



# **LATE ITEMS ORDINARY MEETING**

## **AGENDA**

**7 OCTOBER 2014**

*Your attendance is required at an Ordinary meeting of Council to be held in the Council Chambers, 232 Bolsover Street, Rockhampton on 7 October 2014 commencing at 9.00 am for transaction of the enclosed business.*

A handwritten signature in black ink, appearing to be "C. R.", is positioned above the printed name of the Chief Executive Officer.

**CHIEF EXECUTIVE OFFICER**  
3 October 2014

Next Meeting Date: 11.11.14

**Please note:**

In accordance with the *Local Government Regulation 2012*, please be advised that all discussion held during the meeting is recorded for the purpose of verifying the minutes. This will include any discussion involving a Councillor, staff member or a member of the public.

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## **L STRATEGIC REPORTS**

### **L.1 ROCKHAMPTON AIRPORT MASTER PLAN RUNWAY 04/22**

**File No:** 1689

**Attachments:**

1. Secondary Runway 04/22 Master Planning Evaluation Consultation Report Mar-Aug 2014
2. Rehbein Report - Rockhampton Airport Runway 04/22 Master Planning Report
3. Supporting Information Document

**Authorising Officer:** Ross Cheesman - General Manager Corporate Services

**Author:** Trevor Heard - Manager Rockhampton Airport

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#### **SUMMARY**

*This document outlines the study and consultation process to determine the best future operating capabilities of the existing secondary runway 04/22.*

#### **OFFICER'S RECOMMENDATION**

THAT the secondary runway be altered to a Code 2B runway, non-instrument, daytime use only. It provides a 1200m take-off on 22 and a 1200m landing on 04. Furthermore it provides a 900m take-off on 04 and a 900m landing on 22. The disused runway length will be converted to taxiway.

#### **BACKGROUND**

This report does not refer to the main runway and there will be no changes to the way that runway and taxiing currently operate. 04/22 is the technical term based on degrees for the secondary runway with 04 being the western end and 22 the eastern end. It is currently 1645 in length with lighting. There is a considerable amount of area in the general aviation (GA) precinct that has a potential to be developed however this can only proceed if this runway is shortened. In addition a lessor runway requires less maintenance and upgrade. A community consultation process has been completed and the final report in this regard attached. The recommendations in this report will not impact on the current users operations but allows for the future development.

A number of studies have been performed in recent years regarding the future of the secondary runway 04/22 due to the low usage of the runway and the constraints the various transitional and approach surfaces cause. This places restrictions on heights of hangars (CHRS) , GA apron pole height (lighting LUX compliance), buildings on the PIQ lease and the potential to develop new hangar sites, Air Freight handling facilities aircraft parking aprons and taxiways at the Eastern end on the runway.

In 2007 a strategic development plan was produced which considered the options to expand or relocate the present GA precinct. The preferred option 5 included shortening the secondary runway to 1110m and creating a code "C" taxiway on the shortened section of the runway.

In 2009 a GA redevelopment project study was undertaken to firm up the work done in 2007 and the preferred option 5 identified during that study in relation to the GA precinct. The options 1A, 1B, 2 and 3 of that study all included shortening the secondary runway to 1200m, transforming the reduced runway length to a code "C" taxiway, providing sites for additional apron parking, hangars and Air Freight facilities.

For many years the secondary runway has been shortened to 1200m and take-off from runway 04 not available during military exercises to accommodate parking of military aircraft and virtually taking over the shortened area of the secondary runway, which requires taxiway "C" to be closed during this time. This also impacts on the air taxi options for the Rescue

helicopter operations and required special “follow Me” guidance and escort by an airport safety vehicle.

### **Runway Usage – extract from 2010 Rehbein ANEF Report**

Runway	Movements	Distribution
15	32,359	74.8%
33	6,550	15.15
04	1,271	2.9%
22	593	.4%

### **Runway Availability – 25 year ROK Wind & runway Usability**

Percentage of time RWY 15/33 is available (up to 10 knot crosswind - 94.8%)

Percentage of time RWY 15/33 is not available (over 10 knot crosswind - 5.2%)

Percentage of time RWY 04/22 is available (up to 10 knot crosswind - 93.9%)

In summary whilst the secondary runway is available for use 93.9% of the time it is only utilized a total of 4.3% of the time.

### **Safety Management System airport stakeholders meeting**

The preferred proposal was presented to the meeting for feedback from a safety perspective and was supported with no adverse comments from committee members.

### **Consultation Process**

Consultation on the options for the secondary runway was undertaken by the consultant with key stakeholders and the comments were;

### **Key Stakeholder Feedback**

- **QantasLink + Virgin**
  - ☐ Limited use of 04/22 due to marginal length and preferred ATC sequencing to 15/33 – company instructions
  - ☐ No Instrument approaches or PAPI available
  - ☐ Any reduction in length would prevent use
  - ☐ Not seen as critical to operations at ROK
- **Freight Operators**
  - ☐ Occasional users of 04/22 but 15/33 preferred due to night operations which require instrument approach (only runway 15/33 has published instrument approaches and PAPI approach lighting).
  - ☐ Minimum 1,400m length
  - ☐ Not seen as critical to operations at ROK
- **Royal Flying Doctor Service**
  - ☐ Regular use (25–30%) for movements to/from Emerald
  - ☐ 15/33 could always be used but 04/22 more convenient
  - ☐ Minimum 1,200m required
  - ☐ Rarely used for movements to/from east
  - ☐ Helpful to operations at ROK but not essential
- **Capricorn Helicopter Rescue Service**
  - ☐ No fixed-wing operations
  - ☐ No impact
- **Rockhampton Aero Club (President)**
  - ☐ 04/22 provides direct access to training area
  - ☐ Charter aircraft require minimum 1,000m for charter aircraft
  - ☐ Closure would be unacceptable

- **Airservices ATC**

- ☐ Preference to retain 04/22 in some form
- ☐ 1,200m would maintain flexibility for GA traffic and avoid increasing traffic on 15/33
- ☐ Consistency of displaced thresholds would be supported
- ☐ Helicopter ops to current 22 threshold could continue

### Public Consultation

#### The Proposed Arrangement after Key Stakeholder feedback

- Provide 1,200m take-off 22 and landing 04
- Permanent displaced RWY 22 threshold
  - ☐ 800m landing length 22
  - ☐ 800m take-off run 04
- Similar to current arrangement during military ops but, with take-off on 04 now allowed
- Runway 04 operations permitted
- Code 2B runway, non-instrument, daylight only
- Disused runway length converted to taxiway to connect to taxiway "C"

#### Key Benefits to Council

- Reduced pavement area to maintain at higher standard (~50% existing)
- Lighting upgrade and maintenance costs avoided
- Provides for growth opportunities such as air freight, charter, FIFO and associated activity – through:
  - ☐ Taxiway access to GA precinct for larger aircraft
  - ☐ Additional aviation support facilities (hangars) at eastern end of GA precinct
  - ☐ Future aircraft apron parking bays
  - ☐ Air freight distribution facilities
  - ☐ Ability to provide compliant GA apron lighting, in main use areas with increased pole heights

#### Consultation Process Evaluation

The following options were put to the community with the preferred option being 1200m x 23m 2B as indicated.

Option	Length	Width	Ref Code	Pavement Area	Lighting
Current	1,645m	30m	3C	49,350m <sup>2</sup>	Yes*
1200_3C	1,200m	30m	3C	36,000m <sup>2</sup>	Yes + No
1200_2B	1,200m	23m	2B	27,600m <sup>2</sup>	Yes + No
900_2B	900m	23m	2B	20,700m <sup>2</sup>	Yes + No
900_1A	900m	18m	1B	16,200m <sup>2</sup>	Yes + No
750_1B	750m	18m	1B	13,500m <sup>2</sup>	No
Closure					

#### Results of Public Consultation and Written submissions

19 members of the public attended the meeting on the 21<sup>st</sup> July 2014

16 persons provided written submissions including some of those who attended the meeting

During the question and answer session of the meeting apart from those that did not want anything to change the majority of the questions in relation to the shortening of the runway were adequately answered.

One issue that did become apparent is that the 800m length for training touch and go landings was considered too short for novice pilots and as a consequence the recommendation is for a longer length.

### Analysis of written submissions

In total, there were 16 submissions received by the due date.

Submissions were received from a small cross section of the aviation community (recreation and commercial), those interested in aviation, emergency service providers and also Air Services Australia (labelled as other).

In terms of recreational aviators the majority of these persons seemed to have extensive experience whilst one submitter was a novice/beginner. As for commercial aviators these tended to be smaller commercial outfits.

10 out of the 16 that provided a submission indicated that the runway should remain as it is – this came from some recreation aviators and aviation enthusiasts. Commercial operators/emergency services had no issues with reducing the Secondary Runway 04/22 to 1200m. Those that wanted the runway retained indicated that longer secondary runways can provide commercial benefits, it was important for training purposes, emergency situations and that other areas for hanger development could be reviewed rather than reducing the runway.

### CONCLUSION

After considering all of the responses, with high weighting for safety, emergency services use, training, apron lighting compliance, maintenance and operational cost efficiencies, capital investment commitments, future growth of core aviation facilities such as taxiways, aprons, hangars and air freight facilities the most important and strongly supported requirements are considered to be:-

- ☐ Need to retain the Secondary runway in some form.
- ☐ Needs to be a length that support the emergency services (RFDS).
- ☐ Taking off to and landing from the West with a 1200m length is necessary.
- ☐ 800m for taking off to and landing from the east for touch and go training is not sufficient for novice pilots.
- ☐ Lighting of the secondary runway is not very important as portable lighting can be provided in emergency situations.

Benchmarking was conducted with smaller busy GA training airports in Queensland and the results of that study were

Redcliffe Airport	<b>RWY 07/25</b>	<b>741m asphalt</b>
Caboolture Airport	<b>RWY 06/24</b>	<b>821m grass</b>
	<b>RWY 12/30</b>	<b>1210 grass</b>
Caloundra Airport	<b>RWY 05/23</b>	<b>795m asphalt</b>

### Recommendations

That the secondary runway be altered to a Code 2B runway, non-instrument, daytime use only. It provides a 1200m take-off on 22 and a 1200m landing on 04. Furthermore it provides a 900m take-off on 04 and a 900m landing on 22. The disused runway length will be converted to taxiway.



# **ROCKHAMPTON AIRPORT MASTER PLAN RUNWAY 04/22**

## **Secondary Runway 04/22 Master Planning Evaluation Consultation Report Mar-Aug 2014**

**Meeting Date: 7 October 2014**

**Attachment No: 1**



***Secondary Runway 04/22  
Master Planning Evaluation  
Consultation Report***

**Date: Mar - August 2014**

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## **Executive Summary**

Council is completing a master planning evaluation to determine the future use of Runway 04/22 (the Secondary Runway) at Rockhampton Airport. The provision of a facility that meets stakeholders' needs is being evaluated to justify future budget commitment, the Airports' overall operations, and the potential to improve the use of adjacent areas and facilities.

In terms of Council's community engagement procedure this engagement was rated as a high local engagement as significant changes were being evaluated that would potentially impact on the usage of the Secondary Runway 04/22. As such the engagement included:

- Direct stakeholder discussions;
- Direct discussions with general aviation;
- A meeting for of all stakeholders and general aviation; &
- A formal submission process.

In March/April 2014, Airport Management engaged Rehbein Airport Consulting to complete stakeholder engagement and to prepare engineered options for potential changes to the runway configuration. These options were presented and discussed at a stakeholder and general aviation meeting on the 21 July 2014 at the Rockhampton Aero club for all to voice their opinions. 29 people attended this meeting. This Secondary Runway 04/22 Master plan Evaluation was then released to the wider community calling for submissions to be made. Communications were undertaken through direct letters/emails to general aviation that use the facility, a media release, RRC website posts, Be In the Know daily newsfeed and the Council's Regional Voice membership was notified. In total, 16 submissions were received.

### **Main messages from participants...**

#### **Larger commercial operators outline that the runway 04/22 not critical to their operations**

- QantasLink, Virgin Australia, Freight Operators (Pel-Air, Toll and GAM) all agreed that the Secondary Runway 04/22 is not critical to their operations at the Rockhampton Airport
- There is limited use of the Secondary Runway 04/22 by larger passenger operators and if this runway is reduced further this would limit their future use of the runway.
- Freight operators indicated that their preference is if the Secondary Runway 04/22 is to be reduced for their purposes 1400m in length is their preference.

#### **Royal Flying Doctor Service prefers if the runway is to be reduced – 1200m minimum**

- RFDS are regular users of the Secondary Runway 04/22 as 25-30% of their operations are to and from Emerald.
- RFDS agrees that runway that Secondary Runway 04/22 is helpful but not crucial.

#### **Rockhampton Aero Club - we are ok are with reduction but 04/22 must remain**

- Closure of runway 04/22 is deemed *unacceptable* as it provides direct access to the training area.
- If the runway was to be reduced in length it is preferred that it is only to a minimum of 1,000 metres.

#### **Airservices Australia – reduction to 1200m would maintain flexibility for general aviation**

- Engineering supports these proposals so long as the integrity of restricted areas for the Rockhampton Communication, Navigation Surveillance facilities is maintained.

**16 submissions received - recreational, commercial, emergency services and enthusiasts**

- Mixed response on the Secondary Runway 04/22 Master plan Evaluation
- Many recreational aviators / all enthusiasts wanted the runway to remain as is.
- Smaller scale commercial operators had no issues with the reduction of the runway to 1200m

**Aviation community sees the Secondary Runway 04/22 as an asset for the airport**

- The main reasons were: in case of an emergency, for training purposes, cross winds making the secondary runway more favourable and the economic benefit of retaining the secondary runway.

## Findings – Major stakeholder discussions

### QantasLink and Virgin Australia

Both airlines engage in limited use of 04/22 due to its marginal length and unavailability of instrument approaches or PAPI. Preferred sequence for ATC is runway 15/33 for high capacity RPT operations. Airlines have been instructed by management to utilise only the main runway 15/33 due to its more extensive facilities. Any reduction in length would prevent limited use from occurring. Both airlines agree that runway 04/22 is not classified as critical to its operations at Rockhampton Airport.

### Freight Operators (Pel-Air, Toll and GAM)

Freight operators are occasional users of runway 04/22 but the frequency of night operations require them to utilise runway 15/33 due to its instrument approach facilities. If the secondary runway was to be reduced in length, it is preferred that it only comes down to a minimum of 1,400 metres. All operators agree that runway 04/22 is not classified as critical for their operations at Rockhampton Airport.

### Royal Flying Doctor Service (RFDS)

The RFDS are regular users of runway 04/22 as 25-30% of their operations are to and from Emerald. Runway 04/22 is rarely utilised for movements to and from the eastern direction. Runway 15/33 could always be used for operations although, due to its direction, runway 04/22 is considered to be more convenient for facilitation on the ground. If the secondary runway was to be reduced in length it is preferred that it only comes down to a minimum of 1,200 metres in length. The RFDS agrees that runway 04/22 is classified as helpful to operations to Rockhampton Airport, but not essential.

### Capricorn Helicopter Rescue Service (CHRS)

The reduction of the secondary runway will have little to no impact on CHRS - no fixed-wing operations.

### Rockhampton Aero Club (President)

The closure of runway 04/22 is deemed *unacceptable* as the runway provides direct access to the training area. If the runway was to be reduced in length it is preferred that it is only reduced to a minimum of 1,000 metres in length for charter aircraft.

### Airservices Australia (Air Traffic Control)

A strong preference to retain the secondary runway in some form for smaller aircraft operations, preferably to be reduced to only 1,200 metres. This alternative would maintain flexibility for GA traffic and would avoid increasing traffic on the main runway. The consistency of the displaced threshold would avoid confusion for operational procedures for helicopter operations at the 22 threshold.

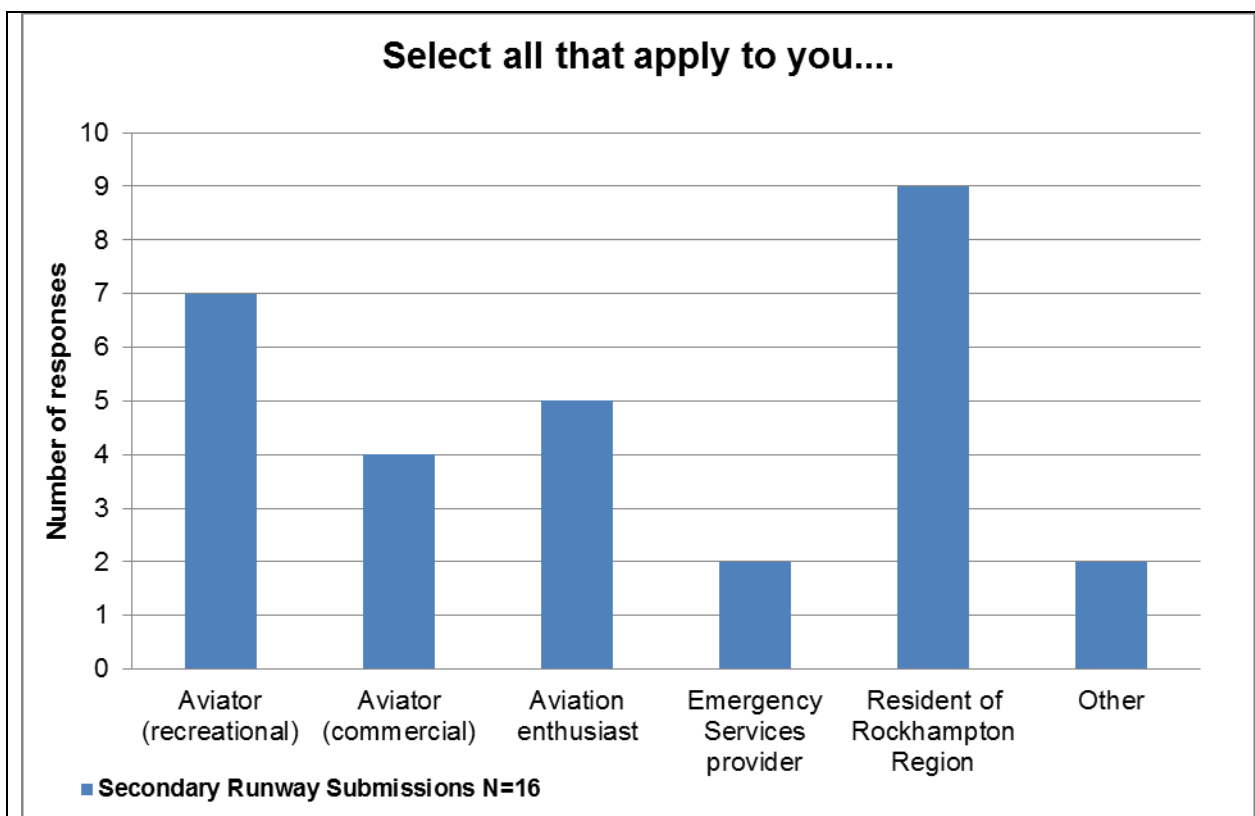
Upon reviewing the initial feedback from key stakeholders a preferred option was formulated for a category **2B** runway (non-instrument and daylight operations only) with a length of 1,200 metres, a width of 23 metres and a pavement area of 27,600 square metres. This would provide for 1,200m take-off distance for runway 22 and landing distance for runway 04. A permanent displaced threshold for runway 22 would exist which would result in 800m in landing length at runway 22 and 800m in take-off length at runway 04. The disused runway length would later be converted to a taxiway to provide access to the GA area. This option is very similar to the arrangements set in place during military operations which is an indication that the option is effective.

The reduction of runway 04/22 presents many benefits to Council including:

- Reduced pavement overlay costs
- Lighting upgrade and maintenance costs avoided
- Solutions driven by enabling aviation related growth opportunities for GA, air freight, charter, FIFO and associated activity through;

- Taxiway access to GA precinct for larger aircraft
- Additional aviation support facilities (hangars) at eastern end of GA precinct
- Future aircraft parking bays
- Air freight distribution facilities

## Findings – Submissions



### Analysis:

In total, there were 16 submissions received by the due date.

As can be seen above submissions were received from a small cross section of the aviation community (recreation and commercial), those interested in aviation, emergency service providers and also Air Services Australia (labelled as other).

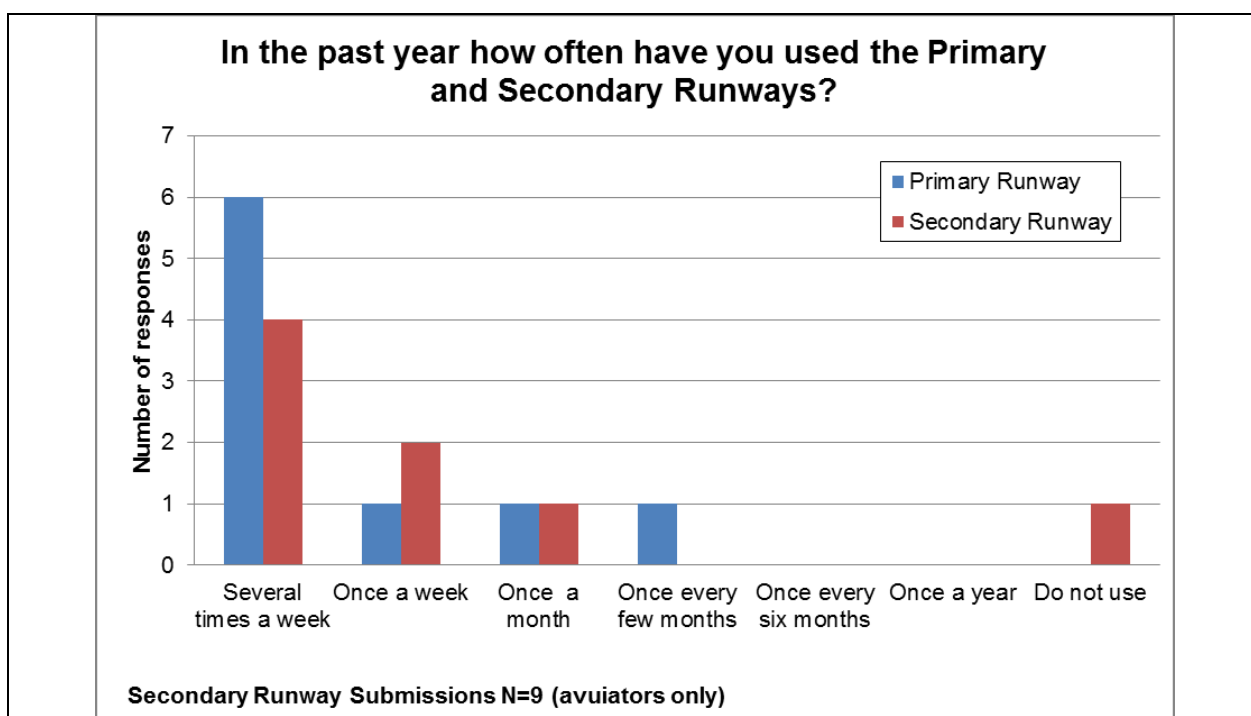
In terms of recreational aviators the majority of these persons seemed to have extensive experience whilst one submitter was a novice/beginner. As for commercial aviators these tended to be smaller commercial outfits.

*Note: that Jemena (owners and operators of the QLD pipeline) had requested more information as to nature of the Secondary Runway 04/22 Master plan evaluation, once understanding that there would be no impact on the QLD Gas Pipeline asset area Jemena indicated that there was no need from their perspective to place in a submission.*



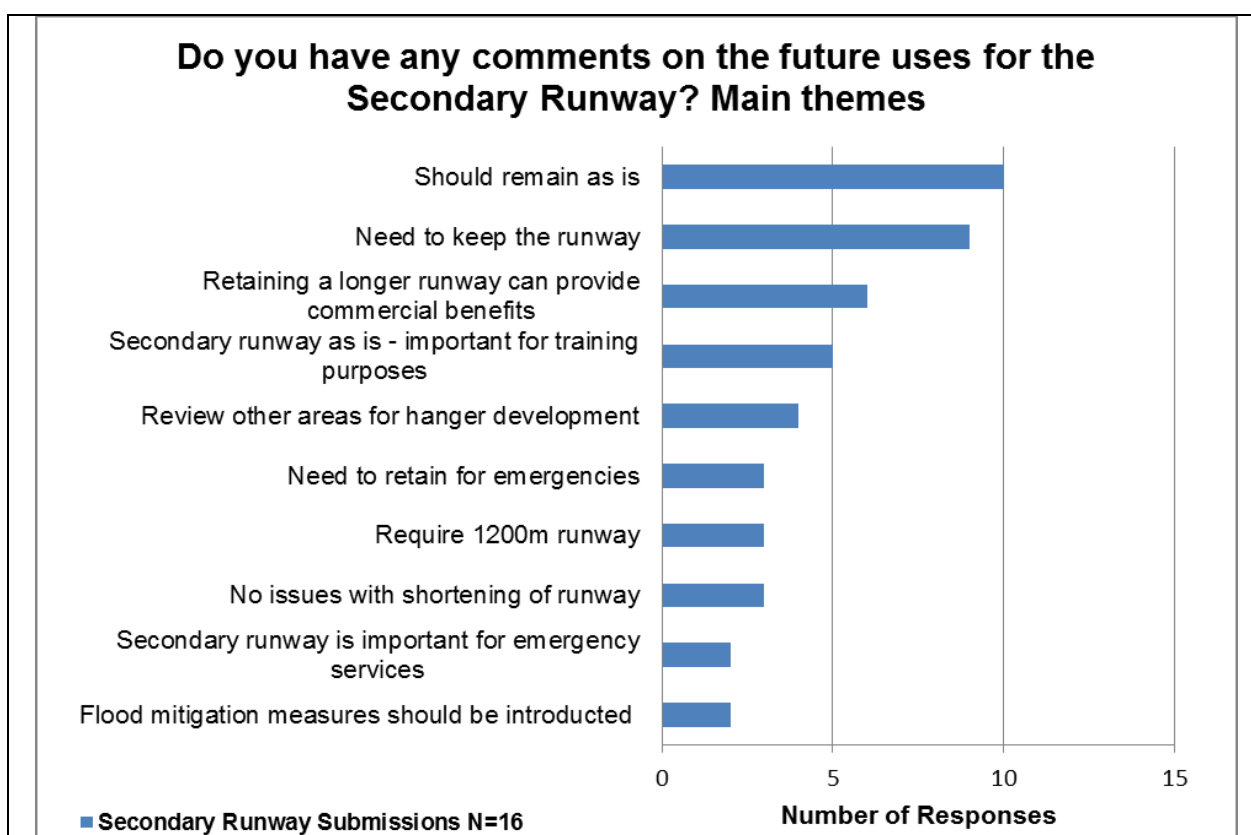
Type of aircraft respondents indicated they operated

C 150		
C 172		
Bell 412		
EMB - 135		
Beechcraft King Air		



Analysis: The primary runway was the most often used runway by both commercial and recreational aviators.

However the secondary runway was also frequently used by smaller commercial operators and recreational aviators. Many detailed this was for several reasons but mainly because of favourable wind conditions for the secondary runway.



Analysis: 10 out of the 16 that provided a submission indicated that the runway should remain as it is – this came from some recreation aviators and aviation enthusiasts. Commercial operators/ emergency services had no issues with reducing the Secondary Runway 04/22 to 1200m. Those that wanted the runway retained indicated that longer secondary runways can provide commercial benefits, it was important for training purposes, emergency situations and that other areas for hanger development could be reviewed rather than reducing the runway.

## Do you have comments on the future uses for the Secondary Runway

### Actual Submissions

1. Yes it should be left as it is this is obviously to pander to the FIFO market which is almost at the moment dead on its legs with little chance of its recovering. We as a local company require a minimum of 1200 metres. The Council is just trying to relinquish its responsibility regarding maintaining the airport and while I feel this is a futile protest and the meeting was like watching a rerun of Yes Minister, I believe this is a forgone conclusion and again this is just cosmetic to look like there has been consultation XXXXXXXXXXXXXXXX.

2. Whilst I am clearly in favour of encouraging reasonable, sustainable, commercial development opportunities for Rockhampton Airport, I strongly believe that the proposal to shorten the existing operational length of runway 04/22 is regressive rather than progressive.

Once buildings are established within the area proposed to be made available by the shortening of this runway, the full operational length is **lost forever**. It has been stated that such a reduction in length would bring Rockhampton Airport in line with other regional centres. Better long term commercial outcomes can be achieved if Rockhampton Airport positions itself above other regional centres. Other development sites and opportunities around the airfield should be continuously explored rather than shorten this asset (runway 04/22) which our local predecessors had the foresight to establish as far back as 1930. If its present operational length is retained, it will be best suited to help the airport cope with future long term regional development.

Certainly maintenance costs relevant to this runway are a major factor to be considered and these may dictate the standard to which it is maintained, but the full operational length should not be sacrificed permanently for short term gain.

To date there has been a strong focus on options relating to reductions in the length of this runway. Some of the points offered in support of those propositions may have merit but warrant clarification and/or substantiation.

1. A Figure of \$9 million has been suggested in relation to the cost of upgrading runway 04/22 lighting. What is the basis of this estimation?
2. What is the total area of land that would be "freed up" for airside development should a reduction in runway length be undertaken? Is it intended to provide roadside commercial blocks for general use as well?
3. Should additional airside development space be provided, what would the projected cost be for additional aprons and taxiways to access such sites?
4. Would the pavement strength of the eastern end of 04/22 need to be upgraded to cater for tug and taxi operations of the "large" aircraft that have been suggested by management i.e. Dash 8 and Fokker Jets?  
If so, what cost would this involve?
5. In the past, operators of aircraft of the calibre mentioned have carried out maintenance in capital cities which are "hubs" of their networks. There is now a developing trend to outsource this maintenance overseas. How strong is the likelihood of "bucking this trend" and attracting this style of operation to a regional centre such as Rockhampton?

6. Would it be a practical and feasible to access large aircraft maintenance hangars by tugging or taxiing the type of aircraft mentioned, along 04/22 during exercises when the area is usually occupied by military helicopters?

Whilst the number of aircraft using this runway has declined in recent times, it is still of considerable value to training organisations, agricultural and firebombing operators and many other light aircraft owners during their normal operations and more particularly when wind and weather conditions do not favour use of the main runway.

3. I believe 04-22 as an established operating legal runway is an asset to Rockhampton City and Region and should remain, as is, to be used at all times by RFDS, G.A. and flying training. Yes I believe in progress if more land adjoining runways, lower flood prone ground closer to 15-33 could be filled with land fill (eg) alot of material that goes to the city dump could be redirected to lower land areas at airport.  
A flood levee could be commenced in the same manner with city waste fill on some sections near the flood prone runways! Examples = rugby Park - landfill, Example -15 Bowen Street - Landfill (All good at minimum cost)

4. XXXXX is a regional jet operator that will shortly be commencing scheduled airline services in addition to our FIFO and charter operations.

The founding shareholders are Rockhampton residents and originally planned to base the company at Rockhampton however for several reasons at the time it was not feasible.

XXXXX currently conducts ad-hoc charter operations to and from Rockhampton numerous times a year however performance limits preclude the operation of our jets on 04/22 the majority of the time.

The proposed shortening of the runway will not affect XXXX operations.

XXXXX has discussed the options for construction of a hanger and maintenance facility at the airport with Council. The business case for this project has continually been strengthened as potential users have all expressed their desire for such a facility to be available as presently there are very limited options.

Council has proposed several sites for this facility some of which would be built adjacent to the current threshold of Runway 22 and require the councils proposed runway reduction to be completed in order to maintain acceptable obstacle clearance.

5. Changing the existing arrangements to 1200m and 2B code would not adversely affect our operations. 1200mk take-off and landing on 04 and 22 would be required for safe operations.

The use of 15/33 would be preferable for students in the early hours of solo training.

6. \* Emergency landings  
\* Training  
\* Alternate landings  
\* General aviation traffic

The secondary runway at Rockhampton is very important for GA in the Rockhampton Area. It can also be of benefit to airline operators as a standby runway (or commuter type aircraft). As the asset is already in place (at the community's expense) we believe it should remain. It is a unique facility for the Rockhampton Area and the cost of replacement would be unachievable in today's economy.

There are many alternate sites on the vicinity of the airfield to erect additional hangers.

7. 1/ 04/22 in its current form is valuable as an alternative runway for Dash 8 sized aircraft if the main 15/33 runway is ever damaged due to a jet misadventure. However the current length would need to be retained to be suitable for this possibility.  
2/ 04/22 is ideal for cross wind training when the wind is unfavourable for 15 or 33. It is also invaluable when the wind favours 04/22 and a student is having difficulty learning to fly or is about to go solo.  
3/ 04/22 in its current form is ideal for students. Experienced pilots can land in a much shorter length, but students often cannot control rates of descent requiring the normal strip length. They also struggle with directional control requiring a wide runway to be considered safe. As we already have such an asset in place it would be disappointing to downgrade it "to be in line with other Regional Centres".  
4/ The North East end of 04/22 is ideal for instructors to get a good look at student flying technique. This is invaluable when some students have difficulty learning how to fly.  
5/ 04/22 is useful as students progress as instructions to change runways mid flights require concentration to execute well.  
6/ Retention of 04/22 in its current format (i.e. same length, same width) would be invaluable in the future when aircraft movements increase significantly. For instance light and medium could line up on 04/22 and depart in between heavy aircraft on 15/33 thereby aiding traffic movement. The more 04/22 is reduced in length and width the less useful this option would become. The experience at Brisbane and Sydney airports highlights the folly of not planning well in advance for the future.  
7/ If something has to go to reduce expenditure then forgo the lights on 04/22 when they become too expensive to maintain, but please maintain the length and width. Of length and width, length is the most important.
8. The full operational length of Runway 04/22 should be retained for many safety reasons but particularly so that aircraft arriving at Rockhampton with minimum but legal fuel reserves are given every opportunity of a safe arrival particularly during adverse weather conditions. Additionally it is important that the full length of this runway remains available as an alternative should the main runway 15/33 be unusable due to operational problems or mishaps.

**9. Air Traffic Control**

Rockhampton ATC was approached by Rehbein consultancy (engaged by airport) and provided the following comments (as per the attached):

- Preference to retain RWY 04/22 in some form
- 1,200m would maintain flexibility for GA traffic and avoid increasing traffic on RWY 15/33
- Consistency of displaced thresholds would be supported (Comment: threshold is often displaced in support of military exercises to provide additional aircraft parking areas).
- Helicopter ops to current RWY 22 threshold could continue

**CNS – (Communications, Navigation, Surveillance)**

Engineering supports these proposals so long as the integrity of restricted areas for the Rockhampton CNS facilities is maintained.

The CNS facilities at Rockhampton Airport currently include:

- NDB,
- DVOR,
- DME,
- VHF,
- Radio links and
- SGS.

The shortening of RWY 22 threshold end for expansion purposes may impact on the NDB, DVOR/DME, VHF and SGS. Shortening of the RWY 04 threshold end could potentially impact on the DVOR/DME, VHF and the Rockhampton – Table Mountain Link.

The below area (red circle) would be of most interest to Airservices Engineering should any works be planned for this area. Any works would need to be submitted for assessment via the usual DA process.

Airservices encourages QLD airport operators to refer to the QLD SPP Guideline for Strategic Airports Aviation Facilities (released July 2014)  
<http://www.dsdp.qld.gov.au/resources/guideline/spp/spp-guideline-strategic-airports-aviation-facilities.pdf> for information on the protection of building restricted areas associated with CNS facilities.

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### Airservices Environment

Airservices Environment Division seek engagement on any associated changes to existing RWY15/33 procedures or any consequential redistribution of aircraft traffic/changes to flight paths if apparent from changes made to RWY 04/22.

### Aviation Rescue and Fire Fighting (ARFF)

ARFF have no issue with any proposed changes to RWY 04/22.

10. The consultation process was poor in that information was not provided to stakeholders sooner.  
 The Runway 04/22 should not be less than 1200m as suggested by the majority of stakeholders.  
 I don't have any issues with looking at ways of generating revenue - I do have issues with of reducing an asset because the Council don't want to spend money on maintenance.  
 There does not appear to be many people in the Council / Airport that know that the Secondary Runway use is generally directed the ATC (Tower) according to the wind direction. Hence your form is badly designed.  
 My suggestion would be to utilize the southern end for redevelopment and the military precinct.

- |   |
|---|
| <p>11. To remain unchanged until 2021 for resealing<br/>Tender for maximum fixed pricing for runway weighting.<br/>There is no requirement to be in line with other Regional Centres by retaining 04/22<br/>Runway we are ahead of other centres.<br/>Maintain 04/22 Runway as is valuable asset to the community.</p>  |
| <p>12. Rockhampton is indeed fortunate to be blessed with arguably the best regional airport in Australia in terms of runway infrastructure. The remarkable asset was bequeathed to the city by farsighted forefathers and something Rocky should be immensely proud of.<br/>It would be a travesty if the second runway's operational capacity was diminished in the interests of short term financial considerations. The present Council needs to be visionary and forward - thinking, as were those who established Connor Park Aerodrome all those years ago. Picture the city and its aviation needs 50 plus years from now.<br/>What would the Rockhampton City Council in 2070 make of a decision by their predecessors in 2014, that limited the scope and viability of this magnificent airport, which has so much potential.</p> |
| <p>13. OK to remove lighting on 04/22 but not happy with reduction in length proposal. Very useful for training and extra length gives novice / student pilots more room for error and allows multiple touch and go / crop dust runs for training. Useful to take advantage of crosswind for training or avoid crosswind due to strong SW winds.<br/>Do not shorten 04/22 OK if lighting is removed. Landing fee concessions for student pilot / training flights.</p>  |



14.

RUNWAY 04/22

Runway 04/22 should be maintained in its existing form with full operational length including runway lighting for aviation use – aircraft taking off and landing.

If maintenance costs are an issue, then all airport revenue/surplus/profit should be invested back into the airport for maintenance (including runway 04/22) and capital works.

Closing or shortening the runway would reduce the capacity of the airport for air traffic and may compromise growth opportunities.

Currently there is no demand for large/heavy aircraft to access the general aviation area although they could taxi along the existing runway. However, the existing tarmac in that precinct has weight restrictions.

Structures/hangars at the eastern end along Canoona Road would compromise safety for aircraft operating off a reduced length 04/22.

There are limited opportunities for heavy maintenance with airlines increasing maintenance off shore. There would also be reluctance to invest in hangar facilities at an airport that can be affected by flooding. Any surplus revenue from the airport could be directed at flood proofing.

Retaining the runway with existing length provides an alternate runway for larger aircraft such as Dash-8/ATR when the main runway is not serviceable due to maintenance. DC9 aircraft (weight limited) used 04/22 when the main runway was undergoing maintenance.

Because there would be occasions when the cross wind component on the main runway would exceed the maximum for light aircraft, particularly with student pilots, 04/22 should be retained. Also, this runway needs to remain at its full length to enable circuits & bumps to be conducted safely for training.

As a regional airport, Rockhampton would currently have the best runway setup available and this could be enhanced by installing an ILS (Instrument Landing System) on the main runway instead of reducing operational capacity of 04/22.

The airport was under the control of the Commonwealth when both runways were established and resulted from forward planning – something that seems to be missing at present.

Rockhampton Airport has great potential and its future is assured due to its geographical position, military activity, positive future for tourism, and also its capability to accept large aircraft.

The complete airport needs a new or revised master plan – not just runway 04/22.

Comparing this runway with the lower standards of other regional airports is not a valid reason to downgrade our airport. The current standard of Rockhampton's runways should be maintained and not lowered simply to match our neighbours.

Runway 04/22 is a valuable asset and its operational length should not be reduced based on short term financial assumptions or to avoid maintenance costs. It would never be replaced.

Closing or reducing the runway is totally unacceptable.

15. I feel reducing the length of Runway 04/22 is not acceptable as a valuable asset will be destroyed and lost forever and will never be replaced.

At a time when Council is talking up the prospect of additional business for the airport the current capacity of the airport should be maintained and not reduced. In the event of Runway 15/33 becoming inoperable due to maintenance or a disabled aircraft on the main runway then 04/22 should be made available for emergency use.

I can recall when DC9 aircraft at reduced weight operated off 04/22 while 15/33 was undergoing maintenance. In fact I was a passenger on one of those flights that arrived from Mackay.

If the cost of maintaining the pavement and lighting is a concern then this should be covered by revenue that the Council is currently taking from the Airport.

All revenue that is raised from the airport should be spent on the airport and not used to balance Council budget.

Reducing the length or closing the existing runway does not provide for growth in air traffic.

To cater for access for larger aircraft to G.A. area the existing taxiway should be upgraded to higher pavement strength. Runway 04/22 should not be sacrificed simply to provide real estate for aviation support facilities that may never eventuate.

## Appendix

- Touch and go training exercises – minimum distances recommendation email
- Rockhampton Airport Community Meeting Runway 04/22 Master Planning
-

## Touch and go training exercises – minimum distances recommendation email

### Trevor Heard

---

**From:** Iain Lobegeier  
**Sent:** Monday, 21 July 2014 1:43 PM  
**To:** Trevor Heard  
**Subject:** Fwd: email  
**Attachments:** image002.gif; ATT00001..htm; image003.jpg; ATT00002..htm; C-172N Take-Off Landing Distances.pdf; ATT00003..htm

Regards  
Iain Lobegeier  
Rockhampton Airport

Sent from my iPhone

Begin forwarded message:

**From:** Stephen Alley <[stephen@peace.org.au](mailto:stephen@peace.org.au)>  
**Date:** 21 July 2014 13:24:31 AEST  
**To:** Iain Lobegeier <[Iain.Lobegeier@rrc.qld.gov.au](mailto:Iain.Lobegeier@rrc.qld.gov.au)>  
**Subject:** RE: email

Hi Iain,

As discussed, I've attached a couple of Take-off and Landing charts. They are quite easy to read, but keep in mind that all of the distances are in feet, not metres.

These charts are designed for the C-172N, which is a fairly common aircraft used for training. A Cessna 152 would use less distance again, and most training aircraft would be fairly comparable.

One thing to keep in mind is the with students conducting circuits, we would expect them to use quite a bit more runway than listed in these charts as they involve the aircraft continuing to roll down the runway while setting up for the next take-off. Also, students new to circuits quite often use more distance than someone would expect to with more experience. Because of so many variables, it is impossible to name an exact figure. My opinion based on the experiences I've had as an instructor would be that 900m to 1000m would be about the minimum ideal length.

If the runway in use was quite short, the instructor would by necessity help with the take-off. That would ensure that the student didn't run out of runway. This isn't ideal, but can be managed.

Finally, one other thing to take into consideration is that on a long runway, we have the ability to position our aiming point further down the runway. Rather than attempting to land at the very beginning of a runway, this creates a safer environment for the student. If the student was to suffer an engine failure on final, he would still be able to glide the aircraft safely onto the runway.

Luckily for us, we rarely use runway 04/22 for circuits. Even if it was much shorter, I'm sure we would be able to adapt even if it wasn't ideal.

Anyway, there is a number of things to take into consideration. If you have any questions, or if there is anything else that I can do, please let me know. Thanks Iain.

Stephen  
Peace Aviation  
0429 616 758

SECTION 5  
PERFORMANCECESSNA  
MODEL 172NTAKEOFF DISTANCE  
MAXIMUM WEIGHT 2300 LBS

## SHORT FIELD

## CONDITIONS:

Flaps Up  
Full Throttle Prior to Brake Release  
Paved, Level, Dry Runway  
Zero Wind

## NOTES:

1. Short field technique as specified in Section 4.
2. Prior to takeoff from fields above 3000 feet elevation, the mixture should be leaned to give maximum RPM in a full throttle, static runup.
3. Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
4. For operation on a dry, grass runway, increase distances by 15% of the "ground roll" figure.

WEIGHT LBS	TAKEOFF SPEED KIAS		PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
	LIFT OFF	AT 50 FT		GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS
2300	52	59	S.L.	720	1300	775	1390	835	1490	895	1590	960	1700
			1000	790	1420	850	1525	915	1630	980	1745	1050	1865
			2000	865	1555	930	1670	1000	1790	1075	1915	1155	2055
			3000	950	1710	1025	1835	1100	1970	1185	2115	1270	2265
			4000	1045	1880	1125	2025	1210	2175	1300	2335	1400	2510
			5000	1150	2075	1240	2240	1335	2410	1435	2595	1540	2795
			6000	1265	2305	1365	2485	1475	2680	1585	2895	1705	3125
			7000	1400	2565	1510	2770	1630	3000	1755	3245	1890	3515
			8000	1550	2870	1675	3110	1805	3375	1945	3670	2095	3990

Figure 5-4. Takeoff Distance (Sheet 1 of 2)



CESSNA  
MODEL 172N

SECTION 5  
PERFORMANCE

## LANDING DISTANCE

### SHORT FIELD

#### CONDITIONS:

Flaps 40°  
Power Off  
Maximum Braking  
Paved, Level, Dry Runway  
Zero Wind

#### NOTES:

1. Short field technique as specified in Section 4.
2. Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots
3. For operation on a dry, grass runway, increase distances by 45% of the "ground roll" figure.

WEIGHT LBS	SPEED AT 50 FT KIAS	PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
			GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS
2300	60	S.L.	495	1205	510	1235	530	1265	545	1295	565	1330
		1000	510	1235	530	1265	550	1300	565	1330	585	1365
		2000	530	1265	550	1300	570	1335	590	1370	610	1405
		3000	550	1300	570	1335	590	1370	610	1405	630	1440
		4000	570	1335	590	1370	615	1410	635	1445	655	1480
		5000	590	1370	615	1415	635	1450	655	1485	680	1525
		6000	615	1415	640	1455	660	1490	685	1535	705	1570
		7000	640	1455	660	1495	685	1535	710	1575	730	1615
		8000	665	1500	690	1540	710	1580	735	1620	760	1665

Figure 5-10. Landing Distance

5-21/(5-22 blank)

- Rockhampton Airport Community Meeting Runway 04/22 Master Planning

# **ROCKHAMPTON AIRPORT MASTER PLAN RUNWAY 04/22**

## **Rehbein Report - Rockhampton Airport Runway 04/22 Master Planning Report**

**Meeting Date: 7 October 2014**

**Attachment No: 2**



**REHBEIN AIRPORT CONSULTING**

DATE 16 September, 2014

CONTACT BEN HARGREAVES

**Rockhampton Airport  
Runway 04/22 Master Planning Report  
For Rockhampton Regional Council**



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## APPENDIX A

KEY STAKEHOLDER CONSULTATION SUMMARY

## APPENDIX B

FIGURES

**Document Control Page**

Revision	Date	Description	Author	Signature	Verifier	Signature	Approver	Signature
0	16/9/14	DRAFT	BJH		NB		BFW	



## 1.0 INTRODUCTION

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REHBEIN Airport Consulting was engaged by Rockhampton Regional Council to undertake a master planning evaluation to determine the future use of the secondary runway (Runway 04/22) at Rockhampton Airport.

The secondary runway has a high degree of operational capability compared with similar regional airports but is used significantly less than the primary runway (Runway 15/33). Therefore, budget allocation needs to be justified to maintain the runway to the current standard.

The scope of the evaluation included the following:

- An evaluation of the current pavement condition and assessment of the current asset value of the runway;
- An assessment of the impact associated with various options for reduced availability of Runway 04/22;
- An assessment of any safety hazards that may result from the permanent relocation of the Runway 22 threshold in relation to helicopter operations;
- Identification of the implications of reducing the runway strip width from the current 150m;
- A practical assessment of the potential to establish instrument approach procedures to improve the utilisation of Runway 04/22 by airline operators and potential savings for RPT operators from use of Runway 04 as an alternative to Runway 15;
- Consultation with key runway users.

This report sets out the assessment undertaken by REHBEIN Airport Consulting in relation to the options for future configuration of the secondary runway and a preferred arrangement developed in response to key user requirements determined from stakeholder consultation.



## 2.0 EXISTING RUNWAY STATUS

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The existing runway arrangement is shown in **Figure 1** at **Appendix A**.

### 2.1 PHYSICAL CHARACTERISTICS

Runway 04/22 is 1,645m in length and 30m wide. Both shoulders are sealed to 7.5m wide. The runway width and shoulders are sealed with un-grooved asphalt.

The runway is located within a 150m wide runway strip of which the central 90m width is graded.

The runway and runway strip physical characteristics meet or exceed the respective requirements for a Code 3 non-instrument runway in accordance with CASA MOS Part 139 Chapter 6.

### 2.2 PAVEMENT STRENGTH

Runway 04/22 has a published Pavement Classification Number (PCN) of 20 /F /C /1000 (145psi)/T

This makes it adequate for unlimited operations by turbo-prop aircraft including the Dash8-300, Q400, ATR72-500 and SAAB-340, as well as all Code A and B types.

### 2.3 OBSTACLE LIMITATION SURFACES

The current obstacle limitation surfaces applicable to Runway 04/22 are those associated with a non-instrument Code 3 runway.

Runway 22 has a non-standard take-off climb surface length of 7,500m rather than the 15,000m required under CASA MOS Part 139. A standard 15,000m surface would be penetrated by the range of hills to the north-east.

### 2.4 VISUAL AIDS

#### 2.4.1 PAVEMENT MARKINGS

Pavement markings are in accordance with CASA MOS Part 139, Chapter 8 and include runway centreline, runway side strip, threshold, aiming point and touchdown zone markings.

#### 2.4.2 RUNWAY LIGHTING

The runway is equipped with medium intensity runway edge lights. The lighting system is old and life-expired is spaced for the original 45m runway width.

Any replacement of the system would be required by CASA to meet the latest applicable standards for the declared runway dimensions. This requirement would also be triggered by any modification to the runway dimensions from existing.



## 2.5 INSTRUMENT APPROACH PROCEDURES

Runway 04/22 does not currently have published runway-aligned instrument approach procedures. Circling approaches based on DME or GNSS navigation are available.

## 2.6 AIRCRAFT MOVEMENTS

Accurate movement data by runway is not available on which to quantify the current use of Runway 04/22. However, the Australian Noise Exposure Forecast (ANEF), developed in 2009, assumed the following breakdown of aircraft movements in 2029/30 as shown in **Table 1**.

**Table 1: Annual Aircraft Movements at ROK**

Runway	RWY 15	RWY 33	RWY 04	RWY 22	Total
% of total	79.4%	16.1%	3.1%	1.4%	100.0%
Movements	32,359	6,550	1,271	593	40,773

The movements in **Table 1** were estimated based on actual movements conducted at the airport during the period August 2008 through August 2009 and forecast growth in various aviation industry sectors.

## 2.7 RUNWAY AVAILABILITY

An assessment of historical wind speed and direction records for a 25-year period between 1 January 1986 through 31 December 2011 was undertaken. The analysis confirms that:

- Runway 15/33 is essentially continuously available for aircraft with a crosswind limit of 20 knots or more;
- For aircraft with a crosswind limit of 10 knots, Runway 15/33 is available 94.8% of the time. This means Runway 04/22 is required only 5.2% of the time; and
- On average, over the year, Runway 04/22 is usable for aircraft for aircraft with a 10 knot crosswind limit 93.9% of the time.

A month-by-month breakdown indicating the extent to which use of Runway 04/22 is required for light aircraft and the respective preferred direction (based on a permissible tailwind limit of 0 knots) is given in **Table 2**.

**Table 2: Runway Usability Analysis**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
<b>RWY 15/33 Available</b>	91.9%	92.9%	94.0%	96.0%	97.4%	97.4%	96.8%	96.7%	95.3%	94.1%	92.9%	92.5%	<b>94.8%</b>
<b>RWY 04/22 Required</b>	8.1%	7.1%	6.0%	4.0%	2.6%	2.6%	3.2%	3.3%	4.7%	5.9%	7.1%	7.5%	<b>5.2%</b>
<b>RWY 04/22 Available</b>	92.5%	90.5%	88.3%	91.8%	94.9%	95.7%	96.9%	96.0%	96.2%	95.5%	94.5%	93.9%	<b>93.9%</b>
<b>RWY 22 Available</b>	20.2%	20.8%	24.9%	29.3%	43.4%	53.4%	55.8%	47.4%	39.6%	29.4%	25.0%	23.0%	<b>34.4%</b>
<b>RWY 04 Required</b>	79.8%	79.2%	75.1%	70.7%	56.6%	46.6%	44.2%	52.6%	60.4%	70.6%	75.0%	77.0%	<b>65.6%</b>

Draft



### 3.0 PAVEMENT EVALUATION

An assessment of the current pavement condition and evaluation of the remaining asset life was undertaken. This consisted of a desktop assessment based on the information provided in the Invitation to Quote documentation, and a site walkover inspection.

#### 3.1 DESKTOP ASSESSMENT

Originally constructed circa World War II, the pavement was reconstructed in 2004-05. This involved cement stabilisation and an overlay of road base material to improve the pre-existing moderate gravel pavement.

Council advised that for the purposes of the pavement assessment, Runway 04/22 consists of a granular pavement depth of 380mm with a 50mm thick dense-graded asphalt surface to airport specifications.

The runway currently has a published pavement classification number (PCN) of 20 /F /C /1000 (145PSI) /T which indicates that, based on a technical evaluation, the pavement is considered strong enough for use by aeroplanes up to Q400 or ATR72 in size without the issue of a pavement concession.

Analysis of the pavement structure using computer software<sup>1</sup> confirms that the PCN is consistent with the pavement construction. Use of the pavement since completion by aircraft larger than Beech King Air 300 is reportedly negligible. Analysis also confirms that trafficking of the pavement at an assumed rate of 1,804 annual departures for 10 years since completion in 2004 would not have caused any measurable fatigue of the pavement structure.

#### 3.2 VISUAL INSPECTION

A visual inspection of the current runway surface condition was undertaken on 5 March 2014 by Ben Hargreaves. The inspection identified that:

- Overall, the pavement appears to be in relatively good condition, with no signs of load-related distress;
- Some cracking and loss of stone is evident within the 30m runway width. The extent and nature of these are generally consistent with the age of the surfacing which was placed in 2004-05 and result from oxidation and embrittlement of the bituminous binder;
- A greater extent of cracking within the runway shoulders;
- Cracks appear to be regularly sealed and other defects identified through regular pavement inspections by airport operations personnel;

<sup>1</sup> COMFAA 3.0 developed by the US Federal Aviation Administration and accepted by CASA as a suitable method for airfield pavement strength evaluation in accordance with Advisory Circular AC139-25(0).





- Several asphalt patches have been undertaken. These are in good condition, flush with the adjacent pavement and with neat, sealed edges;
- Minor damage due to water inundation during recent flooding in 2011 and 2012(?) has resulted in a greater prevalence of these minor defects towards the 04 threshold.

In conclusion, the pavement appears to be in sound condition. Whilst it would benefit from a surface treatment in the next 2-3 years, the need for a full asphalt resurfacing is questionable and would only be considered necessary if the pavement was expected to receive an increase in heavier aircraft traffic.

### 3.3 RESIDUAL LIFE

The life of the underlying pavement, given the PCN and the extent of traffic received since re-construction, is considered to remain at 15 years, subject to an appropriate surfacing restorative treatment.

A preliminary analysis suggests that based on the pavement construction indicated above, the pavement structure should be able to accommodate at least 2,184 movements at full aircraft weight by SAAB 340 aircraft. This equates to 8 movements per day on average over a 15-year life.

Although the surfacing will always require periodic renewal due to environmental aging, provided this occurs to ensure the surface remains effectively sealed against water ingress the life of the granular pavement structure in terms of lighter aircraft such as the Beech King Air is effectively unlimited, due to the low relative damage caused by this aircraft compared with the PCN.



## 4.0 RUNWAY OPTIONS ASSESSMENT

### 4.1 RUNWAY LENGTH AND WIDTH OPTIONS

A range of possible alternative runway length and width options were identified, based on the requirements of the brief. The options are indicated in **Table 3**, which identifies the length, pavement width, Aerodrome Reference Code (ARC), and total pavement area.

**Table 3: Runway Options**

Option	Length	Pavement Width	ARC	Pavement Area	Lighting
Current	1,645m	30m	3C	49,350m <sup>2</sup>	Yes*
1200_3C	1,200m	30m	3C	36,000m <sup>2</sup>	Yes + No
1200_2B	1,200m	23m	2B	27,600m <sup>2</sup>	Yes + No
900_2B	900m	23m	2B	20,700m <sup>2</sup>	Yes + No
900_1A	900m	18m	1B	16,200m <sup>2</sup>	Yes + No
750_1B	750m	18m	1B	13,500m <sup>2</sup>	No

### 4.2 KEY USER REQUIREMENTS

Consultation on the possible options was undertaken with key users during March – April 2014. A summary of the consultations is included at **Appendix A**. Based on this feedback, a set of key user requirements was identified against which to evaluate the possible options. The requirements are set out in **Table 4**.

**Table 4: Key User Requirements**

Key User	Consultation Feedback	Minimum Requirements
Airlines (QantasLink and Virgin)	<ul style="list-style-type: none"> <li>Limited use of 04/22 due to marginal length and preferred ATC sequencing to 15/33</li> <li>Any reduction in length would prevent use</li> <li>Not seen as critical to operations at ROK</li> </ul>	No requirement for Runway 04/22
Freight Operators	<ul style="list-style-type: none"> <li>Occasional users of 04/22 but 15/33 preferred due night operations which require instrument approach</li> <li>Minimum 1,400m length needed for use</li> <li>Not seen as critical to operations at ROK</li> </ul>	No requirement for Runway 04/22



Key User	Consultation Feedback	Minimum Requirements
Royal Flying Doctor Service	<ul style="list-style-type: none"> <li>Regular use (25–30%) for movements to/from Emerald</li> <li>15/33 could always be used but 04/22 more convenient</li> <li>Minimum 1,200m required for take-off to/landing from west</li> <li>Rarely used for movements to/from east</li> <li>Helpful to operations at ROK but not essential</li> </ul>	Code 2B Non-instrument 1,200m TODA RWY 22 1,200m LDA RWY 04
Capricorn Helicopter Rescue Service	<ul style="list-style-type: none"> <li>No Fixed-wing operations</li> <li>No impact as long as helicopter aiming point provided at existing RWY 22 threshold location and access to CHRS base maintained</li> </ul>	No requirement for Runway 04/22 Helicopter aiming point
Rockhampton Aero Club	<ul style="list-style-type: none"> <li>04/22 provides direct access to training area</li> <li>Charter aircraft require minimum 1,000m TODA</li> <li>Closure would be unacceptable</li> </ul>	Code 2B non-instrument 1,000m TODA
Airservices ATC	<ul style="list-style-type: none"> <li>Preference to retain 04/22 in some form</li> <li>1,200m would maintain flexibility for GA traffic and avoid increasing traffic on 15/33</li> <li>Consistency of displaced thresholds would be supported</li> <li>Helicopter ops to current 22 threshold could continue</li> </ul>	Code 2B non-instrument

Consideration of the options presented in Table 3 with reference to the key user requirements in Table 4 indicates that only two (2) arrangements for Runway 04/22 have any possible merit. These are:

- Maintain the current runway length and width; or
- A reduction in length to 1,200m as a Code 2B non-instrument runway without edge lighting.

Whilst several users expressed a preference for runway edge lighting to be maintained to enable use of Runway 04/22 during the hours of darkness or reduced visibility, this is not a requirement for any of the operators given the high availability of Runway 15/33 under such conditions.

#### 4.3 POSSIBLE UPGRADE OF EXISTING RUNWAY

One of the options to be considered by the brief involves the possible upgrade of Runway 04/22 to a Code 3C non-precision instrument runway together with the provision of visual approach slope guidance through the installation of Precision Approach Path Indicator (PAPI).

On face value this option has the potential to improve the usefulness of the cross runway for airlines and freight operators by providing a safer facility which may be more convenient for arrivals from the south. However on further consideration in light of the stakeholder feedback the practical benefit is considered to be negligible. The reasons for this include:

- For airline operators, the runway length is already marginal. Due to its greater available length and width the primary Runway 15/33 is likely to be preferred by larger aircraft whenever available;



- Upgrade of the runway would trigger a CASA requirement to re-space the runway edge lights at a compliant width for the 30m wide runway. This would come at a significant cost;
- Upgrade to a new runway category would also trigger a CASA requirement to implement standard OLS. Currently the Runway 04 take-off climb surface does not extend the full distance stipulated in CASA Manual of Standards Part 139. Given the presence of the terrain to the north and east of the runway, which restricts circling beyond 4 nautical miles from the aerodrome, a standard OLS is unlikely to be achievable;
- While it appears (on a first inspection without conducting any analysis) that it may be possible to design GNSS non-precision instrument approaches to each end of the runway, the main beneficiaries of such procedures would be the airlines and freight operators. All of these users have confirmed they can operate quite satisfactorily without the use of Runway 04/22;
- Even if Runway 04/22 were available as an alternative for airline and freight operators, for reasons of ATC sequencing in practical terms it is likely to be offered only outside busy periods and so would offer no benefit in terms of capacity; and
- The runway would still be subject to closure during military operations where helicopters are based on the eastern section.

Accordingly, a reduction in runway length to 1,200m appears to impose the least practical impact on the operational capability of Runway 04/22 along with significant cost benefits.

The proposed arrangement is outlined in **Section 5.0**.



## 5.0 PREFERRED ARRANGEMENT

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Based on the stakeholder feedback received to date, an arrangement for a preferred option has been identified. This is illustrated in **Figure 2** at **Appendix A**. The key features are:

- Suitable for Code 2B, non-instrument, daylight only operations with a marked runway width of 23m, graded strip width of 90m and no fly-over areas;
- Provision of 1,200m take-off distance available for Runway 22 direction and for landing in Runway 04 direction. This provides for larger GA aircraft such as RFDS and the Aero Club charter operations to conveniently serve destinations to the west by straight out/straight-in take-off and landing wherever wind conditions permit;
- A permanently displaced Runway 22 threshold location to avoid continual changes to the runway arrangement during regular military operations. The threshold location allows 800m landing distance in the Runway 22 direction. This is similar to the current arrangement which is imposed during military operations.
- Runway 04 operations can be permitted at all times, even though these are currently not available during military operations. The effective take-off distance for Runway 04 would also be 800m;
- The disused runway length converted to a taxiway suitable for accommodating Code C aeroplane access to the GA precinct and facilitating development of maintenance and storage facilities in this area for larger aircraft than currently served. This includes the SAAB 340 and Dash 8 aircraft; and
- A helicopter aiming point provided at the existing Runway 22 threshold and air taxi route from here to the CHRS site.

The proposed arrangement was presented to a public meeting at Rockhampton Aero Club on Monday 21 July 2014.

Pending feedback from the public comment period, the proposal as outlined above is considered to represent the optimum master planning outcome in relation to Runway 04/22.



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A decorative horizontal bar composed of two overlapping rectangles. The top rectangle is orange and the bottom rectangle is dark blue. The dark blue rectangle is wider and extends further to the left and right than the orange one.

## APPENDIX A

### KEY STAKEHOLDER CONSULTATION SUMMARY

**Stakeholder Consultation Summary**

17 April 2014

**QantasLink:**

- Runway 15/33 is generally always used as ATC sequence all RPT traffic for this runway.
- QantasLink's operations manual restricts the use of runway 04/22 at Rockhampton. Use of this runway is at the captain's discretion and is probably only used a few times a year. This is usually due to cross wind.
- Runway 04/22 current length is considered marginal for DHC-8-400 series aircraft. As a result only Qantaslink's 200 and 300 series DHC-8 aircraft would be eligible to consider operations to runway 04/22. Any reduction in runway length in the future would prevent the 200 / 300 series aircraft from considering this runway.
- Qantaslink operates a fleet of 51 DHC-8 aircraft. The fleet is made up of;
  - 5 x DHC-8-200
  - 16 x DHC-8-300
  - 30 x DHC-8-400
- The maximum permitted crosswind is 36kts. Maximum tailwind component is 10Kts however this is dependent on runway length available. 04 /22 would not be considered with a downwind component.
- QantasLink's preference is to operate to runways that are serviced by runway aligned instrument approach procedures. Since 04/22 is operationally questionable at present the design and publishing of instrument approaches to 04/22 would be of little advantage to this operator.

**Virgin Australia Regional Airlines:**

- Discussion with ATC personnel indicated that Virgin Australia operated in a similar fashion to QantasLink. Runway 04/22 was only used on odd occasions.
- Based on the manufacturers specification operations of Virgin's jet fleet (B737 & ERJ-190) would not be able to operate from / to runway 04/22.
- Virgin's ATR-72 fleet has similar operating characteristics to DHC-8 aircraft. It is therefore assumed that 04/22 would be the least preferred runway however could be used for when operationally required and in appropriate conditions.
- A reduction in runway length would potentially reduce the viability of this runway for ATR-72 operations in the future.
- Subsequent confirmation was received from Virgin Australia that the above is correct. Runway length is marginal for ATR-72 use and that company operating procedures do not include use of Runway 04/22.



**Royal Flying Doctor Service (RFDS):**

- RFDS use all runways at Rockhampton Airport.
- Runway 04/22 is often used when arriving from or departing to the West.
- Approximately 25 – 30% of arrivals are to runway 04 as the aircraft does regular flights to Emerald QLD. Runway 04 permits a straight in approach from the west increasing efficiencies in medical flights.
- Maximum crosswind component is 25Kts. Maximum downwind component is 10Kts.
- RFDS could continue to conduct its operations on a reduced strip length however; the 1200m option with support of night operations would be the only alternative acceptable.
- The closure of runway 04/22 would remove flexibility for the RFDS to operate into and out of Rockhampton. Due to the priority given to medical flights the RFDS would not be impacted should all traffic be processed to runway 15/33.
- GNSS RNAV or VOR procedures should they be developed for runway 04/22 would be advantageous to the RFDS operation.

**Capricorn Helicopter Rescue Service:**

- CHRS operate Bell 412 rotary wing aircraft. The operation has no fixed wing operations.
- Arrivals and departures vary depending on demand for the service and crew training requirements. Flights take place most days.
- A reduction in the length of runway 04/22 would have little impact on CHRS operations provided appropriate clear areas were maintained to protect the helicopter during the phases of flight associated with final approach and the initial take-off.
- A permanently displaced threshold (22) would not impact CHRS operation provided the previous dot point is observed.

**Toll Aviation:**

- Toll Aviation was contacted for consultation however failed to respond.
- Toll is a night freight operator and therefore generally operates outside of tower hours.
- Discussion with other operators and ATC staff indicated that Toll aircraft on occasion use runway 04/22.
- Based on published performance data a reduction in runway length would eliminate runway 04/22 as an operational option. Published data indicates a required take-off distance of 1311m at sea level in ISA conditions and at maximum take-off weight. Landing distance at sea level at maximum landing weight can be achieved in 732m.
- Due to the nature of Toll's operation runways would need to support night operations.



**Airservices (Rockhampton ATC):**

- Rockhampton ATC preference would be for retention of runway 04/22.
- A reduced length of 1200m would provide flexibility in processing GA traffic without increasing traffic levels on runway 15/33.
- A reduced length of 1200m would maintain consistency in displaced thresholds as a result of annual military operations.
- Helicopter operations could continue to be accommodated with this configuration along with GA arrivals and departures.

**Rockhampton Aero Club:**

- Rockhampton Aero Club operates 7 days a week.
- Runway 04/22 provides direct access to the flight training area to the west of the aerodrome without imposing extended taxi time and impacting on other airport movements.
- The RAC fleet would be able to operate with a reduced strip length however their primary charter aircraft (B58) requires at least 1000m. Therefore, the 1200m option would be supported without impacting on current operations.
- Appropriate lighting to support night operations would be desirable.
- Closure of the runway would impact on the current operations due to the nature of flight training and a lower tolerance for crosswinds.

**Pel-Air:**

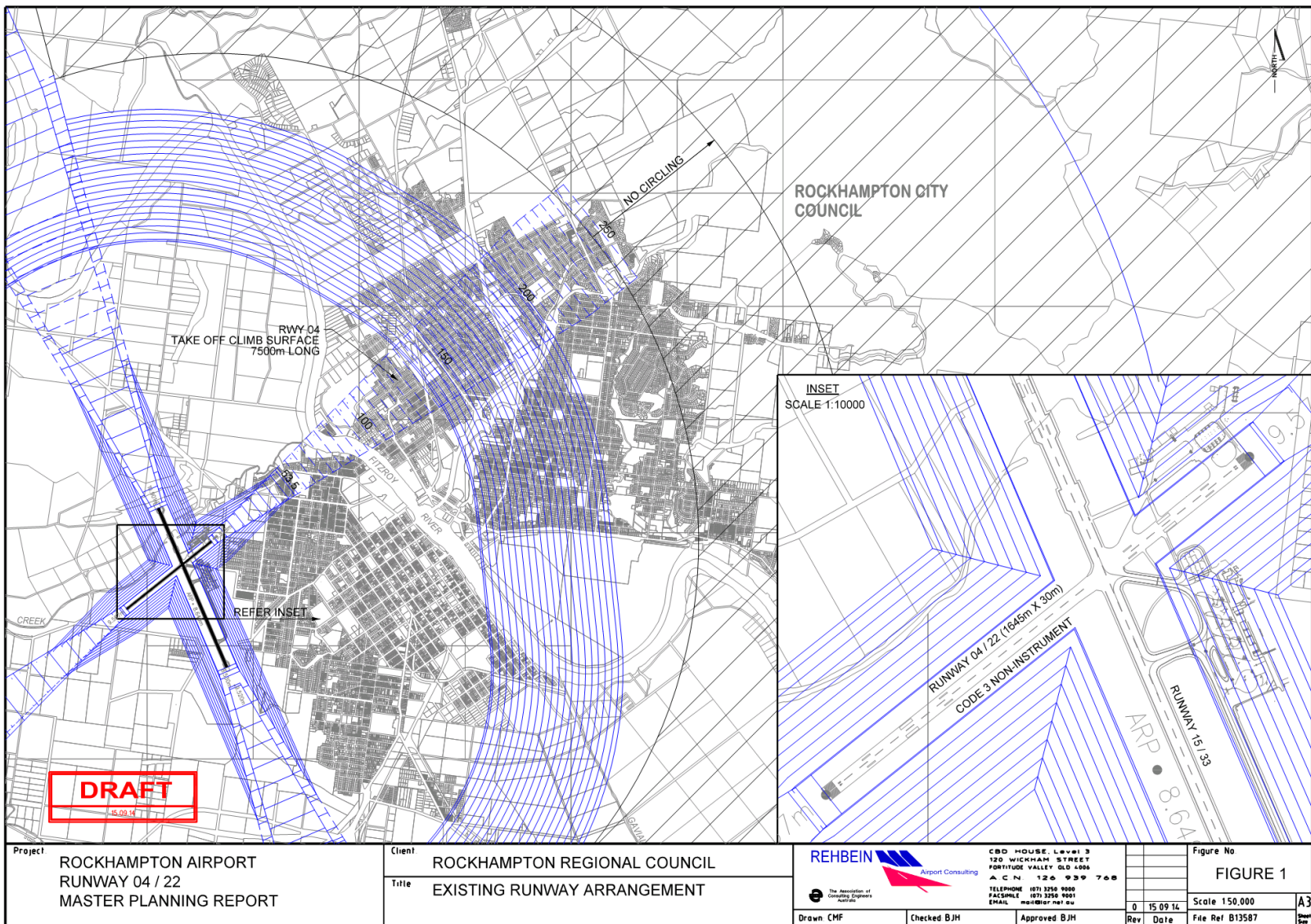
- Pel-Air operate SAAB 340A freighter configuration aircraft.
- Pel-Air operations take place outside of tower hours four (4) nights a week.
- Company policy is a minimum strip length of 1400m.
- Since operations are night based, runways serviced by an instrument approach procedures are used as they provide safe descent instructions.
- Runway 15/33 is the preferred runway however 04/22 is occasionally used.
- Any reduction in the length of 04/22 below 1400m would remove the runway from operational consideration.

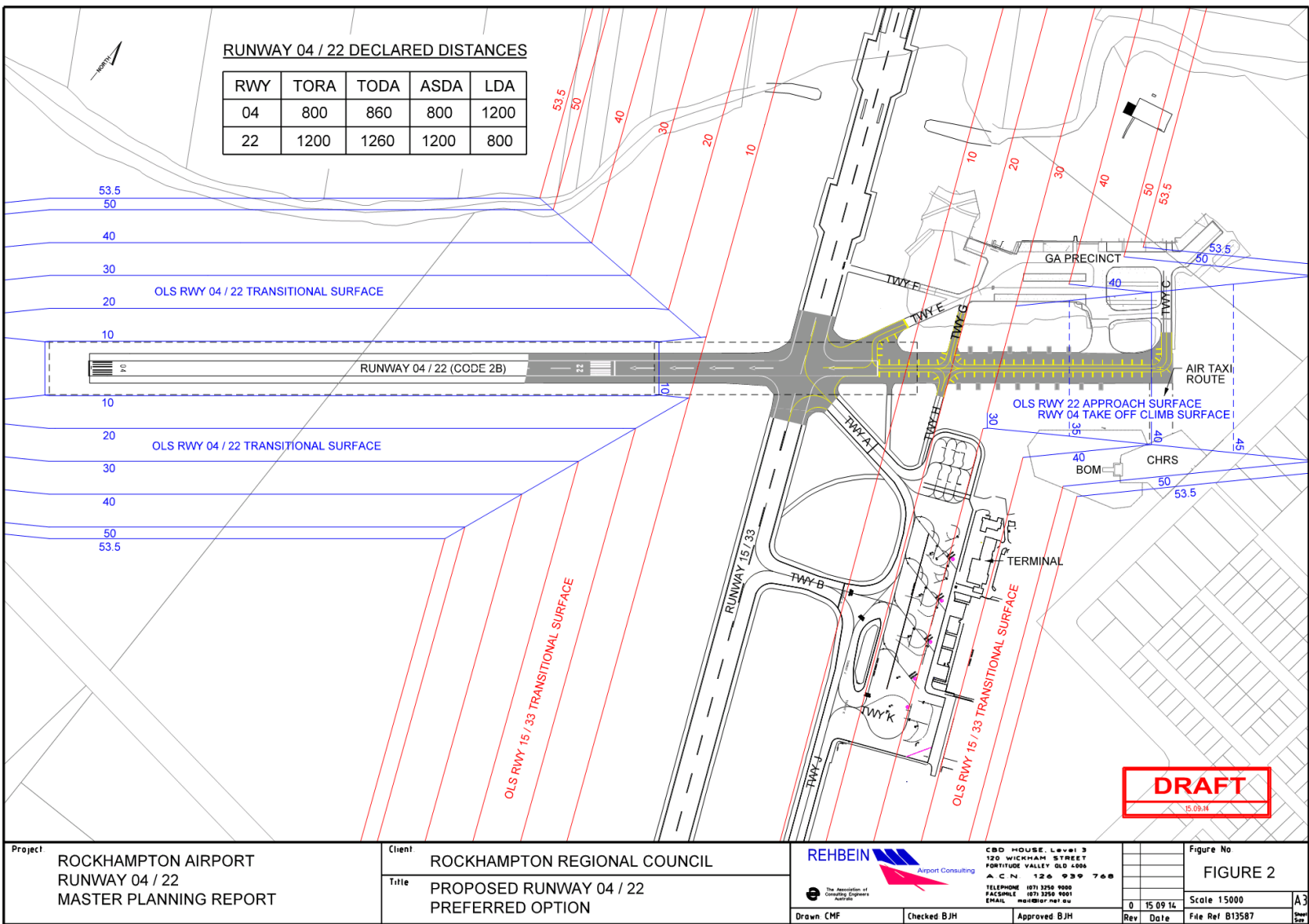


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## APPENDIX B

### FIGURES





# **ROCKHAMPTON AIRPORT MASTER PLAN RUNWAY 04/22**

## **Supporting Information Document**

**Meeting Date: 7 October 2014**

**Attachment No: 3**

**SUPPORTING INFORMATION DOCUMENT FOLLOWING – ROCKHAMPTON AIRPORT  
MASTER PLAN RUNWAY 04/22 PRESENTED TO BUSINESS ENTERPRISE  
COMMITTEE MEETING 1 OCTOBER 2014****SUMMARY**

The following information supports the report to Business Enterprise Committee regarding the shortening of the Airports cross runway

**INTRODUCTION**

A report was presented to Business Enterprise Committee on the 1 October recommending the shortening of the cross runway with the objective to allow for future development of the site. This followed prior and recent approaches from business seeking to expand operations. Extensive consultation as per Council's Community Engagement Policy was undertaken. It was resolved at the Business Enterprise Committee that *'the matter be referred as an agenda item to Council Meeting on Tuesday 7 October 2014'*. Discussion on the day was around the Airport Masterplan and the future planning of uses of this site.

Currently the Airport is reviewing its Masterplan. The current plan, while dated has had iterations and related strategic plans completed to progress development. A history of this follows. An intention of the approved shortening of the runway was to allow more site specific planning in the reviewed Masterplan.

**BACKGROUND**

The 1987 GHD Master plan 1987 – 2007 was approved by Council at a special meeting on 8 February 1988. Maps depicting this will be available at meeting as due to their size are not a suitable quality to be attached to this report. This approved Master Plan laid out the requirements for a works program and future development required at Rockhampton Airport. With the strategic plans as depicted in Figure 1 and detailed below, the Masterplan has been a relevant document.

Elements of that works program that have been completed are:

- Relocation of several buildings in the GA area and extended apron.
- Construction of a new passenger terminal.
- Extension of the main runway to 2628m and strengthening for B747.
- Extension of that terminal in 2006 for more efficient international passenger processing.
- Resurfacing of the runways, taxiways and aprons in 1999/2000.
- Provide an additional aircraft standing position of the main apron for heavy international aircraft.
- Construction of a new Military apron for fighter jets.
- New terminal car park.

Elements that were also included as future developments were

- New ADF facility to the south east of the airport (12.7ha).
- Hotel east of the terminal.
- New GA area to the north east of runway 04/22.
- New Car rental service and storage area to the south east of the terminal.
- Provide for extended and strengthened apron to south east.
- Extend parallel taxiway.
- Future International terminal.
- Further extension of main runway to 3200m.



Figure 1 – History of strategic plans



## Strategic Planning and Studies

### May 2007 – Rockhampton Airport Strategic Development Plan

The purpose of this study was to consider the future options to expand the airport core aeronautical facilities and business. This included options to expand or relocate the present GA precinct. The preferred option included shortening the secondary runway to 1110m and creating a code “C” taxiway on the shortened section of the runway. Many options were considered before this preferred option for the medium and long term horizons were chosen.

Items considered were:

- Runway Extension and extended RESA
- New Control Tower location
- GA Precinct location
- Parallel Runway
- Precinct for Military Operations
- International Aircraft Parking and apron extension
- Freight Precinct
- RPT aircraft Parking
- Parallel Taxiway for Runway 15/33
- Relocation of VOR/DME Navigational aids
- Commercial Activity

The replacement of the VOR/DME navigational equipment owned by Air Services Australia, the construction of a new Control Tower, and new RESA area have now been completed.

### January 2009 – GA Redevelopment Study

Expanded from the 2007 report this study was a broad strategic plan for the development of Council land under Airport control. It provided options for taxiway width compliance on the existing GA apron, future aircraft parking and storage as well as additional aprons for larger aircraft types and Freight facilities north east of runway 04/22. Endorsed by Council, this report and Council feedback formed Airports response to Council’s Regional Plan.

### October 2009 Report - Airport Commercial Strategic planning Information

Endorsed by Council, this report detailed the status of strategic planning for all of the commercial areas of the airport including Aircraft Hangar Facilities and Related Industries.

### July 2012 Report – Military Precinct

Endorsed by Council, this report outlined a proposal to establish a military precinct at the Rockhampton Airport.

### August 2012 Report - New Land Use Plan and outlines Airport Development Options

Endorsed by Council, this report detailed the current state of the then proposed new Airport Land Use Plan and followed on from the 2009 report outlining future development options.

A map of the area under discussion from these two reports is attached.

### November 2012 Buckley Vann – Rockhampton Airport Development opportunities

This report provided recommendations for incorporating provisions in the new Rockhampton Regional Council Planning Scheme for the Rockhampton Airport. Recently updated for final submissions.

### May 2013 Altered Precinct Airport land Use Plan – Council Strategic Planning Unit

This provided a high level outline of the new airport precincts and allowable uses within those precincts

SP1 - Airport	Air services – aviation related
SP2 – Airport Terminal	Air services, Short term accommodation, Shop, Office, Food & Drink outlet, Parking station, Outdoor sales



SP3 – Business	Short term accommodation, Parking station, Outdoor sales, Service industry, Service station, transport depot, Warehouse
SP4 – Airport Expansion	Expansion area South of Hunter Street for future business services

#### August 2013 Rockhampton Master Plan – New Road Access Intersection Study

This report provided a Development Overview and potential staging program arrangements for future airport developments identified in the previously endorsed reports to Council so that a suitable new access road to the South East airport precinct could be identified.

#### 10 Year Capital Budget, Passenger Projections

	<u>Budget</u>	<u>Passengers</u>
<u>2014/15</u>	\$4.4m	650,000
<u>2015/16</u>	\$4.0m	660,000
<u>2016/17</u>	\$3.6m	671,000
<u>2017/18</u>	\$9.2m	681,000
<u>2018/19</u>	\$4.1m	697,000
<u>2019/20</u>	\$2.9m	712,000
<u>2020/21</u>	\$5.9m	734,000
<u>2021/22</u>	\$4.7m	756,000
<u>2022/23</u>	\$2.5m	778,000
<u>2023/24</u>	\$2.6m	801,000
	<b><u>\$43.9m</u></b>	

Passenger projections are based on a further 5% downturn this year with growth commencing in 2015/16 at 1.6% rising to 2% and then 3% by 2021/22

#### **Aircraft Movements**

Financial Year	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Total Movements</b>	46,576	44,466	39,280	40,773	41,092	37,322	38,790	37,212	37,400
<b>Under 7 tonne</b>	25,124	23,506	20,904	20,142	19,320	18,590	20,116	17,822	18,104

The Rehbein study of 40,773 movements in 2009 indicated GA aircraft on the secondary runway was 1,864 or 4.6% of total movements. As aircraft movements for aircraft under 7 tonnes totalled 20,142 from Airservices data then 18,278 movements on the main runway were from GA aircraft.

The number of Aircraft movements has decreased in the last 10 years at Rockhampton as commercial operators move to newer, larger, more economical aircraft types.

At Rockhampton, total aircraft movement decreased by 20% and smaller GA aircraft less than 7 tonne by 28%. As the airframes of the older light aircraft aged and capital and operating costs and compliance of smaller aircraft increase, less GA result movements result.

Nationally, overall aircraft movements remained static at 3,060,000, whilst aircraft under 7 tonnes movements reduced by 21%.

#### **Benchmarking**

Rockhampton airport has plenty of spare runway operating capacity when compared to other airports which handle much larger passenger numbers and aircraft movements with shorter or no secondary runway.

Passengers	Aircraft Movements	1 x Main Rwy + Secondary Rwy
Rockhampton 681,000	37,400	2628m+1200m proposed
Townsville 1,581,200	71,058	2436m+1100m
Cairns 3,878,700	97,004	3196m+925m (Closed)
Gold Coast 5,300,000	90,176	2492m+582m
Launceston 1,286,600	22,434	1981m+ no secondary rwy
Hobart 2,106,600	24,310	2251m+no secondary rwy

### Resource Sector & FIFO Operations

Currently Council's Resource Officer, Jane Whyte has been involved with meetings with mining companies who are the proponents of new mines within Council's range. Discussions have included the Rockhampton Airport as part of their FIFO strategy. Council wants to make the most of the opportunities of FIFO and DIDO but believes that building lovable and sustainable communities at the host and destination ends of the journey are critical. Whilst the region may not want all the FIFO just a balanced proportion that helps the proponents and mining companies reduce their risk. The Rockhampton Airport is an integral part in making this happen. Jane will be available to discuss this and her recent dealings in this area should Council wish to do so at the meeting.

### Agriculture & Freight

Due to the leave, Council's Manager Economic Development was unable to provide comments within the agenda deadline. It is anticipated that he will be available to this issue with Council at the meeting.

### Financial Impacts

Capital savings in decommissioning the lighting is \$2m. The ongoing savings is mainly in the lighting maintenance including depreciation, the cost of regular inspections and maintenance repairs to faults, replacement of lamps estimated to be in the vicinity of \$100,000 pa.

Due approximately 2020, resurfacing runway costs would be less though difficult to accurately quantify at this stage. Based on current technologies and the expected use of the shorter runway, capital costs of lesser resurfacing application like a micro reseat, chip seal or rejuvenation would cost between \$750,000 and \$1m rather than full 50mm asphalt overlay costing around \$3m should the status quo remain.

### Future Plans

In essence the shortening of the cross runway has been considered in past strategies though nothing formal has been adopted, hence this recommendation. This proposal will allow development of commercial options without impacting on the general aviation community. The ensuing Council decision, whatever it may be will allow the masterplan review to be based around this.

Attached are several maps which depict

1. Current status map.
2. 2009 & 2012 endorsed 'Potential Aircraft Hangar and Aeronautical Related Sites' map.
3. Proposed new "Potential Aircraft Hangar and Aeronautical Related Sites' map.

**APPENDIX ONE****Indicative  
Master Plan Staging Program  
2014/15 to 2033/34 – 30 years****2014/15 – 2018/2019 Short term 5 years**

2014/15 – Shortening of runway 04/22 to enable upgrade and expansion of CHRS, PIQ leases, compliant GA apron lighting and area for hangar sites, freight facilities, additional GA aircraft parking and year round Taxiway access to existing Eastern GA apron

2014/15 – Complete Ergon study into options to provide additional and if possible alternate HV supply Feed

2014/16 – Completion of \$7.1m Runway Lighting System replacement. Original cost estimate including rwy 04/22 was \$9.1m

2014/16 – Terminal Redevelopment \$1m to provide capacity to one million passengers a year – Business case completed, in October Capital review

2016/17 – Obtain development approvals for Hotel, Commercial office, Service station/Car Wash/ Convenience store sites in Business precinct – Privately Funded development

2017/18 – Complete design and planning of new access road off Hunter Street for Car rental facilities, Long term car park and Military precinct – Funding from ADF and Business case

2016/19 - Overlay of Main Runway, Taxiways and Apron \$15m

2017/19 – Replace High Voltage transformers and Standby generators \$2m

2018/19 – Replace Checked bag X-Ray screening equipment \$1.6m

2016/19 – Complete Full Airport and Terminal master plan

**2019/20 – 2023/24 – Long term 5 to 10 years**

2019/20 – Relocate Military operations to new Military precinct off Taxiway Juliet “J” – To be Funded by ADF/RSAF, estimates civil only, Fill, Earthworks, Pavements and Lighting, excluding access road Stage 1 - \$7.8m stage 2 - \$6.6m (2012 prices)

2019/20 – Design and Plan area for relocation of existing freight distribution facilities to near gate 1 when the new freight apron is operating on the present leased military apron. Relocation cost to be met by lessees

2020/21 – 50mm Overlay of runway 04/22 - \$3m or resurface application \$1m

2022/23 – Design, Plan and construct new long term car park to meet demand \$1.5m

2020/21 – Resurfacing of airport road network and car parks \$2m

2023/24 – Replace Passenger screening X-Ray equipment \$1.5m

2023/24 - Design & Plan extension to the south of the main apron to accommodate larger new generation jet aircraft – Not funded in 10 year Capital program

2023/24 – Design and Plan widening the Main runway shoulders to enable handling of A380 aircraft type – Not funded in 10 year capital program

2023/24 – Major Terminal refurbishment \$4m

**2024/25 to 2033/34 – 10 to 30 years**

2024/25 – Relocate fuel facility from public area – Not funded

2024/25 – Design and Plan new GA area in Northern (off end Osborne Road) or Western areas of the airport – Not funded

2025/26 – Design of part Parallel Taxiway if demand requires

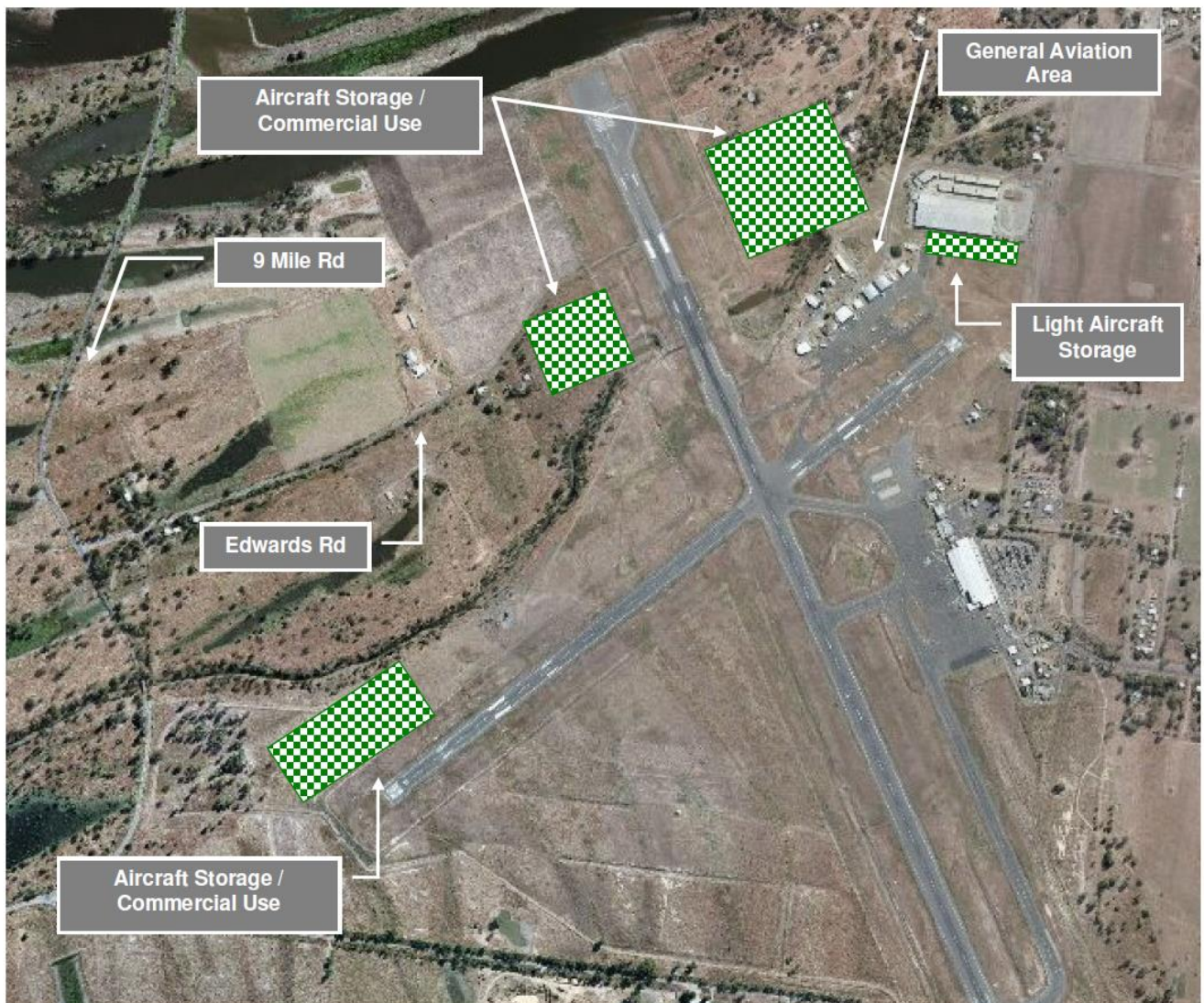
2025/26 – Design and Planning of Runway Extension if demand requires – Not funded

2030/31 – Extension of main runway Runway End Safety Area to full 240m ICAO standard - Not funded

## Current status map





**2009 & 2012 endorsed 'Potential Aircraft Hangar and Aeronautical Related Sites' map**



## Proposed new "Potential Aircraft Hangar and Aeronautical Related Sites' map

