

# Airways New Zealand Gisborne Airspace Amend Design Notes DRAFT Version 4 1 November 2022

Airways consulted on our proposed changes to Napier and Gisborne airspace in 2017 and 2018 to support the implementation of Performance-Based Navigation (PBN). However, due to COVID-19 and other circumstances, the implementation of PBN was delayed. Airways now intends to implement PBN at Napier and Gisborne in November 2023.

This paper resubmits Gisborne Airspace Amend – Design Notes, Version 4 (3 October 2019) as Airways’ submission to CAA’s 2023 Airspace Review East Coast – Gisborne and Hawke’s Bay. It explains and defines Airways requested changes to Gisborne airspace.

## Summary of changes from Version 2

Version 4 differs from the earlier submitted Version 2 with a small expansion of the requested 2500 ft CTA to the south of Gisborne. This is to facilitate a change to one of the planned new PBN arrival procedures.



*Diagram 1 DRAFT amended GS CTR and CTA version 4  
Note minimal change to the GS CTR boundaries except that the upper limit is lowered to 2500 ft.  
White lines are the existing airspace boundaries to be deleted*

## 1. Purpose of changing the airspace

In accordance with *Civil Aviation Rules (CAR) Part 71 – Designation and Classification of Airspace*, the airspace was designed to ensure instrument flight procedures (IFP) at controlled aerodromes are contained within controlled airspace.

A primary driver for changing the Gisborne Control Zone (GS CTR) and Gisborne Control Area (GS CTA) as detailed in this paper is to provide the correct airspace containment of the planned new PBN IFR procedures being developed by Airways for Gisborne. These PBN procedures are still in the design process and some further developments may occur which could result in some changes to the draft airspace layout as detailed in this paper.

Most of the current VOR-based IFPs at Gisborne are **not** correctly contained by the existing GS CTR and CTA. Therefore, to comply with the airspace design policy, the airspace and/or the IFPs concerned will need to be amended to achieve correct airspace containment of the IFPs to be retained.

Also, in accordance with CAR Part 71, Airways desire is to minimise controlled airspace, particularly control zones, as much as practical. However, the need to correctly contain the IFPs to be retained along with the new PBN IFPs has prevented any reduction in the GS control zone as described in this paper.

## 2. Instrument flight procedures to be retained

The draft Gisborne airspace is designed to contain the following IFPs. Containment is based on the airspace design policy of 300 ft per NM gradient for climbs and descents or a steeper gradient where specified for the procedure.

- TWO DELTA Arrival (GS2D)
- ONE CHARLIE Arrival (GS1C)
- VOR/DME RWY 14 approach Cat A, B and C except that the missed approach will be changed so it climbs to 4000 ft.
- VOR/DME RWY 32 approach Cat A, B and C except that the missed approach will be changed so it climbs to 4000 ft.
- NICK THREE Departure (NIC3) off RWY 14 except that the departure needs to be changed for containment. The minimum climb gradient needed for this departure to be contained needs to be significantly steeper than existing – yet to be determined but likely around 500 ft/NM (8.2%) Plan is for the departure to be annotated with the minimum climb gradient required for airspace containment. Pilots may request to fly this departure at a lower gradient accepting the lack of airspace containment.
- NUHAKA THREE Departure (NUH3) off RWY 14 except that the departure may need to be changed slightly for containment.
- TUNA TWO Departure (TUN2) except that the departure needs to be changed for containment – increased climb gradient and/or raised minimum turn level after take-off.
- CRAY THREE Departure (CRA3) off RWY 32 except that the departure needs to be changed for containment. The minimum climb gradient needed for this departure to be contained needs to be significantly steeper than existing – yet to be determined but likely around 500 ft/NM (8.2%) Plan is for the departure to be annotated with the minimum climb gradient required for airspace containment. Pilots may request to fly this departure at a lower gradient accepting the lack of airspace containment.
- PAUA THREE Departure (PAU3) off RWY 32 except that the departure may need to be changed slightly for containment.
- GS VOR 305 holding pattern (overhead) at or above 4000 ft

- GS VOR 133 holding pattern (overhead) at or above 4000 ft
- COOKS holding pattern at or above 4000 ft (enroute criteria)
- Approach Cat A and B circling areas
- Approach Cat C circling area west of RWY 14/32 extended centreline

The VOR RWY 32 approach (non-DME) is to be retained. Containment of this approach is likely but not assured (particularly during the missed approach) and the approach chart will be annotated as such.

### **3. New PBN instrument flight procedures to be contained**

- The draft GS airspace is designed to contain the draft new PBN SIDs, STARs and approaches except that the SIDs and missed approach tracks will need to climb RWY centreline to a level yet to be determined (likely 1500 ft – 1800 ft) before turning.
- 'MARAI' hold at or above 5000 ft
- 'MARKY' hold between 4000 ft and 10,000 ft
- 'ENDEV' hold at or above 4000 ft

### **4. Existing instrument flight procedures to be disestablished**

- All existing RNAV (GNSS) arrivals for RWY 14 and RWY 32
- RNAV (GNSS) RWY 14 approach
- RNAV (GNSS) RWY 32 approach
- GANET ONE Departure
- CITY THREE Departure
- All existing RNAV (GNSS) departures off RWY 14 and RWY 32
- HAWKE holding pattern

The DRAFT GS CTR and CTA has not been designed to contain the Evaluated Climb Sector R050 through south to R355 within 25 NM. A modified version of this departure with limited containment will be assessed by Aeropath.



## 5. The DRAFT CTR

Diagram 2 below depicts the draft CTR v4. This is the same as the existing CTR except that the southern boundary has been moved out to 12.5 NM in order to contain the VOR/DME arc approach to RWY 32.

Note the CTR upper limit lowered to 2500 ft and the addition of a new CTA with lower limit 2500 ft.

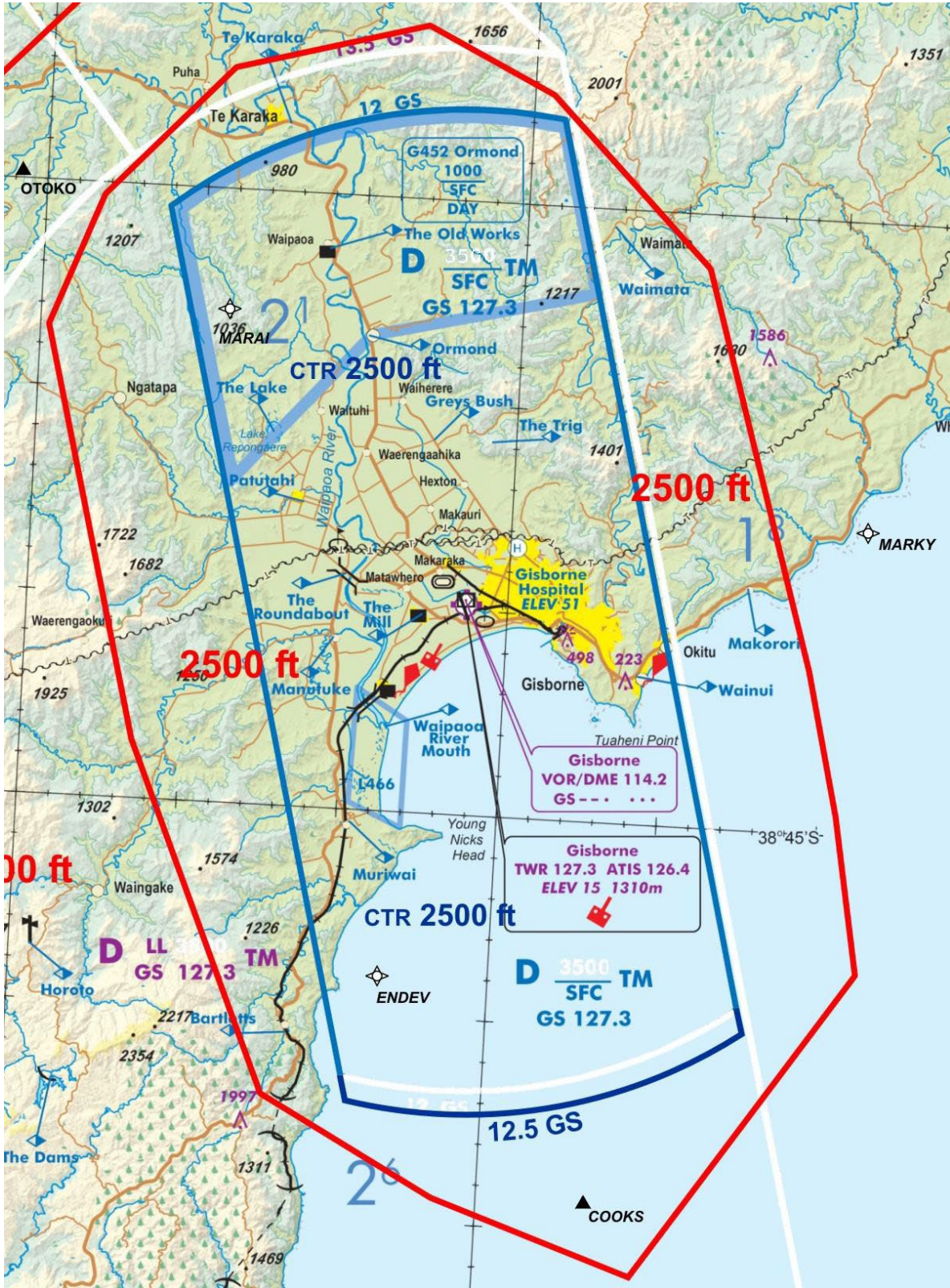


Diagram 2 DRAFT amended GS CTR (the blue line) and 2500 ft CTA (the red line) version 4.  
 Note that the GS CTR upper limit is lowered to 2500 ft.



Most of the departures from GS are to the west. To properly contain those departures when turning at MNM 500 ft the CTR would need to expand westward to the point at which the departure profile, including its lateral buffer, passed 3000 ft – around 6 to 8 NM depending on the departure. This being wider than the existing 5 NM CTR to the west. The same situation applies to the TUNA TWO departure that turns to the east initially.

Widening the CTR by a few miles to contain the IFPs would be contrary to the Airways desire to reduce the size of CTRs. We also expect opposition from industry to a significant increase in the CTR.

Alternatively, containment of the departures and reducing the width of the CTR could be achieved by amending the departures so that they flew RWY centreline until passing 2000 ft – 2500 ft before turning west or east. A MNM turn at that level could result in the CTR being narrowed from existing 5 NM to about 3 NM abeam NZGS. However, that tracking would cause IFR departures to track significantly further before turning towards destination and impact significantly on the ATC efficiency of multiple IFR departures.

This draft CTR seeks a compromise between containment and efficiency. This is achieved by leaving the CTR width as it currently is (neither widen nor narrow) and amending the departures to climb RWY centreline to an appropriate level before turning so that the departure will be contained by the CTR and new 2500 ft CTA above. The minimum turn level for each departure track is yet to be determined by Aeropath but it is believed that the level will be 1500 ft – 1800 ft based on 300 ft/NM climb profile. Some lowering of that level could be achieved by specifying a steeper climb gradient in the departure.

Whilst this compromise does not achieve the Airways desire for reduced CTR size, it is believed that the further reduction in efficiency by making the CTR more narrow is not worth the advantage of making it narrower. Airways is open to feedback about this though.

The CTR needs to be extended half a mile to the south to correctly contain the VOR/DME arc approach to RWY 32 as shown in Diagram 3 below. New boundary at 12.5 NM GS DME.

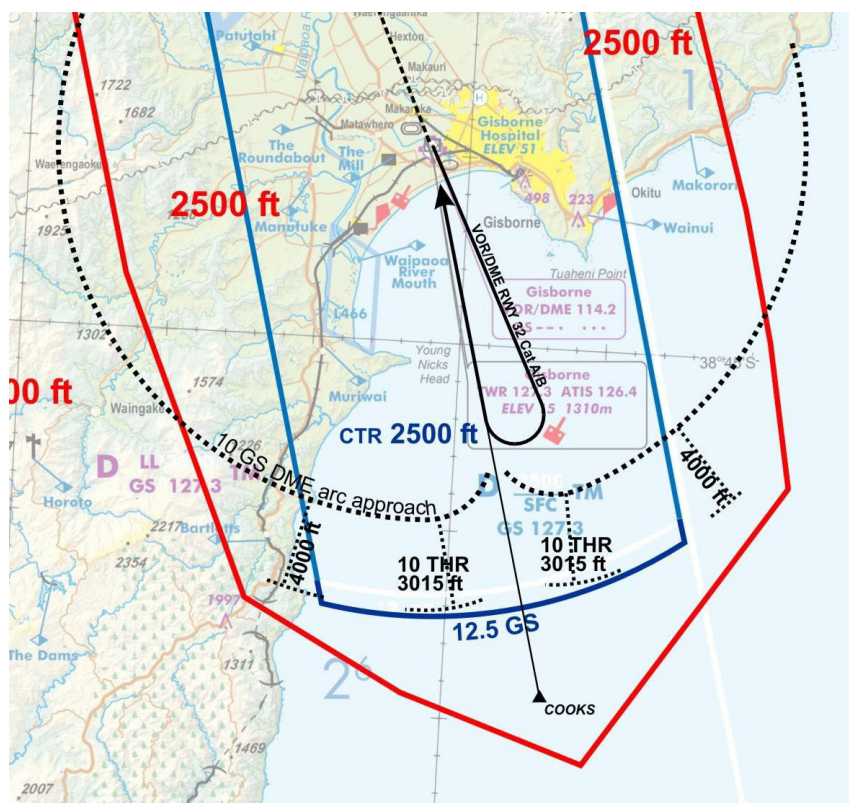


Diagram 3 DRAFT amended GS CTR extended to 12.5 to correctly contain the arc approach to RWY 32.

The arc approach, including its lateral protection buffer, needs to be within the CTR boundary when 3000 ft and below.

The new CTA LL 2500 ft needs to protect the arc approach and its buffer when the approach is 4000 ft and below.

Those profile levels being based on 300 ft/NM descent gradient to the RWY 32 threshold.





GAA G452 Ormond

The Airways proposal includes retention of existing GAA G452 Ormond – our understanding being that it does still get used.

Applicable AIPNZ approach and departure charts for NZGS need to include depiction of this GAA.

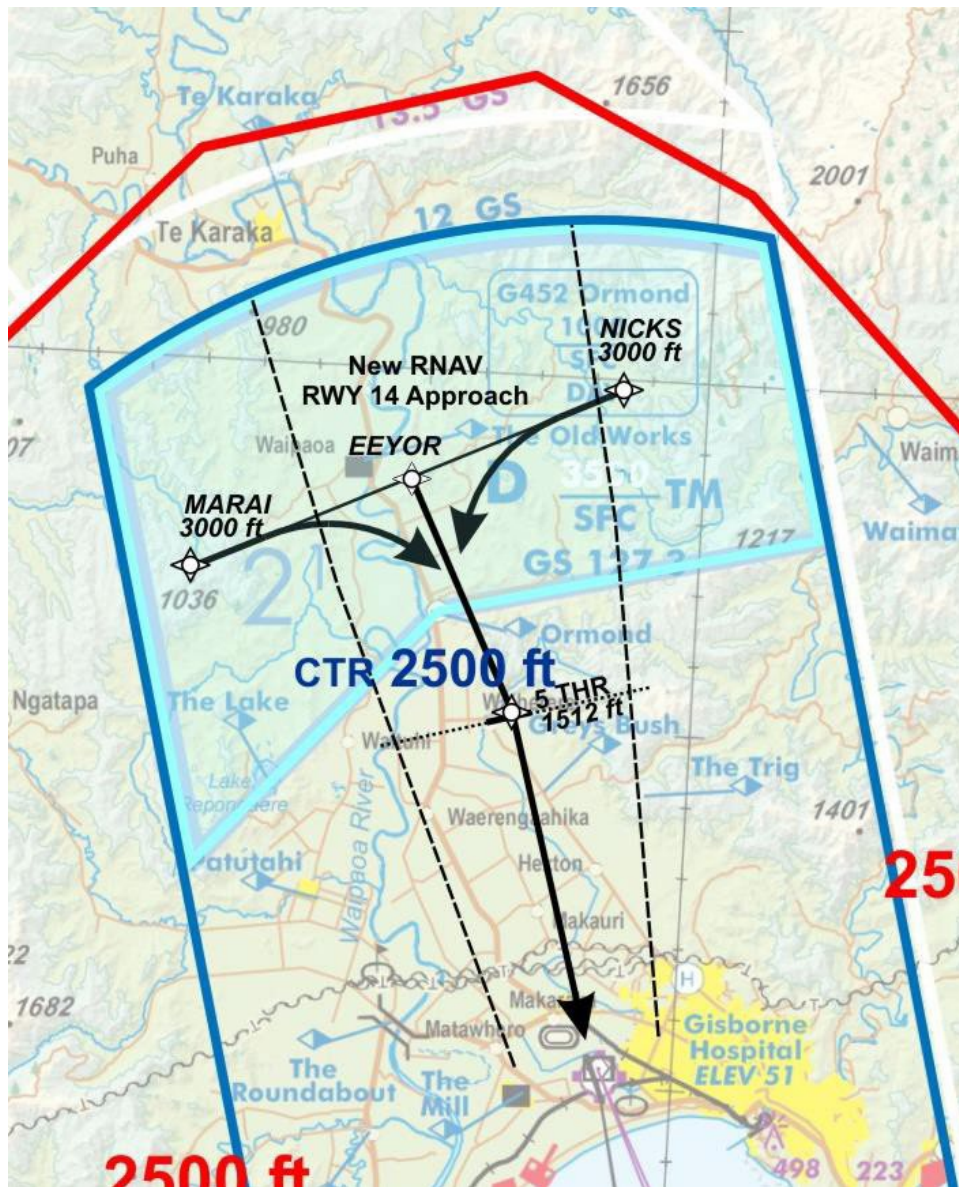


Diagram 5 Northern part of the GS CTR with existing GAA G452 (SFC to 1000 ft) and the planned new PBN RNAV approach to RWY 14.





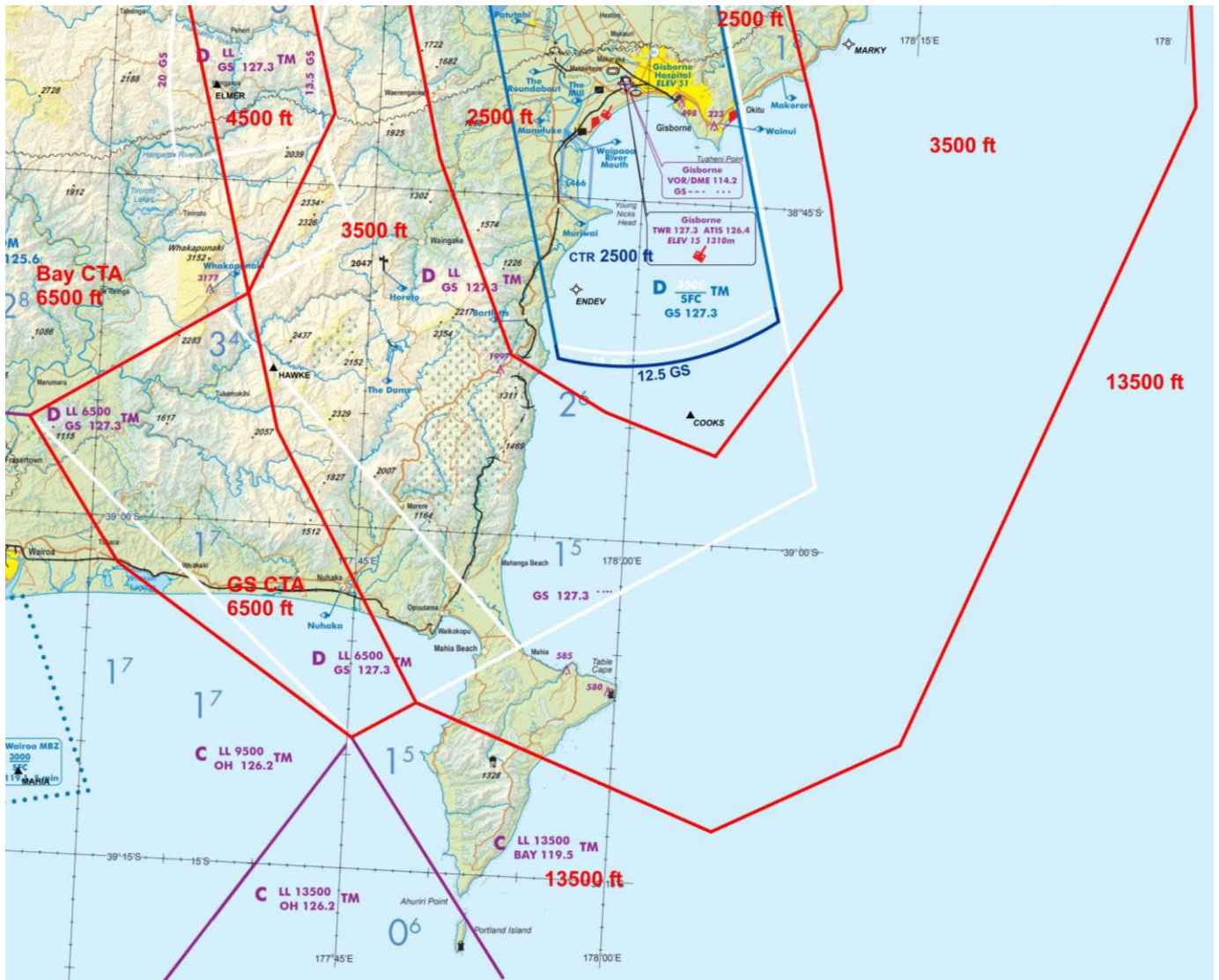


Diagram 7 Southern part of the DRAFT GS CTA  
 This version 2 involves a slight expansion of the 6500 ft CTA east of Wairoa.

Diagram 8 below depicts the draft CTA v4 to the north of Gisborne. The planned new PBN departures off RWYs 14 and 32 to the north are depicted along with checkmarks showing the airspace policy profile (300 ft/NM) levels at various points. The profile of the departures, including their lateral buffer, must always be at least 500 ft above the lower limit of the CTA (e.g. cross into a CTA LL 6500 ft at 7000 ft or above). A portion of the 2 NM lateral buffer is depicted northeast of new waypoint 'BYBYE' – that buffer determining the location of the CTA boundary in that area.

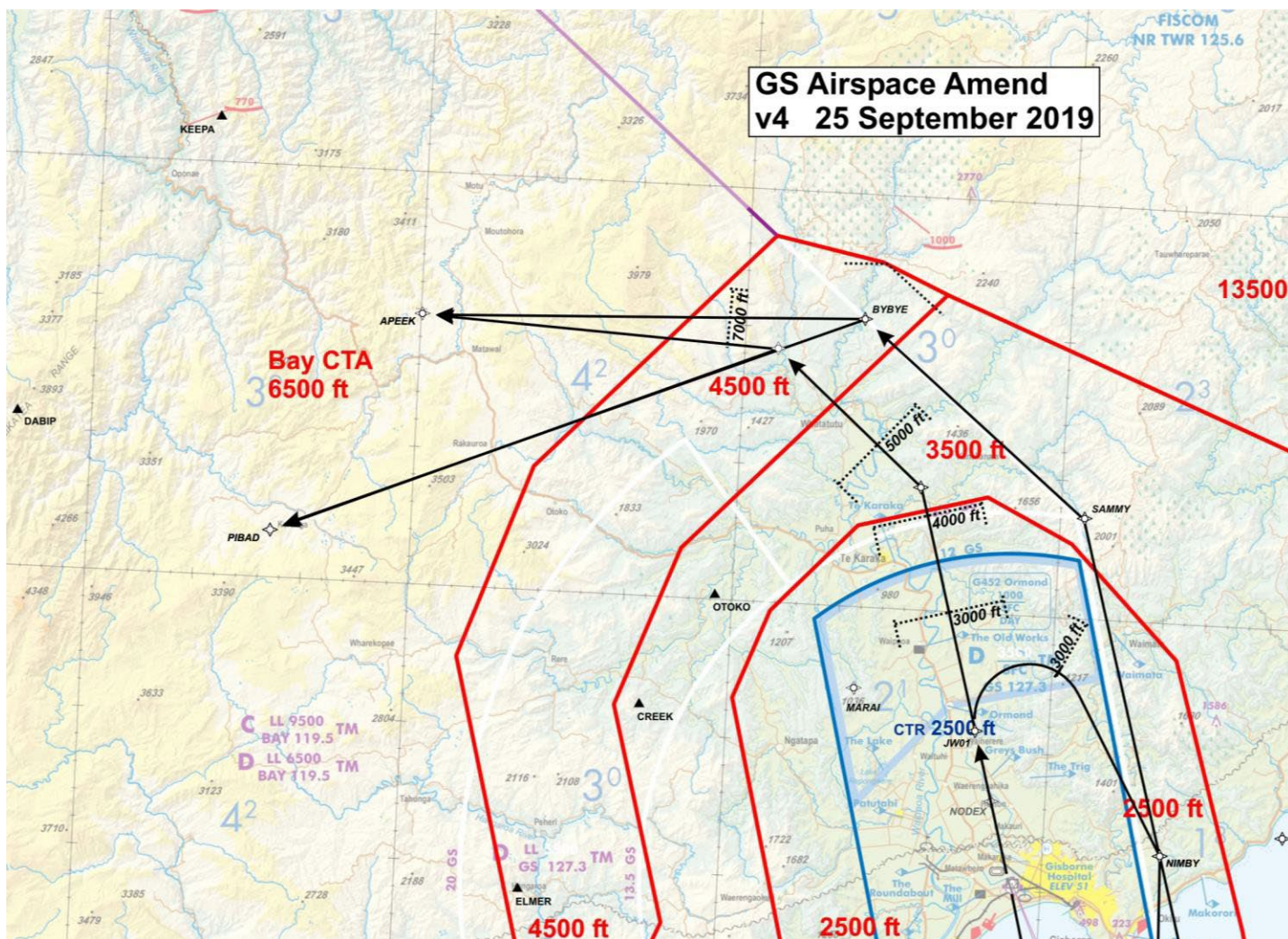


Diagram 8 DRAFT amended GS CTA to the north of Gisborne with new PBN departures depicted along with profile level checkmarks. Profile being 300 ft/NM gradient from runway upwind threshold.



The planned new PBN arrivals to RWY 14 from the north-west also determine the location of the CTA boundaries as shown on Diagram 9 below. Again, a 300 ft/NM profile is used – this time based on the aircraft being at 3000 ft at the start of the T-Bar for the approach.

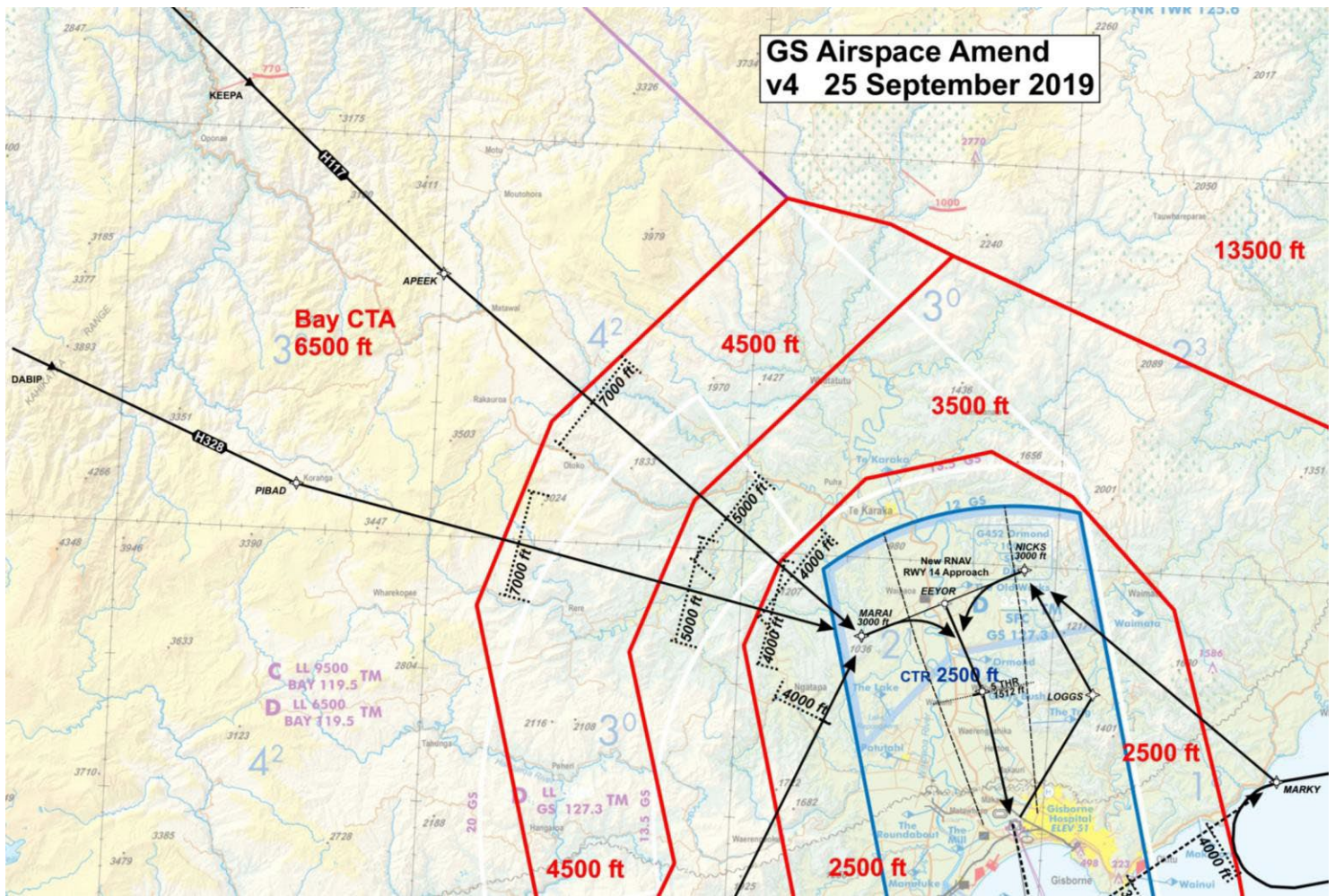
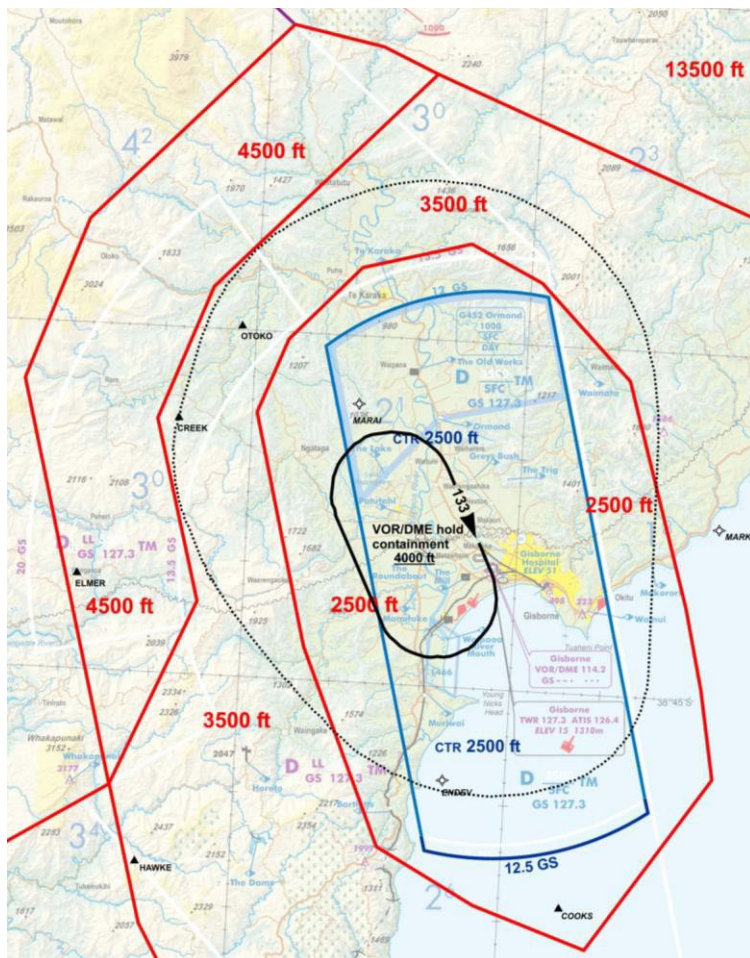


Diagram 9 DRAFT amended GS CTA to the north of Gisborne with new PBN arrivals depicted along with profile level checkmarks.



The containment area for the overhead VOR 133 holding pattern determines the extent of the 3500 ft CTA to the north-west of Gisborne. This holding pattern is contained at 4000 ft and above.

Diagram 10 DRAFT amended GS CTA to the north of Gisborne with the protection area (the black dotted line) for the VOR 133 holding pattern depicted.

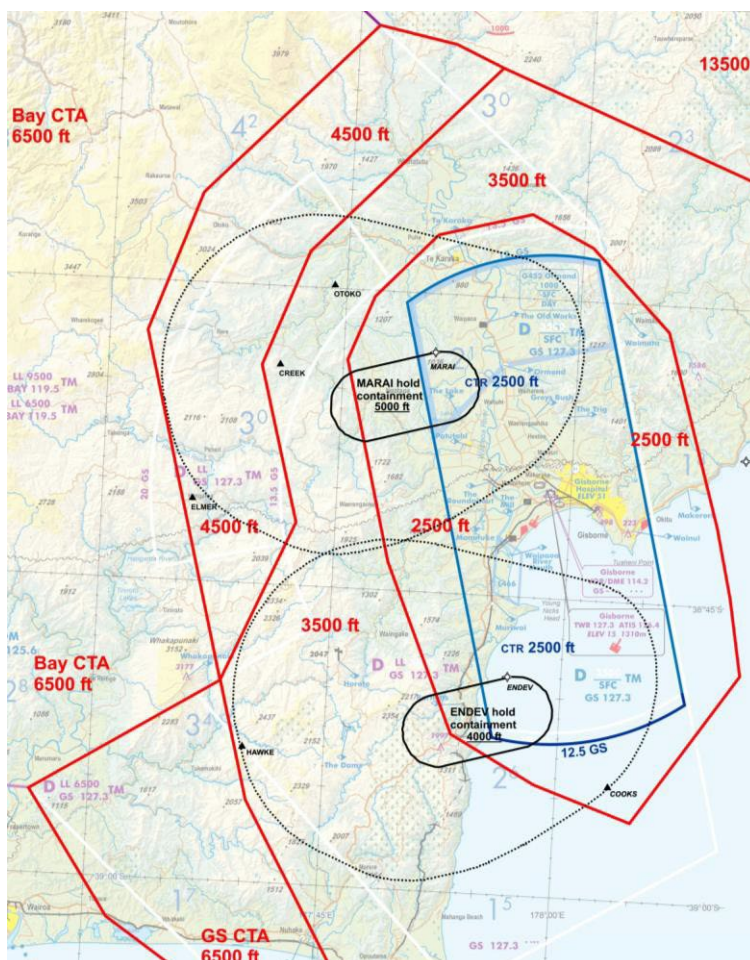


The containment area for the new PBN holding patterns at 'ENDEV' and 'MARAI' determines the extent of the 3500 ft and 4500 ft CTAs to the west of Gisborne.

MARAI holding pattern is contained at 5000 ft and above.

ENDEV holding pattern is contained at 4000 ft and above.

Diagram 11 DRAFT amended GS CTA to the west of Gisborne with the protection areas (the black dotted lines) for the new PBN holding patterns at 'MARAI' and 'ENDEV' depicted.





The existing NICK THREE and CRAY THREE departures need to be amended or replaced for correct airspace containment. Extending the runway centreline tracking until a higher minimum turn level (likely 1500 ft – 1800 ft) would provide for containment of the departures including their lateral buffer areas.

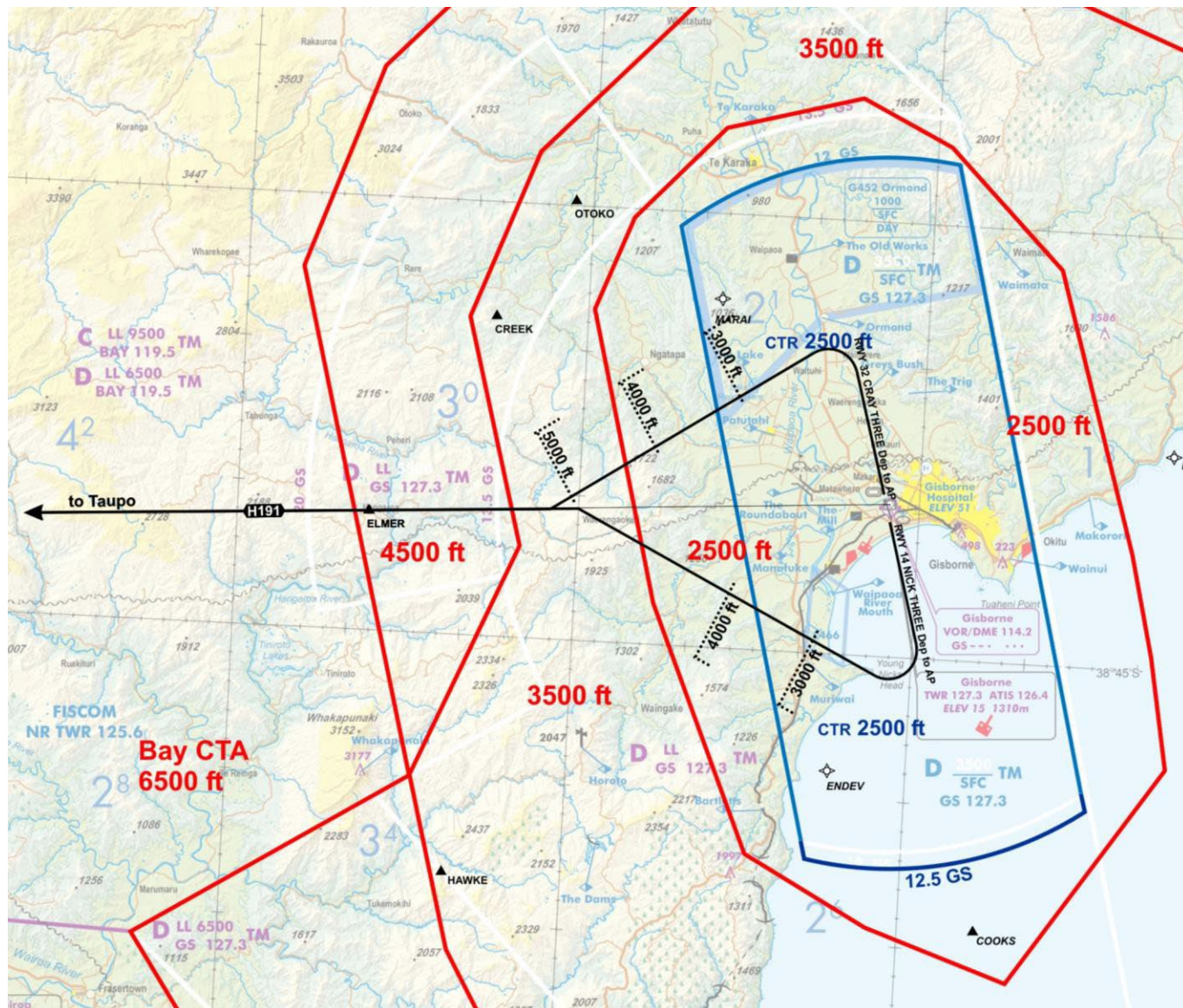


Diagram 12 DRAFT amended GS CTR and CTA with existing NICK THREE and CRAY THREE departures amended for correct containment.

Diagram 13 below depicts the protection area for the COOKS hold. The 3500 ft CTA is expanded south to contain that protection area.

The COOKS hold would be contained at 4000 ft and above.

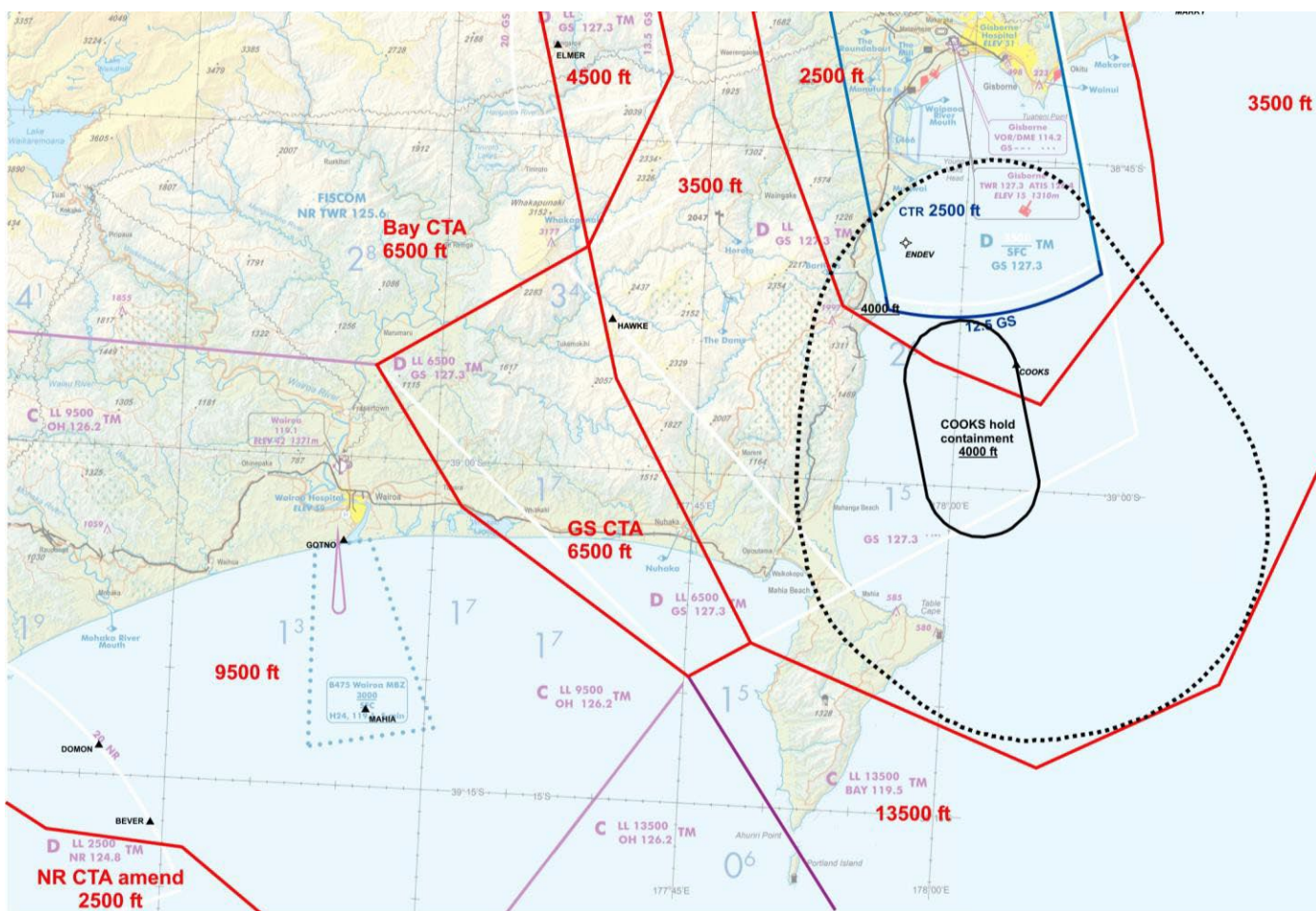


Diagram 13 DRAFT amended GS CTA to the south of Gisborne with the protection area (the black dotted line) for the holding pattern at COOKS depicted. This diagram includes a small portion of the Airways draft change to the NR CTA LL 2500 ft.



The new PBN departure from RWY 14 to the south-west determines the 2500 ft CTA and 3500 ft CTA boundaries as shown in Diagram 14 below. This departure is also the reason for the small expansion of the 6500 ft CTA east of Wairoa.

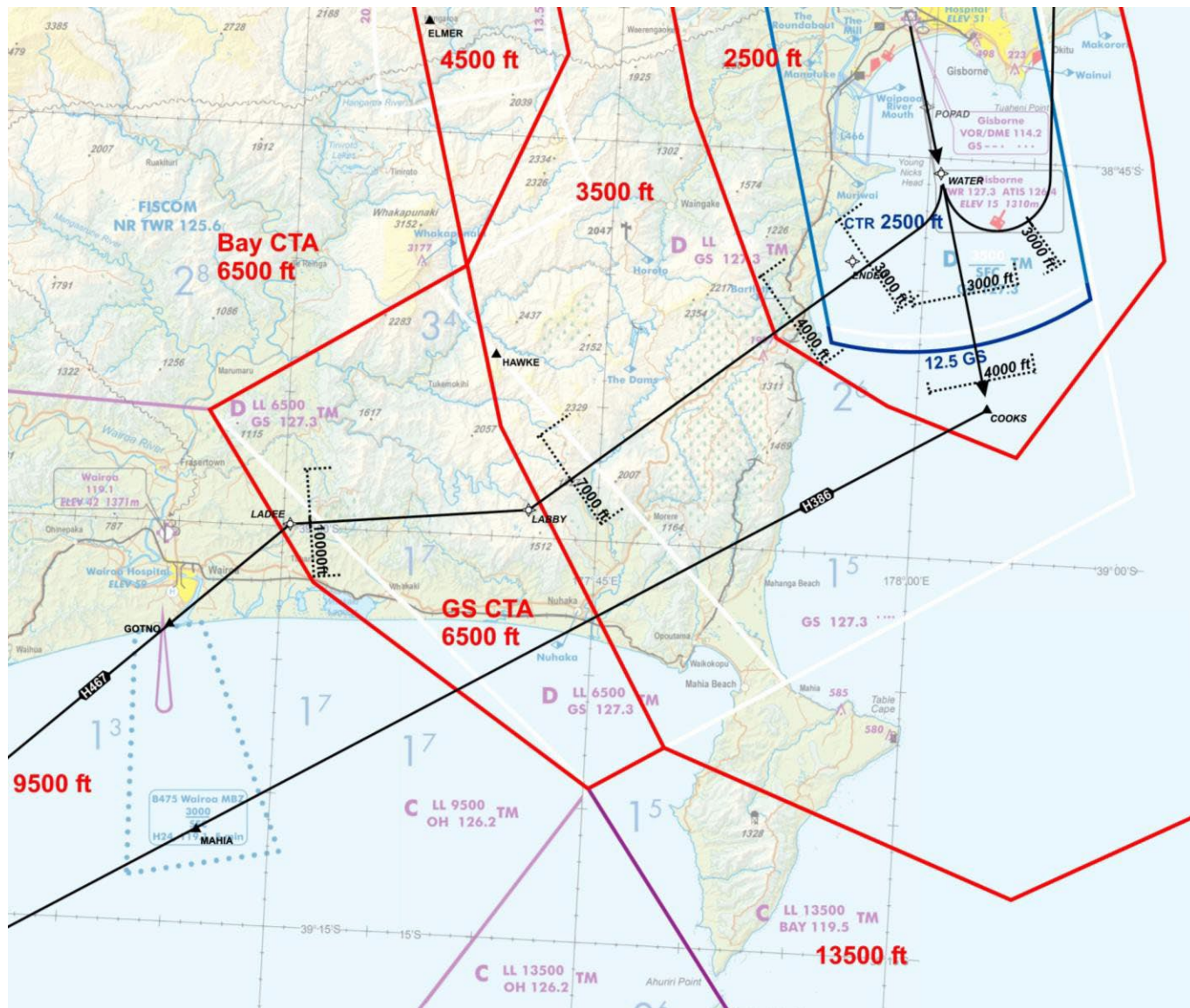


Diagram 14 DRAFT amended GS CTA to the south of Gisborne showing the new PBN departures off RWY 14 to the south-west.





## 7. CTA - above 9500 ft

The Bay CTA LL 9500 ft that extends over the top of the GS CTA needs to be expanded to match the expanded GS CTA.

Consequently, the adjoining Bay CTA LL 13500 ft and the Ohakea CTA LL 9500 ft also need to have their boundaries modified to match the expanded Bay CTA.

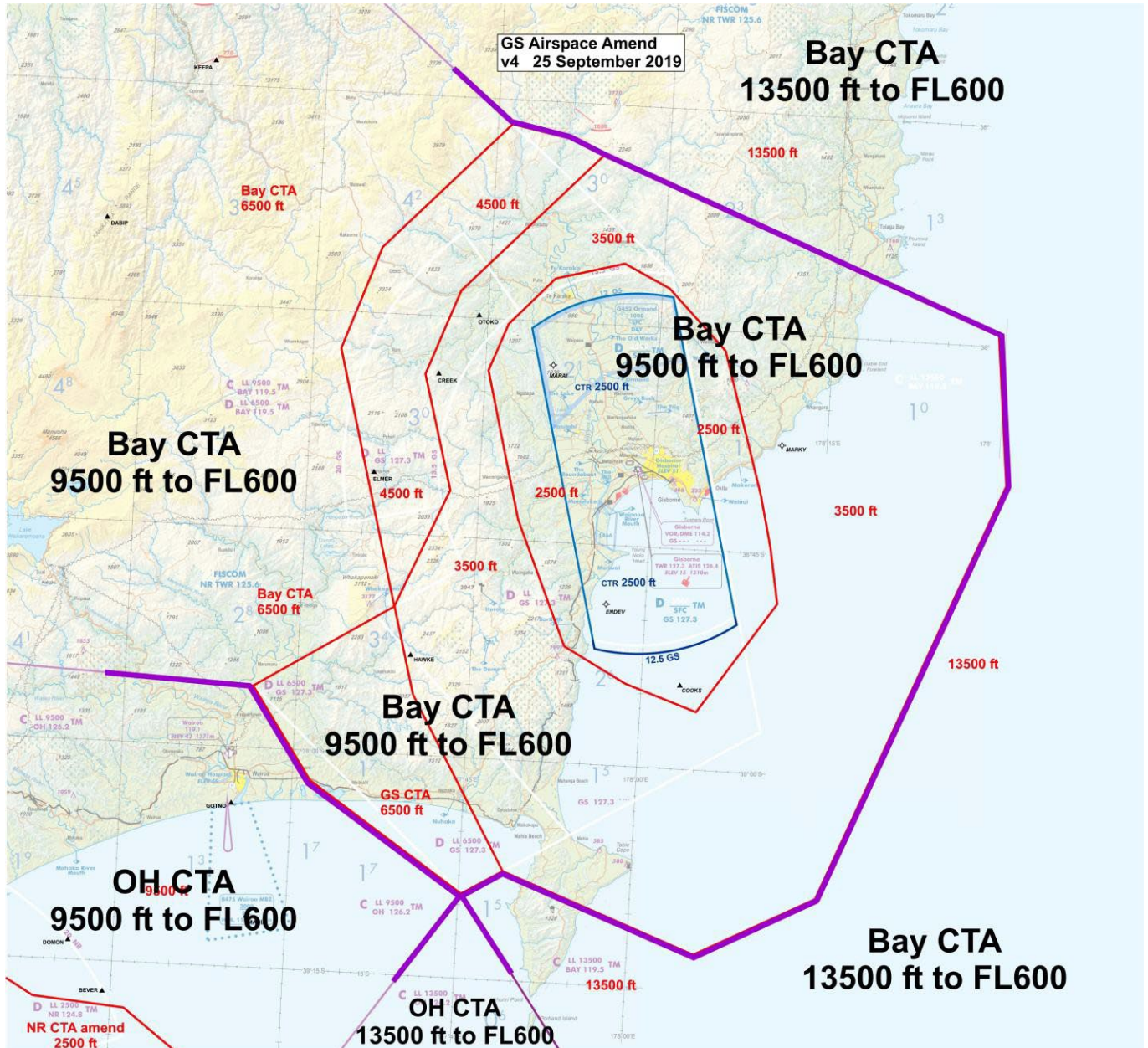


Diagram 17 DRAFT amended airspace above 9500 ft.

## 8. Airspace definitions for DRAFT version 4

- GS CTR
- GS CTA
- Bay CTA
- Ohakea CTA

### GS CTR

Amend NZA450 to move the southern boundary from existing 12 NM arc to a 12.5 NM arc.  
Upper limit lowered to 2500 ft

#### DRAFT GS CTR co-ordinates.

All that airspace bounded by a straight line from;

S38° 27' 46.9" E178° 01' 10.6" existing NZA450 seq 1 point to;

S38° 49' 38.04" E178° 08' 13.73" new point, extension of eastern CTR boundary line then;

the arc of a circle of 12.5 NM radius centred on S38° 39' 37.97" E177° 58' 38.70" GS VOR/DME from;

S38° 49' 38.04" E178° 08' 13.73" clockwise to;

S38° 51' 54.88" E177° 55' 45.44" then a straight line from;

S38° 51' 54.88" E177° 55' 45.44" to;

S38° 30' 23.3" E177° 48' 52.7" existing NZA450 seq 4 point then;

the arc of a circle of 12.5 NM radius centred on S38° 39' 37.97" E177° 58' 38.70" GS VOR/DME from;

S38° 30' 23.3" E177° 48' 52.7" clockwise to;

S38° 27' 46.9" E178° 01' 10.6" existing NZA450 seq 1 point

Vertical limits: SFC to 2500 ft

Classification: Class D

ATC Authority: Gisborne Tower 127.3

### GS CTA

Delete existing GS CTAs NZA430 (LL 3500 ft), NZA431 (LL 5500 ft) and NZA432 (LL 6500 ft) and replace with new GS CTAs LL 2500 ft, LL 3500 ft, LL 4500 ft and LL 6500 ft

#### DRAFT GS CTA LL 2500 ft co-ordinates.

All that airspace bounded by a straight line from;

S38° 31' 09.86" E178° 05' 45.29" to;

S38° 40' 56.39" E178° 09' 30.76" to;

S38° 44' 27.12" E178° 10' 34.21" to;

S38° 48' 21.70" E178° 11' 22.57" to;

S38° 55' 56.91" E178° 04' 57.73" to;

S38° 54' 18.72" E177° 58' 35.69" to;

S38° 51' 59.45" E177° 53' 04.16" to;

S38° 43' 25.32" E177° 48' 32.04" to;



S38° 33' 27.84" E177° 45' 17.43" to;  
S38° 30' 03.98" E177° 46' 51.59" to;  
S38° 26' 57.87" E177° 50' 40.75" to;  
S38° 25' 45.90" E177° 56' 32.81" to;  
S38° 27' 06.08" E178° 00' 33.16" to;  
S38° 31' 09.86" E178° 05' 45.29"

Vertical limits: 2500 to 3500 ft  
Classification: Class D  
ATC Authority: Gisborne Tower 127.3

**DRAFT GS CTA LL 3500 ft co-ordinates.**

All that airspace bounded by a straight line from;

S38° 29' 10.23" E178° 29' 18.12" to;  
S38° 39' 29.30" E178° 30' 41.21" to;  
S39° 08' 14.84" E178° 16' 14.54" to;  
S39° 12' 25.05" E178° 05' 52.95" to;  
S39° 07' 32.34" E177° 48' 52.73" to;  
S38° 55' 51.21" E177° 40' 10.41" to;  
S38° 49' 48.19" E177° 38' 10.05" to;  
S38° 41' 45.12" E177° 42' 28.80" to;  
S38° 33' 56.41" E177° 39' 55.61" to;  
S38° 28' 02.14" E177° 42' 31.79" to;  
S38° 18' 17.65" E177° 54' 13.61" to;  
S38° 29' 10.23" E178° 29' 18.12"

Vertical limits: 3500 to 9500 ft  
Classification: Class D  
ATC Authority: Gisborne Tower 127.3

**DRAFT GS CTA LL 4500 ft co-ordinates.**

All that airspace bounded by a straight line from;

S38° 18' 17.65" E177° 54' 13.61" to;  
S38° 28' 02.14" E177° 42' 31.79" to;  
S38° 33' 56.41" E177° 39' 55.61" to;  
S38° 41' 45.12" E177° 42' 28.80" to;  
S38° 49' 48.19" E177° 38' 10.05" to;  
S38° 32' 24.88" E177° 32' 24.04" to;  
S38° 25' 22.66" E177° 35' 33.02" to;  
S38° 16' 31.22" E177° 46' 24.10" to;

S38° 17' 22.35" E177° 51' 10.45" to;

S38° 18' 17.65" E177° 54' 13.61"

Vertical limits: 4500 to 9500 ft

Classification: Class D

ATC Authority: Gisborne Tower 127.3

**DRAFT GS CTA LL 6500 ft co-ordinates.**

All that airspace bounded by a straight line from;

S38° 49' 48.19" E177° 38' 10.05" to;

S38° 55' 51.21" E177° 40' 10.41" to;

S39° 07' 32.34" E177° 48' 52.73" to;

S39° 09' 08.0" E177° 45' 18.8" existing NZA432 seq 2 point to;

S39° 02' 17.59" E177° 31' 39.86" to;

S38° 55' 42.7" E177° 26' 14.8" existing NZA439 seq 8 point to;

S38° 49' 48.19" E177° 38' 10.05"

Vertical limits: 6500 to 9500 ft

Classification: Class Ds

ATC Authority: Gisborne Tower 127.3



## DRAFT Bay CTA LL 6500 ft co-ordinates.

Amendment of existing NZA439

All that airspace bounded by a straight line from;

S38° 16' 31.22" E177° 46' 24.10" to;

S38° 25' 22.66" E177° 35' 33.02" to;

S38° 32' 24.88" E177° 32' 24.04" to;

S38° 49' 48.19" E177° 38' 10.05" to existing NZA439 co-ords listed below (sequence numbers no longer match);

|                   |              |                 |                      |                       |                |                       |                        |                 |               |
|-------------------|--------------|-----------------|----------------------|-----------------------|----------------|-----------------------|------------------------|-----------------|---------------|
| <del>NZA439</del> | <del>1</del> |                 | <del>382613.0S</del> | <del>1780045.0E</del> | <del>CCA</del> | <del>383937.84S</del> | <del>1775839.22E</del> | <del>13.5</del> | <del>NM</del> |
| <del>NZA439</del> | <del>2</del> |                 | <del>382913.6S</del> | <del>1774739.8E</del> | <del>GRC</del> |                       |                        |                 |               |
| <del>NZA439</del> | <del>3</del> |                 | <del>382408.9S</del> | <del>1774229.5E</del> | <del>CCA</del> | <del>383937.84S</del> | <del>1775839.22E</del> | <del>20</del>   | <del>NM</del> |
| <del>NZA439</del> | <del>4</del> |                 | <del>384418.6S</del> | <del>1773348.7E</del> | <del>GRC</del> |                       |                        |                 |               |
| <del>NZA439</del> | <del>5</del> |                 | <del>384247.9S</del> | <del>1774153.5E</del> | <del>CCA</del> | <del>383937.84S</del> | <del>1775839.22E</del> | <del>13.5</del> | <del>NM</del> |
| <del>NZA439</del> | <del>6</del> |                 | <del>384653.1S</del> | <del>1774406.1E</del> | <del>GRC</del> |                       |                        |                 |               |
| <del>NZA439</del> | <del>7</del> |                 | <del>385033.8S</del> | <del>1773641.0E</del> | <del>GRC</del> |                       |                        |                 |               |
| NZA439            | 8            |                 | 385542.7S            | 1772614.8E            | GRC            |                       |                        |                 |               |
| NZA439            | 9            |                 | 385422.7S            | 1764743.0E            | CCA            | 392713.69S            | 1765208.13E            | 33              | NM            |
| NZA439            | 10           |                 | 390555.3S            | 1761939.8E            | GRC            |                       |                        |                 |               |
| NZA439            | 11           | Motuoapa        | 385556.4S            | 1755232.5E            | GRC            |                       |                        |                 |               |
| NZA439            | 12           |                 | 385718.3S            | 1753437.3E            | GRC            |                       |                        |                 |               |
| NZA439            | 13           |                 | 383246.0S            | 1753905.0E            | GRC            |                       |                        |                 |               |
| NZA439            | 14           |                 | 383506.0S            | 1751918.0E            | GRC            |                       |                        |                 |               |
| NZA439            | 15           |                 | 383151.0S            | 1745947.0E            | GRC            |                       |                        |                 |               |
| NZA439            | 16           |                 | 381123.7S            | 1750202.8E            | CCA            | 375057.7S             | 1752019.0E             | 25              | NM            |
| NZA439            | 17           |                 | 381558.2S            | 1752125.0E            | GRC            |                       |                        |                 |               |
| NZA439            | 18           | Maihihi         | 381254.9S            | 1752302.7E            | GRC            |                       |                        |                 |               |
| NZA439            | 19           | Korakonui       | 380857.0S            | 1752509.5E            | GRC            |                       |                        |                 |               |
| NZA439            | 20           | Wharepapa South | 380838.0S            | 1753301.0E            | GRC            |                       |                        |                 |               |
| NZA439            | 21           |                 | 381508.0S            | 1754905.0E            | CCA            | 380628.9741S          | 1761850.1520E          | 25              | NM            |
| NZA439            | 22           |                 | 383058.0S            | 1762524.6E            | GRC            |                       |                        |                 |               |
| NZA439            | 23           |                 | 382110.5S            | 1762246.3E            | CCA            | 380628.9741S          | 1761850.1520E          | 15              | NM            |
| NZA439            | 24           |                 | 380341.7S            | 1763730.2E            | GRC            |                       |                        |                 |               |
| NZA439            | 25           |                 | 375829.5S            | 1763540.3E            | GRC            |                       |                        |                 |               |
| NZA439            | 26           |                 | 375243.6S            | 1764014.1E            | GRC            |                       |                        |                 |               |
| NZA439            | 27           |                 | 373630.5S            | 1764542.0E            | GRC            |                       |                        |                 |               |
| NZA439            | 28           |                 | 374638.4S            | 1770216.9E            | GRC            |                       |                        |                 |               |

then back to;

S38° 16' 31.22" E177° 46' 24.10"

Vertical limits: 6500 to 9500 ft

Classification: Class D

ATC Authority: Bay Approach 119.5

**DRAFT Bay CTA LL 9500 ft co-ordinates.**

Amendment of existing NZA434

All that airspace bounded by a straight line from;

S38° 29' 10.23" E178° 29' 18.12" to;

S38° 39' 29.30" E178° 30' 41.21" to;

S39° 08' 14.84" E178° 16' 14.54" to;

S39° 12' 25.05" E178° 05' 52.95" to;

S39° 07' 32.34" E177° 48' 52.73" to;

S39° 09' 08.0" E177° 45' 18.8" existing NZA434 seq 4 point to;

S39° 02' 17.59" E177° 31' 39.86" to existing NZA434 co-ords listed below (sequence numbers no longer match);

|                   |              |                 |                      |                       |                |            |             |     |    |
|-------------------|--------------|-----------------|----------------------|-----------------------|----------------|------------|-------------|-----|----|
| <del>NZA434</del> | <del>1</del> |                 | <del>382613.0S</del> | <del>1780045.0E</del> | <del>GRC</del> |            |             |     |    |
| <del>NZA434</del> | <del>2</del> |                 | <del>385704.2S</del> | <del>1781039.4E</del> | <del>GRC</del> |            |             |     |    |
| <del>NZA434</del> | <del>3</del> |                 | <del>390446.7S</del> | <del>1775427.8E</del> | <del>GRC</del> |            |             |     |    |
| <del>NZA434</del> | <del>4</del> |                 | <del>390908.0S</del> | <del>1774518.8E</del> | <del>GRC</del> |            |             |     |    |
| NZA434            | 5            |                 | 385542.7S            | 1772614.8E            | GRC            |            |             |     |    |
| NZA434            | 6            |                 | 385422.7S            | 1764743.0E            | CCA            | 392713.69S | 1765208.13E | 33  | NM |
| NZA434            | 7            |                 | 390555.3S            | 1761939.8E            | GRC            |            |             |     |    |
| NZA434            | 8            | Motuoapa        | 385556.4S            | 1755232.5E            | GRC            |            |             |     |    |
| NZA434            | 9            |                 | 385718.3S            | 1753437.3E            | GRC            |            |             |     |    |
| NZA434            | 10           |                 | 375609.0S            | 1754539.0E            | GRC            |            |             |     |    |
| NZA434            | 11           | Morrinsville    | 373928.8S            | 1753140.3E            | GRC            |            |             |     |    |
| NZA434            | 12           | Te Hoe, 1709 ft | 372914.2S            | 1752153.4E            | GRC            |            |             |     |    |
| NZA434            | 13           |                 | 371524.0S            | 1754143.0E            | CCA            | 370016.3S  | 1744849.4E  | 45  | NM |
| NZA434            | 14           |                 | 365835.7S            | 1754459.3E            | GRC            |            |             |     |    |
| NZA434            | 15           |                 | 371044.0S            | 1765325.1E            | CWA            | 370016.3S  | 1744849.4E  | 100 | NM |
| NZA434            | 16           |                 | 373630.5S            | 1764542.0E            | GRC            |            |             |     |    |
| NZA434            | 17           |                 | 374638.4S            | 1770216.9E            | GRC            |            |             |     |    |

to;

S38° 16' 31.22" E177° 46' 24.10" to;

S38° 17' 22.35" E177° 51' 10.45" to;

S38° 18' 17.65" E177° 54' 13.61" back to;

S38° 29' 10.23" E178° 29' 18.12"

Vertical limits: 9500 ft to FL600

Classification: Class C

ATC Authority: Bay Approach 119.5



**DRAFT Bay CTA LL 13500 ft co-ordinates.**

Amendment of existing NZA435

|        |   |  |           |            |     |  |  |  |  |
|--------|---|--|-----------|------------|-----|--|--|--|--|
| NZA435 | 1 |  | 382700.0S | 1794400.0W | GRC |  |  |  |  |
| NZA435 | 2 |  | 400016.9S | 1783207.3E | GRC |  |  |  |  |
| NZA435 | 3 |  | 390908.0S | 1774518.8E | GRC |  |  |  |  |

to;

S39° 07' 32.34" E177° 48' 52.73" to;

S39° 12' 25.05" E178° 05' 52.95" to;

S39° 08' 14.84" E178° 16' 14.54" to;

S38° 39' 29.30" E178° 30' 41.21" to;

S38° 29' 10.23" E178° 29' 18.12" to;

S38° 18' 17.65" E177° 54' 13.61" to;

S38° 17' 22.35" E177° 51' 10.45" to;

S38° 16' 31.22" E177° 46' 24.10" to;

|                   |              |  |                      |                       |                |           |            |     |    |
|-------------------|--------------|--|----------------------|-----------------------|----------------|-----------|------------|-----|----|
| <del>NZA435</del> | <del>4</del> |  | <del>390446.7S</del> | <del>1775427.8E</del> | <del>GRC</del> |           |            |     |    |
| <del>NZA435</del> | <del>5</del> |  | <del>385704.2S</del> | <del>1781039.4E</del> | <del>GRC</del> |           |            |     |    |
| <del>NZA435</del> | <del>6</del> |  | <del>382613.0S</del> | <del>1780045.0E</del> | <del>GRC</del> |           |            |     |    |
| NZA435            | 7            |  | 374638.4S            | 1770216.9E            | GRC            |           |            |     |    |
| NZA435            | 8            |  | 373630.5S            | 1764542.0E            | CCA            | 370016.3S | 1744849.4E | 100 | NM |
| NZA435            | 9            |  | 371044.0S            | 1765325.1E            | GRC            |           |            |     |    |
| NZA435            | 10           |  | 373229.5S            | 1785608.9E            | GRC            |           |            |     |    |

Vertical limits: 13500 ft to FL600

Classification: Class C

ATC Authority: Bay Approach 119.5

**DRAFT Ohakea CTA LL 9500 ft co-ordinates.**

**Amendment of existing NZA347**

|        |    |                          |           |            |     |             |              |    |    |
|--------|----|--------------------------|-----------|------------|-----|-------------|--------------|----|----|
| NZA347 | 1  |                          | 390908.8S | 1774518.8E | GRC |             |              |    |    |
| NZA347 | 2  |                          | 411650.0S | 1754818.5E | GRC |             |              |    |    |
| NZA347 | 3  | Martinborough            | 411307.5S | 1752735.1E | GRC |             |              |    |    |
| NZA347 | 4  | NE corner Lake Wairarapa | 411118.4S | 1751851.0E | GRC |             |              |    |    |
| NZA347 | 5  | Mount Hector             | 405706.8S | 1751656.6E | GRC |             |              |    |    |
| NZA347 | 6  |                          | 404238.5S | 1751622.2E | GRC |             |              |    |    |
| NZA347 | 7  | KAPTI                    | 403753.8S | 1745948.0E | GRC |             |              |    |    |
| NZA347 | 8  |                          | 403753.8S | 1745524.5E | GRC |             |              |    |    |
| NZA347 | 9  |                          | 394128.3S | 1745505.0E | GRC |             |              |    |    |
| NZA347 | 10 |                          | 391349.1S | 1745455.6E | GRC |             |              |    |    |
| NZA347 | 11 | Taumarunui NDB           | 385517.5S | 1751849.4E | GRC |             |              |    |    |
| NZA347 | 12 |                          | 385555.1S | 1752219.3E | GRC |             |              |    |    |
| NZA347 | 13 |                          | 385718.3S | 1753437.3E | GRC |             |              |    |    |
| NZA347 | 14 | Motuoapa                 | 385556.4S | 1755232.5E | GRC |             |              |    |    |
| NZA347 | 15 |                          | 390555.3S | 1761939.8E | CWA | 392714.112S | 1765208.045E | 33 | NM |
| NZA347 | 16 |                          | 385422.7S | 1764743.0E | GRC |             |              |    |    |
| NZA347 | 17 |                          | 385542.7S | 1772614.8E | GRC |             |              |    |    |

to;

S39° 02' 17.59" E177° 31' 39.86" back to;

S39° 09' 08.8" E177° 45' 18.8"

|          |   |  |  |  |     |           |            |   |    |
|----------|---|--|--|--|-----|-----------|------------|---|----|
| NZA347_S | 1 |  |  |  | CIR | 391722.4S | 1753345.6E | 3 | NM |
|----------|---|--|--|--|-----|-----------|------------|---|----|

Vertical limits: 9500 ft to FL600

Classification: Class C

ATC Authority: OH Control 126.2