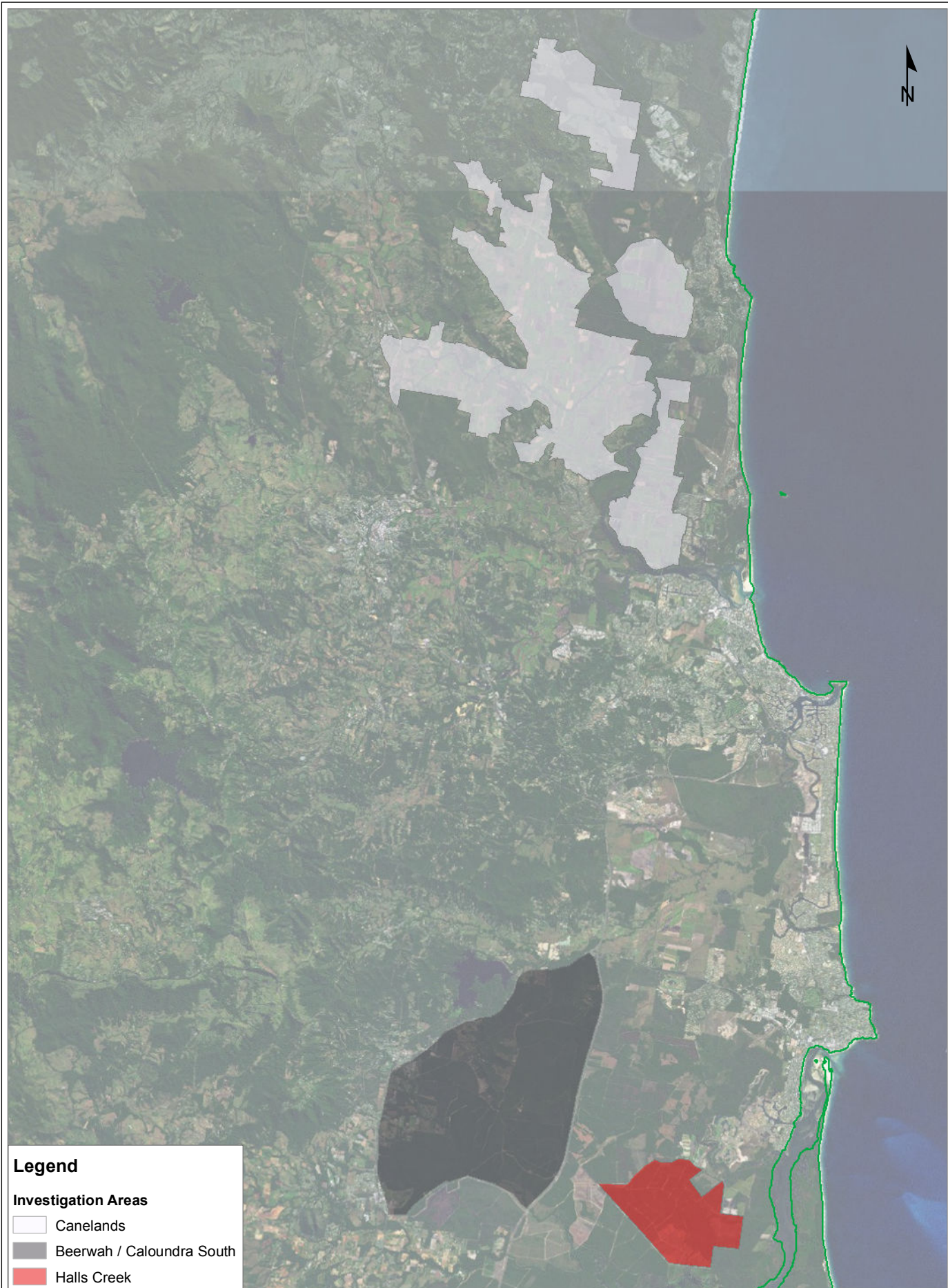
Stockland own much of the land that is referred to as the Halls Creek Investigation Area and have commissioned a number of independent investigations to determine the potential for this land to accommodate future community development on the scale required to accommodate the types of growth forecast for the Sunshine Coast. These studies have included:

- Stockland Halls Creek Identified Growth Area, Stakeholder Consultation Report. The Comms Team (2014-2015).
- Halls Creek IGA: SEQRP Review Report. Urbis. (March 2015).
- Halls Creek Environment Report: Summary – 2015. The Long View Group. (March 2015).
- Halls Creek Environment Update: Review Report – Draft v.2. The Long View Group. (April 2015).
- Halls Creek Integrated Transport Strategy. Lambert and Rehbein. (February 2015).
- Halls Creek Residential and Employment Considerations. Urbis. (December 2014).

Additionally, Stockland commissioned the following brief studies for the Beerwah East IGA:

- Beerwah East – Caloundra South Identified Growth Area: Preliminary Environmental Assessment. RPS. (June 2014).
- Beerwah East Flood and Water Quality Constraints Report. H2O Consult (Tony McAlister). (October 2015).
- Moreton Bay-Sunshine Coast Inter-Urban Break: Identified Growth Area Analysis. Urbis. (November 2015).

- In terms of the Canelands, several previous studies have been commissioned by state and local governments to consider its viability for future urban development. These include:
- McDonald, G. et al (2006), Future Use of Sunshine Coast Cane Landscapes (August 2006); A report to SEQ Catchments.
- Canelands Discussion Paper (October 2009), Sunshine Coast Regional Council.



Legend

Investigation Areas

- Canelands
- Beerwah / Caloundra South
- Halls Creek

Project Number: 665488

Author: NC

Checked: TZ

Approved: TZ

Revision: 1

Last Modified: 08/10/15

0 1,000,000 4,000
meters

Scale: 1:200,000 @A4
Projection: GDA94

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Constraints Analysis of the
Sunshine Coast Investigation Areas

**Figure 1-1:
Location Plan**

2. Broad assessment approach

The broad methodology developed for this study involves:

- **Stage 1** - Rationalisation of the three broad Investigation Areas down to potential developable areas by considering the constraints that would render parts of the area unsuitable for urban development.
- **Stage 2** - Undertaking an analysis of these developable areas using land use, infrastructure and environmental, criteria derived from the SEQRP as identified in section 1.3 above, to identify opportunities and challenges to urban development post 2031.

2.1 Assessment compliance

As previously indicated, the SEQRP designates two Identified Growth Areas; Halls Creek and Beerwah/Caloundra South Corridor that may be suitable to cater for long term urban growth on the Sunshine Coast. Additionally, Sunshine Coast Council's 2014 Planning Scheme, identifies a third region, the Canelands, as a potential Investigation Area to provide additional long term growth capacity for the Sunshine Coast region.

The SEQRP stipulates that further investigations will be required to determine which IGAs identified within the Plan will be seriously considered to accommodate long term residential and employment growth. The SEQRP also presents the factors that must be considered in making such a determination (as identified in section 1.3).

The assessment process for this study was developed to meet the requirements of the SEQRP, including the factors that must be considered as part of any required further investigations. For completeness, the Canelands Investigation Area as identified in the Sunshine Coast Planning Scheme 2014, has also been included in the options assessment process presented in this current study.

In addition to the SEQRP requirements for further investigations, the process for constraints analysis and site rationalisation that is outlined in the Department of Infrastructure and Planning Guidelines about Environmental Assessment and Public Consultation Procedures for Designating Land for Community Infrastructure (2006) and the Sunshine Coast Planning Scheme 2014, have also been taken into consideration in developing the assessment approach for the three IGAs.

A detailed analysis of each Investigation Area was conducted, and the key opportunities and constraints identified in terms of environmental, land use and Infrastructure values, which was determined through the assessment process outlined below.

2.1.1 Sunshine Coast Planning Scheme 2014

The Sunshine Coast Planning Scheme 2014 provides guidance on development on the Sunshine Coast with the intent to ensure appropriate development occurs in appropriate locations. Consideration was given in this study to the Plan's local area maps, Priority Infrastructure Plan (PIP) maps and the seven Strategic Framework maps.

Additionally the planning scheme policies and overlay codes were utilised, particularly in relation to determining the level 1 constraints for Stage 1 of the study (Refer Section 4).

2.1.2 Community infrastructure designation guidelines

Consideration was also given to the matters outlined in the checklist provided in Schedule 2 of the Queensland Governments 'Guidelines about Environmental Assessment and Public Consultation Procedures for Designating Land for Community Infrastructure' (DLGPSR, 2006). Those matters that proved to be potential constraints to urban development were then investigated in greater detail.

The Schedule 2 checklist outlines ten matters for consideration as potential constraints. It is recognised that the list of matters and their queries are provided as a guide only and are not exhaustive. They include the following:

| | |
|---------------------|--|
| Soils and geology | EPBC Act (Cwlth)* |
| Natural resources | Cultural heritage |
| Natural hazards | Health, safety, amenity and social impacts |
| Water quality | Infrastructure |
| Conservation values | Traffic and transport |

**Environment Protection and Biodiversity Conservation Act 1999*

2.2 Delineation of IGA boundaries

Neither the SEQRP nor the Sunshine Coast Planning Scheme 2014 provide cadastral boundaries for the identified Investigation Areas. The approach adopted to delineate the boundaries for investigation in this study has been:

- for Beerwah/Caloundra South Corridor to use major roads;
- where there are no major roads (Halls Creek), to use the property boundaries of land potentially available for development; and
- in the case of Canelands to use a combination of the above approaches.

3. Investigation Area details

This section provides a broad description of the existing environment of the three Investigation Areas assessed as part of this current study. Note that the nature and extent of previous technical investigations undertaken within each of these Investigation Areas varies markedly.

3.1 Halls Creek Investigation Area

General: The Halls Creek Investigation Area comprises 1,277 hectares of predominately cleared land (85% cleared), located on the southern edge of the Sunshine Coast. The Investigation Area is situated south of the Caloundra South Priority Development Area, between the Bruce Highway and Pumicestone Passage. This area has no coastal frontage and is situated approximately 1.6 km from the Pumicestone Passage. The Halls Creek Investigation Area is not within the urban footprint. This Investigation Area comprises of two Freehold lots that are wholly owned by the Stockland Property Group.

Landuse: This Investigation Area was initially cleared in the 1960's for use as a pine plantation. In the early 2,000 more than 85% of the site was cleared of pine and is now used for cattle grazing. Only 13% of the Investigation Area still supports remnant vegetation. The remainder of the site comprises exotic grasslands and small pockets of pine.

Geology, Soils and Topography: Topography across the Halls Creek investigation Area ranges from less than 2.5 m Australian Height Datum (AHD) in the east, to greater than 20 m AHD in the west and north-west of the site. Approximately one third of the site is below 5 m AHD (BMT WBM 2015).

Water: Approximately one third of the Investigation Area is mapped as flood prone or inundation area

The site also features a degraded *Melaleuca* wetland. There are wetlands in the vicinity of (but not within) the Investigation Area that have RAMSAR status. Although not within the Investigation Areas, they do include the downstream estuarine sections of Halls Creek and Pumicestone Passage.

The Halls Creek Investigation Area extends across two catchments;

Halls Creek catchment: The majority of the Investigation Area is located in this self-contained catchment which drains through several minor gullies into the Halls Creek wetland, which overflows into a transitional brackish creek system, to estuarine sections of Halls Creek, and ultimately into Pumicestone Passage.

Coochin Creek catchment: Part of the Investigation Area (approximately 226 hectares) falls within the Coochin Creek catchment and also ultimately drains into Pumicestone Passage.

Both the lower estuary sections of Coochin Creek and Halls Creek downstream of the site are listed as High Ecological Value (HEV) and protected under the Queensland Environmental Protection (Water) Policy (2009). HEV status of Coochin Creek extends upstream to include several minor waterways within the Halls Creek Investigation Area along the south-west boundary (BMT WBM 2015). **National Parks and conservation areas:** The Halls Creek Investigation Area does not support any National Parks or other conservation areas, however, Bribie Island National Park is situated immediately adjacent to its south-east boundary and extends south to the edge of the Pumicestone Passage. Beerwah State Forest adjoins the south-western boundary of the Halls Creek Investigation Area. Additionally, a wildlife corridor of regional value flows through and to the immediate east, of the Halls Creek Investigation Area.

Ecology: The vast majority of the site has been previously cleared and comprises exotic grassland and small patches of intermittent regrowth pine. There remains two patches of intact remnant vegetation (BMT WBM 2015). A 140 ha patch of remnant broad-leaved Melaleuca (Paperbark) open forest/woodland and wetland (RE 12.3.5), which is situated in the south-eastern corner of the Investigation Area and is associated with the Halls Creek drainage depression. This patch is the only regulated vegetation on site under the *Queensland Vegetation Management Act 1999* (VM Act). A 32 ha patch of closed heathland (RE 12.3.13) is also present in the north-west corner of the Investigation Area. This patch is not mapped as regulated vegetation under the VM Act but was documented to be of remnant quality in terms of its structure and condition at the time of survey.

Two flora species of conservation significance, Mount Emu She-oak (*Allocasuarina emuina*) and Christmas Bells (*Blanfordia glandiflora*), have been previously documented to be present within the two above-mentioned areas of remnant vegetation (BMT WBM 2015). Mount Emu She-Oak is listed as Endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Christmas Bells is listed as Endangered under the *Queensland Nature Conservation Act 1992* (NC Act).

Fauna species known or likely to be present in remaining habitat within the Investigation Area include the following state and/or federally listed species; Wallum Froglet (*Crinia tinnula*), Wallum Rocketfrog (*Litoria freycineti*) and Wallum Sedgefrog (*Litoria olongburensis*). Additionally, while there is no suitable habitat on site, the Water Mouse (*Xeromys myoides*) is known to be present downstream of the Investigation Area along the Pumicestone Passage, within mangrove and intertidal areas. Five migratory bird species have previously been recorded within the Investigation Area, however none of these populations constitute a 'significant population' as defined under the EPBC Act (BMT WBM 2015).

Infrastructure: There are no designated roads, rail or other existing infrastructure located within or transcending the Halls Creek Investigation Area. There are a number of existing or approved road infrastructure projects including East-West Link and Bells Creek Arterial Duplication in the vicinity of this Investigation Area.

Heritage: The highly disturbed nature of the Halls Creek Investigation Area has resulted in the lack of any recorded and/or protected non-indigenous cultural heritage sites.

The Kabi Kabi are the recognised Aboriginal Party for the area and as such have been involved with the preparation of a Cultural Heritage Survey and Management Plan for the Halls Creek Investigation Area. Materials were found indicative of transient, intermittent use at five sites during the survey, however no evidence was found for longer term or ceremonial occupation. A registered CHMP is in place for the Investigation Area.

Current IGA status: While listed as an IGA in the SEQRP, the subject to further planning assessment as part of the SEQRP review recognised in the Sunshine Coast Planning Scheme 2014.

3.2 Beerwah/ Caloundra South Corridor Investigation Area

General: The Beerwah East–Caloundra South Corridor Investigation Area is a broad region of approximately 5,226 hectares, located on the western side of the Bruce Highway. It is bounded by Roys Road to the south, Steve Irwin Way to the west and north and the Bruce Highway to the east (Figure 3.2). While the vast majority of this Investigation Area is state-owned leasehold land designated as state forest, a significant number of Freehold lots in several areas also are present.

Currently, this Investigation Area provides significant visual relief from existing urban developments when traversing the Bruce Highway in either direction due to the extensive, well established pine plantations that are growing up to the highway verge. Furthermore, a significant amount of the Investigation Area in the north and central-east is mapped in the Sunshine Coast Council Planning Scheme as a High Value Scenic Area.

Landuse: The majority of this area is currently being used for pine forestry under a 99 year licence between the State Government and HQPlantations Pty Ltd, which was negotiated in 2012.

Closest residential settlements include Glenview to the north, Landsborough to the north-west and Beerwah in the south. There are a significant number of rural allotments interspersed, particularly to the western side of this Investigation Area. Additionally small business, commercial, recreational and industrial activities also are present including two golf courses, Australia Zoo, a cemetery, go-kart facility, various high intensity farming and agricultural practices, as well as a large on-site training facility.

Several areas of steep land mapped with a slope of greater than 25% exist in the centre and to the north of the Investigation Area. Much of the northern part of this Investigation Area is also mapped as high bushfire hazard, correlating closely with the steep, heavily vegetated land. There is no mapped land at or below 5 m AHD.

Water: This Investigation Area is significantly intersected by a number of major creek lines and tributaries. Riparian protection areas associated with these creeks and tributaries are extensive through the entire Investigation Area. There are also a significant number of low lying and notionally wet areas present that are mapped as flooding or inundation areas, and that will largely influence future development.

Coochin Creek is the largest catchment in the Beerwah/Caloundra South Corridor and ultimately drains into the Pumicestone Passage. The majority of Coochin Creek is protected under State legislation as an area of High Ecological Value (HEV) – which requires a no change in water quality to be upheld. The area where Coochin Creek meets The Passage is known as “The Skids”. Given its shallow depths and long water retention times, this area is the most susceptible part of the Passage to any potential adverse water quality change.

Some of the Investigation Area catchment drains into Bells Creek South. This creek in turn flows through the Aura and Pelican Waters urban areas.

Aside from Coochin Creek and Bells Creek South, the other creeklines within this Investigation Area include, Bellbird Creek, Melum Creek and Bluegum Creek. Another designated waterbody, Ewen Maddock Dam, is located adjacent to the Investigation Area in the north-west and marginally encroaches on the Investigation Area where it crosses Steve Irwin Way.

National Parks and conservation areas: The Beerwah East Investigation Area includes two small pockets of the Glasshouse Mountains National Park located in the east of the Investigation Area and the Beerwah Forestry Reserve in the south-west corner. Adjacent the Investigation Area are a number of other National Parks namely; Glasshouse Mountains National Park to the south, Caloundra National Park to the north-east and Mooloolah River National Park to the north. Remnant vegetation along the creeks and tributaries within the Investigation Area act as ecological corridors for wildlife movement.

Ecology: No ecological surveys were identified as having been prepared for this area. Koala Habitat is mapped along sections of the western perimeter, aligning closely with mapped areas of remnant vegetation that is classified as Endangered Regional Ecosystems. Mapped vegetation classified as Endangered Regional Ecosystem is also present in the far north of this Investigation Area.

Infrastructure: In terms of existing infrastructure, two golf courses are located within the Investigation Area; the Beerwah and District Memorial Gold Club to the south-west and Glenview Par 3 Golf Course in the north. Additionally a Big Kart Track and Site Skills Training Sunshine Coast are both located within the Investigation Area, as is Australia Zoo. Site Skills Training is part of a national organisation that delivers short and certificate course remote and on-site training for government and private companies. Minimal road infrastructure and no rail or transmission or distribution lines currently traverse the Beerwah East – Caloundra South Corridor Investigation Area, however there is a designated rail corridor that intersects the Investigation Area from west to east that is proposed to link Caboolture to Maroochydore via hear rail

in the future. A significant amount of land designated as a state Key Resource Area is located adjacent to this Investigation Area in the north. Additionally, situated centrally within the Investigation Area is a designated local resource/processing area. A waste water treatment plant is located within the Investigation Area along the north-western boundary.

Heritage: One registered non-indigenous cultural heritage site is present within the Beerwah East – Caloundra South Corridor Investigation Area; the Mooloolah Cemetery (MLH1).

Little is currently known about the indigenous cultural heritage values of the Investigation Area, however significant cultural heritage values exist in the broader region. Extensive cultural heritage surveys would be required as part of any detailed land use investigation and a Cultural Heritage Management Plan would likely be required. Native Title status would need to be investigated given the Investigation Area's current tenure considerations.

Current IGA status: The Beerwah East – Caloundra South Corridor Investigation Area is currently listed as a future Investigation Area in both the SEQRP and the Sunshine Coast Planning Scheme 2014.

3.3 The Canelands Investigation Area

General: The Canelands Investigation Area covers an area of approximately 8,384 hectares of low-lying flood prone land on the floodplain of the Maroochy River and its associated tributaries on the Sunshine Coast. The Investigation Area is divided into four sections of almost exclusively Freehold land; herein referred to as the northern, eastern, western and southern sections (Figure 3.3).

Broadly, the Canelands Investigation Area is bounded to the east by the coastal urban areas from Peregrin Beach in the north, Coolum Beach, Marcoola and Twin Waters in the south. North of the Investigation Area are the rural residential areas of Verriedale, Doonan and Weyba Downs, while to the west of the Investigation Area are the towns of Yandina, Ninderry and Kulangoor. The Investigation Area is bounded by Parkland Forest Reserve, the town of Bli Bli, Maroochy River and Maroochydhore to the south. The vast tracts of open space associated with the Canelands is an important part of the Sunshine Coast's character and scenic amenity, and currently much of this land is classified in the Sunshine Coast Council Planning Scheme as a High Value Scenic Area.

Geology, Soils and Topography: The topographic relief within the Canelands Investigation Area is exclusively below 15% slope and there are no designated landslip areas. All four sections are predominately designated flooding or inundation areas. A great majority of the land is mapped at or below 5m AHD, indicating a likely presence of acid sulfate soils (ASS).

Landuse: Prior to 2003, the Canelands was predominantly used for sugar cane production that supplied the Nambour Sugar Mill. The closure of the mill in 2003 led to a rapid decline in cane farming in the Canelands area. Presently much of the land has been cleared, with small stands of sugar cane still remaining, either being used for short-term economic purposes or currently lying fallow. In addition, there are patches of native regrowth vegetation emerging throughout the area and a small percentage of land is being used for a variety of other agricultural and non-agricultural land uses, as well as rural living not associated with a rural activity on the land. The Canelands has significant issues with weed and pest species, as well as significant levels of degradation to streambanks within the area. Maintenance of the remaining cane drains have also been an issue.

Water: The Investigation Area includes the waterways and associated riparian areas of Yandina Creek, Valdora and Maroochy River, as well as rural portions of Yandina, Bli Bli, Coolum Beach, Marcoola and Pacific Paradise.

Flooding significantly influences the Investigation Area, with events of various intervals and extents occurring regularly. Anecdotal evidence from landowners suggests that a major flooding event is experienced approximately every 7 years (Sunshine Coast Regional Council, 2009).

National Parks and conservation areas: There are no National Parks or Conservation Reserves located within this Investigation Area. However, there are significant conservation areas nearby or adjacent the Investigation Area including National Parks, Conservation Parks or Forest Reserves; Parklands Conservation Park, Maroochy Wetland Sanctuary, Mount Coolum National Park, Noosa Resource Reserve, and Maroochy Forest Reserve. There is other remnant vegetation associated with private land, particularly within the rural residential areas of Yandina Creek, Verrierdale and Ninderry. The tidal reaches of the Maroochy River are also designated as Fish Habitat Areas by the State Government.

Ecology: The biodiversity values for the Canelands Investigation Area are low as a result of past landuse practices relating to agriculture and previous widespread clearing. There are no designated protected areas or koala habitat within the Investigation Area, with the exception of a very small pocket located within the western section, the Coolum Creek Conservation Park. Additionally, the extent of mapped native vegetation is minimal, highly fragmented and confined largely to the northern and eastern sections, with other very small patches of native vegetation interspersed sparsely through the other two sections that comprise this investigation Area. The remaining vegetation generally comprises Melaleuca forest, heathland, Casuarina forest and Eucalypt woodland.

Infrastructure: There are no Priority Development Areas in the Canelands Investigation Area and very minimal land that is designated as Priority Infrastructure Area, which is located in the northern tip of the southern section.

The Canelands Investigation Area is centrally located in the Sunshine Coast and as a result, has good access to major centres and infrastructure. Key transport routes nearby include the Bruce Highway, Sunshine Motorway, Yandina-Coolum Road, David Low Way and Yandina-Bli Bli Road. The North Coast Railway line runs to the west of the area, with access obtained at stations in Nambour, Yandina and Eumundi. The Sunshine Coast Airport is located to the east of the Investigation Area, and the CAMCOS corridor is currently proposed to extend there. Major infrastructure actually located within the Investigation Area is limited to the Yandina to Coolum Road (also a designated scenic route), Sunshine Coast Motorway, a small section of the Bruce Highway in the vicinity of Yandina, several smaller roads, a power distribution line in the south and designated buffer zones associated with the Coolum wastewater treatment plant and the recently decommissioned Suncoast waste water treatment plant. There are also several designated state and local key resources areas located within the IGA for future use.

Heritage: Several mapped local and/or state heritage places are present within this Investigation Area including; Dick Ashton's House (MRV2), Dunethin Rock (MRV1) (State), Tramway Lift Bridge over Maroochy River (NMB19) (State), Yandina Station Homestead (YDA18), Godfrey's House (BLI5) and Blazed Tree Boundary Marker (PPS1).

Minimal documented research specific to the Canelands Investigation Area is available. However the highly disturbed nature of the Investigation Area and the long term intensive farming practices for much of the region is likely to have resulted in significant disturbance. Extensive cultural heritage surveys would be required as part of any detailed land use investigation and a Cultural Heritage Management Plan would likely be required.

Given the Freehold nature of the land parcels within this Investigation Area, Native Title would not be an issue.

Current IGA Status: The Canelands is not an IGA listed area within the SEQRP. However, part of the area is documented within the Sunshine Coast Planning Scheme 2014 as **Finland Road/Mudjimba West Further Investigation Area**, a 'further investigation area for employment'.

Table 4.1 presents the constraints analysis used to enable the rationalisation of the three Investigation Areas into land suitable for urban development. Specifically this table outlines:

- the potential constraints to urban development;
- the reason why each constraint might preclude urban development;
- how the constraint is measured;
- the source of data used to measure the constraint;
- comments on when the constraint is Level 1 (in which case the land cannot be developed and is excluded from the developable area) or Level 2 (in which case the land has the potential to be developed with appropriate design and management strategies in place and is not excluded from the developable area); and
- comments relevant to the constraints analysis.

Each of the relevant Level 1 constraints were mapped for the three Investigation Areas and the maps are provided in Appendix A.

4. Stage 1 - Constraints analysis of the Investigation Areas

4.1 Overview

As previously indicated, the SEQRP states that further investigations are to be undertaken for any designated Investigation Area in order to determine if it should be seriously considered to accommodate long term residential and employment growth. Stage 1 of the investigations into rationalising the three broad Investigation Areas involved a constraints analysis approach using available mapping sources from the State Government and Sunshine Coast Council.

4.2 Process for analysing constraints to urban development

The first step required in this process is to identify any absolute constraints to urban development and therefore determine the area of developable land within each Investigation Area. All potential criteria that could be utilised as part of the constraints analysis were initially identified from the following:

- SEQRP policies that identify constraints to urban development that should be assessed;
- Overlay codes and mapping from the Sunshine Coast Planning Scheme 2014 that identify constraints to development and provide guidance on how these constraints should be assessed; and
- A cross-check with the Department of Infrastructure and Local Government Planning (DILGP) guidelines for environmental assessment and consultation procedures for designating land for community infrastructure.

Once the criteria were identified, they were then determined as being either a Level 1 or Level 2 constraint where relevant to the study:

- **Level 1 constraint** – makes the land unsuitable for urban development.
- **Level 2 constraint** – may affect urban development but the land can still be developed with appropriate design and management strategies implemented and relevant approvals granted.

Those criteria classified as a Level 1 constraints were mapped to refine the land within the three broad Investigation Areas down to areas suitable for urban development.

Of a total of 16 potential constraints that were initially considered (listed below), ten Level 1 constraints were ultimately used in the constraints analysis as presented in Table 4.1.

| | |
|------------------------|-------------------------------|
| Topography | Protected Area |
| Landslips | Habitat / Biodiversity |
| Waterways | Extractive industry resources |
| Wetlands inc RAMSAR | Scenic amenity |
| Coastal Zone | Regional Infrastructure |
| Bushfire | Cultural heritage |
| Flooding | Soils |
| Natural Resource Areas | Contaminated Land |

Table 4.1: Stage 1 – Constraints Analysis to refine the broad Investigation Areas (IAs) into developable areas

| Constraint | Reason for constraint | How is the constraint measured | Level 1 Constraint | Level 2 Constraint | Analysis |
|--|---|--------------------------------|--|--------------------|---|
| Topography¹ 8.2.10 Landslide hazard and steep land overlay code | Urban development should not be located on steep slopes. | Slope analysis of land parcel. | Level 1 Constraint. Slopes >15% are not considered suitable for urban development. | | <i>Halls Creek</i> – Land predominately flat. No land parcels with slope greater than 15%. <i>Beerwah</i> – Several areas with steep slopes exceeding 25% in the centre and to the north of this IA. <i>Canelands</i> – Land predominately flat. Several small and isolated pockets of land in the western section with slopes between 15-20% and one isolated pocket with slope exceeding 25%. |
| Landslips¹ 8.2.10 Landslide hazard and steep land overlay code | Land potentially affected by landslips is not suitable for urban development. | Mapped landslip hazard areas. | Level 1 Constraint. Landslip hazard rating applies. Unable to undertake development in a Landslide Hazard Area without geotechnical investigation and approval. | | <i>Halls Creek</i> – No land mapped as either high or very high landslide hazard area. <i>Beerwah</i> – Land mapped as high landslide hazard area in the north, as well as intermittent parcels in the central area and a small isolated pocket along the western border. <i>Canelands</i> - No land mapped as either high or very high landslide hazard area. |
| Waterways¹ 8.2.3 Biodiversity, waterways and wetlands overlay code 8.2.13 Water resource catchments overlay code | Development should not occur within 10 m of each bank of a natural waterway. | Distance from waterway. | Level 1 Constraint. Buffer distances are required for developments from waterways and wetlands (other than canals and artificial waterways). | | <i>Halls Creek</i> – No natural or constructed waterbodies, mapped wetlands to the north and south-east, riparian protection area throughout the eastern half of the IA. <i>Beerwah</i> – Very minor natural or constructed waterbodies, significant mapped wetland areas throughout IA, particularly to the west, associated riparian corridors throughout IA, but particularly dense in the west and south –west. <i>Canelands</i> – Designated wetland areas and riparian corridors associated with Yandina Creek, Valdora and Maroochy River. |

Sunshine Coast Constraints Analysis and Comparative
Assessment for three designated Investigation Areas post 2031

| Constraint | Reason for constraint | How is the constraint measured | Level 1 Constraint | Level 2 Constraint | Analysis |
|---|--|--|---|--|---|
| Wetlands inc RAMSAR¹ 8.2.3 Biodiversity, waterways and wetlands overlay code | Development should not occur within wetland areas including RAMSAR wetlands. | Mapped wetland areas and designated RAMSAR Wetland boundaries. | Level 1 Constraint. A dwelling house must not be located on land within; Riparian Protection Area, mapped Wetland Area, 100 m of RAMSAR wetlands | | No RAMSAR wetlands or constructed waterbodies located in any of the IAs. <i>Halls Creek</i> – Mapped wetlands located to the north and south-east of this IA. <i>Beerwah</i> – Mapped wetlands interspersed throughout this entire IA. <i>Canelands</i> – Wetlands and natural waterbodies within each of the four sections of this IA. Maroochy River bisects the western section as well as borders the southern section on the southern boundary. |
| Coastal Zone ¹ 8.2.5 Coastal protection overlay code | Development should not be located in areas affected by coastal processes. | Coastal erosion prone areas and coastal protection zone mapping. | Level 1 Constraint. Buildings and other permanent structures are to be located landward of the coastal building line (declared under the <i>Coastal Protection and Management Act 1995</i>) or equal to the seaward alignment of neighbouring properties. | | Not applicable to the Investigation Areas and therefore not included in constraints mapping for this study. |
| Bushfire¹ 8.2.4 Bushfire hazard overlay code | Development should not occur within a high bushfire hazard area. | Bushfire hazard rating. | Not applicable as Level 1. As development will involve clearing the site of bushland to facilitate urban development the existing bushfire rating within the site is not relevant and hence not a constraint. | Level 2 Constraint. 100 m buffer from high hazard and 50 m buffer from medium hazard bushfire areas on adjoining sites. | While not considered a Level 1 constraint given broadscale clearing usually occurs for urban development of this scale and type, consideration needs to be given for the areas designated for urban development that will adjoin sites mapped as high or medium bushfire hazard. <i>Halls Creek</i> - No mapped bushfire hazard land in this IA. |

| Constraint | Reason for constraint | How is the constraint measured | Level 1 Constraint | Level 2 Constraint | Analysis |
|--|--|---|--|--|--|
| | Development should not occur within a bushfire hazard buffer area. | Bushfire hazard rating. | Not applicable as Level 1. As development will involve clearing the site of bushland to facilitate urban development the existing bushfire rating within the site is not relevant and hence not a constraint. | Level 2 Constraint. 100 m buffer from high hazard and 50 m buffer from medium hazard bushfire areas on adjoining sites. | <i>Beerwah</i> - Significant amount of land parcels mapped as high bushfire hazard area in northern section of this IA. <i>Canelands</i> - Minimal land parcels mapped as high bushfire hazard area in this IA, however land immediately adjacent IA mapped in several locations. |
| Flooding¹ 8.2.7 Flood hazard overlay code | Development should not occur on land affected by flooding or storm surge. | Defined flood event and defined storm tide event mapping. | Level 1 Constraint. Development should not occur within areas affected by defined flood event and defined storm tide event unless detailed investigations confirm land can be developed and be flood free with no adverse downstream impacts. | | <i>Halls Creek</i> – Most of the eastern portion of this IA is constrained by flooding and inundation. <i>Beerwah</i> – A large area to the north-east and along creeklines in the south and south-west including Bells Creek South, Mellum Creek and Bluegum Creek are constrained by flooding and inundation. Flooding in Bells Creek South has the potential to impact the existing flood immunity of downstream communities such as Aura and Pelican Waters. <i>Canelands</i> – The vast majority of this IA is constrained by flooding and inundation. Only verge areas of the western and northern sections are not mapped as an area impacted by flooding or inundation. |
| Natural Resource Areas¹ 8.2.3 Biodiversity, waterways and wetlands overlay code | Land containing valuable natural resources should be protected from urban development. | Agricultural land mapping and land tenure. | Level 1 Constraint. GQAL mapped Class A land. | Level 2 Constraint. State Forests and Timber Reserves. Urban development within land containing valuable natural resources should be avoided where possible to protect the future viability of the resource. | <i>Halls Creek</i> – No GQAL mapped Class A land, timber reserves or State Forest mapped for this IA. <i>Beerwah</i> – IA predominately mapped as State Forest, a Level 2 constraint. Small pocket of Timber Reserve mapped on western border. The site is subject to a 99 year licence which requires resolution and could be subject to compensation to extinguish. <i>Canelands</i> – Large portions of this IA are mapped as Class A Agricultural Land. |

Sunshine Coast Constraints Analysis and Comparative
Assessment for three designated Investigation Areas post 2031

| Constraint | Reason for constraint | How is the constraint measured | Level 1 Constraint | Level 2 Constraint | Analysis |
|--|--|--|---|--------------------|--|
| Protected Areas¹ 8.2.3 Biodiversity, waterways and wetlands overlay code | Urban development cannot occur within areas protected by zoning or tenure. | Land tenure and zoning maps. | Level 1 Constraint. Parks, National Parks, conservation parks and other protected areas. Any building, structure or works is set back 50m where the native vegetation area forms part of the protected estate (e.g. National Park or Conservation Park) or is Council Environmental Reserve. | | <p><i>Halls Creek</i> – There are no National Parks or conservation reserves mapped within this IA.</p> <p><i>Beerwah</i> - Two small pockets of the Glasshouse Mountains National Park located in the east of the IA. Several National Parks located adjacent IA; Glasshouse Mountains NP (south), Caloundra NP (north-east), Mooloolah River NP (north).</p> <p><i>Canelands</i> - There are no National Parks or Conservation Reserves mapped within this IA. Several conservation areas nearby or adjacent IA; Parklands CP, Maroochy Wetland Sanctuary, Mount Coolum NP, Noosa Resource Reserve, Maroochy Forest Reserve.</p> |
| Habitat / Biodiversity¹ 8.2.3 Biodiversity, waterways and wetlands overlay code | Ecologically important areas should be retained in-situ. | Mapped Endangered Regional Ecosystems; Mapped Koala Protection Area; Declared Fish Habitat Area. | Level 1 Constraint. Ecologically important areas are to be retained in situ and the existing terrestrial, riparian, waterway and wetland habitats are to be conserved or rehabilitated. | | <p><i>Halls Creek</i> – No mapped REs, Koala Habitat or fish habitat areas. Two minor areas of remnant vegetation (RE 12.3.5 and 12.3.13) that support several species of flora and fauna of conservation significance.</p> <p><i>Beerwah</i> – Several areas of mapped Endangered REs to the west and north of this IA. Mapped Koala Habitat present along the western section of the IA. Likely to support a significant number of flora/fauna species of conservation significance.</p> <p><i>Canelands</i> – No mapped Koala Habitat. Designated Fish Habitat Areas associated with Maroochy River tidal reaches.</p> |
| Extractive industry resources¹ 8.2.6 Extractive resources overlay code | Valuable extractive resource areas and associated production facilities are not adversely affected by urban development. | KRA Mapping. | Level 1 Constraint. Key resource/processing areas, KRA separation areas and KRA transport route separation area. Development within a | | <p><i>Halls Creek</i> – No mapped extractive resources within this IA.</p> <p><i>Beerwah</i> – One mapped local resource area located to the centre of the IA.</p> |

Constraints analysis and comparative assessment for three potential development areas on the Sunshine Coast post 2031

| Constraint | Reason for constraint | How is the constraint measured | Level 1 Constraint | Level 2 Constraint | Analysis |
|---|--|------------------------------------|--|---|---|
| | | | resource/processing area of an identified local resource should not limit or constrain the existing future viability of that resource. | | <i>Canelands</i> – Several state key resources areas located within the southern and eastern section of the IA, as well as immediately adjacent the northern boundary of the western section. A local mapped resource area is also present within the western section of this IA. |
| Scenic amenity¹ 8.2.12 Scenic amenity overlay code | Regionally significant and locally significant areas of scenic amenity, view corridors and popular significant viewpoints should be protected from visually intrusive development. | Scenic amenity mapping and values. | Not applicable as Level 1 | Level 2 constraint. Land with Scenic Amenity Value of 9-10 (Regionally Significant). Land with Scenic Amenity Value of 6-8 (Locally Important). Developments within regionally and locally significant areas are required to be compatible with the visual character and the landscape or townscape setting. | Not included in constraints mapping for this study. |
| | Urban and rural residential development should not occur within regional or sub-regional inter-urban breaks. | Scenic amenity mapping. | Not applicable as Level 1 | Level 2 constraint. Land included in the regional and sub-regional inter-urban breaks. No acceptable outcomes are provided in the scenic amenity overlay code. Boundaries of inter-urban breaks can be managed as part of any urban development so as not to significantly change their function of | Not included in constraints mapping for this study. |

Sunshine Coast Constraints Analysis and Comparative
Assessment for three designated Investigation Areas post 2031

| Constraint | Reason for constraint | How is the constraint measured | Level 1 Constraint | Level 2 Constraint | Analysis |
|---|---|--|---|---|---|
| | | | | providing continuity of separation between communities and defining communities as separate places. | |
| Regional Infrastructure¹ 8.2.11 Regional infrastructure overlay code | Urban development should not impact areas designated for major regional infrastructure. | Mapped infrastructure corridors and buffers. | Level 1 Constraint. Development should not occur within corridors and buffer areas designated for major regional infrastructure. | | <p><i>Halls Creek</i> – No significant infrastructure mapped as extending through this IA. Future extension of Bells Creek Arterial transferases to the Northern boundary of the site.</p> <p><i>Beerwah</i> – Dedicated transit corridor (CAMCOS) extends across this IA in a west-east direction. An existing railway corridor runs along the western boundary and a major road corridor (Bruce Highway) along the eastern boundary of this IA. Waste water treatment plant located on north-western border.</p> <p><i>Canelands</i> – Several waste water treatment plants a relocated within this IA. An existing railway corridor borders the western boundary of the western section of this IA and a major road corridor (Sunshine Coast Motorway) extends along, or just within the eastern border of southern and eastern sections. Other infrastructure including a high voltage transmission line, gas pipeline, dedicated transit corridor and other major roads are also located within this IA.</p> |
| Cultural heritage¹ 8.2.9 Heritage and character areas overlay code | Urban development should not adversely affect heritage listed places. | Cultural heritage registers and mapping | Areas of Indigenous and European values. | Level 2 Constraint. Heritage places can normally be effectively integrated into new development. | <p>Not included in constraints mapping for this study as Heritage places can be effectively integrated into new development.</p> <p>It is noted that Halls Creek has a Cultural Heritage Management Plan in place, while Beerwah East and the Canelands do not have Cultural Heritage Management Plans prepared.</p> |

Constraints analysis and comparative assessment for three potential development areas on the Sunshine Coast post 2031

| Constraint | Reason for constraint | How is the constraint measured | Level 1 Constraint | Level 2 Constraint | Analysis |
|--|--|--|----------------------------|--|---|
| Soils¹ 8.2.1 Acid sulphate soils overlay code | Applies to assessable development which Level 1 constraint not applicable. Should avoid disturbing Acid Sulfate Soils where subject to the <i>Acid sulphate soils overlay code</i> . | Generic measurement as Acid sulphate soils overlay code and based on elevation of land indicating likelihood of ASS being present. | Not applicable as Level 1. | Level 2 Constraint. Land below 5m AHD is considered generic indication of higher-risk area for ASS. Land between 5m and 20m AHD has potential for ASS to occur. Preparation of an ASS investigation report and, if ASS are to be disturbed then preparation of an ASS management plan. | Not included in constraints mapping for this study as ASS can be managed as part of any development through investigation reports, management plans and remediation strategies. A figure is however provided in Appendix A presents the extent of land at or below 5 m AHD for the three Investigation Areas for reference only. |
| Contaminated Land² | Development should not occur on contaminated land parcels. | Listing on EMR and CLR. | Not applicable as Level 1. | Level 2 Constraint. Contaminated land can normally be remediated or managed so as not to preclude urban development. | Not included in constraints mapping for this study. |

Source:

1. SCRC Planning Scheme Overlay Codes and Maps,
2. EMR/CLR.

4.3 Summary of Constraints Analysis

A total of 16 constraints were initially considered. Ten of these were categorised as a relevant Level 1 constraint meaning that they would preclude urban development within an area that was affected by this criteria.

In order to determine the parts of each IGA suitable for urban development the Level 1 constraints maps were combined into a single constraints map for each IGA. Those areas without constraints were then considered to be the developable area for the IGA as shown in Figures 4.1 to 4.3.

It should be noted that these final developable areas simply represent the areas not affected by Level 1 constraints. It was beyond the scope of this current study to refine the areas further based on considerations of development practicality or viability.

Halls Creek

The initial area investigated for Halls Creek was 1,277 hectares, however 653 hectares of this was precluded during the constraints mapping, leaving 624 hectares considered suitable for future investigation for urban development as shown on Figure 4.1 (Note, more detailed investigations have identified up to 78ha as potential suitable).

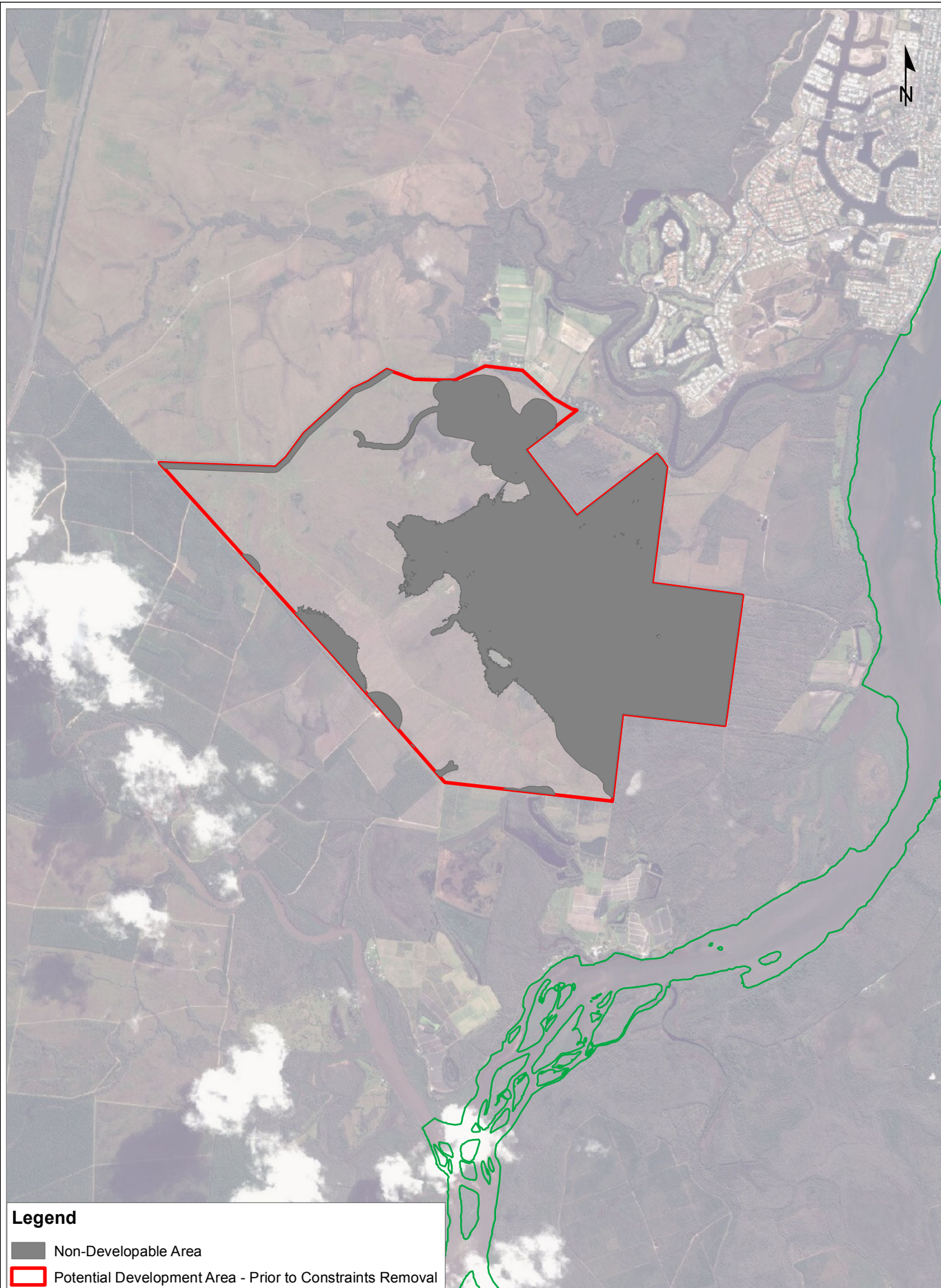
Beerwah/Caloundra South Corridor

For the Beerwah/Caloundra South Corridor Investigation Area, an initial 5,226 hectares was mapped to be considered as part of the constraints analysis. After the Level 1 constraints were all applied, 2,093 hectares remained as being considered suitable for further assessment for future urban development as shown on Figure 4.2.

Canelands

Final mapping as outlined in Figures 4.3 indicates that of the initial 8,384 hectares of Canelands that was investigated through the constraints process, all of the land was precluded from potential use for future urban development. This is due to the constraints of the land being mapped as Class A Agricultural Land and flood prone land. This outcome is consistent with the findings of previous studies including McDonald et al (2006) and Sunshine Coast Regional Council (October 2009) that indicated that the Canelands area is unsuitable for future urban development.

On this basis the Canelands Investigation Area has been excluded from further investigation in this assessment. In addition a number of other constraints including flood, science and further compound the difficult to developing this site.



Legend

- Non-Developable Area
- Potential Development Area - Prior to Constraints Removal

Project Number: 665488

Author: NC

Checked: TZ

Approved: TZ

Revision: 1

Last Modified: 24/09/15

0 250 500 1,000
meters

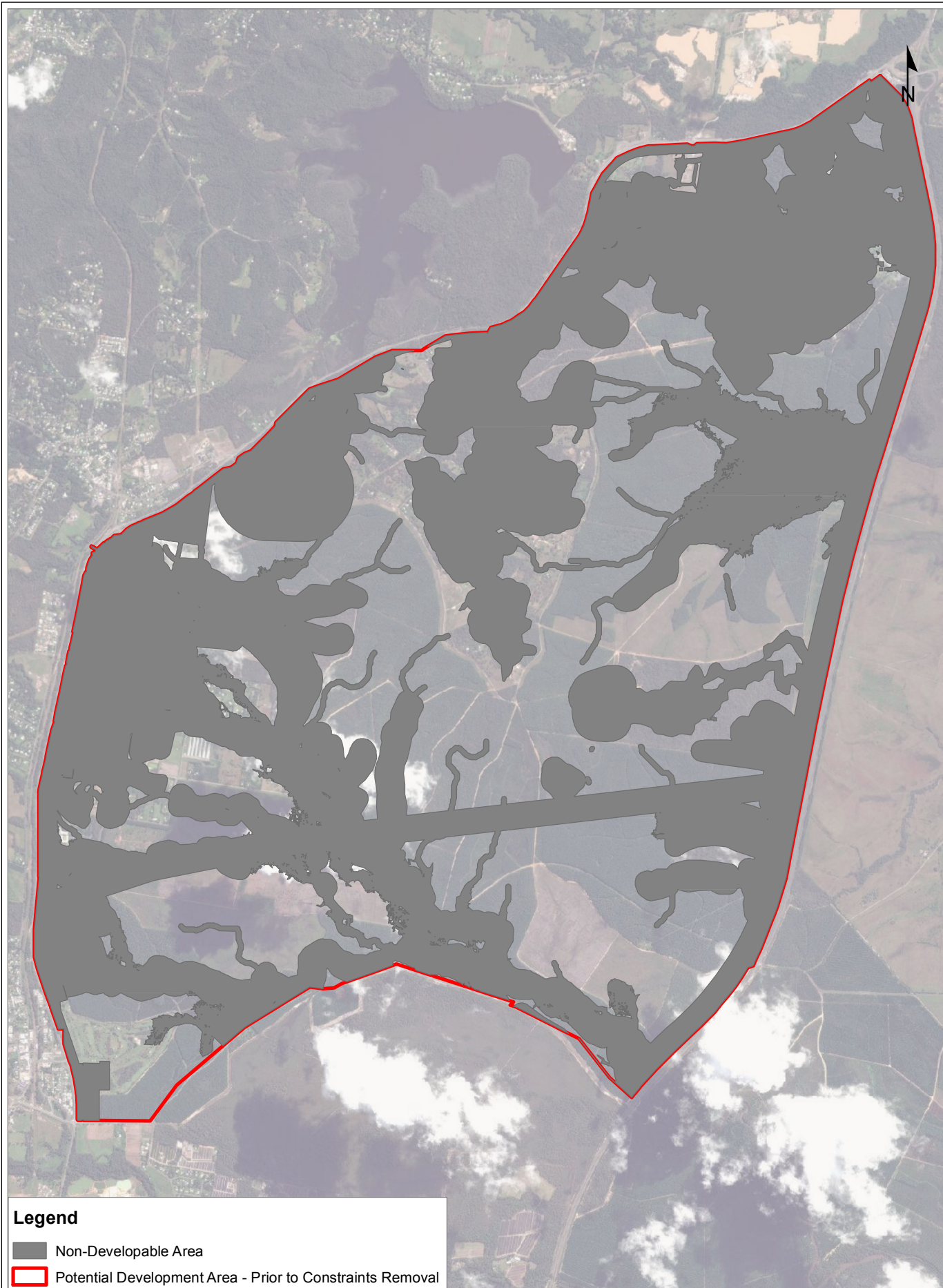
Scale: 1:50,000 @A4
Projection: GDA94



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Halls Creek Investigation Area

**Figure 4-1:
Potential Development Area
after Constraints Removal**



Legend

- Non-Developable Area
- Potential Development Area - Prior to Constraints Removal

Project Number: 665488

Author: NC

Checked: TZ

Approved: TZ

Revision: 1

Last Modified: 24/09/15

0 250 500 1,000
meters

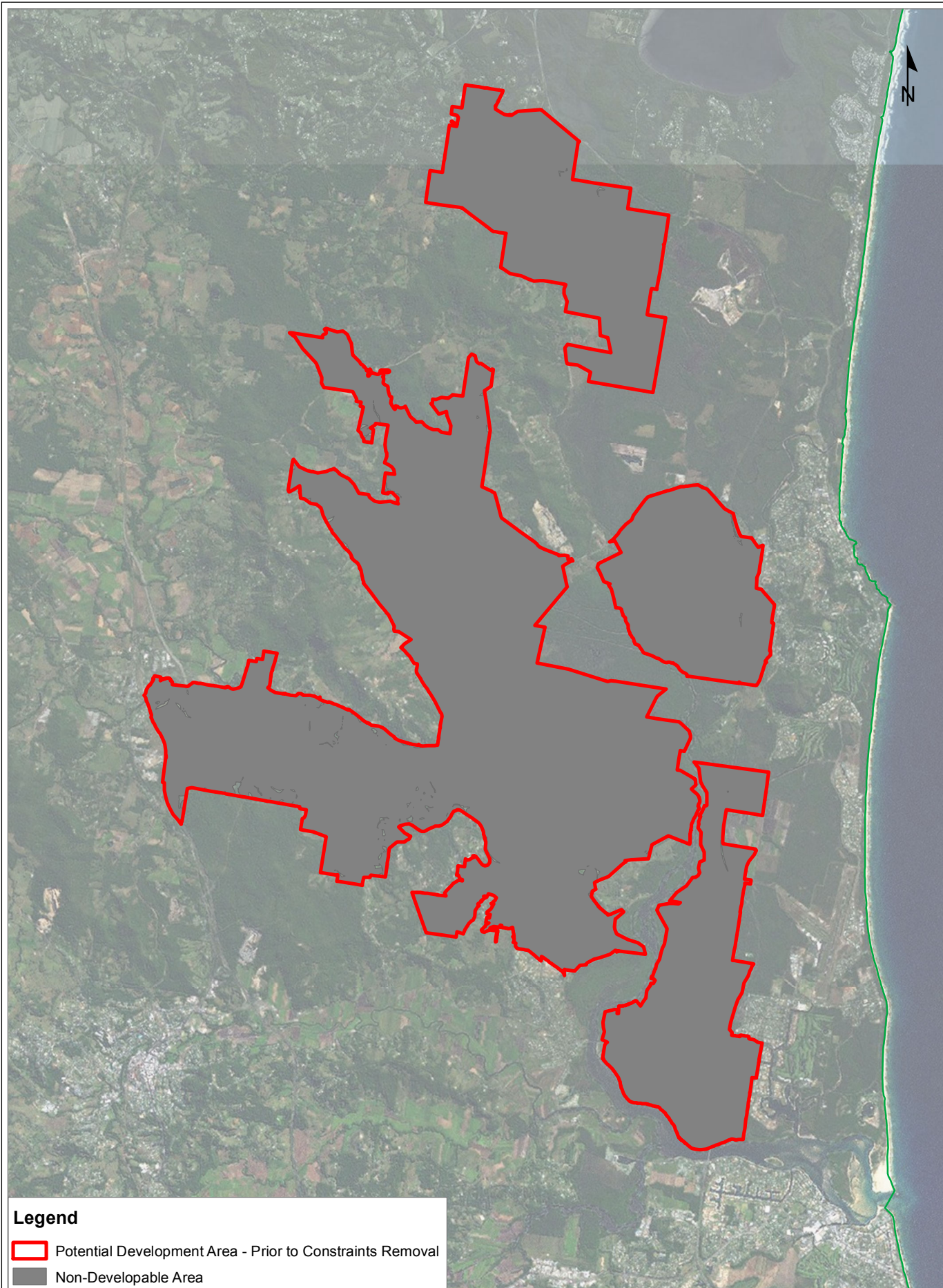
Scale: 1:50,000 @A4
Projection: GDA94



ch2m.

Beerwah/Caloundra South Corridor Investigation Area

Figure 4-2:
Potential Development Area
after Constraints Removal



Legend

- Potential Development Area - Prior to Constraints Removal
- Non-Developable Area

Project Number: 665488

Author: NC

Checked: TZ

Approved: TZ

Revision: 1

Last Modified: 14/09/15

0 5001,000 2,000
meters

Scale: 1:100,000 @A4
Projection: GDA94



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Canelands Investigation Area

**Figure 4-3:
Potential Development Area
after Constraints Removal**

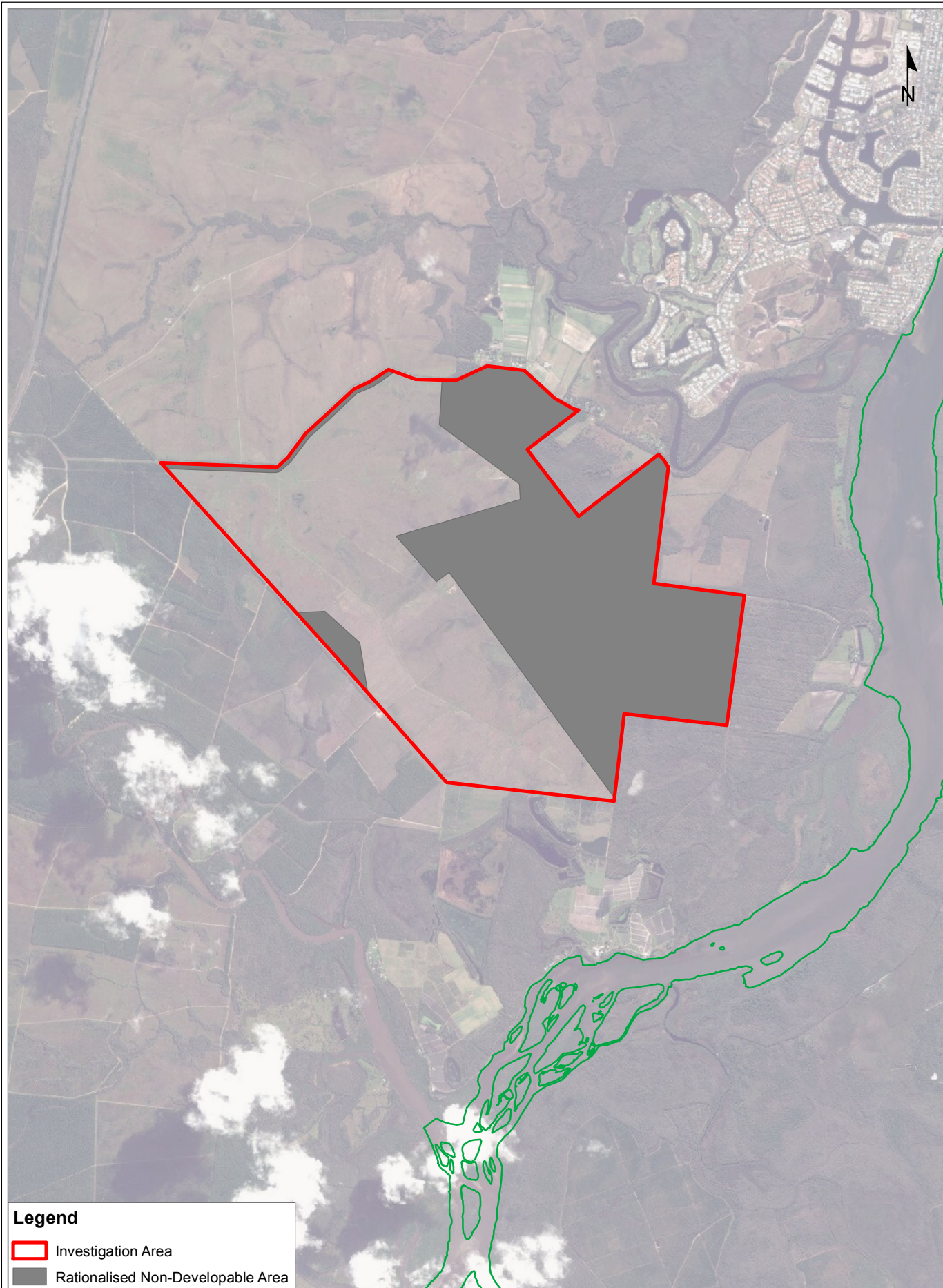
4.4 Rationalisation of developable areas

While Figures 4.1 to 4.3 show the theoretical developable areas for each IGA, in practice the boundaries of these areas would be rationalised. This process is required to:

- Remove small isolated parcels of land that would not be practical to develop because they are surrounded by constrained land;
- Create regular boundaries to developable areas; and
- Incorporate small, isolated pockets of constrained land into developable areas on the basis that these areas could be managed as part of an open space or natural drainage system within the urban area.

The results of this rationalisation process for the Beerwah/Caloundra South Corridor (2,260 ha rationalised area) and Halls Creek (663 ha rationalised area) Investigation Areas are shown in Figures 4.4 and 4.5. Rationalisation was not required for the Canelands Investigation Area as the entire area is constrained.

While this rationalisation process has made minor amendments to the boundaries of the developable areas, it has still not attempted to refine the areas based on planning or development practicalities and viabilities. For the Halls Creek Investigation Area this is a relatively straight forward process as the boundaries of the developable area are unlikely to change much if development practicalities are considered. For the Beerwah/Caloundra South Corridor Investigation Area the results are much more subjective and when development practicalities are considered, as part of more detailed planning, the developable area would likely be reduced significantly.



Legend

- Investigation Area
- Rationalised Non-Developable Area

Project Number: 665488

Author: NC

Checked: TZ

Approved: TZ

Revision: 1

Last Modified: 08/10/15

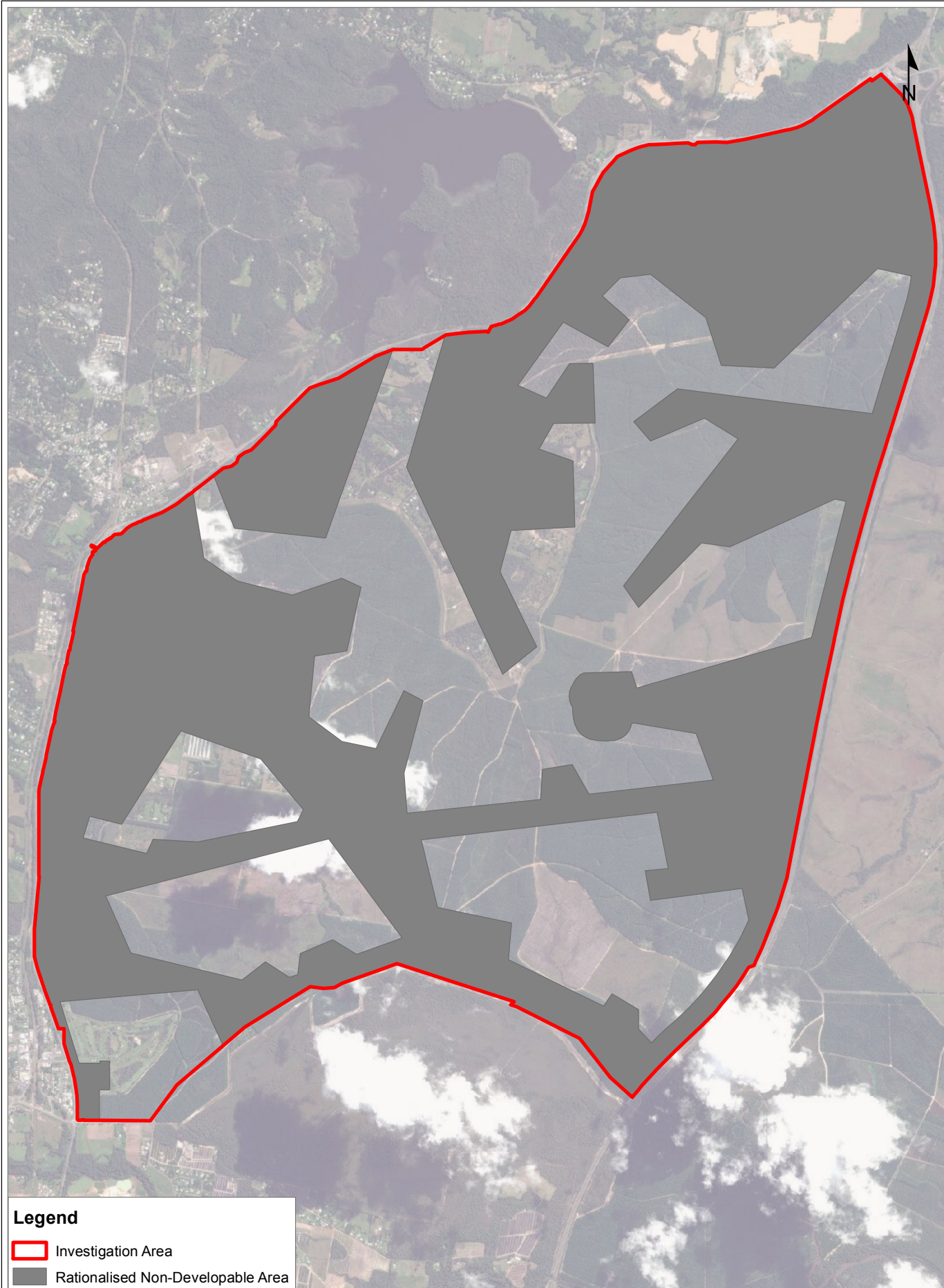
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Constraints Analysis of the
Sunshine Coast Investigation Areas

Figure 4-4:
**Halls Creek - Rationalised Potential
Development Area after
Constraints Removal**



Legend

- Investigation Area
- Rationalised Non-Developable Area

Project Number: 665488

Author: NC

Checked: TZ

Approved: TZ

Revision: 1

Last Modified: 08/10/15

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meters

Scale: 1:50,000 @A4
Projection: GDA94

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Constraints Analysis of the
Sunshine Coast Investigation Areas

**Figure 4-5:
Beerwah - Rationalised Potential
Development Area after
Constraints Removal**

4.5 Implications for future development

The details for each Investigation Area, constraints mapping and constraints analysis have identified a range of considerations relevant to developing the Investigation Areas. These considerations are as follows for the two remaining Investigation Areas:

Halls Creek

Within the Halls Creek Investigation Area there is around 663 ha of land potentially suitable for urban development. Key considerations relevant to developing this land include:

- Site is in single, freehold ownership.
- The developable portion of the site is of regular shape making for efficient infrastructure delivery.
- The developable area is largely cleared and so has limited biodiversity values.
- The area is adjacent to the Aura development which will have committed infrastructure networks and services in place by 2031.
- The parts of the area not suitable for urban development, because of flooding, wetlands and riparian protection areas which will, form a buffer to the Pumicestone Passage. The site drains through this area so rehabilitation of the wetland can assist in water quality management.
- The site is currently used for low intensity grazing so development will have no impact on rural production values including – Class A Agricultural Land, Extractive Industries or State Forests.
- There are no identified cultural heritage issues affecting the site and an Indigenous Cultural Heritage Management Plan is in place.

Beerwah/Caloundra South Corridor

The Beerwah/Caloundra South Corridor contains around 2,260 ha of land potentially suitable for urban development. Key considerations relevant to developing this land include:

- Much of the developable portion of the area is leasehold land with a licence in place (expires 2109), which also raises the potential for native title issues.
- The remainder of the area is in small parcels with individual ownerships.
- The developable portion of the site is irregular in shape making infrastructure delivery difficult.
- The area is isolated from existing communities and infrastructure networks.
- The majority of the developable portion of the site is used for plantation forestry so clearing of the site would have an impact on rural production values. There is also an extractive resource identified in the area which would likely be affected by development.
- The irregular nature of the developable area means that there will be significant edge effects on areas that are not suitable for development due to their biodiversity values, koala habitat, riparian protection areas or high bushfire hazard status.
- The southern portion of the area drains to Coochin Creek which subsequently enters “The Skids”, an extremely sensitive section of the Pumicestone Passage. The majority of Coochin Creek is protected under State legislation as it is an area of High Ecological Value (HEV) – which requires a no change in water quality standard to be upheld.
- The northern portion of the area drains to Bells Creek South, which in turn runs through the Aura development and Pelican Waters. Downstream impacts (flooding and water quality) will need to be managed on-site to ensure no worsening of the current situation.

- There are no cultural heritage values identified for the area, however, an indigenous cultural heritage management plan will need to be developed to reflect the region's broader indigenous cultural values.

5. Stage 2 - Comparative analysis of Investigation Areas

5.1 Overview

Based on the outcome of the Stage 1 constraints assessment, a comparative analysis of the developable land for the remaining Investigation Areas; Halls Creek and Beerwah/Caloundra South Corridor was undertaken.

Stage 1 of the assessment process identified the developable land available within each of the three Investigation Areas. At this stage the third Investigation Area, the Canelands, was excluded based on the extent of Level 1 constraints present within the area that ruled out any potential for urban development in the future.

The SEQRP states that ‘further investigation sare required to determine which of these IGAs will be seriously considered to accommodate long-term residential and employment growth on the Sunshine Coast’. The SEQRP then sets down the factors that must be considered in making such a determination.

These factors include each area’s ability to:

- comply with the Urban Footprint principles and requirements within the Sunshine Coast sub-regional narrative;
- assist in the delivery and performance of infrastructure (including public transit) to the Sunshine Coast community;
- protect environmental values;
- achieve urban consolidation and self-containment;
- achieve coordinated delivery of infrastructure; and
- achieve high environmental performance.

In addition, development within each area must demonstrate:

- sufficient demand for further urban land within the sub-region;
- accessibility to a public transit service;
- achieving compliance with the urban footprint principles;
- achieve world leading environmental performance for any urban development and related infrastructure;
- materially assist in the provision of infrastructure for the southern Sunshine Coast community;
- demonstrate high levels of employment self-containment; and
- coordinated delivery of infrastructure.

5.2 Process for comparison of Investigation Areas

In order to measure the performance of each area against these criteria the following process was followed:

- a) The factors listed in Section 5.1 were combined into a single set of performance criteria and grouped under three broad categories: Land Use, Infrastructure and Environment.
- b) All the regional policies in the SEQRP were reviewed to identify those that apply specifically to future urban development at the Growth Area level (other policies that are not relevant apply to managing growth, growth at the local scale etc).
- c) Each relevant regional policy was allocated to the most suitable performance criteria and relevant policies from 8.2 (operational principles for new Urban Areas) are allocated to most appropriate evaluation criteria.
- d) For each regional policy qualitative assessment measures were developed.
- e) The two remaining Investigation Areas were then assessed against each regional policy using the qualitative measures.
- f) Based on this assessment the performance of each Investigation Area against the regional policy was then rated according to the scale outlined below.

The evaluation process and results of this assessment are detailed in Appendix B. Table 5.1 presents a summary of the assessment criteria and the results of the assessment. The following scale is used to summarise the performance of each Investigation Area against each criteria. It should be noted that this scale is not intended to be a score for each criteria but rather to identify opportunities and challenges to developing each Investigation Area.

| | | |
|---|--|--|
| Presents Opportunity for Development | Issue to be resolved to allow development | Presents significant challenge to development |
|---|--|--|

Table 5.1: Summary of comparative assessment of the Halls Creek and Beerwah/Caloundra South Corridor Investigation Areas

| Evaluation Criteria | | SEQR Source | Basis for measurement | Beerwah/Caloundra South Corridor Investigation Area | Halls Creek Investigation Area |
|---------------------|--|--|---|--|---|
| LAND USE | | | | | |
| 1 | Compliance with Urban Footprint Principles and Requirements within the Sunshine Coast Sub-Regional narrative Ability to achieve urban consolidation and self-containment <i>Demonstrate achieving compliance with Urban Footprint principles</i> <i>Demonstrate sufficient demand for further urban land within the sub-region</i> <i>Demonstrate high levels of employment self-containment</i> | | | | |
| 1.1 | Demonstrate capacity to cater for dwelling requirements beyond 2031 | Sub-regional narrative - Infrastructure | Does the Investigation Area have the capacity to meet the SEQR dwelling targets for 2041 for Sunshine Coast which require 25,000 new dwellings (Urbis Report) in greenfield areas? Measured by developable area capacity compared to target of 25,000 dwellings based on an average of 20 dwellings per hectare. | Could potentially accommodate up to 45,000 new dwellings. Long term licence (99 years) make it unlikely to meet target within 2041 planning horizon | Could potentially accommodate up to 13,000 new dwellings within 2041 planning horizon |
| | Facilitate the achievement of regional dwelling and employment targets through Investigation Areas | 8.10.2 | | | |
| 1.2 | Residential and employment growth may occur at Beerwah East or Halls Creek. | Sub-regional narrative - Residential | Does the land tenure and ownership pattern of the Investigation Area facilitate the development of the site for urban purposes in the long term? Assessment is qualitative based on the tenure of land in the Investigation Area, the land ownership pattern and the current land use. | Mix of Freehold and leasehold land, and range of viable existing land uses including long term (99 year) forestry licence (expires 2109) means that an integrated approach to development will be difficult to achieve. | Site is in single, freehold ownership with no impediments to future development. |
| | Identify and protect identified Growth Areas for accommodating long-term growth beyond the life of the plan. | 8.10.7 | | | |
| 1.3 | New urban footprint areas should be located to have ready access to services and employment | 8.2 Operational Principles for new Urban Areas | Does the Investigation Area have ready access to services and employment areas as identified on the SCPS Economic and Employment Strategic Plan map? Does the Investigation Area achieve a strong link between the transport system and activity centres? The key services and employment areas for the Sunshine Coast (not including Beerwah or Caloundra South Regional Activity Centres), which are the preferred destinations for employment-related travel, are located within the Sunshine Coast Enterprise Area which runs from Caloundra South/Sunshine Coast Regional Business and Industry Park to Sunshine Coast Airport at Marcoola. These areas are linked by Priority Transit Corridors starting at Caloundra | Requires a mix of cycle, train and/or car/bus to access Priority Transit Corridors involving a maximum trip time of between 26 and 32 minutes (depending on travel mode) from Investigation Area. Infrastructure required to facilitate these trips is not yet committed. | Short trip of a maximum of 17 minutes to access Priority Transit Corridors. Required infrastructure is committed under an Infrastructure Agreement. |
| | Ensure that development supports the activity centres network and the transport system. | 8.6.1 | | | |

Constraints analysis and comparative assessment of three potential development areas on the Sunshine Coast post 2031

| Evaluation Criteria | | SEQR Source | Basis for measurement | Beerwah/Caloundra South Corridor Investigation Area | Halls Creek Investigation Area |
|---------------------|---|-------------|--|--|---|
| | | | South and extending northwards. The strength of the link between the transport system and the activity centres is therefore dependent on the ease with which residents can access these Priority Transit Corridors. Assessed by average travel distance from Investigation Area to access Priority Transit Corridors which are identified on SCPS Strategic Transport Map. | | |
| 1.4 | Integrate and connect communities in new development with existing or adjacent communities to prevent areas of social and locational disadvantage. | 6.2.3 | Is the Investigation Area contiguous with an existing community? Does the Investigation Area connect/integrate with existing communities? Measured by qualitative assessment of how contiguous the Investigation Area is with existing communities. | Largely isolated and fragmented so need to create a new community from the ground up. Some potential for support from the Beerwah Regional Activity Centre. Likely to be ongoing tensions between existing rural and new urban activities. | Contiguous with Aura community so ready access to established infrastructure, transport, community services, retail and employment. |
| | Make Investigation Areas contiguous with existing communities wherever possible, or otherwise provide development with direct transport linkages to established urban areas early in the development. | 8.2.2 | | | |
| 1.5 | Focus higher density and mixed use development in and around regional activity centres and public transport nodes and corridors | 8.1.2 | Does the Investigation Area provide the opportunity to focus high density and mixed use development in and around regional activity centres and public transport nodes and corridors? Does the Investigation Area provide superior transportation choices by locating growth along | Potential to focus high density development around future CAMCOS station at Beerwah East (Note no delivery commitment for this | Regular shape of the Investigation Area creates the potential to develop an integrated community where homes have good |

| Evaluation Criteria | | SEQR Source | Basis for measurement | Beerwah/Caloundra South Corridor Investigation Area | Halls Creek Investigation Area |
|-----------------------|--|-------------|---|---|---|
| | Accommodate regional growth in locations that provide superior transportation choices or otherwise reduce car use, particularly through supporting growth in established urban areas and redevelopment in and around existing urban centres, and along priority transit networks and other high-frequency transit corridors. | 8.2.1 | priority transit networks and other high-frequency transit corridors? Measured by area with potential to be developed with easy transit corridor access, measured by number of dwellings that could be located along high frequency transit corridors or public transport nodes. | infrastructure at present) Irregular shape of the Investigation Area makes it costly and difficult to service the community with a high quality bus network. | access to high quality bus services that link to the Regional Activity Centre at Aura. |
| INFRASTRUCTURE | | | | | |
| 2 | Potential to assist in the delivery and performance of infrastructure (including public transport infrastructure) Ability to achieve coordinated delivery of infrastructure <i>Demonstrate accessibility to a public transport service</i> <i>Demonstrate materially assisting in the provision of infrastructure for the Sunshine Coast community</i> <i>Demonstrate coordinated delivery of infrastructure</i> | | | | |
| 2.1 | Connect active transport routes to improve accessibility and encourage transport use by a broader range of people | 8.9.4 | Potential to connect the Investigation Area to the external walking or cycling network. Potential to connect the active transport network with the public transport network to promote integration of non-car transport nodes. Measured by the ability to connect the Investigation Area the existing or planned external active transport network as show on the SCPS Priority Infrastructure Plans and Caloundra South Master Plan. Length of pedestrian/cycle paths to be built to ensure all residents within the Investigation Area have access to the public transport network. | Linkages to external network along Steve Irwin Way and Roys Road with significant travel distances to external destinations. Likely to require around 28 km of internal trunk network to provide all residents with high quality active transport facilities. | Potential to seamlessly integrate with the dedicated active transport network in Caloundra South. Around 3 km of trunk infrastructure required to provide high quality active transport facilities servicing all residents. |
| 2.2 | Prioritise new broad hectare development sites with access to existing or planned transport infrastructure | 8.9.1 | Does the Investigation Area have good access to existing and/or planned transport infrastructure? Does the Investigation Area provide a logical extension of the transport network? Does the Investigation Area make use | Requires significant investment in new infrastructure including CAMCOS station and up to | Makes use of existing infrastructure committed under the Aura (Caloundra South) Infrastructure |

| Evaluation Criteria | | SEQR Source | Basis for measurement | Beerwah/Caloundra South Corridor Investigation Area | Halls Creek Investigation Area |
|---------------------|---|---|---|---|--|
| | Integrate transport infrastructure, services and land use planning by sequencing Investigation Areas and aligning transport investment. | 12.3.1 | of existing transport infrastructure rather than requiring investment in new transport infrastructure, additional whole of life costs and environmental impacts? Measured by the cost of new transport infrastructure required to connect the Investigation Area to the existing major transport networks - road and rail. | seven new major intersections with the external road network. New construction will have additional environmental impacts and increase whole of life costs. | Agreement between Stockland and DTMR. Only new infrastructure required is for accesses to the site from Bells Creek Road so limited environmental impacts and minimal increase in whole of life costs |
| | Review transport investment priorities to take into account maximum use of existing infrastructure, the whole of life costs (construction plus operation) and environmental implications. | 12.3.4 | | | |
| | Maximise the use of existing transport assets and services by effective transport investments and policies, demand management and the use of new technologies. | 12.4.1 | | | |
| | Maximise the use of committed and planned major transport and water infrastructure | 8.2 Operational Principles for new Urban Areas | | | |
| 2.3 | Ensure delivery of Investigation Areas is coordinated with the provision of public transport. | 8.10.3 | Can the delivery of the Investigation Area be coordinated with the provision of public transport? Proximity to transport infrastructure network -rail and bus. Measured by cost to provide major public transport infrastructure to the Investigation Area based on the length of new high frequency bus routes required to provide a maximum 400 metre walking distance to a high frequency public transport stop for all new residents. | Investigation Area could be serviced by new high quality bus network providing access to the new CAMCOS station (not committed). To provide access for all residents to high quality services would require a complex network using a number of routes. | Public transport can be provided by high quality bus services as an extension of the Caloundra South network. The Investigation Area could provide all residents with 400m walking distance to public transport stop using only one route. |
| | Ensure public transport infrastructure and service investment actively reduces oil dependence, particularly for trips that could be undertaken by public or active transport. | 1.5.3 | | | |

| Evaluation Criteria | | SEQRP Source | Basis for measurement | Beerwah/Caloundra South Corridor Investigation Area | Halls Creek Investigation Area |
|---------------------|--|--|---|---|--|
| 2.4 | Proponents must demonstrate how necessary infrastructure and services for broad hectare areas outside current state and local government infrastructure delivery programs will be delivered and funded. | 8.2.4 | Is there capacity to service the Investigation Area by key state/local infrastructure delivery programs for water, sewerage and stormwater including a clear funding mechanism? Does the Investigation Area present a logical sequence of infrastructure delivery? Will the Investigation Area achieve the integrated delivery of infrastructure services at regional, sub-regional and local levels? Does the Investigation Area maximise the use of committed and planned major transport and water infrastructure? Measured by indicative cost to service the Investigation Area with new trunk water and sewerage infrastructure (external to the IA) and stormwater infrastructure required. | There is currently no planning or programming of water and wastewater infrastructure for this area. New transmission and distribution networks will need to be developed to service the area. For both Coochin and Bells Creek South catchments there will be substantial detention/ retention and water quality improvement infrastructure required within the Investigation Area to protect the Pumicestone Passage and Aura/Pelican Waters areas respectively from downstream impacts of flooding and water quality issues. | Water and wastewater infrastructure can be integrated with the adjacent Aura networks. No major stormwater constraints as no downstream properties to be affected by flooding and buffer area provided by rehabilitated wetlands. |
| | Ensure infrastructure delivery is timed and sequenced with the development. | 8.10.4 | | | |
| | Coordinate and integrate the planning and delivery of infrastructure services at regional, sub-regional and local levels. | 10.2.1 | | | |
| | Enable the efficient provision of physical and social infrastructure, including public transport | 8.2 Operational Principles for new Urban Areas | | | |
| | Maximise the use of committed and planned major transport and water infrastructure | 8.2 Operational Principles for new Urban Areas | | | |
| ENVIRONMENT | | | | | |
| 3 | Protection of environmental values Potential to achieve high environmental performance <i>Demonstrate achieving world-leading environmental performance for any urban development and related infrastructure</i> | | | | |
| 3.1 | Avoid impacts on areas with significant biodiversity values in the Regional Landscape and Rural Production Area, including biodiversity corridors. | 2.1.1 | Does the Investigation Area impact on areas or corridors with significant biodiversity values? Does the Investigation Area have the potential to have edge effects on areas of significant biodiversity values (including endangered RE's)? Measured by the area of significant biodiversity habitat | This IA comprises two small pockets of the Glasshouse Mountains National Park. Three national parks are located adjacent this IA; | There are no designated National Parks within this IA. However the IA does border the Beerwah State Forest to the south-west |

| Evaluation Criteria | | SEQR Source | Basis for measurement | Beerwah/Caloundra South Corridor Investigation Area | Halls Creek Investigation Area |
|---------------------|---|-------------|--|---|--|
| | Avoid off-site impacts from development or other activities on areas with significant biodiversity values. | 2.1.3 | lost due to development not including the endangered RE's or other natural areas that are protected from development. Calculate the area of significant biodiversity habitat remaining within and adjoining the Investigation Area that is likely to be impacted by edge effects that extend 50 metres from the boundary of the developable area. Add both areas to provide the total area of significant biodiversity habitat that will be affected by developing the Investigation Area. | namely Caloundra NP (north-east), Mooloolah River NP (north) and Glasshouse Mountains NP (south). Mapped regional ecosystems classified as Endangered are located in the far north and west of this IA. | and Bribie Island National Park to the south-east. A wildlife corridor extends through and to the immediate east of the IA. There are no Endangered regional ecosystems mapped within this IA. |
| 3.2 | Ensure planning and development caters for koala movement between conserved areas of bushland koala habitat. | 2.2.3 | Does the Investigation Area impact on koala habitat or movement, provide the potential to protect or improve the quality koala habitat or movement or provide the potential to protect or improve the quality koala habitat or movement? Measured by the area of koala habitat/movement corridors affected by development (loss of land and edge effects). | A total 400 ha of potential koala habitat including 50 m buffer is mapped within this IA. | There is no koala habitat or potential movement corridors mapped within this IA. |
| | Prioritise the protection and rehabilitation of koala habitat areas outside Urban Footprint as a key source of long-term habitat to region's koala population. | 2.2.4 | | | |
| | Ensure planning and development seeks to maintain or enhance koala habitat values in areas of bushland habitat, areas suitable for rehabilitation and other areas of value to koalas. | 2.2.5 | | | |
| 3.3 | Ensure development other than maritime infrastructure avoids erosion prone areas, storm tide inundation hazard areas, and undeveloped sections of tidal waterways in accordance with the Queensland Coastal Plan. | 2.4.2 | Does the Investigation Area include erosion prone areas, storm tide inundation hazard areas or impact on undeveloped sections of tidal waterways? Measured by the area of these elements affected by developing the Investigation Area. | No land or waterways affected by these elements within the Investigation Area. | No land or waterways affected by these elements within the Investigation Area. |

| Evaluation Criteria | | SEQRP Source | Basis for measurement | Beerwah/Caloundra South Corridor Investigation Area | Halls Creek Investigation Area |
|---------------------|--|--|--|---|--|
| 3.4 | Ensure land use and infrastructure plans are consistent with the Moreton Bay Marine Park zones and fish habitat zones and management plans for the region. | 2.4.5 | Does the Investigation Area affect Moreton Bay Marine Park zones or fish habitat zones and management plans for the region? Will the Investigation Area have an impact on the quality of fishery habitats? Measured by qualitative assessment of potential water quality impacts. | Surface water from the Investigation Area discharges partly into Coochin Creek which flows directly into the most environmentally sensitive area of the Pumicestone Passage with no natural buffers to mitigate unforeseen releases. The balance of the Investigation Area flows into Bells Creek South which in turn discharges into the Caloundra South system. This system has not been designed to cater for development upstream of the Bruce Highway so all discharges will need to be managed on site. | Surface water discharges into Pumicestone Passage north of the environmentally sensitive areas via the wetland area which acts as a buffer to mitigate any unforeseen discharges. |
| | Protect, manage and enhance marine, estuarine and freshwater habitats to sustain fish stock levels and maximise fisheries production for the ongoing benefit of the community. | 4.2.5 | | | |
| 3.5 | Protect, maintain and enhance the function of inter-urban breaks. | 3.2.4 | Does the Investigation Area protect, maintain or enhance an inter-urban break? What impact will the Investigation Area have on the function and effectiveness of inter-urban breaks? Functions of inter-urban breaks include containing urban growth; safeguarding natural and productive areas; providing amenity, recreation and quality of life; and preventing communities from merging to preserve their character. | Development will result in the will be lost of two sub-regional inter-urban breaks. The previous separation of communities west of the Bruce Highway from development to the east and between Beerwah and Landsborough will also be lost. | Development will result in the movement of the regional inter-urban break boundary southwards but will not affect its function or perception of the separation of the Sunshine Coast and Caboolture communities. |
| | Maintain the integrity of inter-urban breaks | 8.2 Operational Principles for new Urban Areas | | | |
| | Inter-urban break preserves the distinctive character of Sunshine Coast and its communities. | Sub-regional narrative | | | |
| 3.6 | Ensure coordination of state and local government land use and infrastructure planning to protect and manage priority regional landscape areas. | 3.3.1 | Does the Investigation Area affect priority regional landscape areas? Does the development of the Investigation Area affect the regional community greenspace network? Measured by nett impact on regional community greenspace area as shown on SEQRP maps. | Will result in the loss of a significant part of the Community Greenspace Network. | No impact on Community Greenspace Network. No loss of scenic values. |

Constraints analysis and comparative assessment of three potential development areas on the Sunshine Coast post 2031

| Evaluation Criteria | | SEQR Source | Basis for measurement | Beerwah/Caloundra South Corridor Investigation Area | Halls Creek Investigation Area |
|---------------------|--|--|---|--|---|
| | Expand and develop the capacity of the existing regional community greenspace network to meet current and future community needs. | 3.4.1 | Assessed by areas of high value scenic amenity as shown on SCPS Strategic Framework Maps and regional community greenspace area as shown on SEQR Maps lost to development of the Investigation Area. | | |
| 3.7 | Identify and protect extractive and mineral resources for potential future extraction, including providing appropriate transport corridors, and buffers, and ensuring that planning preserves the opportunity for discovery and development of new resources in appropriate areas. | 4.2.3 | Does the Investigation Area impact on extractive and mineral resources? Assessed by the extent of impact on extractive and mineral resource areas (assuming these are lost because of incompatibility with urban development). | One resource area likely to be lost as a result of urban development encroaching. | No impact on resource areas. |
| 3.8 | Protect areas supplying high levels of ecosystem services from development impacts. | 4.3.1 | Does the Investigation Area affect areas supplying high levels of ecosystem services (as defined by p71 of SEQR)? Assessed by the area of land supplying high level ecosystem services lost including native/plantation forests and natural economic resources, based on SEQR and SCPS Strategic Framework Maps for elements not measured under other criteria. Most relevant ecosystem services (food, genetic resources, transport infrastructure, arable land productive soils, pollination, cultural diversity, iconic landscapes, iconic species etc. have been assessed under other evaluation criteria. The only ecosystem service not already assessed (and which is relevant) is building and fibre, and this also relates to the other aspects of this evaluation criteria above – native and plantation forests, natural economic resources. | Loss of significant plantation forestry resource (ie. Approximately 1,824 ha of mapped State F). | No loss of ecosystem services. No plantation forests within IA. |
| | Protect, enhance and sustainably manage the region's native and plantation forests. | 4.2.4 | | | |
| | Identify and protect natural economic resource areas from further fragmentation and inappropriate land use. | 4.2.1 | | | |
| | Minimise impacts on natural resources | 8.2 Operational Principles for new Urban Areas | | | |

| Evaluation Criteria | | SEQR Source | Basis for measurement | Beerwah/Caloundra South Corridor Investigation Area | Halls Creek Investigation Area |
|---------------------|--|-------------|---|---|--|
| 3.9 | Protect and maintain traditional Aboriginal cultural landscapes and culturally significant places in land use, planning and management arrangements in partnership with traditional owners of those landscapes and places, and maintain or improve traditional owners' access to cultural resources. | 7.4.1 | Does the Investigation Area affect traditional Aboriginal cultural landscapes and culturally significant places? Measured by the area/extent of impacts. | No identified aboriginal cultural heritage issues. Potential issue with native title and leasehold land areas will require further investigation. Cultural Heritage Management Plan will be required. | Cultural Heritage Management Plan in place. No identified aboriginal cultural heritage issues. No native title issues. |

1 SEQR basis for comparison of Investigation Areas (from p23 of SEQR)

6. Conclusion

The purpose of this study is to consider the constraints, and compare the opportunities and challenges affecting greenfield urban growth areas on the Sunshine Coast. Three Investigation Areas were considered as part of this study based on their current inclusion in either the SEQRP or the Sunshine Coast Planning Scheme 2014 as a future investigation area. These are:

- Halls Creek Investigation Area
- Beerwah-Caloundra South Corridor Investigation Area
- Canelands Investigation Area

Stage 1 of this study comprised a detailed mapping exercise using the Sunshine Coast Planning Scheme 2014 mapping, policies and guidelines to indicate the constraints for urban development.

At completion of Stage 1, 52% of Halls Creek Investigation Area, 43% of Beerwah-Caloundra South Corridor Investigation Area and 100% of the Canelands Investigation Area were identified as not being viable for future development based on the constraints analysis (refer Section 3). The areas identified represent all the land within the Investigation Areas that is not subject to a Level 1 constraint, however a detailed assessment of the practicalities of developing all the land has not been part of this study.

As a result of the outcomes of the Stage 1 constraints analysis, the Canelands, which did not contain any unconstrained land, was omitted from Stage 2 of the study. Stage 2 involved a comparative analysis of the two remaining Investigation Areas based on SEQRP criteria that are identified as considerations in any assessment of the merits of the Investigation Areas.

Based on the investigation undertaken and presented in this report, both sites have opportunities for development and challenges going forward.

6.1 Halls Creek Investigation Area

This Investigation Area is cleared (85%) and ready for development to proceed. This means that development will not result in any undue impacts on significant biodiversity habitat, koala habitat, the Regional Greenspace Network, scenic values or ecosystem services.

The Investigation Area is contiguous with the Caloundra South PDA. When the time comes for development to proceed there will be good access to established community services, trunk infrastructure (Aura trunk infrastructure can be designed to accommodate Halls Creek), and Priority Transit Corridors. Development within the Investigation Area will also support the viability of the Caloundra South Regional Activity Centre and CAMCOS station.

As the land is in single, freehold ownership and with the above infrastructure in place it is available to be developed post-2031 to meet the timeframe when additional greenfield land will be required.

The regular shape of the Investigation Area means that the whole area can be efficiently serviced by public and active transport immediately development commences (connecting into the Aura networks). This provides the opportunity to create a transit-based community focused on high quality public transport.

The majority of the Investigation Area falls within the Halls Creek Catchment . The IA also provides the opportunity to create an effective water quality treatment system to ensure that there are no adverse impacts on water quality in the Pumicestone Passage. The wetland area separating the development from Pumicestone Passage provides an additional buffer for treating unexpected discharges.

Because of these factors the Halls Creek Investigation Area generally complies with the Strategic Directions and regional policies that are identified in the SEQRP and are relevant to developing greenfield areas.

The Halls Creek Investigation Area does not provide sufficient developable area to contain all the future dwellings required from greenfield sites on the Sunshine Coast to meet the 2041 planning horizon.

The site is identified in the Sunshine Coast Councils planning scheme as being with an inter urban break area however, it also recognises that it is subject to further planning assessment as part of the SEQRP review. Its development would not impact on the function of the Inter urban break.

6.2 Beerwah/Caloundra South Corridor Investigation Area

The developable land within the Investigation Area is of sufficient size to cater for the future dwellings required from Greenfield areas on the Sunshine Coast.

The presence of the CAMCOS corridor through the Investigation Area provides the opportunity to focus higher density development around the proposed Beerwah East station.

Development within the Investigation Area would support the viability of the Beerwah Regional Activity Centre.

Development of this Investigation Area must overcome a number of challenges if it is to comply with all the Strategic Directions and regional policies that are identified in the SEQRP and are relevant to developing Greenfield areas.

The land ownership, land use and land tenure patterns within the Investigation Area will make integrated development difficult to achieve. Existing activities such as agriculture, tourism and plantation timber (long-term 99 forestry licence on leasehold land) will need to be ceased in order for urban development to proceed. There may also be native title issues related to the leasehold land.

The irregular shape of developable land within the Investigation Area will make it difficult to service by public transport. There will need to be a new public transport network created west of the Bruce Highway to service the area.

As the Investigation Area is currently isolated from trunk infrastructure networks, these networks will need to be extended. This includes a new CAMCOS station, arterial road upgrades and new intersections, and water and sewer infrastructure.

The Investigation Area falls within two main catchments – Coochin Creek and Bells Creek South. In both cases there will need to be extensive detention/retention and water quality improvement infrastructure located within the developed area to reduce the potential environmental risks to the water quality of the Pumicestone Passage. These are required because:

- Coochin Creek is a protected High Ecological Value (HEV) area and flows directly into the most poorly flushed section of the Pumicestone Passage known as 'The Skids'. The potential conversion of the Beerwah/Caloundra South Corridor IA site from forested to urban residential form will significantly increase stormwater flows and pollutant loads into Coochin Creek and ultimately the Pumicestone Passage. In order to achieve the minimum 'no change' water quality performance criteria required to protect downstream high ecological value (HEV) waterways within the Pumicestone Passage catchment, significant water quality management intervention will be required.

- Bells Creek South will flow into the Aura system which already has the challenge of ensuring the quality and quantity of flows into Golden Beach and Pelican Waters are managed to ensure there will be no downstream flooding or water quality impacts. This system has not been designed to cater for urban development upstream of the Bruce Highway so significant intervention will be required to manage water quality and flooding within the Beerwah/Caloundra South Corridor IA.

Development of the Investigation Area will result in the loss of three sub-regional inter urban breaks identified in the Sunshine Coast Planning Scheme 2014. It will have impacts on the Regional Greenspace Network, as well as the scenic values within the Investigation Area. The loss of plantation timber as a result of urban development will have an impact on the ecosystem services on the Sunshine Coast.

6.3 Summary

In summary it would appear that the Halls Creek Investigation Area is easier to develop as a logical extension of the Aura community and generally meets SEQRP criteria for developing Greenfield areas. Developing this area will have minimal impacts on existing land uses and environmental values, make efficient use of infrastructure that will exist in 2031, and create a contiguous community within the existing Sunshine Coast urban area.

On the other hand Halls Creek does not have sufficient capacity to full meet the demand for new Greenfield dwellings on the Sunshine Coast post-2031. This means that the Beerwah-Caloundra South Corridor Investigation Area will also be required as an area for future urban growth. The greater challenges to be resolved for this area around land ownership, infrastructure, forestry and water cycle management may mean that development is a longer term proposition.

The recommendation of this study is that both the Halls Creek and Beerwah/Caloundra South Corridor Investigation Areas need to be retained in the SEQRP going forward.

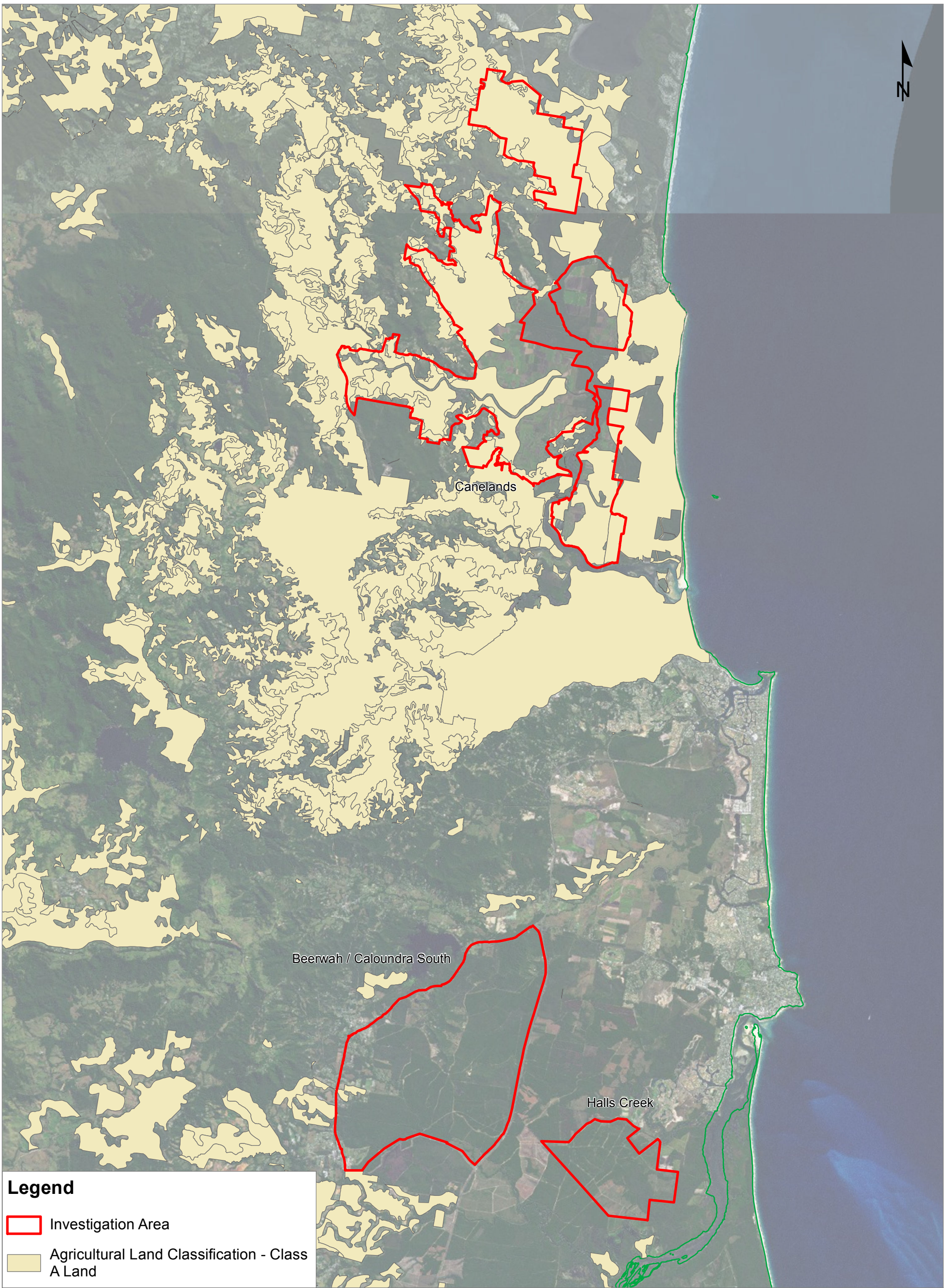
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Appendix A

Constraints mapping

Drawing No. A3_01_Agriculture; It remains the property of CH2M . © Sunshine Coast Regional Council 2015, CH2M



Legend

Investigation Area

Agricultural Land Classification - Class A Land

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| Project Number: 665488 |
| Author: NC |
| Checked: TZ |
| Approved: TZ |
| Revision: 1 |
| Last Modified: 17/09/15 |

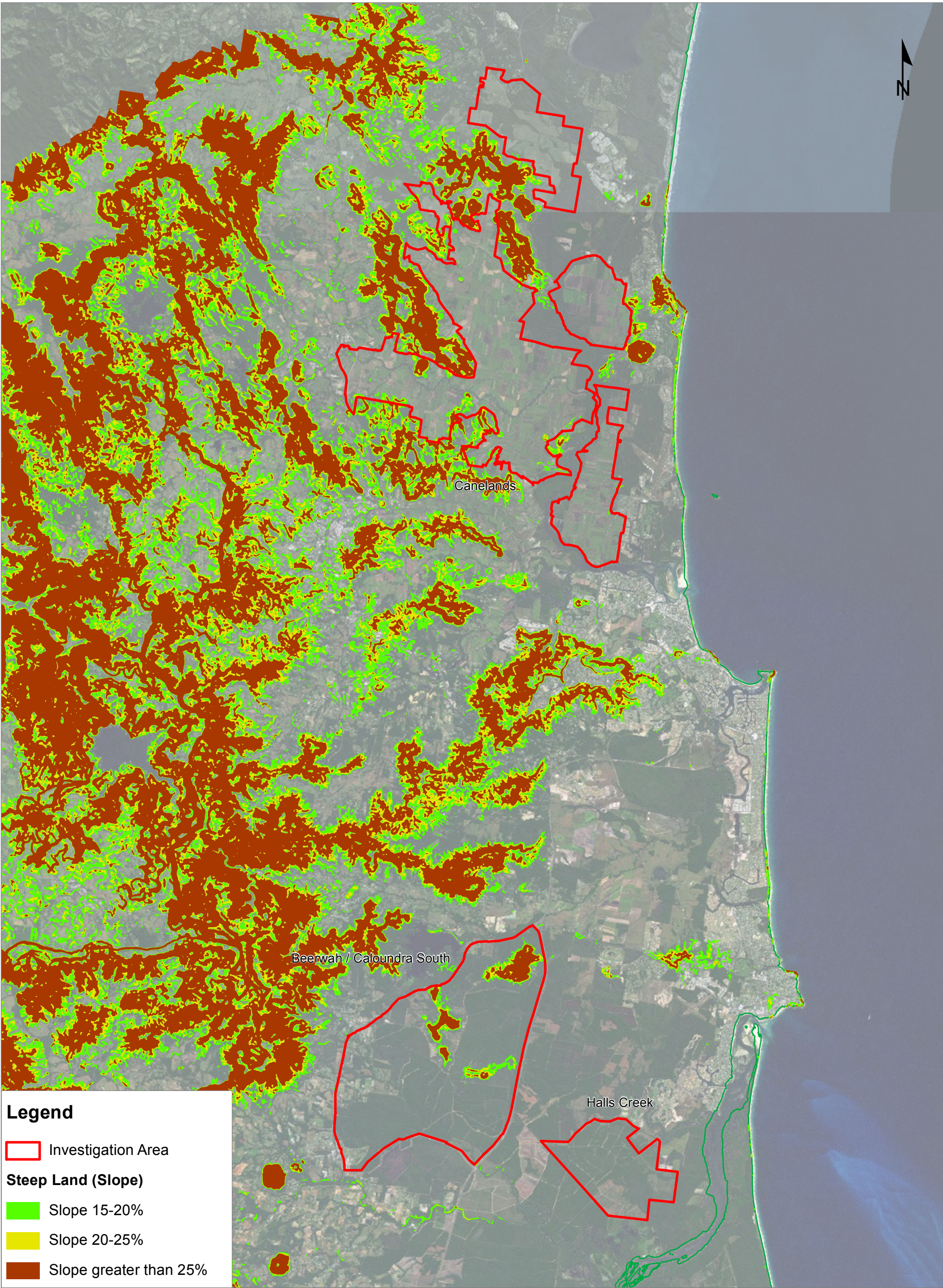
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Projection: GDA94



Constraints Analysis of Three
Sunshine Coast Investigation Areas

Class A Agricultural Land

Drawing No. A3_02_Slope; It remains the property of CH2M. © Sunshine Coast Regional Council 2015, CH2M



Legend

Investigation Area

Steep Land (Slope)

Slope 15-20%

Slope 20-25%

Slope greater than 25%

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| Project Number: 665488 |
| Author: NC |
| Checked: TZ |
| Approved: TZ |
| Revision: 1 |
| Last Modified: 06/10/15 |

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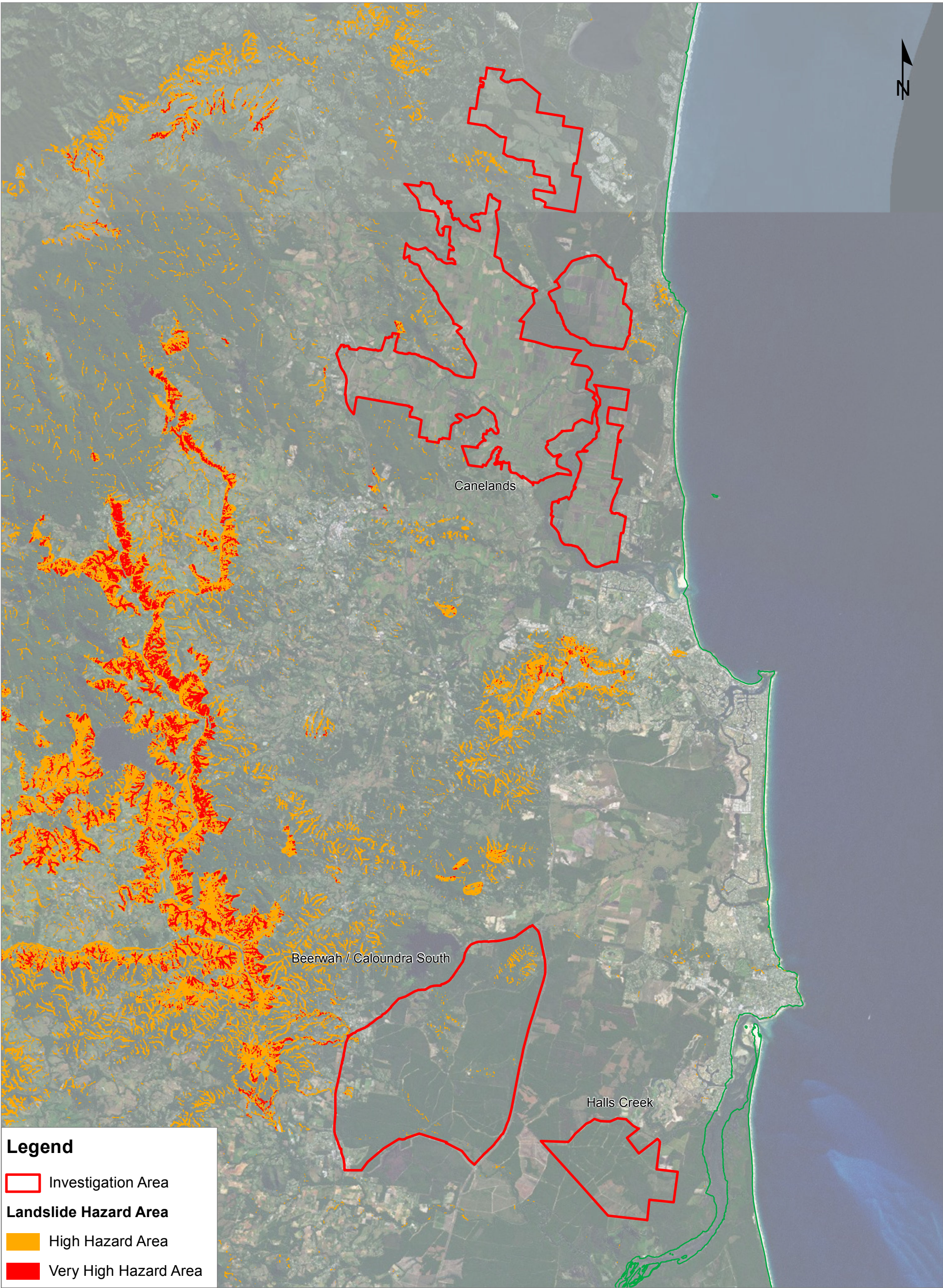
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Constraints Analysis of Three
Sunshine Coast Investigation Areas

Topography - Steep Land

Drawing No. A3_05_Landslide; It remains the property of CH2M. © Sunshine Coast Regional Council 2015, CH2M



Legend

Investigation Area

Landslide Hazard Area

High Hazard Area

Very High Hazard Area

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| Project Number: 665488 |
| Author: NC |
| Checked: TZ |
| Approved: TZ |
| Revision: 1 |
| Last Modified: 07/10/15 |

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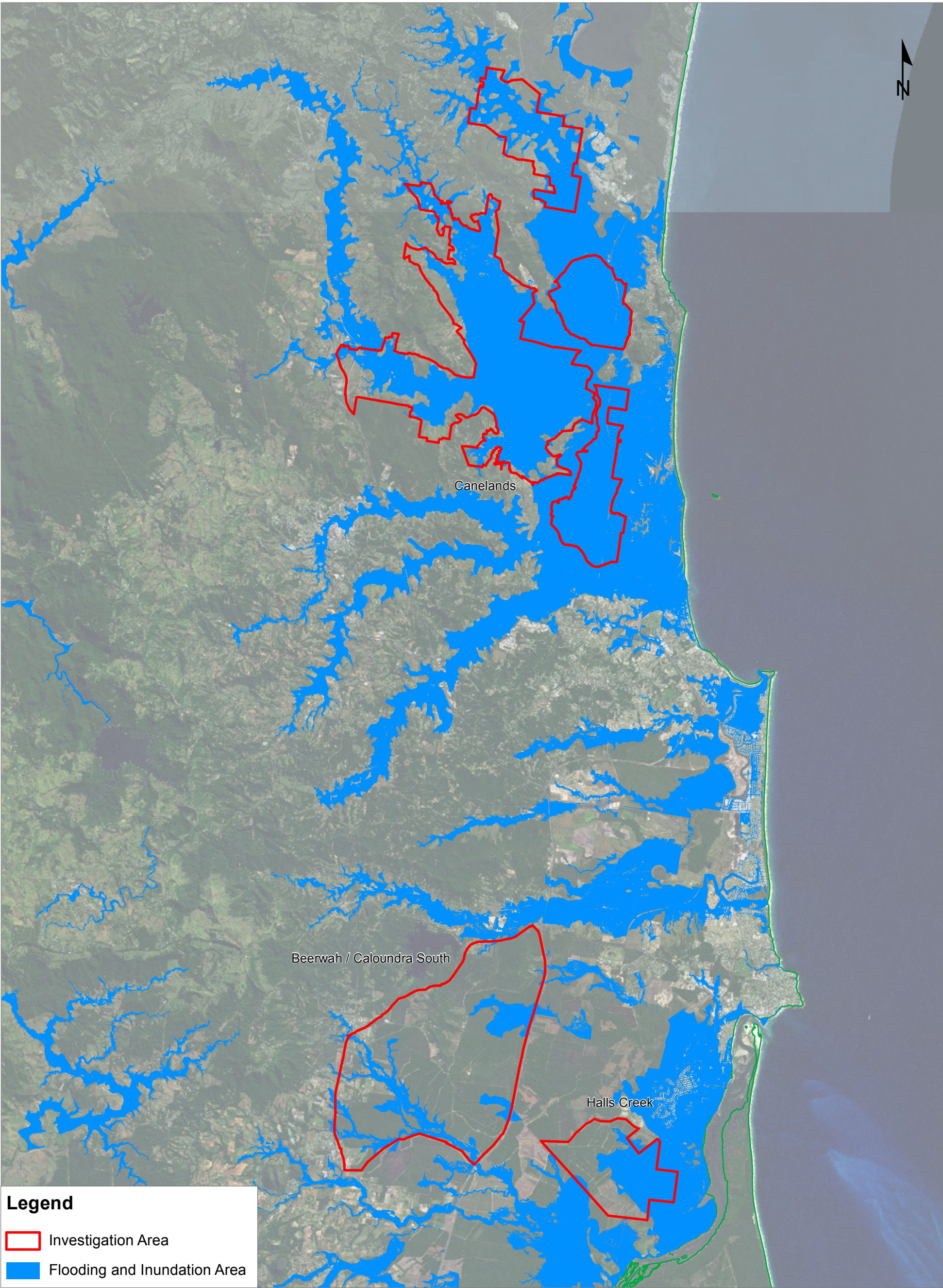
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Constraints Analysis of Three
Sunshine Coast Investigation Areas

Landslide Hazard Area

Drawing No. A3_07_Flooding: It remains the property of CH2M . © Sunshine Coast Regional Council 2015, CH2M



Legend

Investigation Area

Flooding and Inundation Area

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| Project Number: 665488 |
| Author: NC |
| Checked: TZ |
| Approved: TZ |
| Revision: 1 |
| Last Modified: 07/10/15 |

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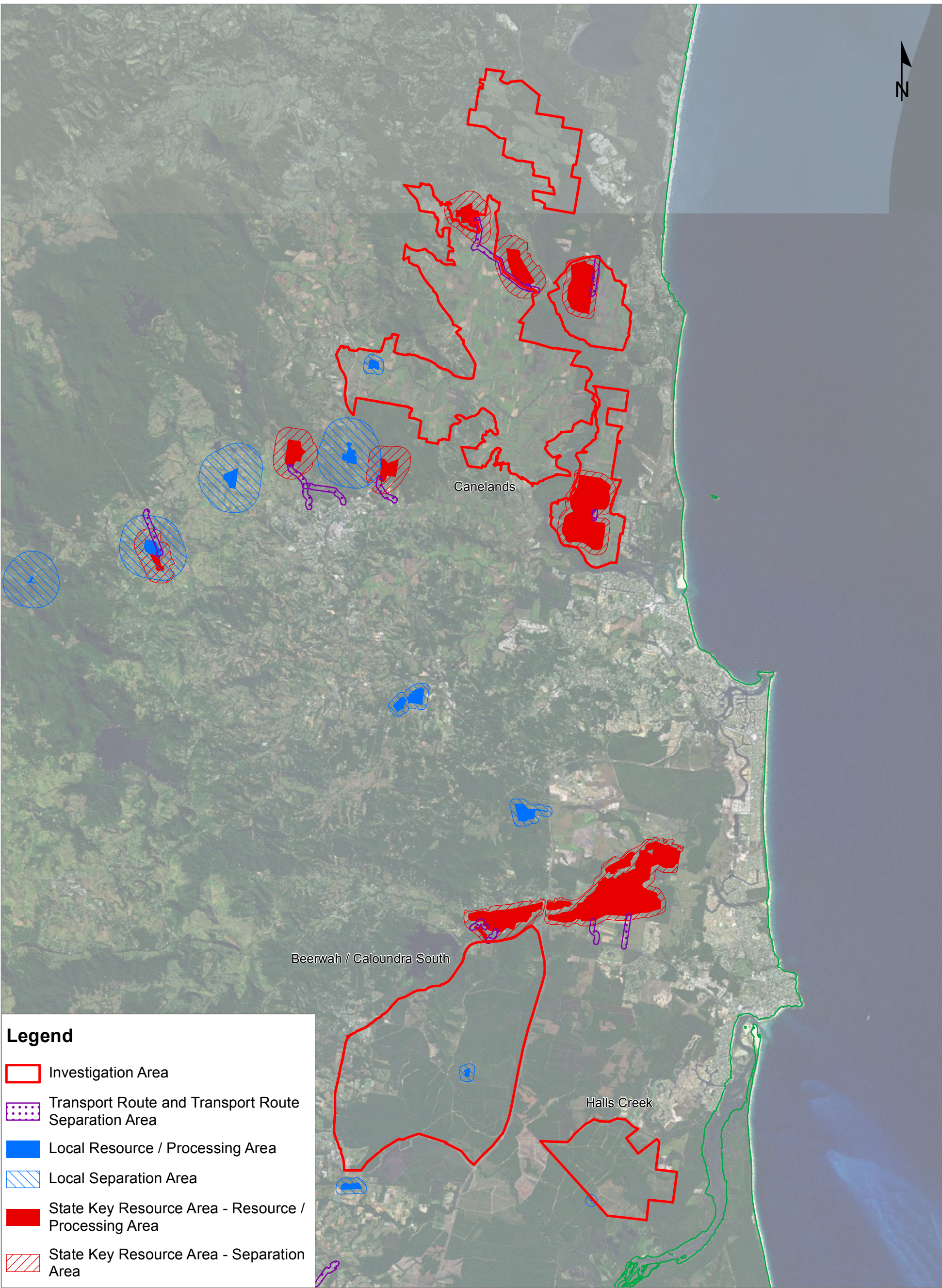
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Constraints Analysis of Three
Sunshine Coast Investigation Areas

Flooding and Inundation Area



Legend

- Investigation Area
- Transport Route and Transport Route Separation Area
- Local Resource / Processing Area
- Local Separation Area
- State Key Resource Area - Resource / Processing Area
- State Key Resource Area - Separation Area

| |
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| Project Number: 665488 |
| Author: NC |
| Checked: TZ |
| Approved: TZ |
| Revision: 1 |
| Last Modified: 07/10/15 |

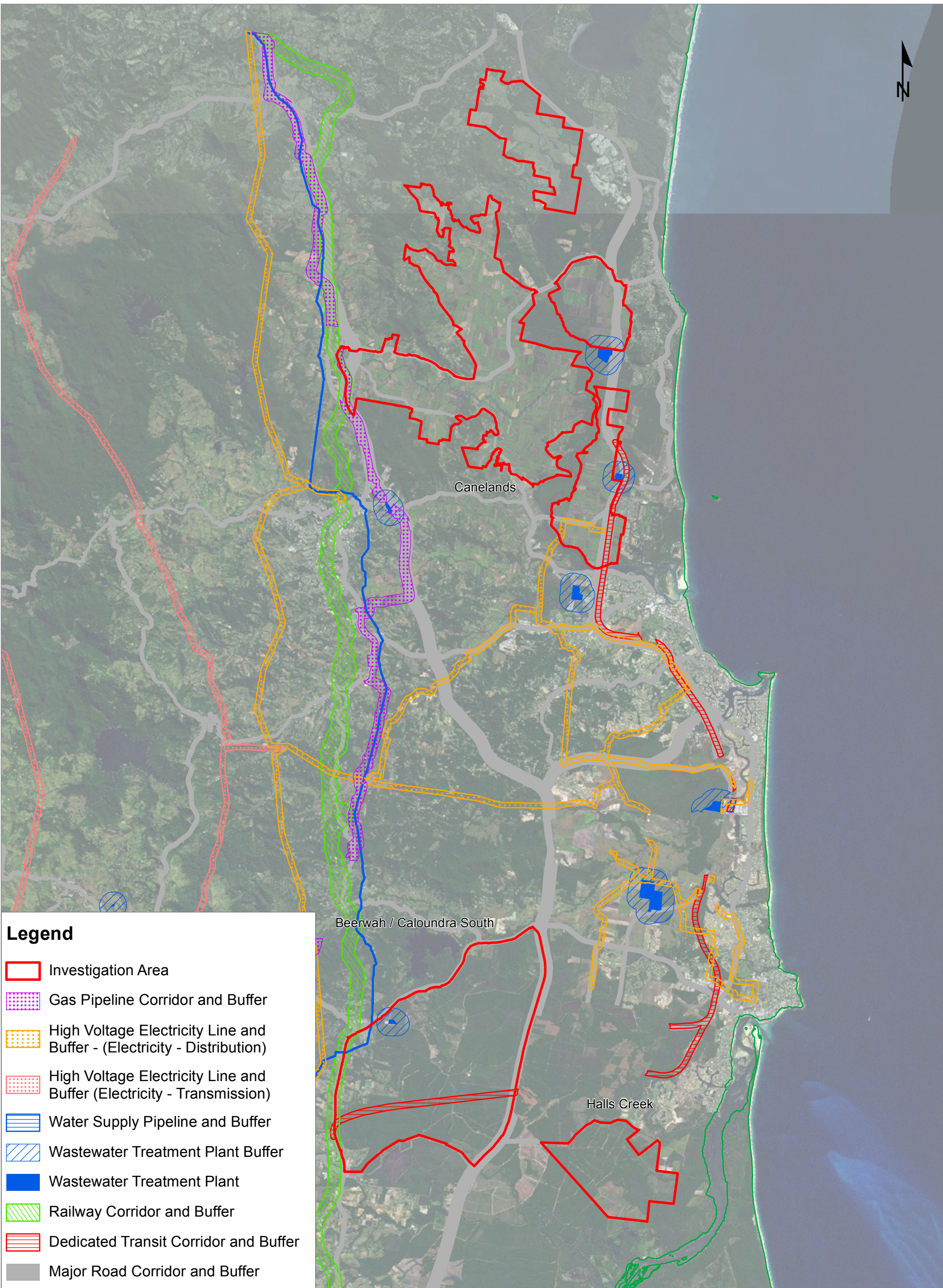
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Constraints Analysis of Three
Sunshine Coast Investigation Areas

Extractive Resources

Drawing No. A3_12_Infrastructure; It remains the property of CH2M. © Sunshine Coast Regional Council 2015, CH2M



Legend

- Investigation Area
- Gas Pipeline Corridor and Buffer
- High Voltage Electricity Line and Buffer - (Electricity - Distribution)
- High Voltage Electricity Line and Buffer (Electricity - Transmission)
- Water Supply Pipeline and Buffer
- Wastewater Treatment Plant Buffer
- Wastewater Treatment Plant
- Railway Corridor and Buffer
- Dedicated Transit Corridor and Buffer
- Major Road Corridor and Buffer

Project Number: 665488

Author: NC

Checked: TZ

Approved: TZ

Revision: 1

Last Modified: 07/10/15

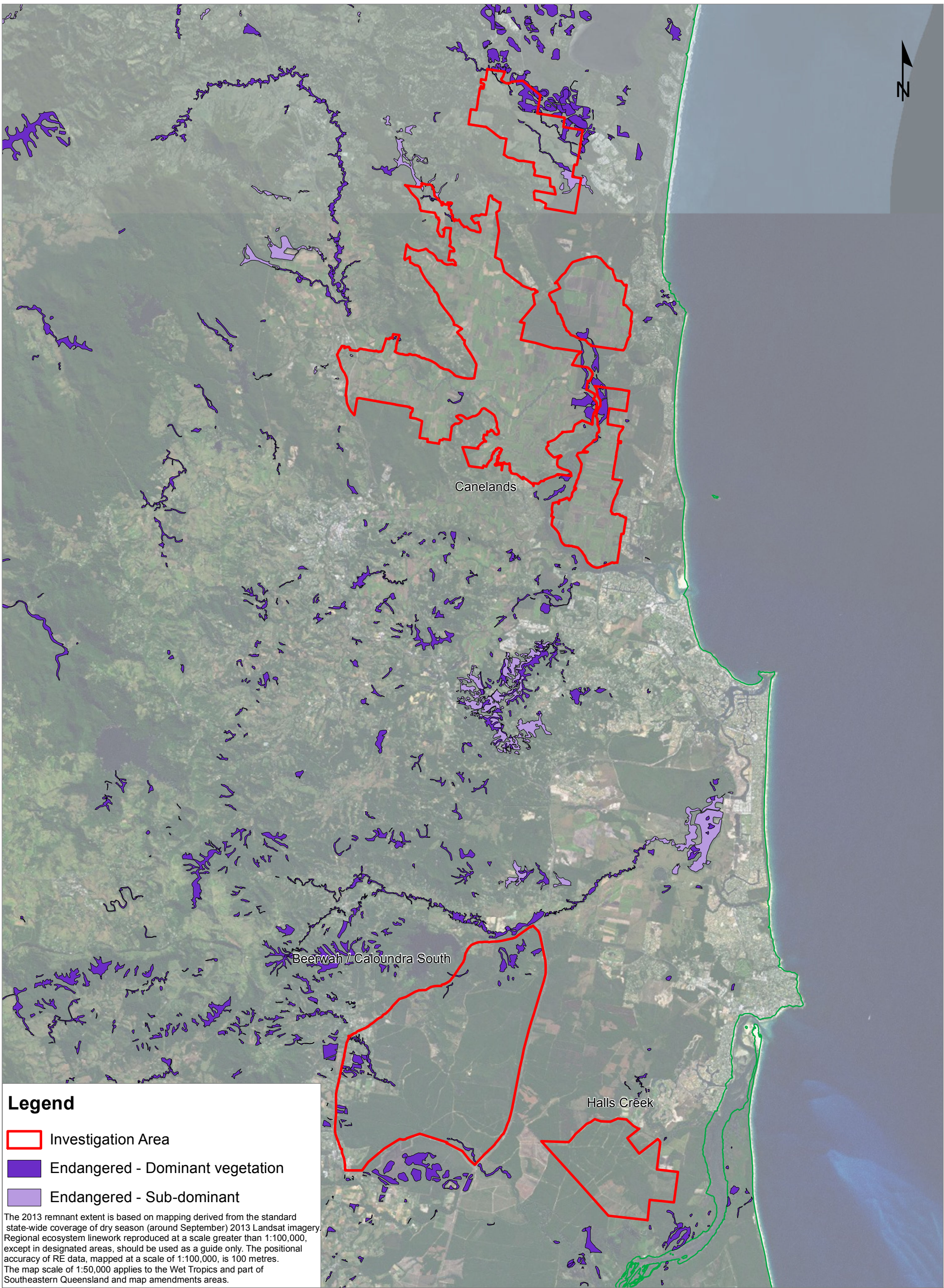
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Kilometers
Scale: 1:150,000 @A3
Projection: GDA94

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Constraints Analysis of Three
Sunshine Coast Investigation Areas

Regional Infrastructure

Drawing No. A3_14_Biodiversity, It remains the property of CH2M . © Sunshine Coast Regional Council 2015, CH2M



Legend

- Investigation Area
- Endangered - Dominant vegetation
- Endangered - Sub-dominant

The 2013 remnant extent is based on mapping derived from the standard state-wide coverage of dry season (around September) 2013 Landsat imagery. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The positional accuracy of RE data, mapped at a scale of 1:100,000, is 100 metres. The map scale of 1:50,000 applies to the Wet Tropics and part of Southeastern Queensland and map amendments areas.

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| Project Number: 665488 |
| Author: NC |
| Checked: TZ |
| Approved: TZ |
| Revision: 1 |
| Last Modified: 07/10/15 |

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Kilometers

Scale: 1:150,000 @A3

Projection: GDA94



Constraints Analysis of Three
Sunshine Coast Investigation Areas

Endangered Regional Ecosystems

Drawing No. A3_15_ProtectedAreas; It remains the property of CH2M. © Sunshine Coast Regional Council 2015, CH2M

- Protected Areas Inside Investigation Areas**
- 1. Beerwah State Forest
 - 2. Beerwah Forest Reserve
 - 3. Glass House Mountains National Park
 - 4. Glass House Mountains National Park
 - 5. Coolum Creek Conservation Park

Legend

Investigation Area

Protected Areas

Forest Reserve

National Park

State Forest

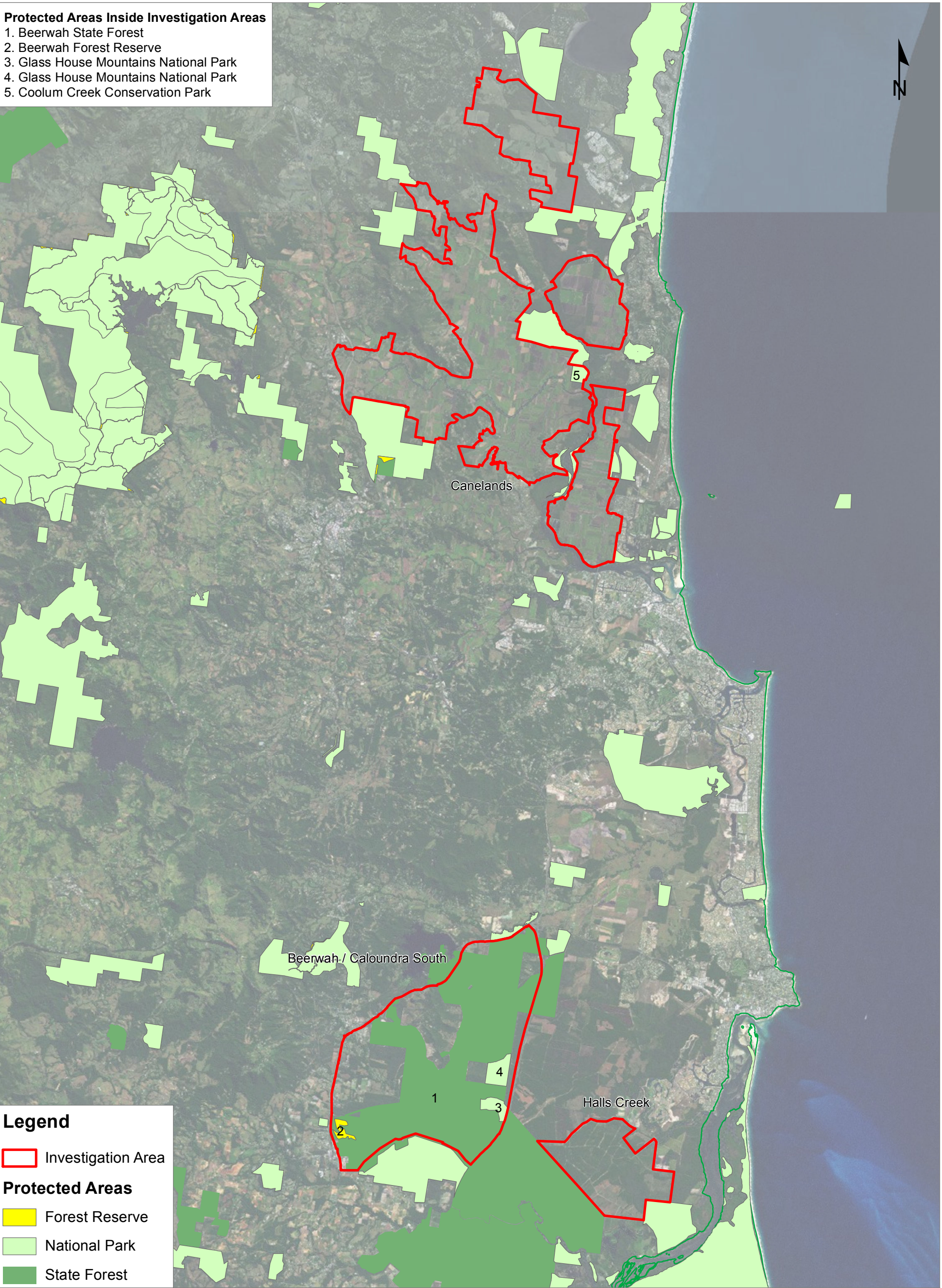
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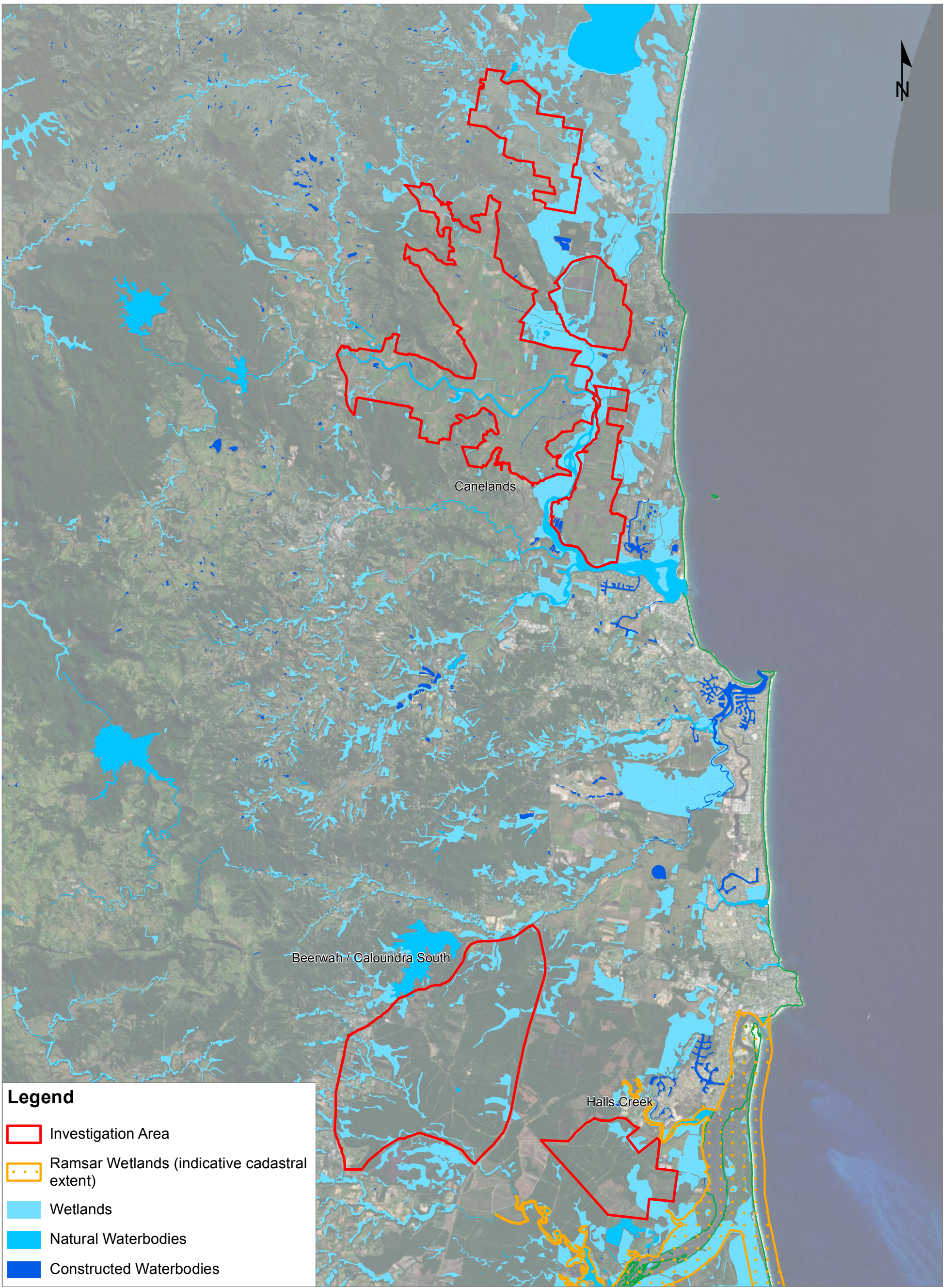


Constraints Analysis of Three
Sunshine Coast Investigation Areas

National Parks, State Forests
and Forest Reserves



Drawing No. A3_16_Wetlands_and_Waterbodies; It remains the property of CH2M © Sunshine Coast Regional Council 2015, CH2M



Legend

Investigation Area

Ramsar Wetlands (indicative cadastral extent)

Wetlands

Natural Waterbodies

Constructed Waterbodies

| |
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| Project Number: 665488 |
| Author: NC |
| Checked: TZ |
| Approved: TZ |
| Revision: 1 |
| Last Modified: 07/10/15 |

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Scale: 1:150,000 @A3
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Constraints Analysis of Three
Sunshine Coast Investigation Areas

Wetlands and Waterbodies

Appendix B

Stage 2 Analysis of comparative assessment evaluation criteria

Basis for comparison of Investigation Areas (from p23 of SEQRP).

Key: Performance against evaluation criteria

| | | |
|---|--|--|
| Presents Opportunity for Development | Issue to be resolved to allow development | Presents significant challenge to development |
|---|--|--|

1. Land Use

Compliance with Urban Footprint Principles and Requirements within the Sunshine Coast Sub-Regional narrative

Ability to achieve urban consolidation and self-containment

Demonstrate achieving compliance with Urban Footprint principles

Demonstrate sufficient demand for further urban land within the sub-region

Demonstrate high levels of employment self containment

| Evaluation Criteria 1.1 | | Source |
|--|---|---|
| Demonstrate capacity to cater for dwelling requirements beyond 2031 | | Sub-regional narrative - Infrastructure |
| Facilitate the achievement of regional dwelling and employment targets through Investigation Areas | | 8.10.2 |
| Basis for Measurement | Does the Investigation Area have the capacity to meet the SEQRP dwelling targets for 2041 for Sunshine Coast which require 25,000 new dwellings (Urbis Report) in greenfield areas? Measured by developable area capacity compared to target of 25,000 dwellings based on an average of 20 dwellings per hectare. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | Based on a nett developable area of 2,260 ha and using a development density of 20 dph, Beerwah/Caloundra South Corridor IA could accommodate around 45,200 new dwellings. | |
| Halls Creek Investigation Area | Based on a nett developable area of 613.4 ha and using a development density of 20 dph, Halls Creek IA could accommodate around 13,300 new dwellings. | |

| Evaluation Criteria 1.2 | | Source |
|--|--|--------------------------------------|
| Residential and employment growth may occur at Beerwah East or Halls Creek. | | Sub-regional narrative - Residential |
| Identify and protect identified Growth Areas for accommodating long-term growth beyond the life of the plan. | | 8.10.7 |
| Basis for Measurement | Does the land tenure and ownership pattern of the Investigation Area facilitate the development of the site for urban purposes in the long term? Assessment is qualitative based on the tenure of land in the Investigation Area, the land ownership pattern and the current land use. | |

| Performance | | Rating |
|--|---|--------|
| Beerwah/Caloundra South Corridor Investigation Area | This Investigation Area includes land with a mix of freehold and leasehold (State Forest) tenure. There are also two small pockets of the Glasshouse Mountains National Park located in the east of the Investigation Area and the Beerwah Forestry Reserve in the south-west corner. The freehold land comprises a large number of small land holdings, with the owners having a wide range of strategies for the use of their land. The State Forest land total's 1,824 ha and is leased by HQPlantations Pty Ltd with a 99 year term (expires 2109) and the intention to continue its use as a plantation timber resource. | |
| Halls Creek Investigation Area | Tenure of this land is freehold. The Investigation Area is held in single ownership with the land owner being a large development corporation, experienced in developing large greenfield sites. This allows for integration of design and more efficient planning and coordination of infrastructure and services. | |

| Evaluation Criteria 1.3 | | Source |
|---|---|--|
| New urban footprint areas should be located to have ready access to services and employment | | 8.2 Operational Principles for new Urban Areas |
| Ensure that development supports the activity centres network and the transport system. | | 8.6.1 |
| Basis for Measurement | Does the Investigation Area have ready access to services and employment areas as identified on the SCPS Economic and Employment Strategic Plan map? Does the Investigation Area achieve a strong link between the transport system and activity centres? The key services and employment areas for the Sunshine Coast (not including Beerwah or Aura Regional Activity Centres), which are the preferred destinations for employment-related travel, are located within the Sunshine Coast Enterprise Area which runs from Caloundra South/Sunshine Coast Regional Business and Industry Park to Sunshine Coast Airport at Marcoola. These areas are linked by Priority Transit Corridors starting at Caloundra South and extending northwards. The strength of the link between the transport system and the activity centres is therefore dependent on the ease with which residents can access these Priority Transit Corridors. Assessed by average travel distance from Investigation Area to access Priority Transit Corridors which are identified on SCPS Strategic Transport Map. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | Residents within this Investigation Area will have good access to services and employment centred around the new Beerwah East Station and in the Beerwah Regional Activity Centre. Maximum travel times to access these nodes would be in the order of: <ul style="list-style-type: none"> Beerwah East Station – 17 min cycle, 16 min walk then bus Beerwah Regional Centre – 27 min cycle, 28 min walk then bus | |

| | | |
|---------------------------------------|--|--|
| | <p>Residents would face a longer trip to access the Priority Infrastructure Corridors servicing other key Sunshine Coast employment location. These trips would involve maximum travel times of:</p> <ul style="list-style-type: none"> • Cycle – 32 min • Walk/bus – 26 min • Rail (with walk/bus or cycle) – 31 to 32 min <p>Travel times for bus and cycle could be reduced for some parts of the Investigation Area if the new Aura interchange over the Bruce Highway is extended into the area.</p> | |
| Halls Creek Investigation Area | <p>Residents of the Investigation Area will have good access to services and employment at the Aura Regional Activity Centre and connection there to the Priority Transit Corridors. Maximum travel times to access this node from the Investigation Area would be in the order of:</p> <ul style="list-style-type: none"> • Cycle – 18 min • Walk/bus – 17 min | |

| Evaluation Criteria 1.4 | | Source |
|---|---|---------------|
| Integrate and connect communities in new development with existing or adjacent communities to prevent areas of social and locational disadvantage. | | 6.2.3 |
| Make Investigation Areas contiguous with existing communities wherever possible, or otherwise provide development with direct transport linkages to established urban areas early in the development. | | 8.2.2 |
| Basis for Measurement | Is the Investigation Area contiguous with an existing community? Does the Investigation Area connect/integrate with existing communities? Measured by qualitative assessment of how contiguous the Investigation Area is with existing communities. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | The Investigation Area is largely isolated and surrounded by major roads and State Forest. The only potential for integration is with the existing Beerwah community. There will be a need to create an entirely new community with a different character to that of Beerwah. As the area develops there will be ongoing tension between existing rural land uses and new urban development. | |
| Halls Creek Investigation Area | The Investigation Area is contiguous with the Aura master planned community. Since the land is in the same ownership master planning for the Investigation Area can be integrated with Aura. This allows for efficiencies in trunk infrastructure, transport, community services and employment self-containment. Development in the Investigation Area can have achieve the look and feel of seamless integration as part of the existing community. | |

| Evaluation Criteria 1.5 | | Source |
|--|---|---------------|
| Focus higher density and mixed use development in and around regional activity centres and public transport nodes and corridors. | | 8.1.2 |
| Accommodate regional growth in locations that provide superior transportation choices or otherwise reduce car use, particularly through supporting growth in established urban areas and redevelopment in and around existing urban centres, and along priority transit networks and other high-frequency transit corridors. | | 8.2.1 |
| Basis for Measurement | Does the Investigation Area provide the opportunity to focus high density and mixed use development in and around regional activity centres and public transport nodes and corridors? Does the Investigation Area provide superior transportation choices by locating growth along priority transit networks and other high-frequency transit corridors? Measured by area with potential to be developed with easy transit corridor access, measured by number of dwellings that could be located along high frequency transit corridors or public transport nodes. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | This Investigation Area provides the opportunity to focus high density development adjacent to the Beerwah Regional Activity Centre and the Beerwah East CAMCOS station when it is built. Other parts of the Investigation Area could be serviced by high frequency bus services. However, the irregular shape of the area means that these services would need to operate on a number of different routes making it costly to run the services at high frequency to all areas to ensure good levels of walkability. A large proportion of the Investigation Area is located within 5 km of the Beerwah East CAMCOS station which will be a key public transport node when it is built. | |
| Halls Creek Investigation Area | <p>The regular shape of this Investigation Area provides the potential to create an integrated design where all homes have access to high frequency public transport. This would take the form of high frequency bus services linking the area to the Aura CAMCOS station and the priority bus corridors originating from that node. A large proportion of the Investigation Area is located within 5 km of this key public transport node. The shape of the area means these high frequency services could operate via a single loop route through the development.</p> <p>There is also potential to develop a public transport node within Halls Creek as the southern terminus for the bus priority corridor. This node would provide the opportunity for higher density development within the surrounding area.</p> | |

2. Infrastructure

Potential to assist in the delivery and performance of infrastructure (including public transport infrastructure)

Ability to achieve coordinated delivery of infrastructure

Demonstrate accessibility to a public transport service

Demonstrate materially assisting in the provision of infrastructure for the Sunshine Coast community

Demonstrate coordinated delivery of infrastructure

| Evaluation Criteria 2.1 | | Source |
|--|--|--------|
| Connect active transport routes to improve accessibility and encourage transport use by a broader range of people. | | 8.9.4 |
| Basis for Measurement | Potential to connect the Investigation Area to the external walking or cycling network. Potential to connect the active transport network with the public transport network to promote integration of non-car transport modes. Measured by the ability to connect the Investigation Area to the existing or planned external active transport network as shown on the SCPS Priority Infrastructure Plans and Caloundra South Master Plan. Length of pedestrian/cycle paths to be built to ensure all residents within the Investigation Area have access to the public transport network. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | The cycle network within the Investigation Area can connect to the external network that will be in place along Steve Irwin Way and Roys Road. This network will provide a 15 minute cycle ride to the Beerwah Regional Activity Centre, however access to other employment and retail nodes to the east of the Bruce Highway will require longer journey times. Within the Investigation Area the trunk cycle/pedestrian network will need to be extensive (around 28 km) to provide all residents with easy access to high quality public transport facilities at the future Beerwah East CAMCOS node. | |
| Halls Creek Investigation Area | The cycle network within the Investigation Area can seamlessly integrate with the dedicated Aura cycle network via the two-way segregated cycle track at Bells Creek Road and the shared trail networks. This network provides direct links to employment, retail, education and recreation activities within Aura. Most of the Investigation Area is within a 15 minute cycle ride of the AuraCAMCOS node. Internal to the Investigation Area cycle/pedestrian paths could provide all residents with easy access to a public transport node within Halls Creek with around 3 km being the longest trip to access the facility. | |

| Evaluation Criteria 2.2 | | Source |
|---|---|--|
| Prioritise new broad hectare development sites with access to existing or planned transport infrastructure | | 8.9.1 |
| Integrate transport infrastructure, services and land use planning by sequencing Investigation Areas and aligning transport investment. | | 12.3.1 |
| Review transport investment priorities to take into account the maximum use of existing infrastructure, the whole of life costs (construction plus operation) and environmental implications. | | 12.3.4 |
| Maximise the use of existing transport assets and services by effective transport investments and policies, demand management and the use of new technologies. | | 12.4.1 |
| Maximise the use of committed and planned major transport and water infrastructure. | | 8.2 Operational Principles for new Urban Areas |
| Basis for Measurement | Does the Investigation Area have good access to existing and/or planned transport infrastructure? Does the Investigation Area provide a logical extension of the transport network? Does the Investigation Area make use of existing transport infrastructure rather than requiring investment in new transport infrastructure, additional whole of life costs and environmental impacts? Measured by the cost of new transport infrastructure required to connect the Investigation Area to the existing major transport networks - road and rail. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | <p>Providing trunk transport infrastructure to service the Investigation Area will require significant investment in new or upgraded infrastructure by the development and/or Council. While the CAMCOS corridor traverses the Investigation Area there will need to be a new station constructed to service the area. New intersections will be needed to provide access and egress to the Investigation Area and are likely to include up to four major intersections with Steve Irwin Way and up to three with Roys Road (subject to detailed planning and traffic modelling). There are also likely to be significant localised traffic impacts on the Beerwah local road network. Both Steve Irwin Way and Roys Road (including the Bruce Highway Interchanges) will need to be upgraded to cater for the additional traffic generated by the Investigation Area. In addition, the grade-separated intersection with the Bruce Highway, constructed for Aura, between Bells Creek Road and Steve Irwin Way Interchanges (proposed as north in/south out at present) would need to be substantially upgraded to provide access onto/across the highway.</p> <p>The substantial new construction required will have the potential to create additional environmental impacts and will significantly increase whole of life costs for the infrastructure.</p> | |
| Halls Creek Investigation Area | As part of the Caloundra South Infrastructure Agreement both Stockland and DTMR will invest substantially in transport infrastructure that will allow the Investigation Area to make use of | |

| | | |
|--|---|--|
| | <p>infrastructure in place rather than requiring additional expenditure on new trunk infrastructure. This investment includes the CAMCOS corridor and Aura Station (development within the Investigation Area will increase patronage at this station), extensive upgrades to Bells Creek Road including construction of a grade-separated intersection at the Halls Creek entrance. Therefore, the only trunk transport infrastructure upgrades required to support the Investigation Area will be the construction of the fourth leg of the grade separated intersection and another at grade intersection to provide an additional access to Bells Creek Road.</p> <p>As little new infrastructure is required the environmental impacts of construction will be minimal and there will be little increase in whole of life costs.</p> | |
|--|---|--|

| Evaluation Criteria 2.3 | | Source |
|---|---|---------------|
| Ensure delivery of Investigation Areas is coordinated with the provision of public transport. | | 8.10.3 |
| Ensure public transport infrastructure and service investment actively reduces oil dependence, particularly for trips that could be undertaken by public or active transport. | | 1.5.3 |
| Basis for Measurement | Can the delivery of the Investigation Area be coordinated with the provision of public transport? Proximity to transport infrastructure network -rail and bus. Measured by cost to provide major public transport infrastructure to the Investigation Area based on the length of new high frequency bus routes required to provide a maximum 400 metre walking distance to a high frequency public transport stop for all new residents. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | <p>This Investigation Area could be serviced by high frequency bus services with the addition of access to a heavy rail station along the CAMCOS corridor when the Beerwah East Station is built. Initial services would be provided by high frequency bus. Servicing this Investigation Area with high frequency bus routes would involve a complex network of routes to provide all areas with the desired 400 metre walking distance to a high frequency public transport stop.</p> <p>Timing for the construction of the Beerwah East rail station will likely be dependent on achieving a base level of demand from development in the surrounding area. Once constructed the station will provide residents in the immediate vicinity with a high quality public transport service.</p> | |
| Halls Creek Investigation Area | Public transport to this Investigation Area would be provided by high frequency bus services. The services can easily be established by extending the Aura priority bus corridor that runs along the North-South Arterial over the Southern Interchange. Within the Investigation Area the high frequency bus services could be extended southwards from a transport interchange at a Halls Creek District Centre to follow development. The development layout could be structured to provide a simple network with one route likely to be able to efficiently service the entire Investigation Area within a 400 metre walking distance to a high frequency public transport stop. | |

| Evaluation Criteria 2.4 | | Source |
|---|--|--|
| Proponents must demonstrate how necessary infrastructure and services for broad hectare areas outside current state and local government infrastructure delivery programs will be delivered and funded. | | 8.2.4 |
| Ensure infrastructure delivery is timed and sequenced with the development. | | 8.10.4 |
| Coordinate and integrate the planning and delivery of infrastructure services at regional, sub-regional and local levels. | | 10.2.1 |
| Enable the efficient provision of physical and social infrastructure, including public transport | | 8.2 Operational Principles for new Urban Areas |
| Maximise the use of committed and planned major transport and water infrastructure. | | 8.2 Operational Principles for new Urban Areas |
| Basis for Measurement | Is there capacity to service the Investigation Area by key state/local infrastructure delivery programs for water, sewerage and stormwater including a clear funding mechanism? Does the Investigation Area present a logical sequence of infrastructure delivery? Will the Investigation Area achieve the integrated delivery of infrastructure services at regional, sub-regional and local levels? Does the Investigation Area maximise the use of committed and planned major transport and water infrastructure? Measured by indicative cost to service the Investigation Area with new trunk water and sewerage infrastructure (external to the IA) and stormwater infrastructure required. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | <p>There is no water or wastewater infrastructure planned to service the Beerwah/Caloundra South Corridor. Any development of this area will need new infrastructure planning and agreements which will likely require significant investment in new facilities and networks.</p> <p>The stormwater network for this Investigation Area is subject to a number of challenges. Flooding in the Coochin Creek Catchment, exacerbated by the impacts of urban development, could affect sensitive downstream properties and also the Bruce Highway. Flooding in the Bells Creek South Catchment, exacerbated by the impacts of urban development, could completely prejudice the Caloundra South stormwater drainage network and also drainage across the Bruce Highway. This network already includes detention facilities to protect Golden Beach and Pelican Waters (which are delicately poised in terms of flood immunity). Massive detention/retention works would be required upstream of the Bruce Highway to ensure no worsening of flooding downstream of the Investigation Area.</p> | |
| Halls Creek Investigation Area | New water and wastewater infrastructure networks will be constructed to service the Aura development adjacent to Halls Creek and these are subject to infrastructure agreements and included in infrastructure programs. These networks will be constructed in stages with the initial | |

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| | <p>developments using existing transmission and treatment infrastructure and later stages constructing new infrastructure. Planning for the later stage infrastructure can be coordinated with the requirements of Halls Creek to ensure cost-effective infrastructure delivery to the area.</p> <p>The Halls Creek stormwater network does not face any major constraints. There are no sensitive downstream properties that would be affected by flooding.</p> | |
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3. Environment

Protection of environmental values

Potential to achieve high environmental performance

Demonstrate achieving world-leading environmental performance for any urban development and related infrastructure.

Demonstrate achieving world-leading environmental performance for any urban development and related infrastructure.

| Evaluation Criteria 3.1 | | Source |
|--|---|--------|
| Avoid impacts on areas with significant biodiversity values in the Regional Landscape and Rural Production Area, including biodiversity corridors. | | 2.1.1 |
| Avoid off-site impacts from development or other activities on areas with significant biodiversity values. | | 2.1.3 |
| Basis for Measurement | Does the Investigation Area impact on areas or corridors with significant biodiversity values? Does the Investigation Area have the potential to have edge effects on areas of significant biodiversity values (including Endangered and Of Concern RE's)? Measured by the area of significant biodiversity habitat lost due to development not including the Endangered and Of Concern RE's or other natural areas that are protected or would require offsets to be negotiated if development were to proceed. Calculate the area of significant biodiversity habitat remaining within and adjoining the Investigation Area that is likely to be impacted by edge effects that extend 50 metres from the boundary of the developable area. Add both areas to provide the total area of significant biodiversity habitat that will be affected by developing the Investigation Area. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | The Investigation Area contains significant land with high biodiversity value including areas of National Park and remnant vegetation mapped as either Endangered or Of Concern. These areas are either protected from development or would require negotiated offsets in order to be cleared. | |
| Halls Creek Investigation Area | The Investigation Area comprises minimal land with high biodiversity value. | |

| Evaluation Criteria 3.2 | | Source |
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| Ensure planning and development caters for koala movement between conserved areas of bushland koala habitat. | | 2.2.3 |
| Prioritise the protection and rehabilitation of koala habitat areas outside the Urban Footprint as a key source of long-term habitat to the region's koala population. | | 2.2.4 |
| Ensure planning and development seeks to maintain or enhance koala habitat values in areas of bushland habitat, areas suitable for rehabilitation and other areas of value to koalas. | | 2.2.5 |
| Basis for Measurement | Does the Investigation Area impact on koala habitat or koala movement, provide the potential to protect or improve the quality koala habitat or movement, or provide the potential to protect or improve the quality koala habitat or movement? Measured by the area of mapped koala habitat/movement corridors affected by development (loss of land and edge effects), including a 50 m applied buffer. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | The Investigation Area comprises approximately 400 ha of mapped koala habitat and corridors for movement, including a 50 m buffer for all mapped areas that would be lost as a result of potential development. | |
| Halls Creek Investigation Area | The Investigation Area does not include any mapped koala habitat or corridors for koala movement that could potentially be impacted, or conversely protected or improved by any proposed development. | |

| Evaluation Criteria 3.3 | | Source |
|---|---|---------------|
| Ensure development other than maritime infrastructure avoids erosion prone areas, storm tide inundation hazard areas, and undeveloped sections of tidal waterways in accordance with the Queensland Coastal Plan. | | 2.4.2 |
| Basis for Measurement | Does the Investigation Area include erosion prone areas, storm tide inundation hazard areas or impact on undeveloped sections of tidal waterways? Measured by the area of these elements affected by developing the Investigation Area. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | The Investigation Areas does not include land or waterways affected by erosion prone areas, storm tide inundation hazard areas or impact on undeveloped sections of tidal waterways. | |
| Halls Creek Investigation Area | The Investigation Areas does not include land or waterways affected by erosion prone areas, storm tide inundation hazard areas or impact on undeveloped sections of tidal waterways. | |

| Evaluation Criteria 3.4 | | Source |
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| Ensure land use and infrastructure plans are consistent with the Moreton Bay Marine Park zones and fish habitat zones and management plans for the region. | | 2.4.5 |
| Protect, manage and enhance marine, estuarine and freshwater habitats to sustain fish stock levels and maximise fisheries production for the ongoing benefit of the community. | | 4.2.5 |
| Basis for Measurement | Does the Investigation Area affect Moreton Bay Marine Park zones or fish habitat zones and management plans for the region? Will the Investigation Area have an impact on the quality of fishery habitats? Measured by qualitative assessment of potential water quality impacts. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | <p>Surface water from this Investigation Area will predominantly discharge into Pumicestone Passage via Coochin Creek and Bells Creek South. This Investigation Area is largely uncleared and has undulating terrain. The required land clearing for urban development provides the potential for high levels of sediment transport into the receiving waters.</p> <p>As the section of Pumicestone Passage between Halls Creek and Coochin Creek is a tidal meeting place, the water quality in this area is low relative to other sections of the passage. Therefore, the water quality impacts of new development discharging into Coochin Creek are important to the health of the Pumicestone Passage. Assuming best practice water sensitive urban design in the Investigation Area there should be no pollutants released into the receiving waters. However, should unexpected releases occur, these will flow directly into Coochin Creek and then into the Pumicestone Passage with no natural buffer areas.</p> <p>On the other hand the Bells Creek South discharges will flow into the Aura water network. The Caloundra South water sensitive urban design system is designed to achieve no worsening of water quality discharge. However, this system has not been designed to cater for inflows upstream of the Bruce Highway resulting from urban development. Significant water quality improvement and retention works will be required upstream of the Bruce Highway to protect Caloundra South and the areas further downstream from water quality impacts.</p> | |
| Halls Creek Investigation Area | Surface water from this Investigation Area will ultimately discharge into Pumicestone Passage via Halls Creek. As the section of Pumicestone Passage between Halls Creek and Coochin Creek is a tidal meeting place, the water quality in this area is low relative to other sections of the passage. | |

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| | <p>Therefore, the water quality impacts of new development discharging into Pumicestone Passage are important.</p> <p>Halls Creek is already a cleared area and relatively flat, so the process of best practice urban development should not have significant impacts on sediment levels in the receiving waters. Assuming best practice water sensitive urban design in the Investigation Area there should be no pollutants released into the receiving waters. However, should unexpected releases occur, the wetlands separating the Investigation Area from the Pumicestone Passage will act as a natural buffer and safety net.</p> | |
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| Evaluation Criteria 3.5 | | Source |
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| Protect, maintain and enhance the function of inter-urban breaks. | | 3.2.4 |
| Maintain the integrity of inter-urban breaks | | 8.2 Operational Principles for new Urban Areas |
| Inter-urban break preserves the distinctive character of Sunshine Coast and its communities. | | Sub-regional narrative |
| Basis for Measurement | Does the Investigation Area protect, maintain or enhance an inter-urban break? What impact will the Investigation Area have on the function and effectiveness of inter-urban breaks? Functions of inter-urban breaks include containing urban growth; safeguarding natural and productive areas; providing amenity, recreation and quality of life; and preventing communities from merging to preserve their character. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | There are two sub-regional inter-urban breaks affected by this Investigation Areas. These separate Aura from the area west of the Bruce Highway and Beerwah from the area to the north. Both these inter-urban breaks will be lost as a result of developing the Investigation Area. Land within the Investigation Area is uncleared so has both natural and productive (forestry) values which will be lost with development, as well as the resultant landscape values. Development of the Investigation Area will also result in the loss of separation of individual communities by extending urban development west of the Bruce Highway (where none exists now), and linking the Beerwah and Landsborough communities. | |
| Halls Creek Investigation Area | This Investigation Area falls within the current regional inter-urban break and the northern boundary is also identified as a sub-regional inter-urban break. One of the functions of the regional inter-urban break is to contain urban growth and the inclusion of the Investigation Area will achieve this purpose until the land is required post-2031. The land is cleared and so has no value as natural or productive area, nor does it provide any landscape elements, recreation or quality of life values. As the location is screened from the Bruce Highway and Pumicestone Passage, moving the inter-urban break southwards should not reduce the effectiveness of the Sunshine Coast – Caboolture separation of communities. | |

| Evaluation Criteria 3.6 | | Source |
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| Ensure coordination of state and local government land use and infrastructure planning to protect and manage priority regional landscape areas. | | 3.3.1 |
| Expand and develop the capacity of the existing regional community greenspace network to meet current and future community needs. | | 3.4.1 |
| Basis for Measurement | Does the Investigation Area affect priority regional landscape areas? Does the development of the Investigation Area affect the regional community greenspace network? Measured by nett impact on regional community greenspace area as shown on SEQRP maps. Assessed by areas of high value scenic amenity as shown on SCPS Strategic Framework Maps and regional community greenspace area as shown on SEQRP Maps lost to development of the Investigation Area. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | A significant portion of the Investigation Area falls within the Community Greenspace Network under the South East Queensland Regional Plan. Development of the Investigation Area would result in the loss of the State Forest Lands which make up the majority of this resources. The Investigation Area also includes some land and features (Meridian, Maggies, Deans and Alfs Hills) that are identified as having high scenic value under the Sunshine Coast Planning Scheme Strategic Framework for Community Identity, Character and Social Inclusion Elements. While most of these features are excluded from the developable area, there is no doubt that urban development in the surrounding area would detract from the scenic value of these hills. | |
| Halls Creek Investigation Area | No part of the Investigation Area is included in the Community Greenspace Network as depicted in the South East Queensland Regional Plan. Portions of the Investigation Area are shown on the Sunshine Coast Planning Scheme Strategic Framework for Community Identity, Character and Social Inclusion Elements as high value scenic area. However, these parts of the Investigation Area have largely been excluded from the developable area and so would retain their scenic value. | |

| Evaluation Criteria 3.7 | | Source |
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| Identify and protect extractive and mineral resources for potential future extraction, including providing appropriate transport corridors, and buffers, and ensuring that planning preserves the opportunity for discovery and development of new resources in appropriate areas. | | 4.2.3 |
| Basis for Measurement | Does the Investigation Area impact on extractive and mineral resources? Assessed by the extent of impact on extractive and mineral resource areas (assuming these are lost because of incompatibility with urban development). | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | There is one resource area identified on the Sunshine Coast Planning Scheme Strategic Framework maps within the Investigation Area. This resource would be lost to urban development but is likely to be small enough that it could be fully utilised before development occurs. | |
| Halls Creek Investigation Area | There are no extractive or mineral resources identified within the Investigation Area identified on the South East Queensland Regional Plan, Sunshine Coast Planning Scheme or SARA mapping. | |

| Evaluation Criteria 3.8 | | Source |
|---|---|--|
| Protect areas supplying high levels of ecosystem services from development impacts. | | 4.3.1 |
| Protect, enhance and sustainably manage the region's native and plantation forests. | | 4.2.4 |
| Identify and protect natural economic resource areas from further fragmentation and inappropriate land use. | | 4.2.1 |
| Minimise impacts on natural resources. | | 8.2 Operational Principles for new Urban Areas |
| Basis for Measurement | Does the Investigation Area affect areas supplying high levels of ecosystem services (as defined by p71 of SEQRP)? Assessed by the area of land supplying high level ecosystem services lost including native/plantation forests and natural economic resources, based on SEQRP and SCPS Strategic Framework Maps for elements not measured under other criteria. Most relevant ecosystem services (food, genetic resources, transport infrastructure, arable land productive soils, pollination, cultural diversity, iconic landscapes, iconic species etc. have been assessed under other evaluation criteria. The only ecosystem service not already assessed (and which is relevant) is building and fibre, and this also relates to the other aspects of this evaluation criteria above – native and plantation forests, natural economic resources. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | The Investigation Area contains significant plantation forests (approximately 1,825 ha), which are a valuable natural resource that would be lost as a result of development. | |
| Halls Creek Investigation Area | There is no native or plantation forests located within the Investigation Area. | |

| Evaluation Criteria 3.9 | | Source |
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| Protect and maintain traditional Aboriginal cultural landscapes and culturally significant places in land use, planning and management arrangements in partnership with traditional owners of those landscapes and places, and maintain or improve traditional owners' access to cultural resources. | | 7.4.1 |
| Basis for Measurement | Does the Investigation Area affect traditional Aboriginal cultural landscapes and culturally significant places? Measured by the area/extent of impacts. | |
| Performance | | Rating |
| Beerwah/Caloundra South Corridor Investigation Area | No identified Aboriginal cultural landscapes or culturally significant places identified in relevant registers. Large portion of the site is State leasehold land so native title may be an issue. | |
| Halls Creek Investigation Area | No identified Aboriginal cultural landscapes or culturally significant places identified in relevant registers. Land is in freehold ownership so no native title issues. | |