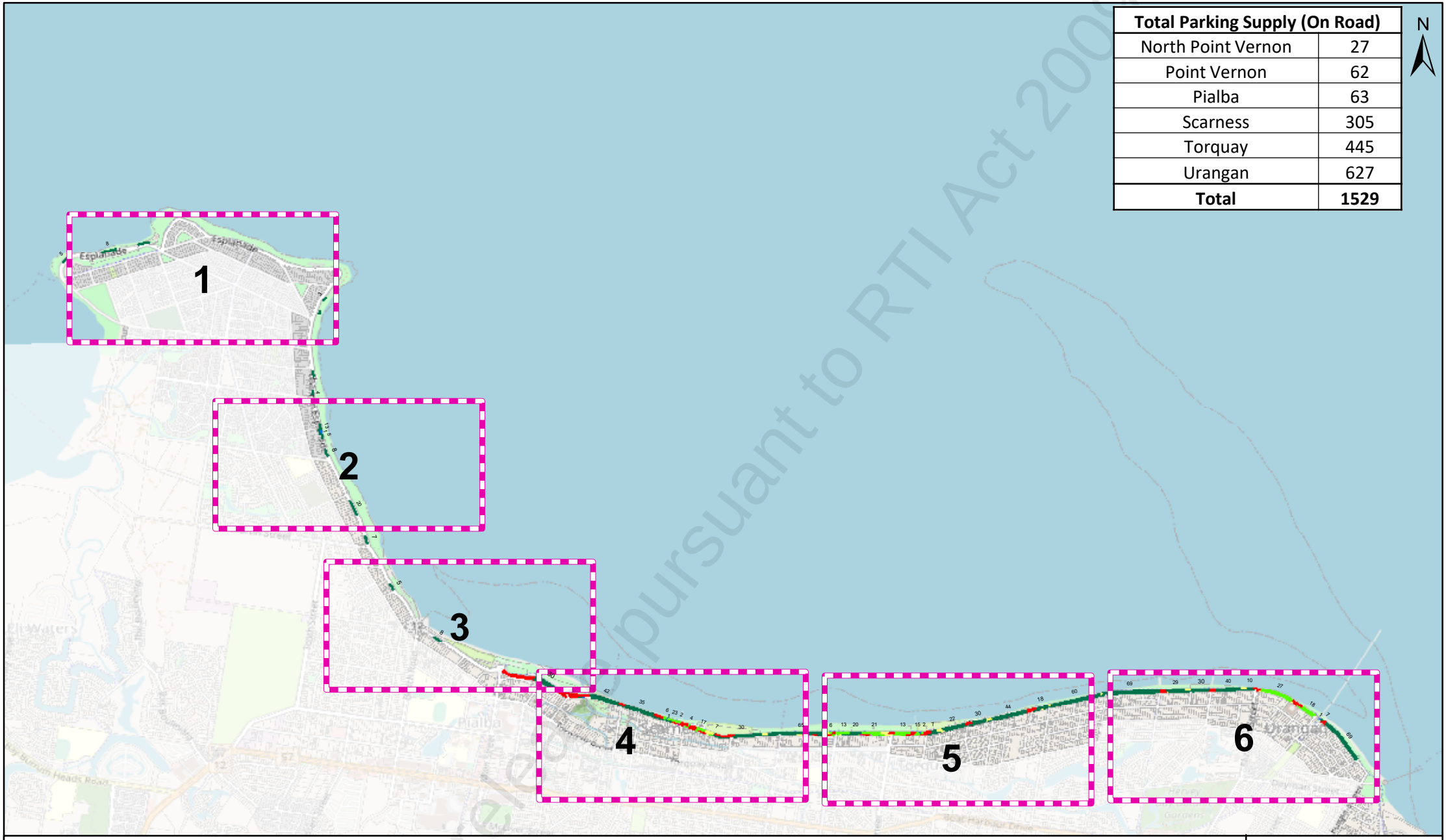
Total Parking Supply (On Road)	
North Point Vernon	27
Point Vernon	62
Pialba	63
Scarness	305
Torquay	445
Urangan	627
Total	**1529**



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

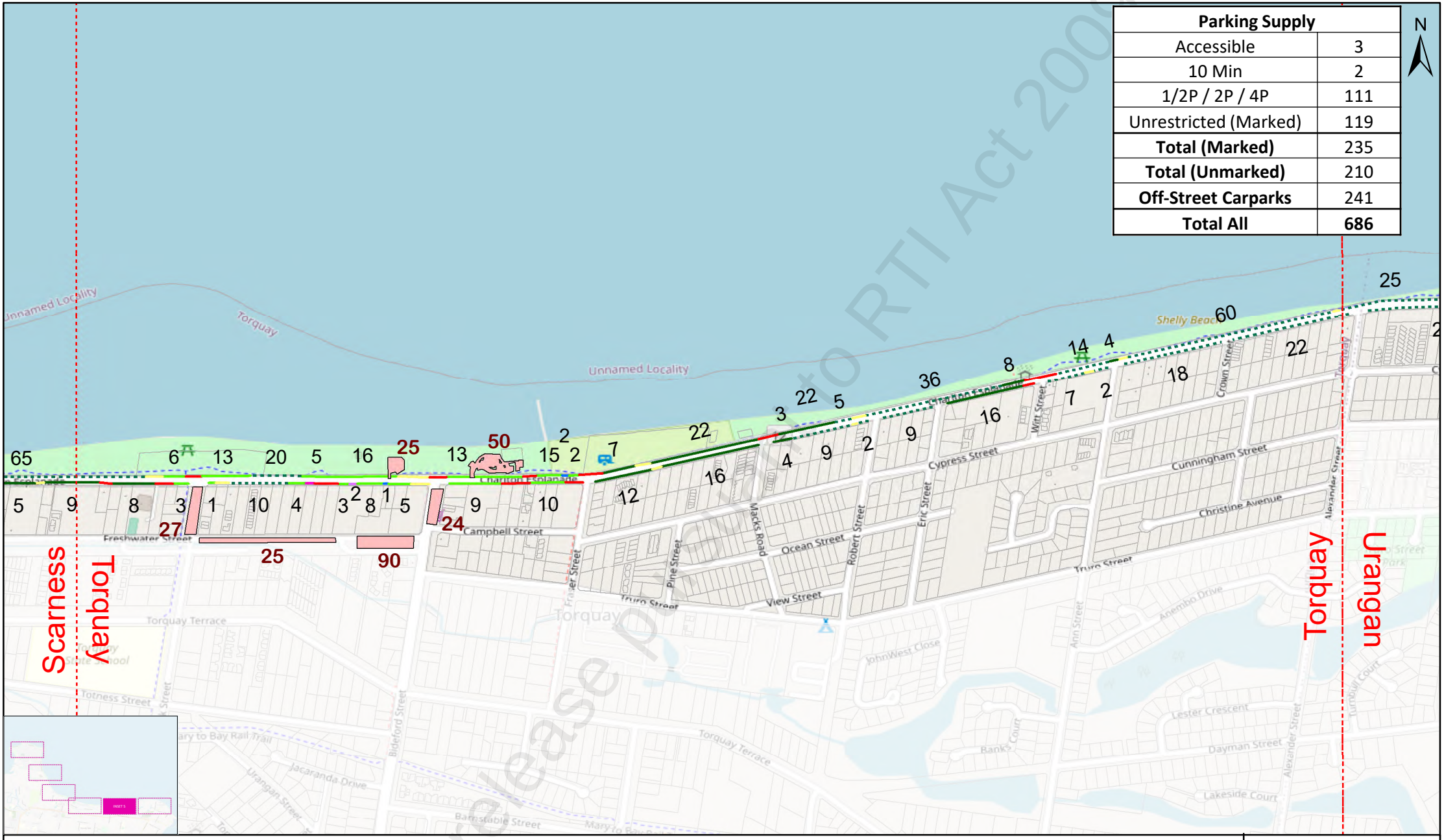
Parking Restrictions

Overview Map

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Restrictions
Location 5: Torquay

- Unrestricted (Unmarked)
- Unrestricted (Marked)
- Accessible
- Taxi Zone
- Loading Zone
- Bus Zone
- No Parking / Stopping
- 10Min
- 1/2P / 2P / 4P
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Saturday 16th Feb 2019)

Location 5: Torquay

Max. Occupancy %

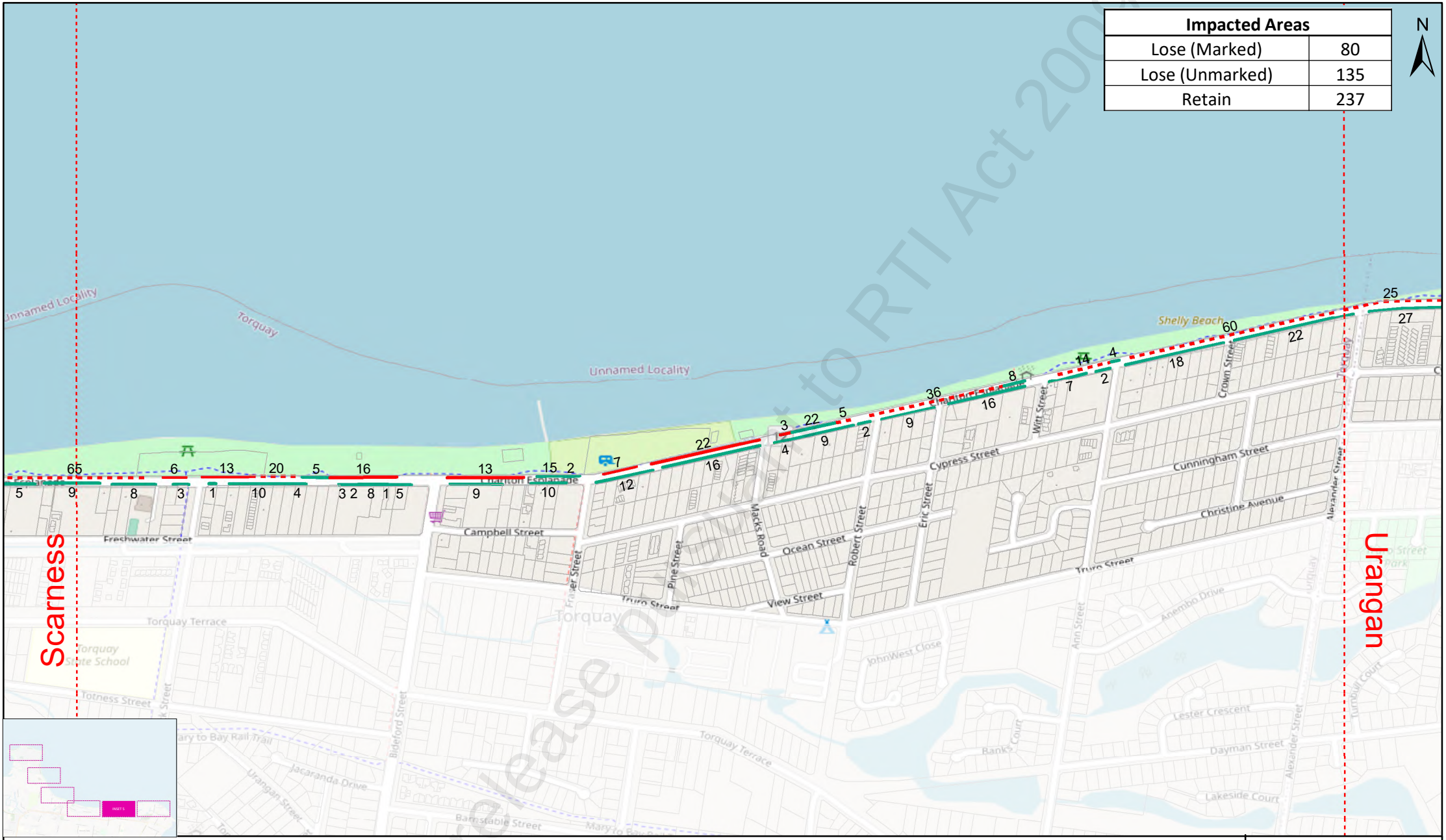
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Impacted Parking Spaces

Location 5: Torquay

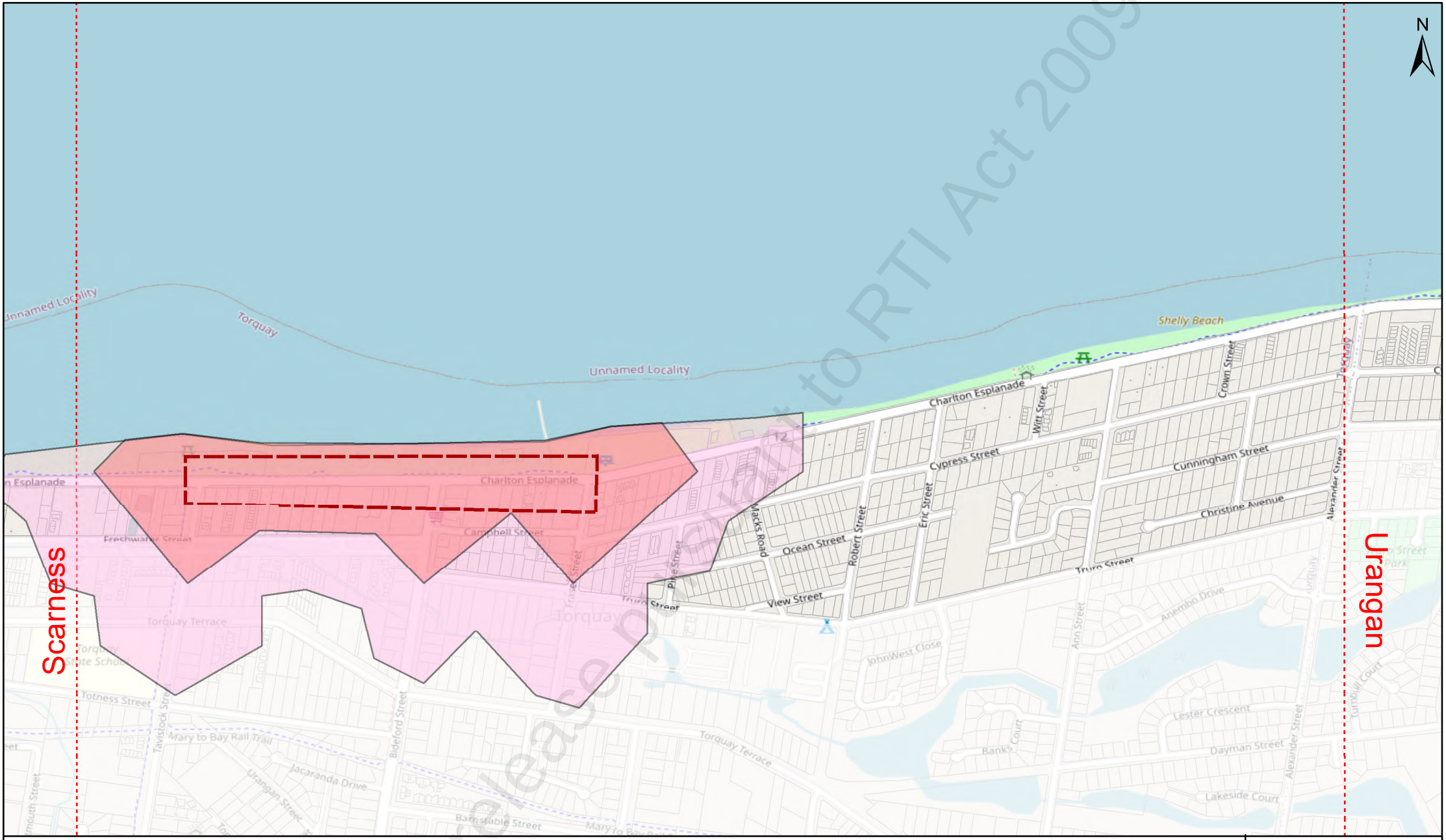
Lose (Marked)
Lose (Unmarked)
Retain

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 10/01/2022

Issue: 002



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Walking Distance

Location 5: Torquay

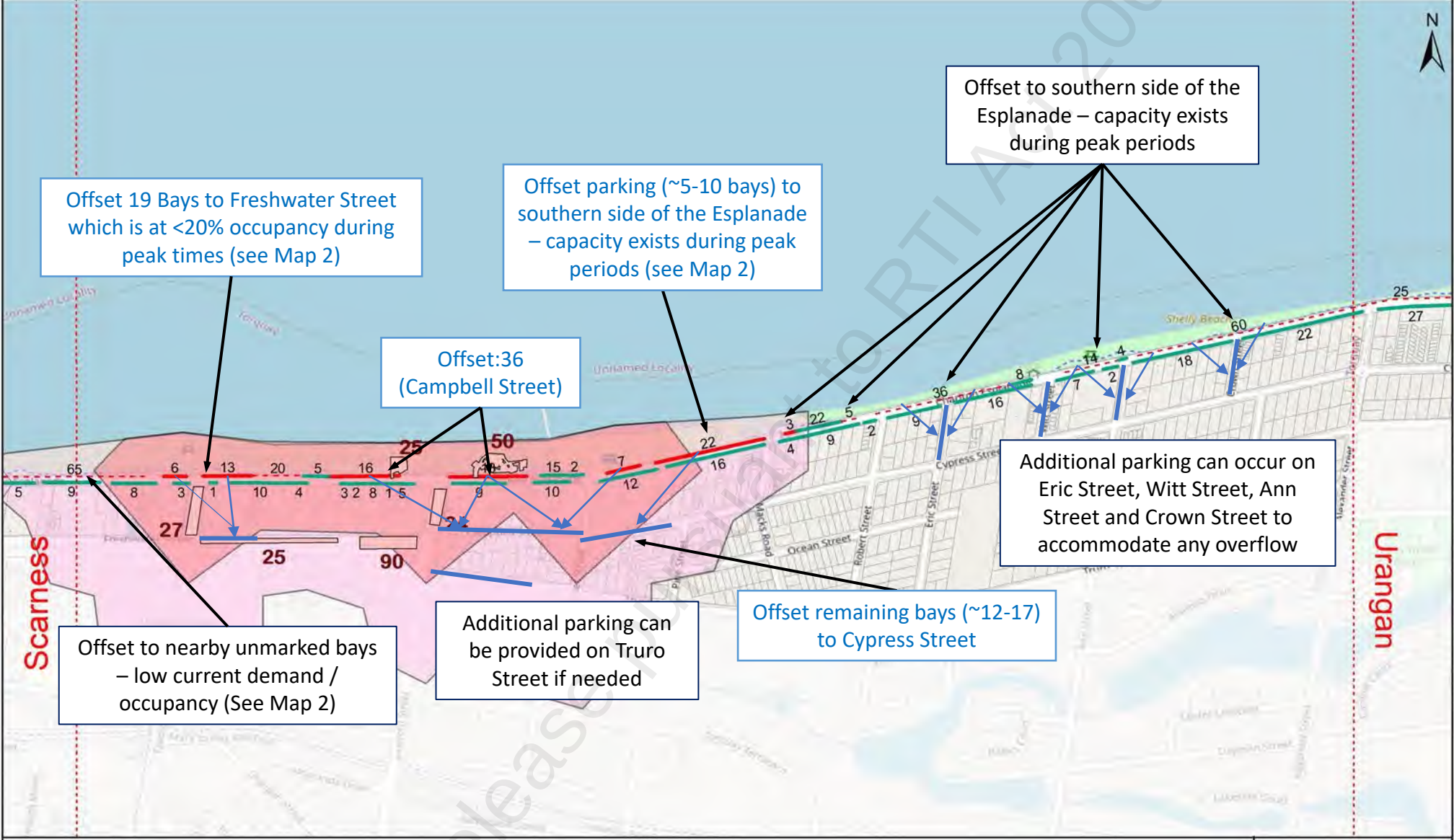
- Street Boundary
- 100m
- 400m

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 06/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS

Parking Options

Location 5: Torquay

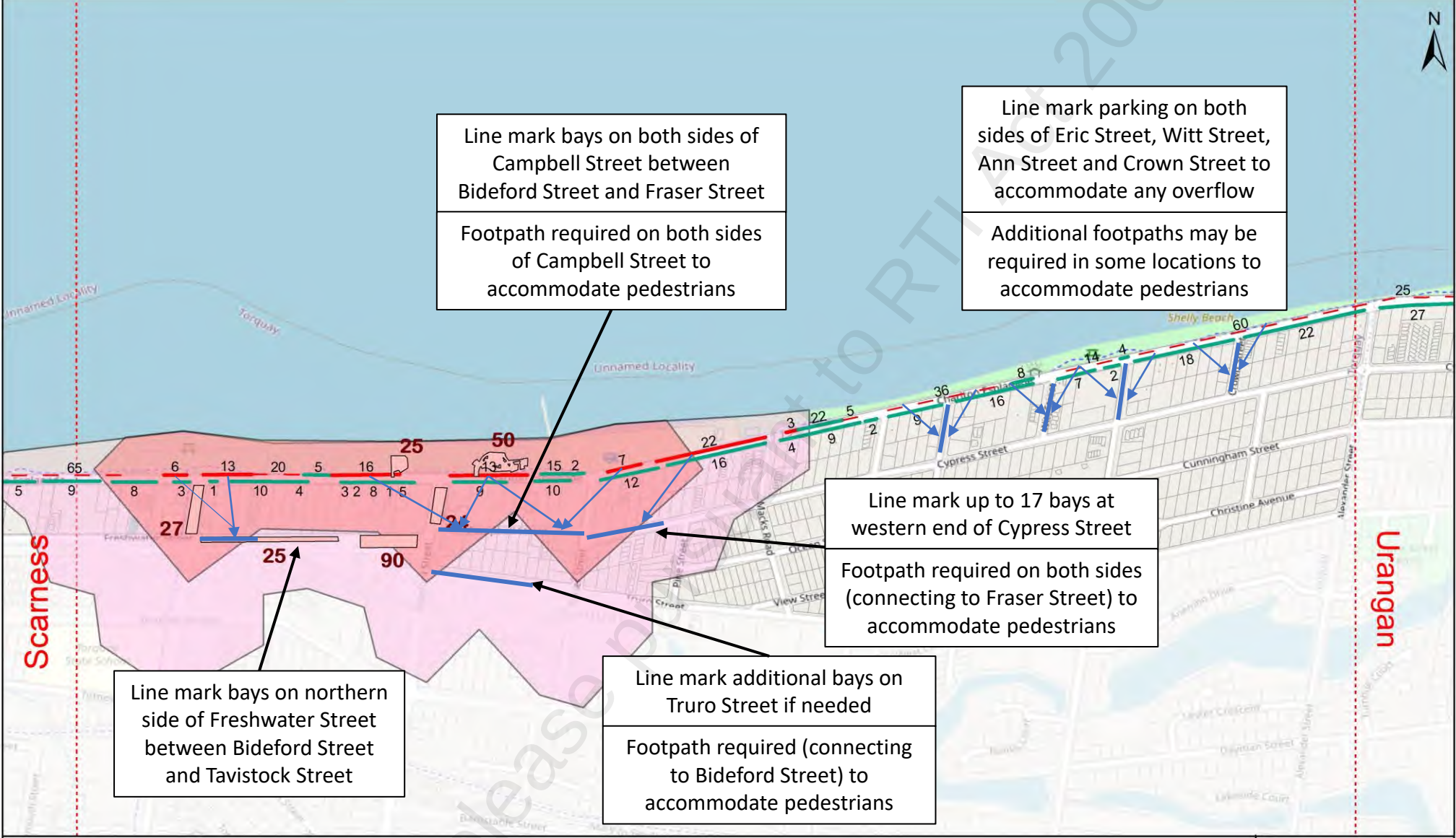
- Lose (Marked)
- Lose (Unmarked)
- Retain
- Off Set Parking
- 100m
- 400m
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 03/02/2022

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Treatment

Location 5: Torquay

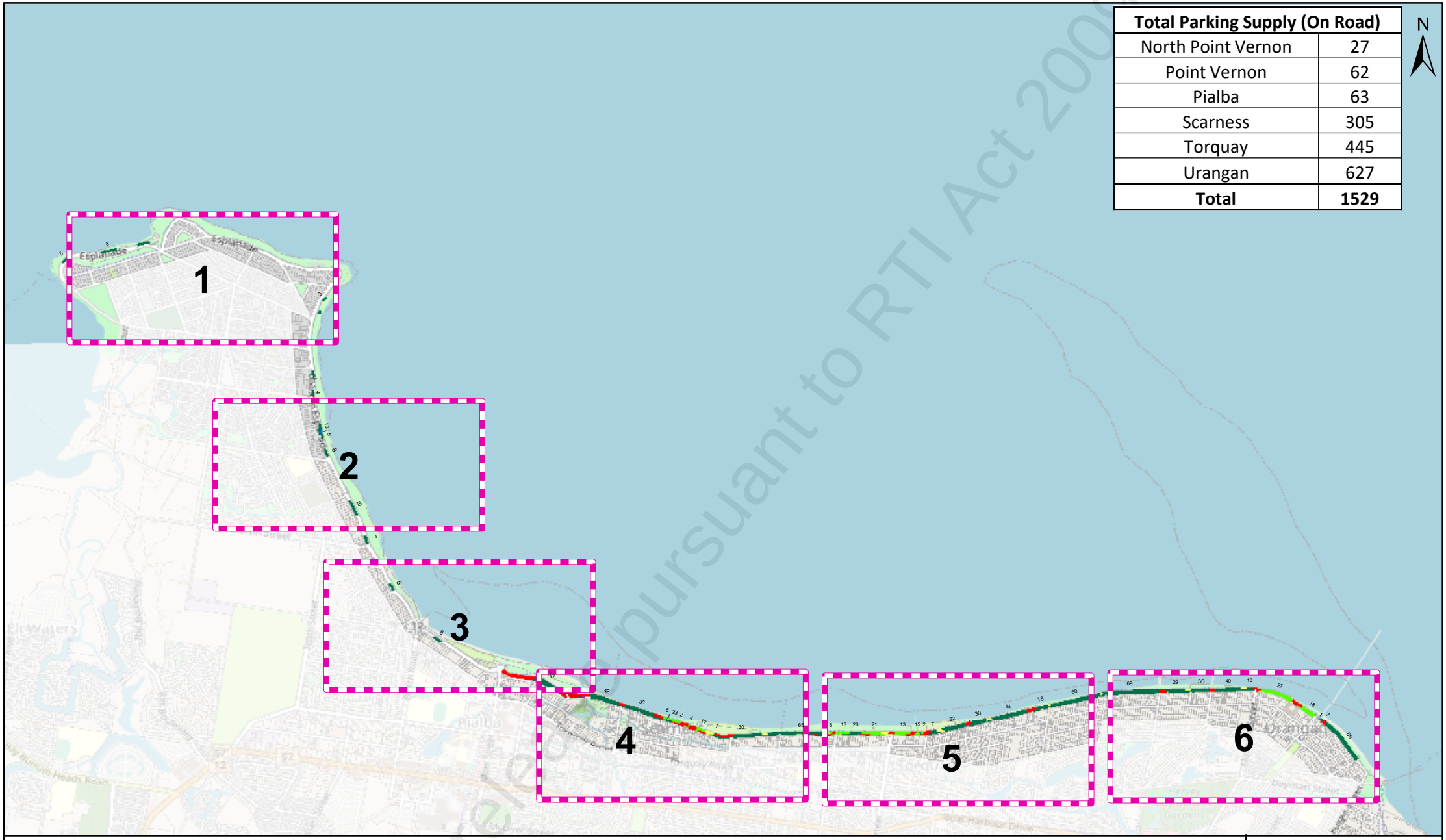
- Lose (Marked)
- Lose (Unmarked)
- Retain
- Off Set Parking
- 100m
- 400m
- Off-Street Carparks
- Available Footpath

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 03/02/2022

Issue: 001



Total Parking Supply (On Road)	
North Point Vernon	27
Point Vernon	62
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Scarness	305
Torquay	445
Urangan	627
Total	**1529**

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Restrictions

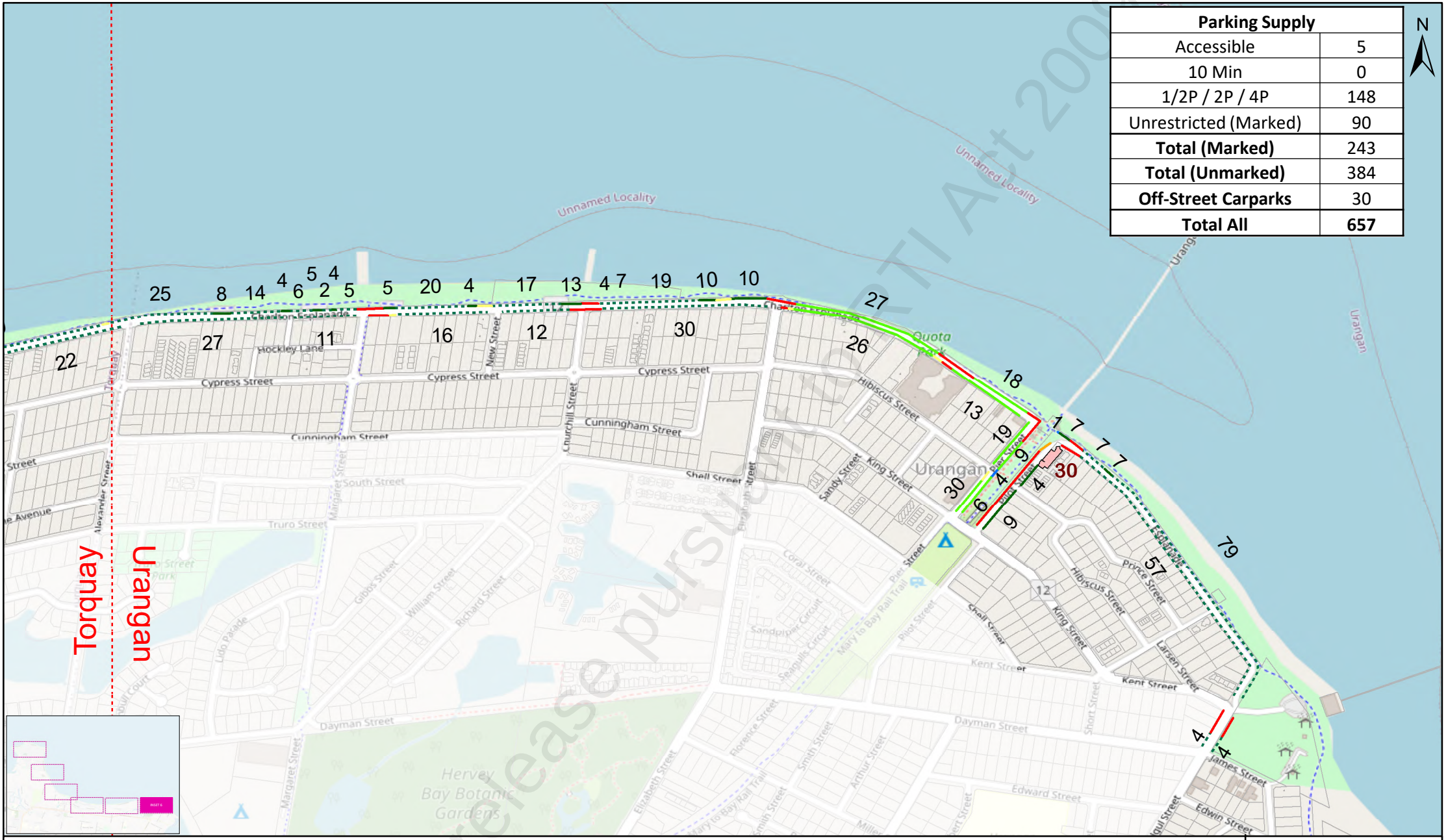
Overview Map

0 162.5 325 650 975 1,300 Meters

Project Number: P5470

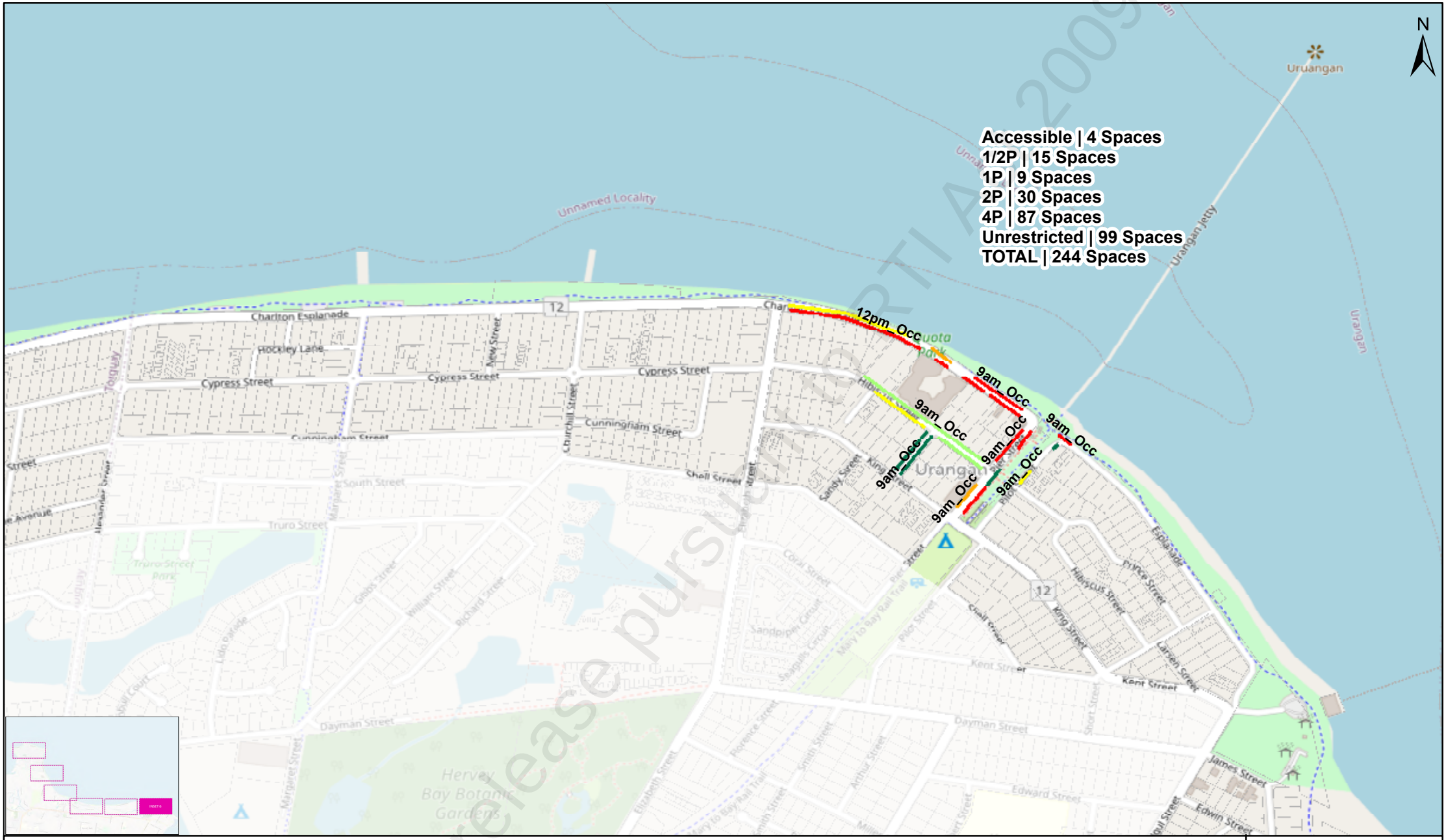
Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Saturday 16th Feb 2019)

Location 6: Urangan

Max. Occupancy %

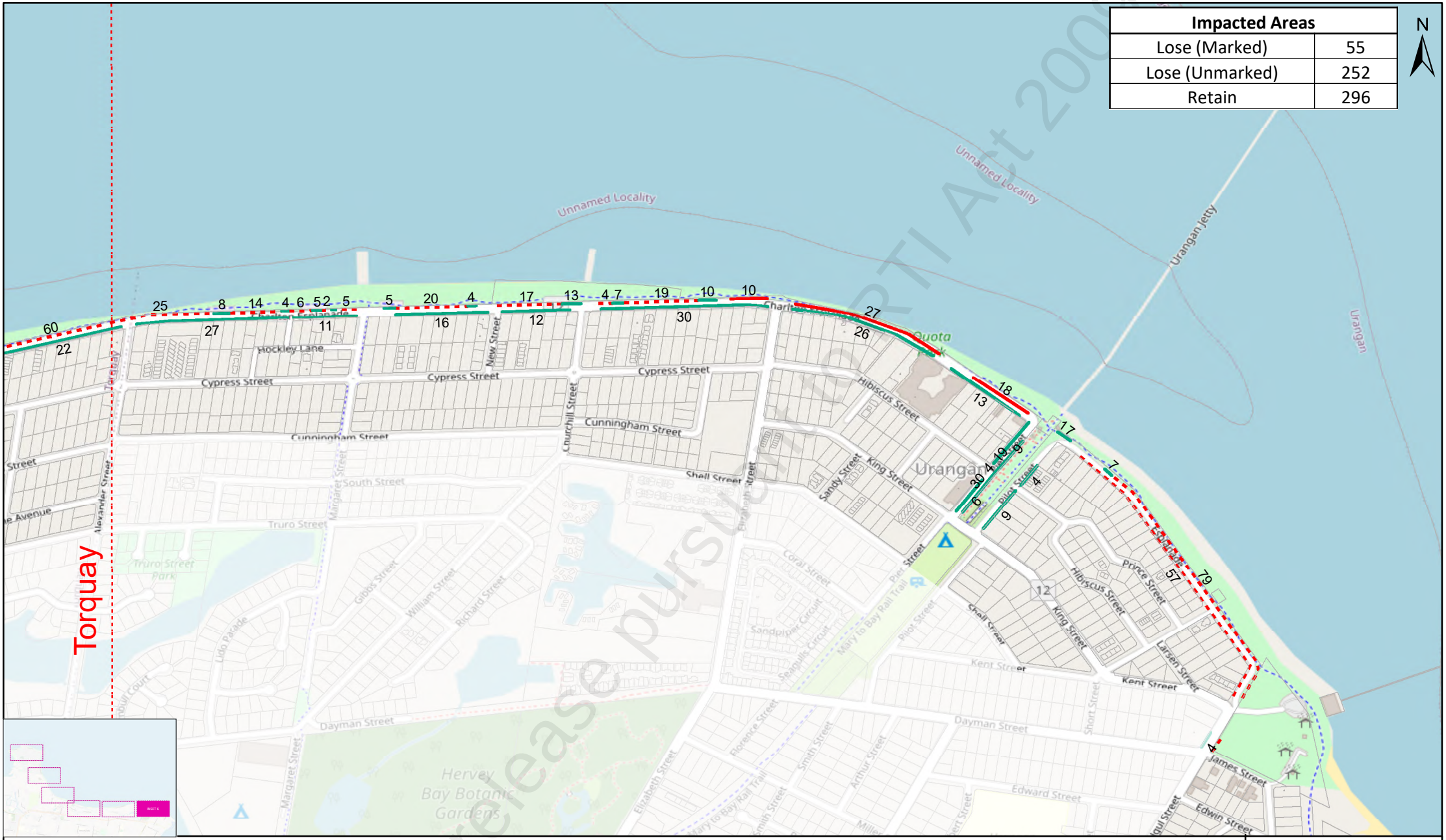
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Impacted Parking Spaces

Location 6: Urangan

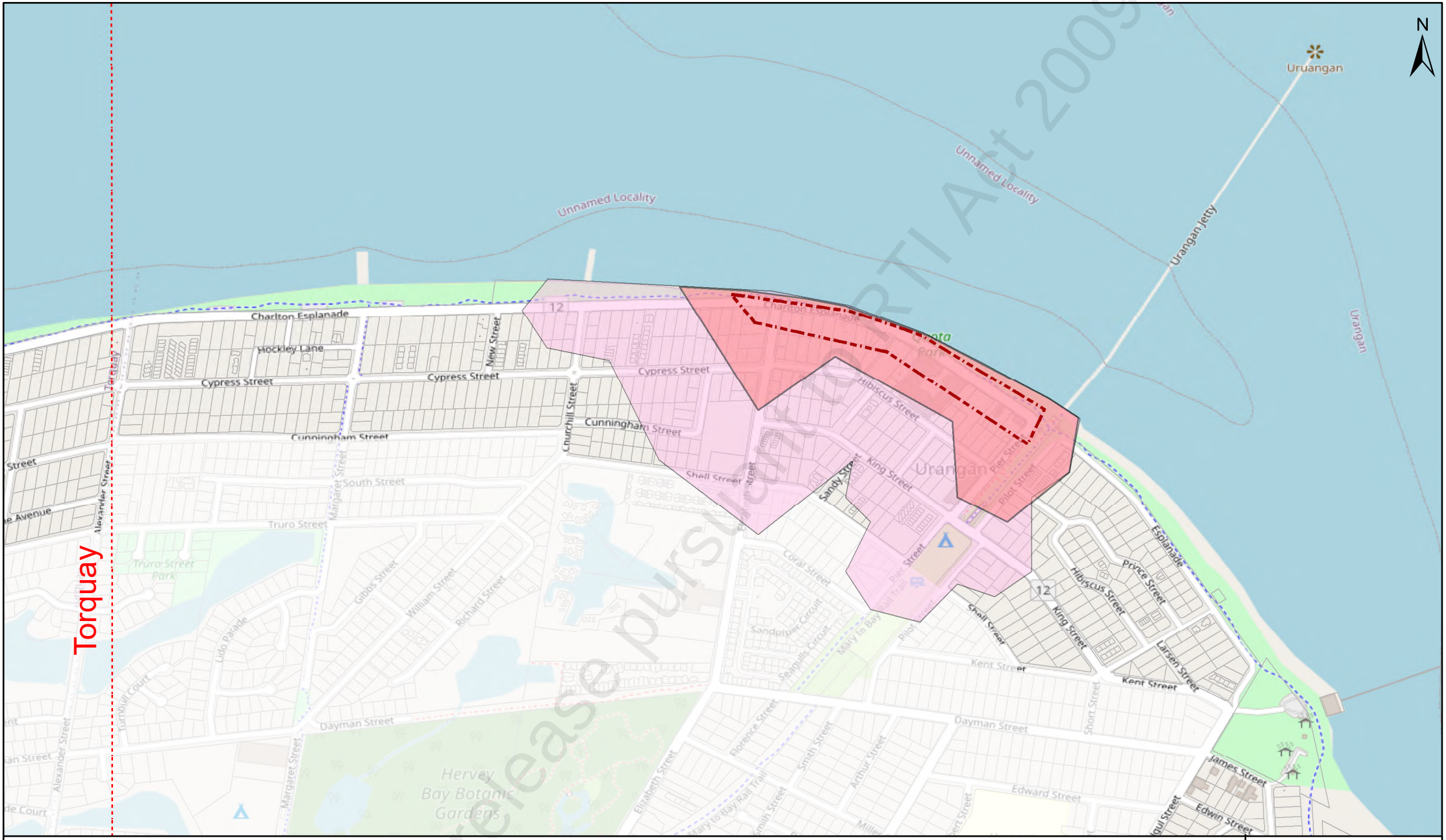
Lose (Marked)
Lose (Unmarked)
Retain

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 10/01/2022

Issue: 002



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Walking Distance

Location 6: Urangan

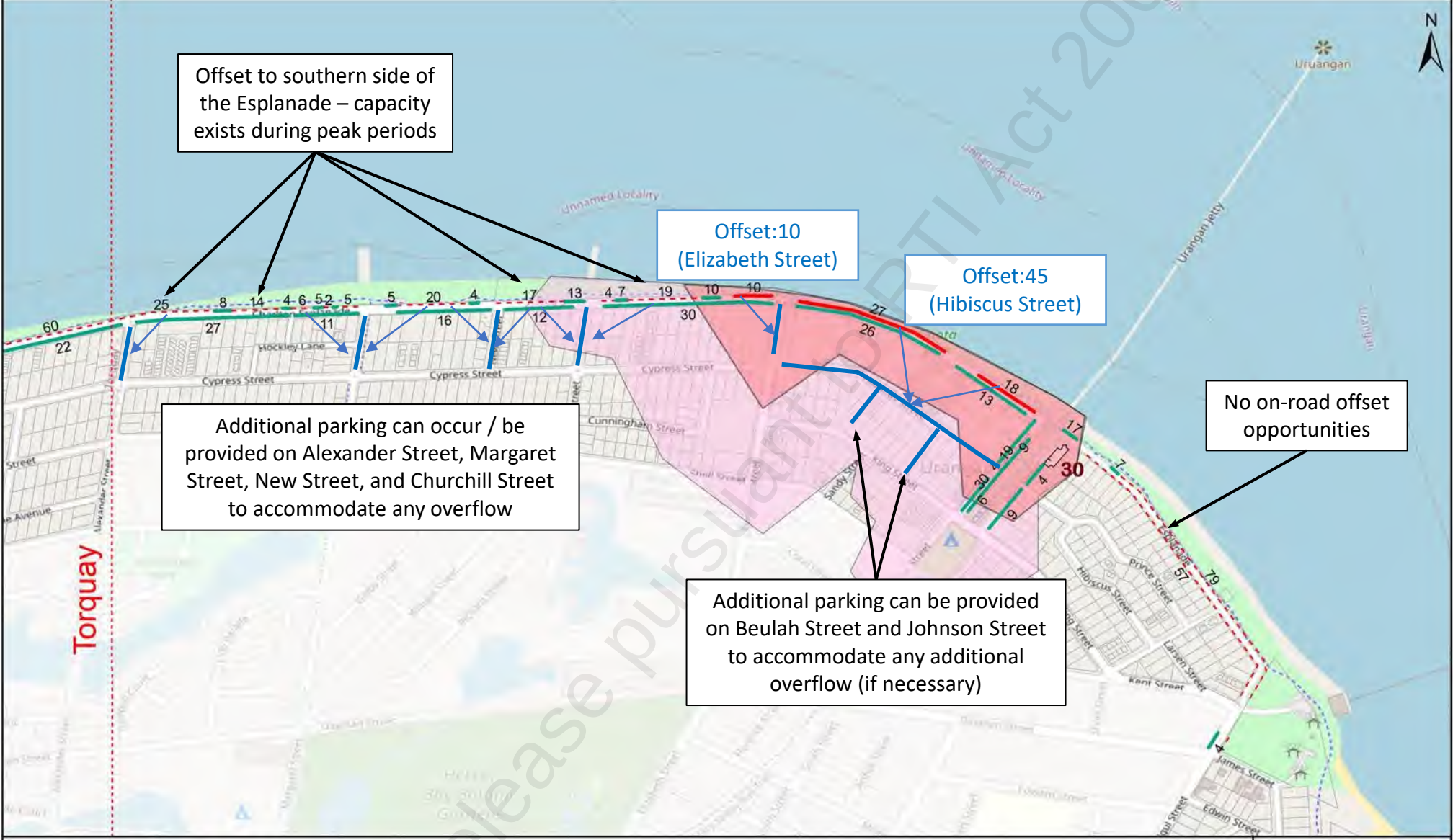
- Street Boundary
- 100m
- 400m

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 06/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS

Parking Options

Location 6: Urangan

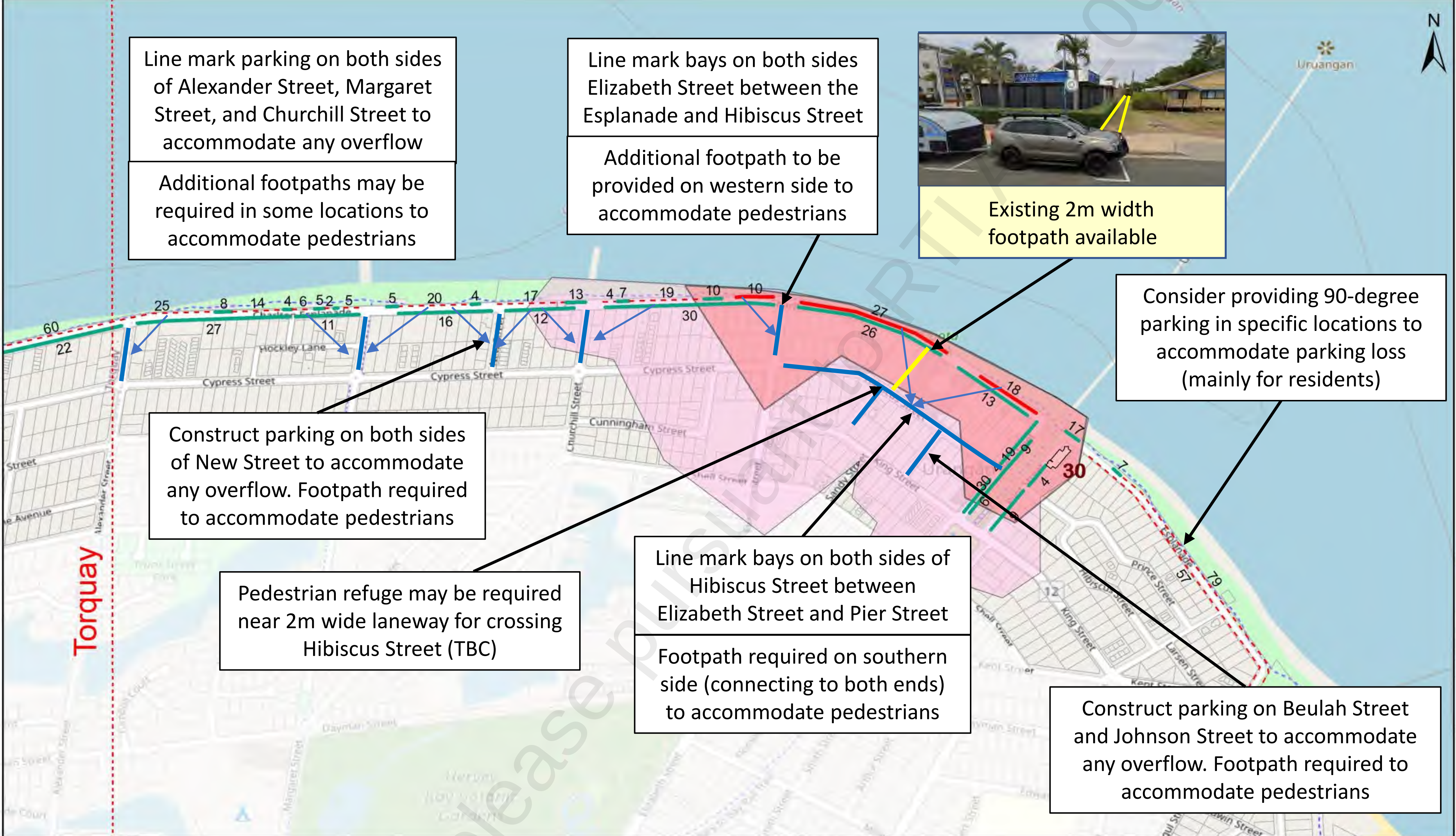
- Lose (Marked)
- Lose (Unmarked)
- Retain
- Off Set Parking
- 100m
- 400m
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 03/02/2022

Issue: 001


Line mark parking on both sides of Alexander Street, Margaret Street, and Churchill Street to accommodate any overflow
Additional footpaths may be required in some locations to accommodate pedestrians
Line mark bays on both sides Elizabeth Street between the Esplanade and Hibiscus Street
Additional footpath to be provided on western side to accommodate pedestrians
Existing 2m width footpath available
Consider providing 90-degree parking in specific locations to accommodate parking loss (mainly for residents)
Construct parking on both sides of New Street to accommodate any overflow. Footpath required to accommodate pedestrians
Pedestrian refuge may be required near 2m wide laneway for crossing Hibiscus Street (TBC)
Line mark bays on both sides of Hibiscus Street between Elizabeth Street and Pier Street
Footpath required on southern side (connecting to both ends) to accommodate pedestrians
Construct parking on Beulah Street and Johnson Street to accommodate any overflow. Footpath required to accommodate pedestrians
Torquay
Uruangan
N
Cypress Street
Cunningham Street
Hockley Lane
Churchill Street
King Street
Hibiscus Street
Prince Street
Larsen Street
Kent Street
Dayman Street
0 37.5 75 150 225 300 Meters

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Treatment

Location 6: Urangan

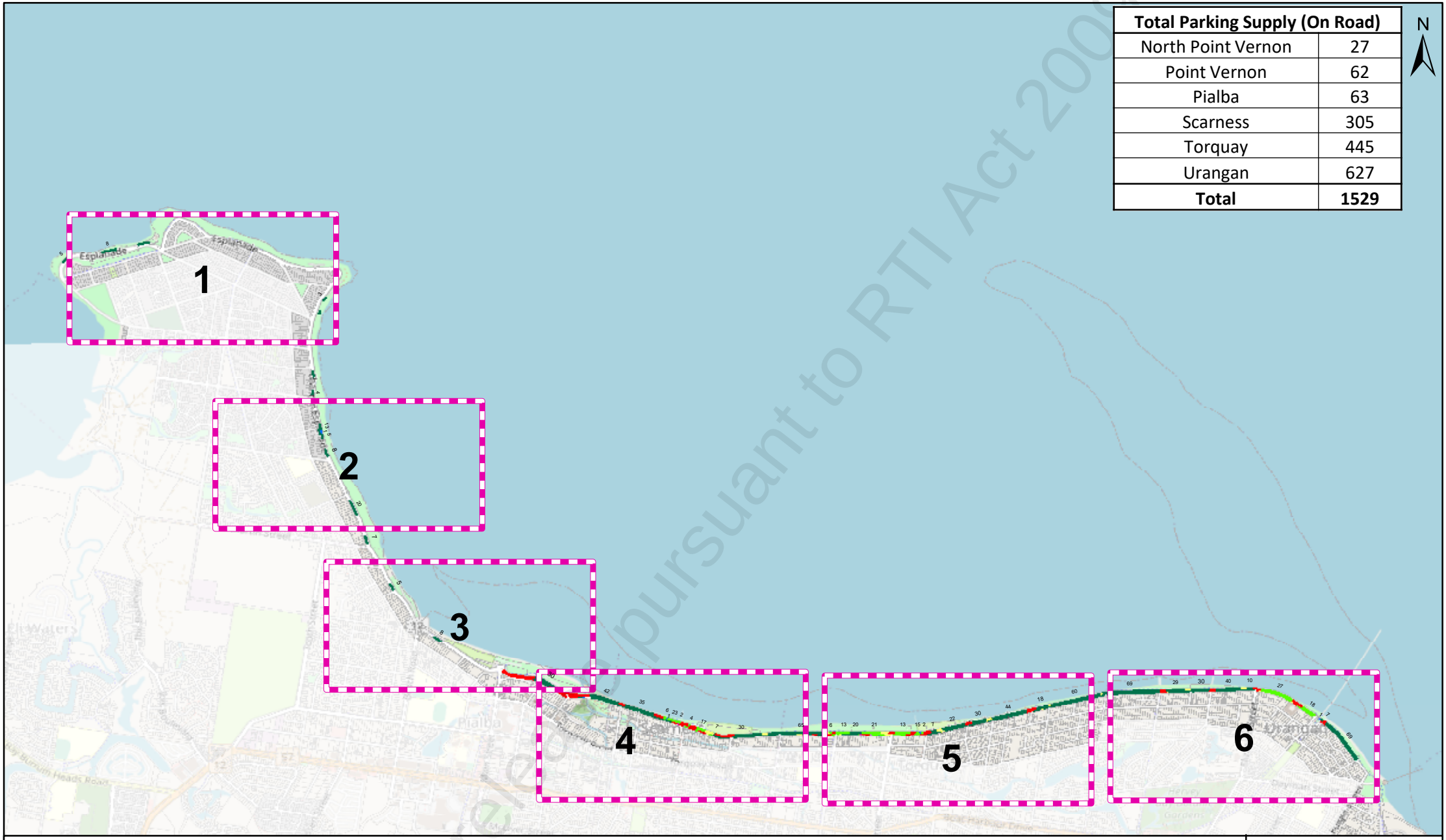
Lose (Marked)	100m		
Lose (Unmarked)	400m		
Retain	Off-Street Carparks		
Off Set Parking	Available Footpath		

Project Number: P5470

Date: 03/02/2022

Issue: 001

Total Parking Supply (On Road)	
North Point Vernon	27
Point Vernon	62
Pialba	63
Scarness	305
Torquay	445
Urangan	627
Total	**1529**



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

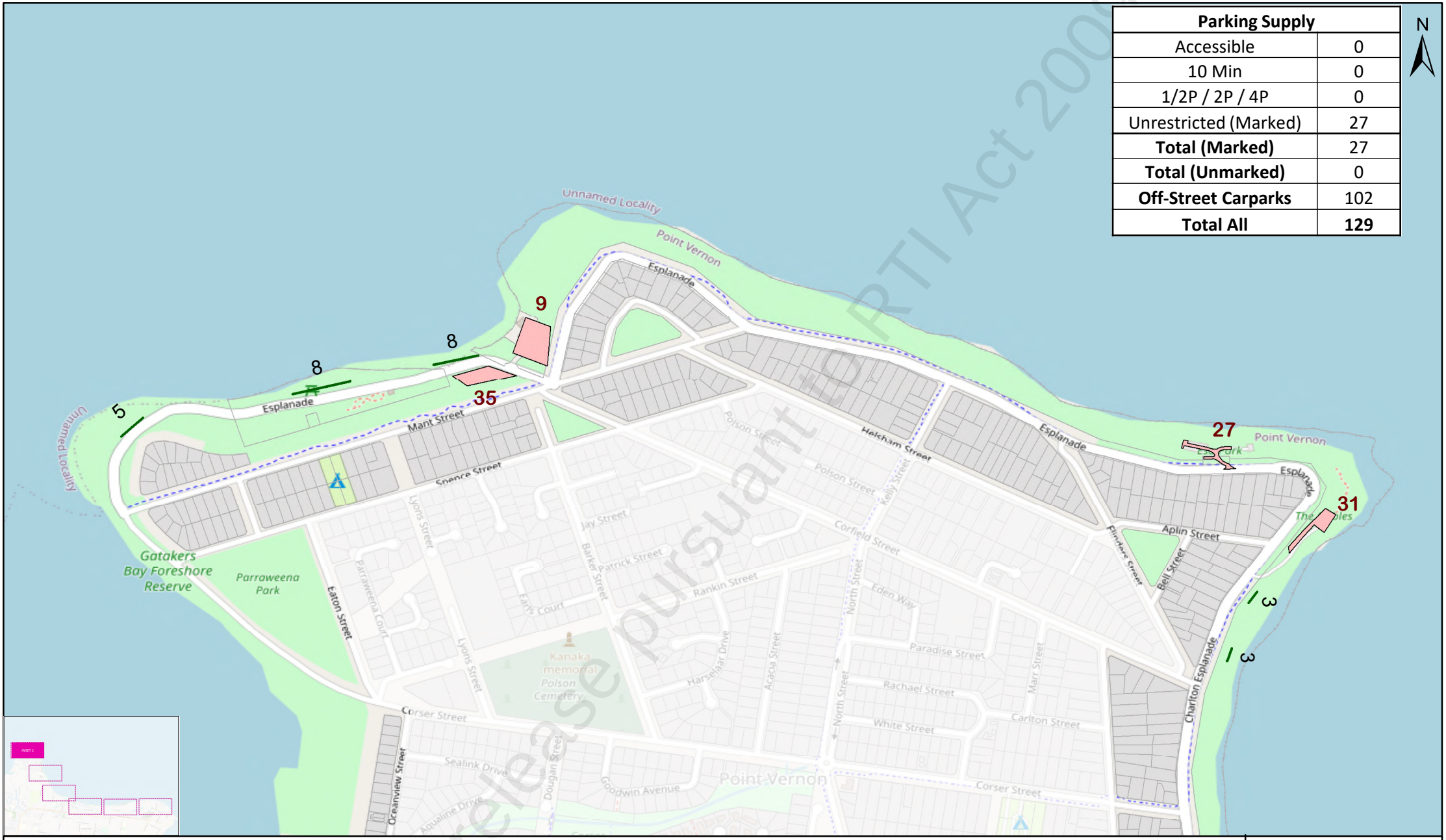
Parking Restrictions

Overview Map

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Restrictions
Location 1: North Point Vernon

- Unrestricted (Unmarked)
- Unrestricted (Marked)
- Accessible
- Taxi Zone
- Loading Zone
- Bus Zone
- No Parking / Stopping
- 10Min
- 1/2P / 2P / 4P
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

Parking Supply	
Accessible	0
10 Min	0
1/2P / 2P / 4P	0
Unrestricted (Marked)	62
Total (Marked)	62
Total (Unmarked)	0
Off-Street Carparks	0
Total All	**62**

N

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Restrictions
Location 2: Point Vernon

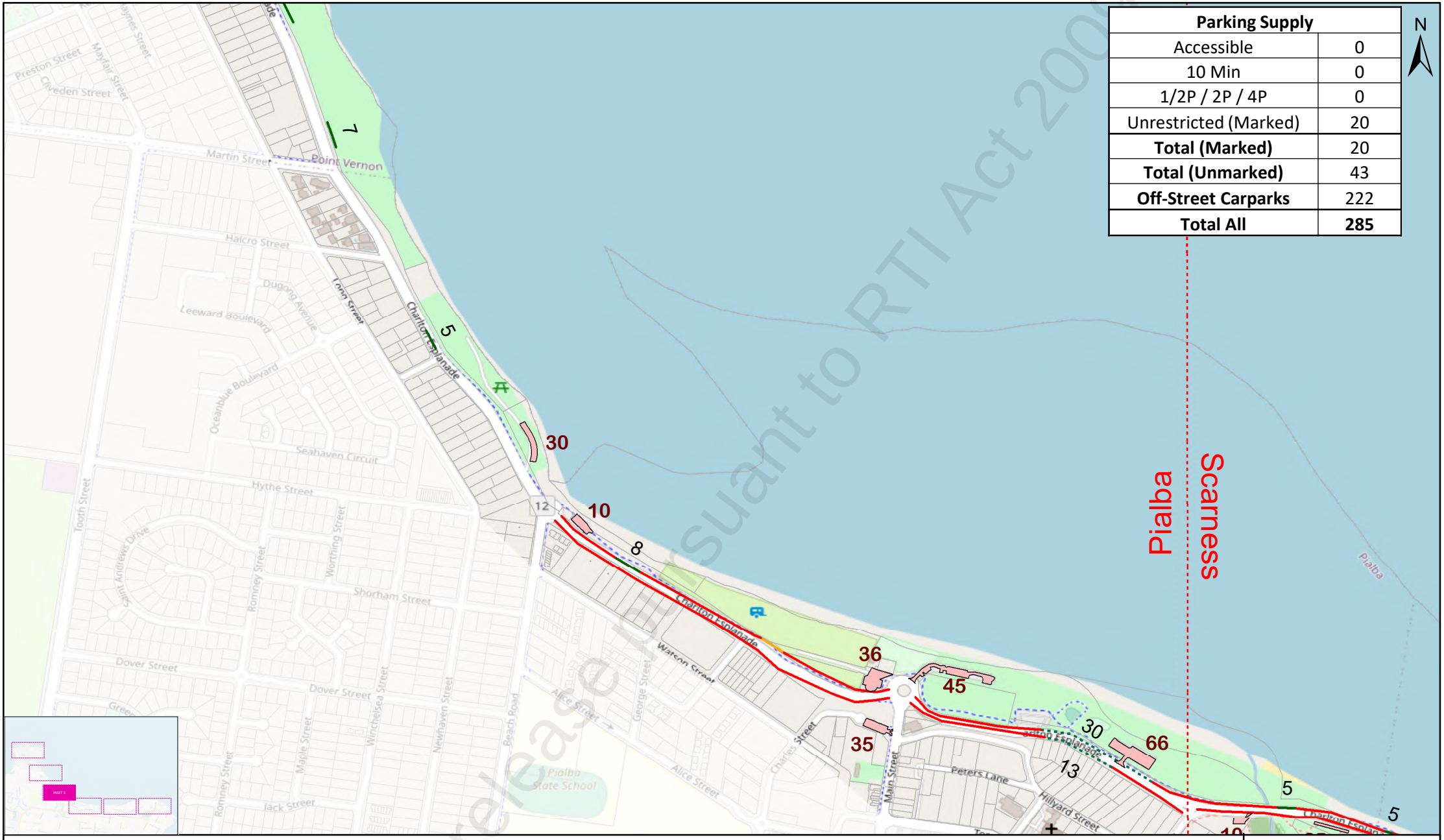
- Unrestricted (Unmarked)
- Unrestricted (Marked)
- Accessible
- Taxi Zone
- Loading Zone
- Bus Zone
- No Parking / Stopping
- 10Min
- 1/2P / 2P / 4P
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

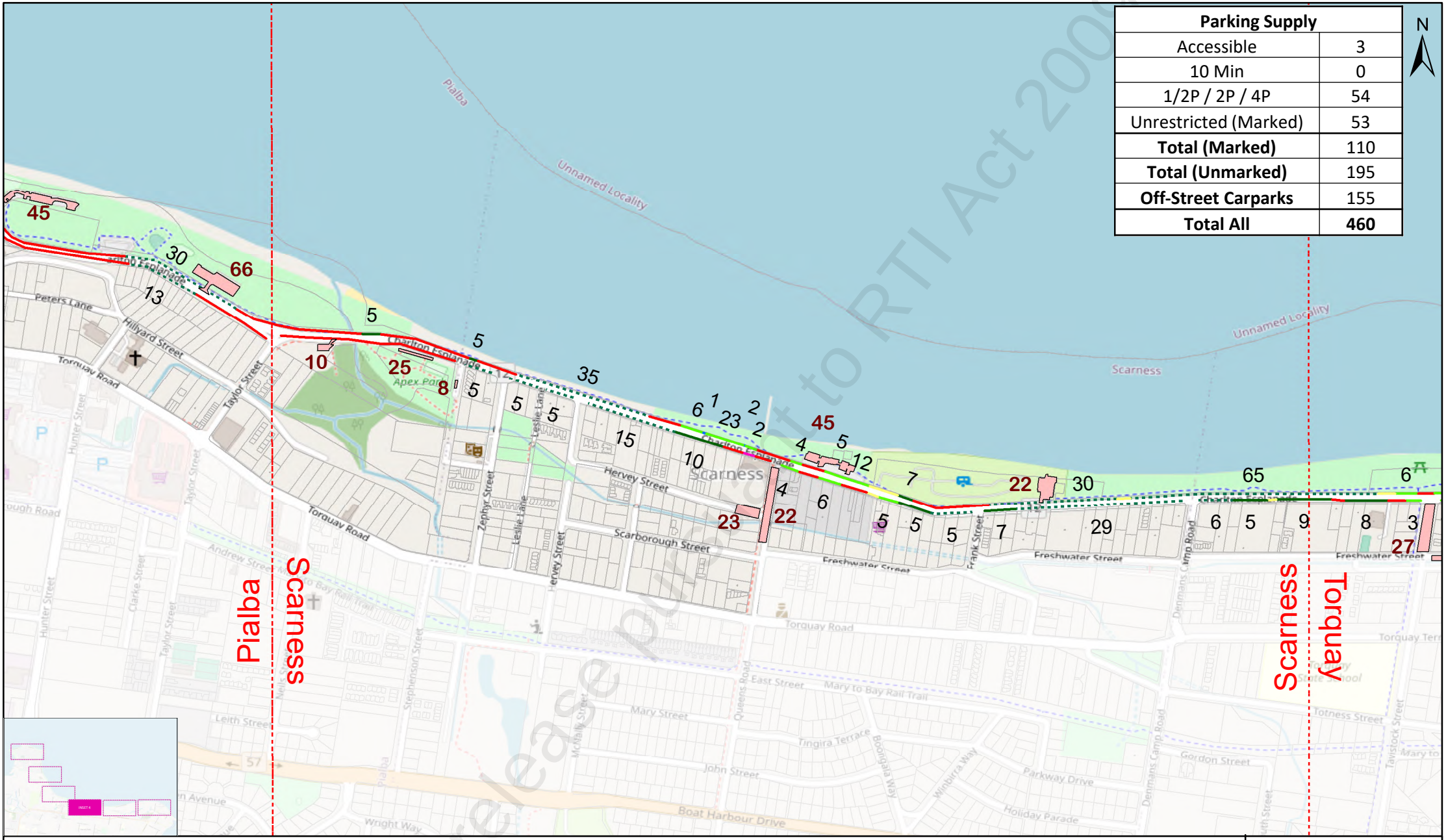
Parking Restrictions
Location 3: Pialba

- Unrestricted (Unmarked)
- Unrestricted (Marked)
- Accessible
- Taxi Zone
- Loading Zone
- Bus Zone
- No Parking / Stopping
- 10Min
- 1/2P / 2P / 4P
- Off-Street Carparks

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Restrictions
Location 4: Scarness

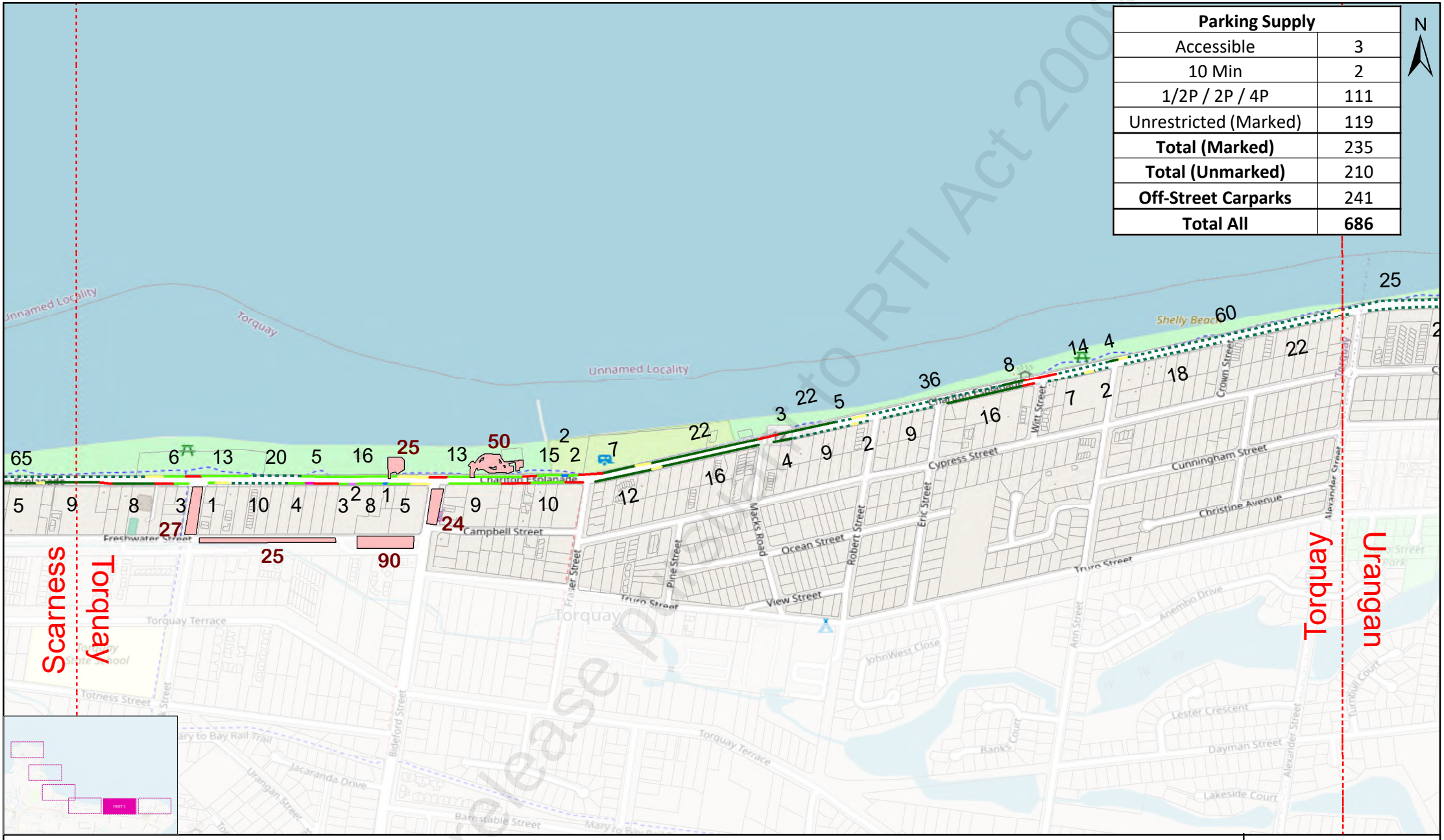
- Unrestricted (Unmarked)
- Unrestricted (Marked)
- Accessible
- Taxi Zone
- Loading Zone
- Bus Zone
- No Parking / Stopping
- 10Min
- 1/2P / 2P / 4P
- Off-Street Carparks

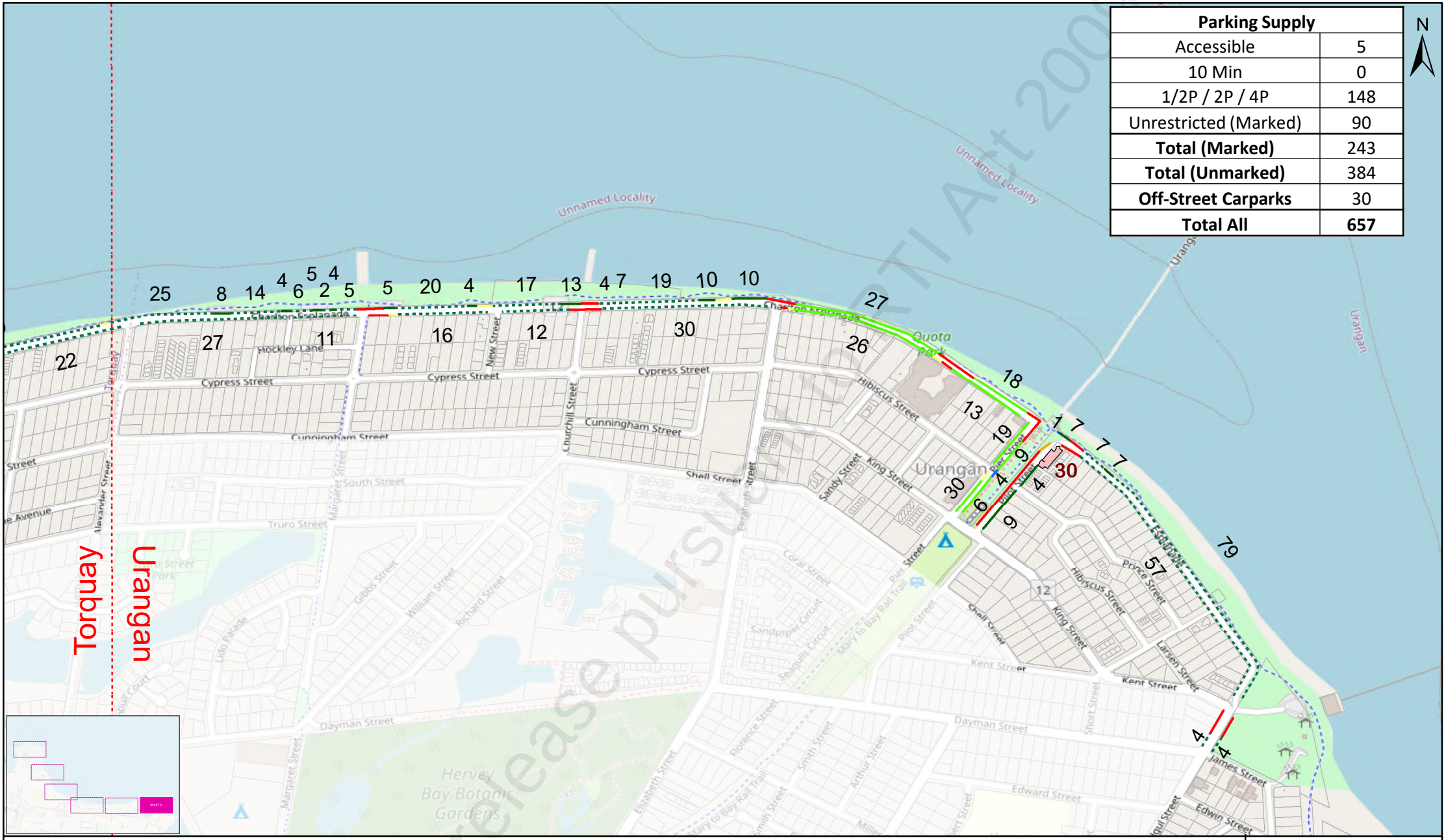
0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001





HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Restrictions
Location 6: Urangan

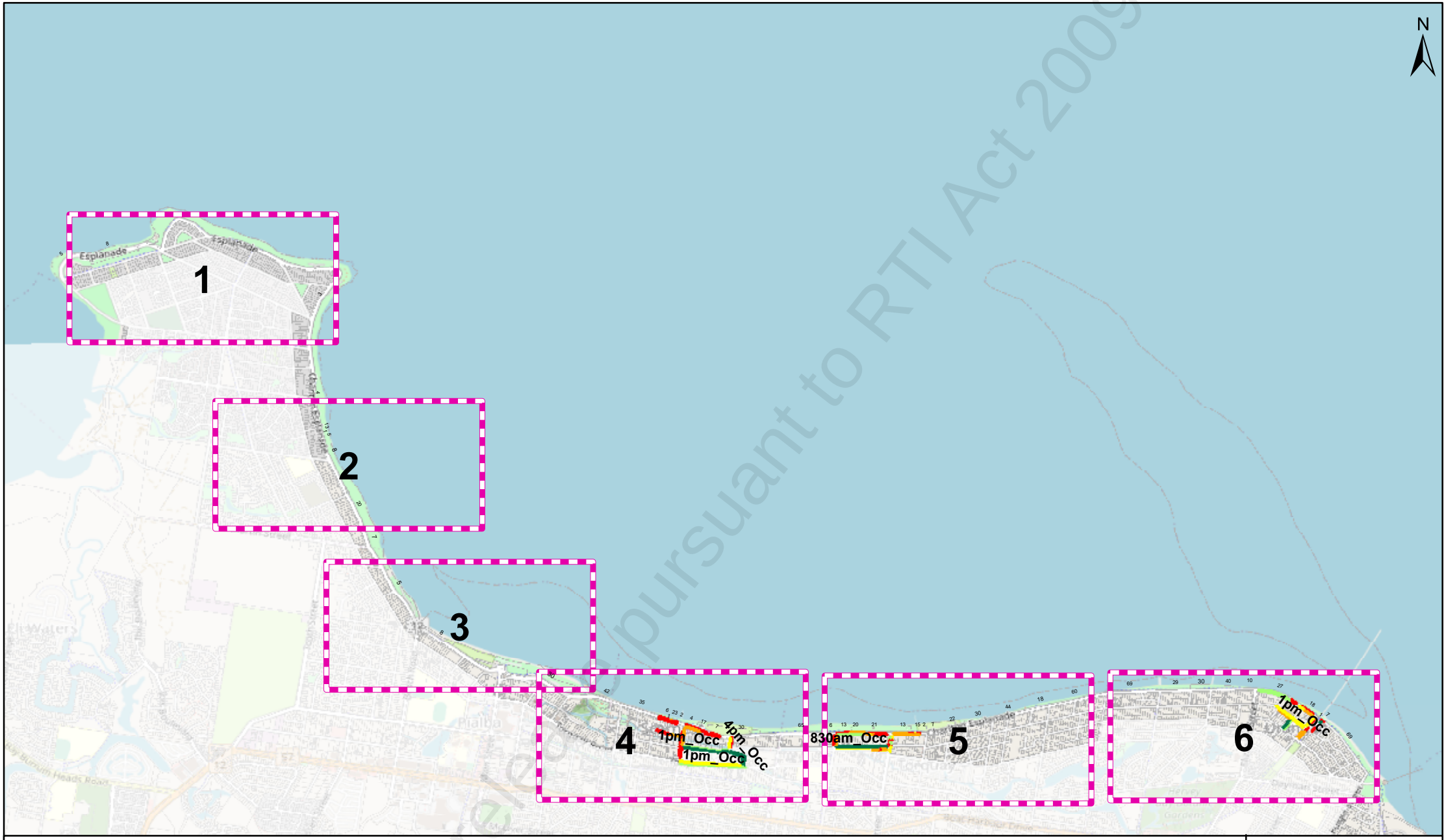
- Unrestricted (Unmarked)
- Unrestricted (Marked)
- Accessible
- Taxi Zone
- Loading Zone
- Bus Zone
- No Parking / Stopping
- 10Min
- 1/2P / 2P / 4P
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Thursday 14th Feb 2019)

Overview Map

0 162.5325 650 975 1,300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN PARKING AND TRAFFIC ADVICE

Parking Occupancy (Thursday 14th Feb 2019)

Location 1: North Point Vernon

Max. Occupancy %

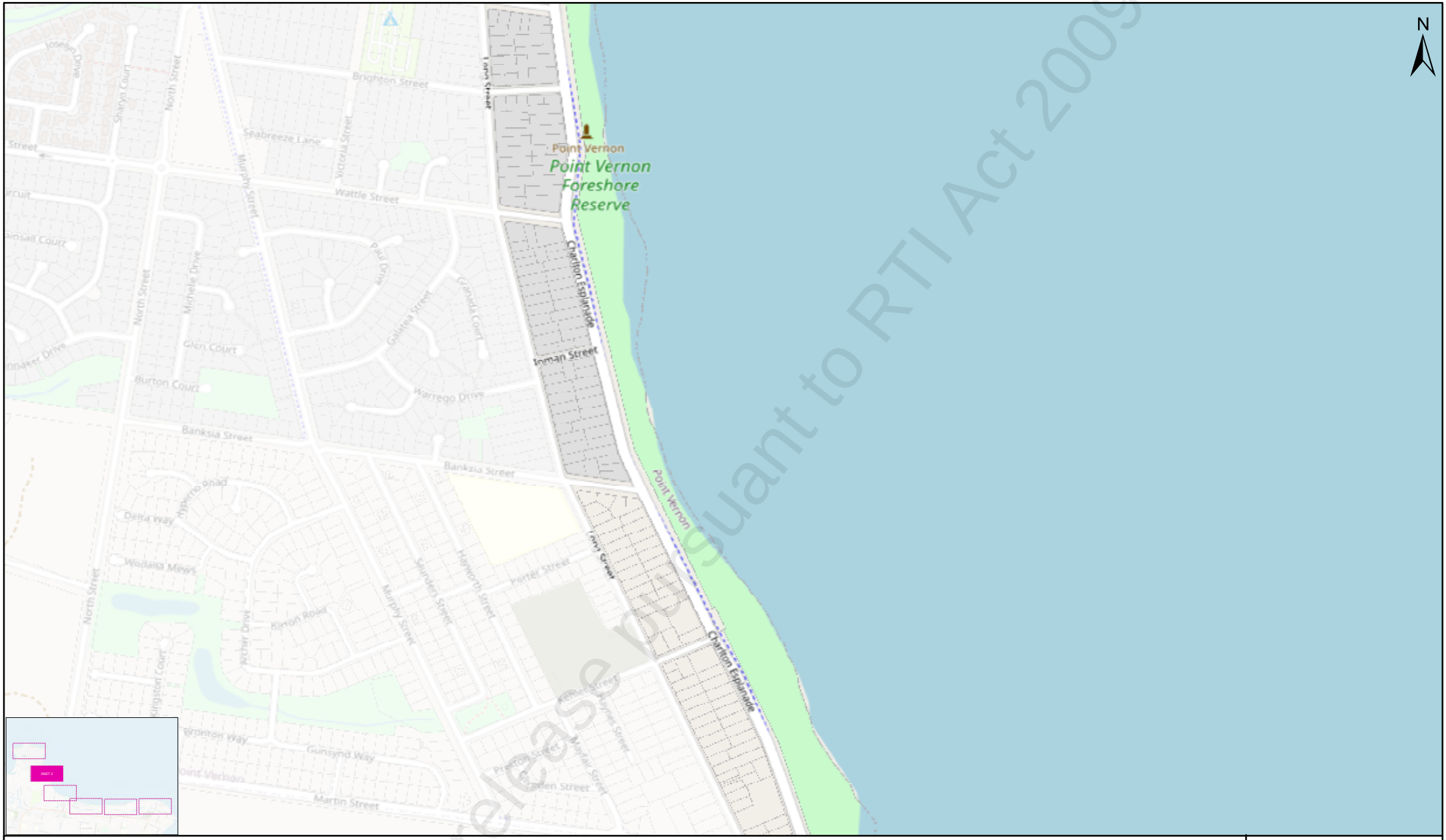
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Thursday 14th Feb 2019)

Location 2: Point Vernon

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Thursday 14th Feb 2019)

Location 3: Pialba

Max. Occupancy %

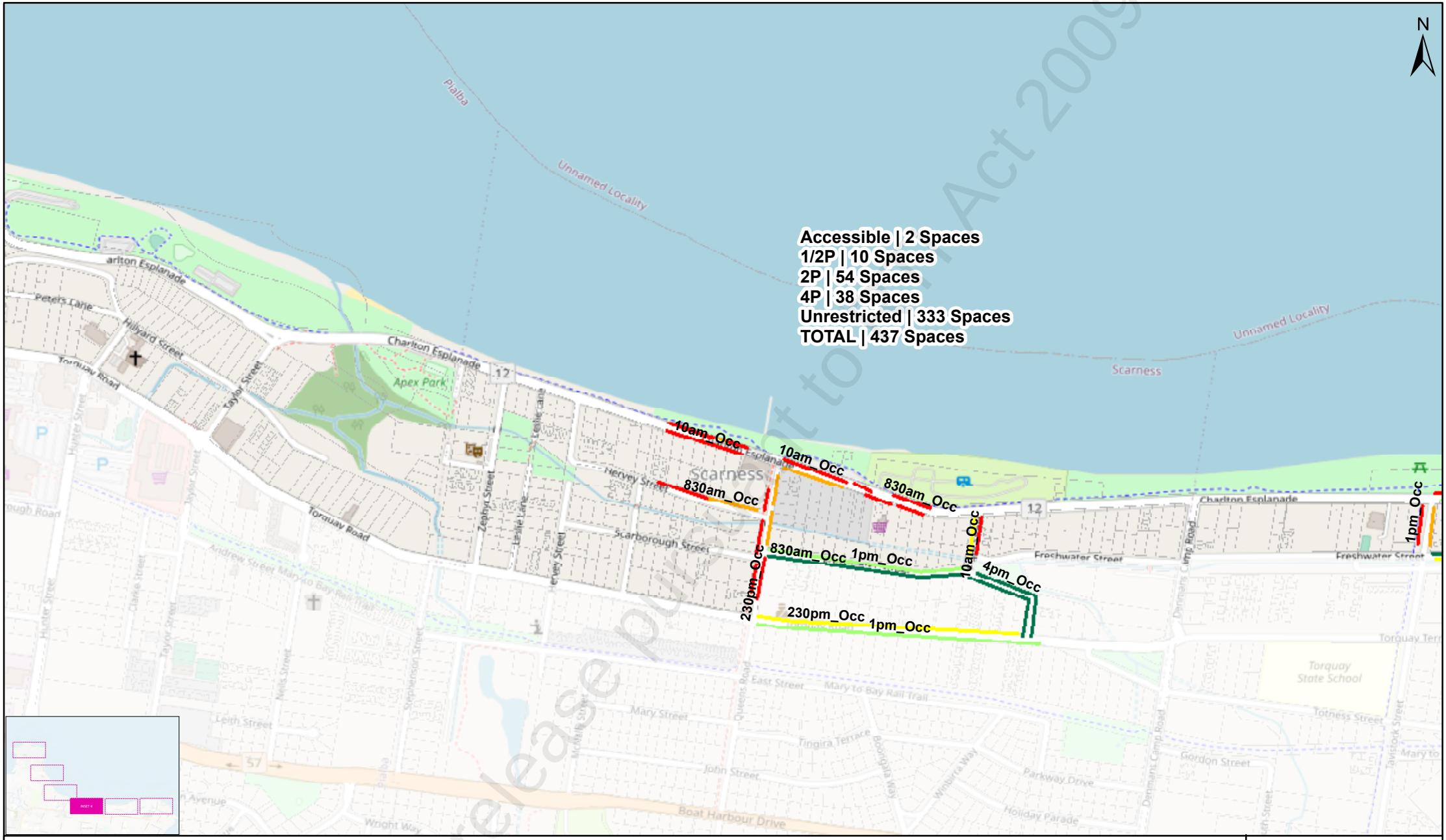
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Thursday 14th Feb 2019)

Location 4: Scarness

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Thursday 14th Feb 2019)

Location 5: Torquay

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Thursday 14th Feb 2019)

Location 6: Urangan

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

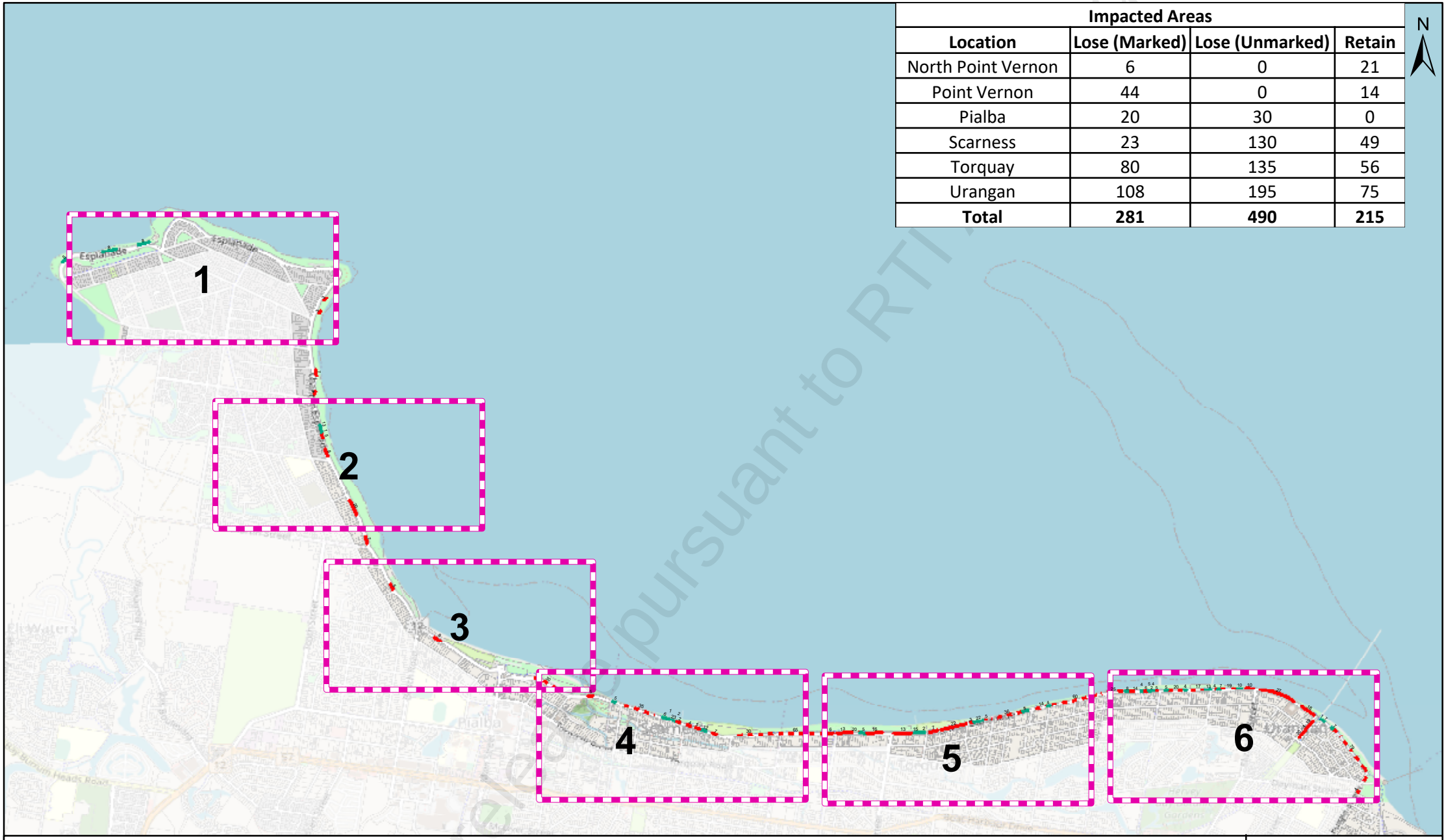
0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

Impacted Areas			
Location	**Lose (Marked)**	**Lose (Unmarked)**	**Retain**
North Point Vernon	6	0	21
Point Vernon	44	0	14
Pialba	20	30	0
Scarness	23	130	49
Torquay	80	135	56
Urangan	108	195	75
Total	**281**	**490**	**215**



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Impacted Parking Spaces

Overview Map

Lose (Marked)
Lose (Unmarked)
Retain

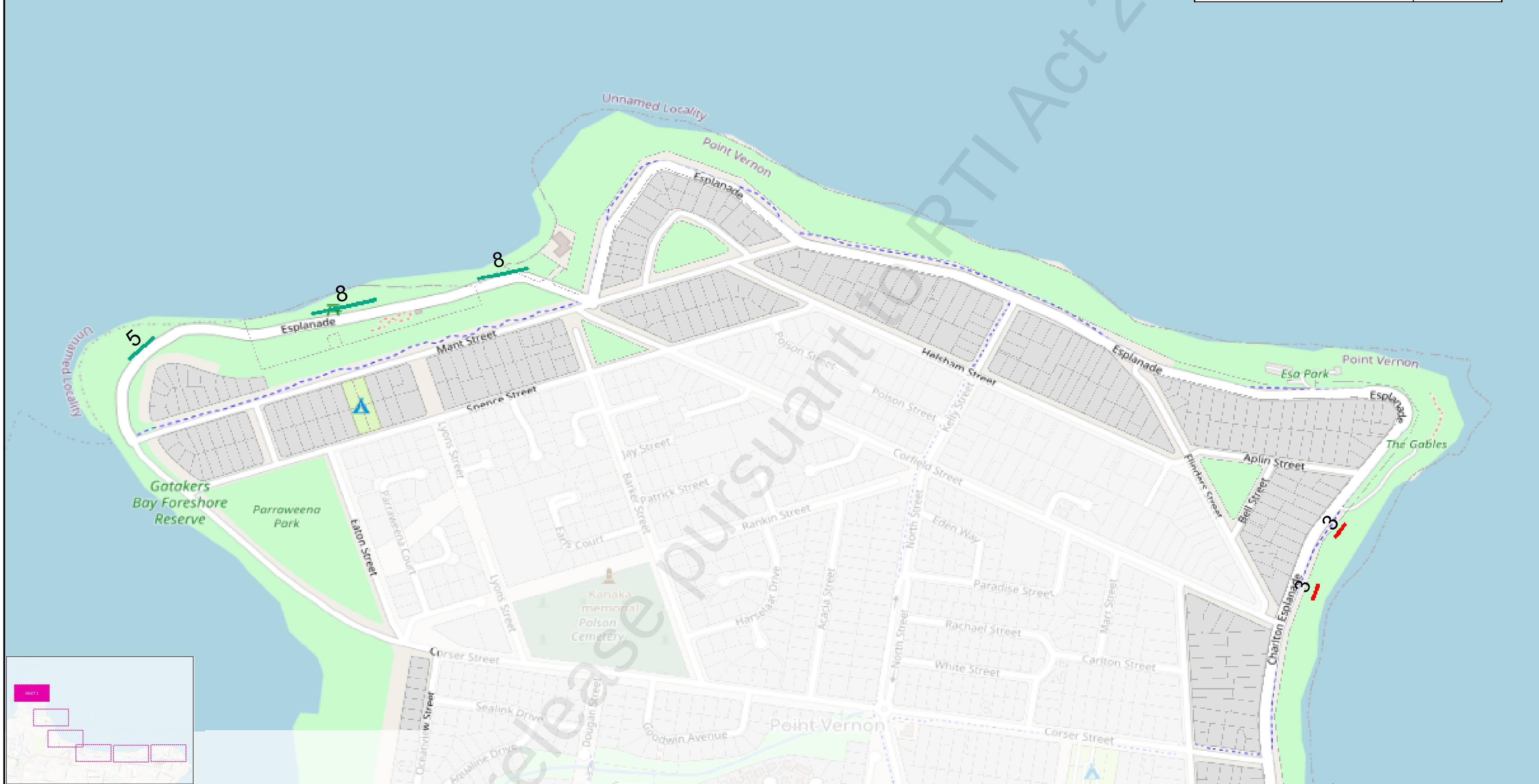
0 162.5325 650 975 1,300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

Impacted Areas	
Lose (Marked)	6
Lose (Unmarked)	0
Retain	21



HERVEY BAY MASTER PLAN PARKING AND TRAFFIC ADVICE

Impacted Parking Spaces

Location 1: North Point Vernon

Lose (Marked)
Lose (Unmarked)
Retain

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Impacted Parking Spaces

Location 2: Point Vernon

- Lose (Marked)
- Lose (Unmarked)
- Retain

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Impacted Parking Spaces

Location 3: Pialba

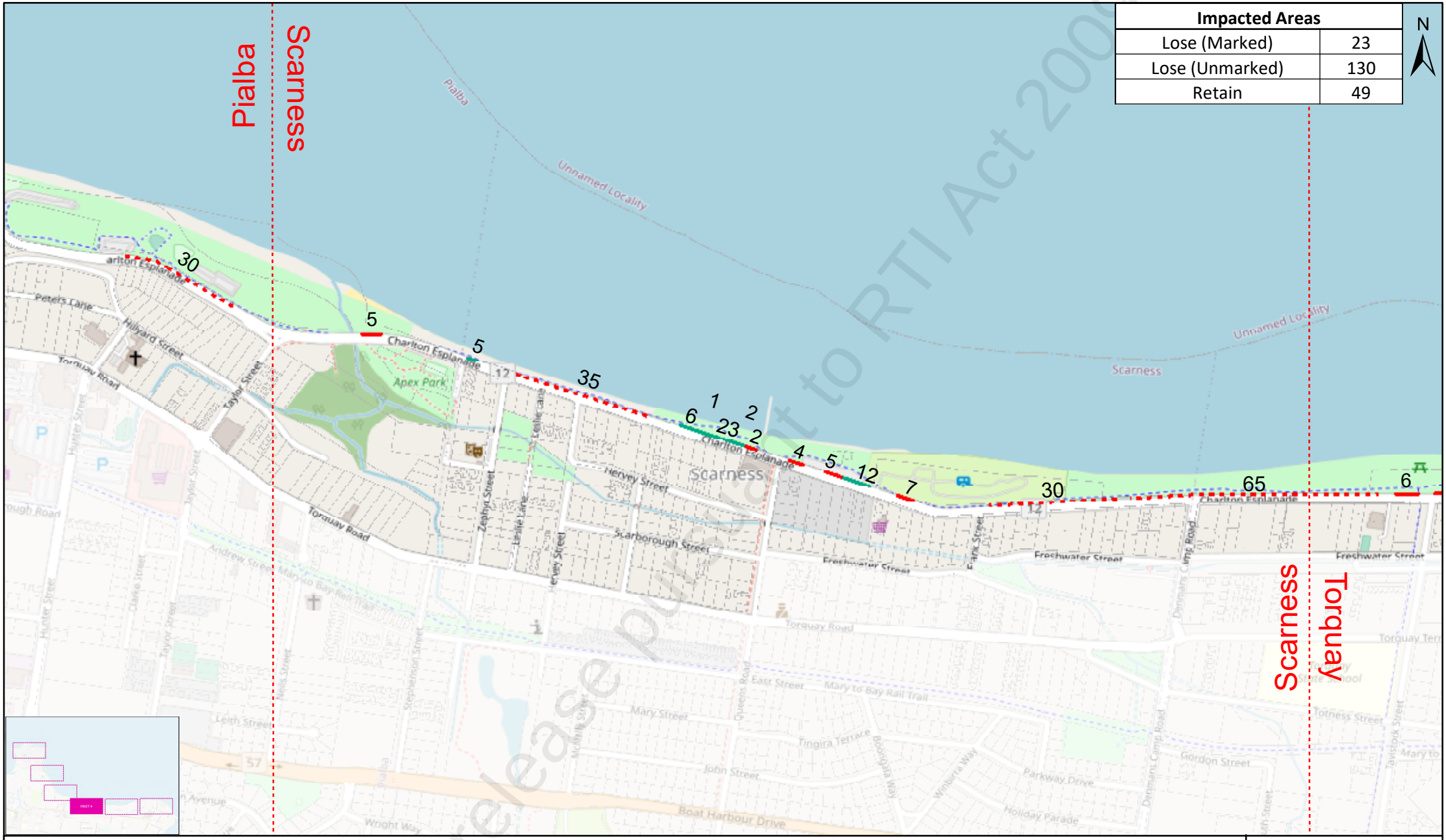
- Lose (Marked)
- Lose (Unmarked)
- Retain

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Impacted Parking Spaces

Location 4: Scarness

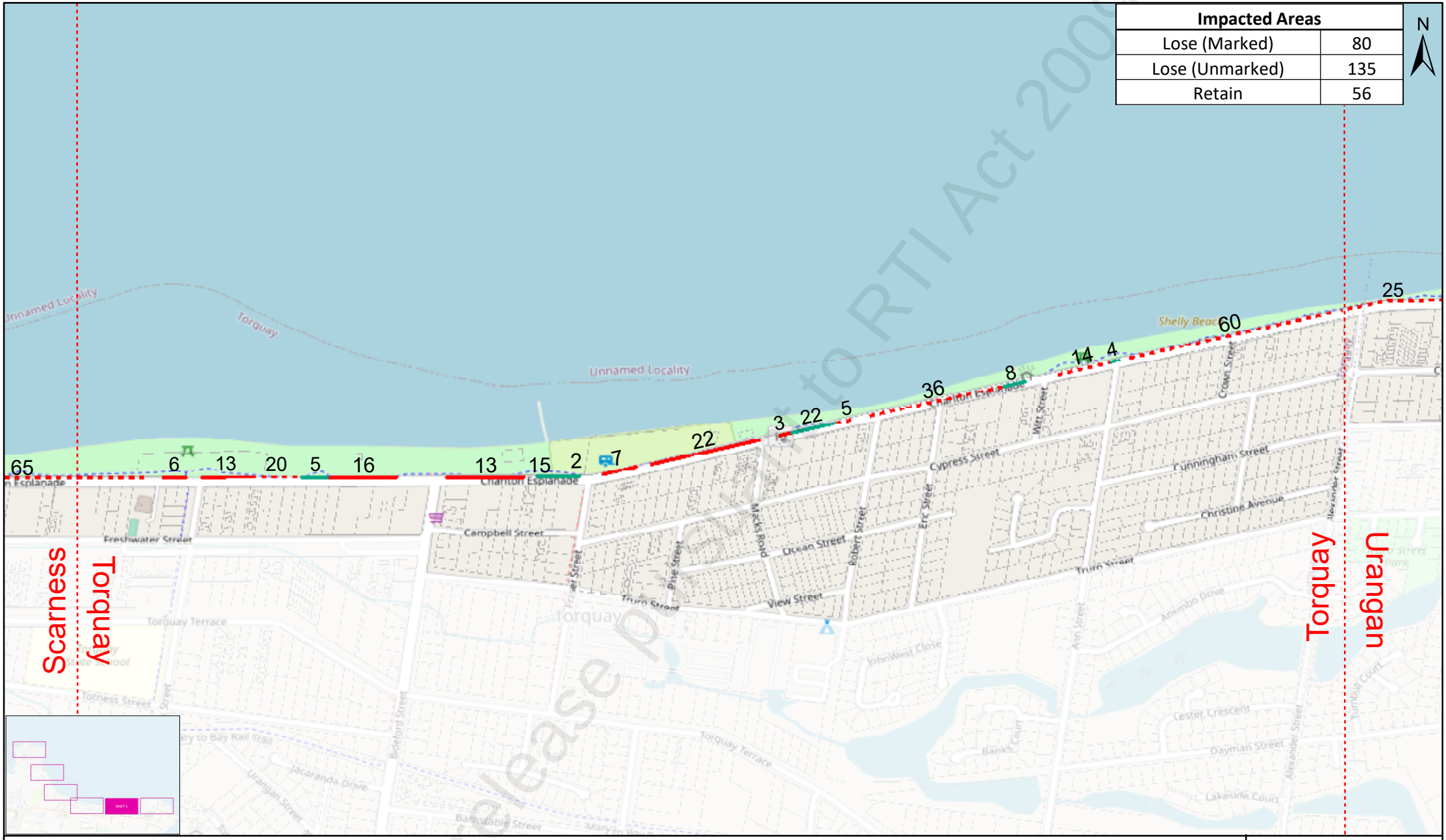
- Lose (Marked)
- Lose (Unmarked)
- Retain

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Impacted Parking Spaces

Location 5: Torquay

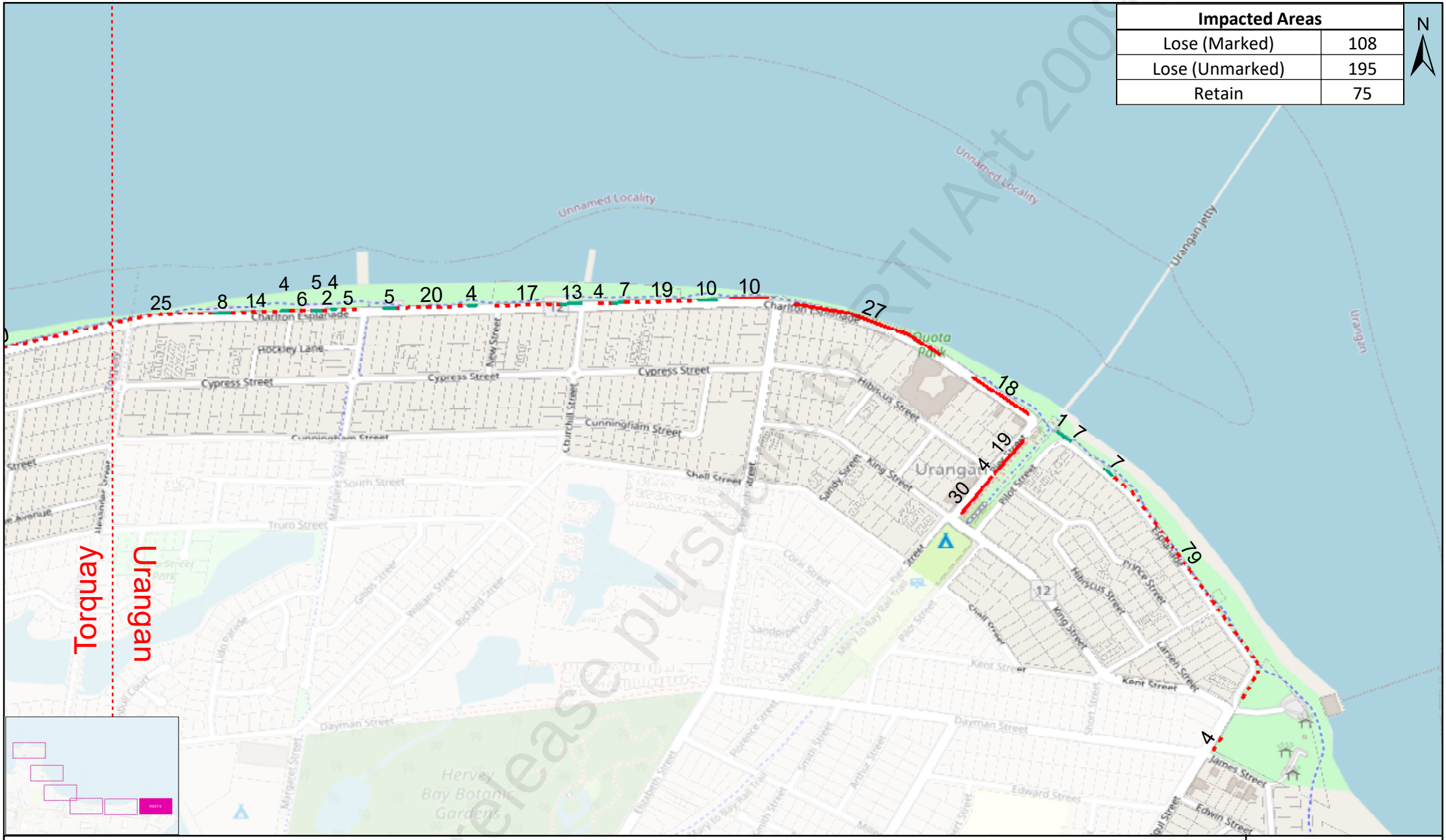
- Lose (Marked)
- Lose (Unmarked)
- Retain

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Impacted Parking Spaces

Location 6: Urangan

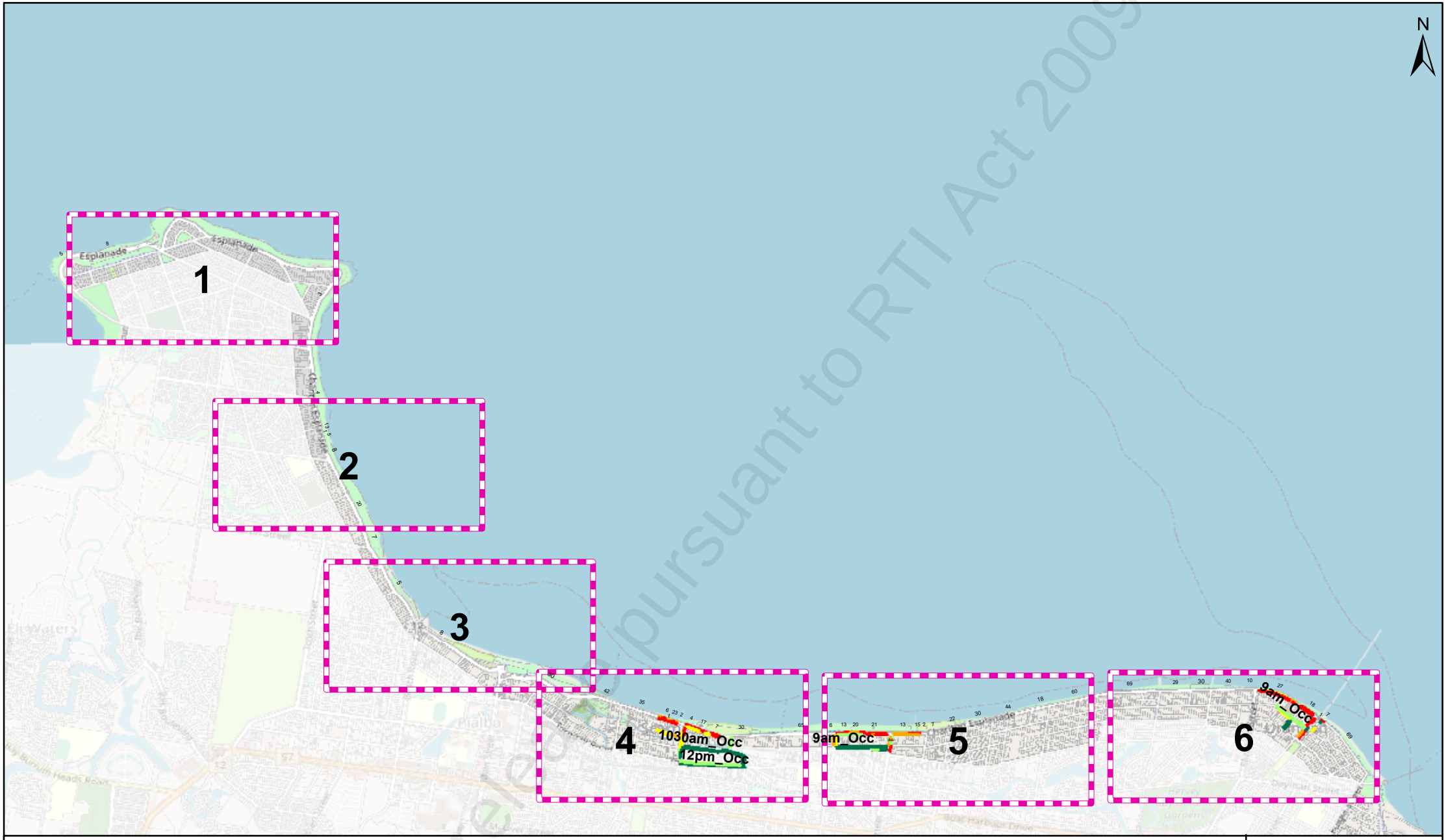
- Lose (Marked)
- Lose (Unmarked)
- Retain

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Saturday 16th Feb 2019)

Overview Map

0 162.5325 650 975 1,300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Saturday 16th Feb 2019)

Location 1: North Point Vernon

Max. Occupancy %

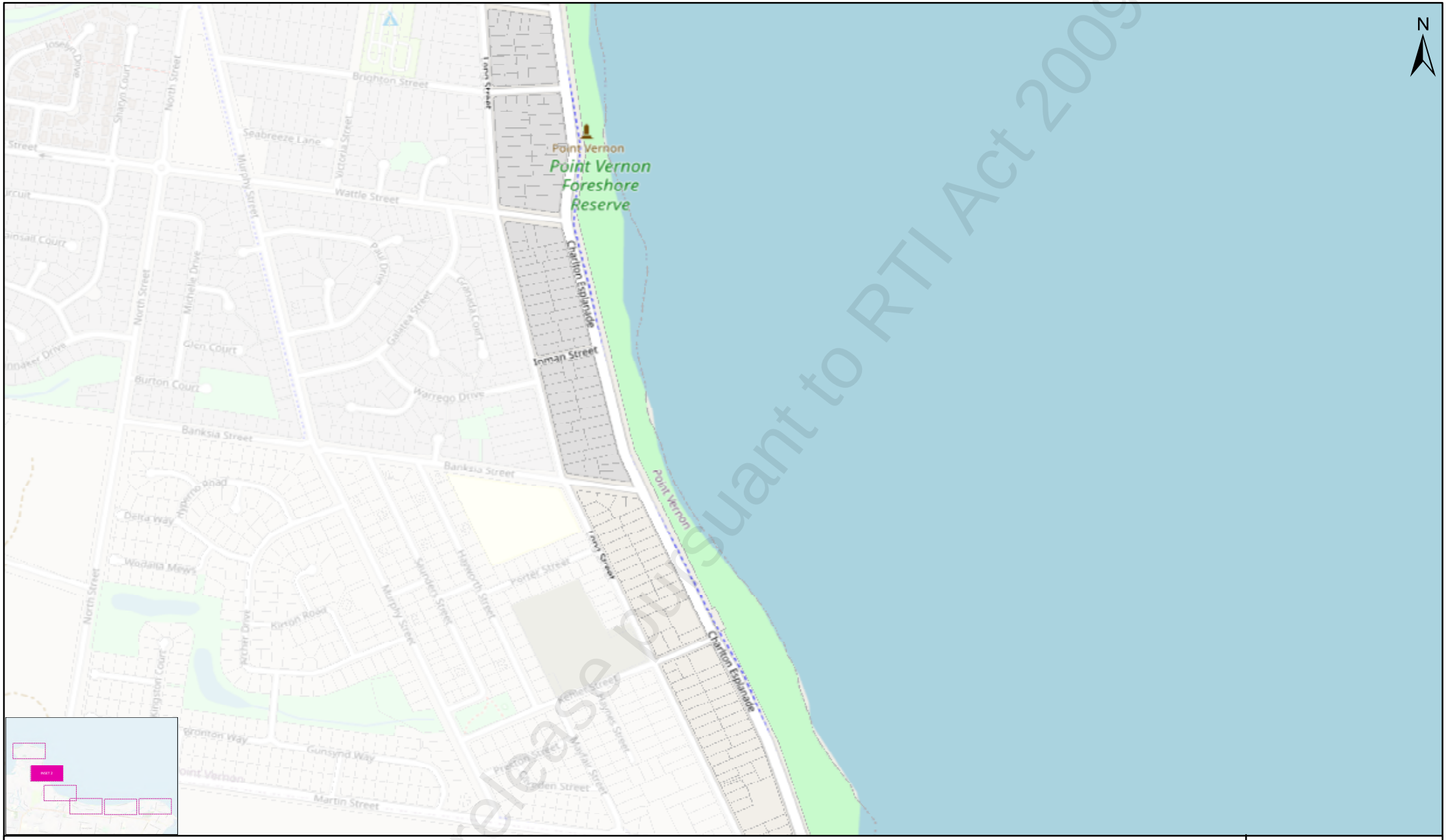
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Saturday 16th Feb 2019)

Location 2: Point Vernon

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Saturday 16th Feb 2019)

Location 3: Pialba

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Saturday 16th Feb 2019)

Location 4: Scarness

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Saturday 16th Feb 2019)

Location 5: Torquay

Max. Occupancy %

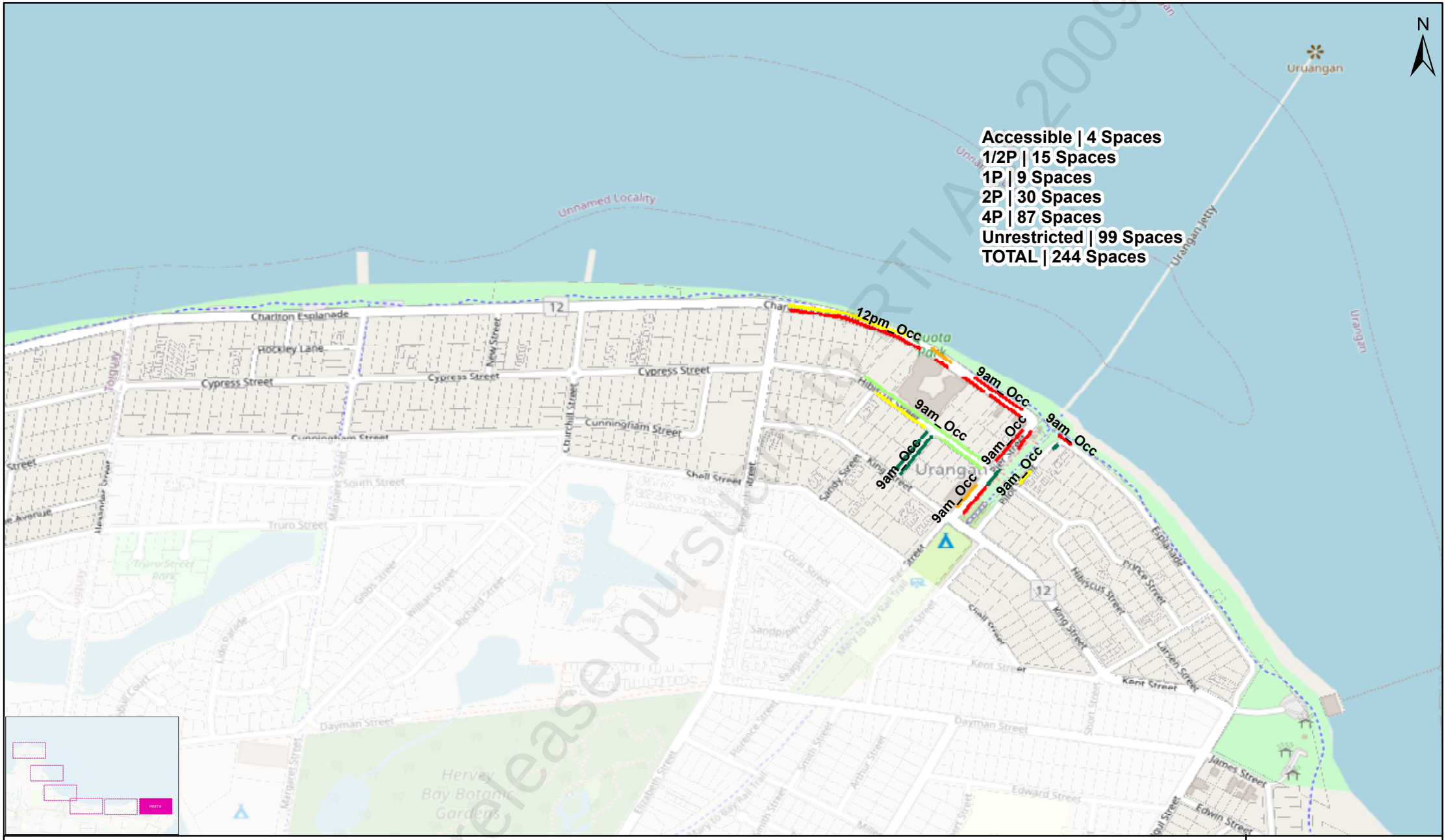
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Saturday 16th Feb 2019)

Location 6: Urangan

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

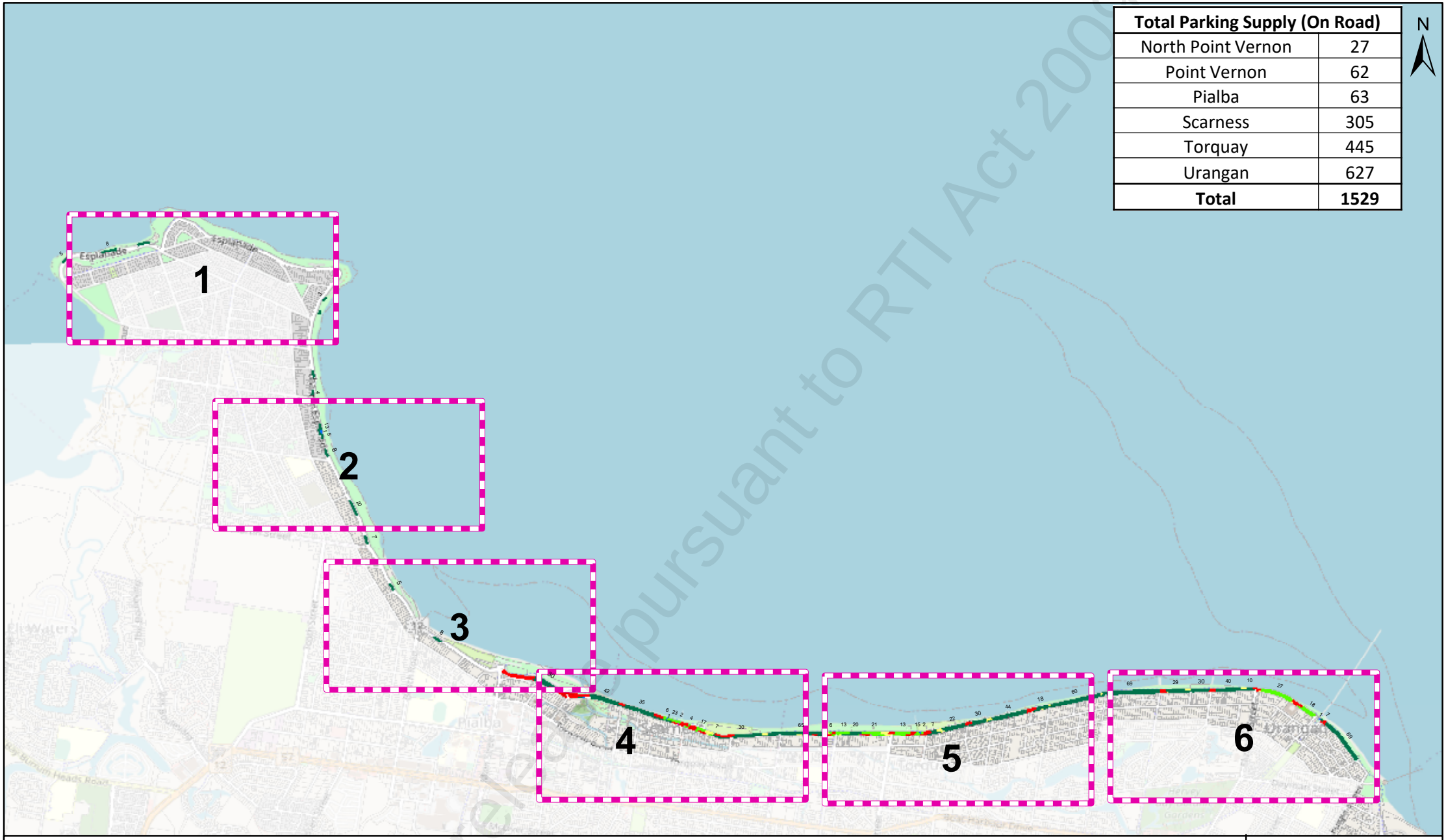
0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

Total Parking Supply (On Road)	
North Point Vernon	27
Point Vernon	62
Pialba	63
Scarness	305
Torquay	445
Urangan	627
Total	**1529**



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

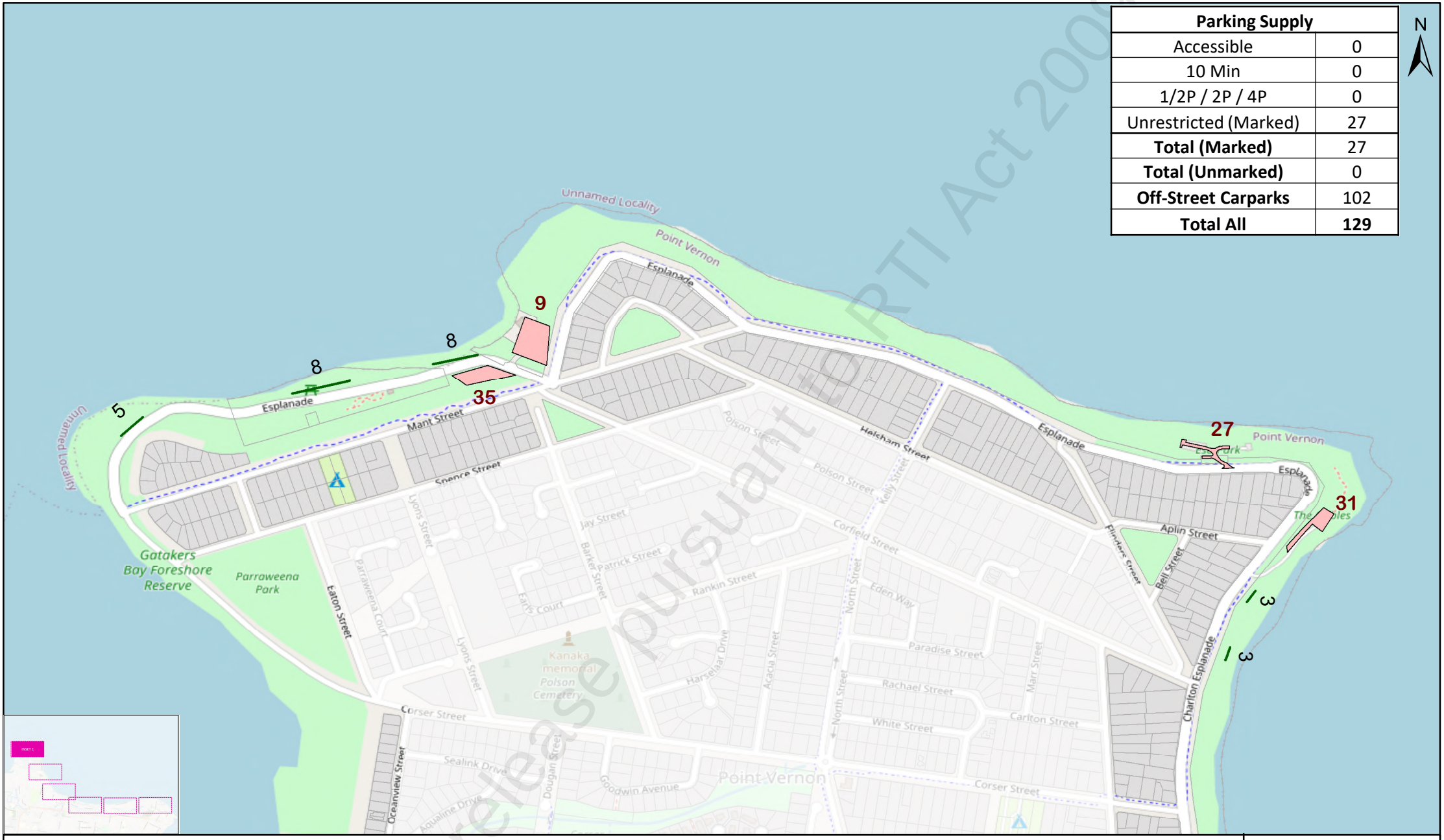
Parking Restrictions

Overview Map

Project Number: P5470

Date: 30/11/2021

Issue: 001



Parking Supply	
Accessible	0
10 Min	0
1/2P / 2P / 4P	0
Unrestricted (Marked)	27
Total (Marked)	27
Total (Unmarked)	0
Off-Street Carparks	102
Total All	**129**

N

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Restrictions
Location 1: North Point Vernon

- Unrestricted (Unmarked)
- Unrestricted (Marked)
- Accessible
- Taxi Zone
- Loading Zone
- Bus Zone
- No Parking / Stopping
- 10Min
- 1/2P / 2P / 4P
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Restrictions
Location 2: Point Vernon

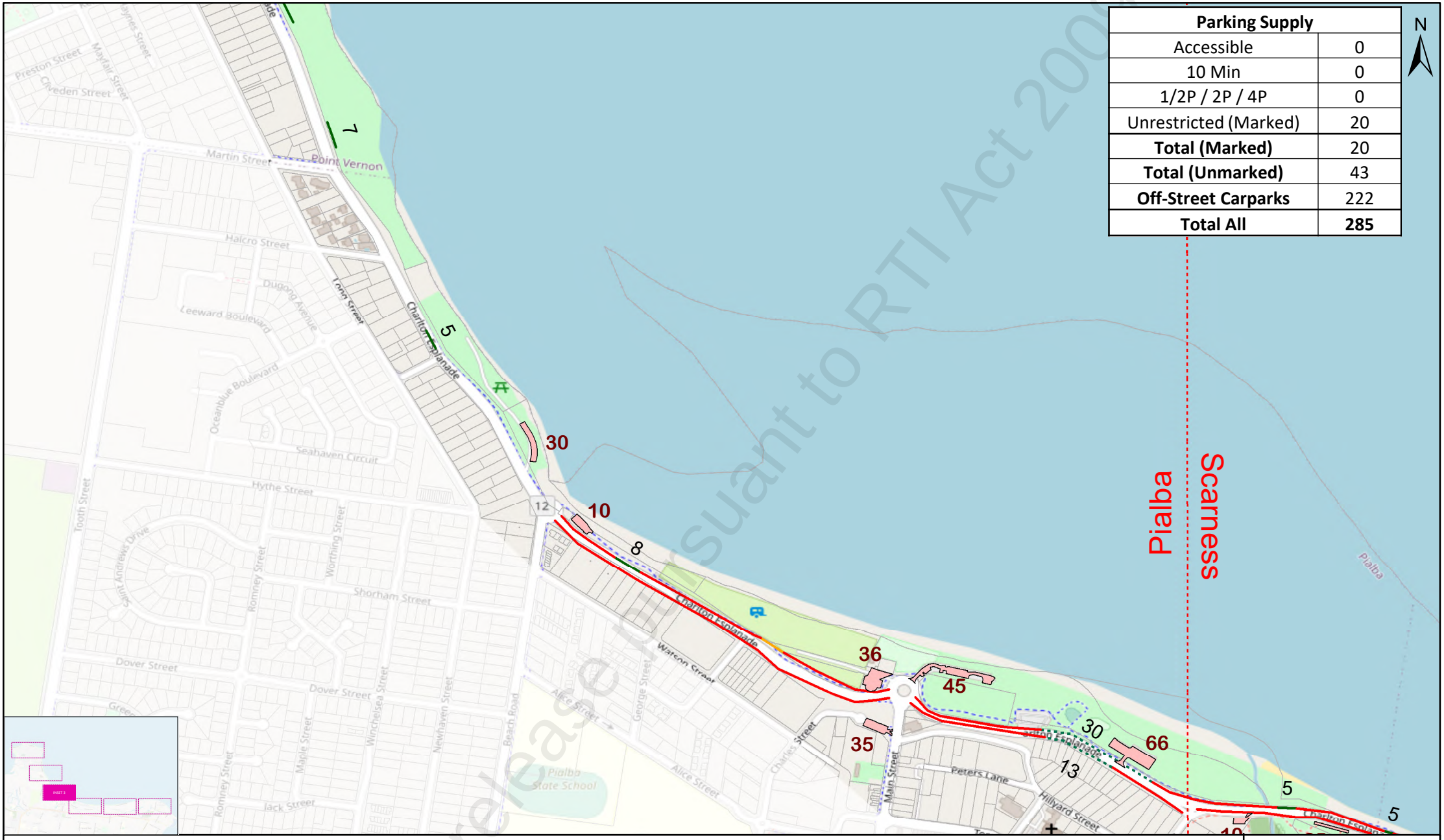
- Unrestricted (Unmarked)
- Unrestricted (Marked)
- Accessible
- Taxi Zone
- Loading Zone
- Bus Zone
- No Parking / Stopping
- 10Min
- 1/2P / 2P / 4P
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Restrictions
Location 3: Pialba

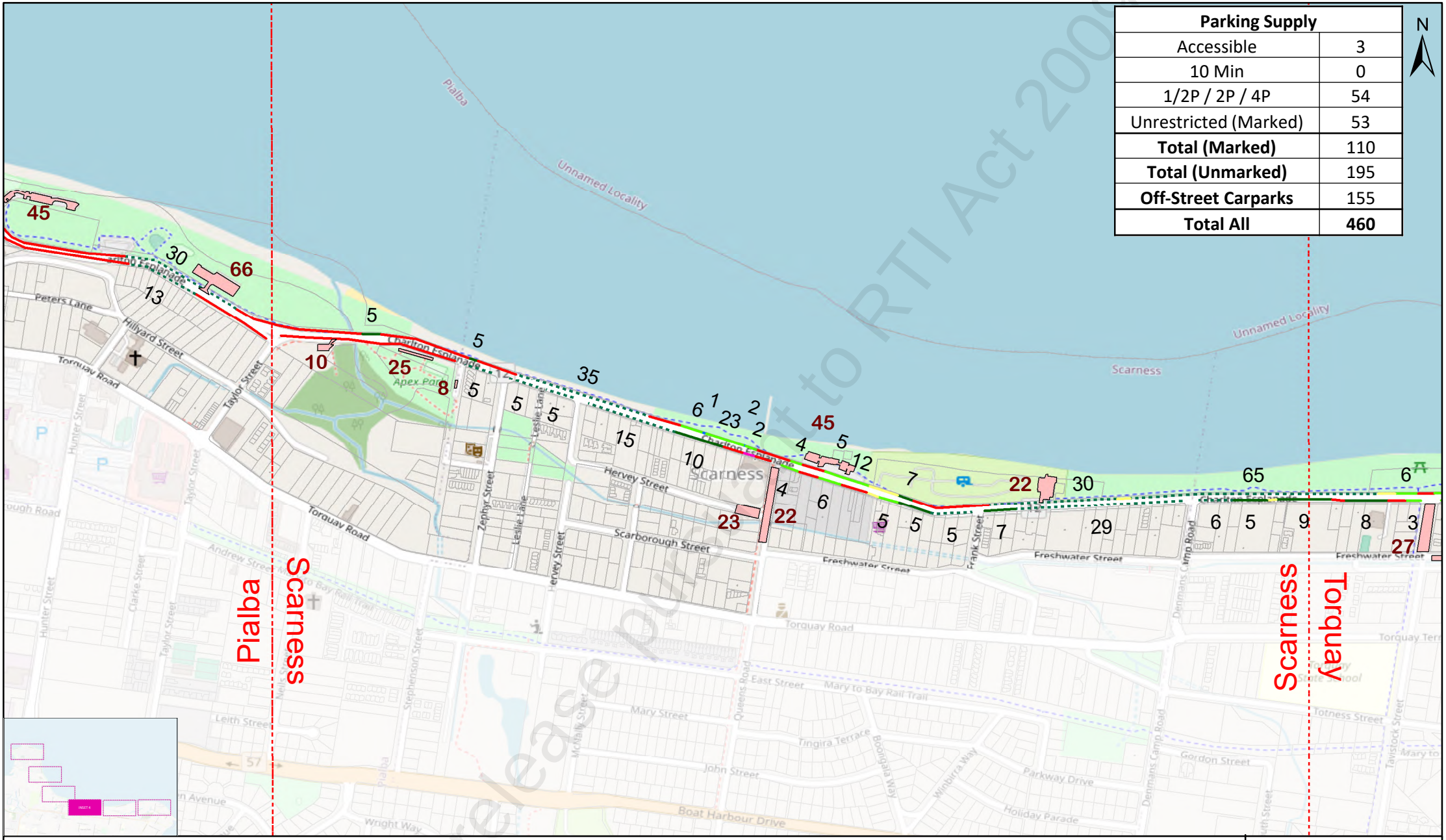
- Unrestricted (Unmarked)
- Unrestricted (Marked)
- Accessible
- Taxi Zone
- Loading Zone
- Bus Zone
- No Parking / Stopping
- 10Min
- 1/2P / 2P / 4P
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Restrictions
Location 4: Scarness

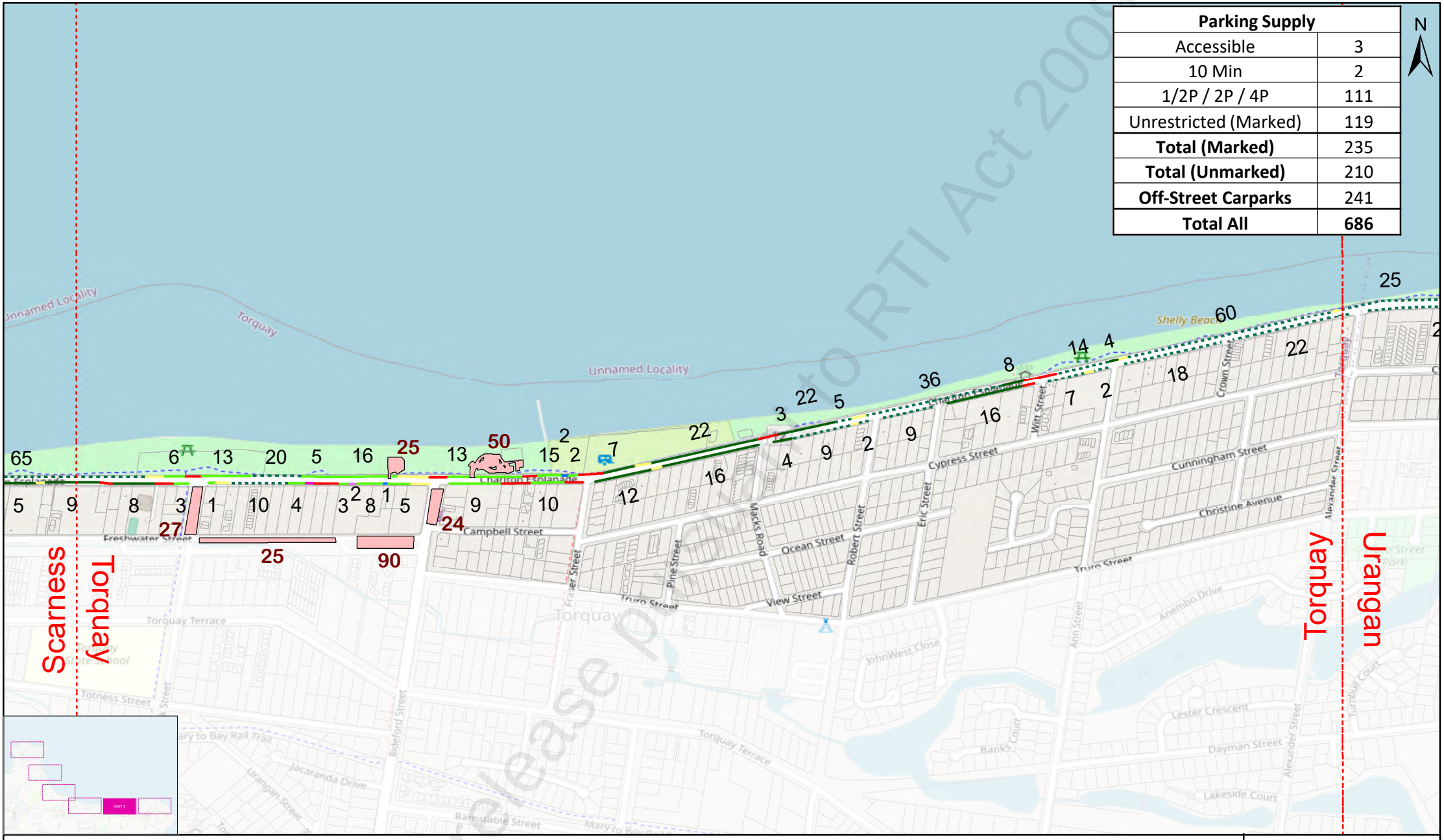
- Unrestricted (Unmarked)
- Unrestricted (Marked)
- Accessible
- Taxi Zone
- Loading Zone
- Bus Zone
- No Parking / Stopping
- 10Min
- 1/2P / 2P / 4P
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

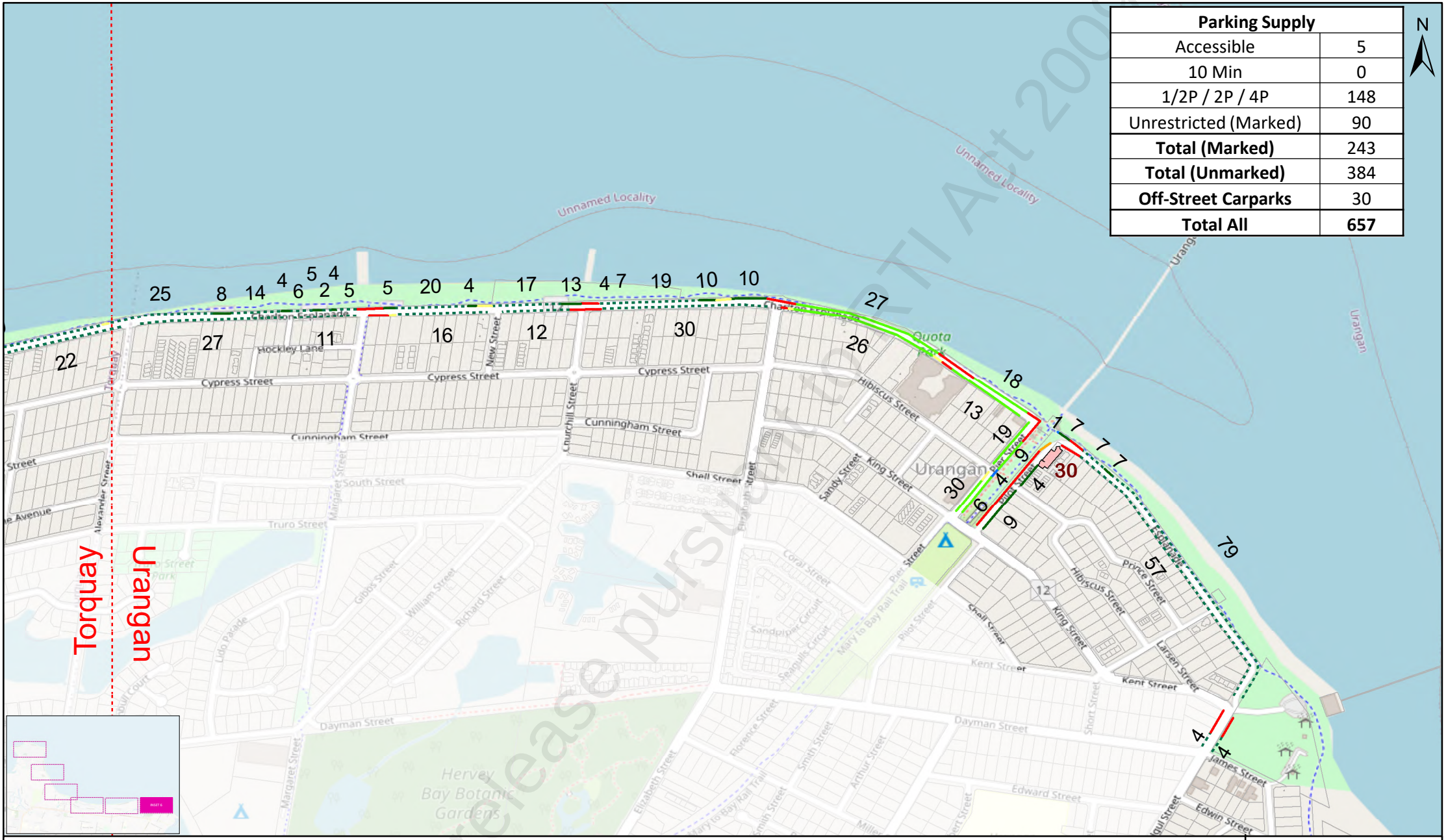
BITZIOS consulting

Parking Restrictions
Location 5: Torquay

Project Number: P5470

Date: 30/11/2021

Issue: 001



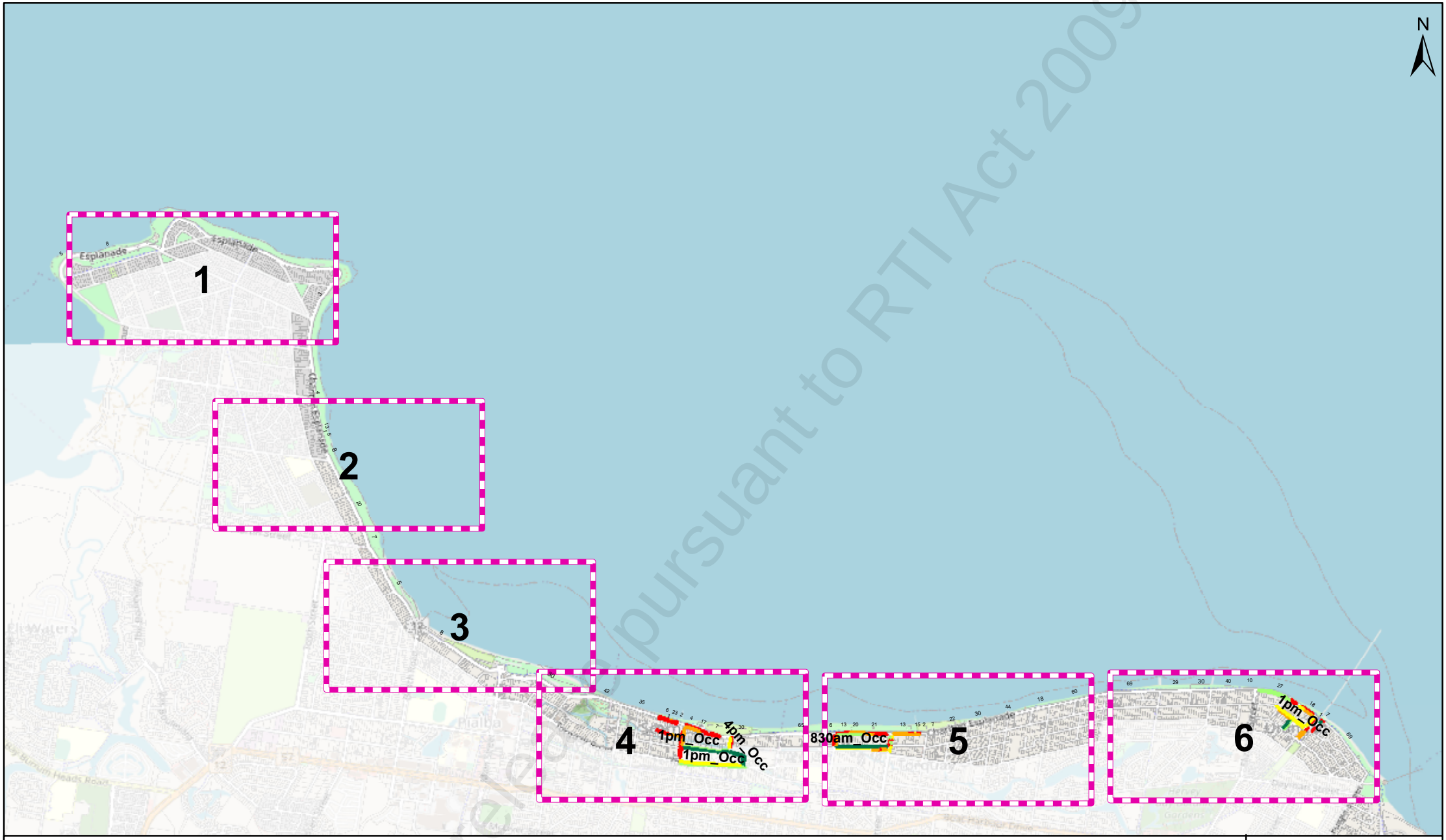
HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Thursday 14th Feb 2019)

Overview Map

0 162.5325 650 975 1,300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN PARKING AND TRAFFIC ADVICE

Parking Occupancy (Thursday 14th Feb 2019)

Location 1: North Point Vernon

Max. Occupancy %

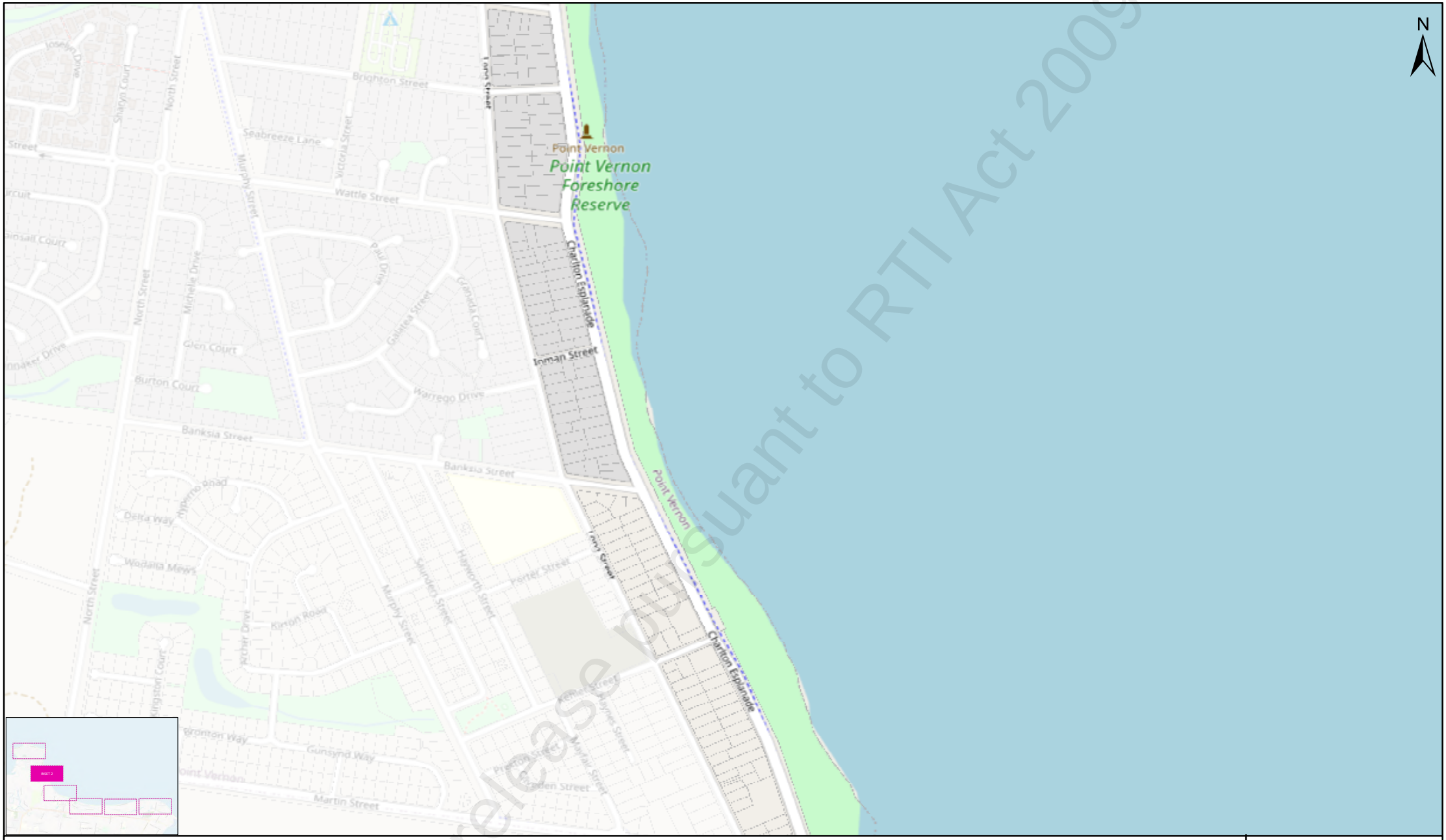
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Thursday 14th Feb 2019)

Location 2: Point Vernon

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Thursday 14th Feb 2019)

Location 3: Pialba

Max. Occupancy %

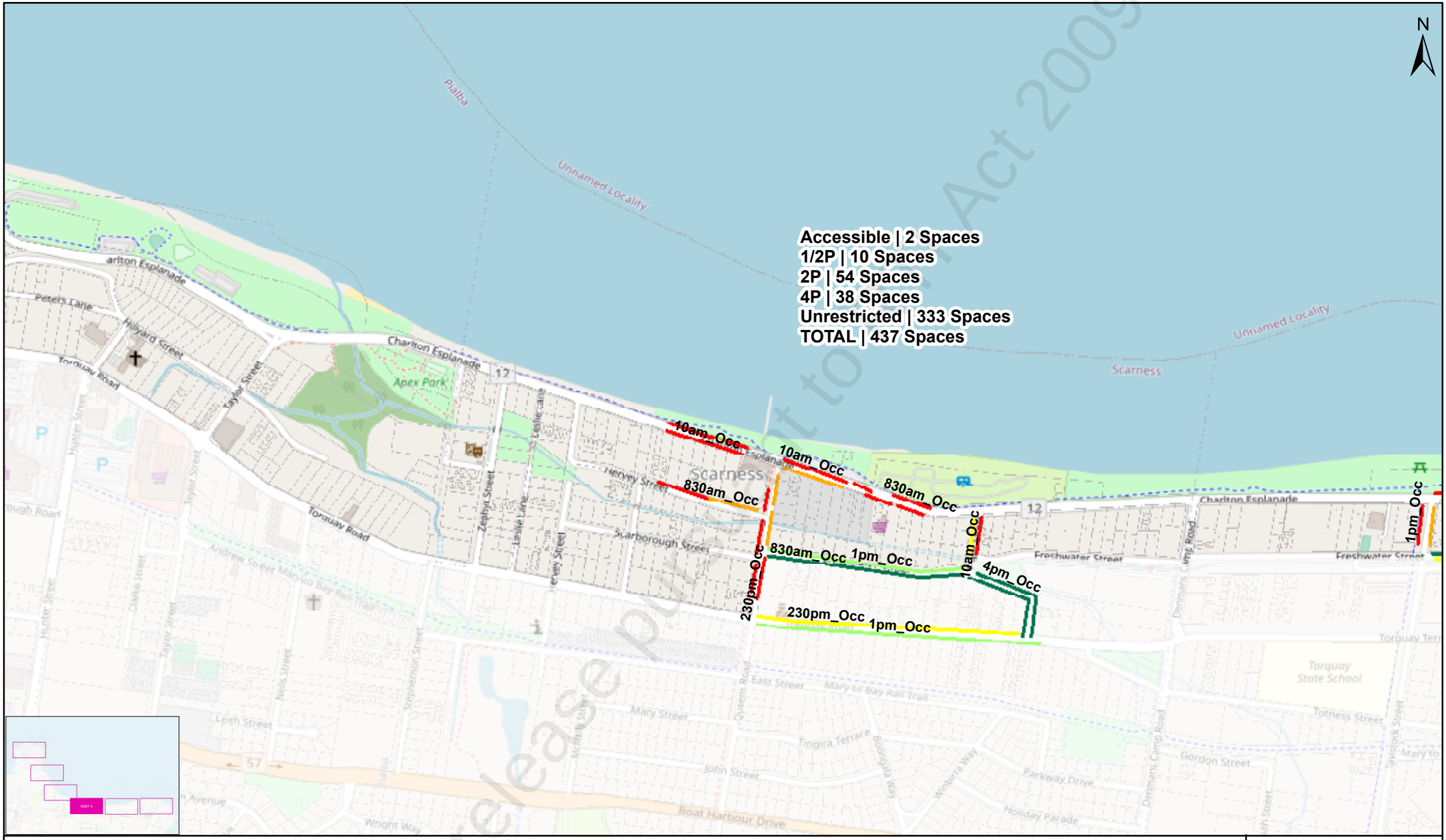
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Thursday 14th Feb 2019)

Location 4: Scarness

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Thursday 14th Feb 2019)

Location 5: Torquay

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Thursday 14th Feb 2019)

Location 6: Urangan

Max. Occupancy %

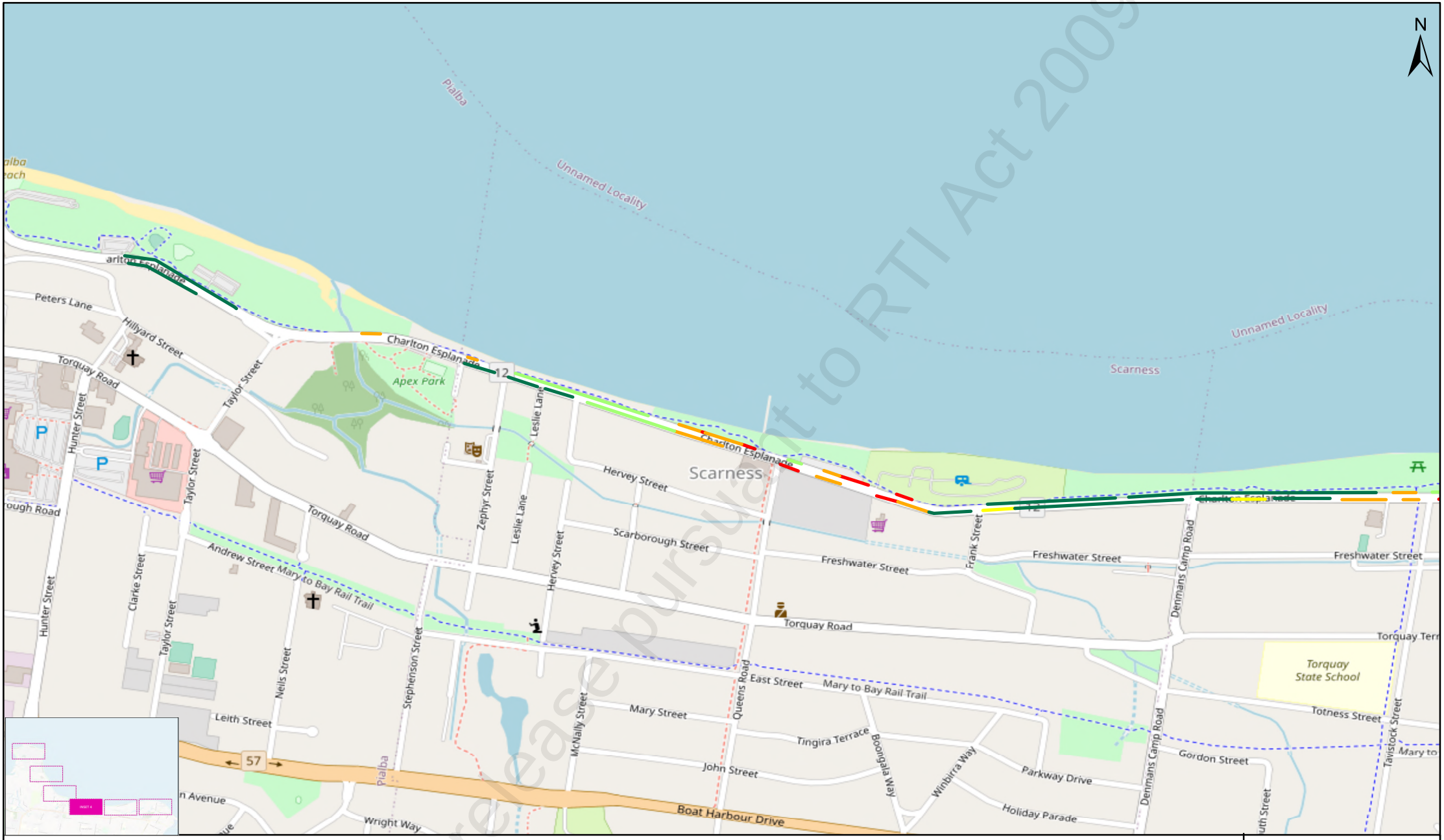
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Tuesday, 7th Dec 2021 - AM)

Location 4: Scarness

Occupancy %

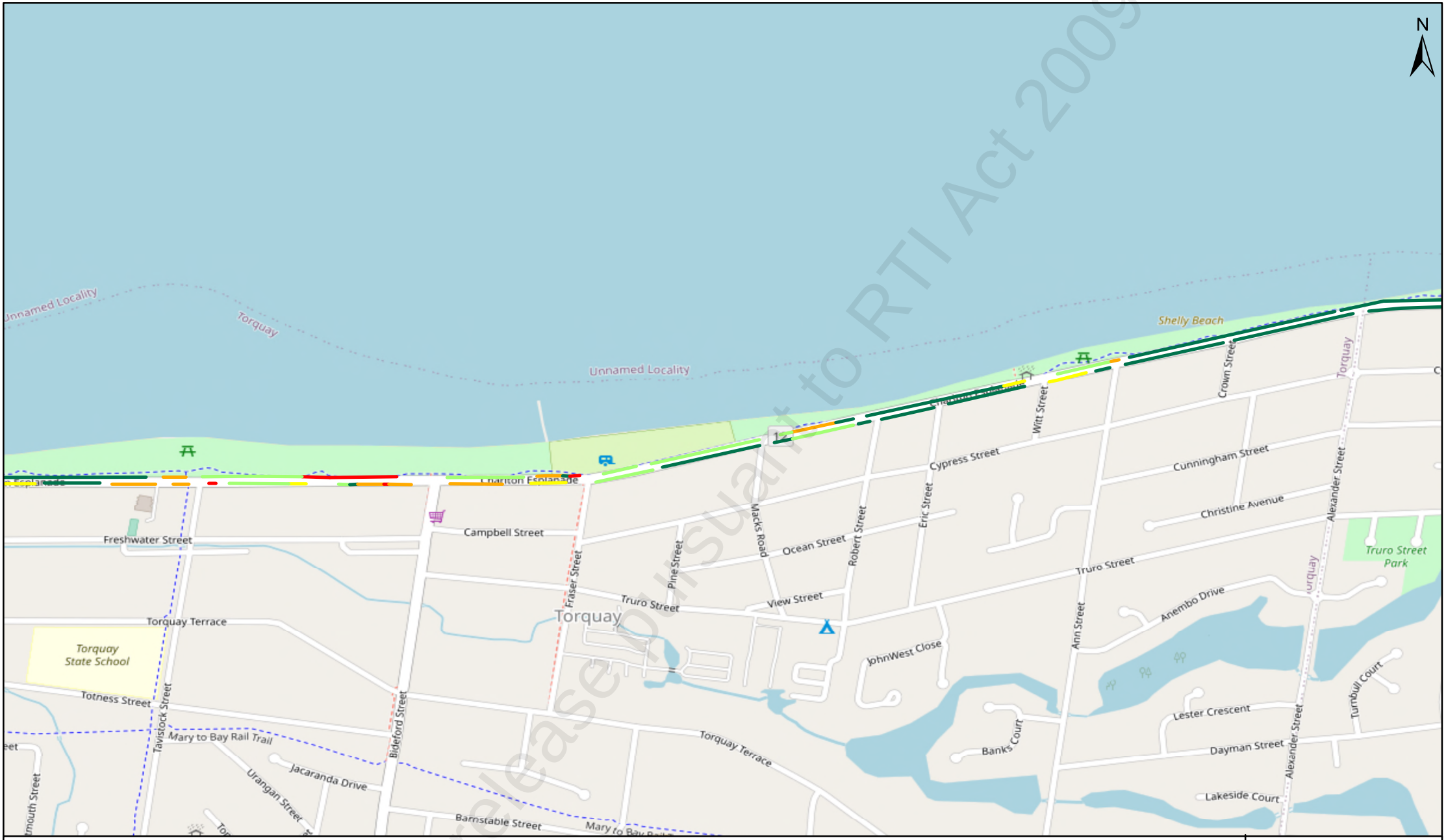
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 17/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Tuesday, 7th Dec 2021 - AM)

Location 5: Torquay

Occupancy %

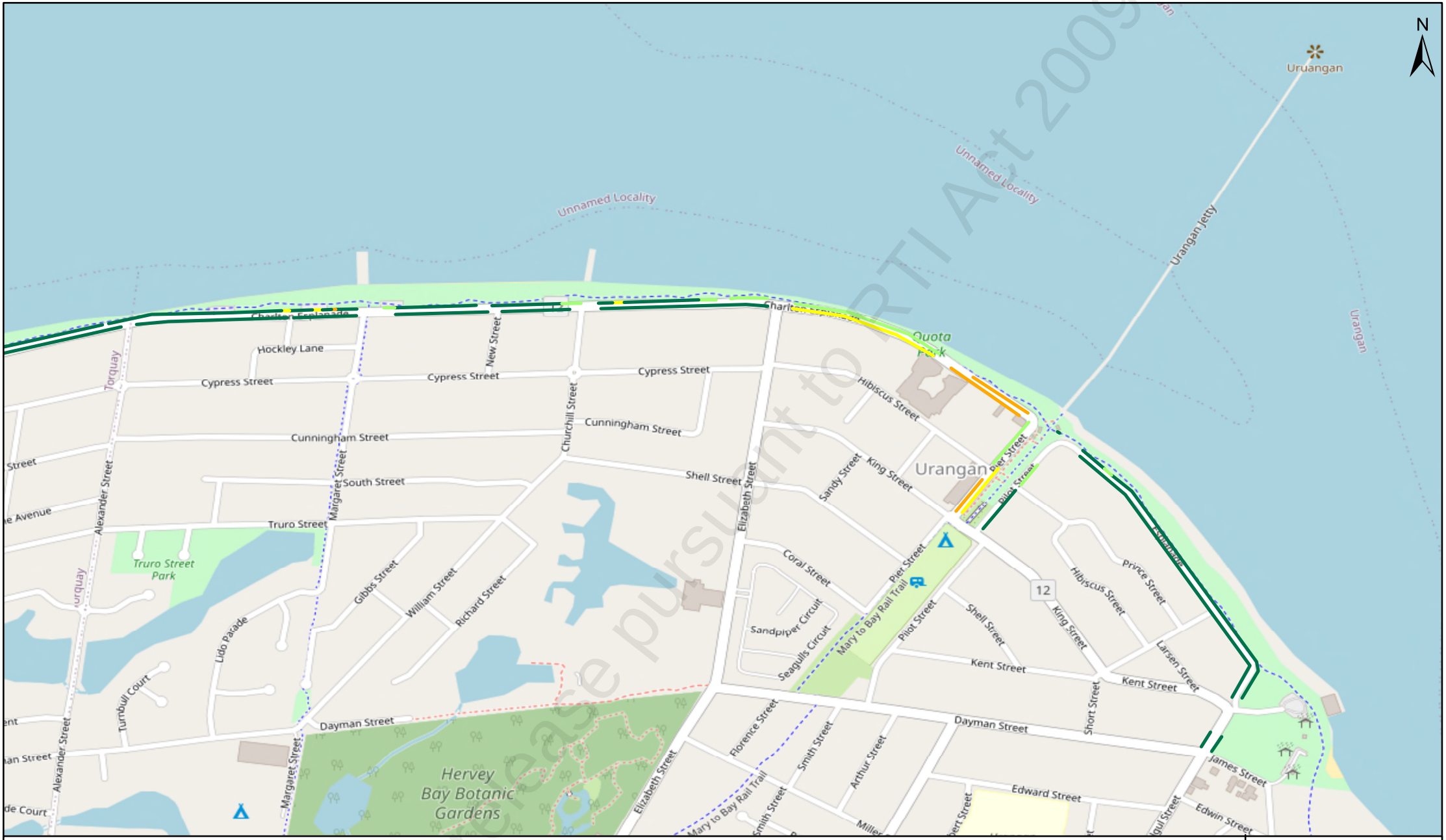
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 17/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Tuesday, 7th Dec 2021 - AM)

Location 6: Urangan

Occupancy %

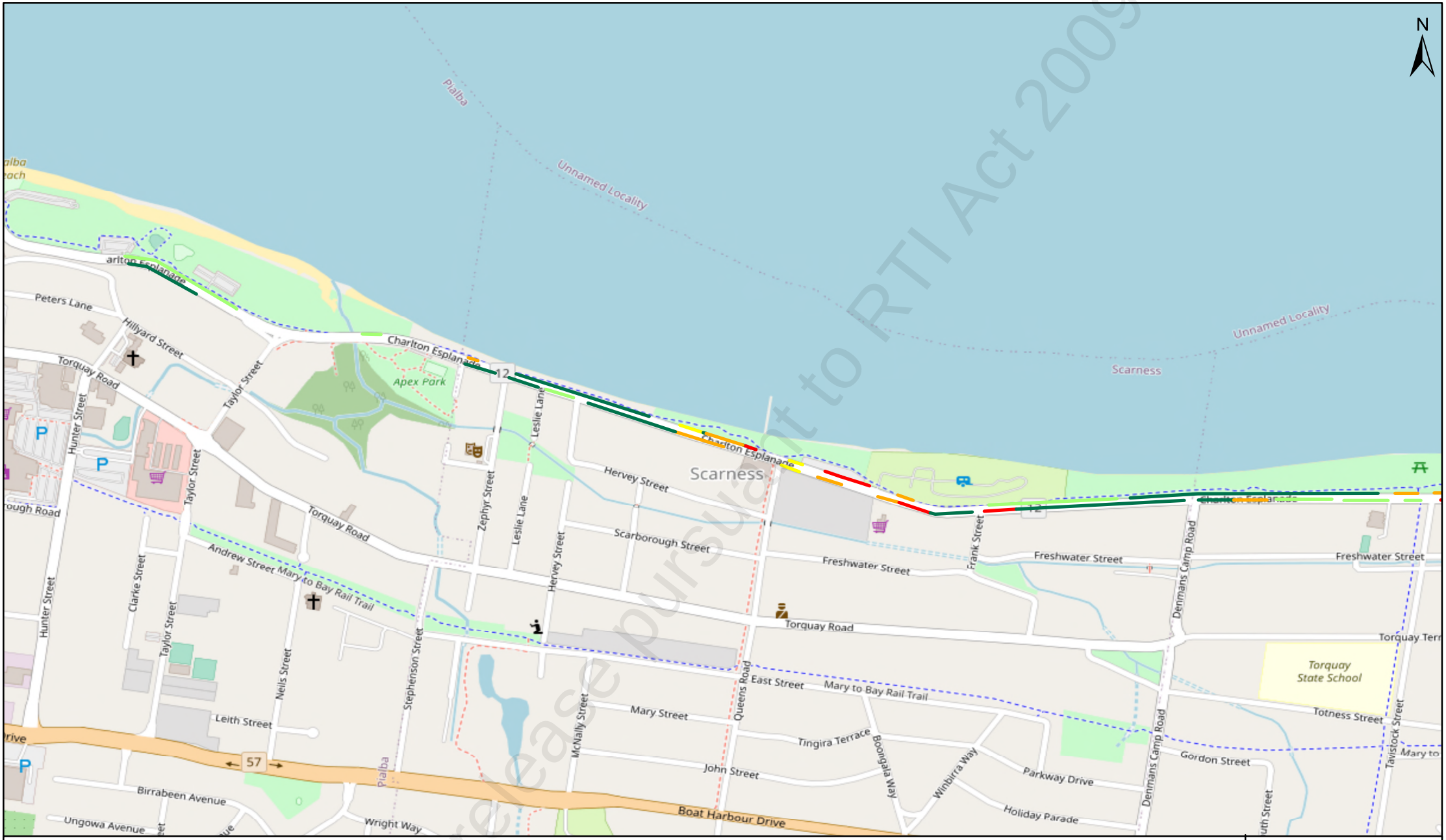
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 17/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Tuesday, 7th Dec 2021 - AM)

Location 4: Scarness

Occupancy %

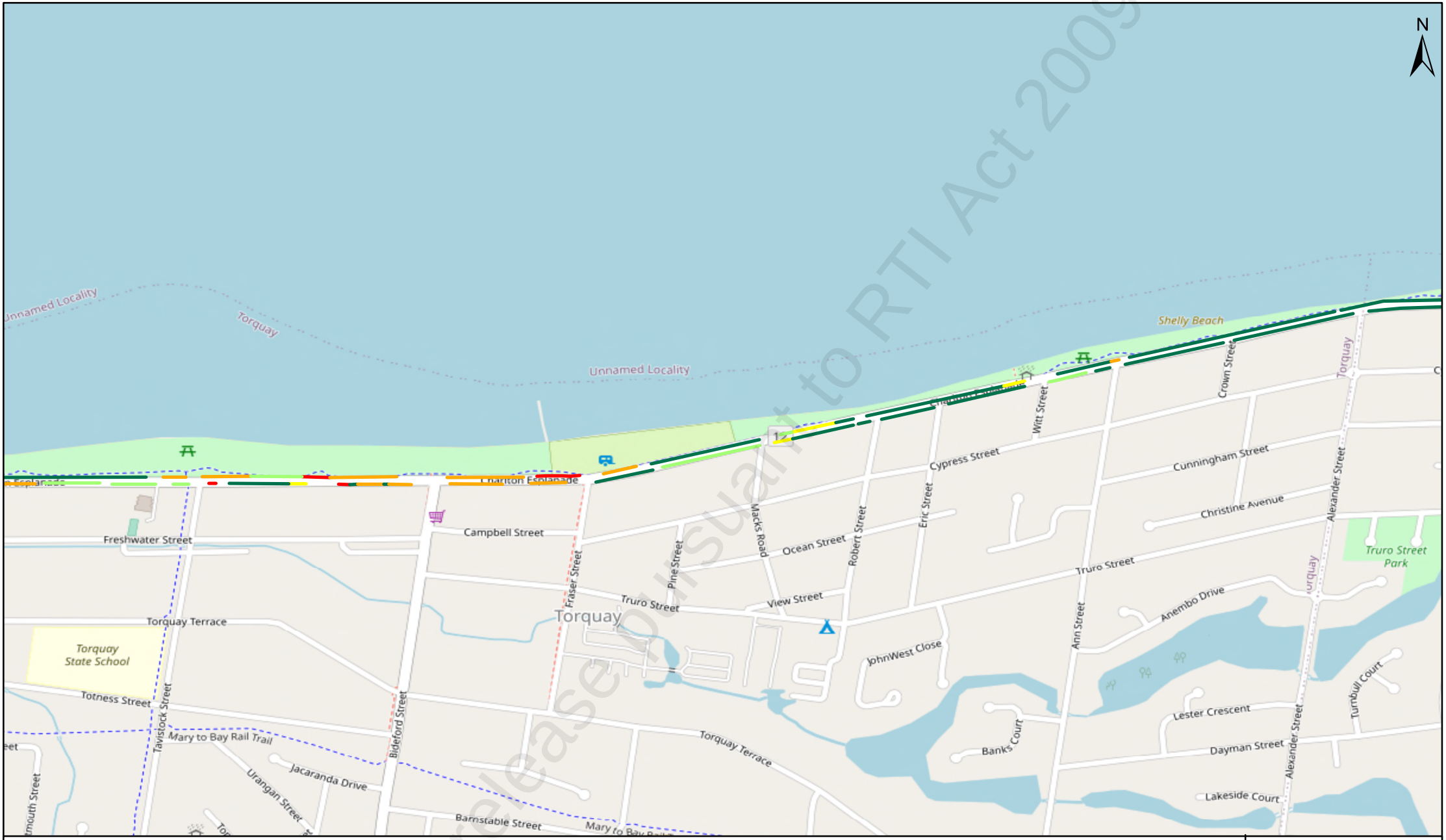
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 17/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Tuesday, 7th Dec 2021 - AM)

Location 5: Torquay

Occupancy %

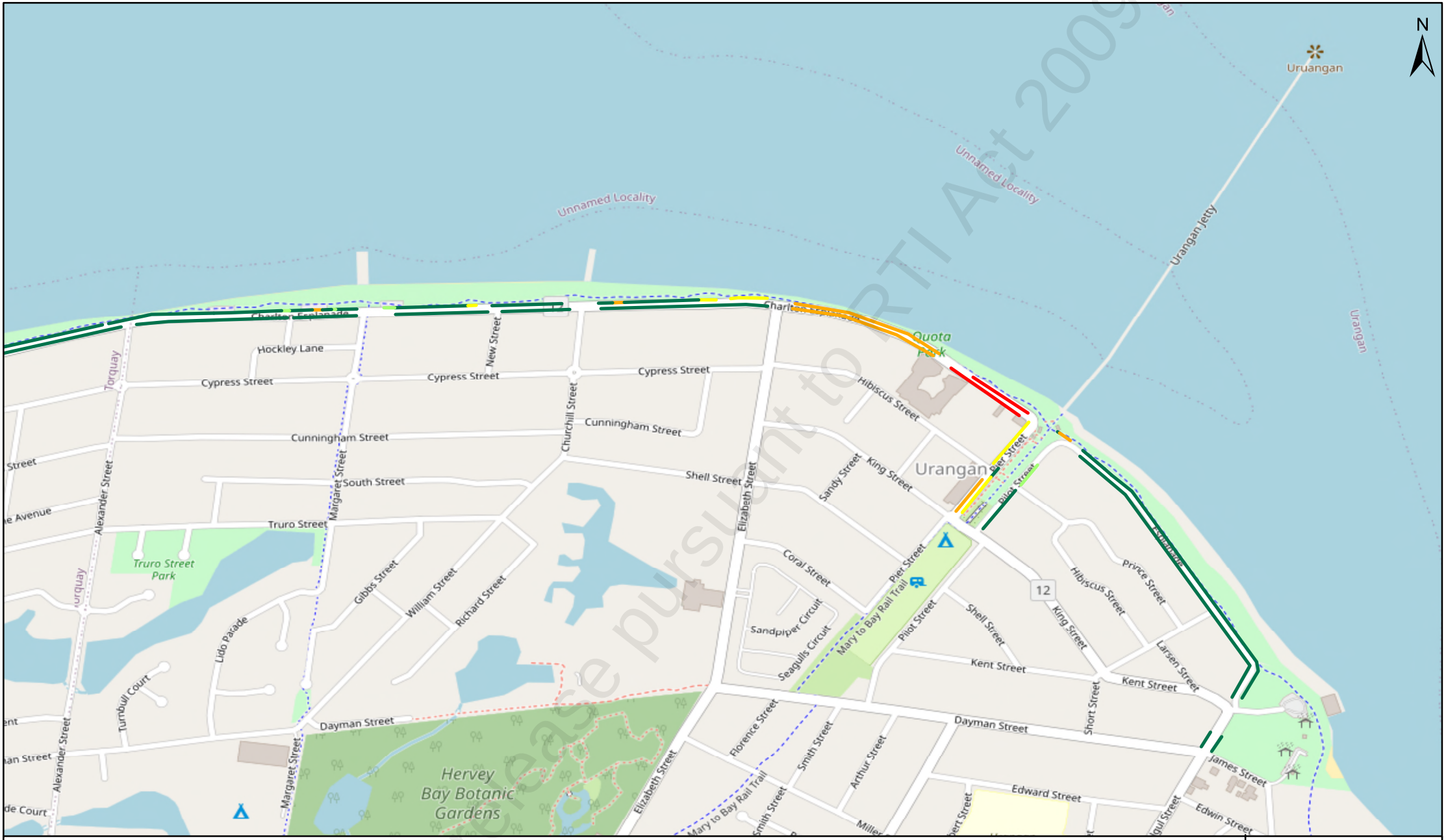
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 17/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Tuesday, 7th Dec 2021 - AM)

Location 6: Urangan

Occupancy %

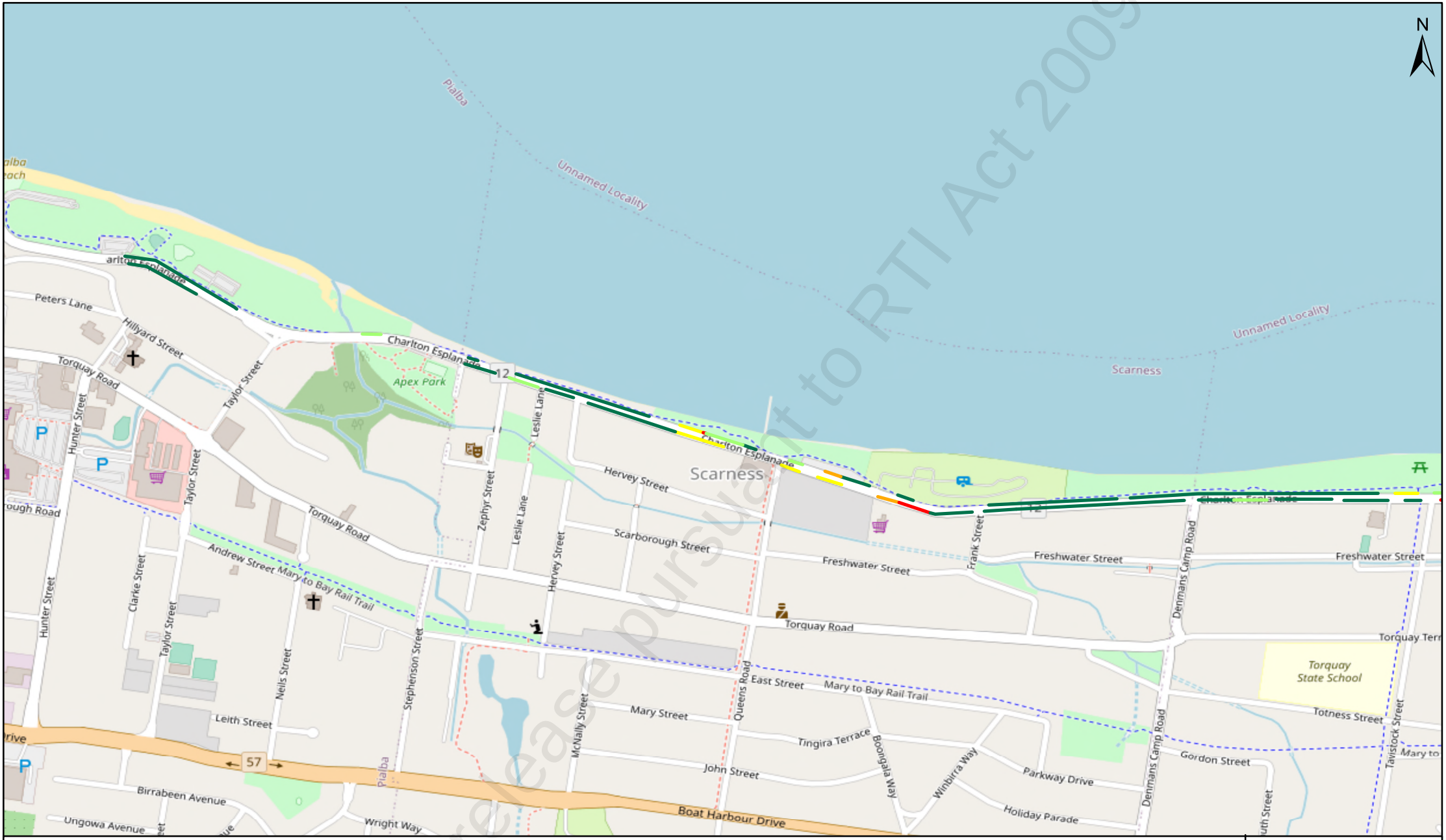
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 17/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Tuesday, 7th Dec 2021 - AM)

Location 4: Scarness

Occupancy %

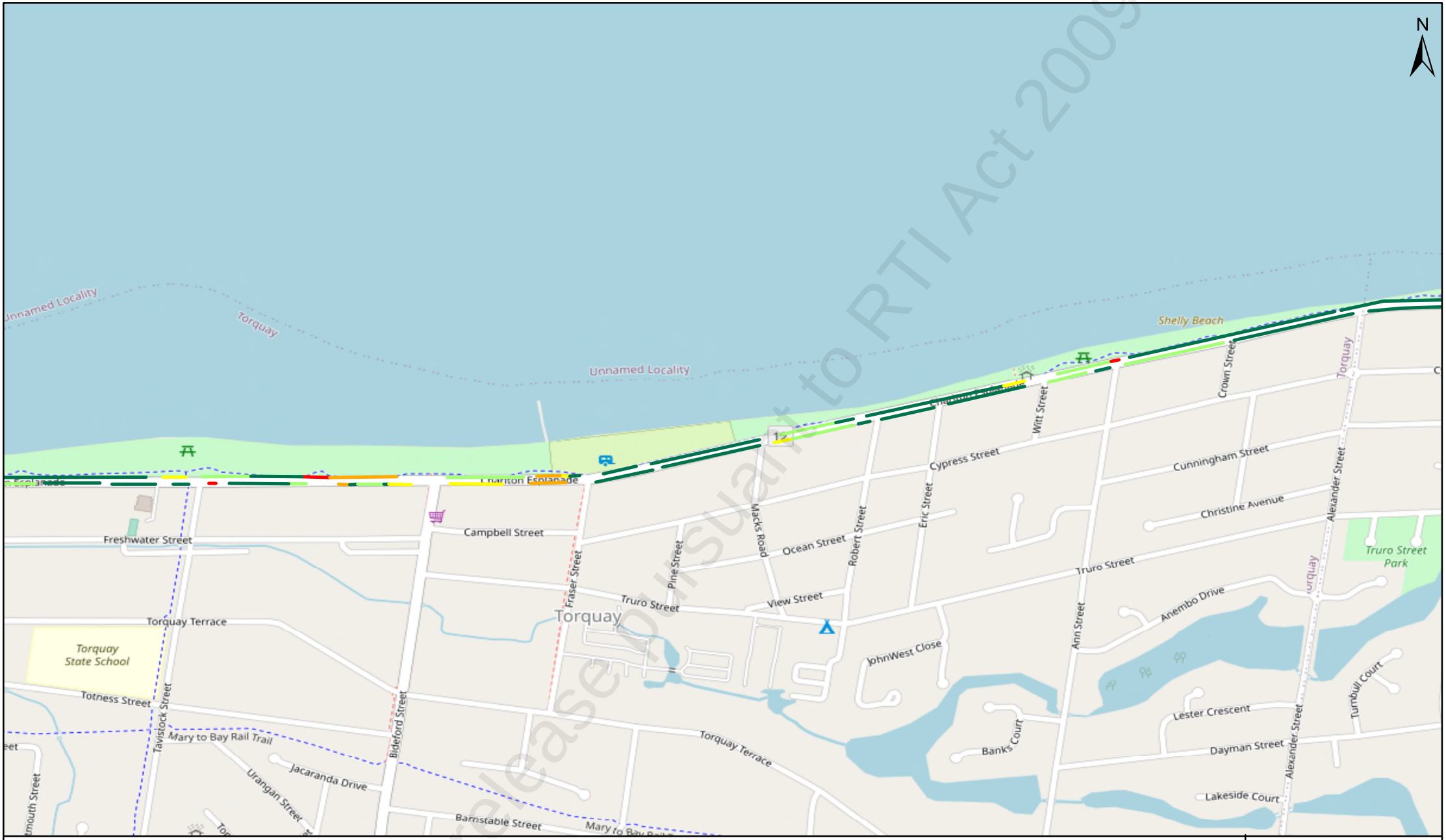
- 0-20
- 21-40
- 41-60
- 61-85
- 86-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 17/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Tuesday, 7th Dec 2021 - AM)

Location 5: Torquay

Occupancy %

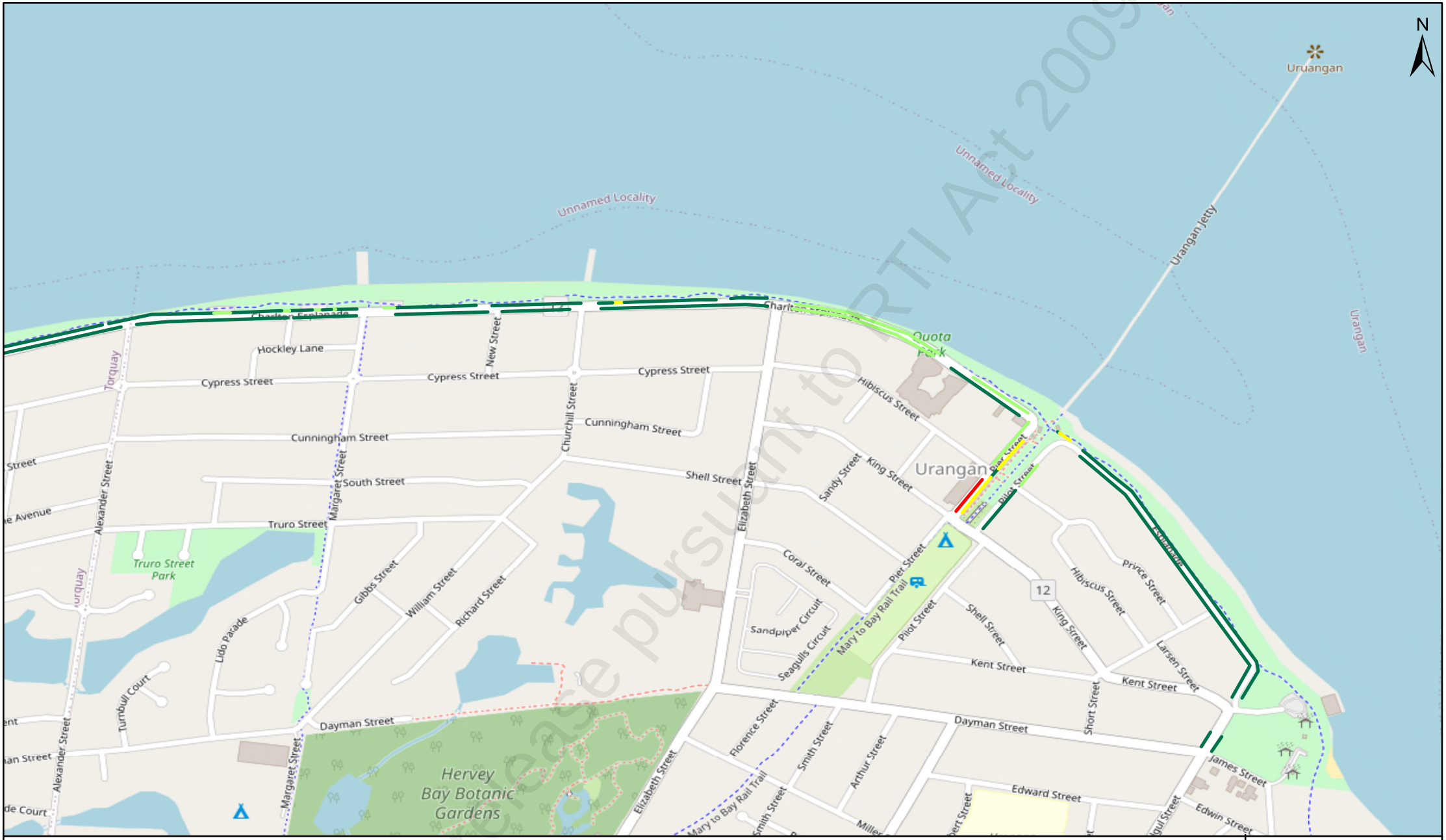
- 0-20
- 21-40
- 41-60
- 61-85
- 86-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 17/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Tuesday, 7th Dec 2021 - AM)

Location 6: Urangan

Occupancy %

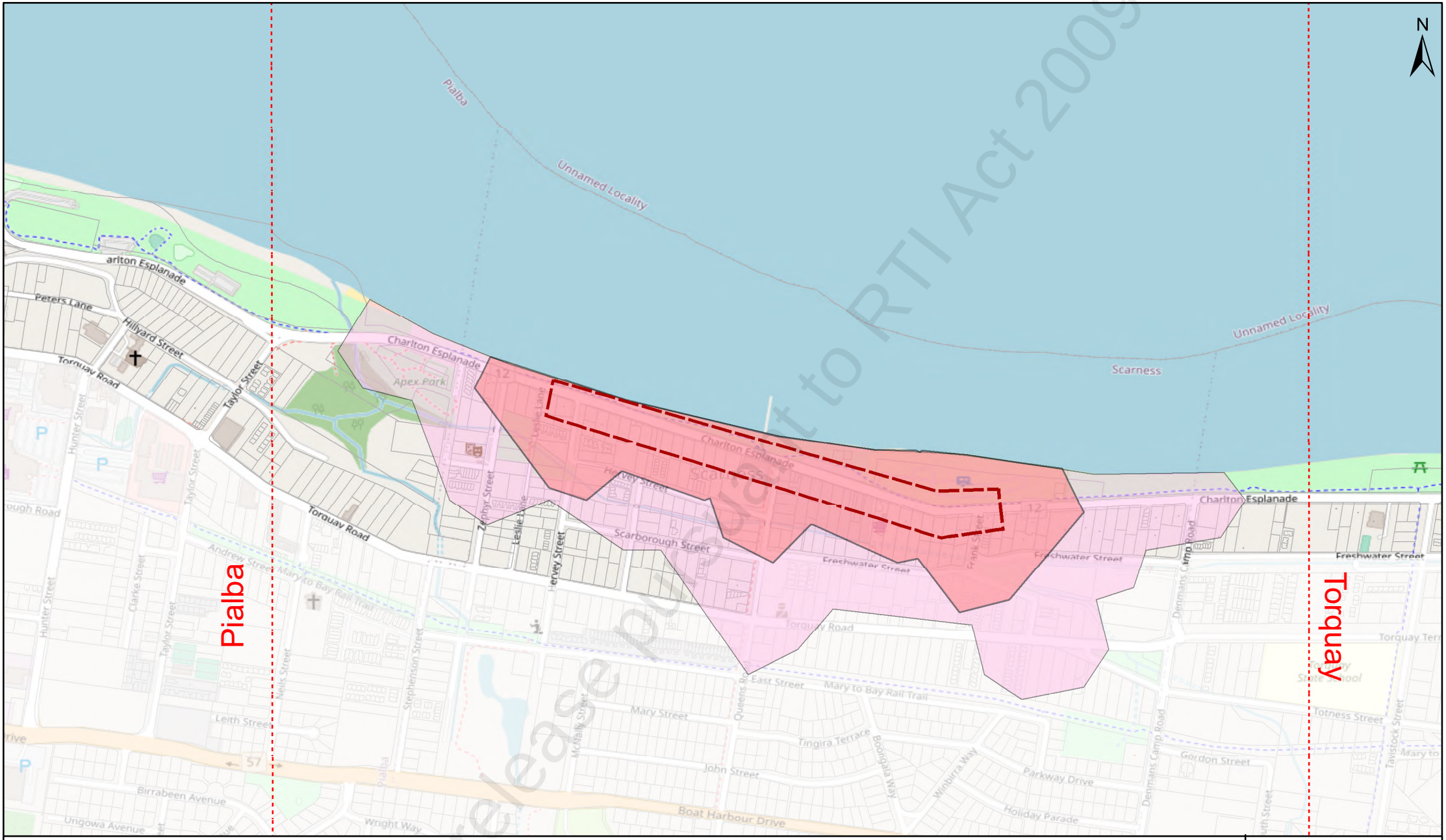
- 0-20
- 21-40
- 41-60
- 61-85
- 86-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 17/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Walking Distance

Location 4: Scarness

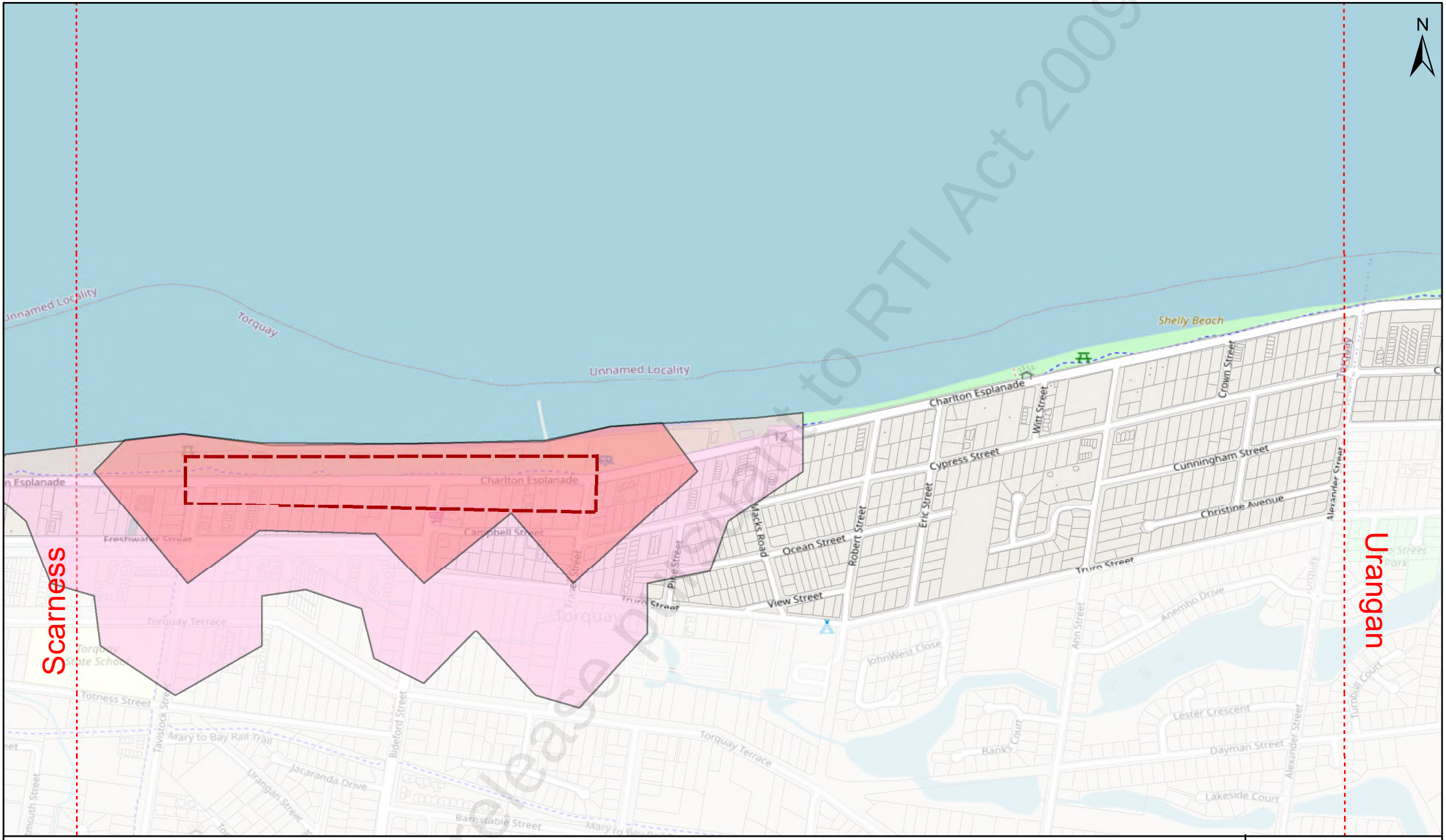
Road Boundary
100m
400m

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 06/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Walking Distance

Location 5: Torquay

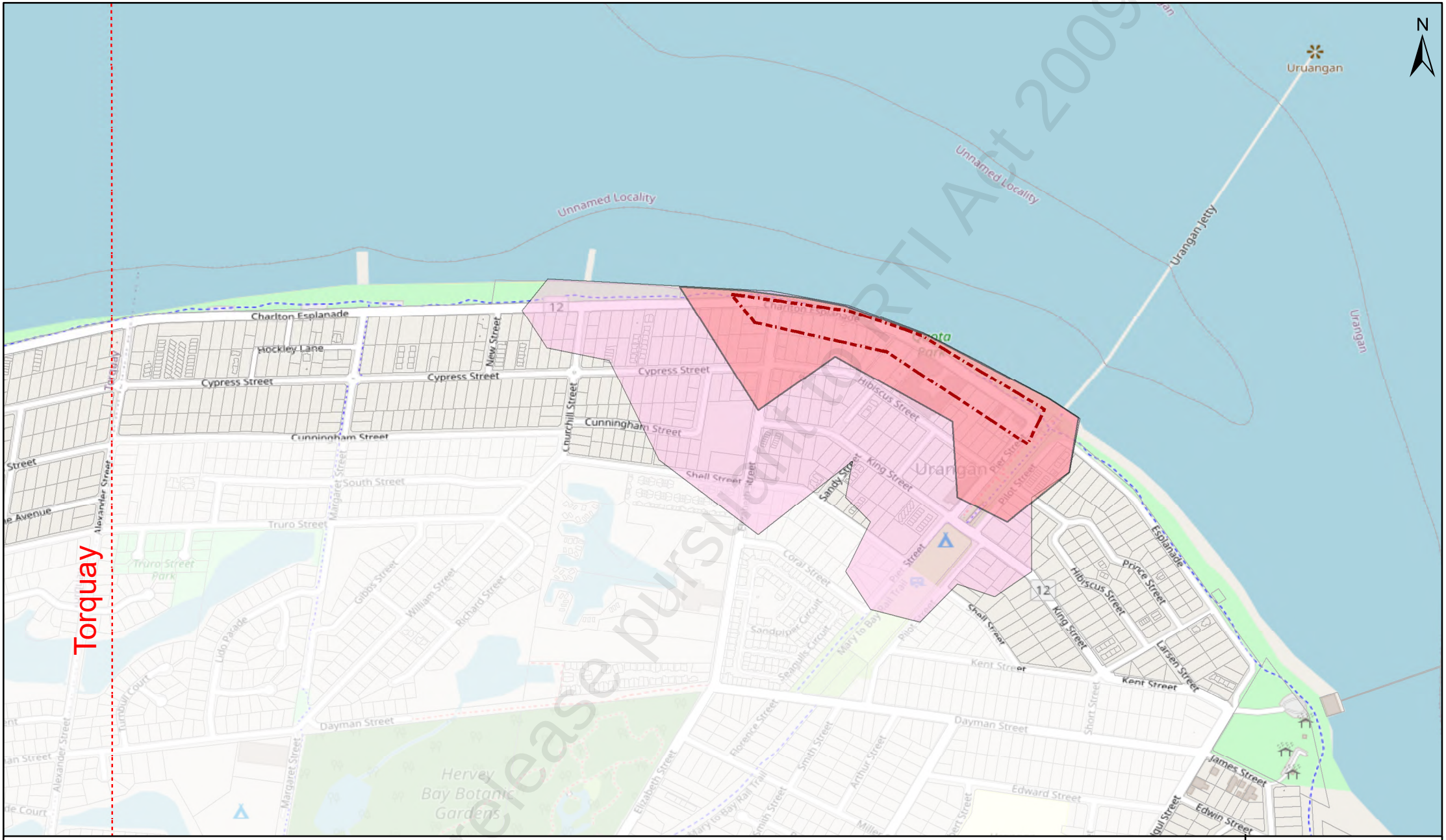
- Street Boundary
- 100m
- 400m

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 06/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Walking Distance

Location 6: Urangan

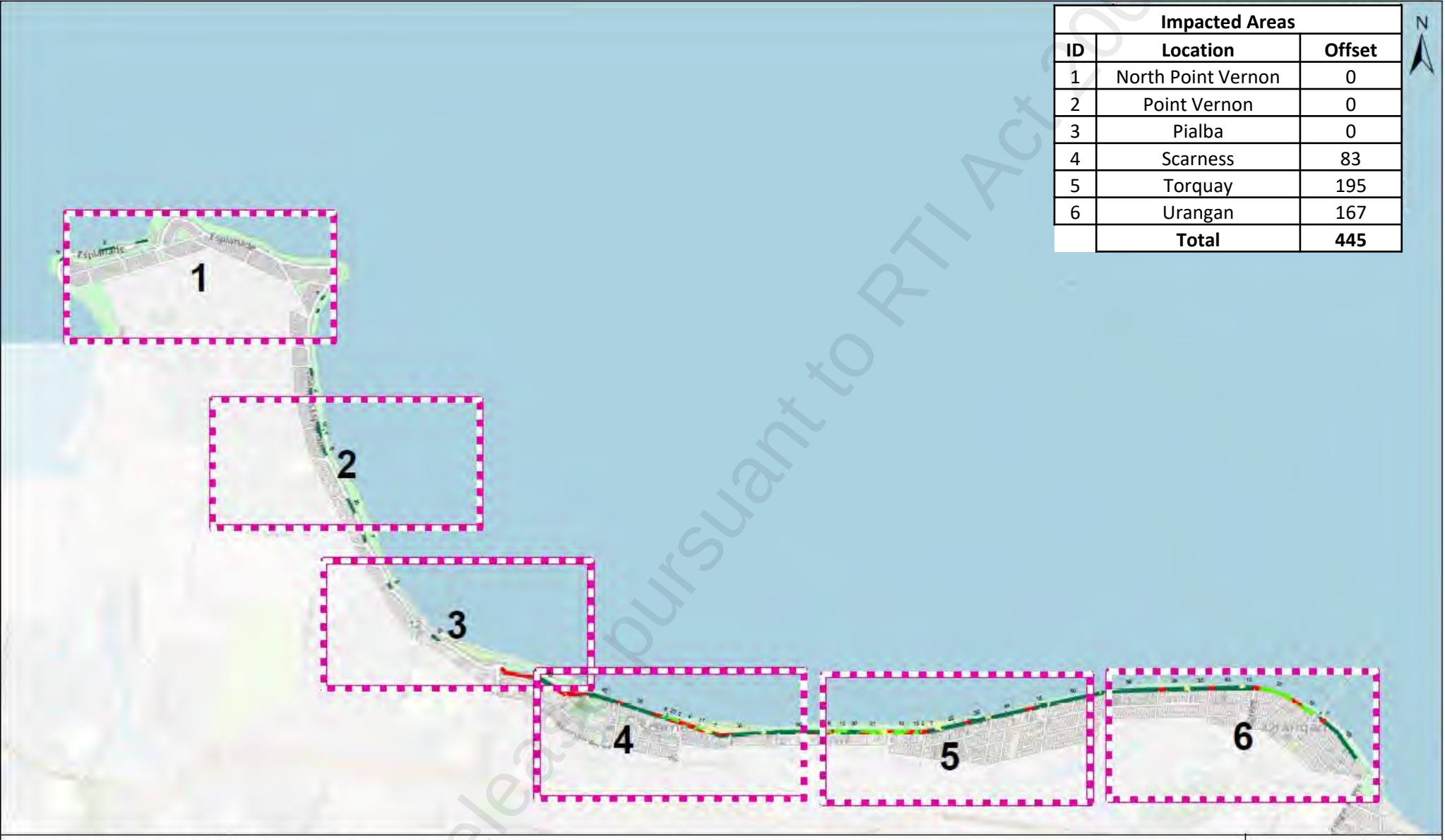
- Street Boundary
- 100m
- 400m

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 06/12/2021

Issue: 001



Impacted Areas		
ID	**Location**	**Offset**
1	North Point Vernon	0
2	Point Vernon	0
3	Pialba	0
4	Scarness	83
5	Torquay	195
6	Urangan	167
	Total	**445**

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS

Parking Options

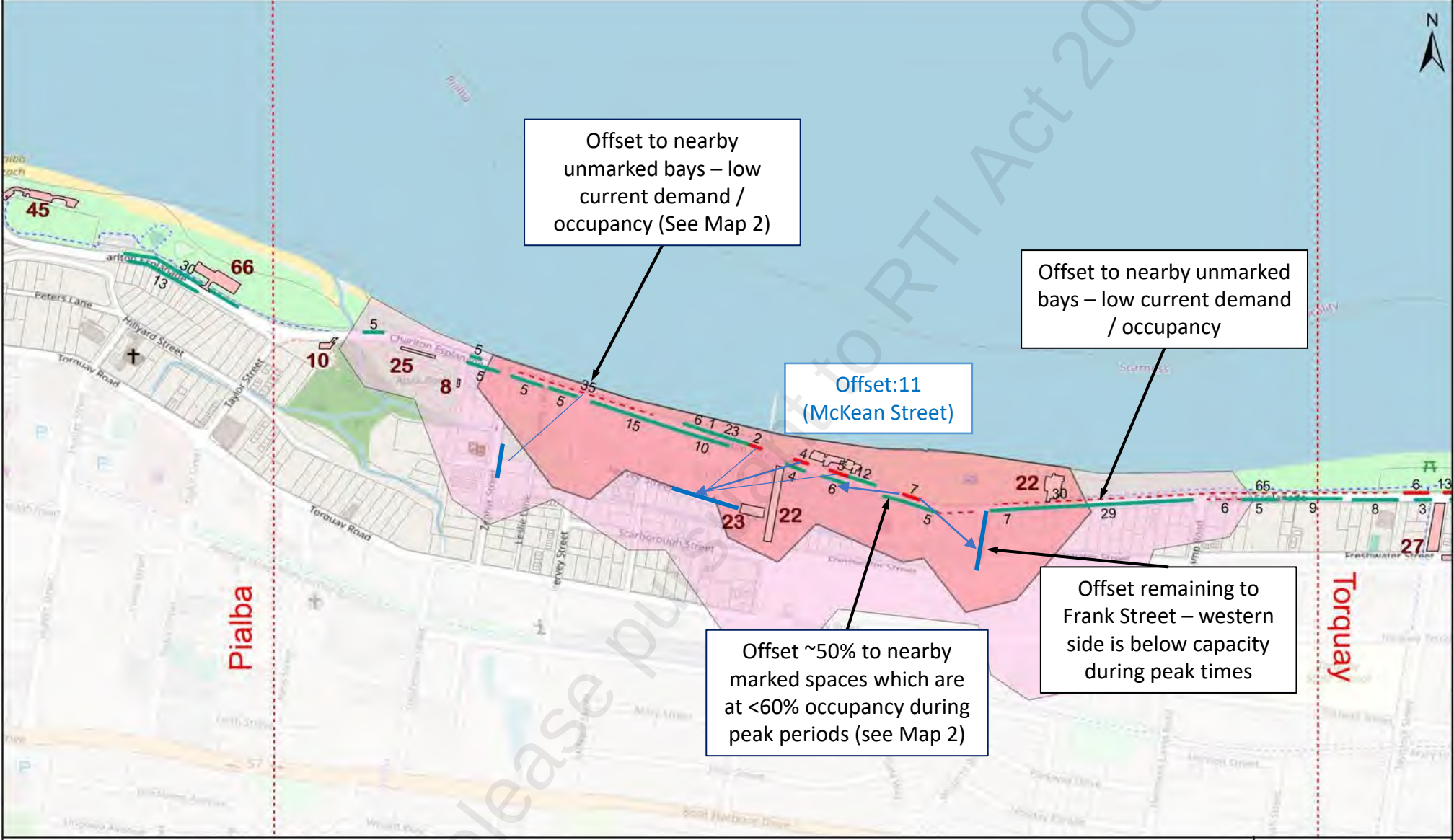
Overview Map

0 162.5325 650 975 1,300 Meters

Project Number: P5470

Date: 03/02/2022

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS

Parking Options

Location 4: Scarness

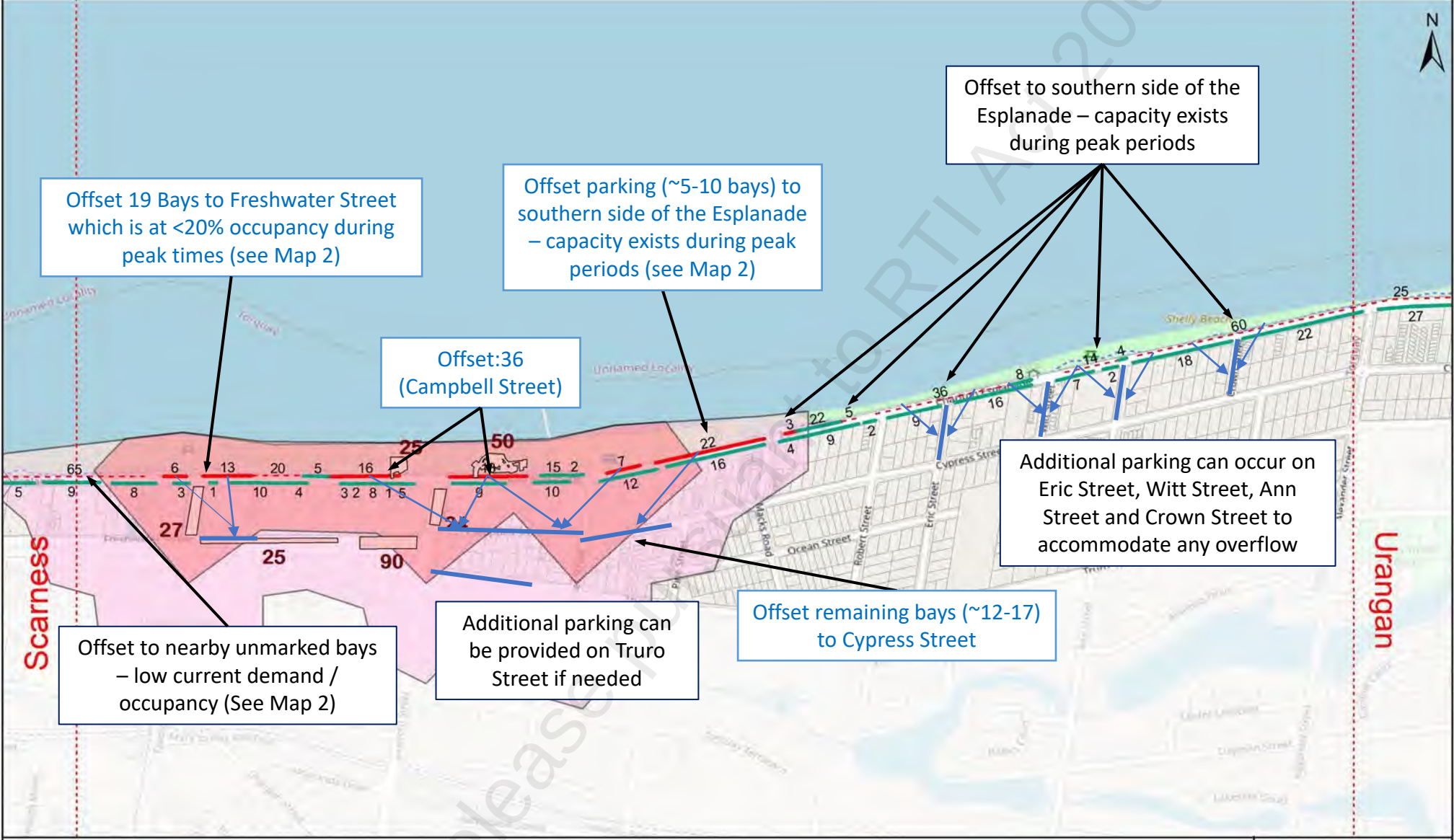
- Lose (Marked)
- Lose (Unmarked)
- Retain
- Off Set Parking
- 100m
- 400m
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 03/02/2022

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS

Parking Options

Location 5: Torquay

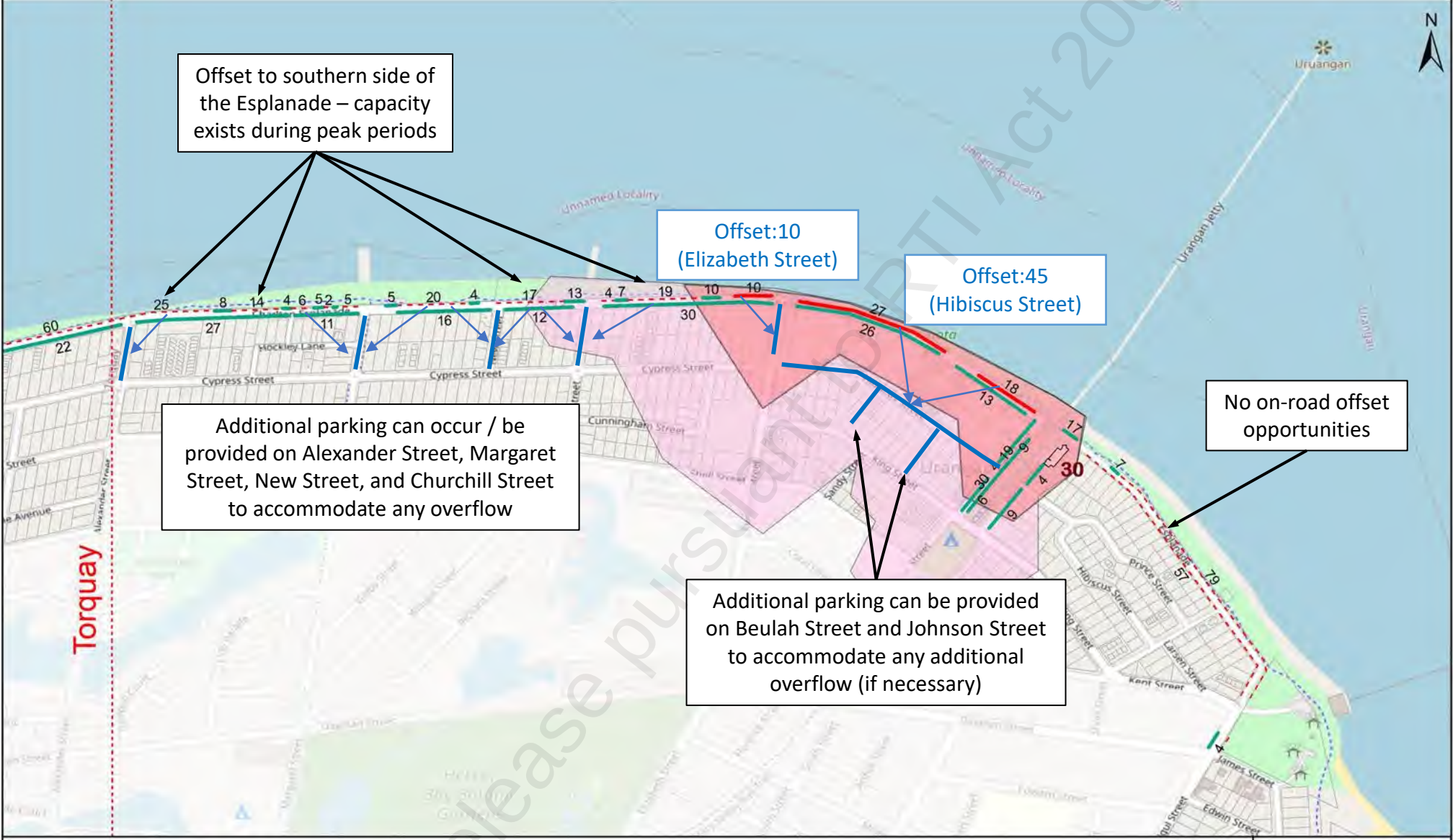
- Lose (Marked)
- Lose (Unmarked)
- Retain
- Off Set Parking
- 100m
- 400m
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 03/02/2022

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS

Parking Options

Location 6: Urangan

- Lose (Marked)
- Lose (Unmarked)
- Retain
- Off Set Parking
- 100m
- 400m
- Off-Street Carparks

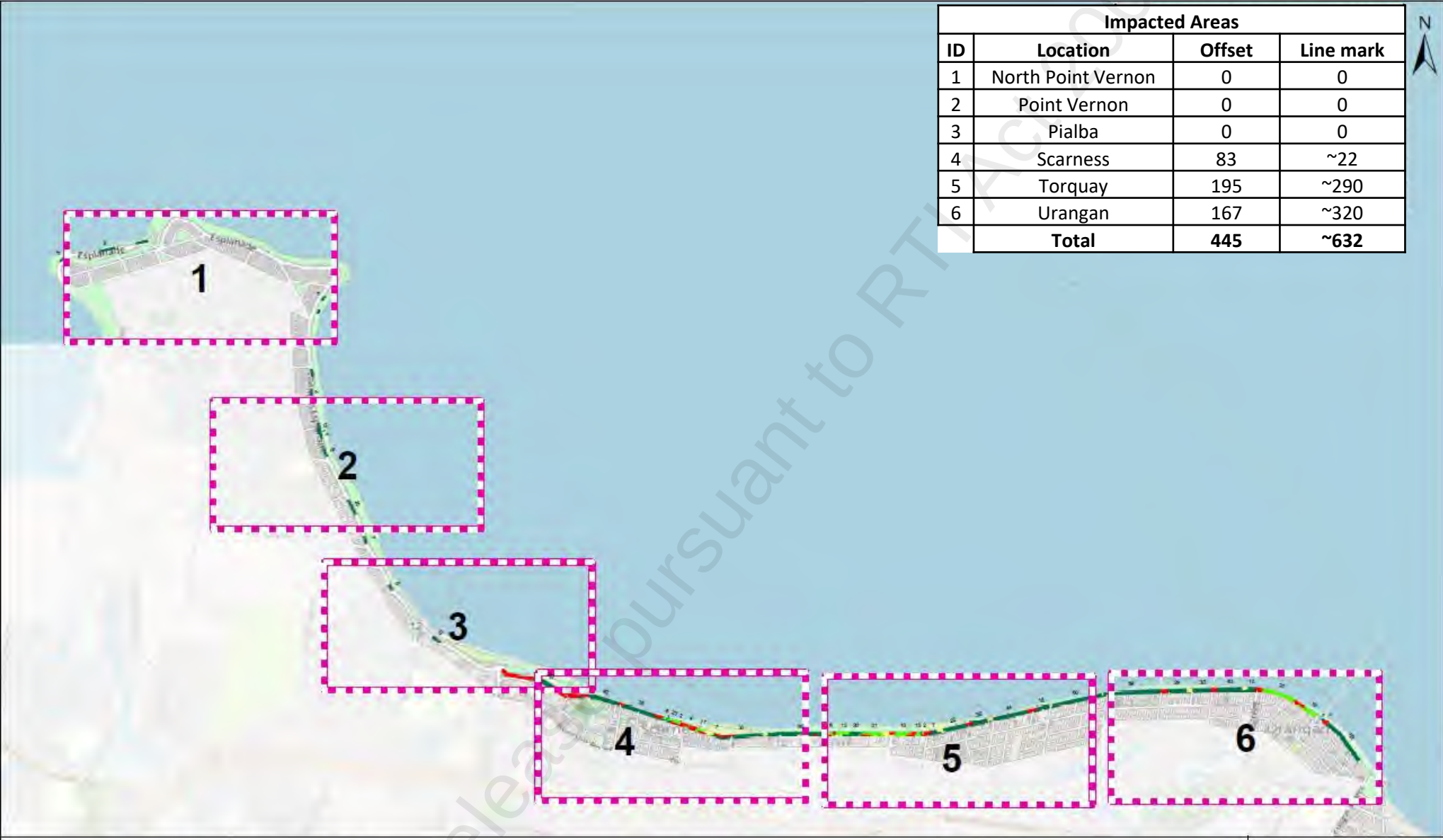
0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 03/02/2022

Issue: 001

Impacted Areas			
ID	Location	Offset	Line mark
1	North Point Vernon	0	0
2	Point Vernon	0	0
3	Pialba	0	0
4	Scarness	83	~22
5	Torquay	195	~290
6	Urangan	167	~320
	Total	**445**	**~632**



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS

Parking Treatment

Overview Map

Project Number: P5470

Date: 03/02/2022

Issue: 001

Existing footbridge through Tooan Tooan Creek (to provide pedestrian connectivity)

Line mark additional 11 bays on McKean Street

Footpath required on both sides (connecting to Queens Road) to accommodate pedestrians

14 bays already provided on Zephyr Street

Existing footbridge through Tooan Tooan Creek (to provide pedestrian connectivity

On-street parking available at Scarborough Street (if additional parking is needed)

Footpath required on both sides (connecting to Queens Road) to accommodate pedestrians

Line mark bays on both sides of Frank Street between The Esplanade and Freshwater Street

Footpath required on eastern side (connecting to The Esplanade) to accommodate pedestrians

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS

Parking Treatment

Location 4: Scarness

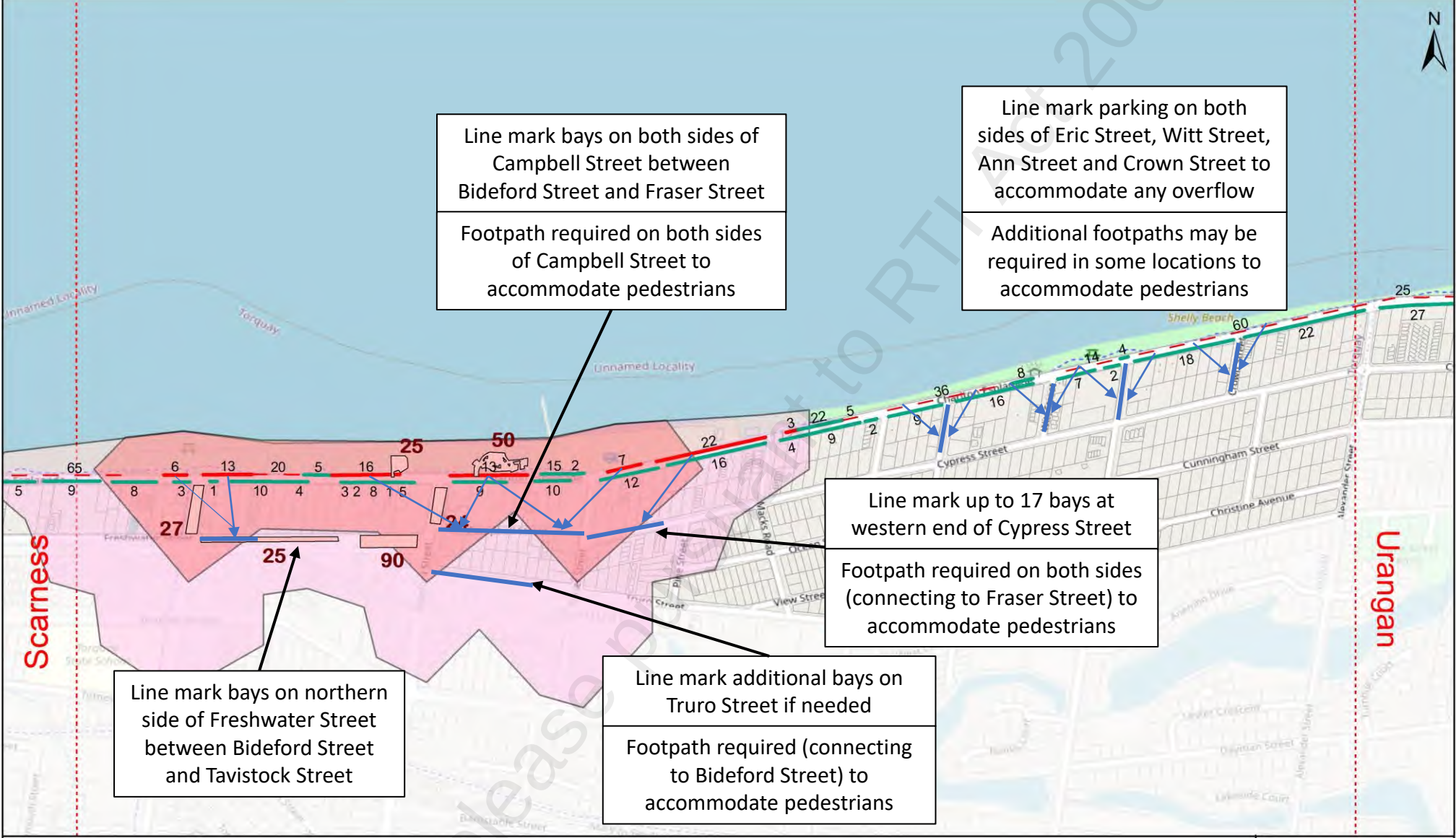
- Lose (Marked)
- Lose (Unmarked)
- Retain
- Off Set Parking
- 100m
- 400m
- Off-Street Carparks
- Available Footpath

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 03/02/2022

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS

Parking Treatment

Location 5: Torquay

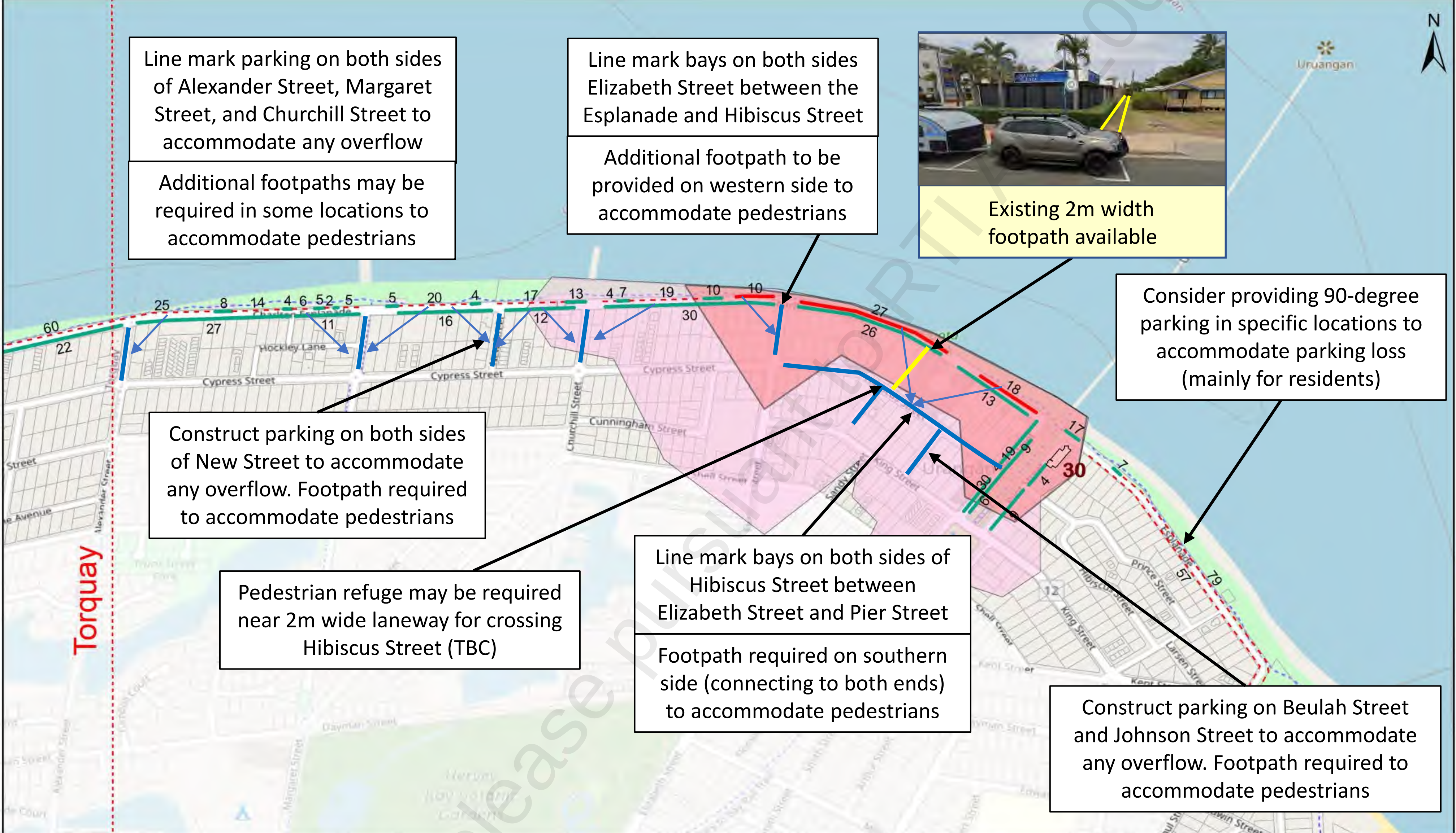
- Lose (Marked)
- Lose (Unmarked)
- Retain
- Off Set Parking
- 100m
- 400m
- Off-Street Carparks
- Available Footpath

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 03/02/2022

Issue: 001



Line mark parking on both sides of Alexander Street, Margaret Street, and Churchill Street to accommodate any overflow
Additional footpaths may be required in some locations to accommodate pedestrians
Line mark bays on both sides Elizabeth Street between the Esplanade and Hibiscus Street
Additional footpath to be provided on western side to accommodate pedestrians
Existing 2m width footpath available
Consider providing 90-degree parking in specific locations to accommodate parking loss (mainly for residents)
Construct parking on both sides of New Street to accommodate any overflow. Footpath required to accommodate pedestrians
Pedestrian refuge may be required near 2m wide laneway for crossing Hibiscus Street (TBC)
Line mark bays on both sides of Hibiscus Street between Elizabeth Street and Pier Street
Footpath required on southern side (connecting to both ends) to accommodate pedestrians
Construct parking on Beulah Street and Johnson Street to accommodate any overflow. Footpath required to accommodate pedestrians
Torquay
Uruangan
N
Cypress Street
Cunningham Street
Hockley Lane
Churchill Street
30

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Treatment

Location 6: Urangan

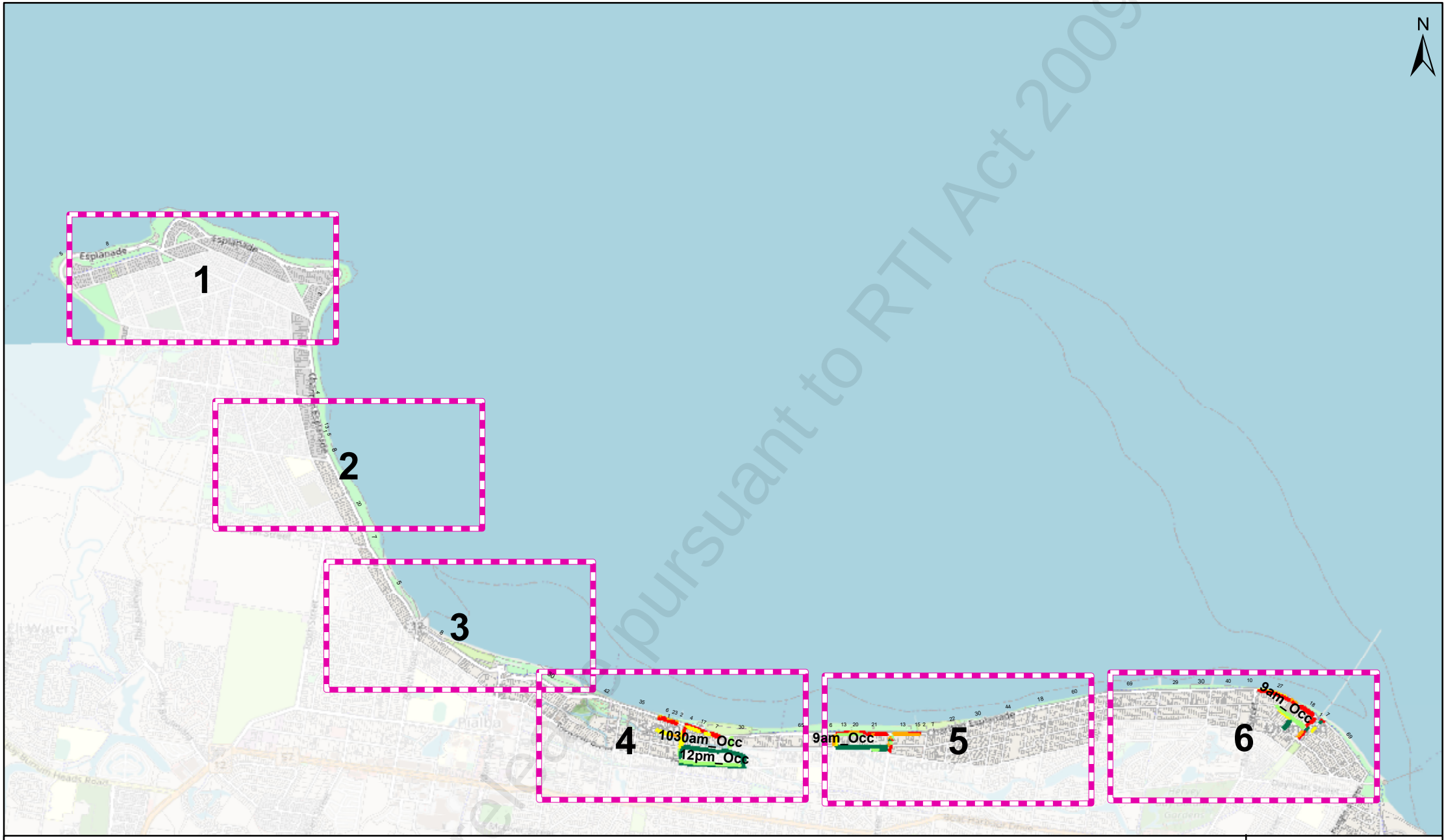
Legend	
Lose (Marked)	100m
Lose (Unmarked)	400m
Retain	Off-Street Carparks
Off Set Parking	Available Footpath

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 03/02/2022

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Saturday 16th Feb 2019)

Overview Map

0 162.5 325 650 975 1,300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Saturday 16th Feb 2019)

Location 1: North Point Vernon

Max. Occupancy %

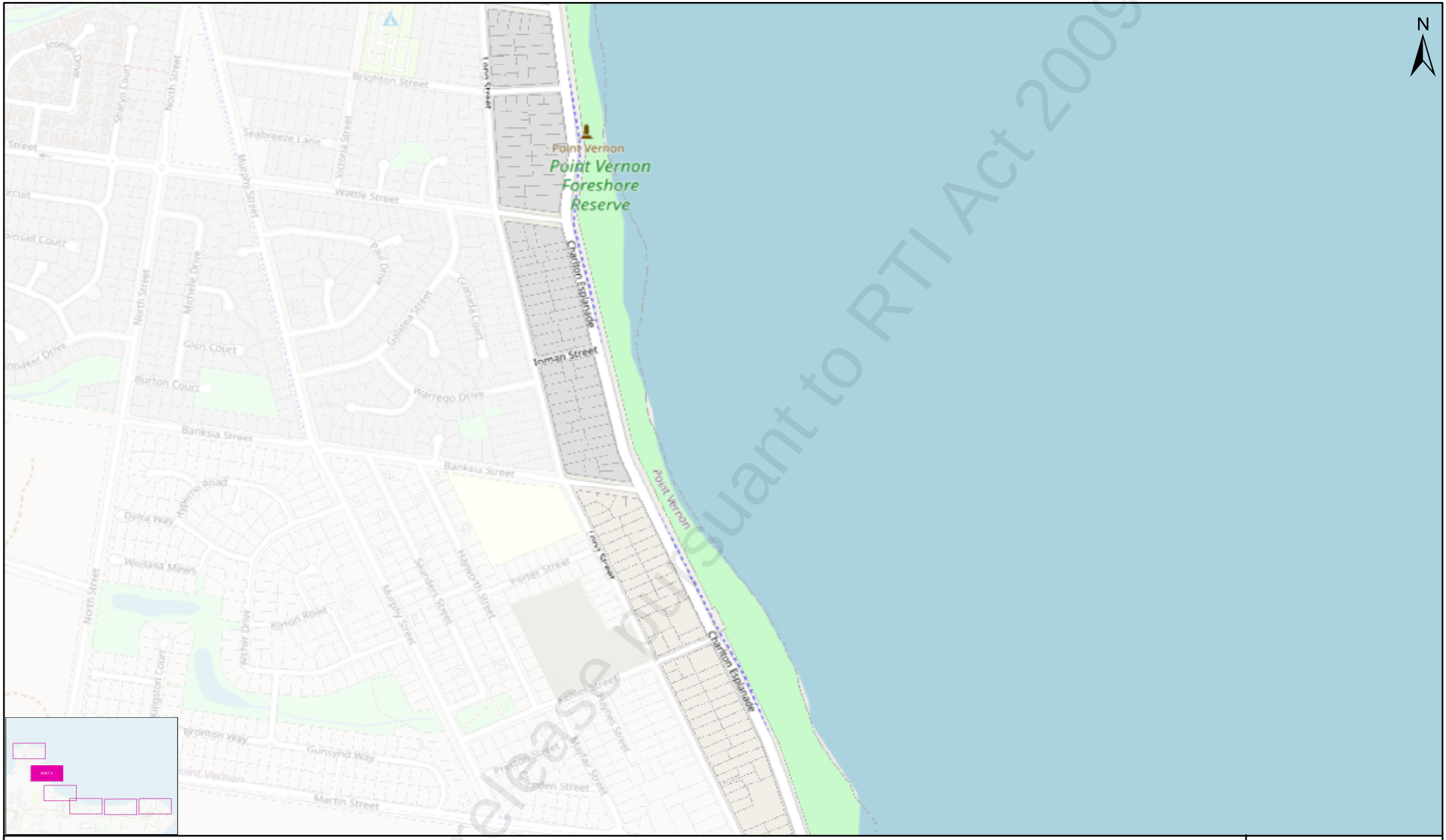
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Saturday 16th Feb 2019)

Location 2: Point Vernon

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Saturday 16th Feb 2019)

Location 3: Pialba

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Saturday 16th Feb 2019)

Location 4: Scarness

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Saturday 16th Feb 2019)

Location 5: Torquay

Max. Occupancy %

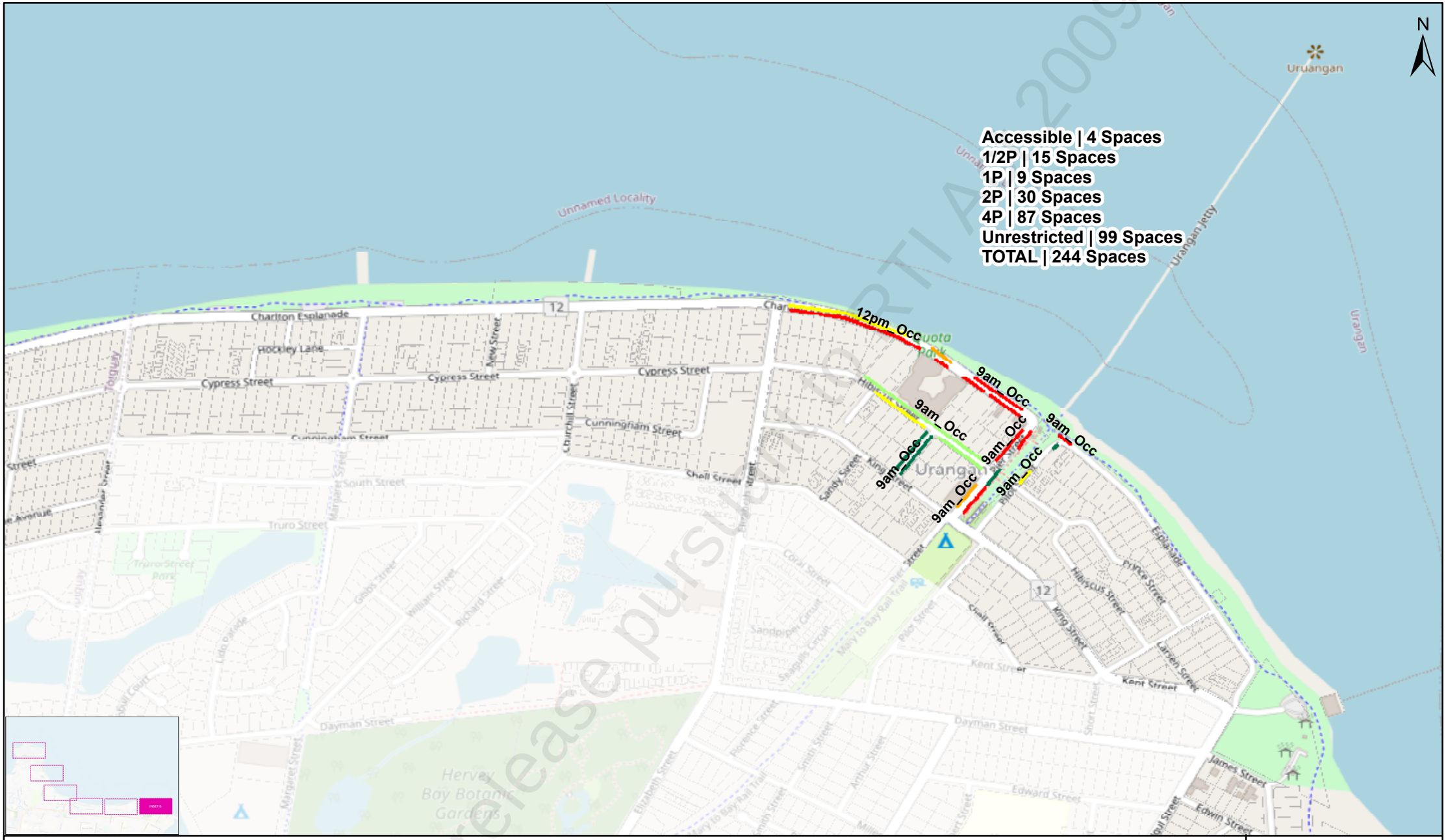
- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Occupancy (Saturday 16th Feb 2019)

Location 6: Urangan

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

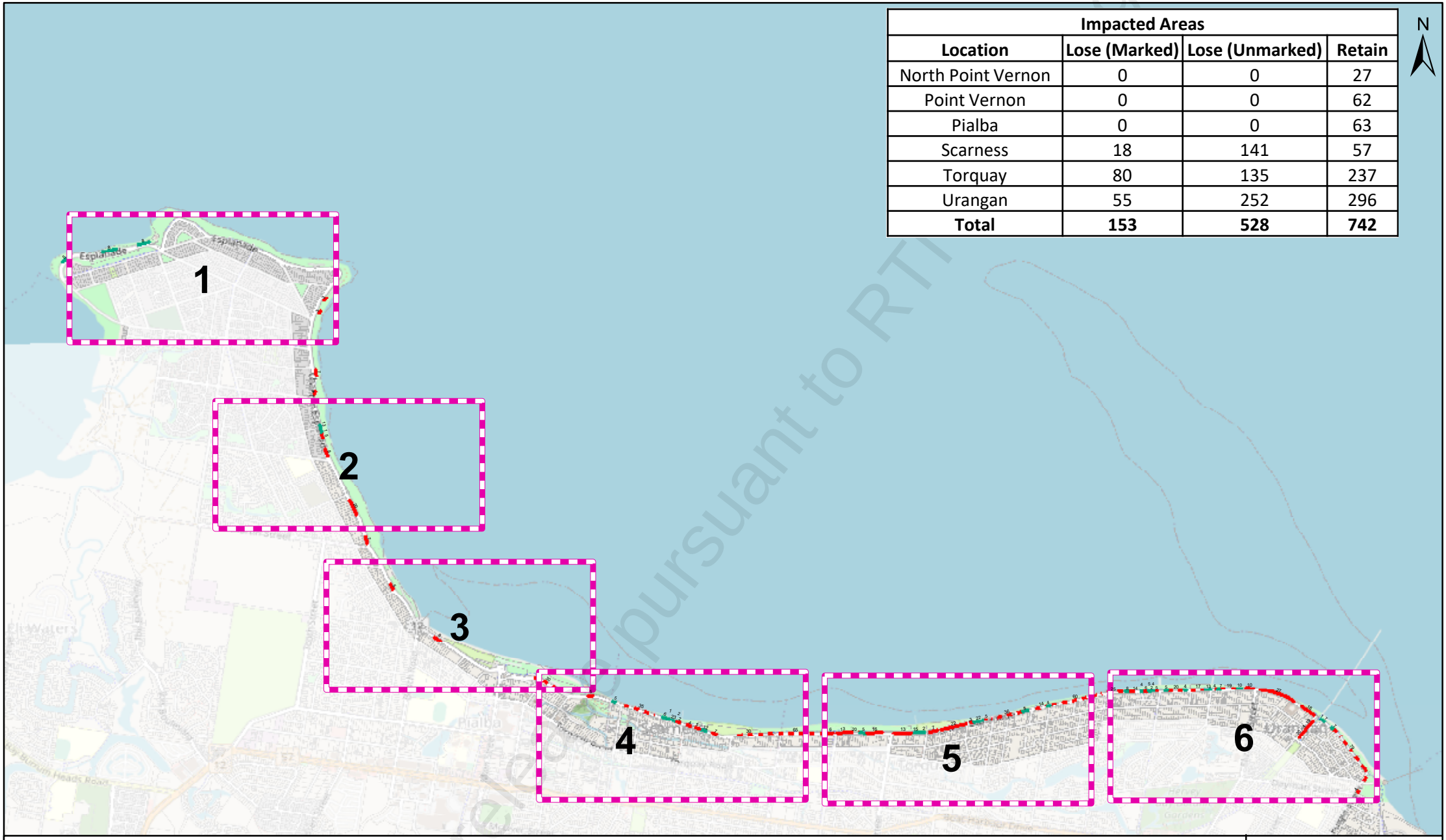
0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001

Impacted Areas			
Location	**Lose (Marked)**	**Lose (Unmarked)**	**Retain**
North Point Vernon	0	0	27
Point Vernon	0	0	62
Pialba	0	0	63
Scarness	18	141	57
Torquay	80	135	237
Urangan	55	252	296
Total	**153**	**528**	**742**



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Impacted Parking Spaces

Overview Map

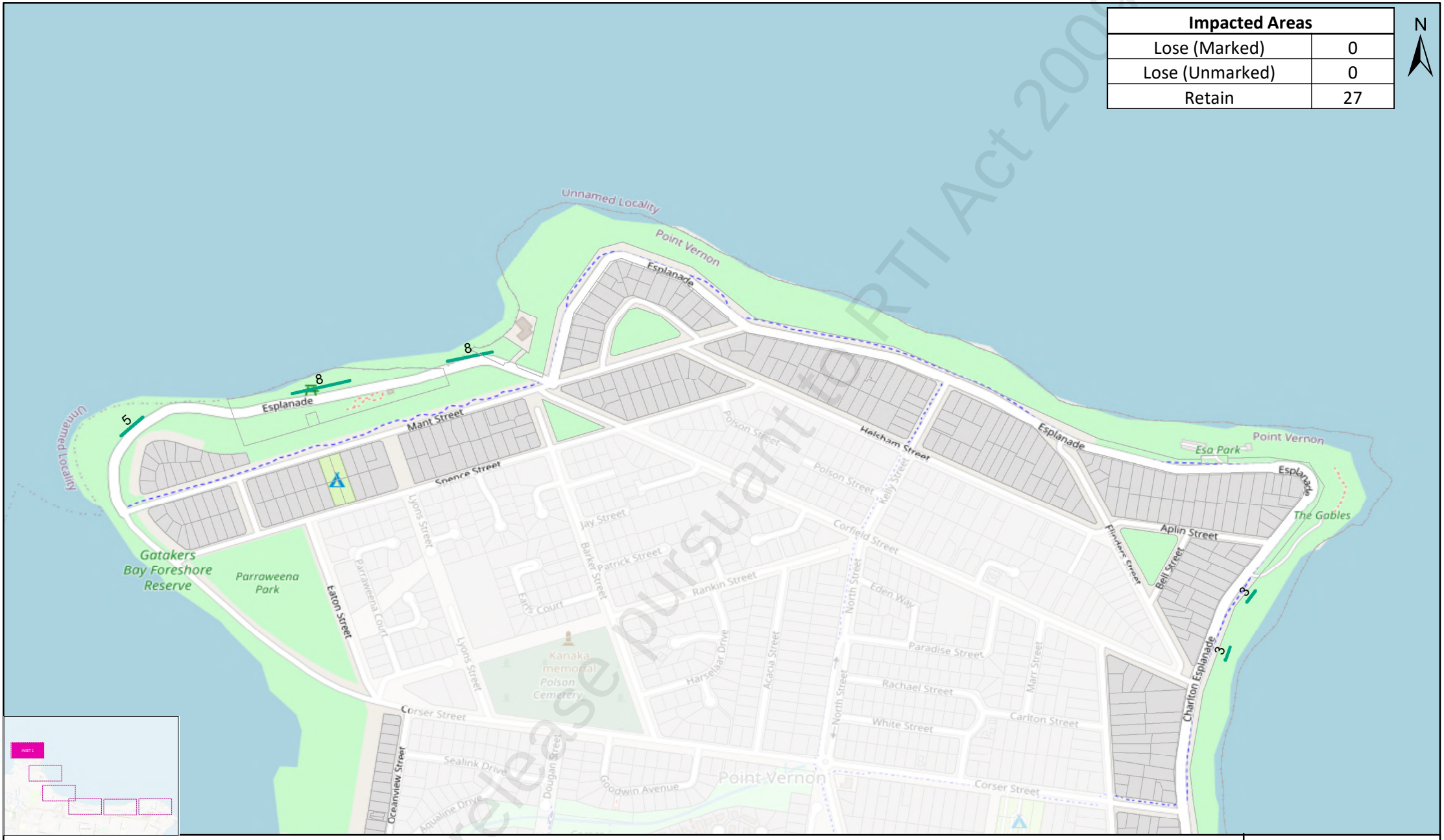
Lose (Marked)
Lose (Unmarked)
Retain

0 162.5325 650 975 1,300 Meters

Project Number: P5470

Date: 10/01/2022

Issue: 002



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Impacted Parking Spaces

Location 1: North Point Vernon

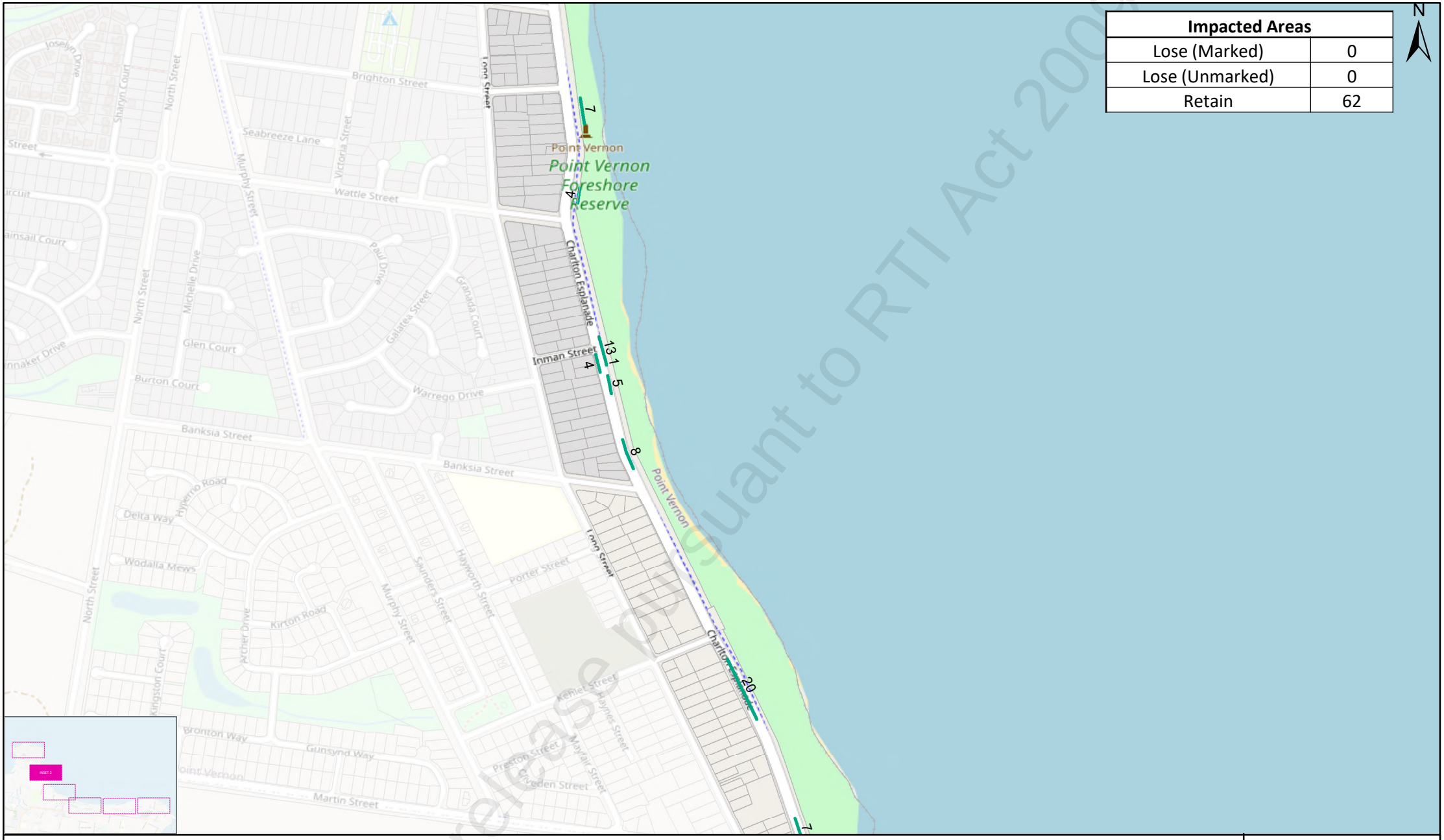
Lose (Marked)
Lose (Unmarked)
Retain

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 10/01/2022

Issue: 002



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Impacted Parking Spaces

Location 2: Point Vernon

- Lose (Marked)
- Lose (Unmarked)
- Retain

Project Number: P5470

Date: 10/01/2022

Issue: 002

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Impacted Parking Spaces

Location 3: Pialba

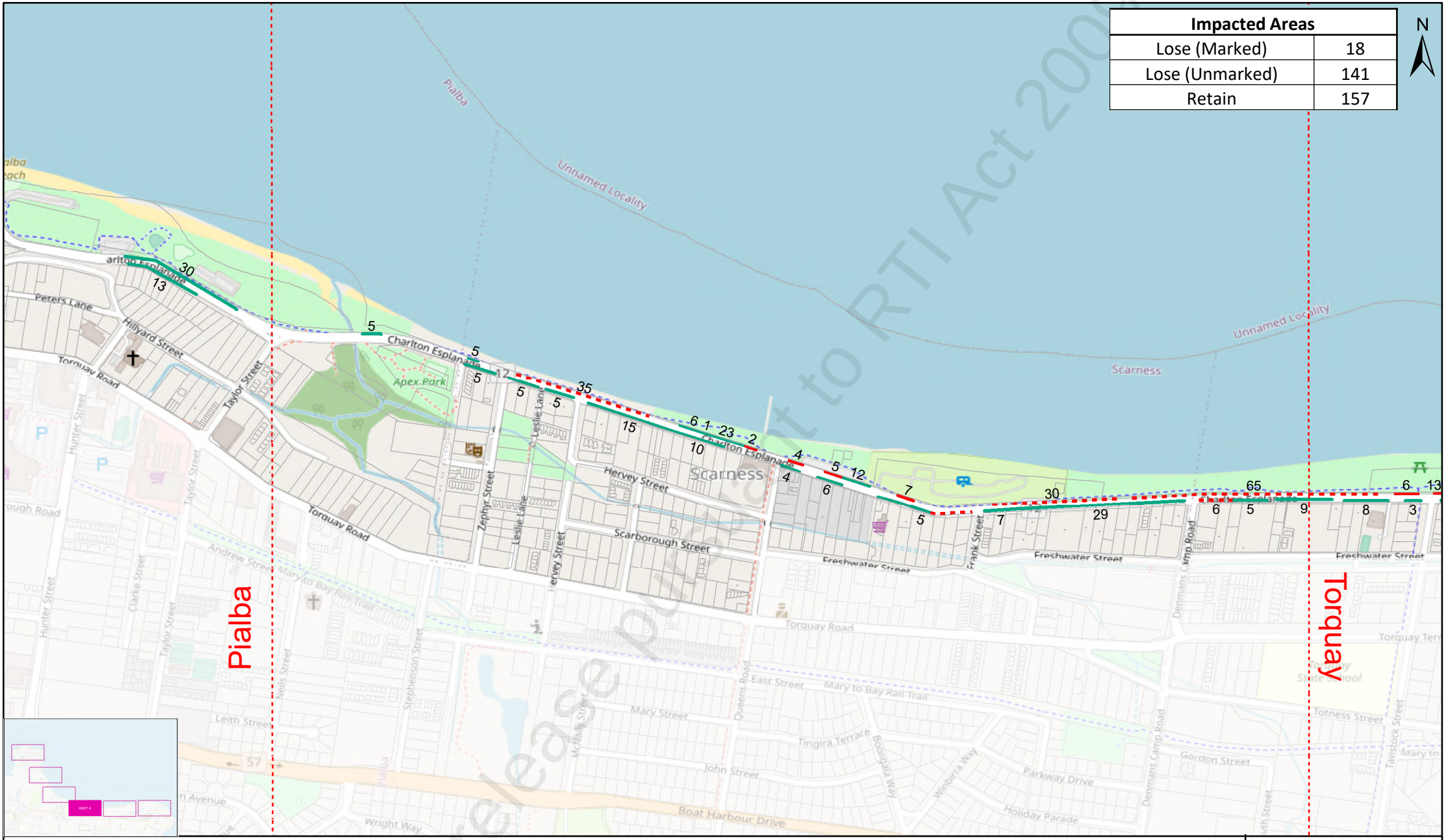
- Lose (Marked)
- Lose (Unmarked)
- Retain

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 10/01/2022

Issue: 002



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Impacted Parking Spaces

Location 4: Scarness

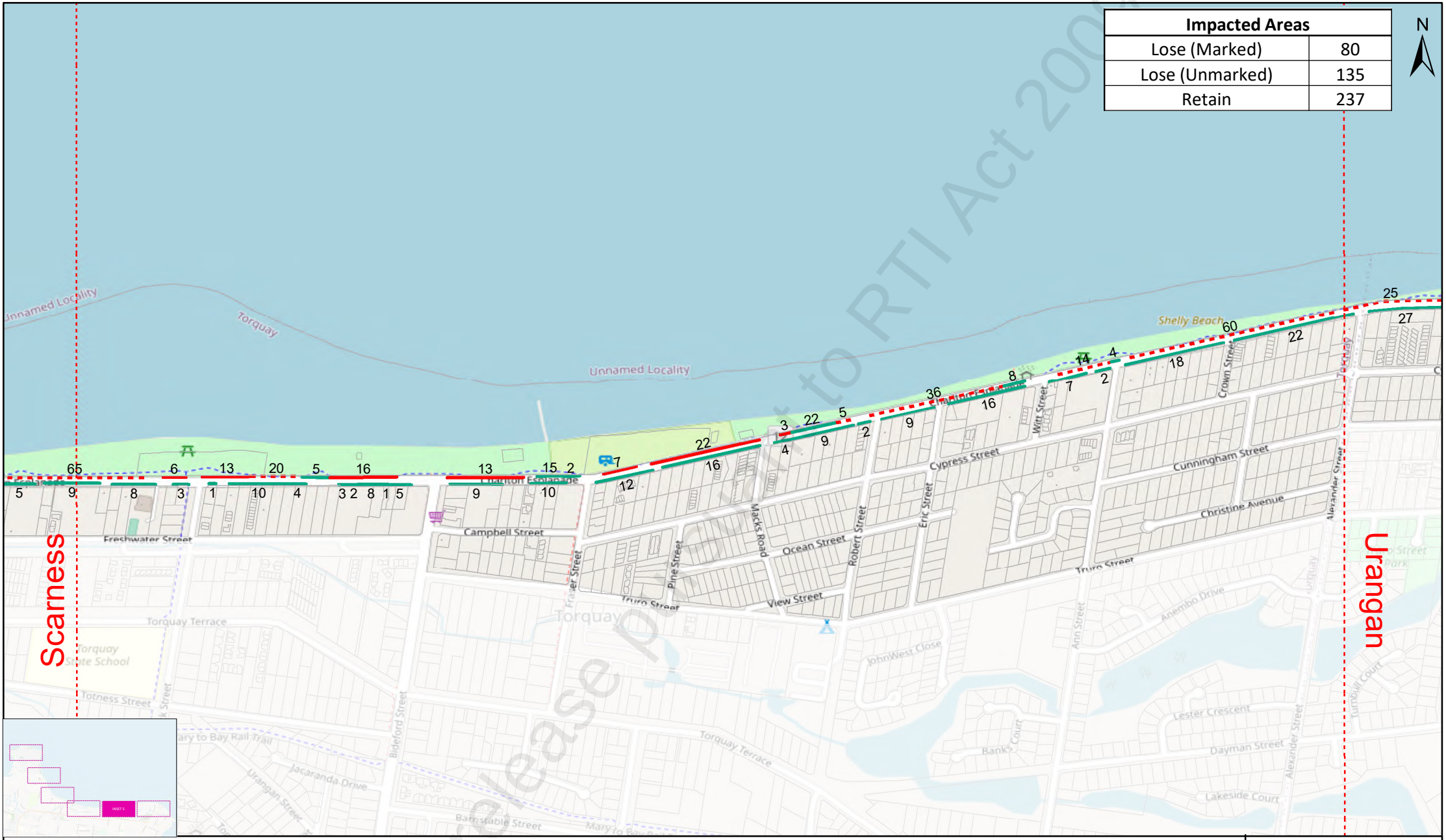
Lose (Marked)
Lose (Unmarked)
Retain

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 10/01/2022

Issue: 002



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Impacted Parking Spaces

Location 5: Torquay

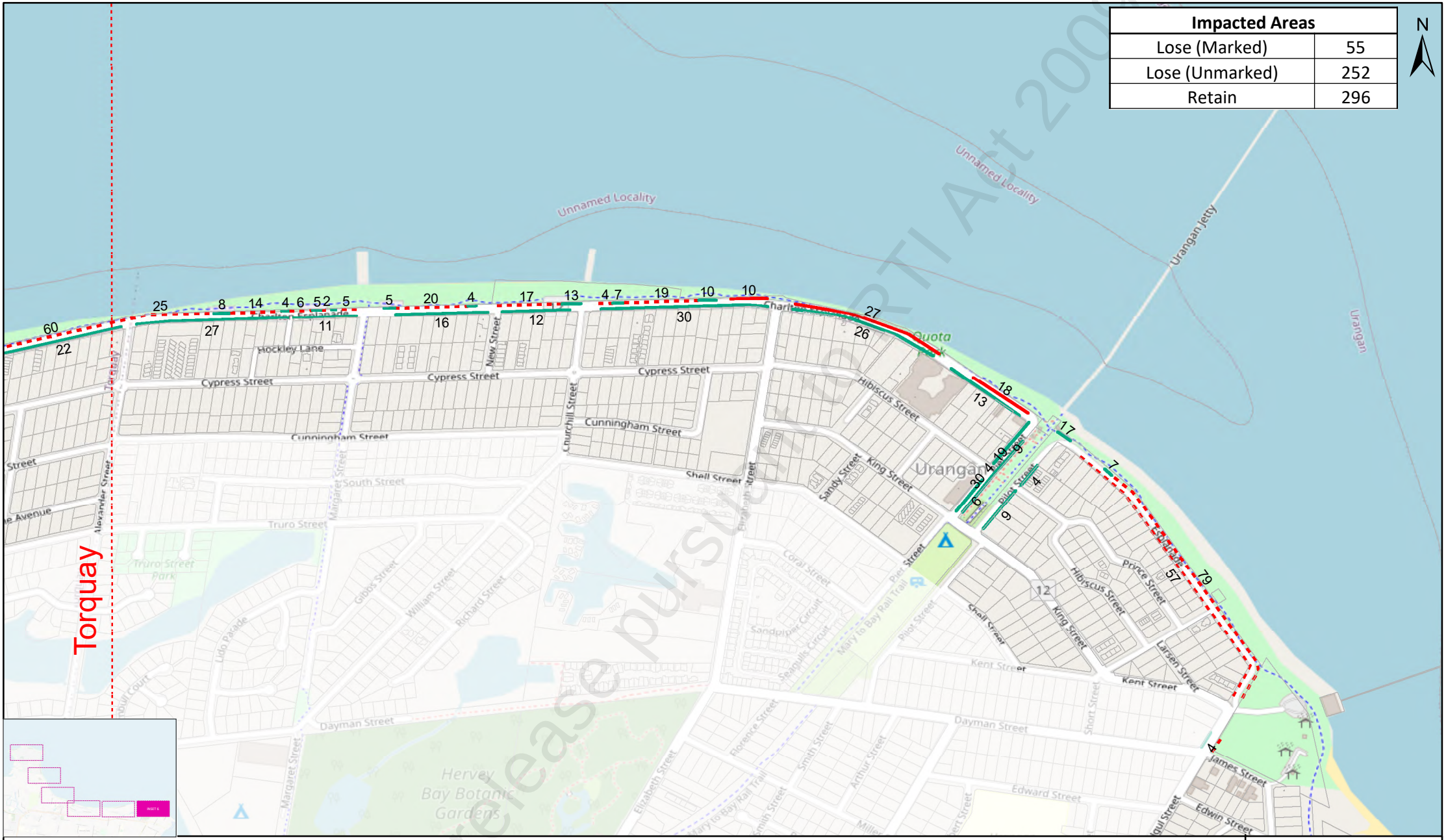
Lose (Marked)
Lose (Unmarked)
Retain

0 37.5 75 150 225 300 Meters

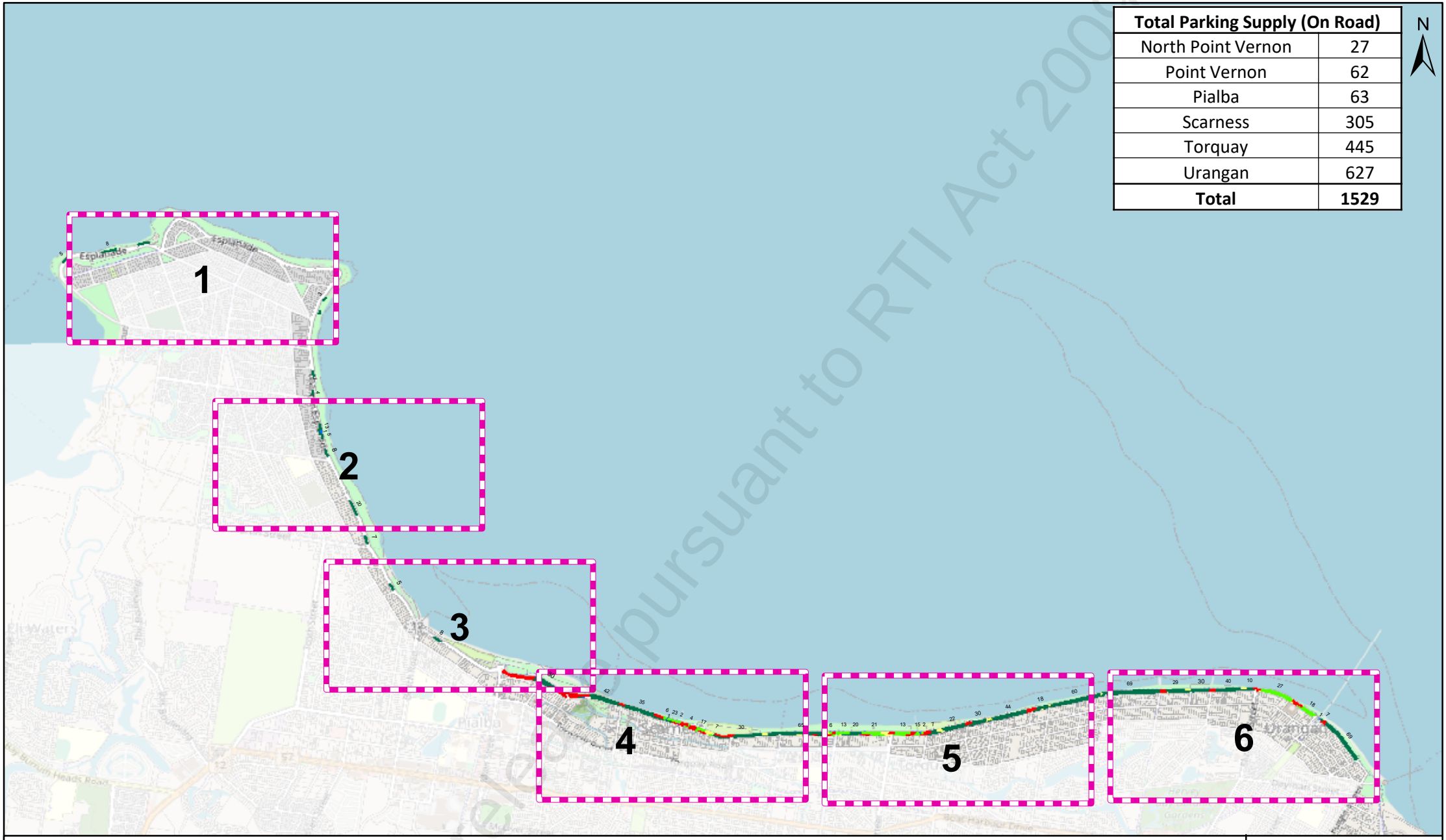
Project Number: P5470

Date: 10/01/2022

Issue: 002



Total Parking Supply (On Road)	
North Point Vernon	27
Point Vernon	62
Pialba	63
Scarness	305
Torquay	445
Urangan	627
Total	**1529**



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

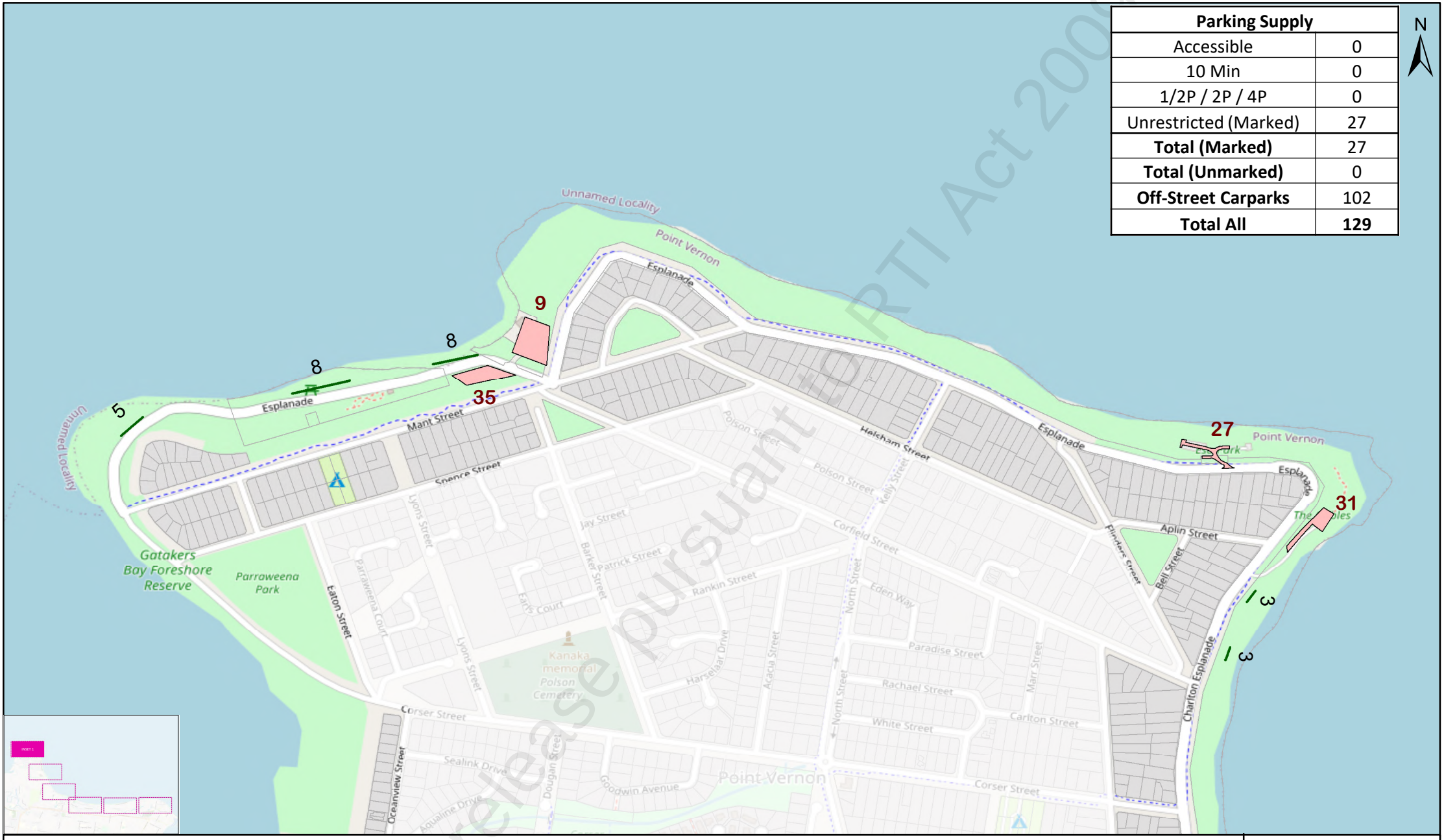
Parking Restrictions

Overview Map

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN PARKING AND TRAFFIC ADVICE

Parking Occupancy (Thursday 14th Feb 2019)

Location 1: North Point Vernon

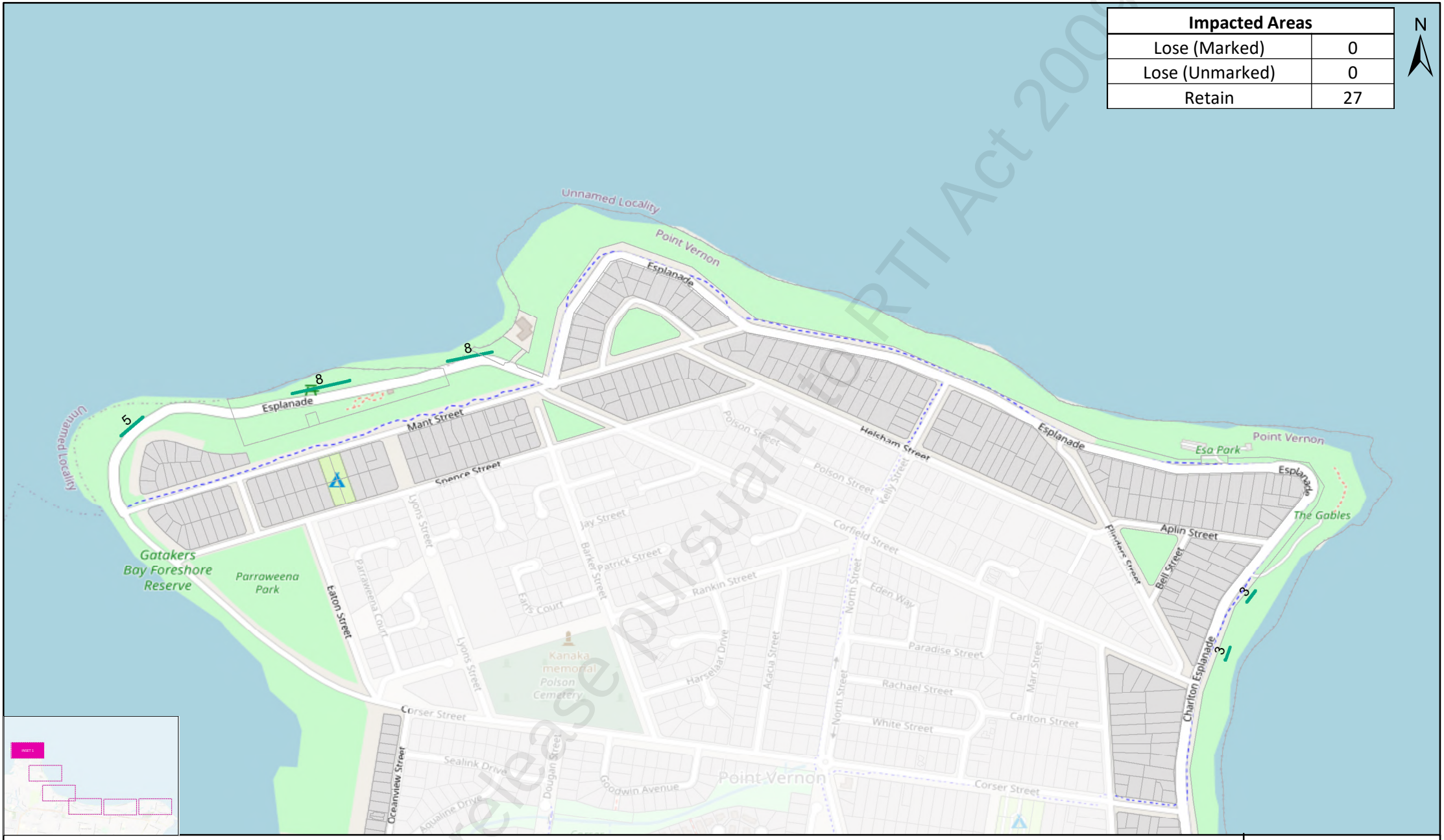
Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Impacted Parking Spaces

Location 1: North Point Vernon

Lose (Marked)
Lose (Unmarked)
Retain

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 10/01/2022

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Total Parking Supply (On Road)	
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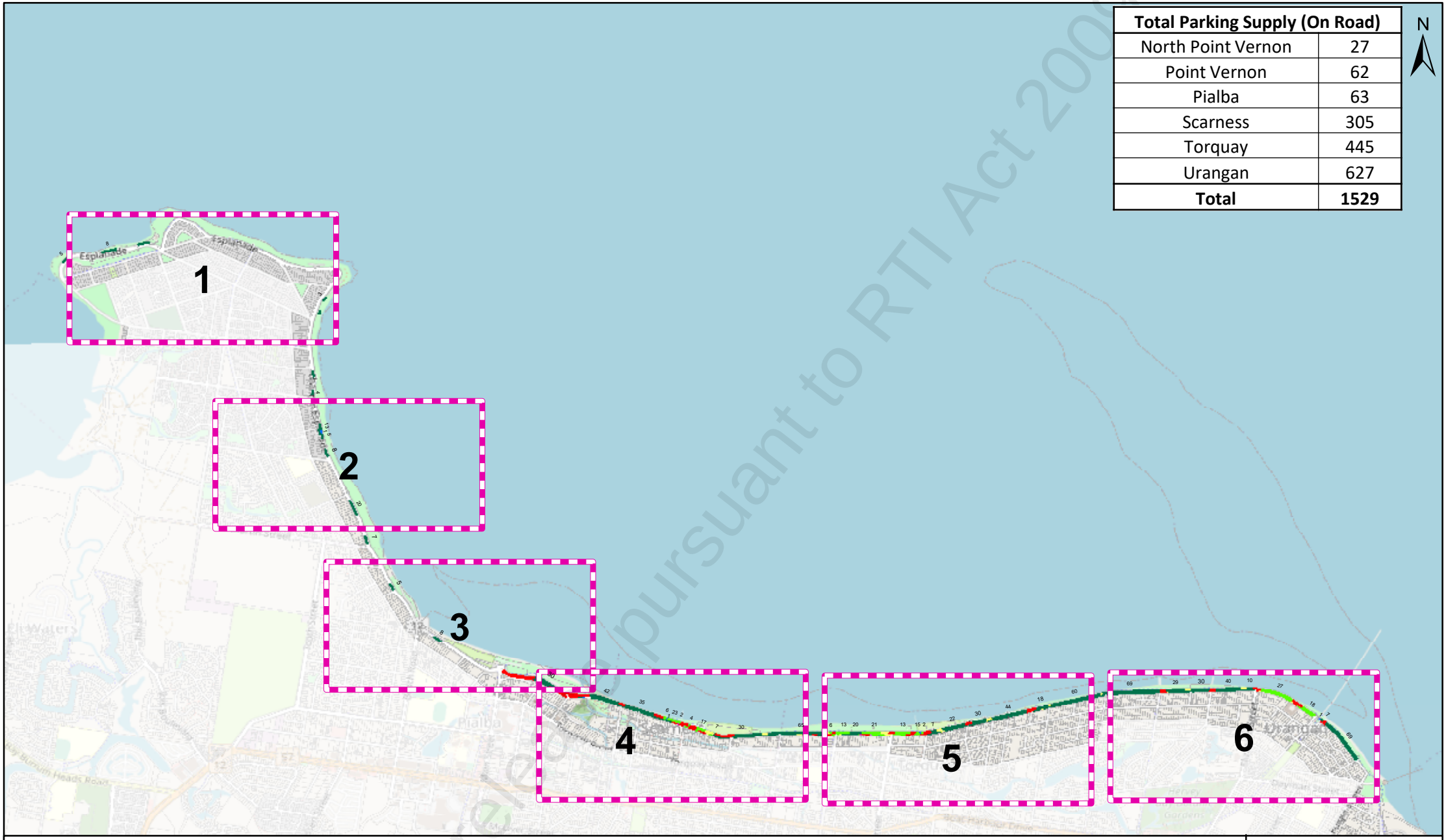


HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Restrictions

Overview Map

Project Number: P5470

Date: 30/11/2021

Issue: 001

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Restrictions
Location 2: Point Vernon

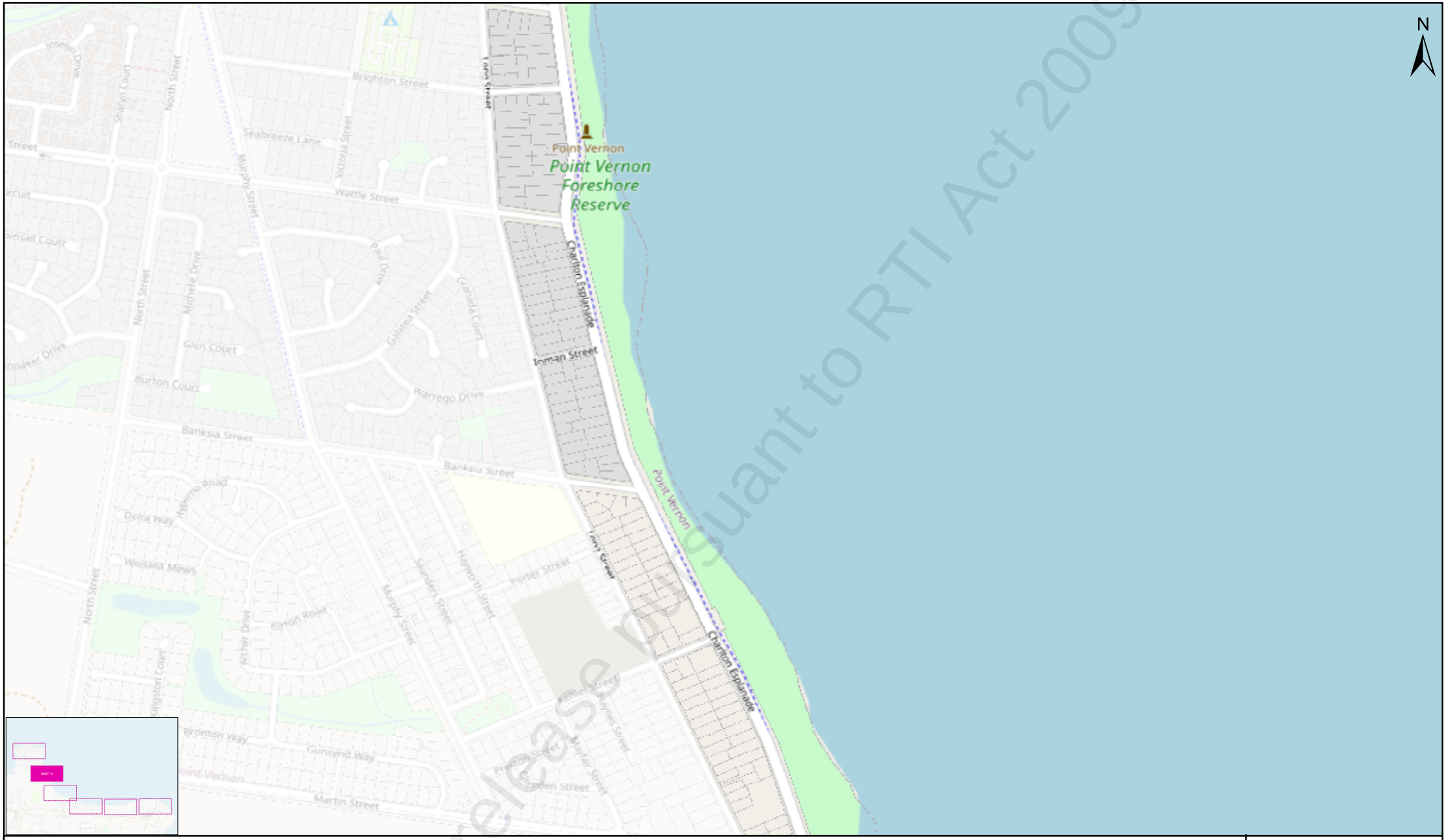
- Unrestricted (Unmarked)
- Unrestricted (Marked)
- Accessible
- Taxi Zone
- Loading Zone
- Bus Zone
- No Parking / Stopping
- 10Min
- 1/2P / 2P / 4P
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



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PARKING AND TRAFFIC ADVICE

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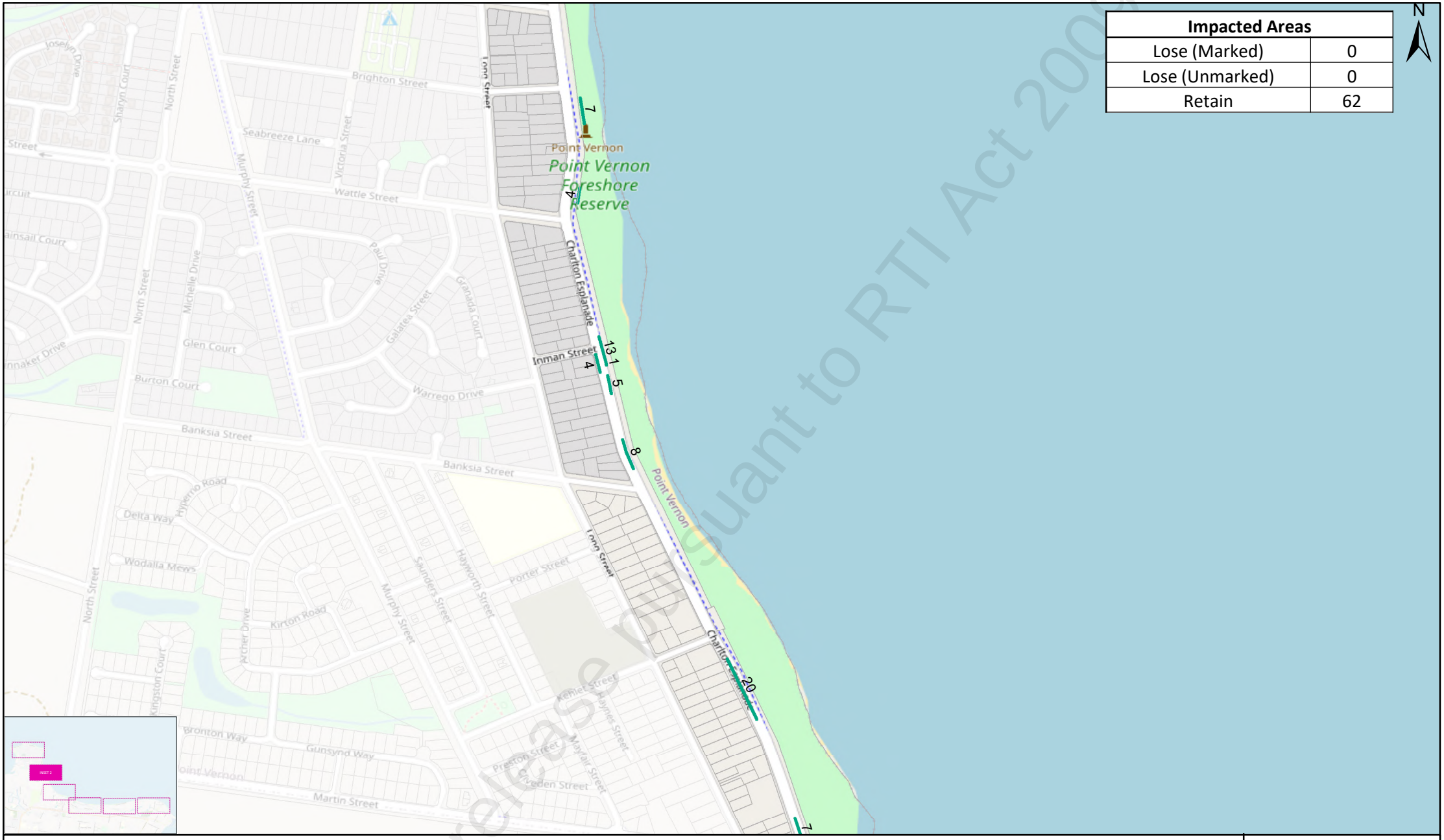

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Impacted Parking Spaces

Location 2: Point Vernon

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Lose (Unmarked)
Retain

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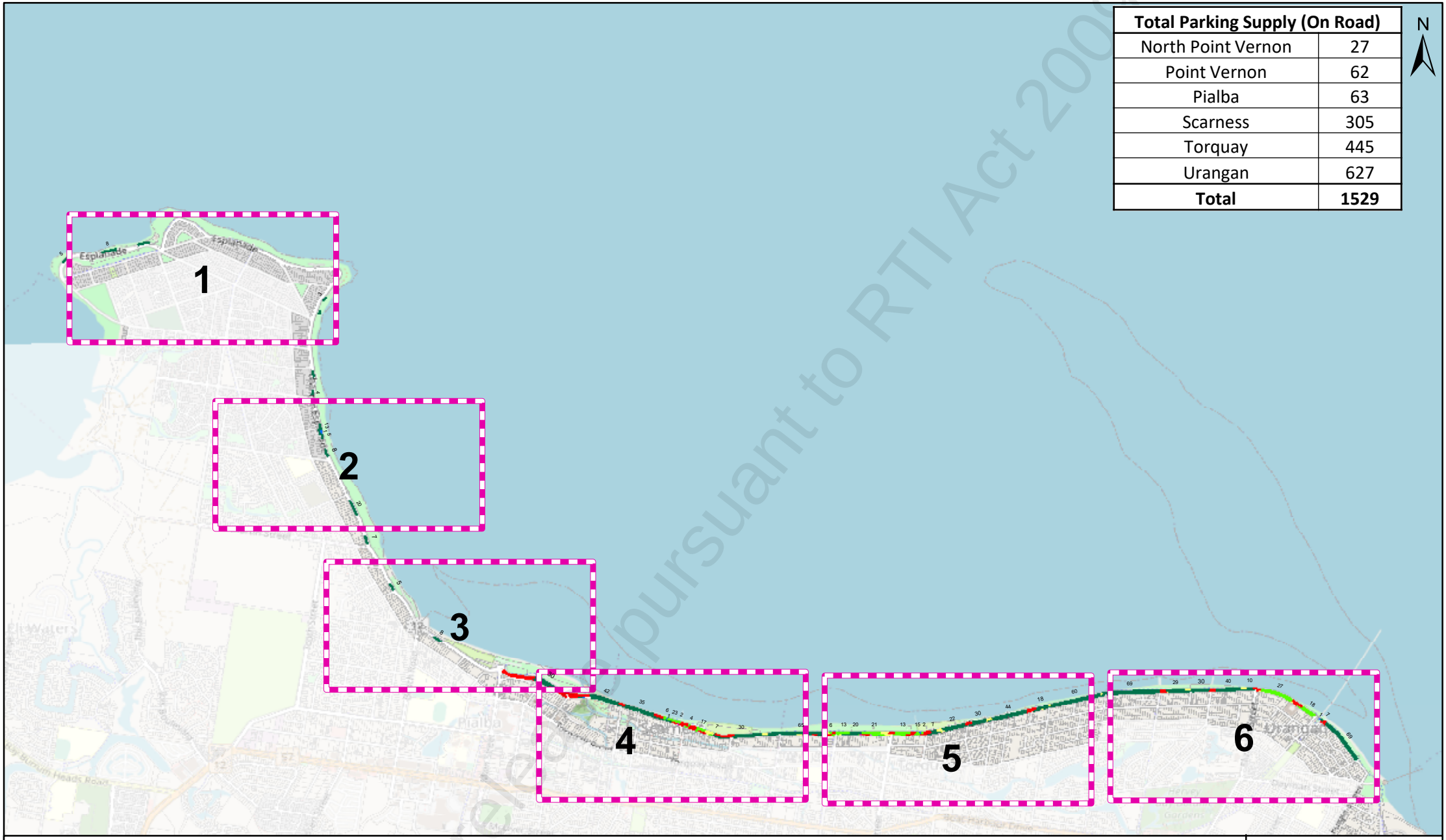

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Total	**1529**

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Restrictions

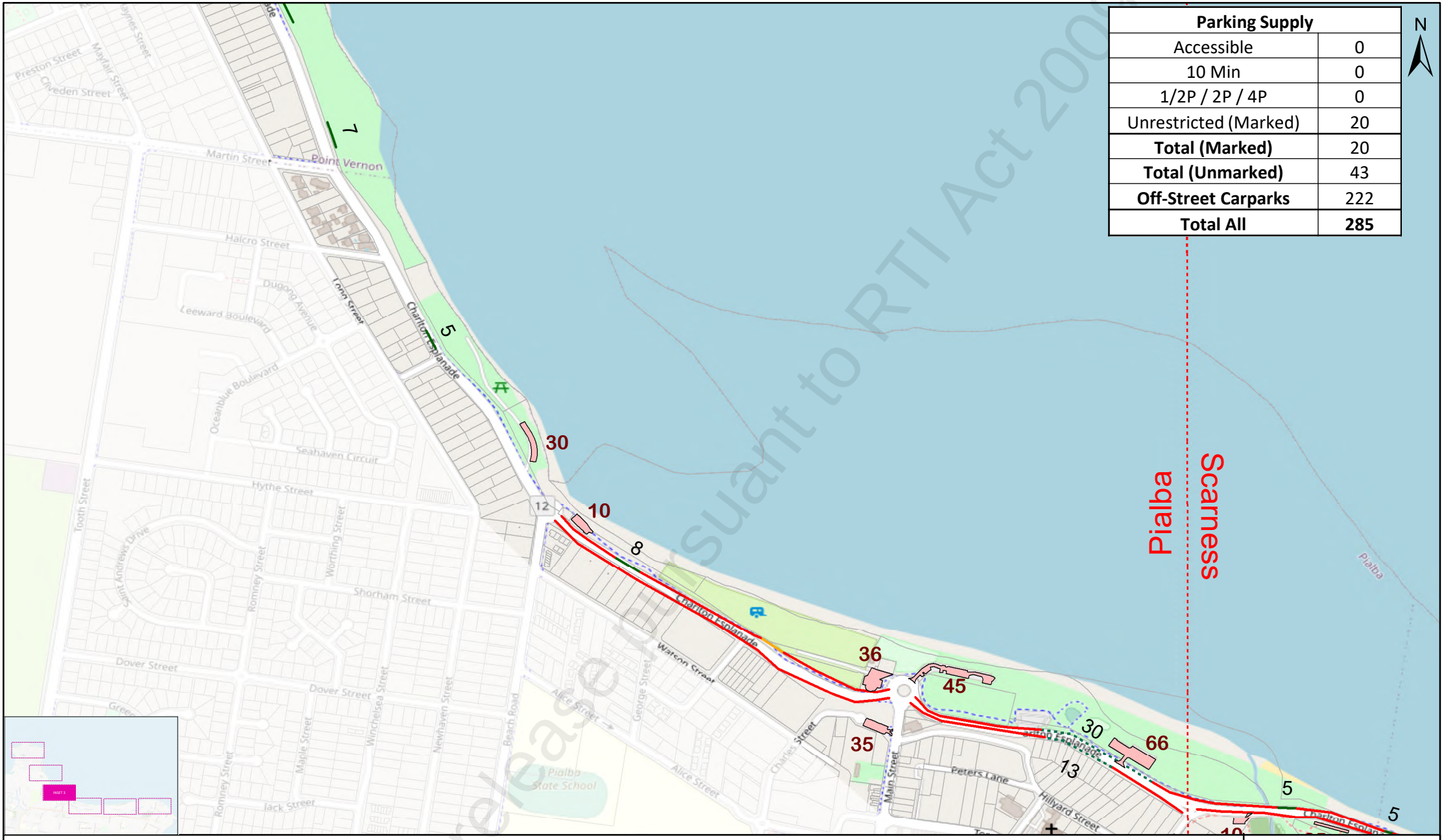
Overview Map

0 162.5 325 650 975 1,300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Restrictions
Location 3: Pialba

- Unrestricted (Unmarked)
- Unrestricted (Marked)
- Accessible
- Taxi Zone
- Loading Zone
- Bus Zone
- No Parking / Stopping
- 10Min
- 1/2P / 2P / 4P
- Off-Street Carparks

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Project Number: P5470

Date: 30/11/2021

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HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

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HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Impacted Parking Spaces

Location 3: Pialba

- Lose (Marked)
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- Retain

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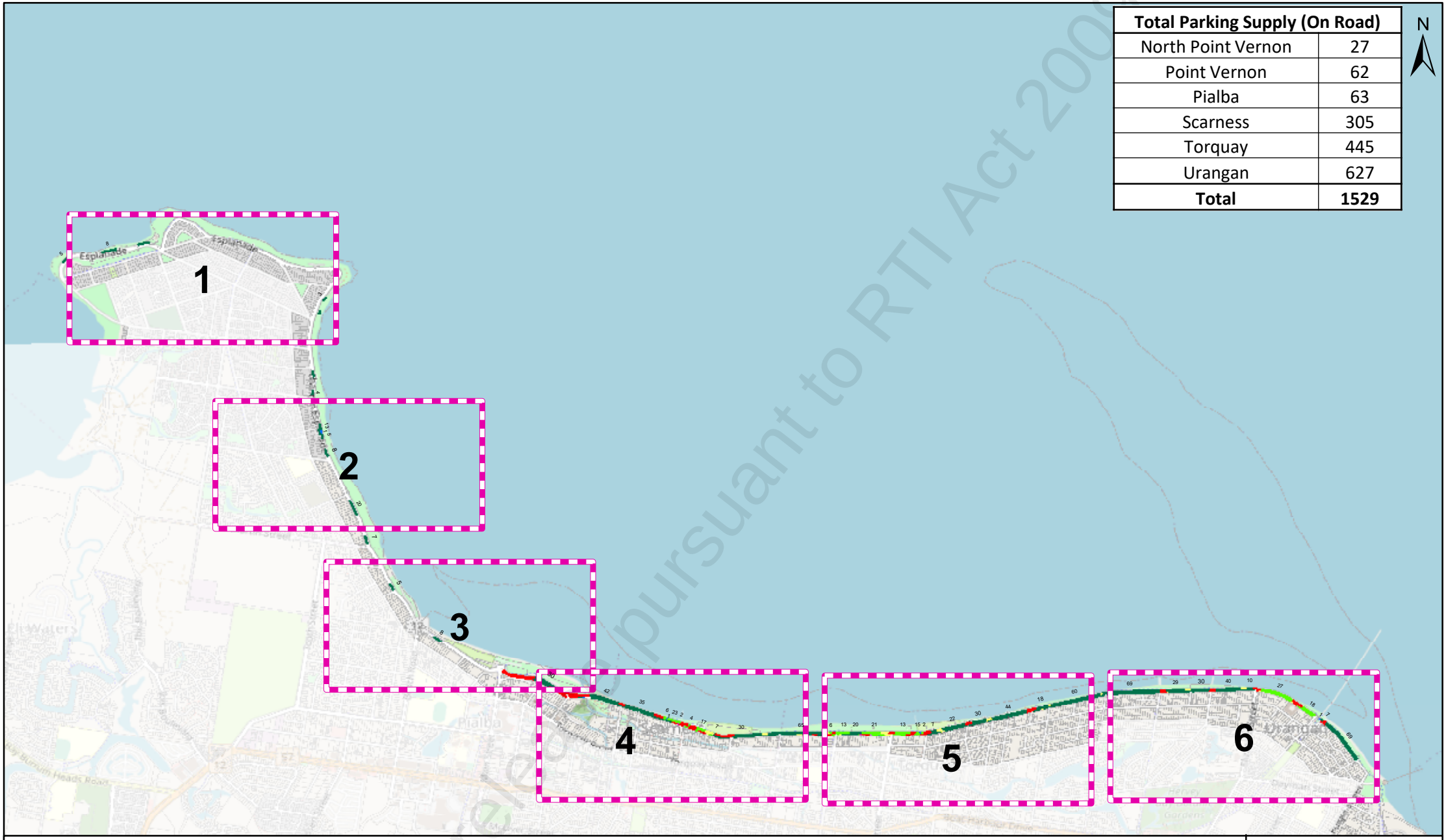

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Restrictions

Overview Map

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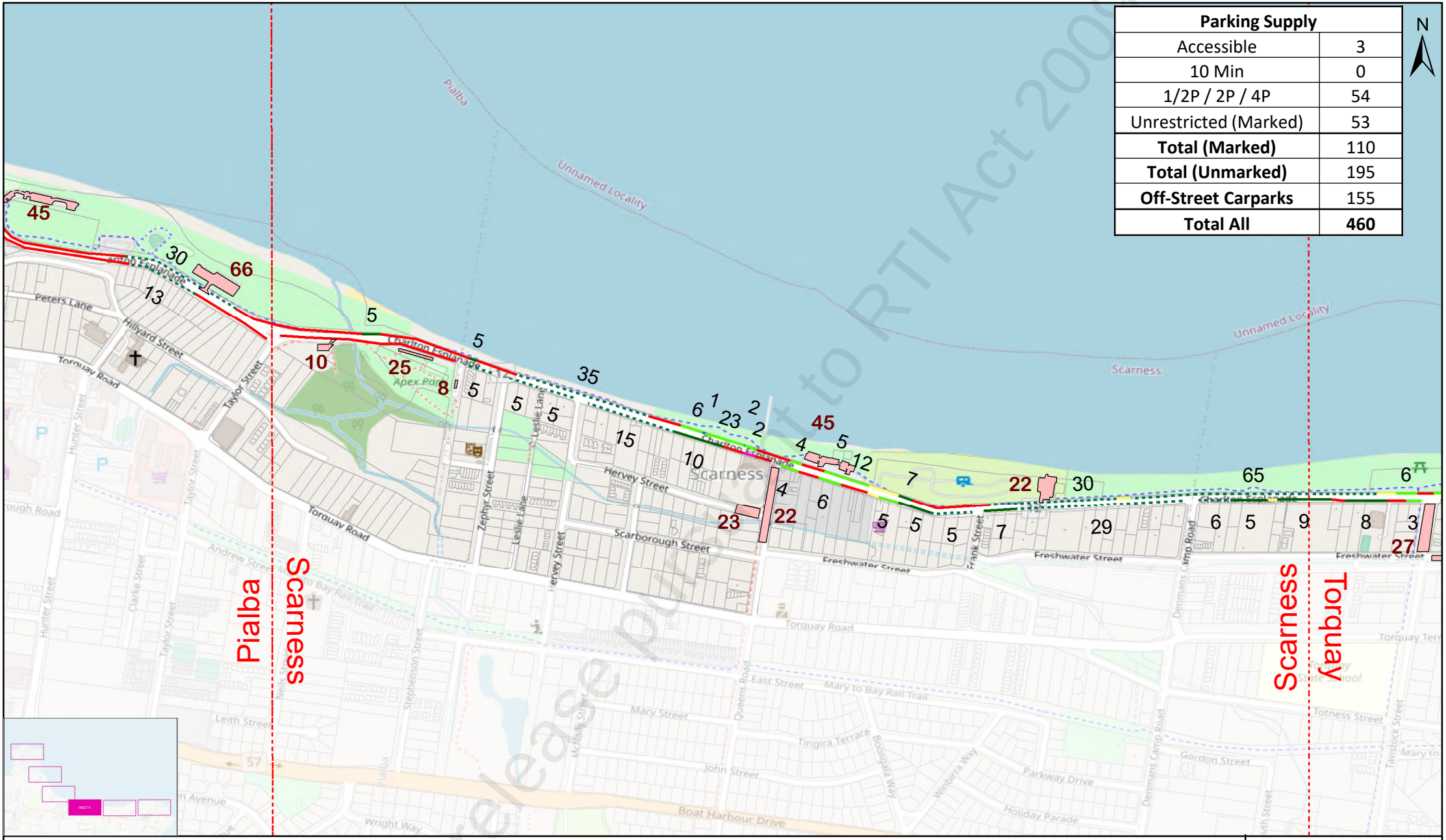
Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Parking Restrictions
Location 4: Scarness

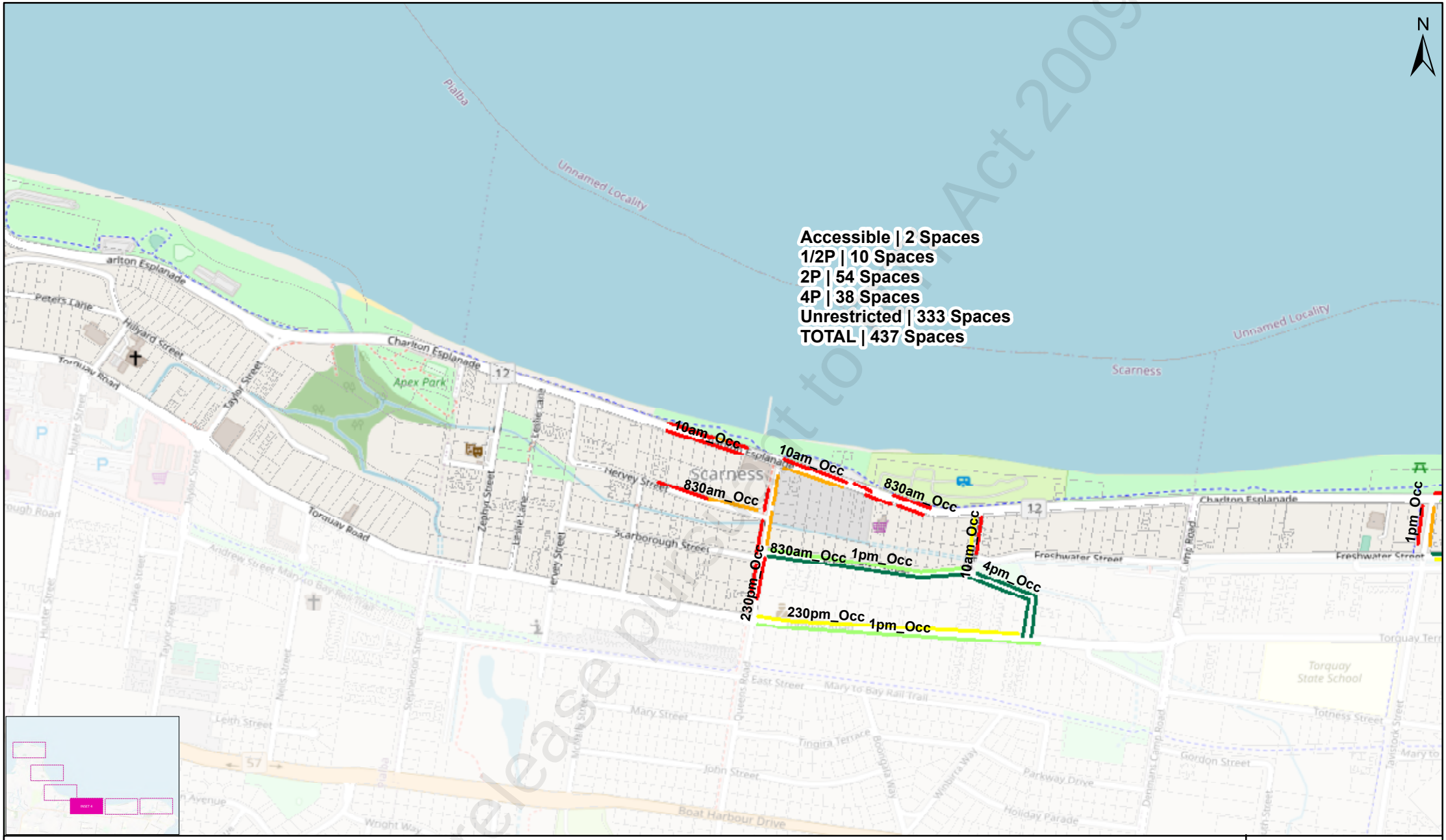
- Unrestricted (Unmarked)
- Unrestricted (Marked)
- Accessible
- Taxi Zone
- Loading Zone
- Bus Zone
- No Parking / Stopping
- 10Min
- 1/2P / 2P / 4P
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 30/11/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

Parking Occupancy (Thursday 14th Feb 2019)

Location 4: Scarness

Max. Occupancy %

- 0-20
- 21-40
- 41-60
- 61-84
- 85-100

0 37.5 75 150 225 300 Meters

Project Number: P5470

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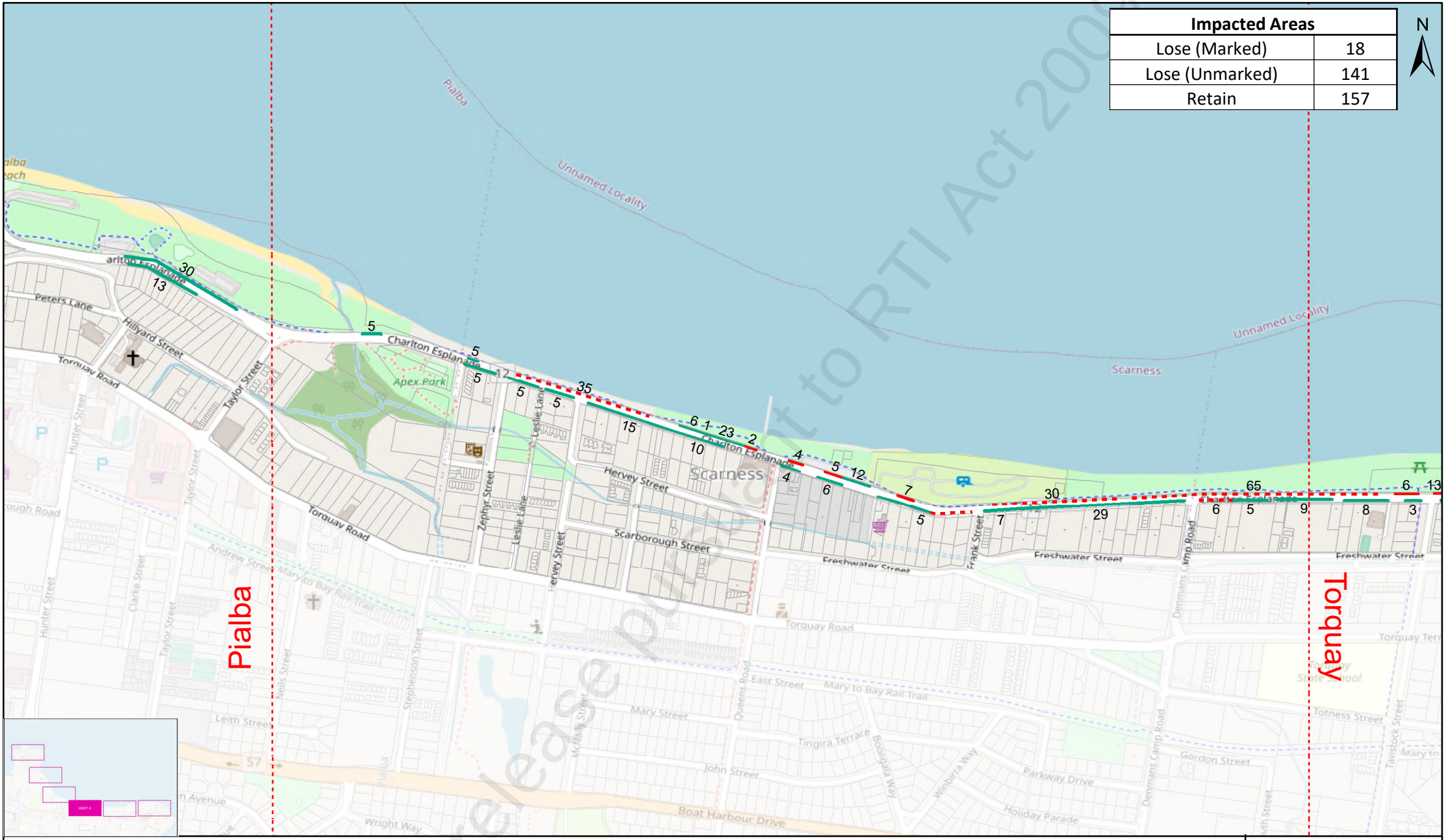


HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Impacted Parking Spaces

Location 4: Scarness

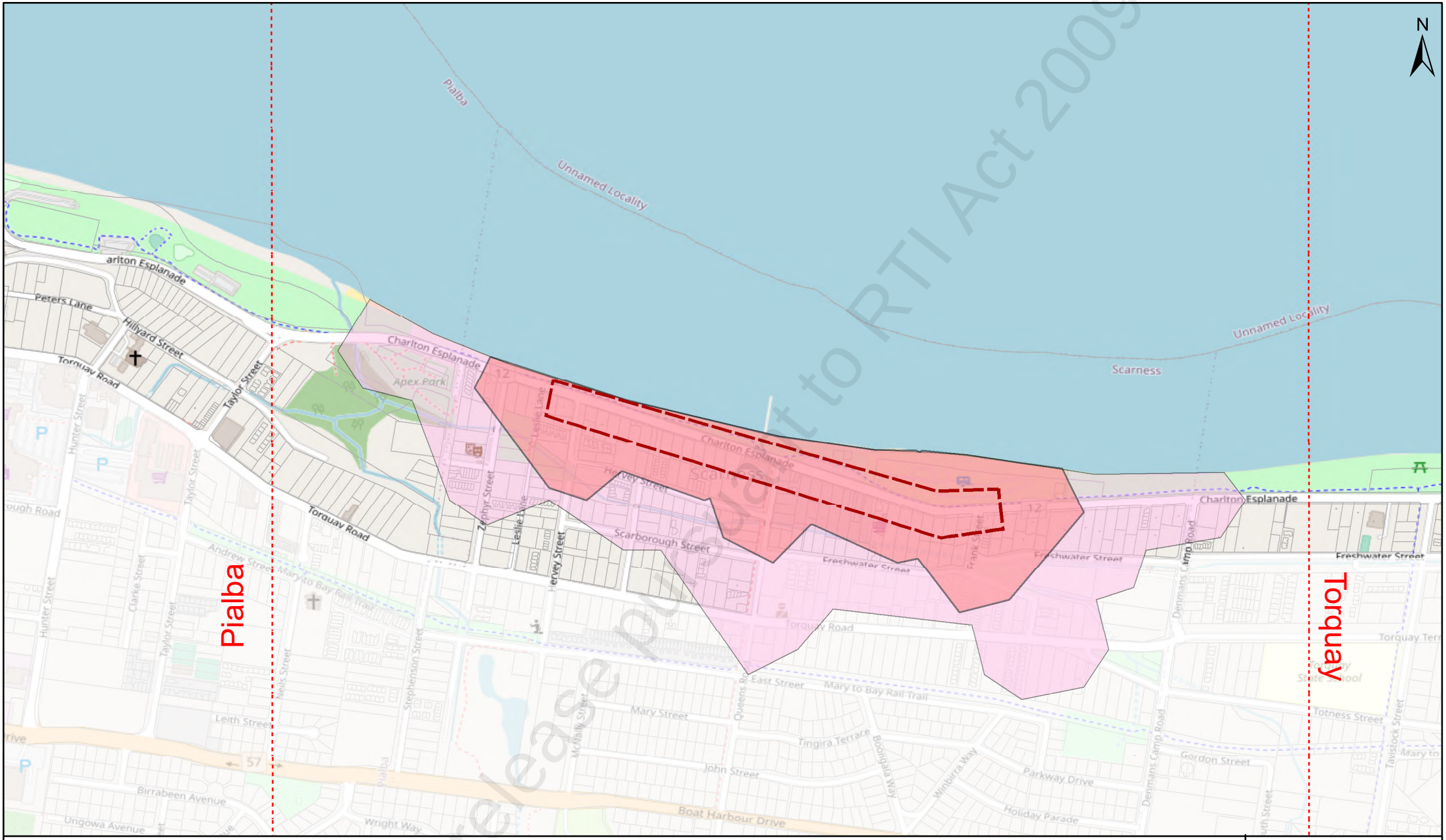
- Lose (Marked)
- Lose (Unmarked)
- Retain

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 10/01/2022

Issue: 002



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS consulting

Walking Distance

Location 4: Scarness

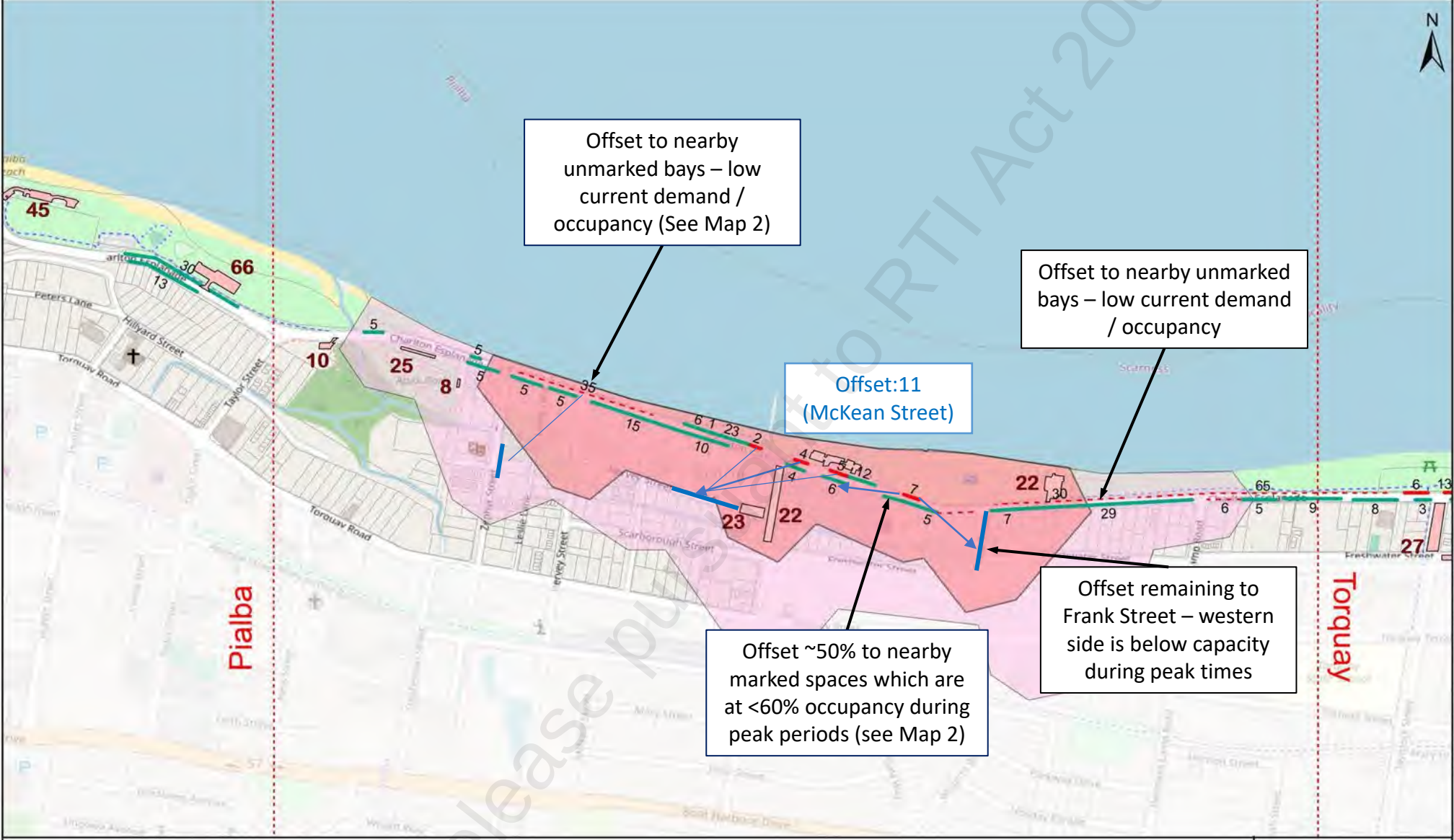
Road Boundary
100m
400m

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 06/12/2021

Issue: 001



HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS

Parking Options

Location 4: Scarness

- Lose (Marked)
- Lose (Unmarked)
- Retain
- Off Set Parking
- 100m
- 400m
- Off-Street Carparks

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 03/02/2022

Issue: 001

Existing footbridge through Tooan Tooan Creek (to provide pedestrian connectivity)

Line mark additional 11 bays on McKean Street

Footpath required on both sides (connecting to Queens Road) to accommodate pedestrians

14 bays already provided on Zephyr Street

Existing footbridge through Tooan Tooan Creek (to provide pedestrian connectivity

On-street parking available at Scarborough Street (if additional parking is needed)

Footpath required on both sides (connecting to Queens Road) to accommodate pedestrians

Line mark bays on both sides of Frank Street between The Esplanade and Freshwater Street

Footpath required on eastern side (connecting to The Esplanade) to accommodate pedestrians

Torquay

HERVEY BAY MASTER PLAN
PARKING AND TRAFFIC ADVICE

BITZIOS

Parking Treatment

Location 4: Scarness

- Lose (Marked)
- Lose (Unmarked)
- Retain
- Off Set Parking
- 100m
- 400m
- Off-Street Carparks
- Available Footpath

0 37.5 75 150 225 300 Meters

Project Number: P5470

Date: 03/02/2022

Issue: 001

Hervey Bay Master Plan

Parking Strategy for the Active Travel Corridor

Fraser Coast Regional Council

4th March 2022

Gold Coast
Suite 26, 58 Riverwalk Avenue
Robina QLD 4226
P: (07) 5562 5377

Brisbane
Level 2, 428 Upper Edward Street
Spring Hill QLD 4000
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Sydney
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Document Issue History

Report File Name	Prepared	Reviewed	Issued	Date	Issued to
P5470.001R Hervey Bay Master Plan Parking Strategy for the Active Travel Corridor	B. Chui E. Secondes	M. Davidson	M. Davidson	04/03/2022	Paul Rice via email: paul.rice@frasercoast.qld.gov.au

CONTENTS

Tables

Figures

Appendices

1. INTRODUCTION

1.1 Background

Bitzios Consulting has been engaged by Fraser Coast Regional Council (Council) to review the potential parking impacts associated with the proposed active transport provisions along the Esplanade in Hervey Bay and to develop to develop a car parking and traffic management strategy which will form part of the Hervey Bay Esplanade Master Plan. The Master Plan seeks to establish an Active Transport Corridor between Point Vernon and Urangan.

1.2 Active Transport Corridor

The existing shared path that travels parallel to / along the Esplanade in Hervey Bay is highly constrained and results in high levels of conflict between pedestrians, cyclists and other personal mobility devices. As a result, an "on road active transport corridor" is being investigated to accommodate active travel devices that travel at higher speeds (i.e. e-scooters, bikes and mobility scooters) that aims to separate vulnerable road users to "off-road" areas and more high speed active transport users to on-road facilities.

This Active Transport Corridor will be 3m wide, two way and will travel from Point Vernon to Urangan (~17km). Due to the changing topography and roadside environment, the corridor will be slightly different through different parts of the Esplanade as illustrated from Figure 1.1 to Figure 1.5.

As shown, the proposed on-road corridor will impact existing car parking spaces provided along the Esplanade, most notably near key centre zones (i.e. Scarness, Torquay and Urangan). Based on this, a car parking and traffic management strategy is required to ensure there is no impact to operation of the existing centres, and to ensure that parking can be suitably accommodated nearby.

Figure 1.1: Mobility Corridor Concept Plan – Point Vernon

Figure 1.2: **Mobility Corridor Concept Plan – Pialba**

Figure 1.3: **Mobility Corridor Concept Plan – Scarness**

Figure 1.4: **Mobility Corridor Concept Plan – Torquay**

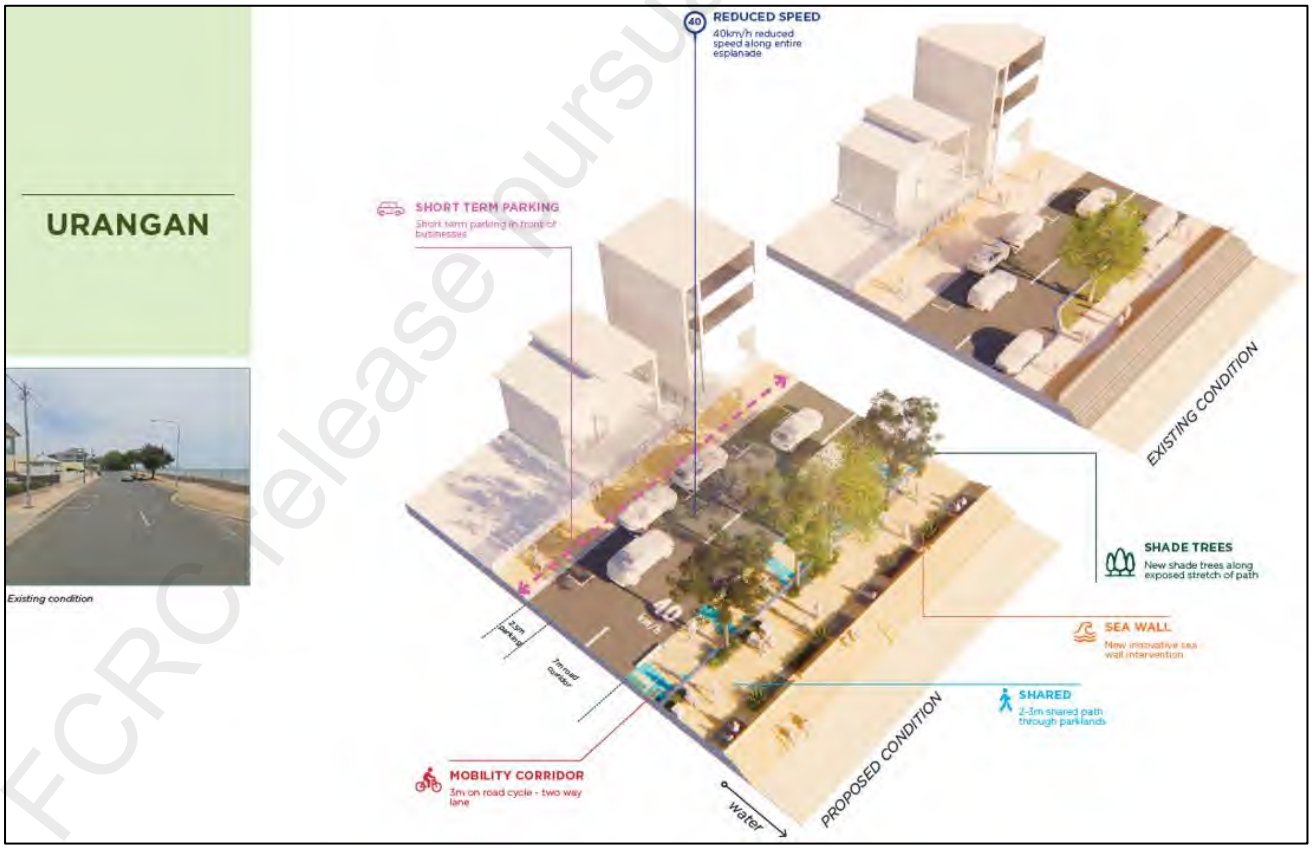
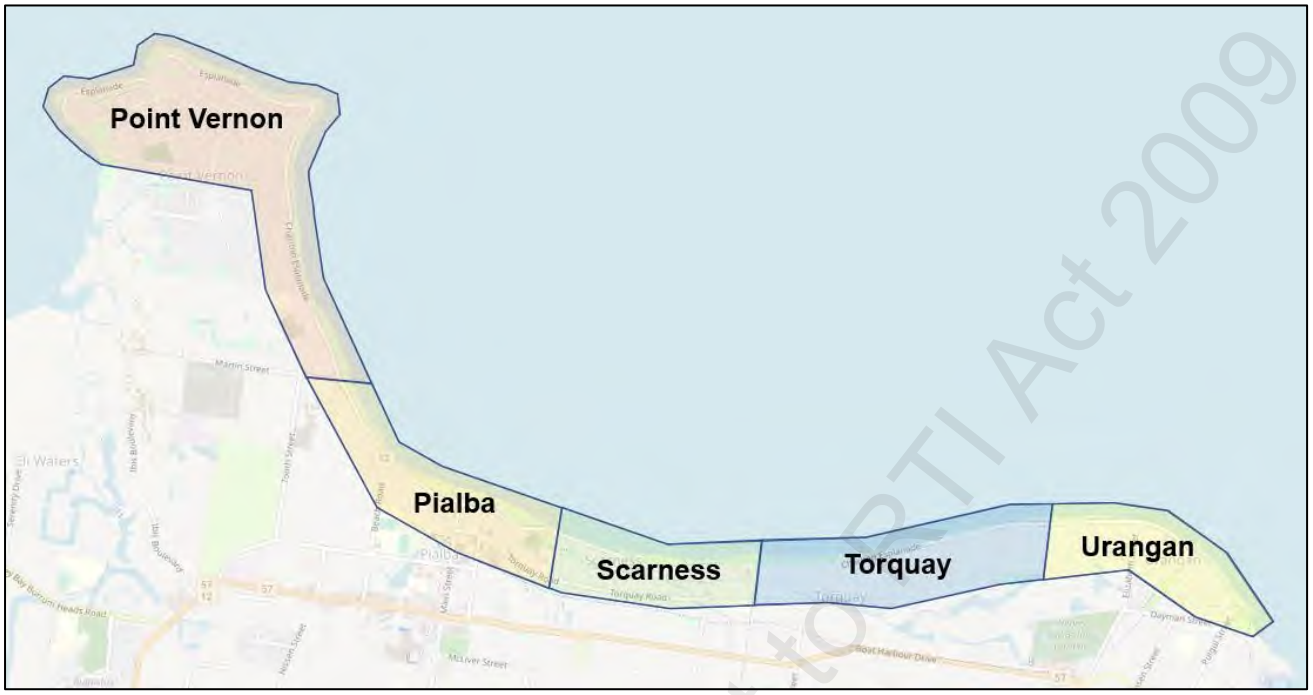


Figure 1.5: **Mobility Corridor Concept Plan – Urangan**

1.3 Subject Site

The subject site is displayed indicatively in Figure 1.6 with five (5) key focus areas.



Source: Open Street Maps

Figure 1.6: Subject Site

2. SITE VISIT OBSERVATIONS

A site visit was conducted on Tuesday 7th December 2021 to review the existing conditions and constraints during the peak periods along the Esplanade. This included observations of occupancy, identification of hotspots, review of relevant parking controls, observations on duration of stay and any opportunities that may connect the surrounding streets to the Esplanade. Key observations from site inspection are summarised below:

- High AM/PM occupancy along The Esplanade near the Urangan town centre
- Low AM/PM occupancy at Hibiscus Street
- Low on-street AM/PM occupancy from Elizabeth Street to Macks Road
- High AM/PM occupancy along the Esplanade near the Torquay town centre
- Low on-street AM/PM occupancy from Tavistock Street to Frank Street
- High AM/PM occupancy along the Esplanade near the Scarness town centre
- Decent number of pedestrians / cyclists during a weekday.

Figure 2.1 shows select key parking bays along The Esplanade.

Figure 2.1: The Esplanade in Urangan (Top) & Scarness (Bottom)

3. OVERVIEW OF MAPS

To develop the car parking strategy, six (6) maps were developed to identify the existing situation and understand the car parking hotspots, determine the available walking catchment for each focus area and investigate nearby opportunities that can accommodate the shift of parking demand.

Six (6) maps were created as described below:

- **Map 1 – Parking Restrictions**
  - Identified all existing parking spaces along the Esplanade Corridor
  - Identified relevant parking controls (e.g., timed bays, loading bays, PWD bay, etc.)
  - Identified major off-street carparks and street parking spaces at adjacent roads in key focus areas.
- **Map 2 – Occupancy**
  - Identified the parking supply across relevant areas surveyed as part of the *Maryborough and Hervey Bay Parking Strategy*
  - Identified the parking supply across relevant areas reviewed as part of site inspection in 2021.
- **Map 3 – Impacted Areas**
  - Identified all the parking bays that will be impacted on the Esplanade as part of the proposed strategy
  - This includes consideration to bays on the southern side of the Esplanade where the Active Transport Corridor will reduce the available carriageway width result in a loss of parking
  - Indented parking is expected to be retained
- **Map 4 – Waking Distance**
  - Identified the 100m and 400m walking catchments from the key centre zones (i.e. Scarness, Torquay and Urangan) in which the parking bays are expected to be impacted most.
- **Map 5 – Parking Offset Opportunities**
  - Identified alternative parking options to accommodate the impacted parking bays to support the active travel corridor without compromising parking supply
  - The intent was to provide all alternative parking within the 100m and 400m walking catchments
- **Map 6 – Potential Parking Treatments Required**
  - Identified parking treatments to accommodate the proposed alternative parking options
  - Identified potential active transport infrastructure required to support the alternative parking options.

4. MAP 1: PARKING RESTRICTIONS

4.1 Methodology

The identified carparks were categorised into four (4) groups as follows:

- Timed bays (2P, 4P, etc)
- Specific usage (e.g. PWD, taxi zone, etc)
- Unrestricted marked
- Unrestricted unmarked bays.

Figure 4.1 illustrates Map ID001 Parking Restrictions in Torquay.

SOURCE: ArcGIS Edited Bitzios Consulting

Figure 4.1: Map ID 001 Parking Restrictions – Location 5: Torquay

The parking spaces were identified via desktop review using available online aerial photography (Nearmap, Google Streetview and Google Earth). Due to this, unmarked bays and off-street carparks were estimated using the following assumption:

- Northern unmarked bays – 6m / space
- Southern unmarked bays – generally 9-10m / space due to the presence of residential crossovers.

4.2 Summary

Table 4.1 summarises the total of each parking bay category in all six (6) locations.

Table 4.1: Parking Restrictions Summary

Category	North Point Vernon	Point Vernon	Pialba	Scarness	Torquay	Urangan	Total
Accessible	0	0	0	3	3	5	**11**
10 Min	0	0	0	0	2	0	**2**
1/2P / 2P / 4P	0	0	0	54	111	148	**313**
Unrestricted (Marked)	27	62	20	53	119	90	**371**
Unrestricted (Unmarked)	0	0	43	195	210	384	**832**
Total On-Street Carparks	**27**	**62**	**63**	**305**	**445**	**627**	**1,529**
Off-Street Carparks	**102**	**0**	**222**	**155**	**241**	**30**	**750**
Total	**129**	**62**	**285**	**460**	**686**	**657**	**2,279**

In summary, a total of 2,279 parking bays (on-street and-off street) were identified across the Esplanade precinct. This includes 1,529 on-street parking bays with approximately 90% are provided between Scarness, Torquay and Urangan. As a result, these three (3) locations are identified as the key centre zones and will be the focus areas for investigation.

A copy of the Map 1 (Parking Restrictions) is included in **Appendix A**.

5. MAP 2: OCCUPANCY

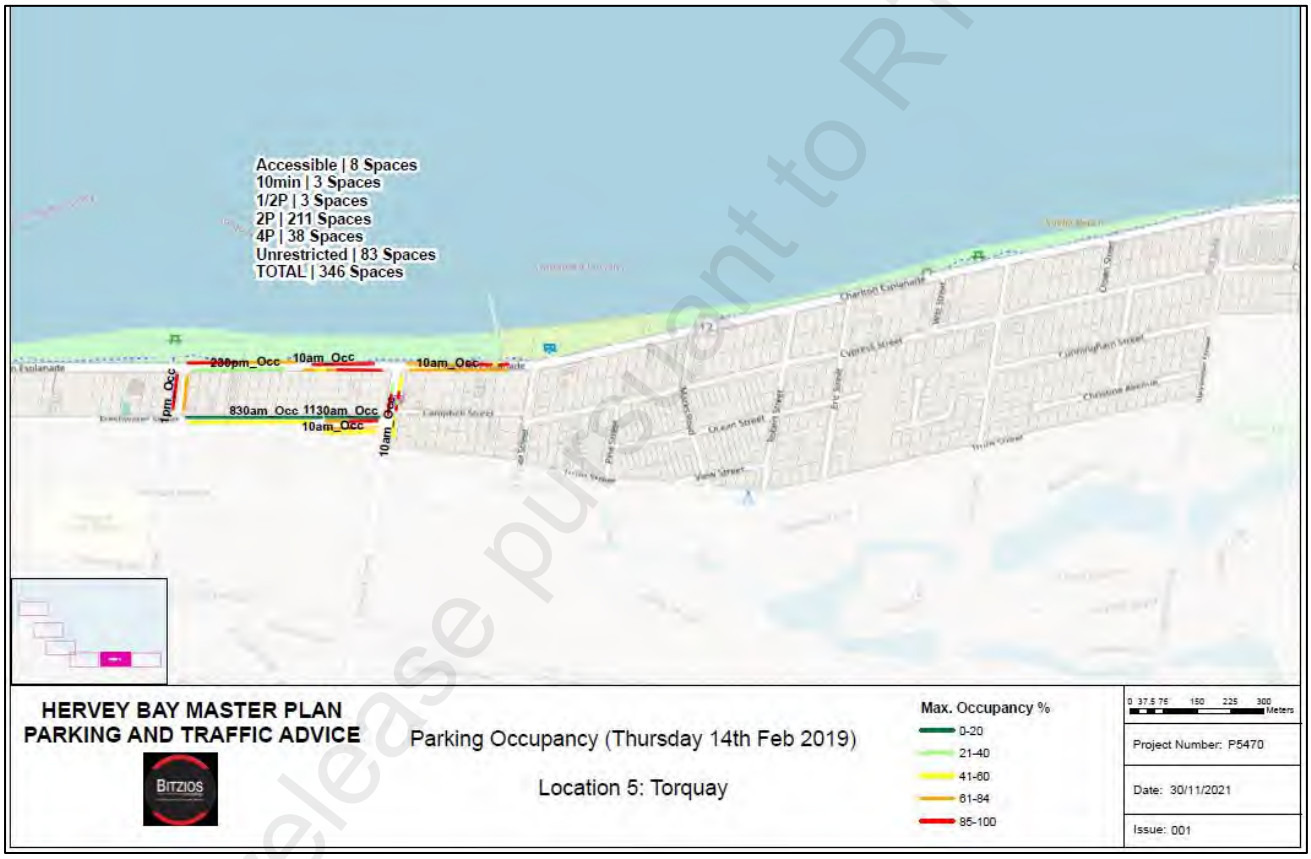
5.1 Methodology

5.1.1 Maryborough and Hervey Bay Parking Strategy (2019)

Parking survey data was sourced from the *Maryborough and Hervey Bay Parking Strategy Project* which was undertaken by Bitzios Consulting in 2019. The parking occupancy surveys were undertaken within the three (3) key central zones on a typical Thursday and Saturday in 2019. Survey details were as follows:

- Thursday 14th February 2019, 8:30AM to 4:00PM
- Saturday 16th February 2019, 9:00AM to 1:00PM.

Figure 5.1 illustrates the occupancy maps in Torquay recorded during the *Maryborough and Hervey Bay Parking Strategy*.



SOURCE: ArcGIS Edited Bitzios Consulting

Figure 5.1: Map ID 002A Occupancy (Thursday) – Location 5: Torquay

A copy of the Map 2A (Weekday Occupancy) and 2B (Saturday Occupancy) is included in **Appendix B and C** respectively.

5.1.2 Site Observation (2021)

As mentioned in Section 2, a site visit was undertaken on Tuesday 7th December 2021 from 9:00am to 4:00pm along the Esplanade on typical weekday in 2021. Parking occupancy along the Esplanade was observed and the results were summarised into three (3) periods:

- AM Peak (9:00am to 11:00am)
- Lunchtime Peak (11:00am to 1:00 pm)
- PM Peak (1.00pm to 4:00pm)

Figure 5.2 figuratively shows Map 2C (Weekday 2021 Occupancy) in Torquay recorded during the site inspection.

SOURCE: ArcGIS Edited Bitzios Consulting

Figure 5.2: Map ID 002C Occupancy (AM Peak, 2021) – Location 5: Torquay

A copy of the Map 2C (Weekday 2021 Occupancy) is included in **Appendix D**.

5.2 Summary

The parking survey from *Maryborough and Hervey Bay Parking Strategy* shows that the central area of Scarness, Torquay and Urangan is highly utilised along the Esplanade. The was further validated during the 2021 site observation. Additionally, this utilisation of parking on side / rear streets is relatively low which indicates a potential high level of parking supply within a short walking distance.

Furthermore, parking demands outside of the Scarness, Torquay and Urangan centres was generally very low with low levels of occupancy recorded across the whole day. These parking areas are likely utilised by local residents as opposed to visitors to the nearby centres.

6. MAP 3: IMPACTED AREAS

6.1 Methodology

The proposed “on-road active transport corridor” consists of a 3m wide, two-way corridor. Therefore, the existing car parking spaces provided along the Esplanade will be impacted by the proposed on-road treatment. Map 3 identifies the impacted parking spaces along the Esplanade.

It is expected that all parallel parking on the northern side of the Esplanade will be impacted. Furthermore, in some locations parking on the southern side of the Esplanade will be impacted as the introduction of the “on-road active transport corridor” will reduce the road carriageway width, with parking lost in order to retain two way vehicular travel. These locations have also been identified.

All on-street angled parking bays and off-street carparks are expected to be retained, and have been notated as “retained parking spaces” in the map.

Figure 6.1 shows Map 3 (Impacted Parking Spaces) in Torquay.

SOURCE: ArcGIS Edited Bitzios Consulting

Figure 6.1: Map ID 003 Impacted Parking Spaces – Location 5: Torquay

6.2 Summary

Table 6.1 summarises the total number of the impacted parking spaces in all six (6) locations.

Table 6.1: Impacted Parking Spaces Summary

Location	Total Parking Spaces (On Street)	Impacted	Retained	Lost Ratio (Northern Side)	Lost Ratio (Overall)
North Point Vernon	**27**	0	27	0%	0%
Point Vernon	**62**	0	62	0%	0%
Pialba	**63**	0	63	0%	0%
Scarness	**305**	159	146	~69%	52%
Torquay	**445**	215	230	~79%	48%
Urangan	**627**	307	320	~90%	49%
Total	**1,529**	**681**	**848**	**~78%**	**45%**

In summary, a total of 681 parking bays (on-street and-off street) are identified as impacted across the Esplanade precinct. This results in a loss of approximately 78% of parking bays across the northern side of Esplanade Corridor and a total of 45% of all spaces along the corridor.

It is noted that no parking is lost in North Point Vernon, Point Vernon or Pialba, and as such these areas were not considered further.

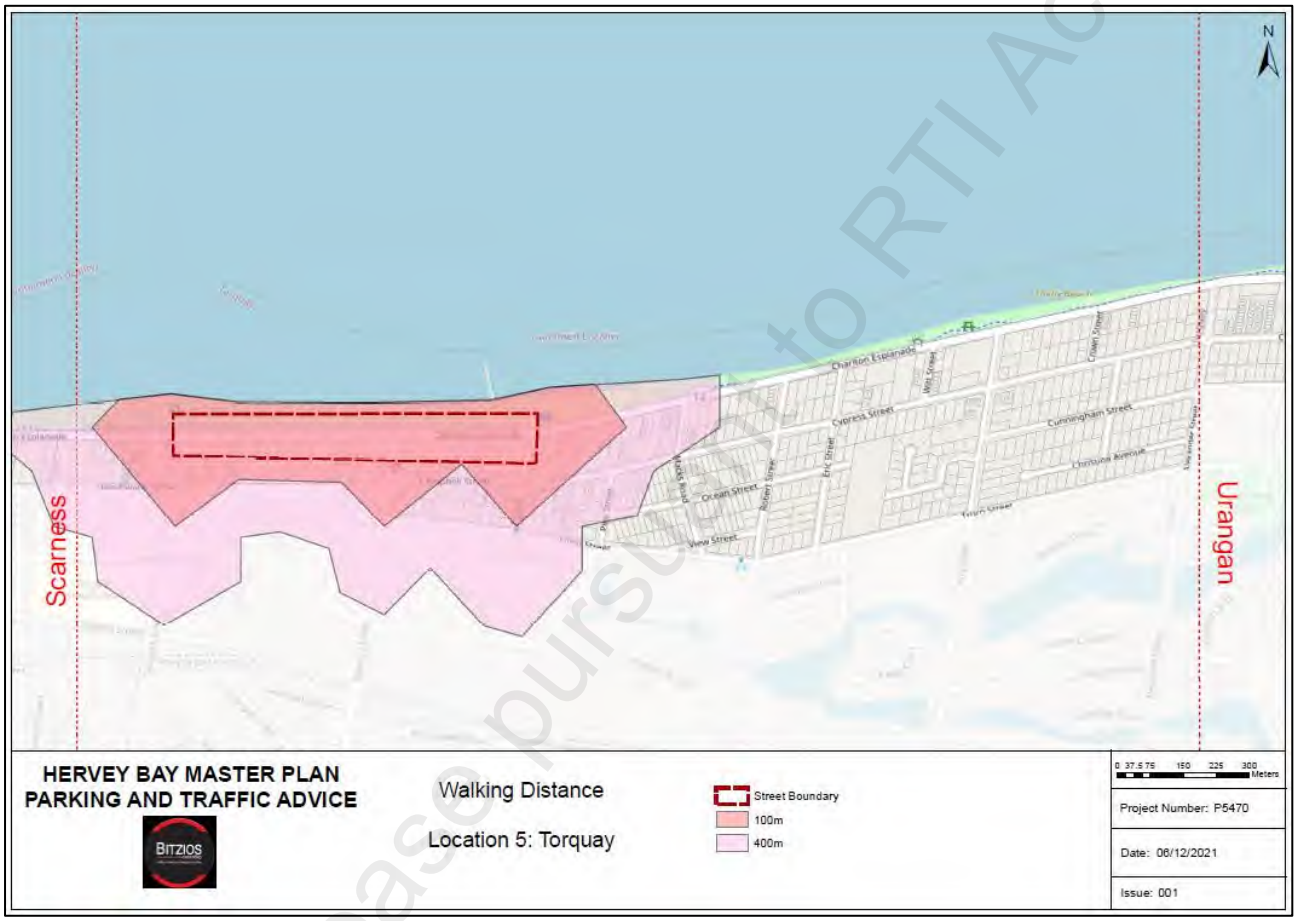
A copy of the Map 3 (Impacted Areas) is included in **Appendix E**.

7. MAP 4: WALKING DISTANCE

7.1 Methodology

The boundary of each key centre zones was identified with a 100-metre and 400-metre walking catchment identified through ArcGIS. This represents 1-minute and 5-minute walking distances from the key local centres respectively and considers travel distance along the existing road corridors (not a linear measurement). These maps provide a practical walking catchment to assist with identifying suitable relocation options for the impacted parking bays.

Figure 7.1 shows Map 4 (Walking Distance) in Torquay.



SOURCE: ArcGIS Edited Bitzios Consulting

Figure 7.1: Map ID 004 Walking Distance – Location 5: Torquay

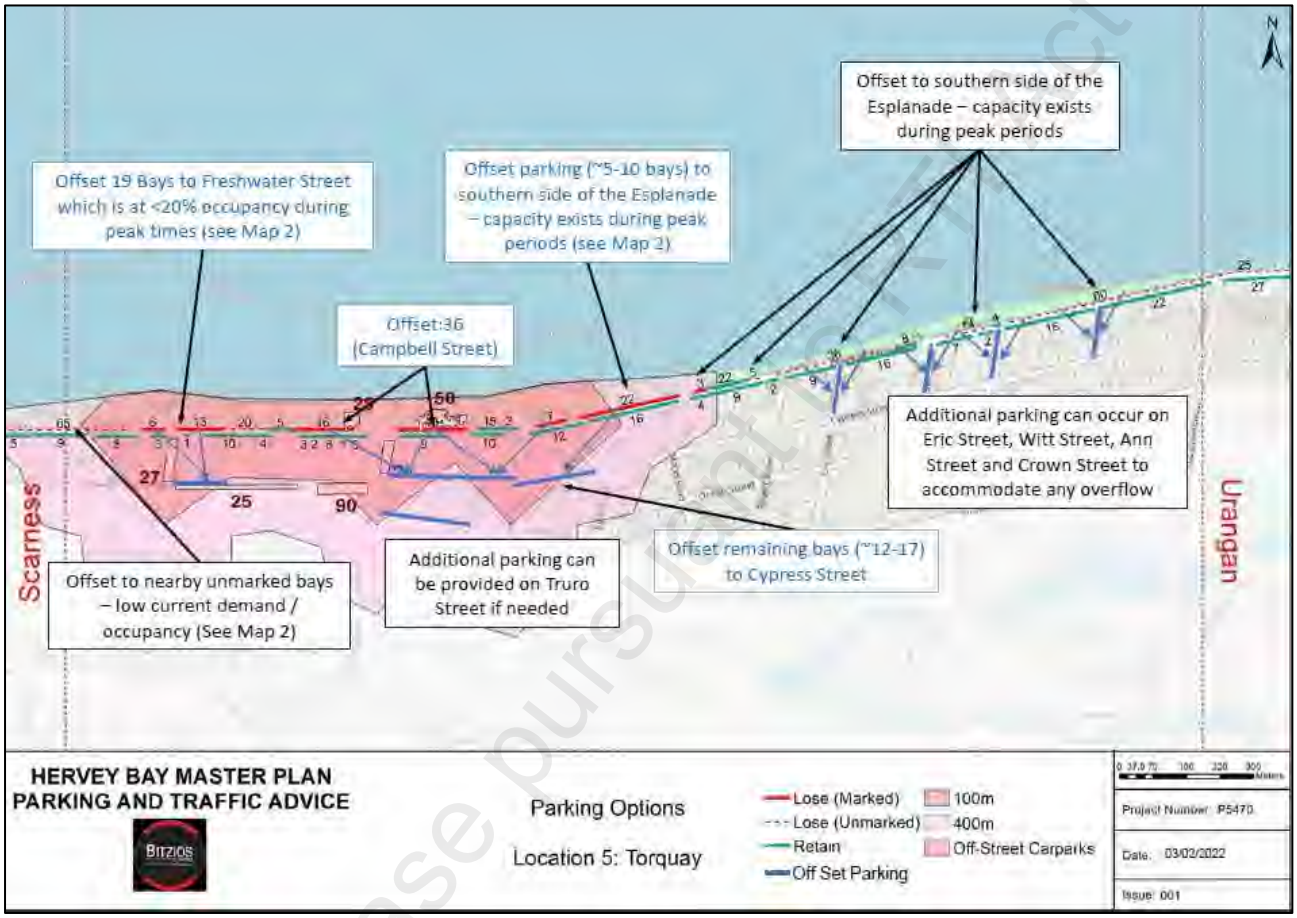
A copy of the Map 4 (Walking Distance) is included in **Appendix F**.

8. MAP 5: PARKING OFFSET OPPORTUNITIES

8.1 Methodology

Each impacted parking bay was independently reviewed and alternative locations for parking were identified. Impacted parking bays are proposed to be relocated to the closest available streets within the walking catchments identified in Map 4, with an aim to provide alternative parking within 100m wherever possible.

Figure 8.1 shows Map 5 (Parking Offset Opportunities) in Torquay.



SOURCE: ArcGIS Edited Bitzios Consulting

Figure 8.1: Map ID 005 Parking Offset Opportunities – Location 5: Torquay

8.2 Recommendations

The following recommendations propose alternative parking options for each key central zone:

8.2.1 Scarness

- The majority of the impacted marked parking bays are proposed to be offset to McKean Street which is within a 100m walking radius of the centre
- The remaining impacted marked parking bays can be offset to the western side of Frank Street, which has low parking demand during peak times
- Additionally, impacted marked parking bays can also be offset to nearby unmarked bays along the southern side of the Esplanade due to low current demand as indicated in Map 2.

8.2.2 Torquay

- The majority of impacted parking bays are proposed to be offset to Campbell Street, Cypress Street and Freshwater Street which is within a 100m walking radius of the centre
- The remaining impacted parking spaces can be offset to Truro Street within a 400m walking radius
- Impacted marked parking bays can also be offset to nearby unmarked bays along the southern side of the Esplanade due to low current demand as indicated in Map 2
- Additional parking spaces can also be provided on Eric Street, Witt Street, Ann Street and Crown Street. The available parking spaces in these streets will be capable to accommodate potential overflow from low demand areas to the east of Torquay centre (likely residential use).

8.2.3 Urangan

- The impacted marked parking bays are proposed to be mainly offset to Elizabeth Street within a 100m walking radius, and Hibiscus Street within a 400m walking radius
- Additional parking can be provided on Beulah Street and John Street within a 400m walking radius
- Impacted marked parking bays can also be offset to nearby unmarked bays along southern side of the Esplanade due to low current demand as indicated in Map 2
- Additional parking spaces are provided on Alexander Street, Margaret Street, New Street, Churchill Street. The available parking spaces in these streets will be capable to accommodate potential overflow from low demand areas to the west of Urangan centre (likely residential use).
- To the east of Urangan there is no opportunity to offset impacted parking.

8.3 Summary

Table 8.1 summarises the total number of the abovementioned impacted parking spaces in all three (3) key central zones.

Table 8.1: Offset Impacted Bays

Location	Impacted Parking Bays	Offset Parking Bays (New)
Scarness	159	83
Torquay	215	195
Urangan	307	167
Total	**681**	**445**

A total of 445 impacted parking bays are proposed to be relocated to the nearby available streets. The balance is expected to be absorbed by existing parking spaces which are below capacity during peak periods, or by creating additional line marked parking bays (see Map 6).

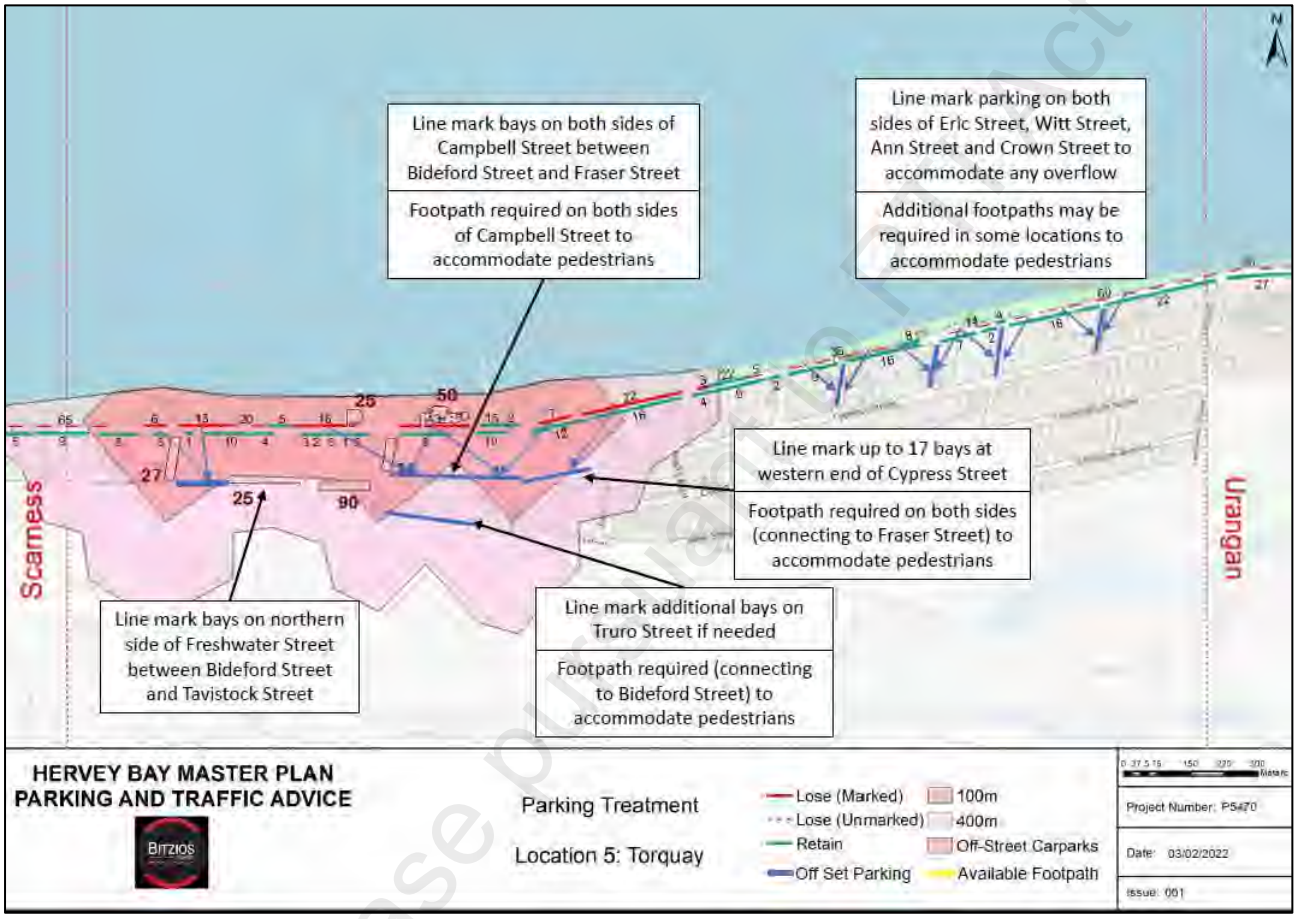
A copy of the Map 5 (Parking Offset Opportunities) is included in **Appendix G**.

9. MAP 6: POTENTIAL PARKING TREATMENTS REQUIRED

9.1 Recommendations

Each alternative parking option was independently investigated, and parking / active transport infrastructure suggested to ensure accessibility to proposed new parking areas was provided.

Figure 9.1 shows Map 6 (Potential Parking Treatment Required) in Torquay.



SOURCE: ArcGIS Edited Bitzios Consulting

Figure 9.1: Map ID 006 Potential Parking Treatment Required - Location 5: Torquay

The following is noted regarding proposed parking treatments for each key central zone:

9.1.1 Scarness

- Line mark 11 additional parking bays on McKean Street. Footpaths connecting to Queens Road will be required on both sides of McKean Street to accommodate pedestrians
- On-street parking is available at Scarborough Street to accommodate potential overflow. A footpath connecting to Queens Road will be required on both sides to accommodate pedestrians. The existing footbridge is available at Downs Street through Tooan Tooan Creek
- Line mark parking bays on both sides of Frank Street between the Esplanade and Freshwater Street. A footpath will be required on the eastern side of Frank Street to accommodate pedestrians.

9.1.2 Torquay

- Line mark parking bays on both sides of Campbell Street between Bideford Street and Fraser Street. Footpaths will be required on both sides of Campbell Street to accommodate pedestrians
- Line mark 17 additional parking bays at the western end of Cypress Street. Footpaths connecting Fraser Street will be required on both sides of Campbell Street to accommodate pedestrians
- Line mark additional bays on Truro Street to accommodate potential overflow. Footpaths connecting Bideford Street will be required on Truro Street to accommodate pedestrians
- Line mark parking bays on the northern side of Freshwater Street between Bideford Street and Tavistock Street
- Line mark additional parking bays on both sides of Eric Street and Crown, Witt Street, Ann Street and Crown Street to accommodate potential overflow. Footpaths will be required on the abovementioned streets to accommodate pedestrians (where parking is provided).

9.1.3 Urangan

- There is an existing 2m wide footpath available on the western boundary of the Pier Resort which provides pedestrian connectivity Hibiscus Street, Elizabeth Street, Pier Street, etc.
- Line mark parking bays on both sides of Hibiscus Street between Elizabeth Street and Pier Street. Footpaths connecting both ends will be required on Hibiscus Street
- Construct parking bays on Beulah Street and Johnson Street to accommodate potential overflow. Footpath will be required on both streets to accommodate pedestrians. Also, a pedestrian refuge maybe required near the 2m wide laneway to cater for pedestrians crossing Hibiscus Street
- Line mark parking bays on both sides of Elizabeth Street between the Esplanade and Hibiscus Street. Footpaths will be required on the western side of Elizabeth Street to accommodate pedestrians
- Line mark parking bays on both sides of Alexander Street, Margaret Street, Churchill Street and New Street. Footpaths will be required on the abovementioned streets to accommodate pedestrians (where parking is provided)
- Consider providing 90-degree parking bays along sections of Charlton Street (east of Urangan) to accommodate parking loss, to cater for nearby residents.

9.2 Summary

Table 9.1 summarises the total number of alternative parking to be line marked.

Table 9.1: Total Alternative Parking Supply

Location	Offset	Proposed Line Mark Carparks
North Point Vernon	0	0
Point Vernon	0	0
Pialba	0	0
Scarness	83	~22
Torquay	195	~290
Urangan	167	~230
Total	**445**	**~632**

A total of 632 new line-marked parking bays can be provided to accommodate the 445 offset impacted parking bays. This is expected to be suitable to accommodate the offset parking demand and ensure that there are limited parking impacts near key centres along the Esplanade. A copy of the Map 6 (Potential Parking Treatment Required) is included in **Appendix H**.

10. SUMMARY

Key findings are summarised below:

- **Map 1** identifies a total of 1,529 existing on-street parking across the Esplanade with 90% provided between Scarness, Torquay and Urangan
- **Map 2** identifies Scarness, Torquay and Urangan as the key centre zones with high parking demand during peak periods. This has been determined through reviewing the parking survey from *Maryborough and Hervey Bay Parking Strategy* as well as site observations in 2021
- **Map 3** identifies that in the order of 681 parking spaces (or 45%) along the Esplanade may be impacted by the proposed "on-road active transport corridor". All of these impacts occur in Scarness, Torquay and Urangan. No parking is lost in North Point Vernon, Point Vernon or Piabla
- **Map 4** identifies 100m and 400m walking catchments from the impacted centres
- **Map 5** identifies that in the order of 445 parking bays (65%) of impacted parking bays can be offset to existing parking areas within 100m or 400m of the impacted centres
- **Map 6** identifies alternative parking options for up to 632 parking bays across the impacted centres. Active transport infrastructure has also been identified to ensure new parking bays have appropriate accessibility to promote use.

In summary, the proposed "on-road active transport corridor" will impact a significant number of parking bays across the Esplanade. However, a detailed review has confirmed that there are suitable alternatives located nearby to offset this loss, or to provide alternative parking supply. This is expected to be suitable to accommodate the offset paring demand and ensure that there are limited parking impacts associated with the proposed Active Transport Corridor.

Appendix A: Map 1: Parking Restrictions

Appendix B: Map 2A: Occupancy (Thursday)

Appendix C: Map 2B: Occupancy (Saturday)

Appendix D: Map 2C: Occupancy (2021 Site Visit)

Appendix E: Map 3: Impacted Areas

Appendix F: Map 4: Walking Distance

Appendix G: Map 5: Parking Offset Opportunities

Appendix H: Map 6: Potential Parking Treatments Required

Irrelevant Information

From: Mark Davidson <Sch 4 Pt 3(3)>
Sent: Wednesday 27 April 2022 3:01 PM
To: Paul Rice
Cc: Sch 4 Pt 3(3)
Subject: RE: Hervey Bay Master Plan Parking and Traffic Study Fee Proposal

Hi Paul,

Irrelevant Information

Please see our comments below in relation to the items that John raised. I hope that the below information confirms these items, but more than happy to discuss further if need be.

Parking Demand Away from the Esplanade

In general, the parking demand surveys only included small sections away from The Esplanade, and this was generally contained to the next street back (e.g., Freshwater Street & Cypress Street). This was a limitation of the surveys as collecting data for backstreet areas was costly, and it was anticipated (and confirmed though surveys) that parking demands would be fairly limited.

The data we did collect for these streets shows:

Table 1: Parking Occupancy for Roads Parallel to The Esplanade

ID	Precinct	Street - Restriction	Parking Demand			
			Weekday	Weekend	Site Visit	Average
4	Scarness	Freshwater Street – Unrestricted	22%	6%	24%	18%
		McKean Road – 4P	80%	60%	40%	60%
	Sub Total (Weighted Ave based on Total Spaces)		*39%*	*21%*	*29%*	*30%*
5	Torquay	Freshwater Street – Unrestricted	48%	15%	30%	31%
		Freshwater Street – 2P	39%	14%	37%	30%
		Campbell Street - Unrestricted	N/A – adopted 20%	N/A – adopted 20%	20%	20%
	Sub Total (Weighted Ave based on Total Spaces)		*37%*	*16%*	*31%*	*28%*
6	Urangan	Hibiscus Street – Unrestricted	22%	14%	24%	20%
	Sub Total (Weighted Ave based on Total Spaces)		22%	14%	24%	*20%*
TOTAL			**35%**	**17%**	**30%**	**27%**

The following key points are noted form the above:

- The parking demands for these areas was generally much below capacity
- For all parallel streets back from The Esplanade, the average occupancy was about 30%
- For all parallel streets back from The Esplanade, the peak occupancy was <40% in all cases

Based on the above, we adopted a worst case scenario that all of these streets would have a background occupancy of 40%. This is conservative as it is above the peak rates observed. That said, in some localised locations (e.g. McKean Street) this will be higher during some periods and in others it may be lower, Given the scope of our assessment we felt this was an acceptable assumption.

Noting this, we sought to ensure that when parking was shifted from The Esplanade to these areas it did so at a rate of greater than 1 to 1. The Table below shows the difference between the transferred parking bays and proposed line marked bays.

Table 2: Parking Occupancy Review for Roads Parallel to The Esplanade

ID	Precinct	Existing Capacity (spaces) on Streets back from The Esplanade	Existing Free Spaces E.g. Assumes 40% Occupancy	Proposed Line Marked Car Parks (Additional Parking)	Total Parking Available on Rear Streets (Existing Free Spaces + Proposed Line Marked Bays)	Offset Cars E.g. Additional Parking to be provided in Rear Streets Only considers parking impacted within 400m radius of centres	Parking Demand on Available Spaces due to Offset Cars
4	Scarness	70	42	+22	66	40	61%
5	Torquay	221	133	+290	423	195	46%
6	Urangan	57	34	+320	354	167	47%
TOTAL		**348**	**209**	**632**	**843**	**402**	**48%**

Note: the above assumes all parking will transfer to parallel roads (e.g. Freshwater Street). Some of this also occur in north-south roads (e.g. Queens Road) which also generally have some available occupancy.

This shows:

- The impacts on parking at Scarness can be suitably offset with all impacted parking (40 cars) comfortably accommodated in the 66 available bays provided back from the Esplanade
- The impacts on parking at Torquay can be suitably offset with all impacted parking (195 cars) comfortably accommodated in the 423 available bays provided back from the Esplanade
- The impacts on parking at Urangan can be suitably offset with all impacted parking (167 cars) comfortably accommodated in the 354 available bays provided back from the Esplanade
- Generally, the impacts across the centre zones can be suitably offset with all impacted parking (445 cars) comfortably accommodated in the 843 available bays provided back from the Esplanade
- Generally 40-50% capacity will still be provided in these areas.

This shows that the parking transfer is comfortably accommodated in the nearby streets based on conservative assumptions of the parking demands in these streets. That is, if 40% of parking away from the Esplanade was occupied, the transfer of parking will still be suitable to accommodate those impacted by the loss on the Esplanade.

Future Parking to be Preserved

We have not specifically considered the preservation of on-street parking for future private development. It is important to note that we have assumed some levels of occupancy and that this has been generally carried over to these spaces as well.

Taking a more detailed look at our assessment, the following is noted

- We have generally assumed all roads in these areas to be at 40% capacity. Based on what surveys we have available, this is highly conservative in many cases
- As shown above, the parking offset will still result in ~40-50% free parking availability on streets back from the Esplanade
- Locals / Visitors would generally park as close as possible to their destination (shops / beach / Pier etc.)
- There was generally low parking occupancy near residential areas, particularly on the immediate back streets (i.e. Hibiscus Street, Cypress Street, Freshwater Street)
- Some parts of Freshwater Street provided 'back accesses' for some businesses but generally had low levels of occupancy provided its close vicinity to the Esplanade
- Cypress Street also had very low occupancy levels
- Hibiscus Street was generally occupied on the eastern end compared to the western end.

Therefore, we do not think that the overflow of parking is going to result in surrounding streets being significantly impacted to the extent that it will not allow for on-street parking to occur for existing or future uses nearby.

Thanks,

Regards,
MARK DAVIDSON
Sch 4 Pt 3(3)
Sch 4 Pt 3(3)
| W www.bitziosconsulting.com.au
GOLD COAST **|** SYDNEY **|** **BRISBANE**

From: Mark Davidson
Sent: Thursday, 14 April 2022 3:25 PM
To: Paul Rice <Paul.Rice@frasercoast.qld.gov.au>
Cc: Sch 4 Pt 3(3)
Subject: RE: Hervey Bay Master Plan Parking and Traffic Study Fee Proposal

Hi Paul,

This is a good question and something that we did consider as part of our assessment. Eric and I will draft up a response email to this early next week and from there we can discuss if any changes to the study are necessary.

Thanks,

Regards,
MARK DAVIDSON
Sch 4 Pt 3(3)
Sch 4 Pt 3(3)
| W www.bitziosconsulting.com.au
GOLD COAST **|** SYDNEY **|** **BRISBANE**

From: Paul Rice <Paul.Rice@frasercoast.qld.gov.au>
Sent: Tuesday, 12 April 2022 9:41 AM
To: Mark Davidson Sch 4 Pt 3(3)
Subject: FW: Hervey Bay Master Plan Parking and Traffic Study Fee Proposal

Good morning, Mark

Following the submission of your traffic study, Council's Engineering Services section have raised a couple of considerations regarding the proposed offset parking arrangements.

Are you able to provide some clarification around this, please?

I'd be happy to discuss further, including an extension to the previous scope should further study be warranted.

Kind regards,

Paul Rice
Open Space Planner
Open Space and Environment
Development and Community
T (07) Sch 4 Pt 3(3) [redacted] **E** paul.rice@frasercoast.qld.gov.au

---

From: John Mclennan <John.Mclennan@frasercoast.qld.gov.au>
Sent: Friday 8 April 2022 4:15 PM
To: Paul Rice <Paul.Rice@frasercoast.qld.gov.au>
Cc: Damion Beety <Damion.Beety@frasercoast.qld.gov.au>
Subject: RE: Hervey Bay Master Plan Parking and Traffic Study Fee Proposal

Hi Paul

Had a quick read of the report and have a few question to ask.

The demand assessment does not seem to extend to the areas that the offset parking is proposed. How do we know what demand is currently occurring in the prepose offset areas?
Also what parking is proposed to be preserved in the offset areas that is for future development of property that want existing frontage credits?

Appreciate this is late in response.

Cheers

John McLennan
Executive Manager
Engineering Services
Infrastructure Services
T (07) Sch 4 Pt 3(3) [redacted] **E** john.mclennan@frasercoast.qld.gov.au

From: Paul Rice
<Paul.Rice@frasercoast.qld.gov.au>
Sent: Friday 18 March 2022 2:26 PM
To: Damion Beety <Damion.Beety@frasercoast.qld.gov.au>
Cc: John Mclennan <John.Mclennan@frasercoast.qld.gov.au>
Subject: RE: Hervey Bay Master Plan Parking and Traffic Study Fee Proposal

Hi Damion, John

Do you have any feedback on the parking review (access via the below link) ?

Kind regards,

Paul Rice
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19 September 2022

Hervey Bay Esplanade Master Plan: Economic Benefit Assessment

Lat Studio

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Document History

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Disclaimer:

This report has been based upon the most up to date readily available information at this point in time, as documented in this report. Bull & Bear Economics has applied due professional care and diligence in accordance with generally accepted standards of professional practice in undertaking the analysis contained in this report from these information sources. Bull & Bear Economics shall not be liable for damages arising from any errors or omissions which may be contained within these information sources.

As this report involves future market projections which can be affected by several unforeseen variables, they represent our best possible estimates at this point in time and no warranty is given that this particular set of projections will in fact eventuate.

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1 Introduction

Bull & Bear Economics was engaged by Lat Studios to provide an economic assessment of the Hervey Bay Esplanade Master Plan. The master plan proposes several interventions in the public realm of Hervey Bay Esplanade across the coastal villages located along the ~15 kilometres of esplanade at Hervey Bay. These interventions include initiatives such as a mobility corridor, water sports hub, indigenous interpretation and celebration, revegetation and creation of new dining spaces. The economic assessment proposes to monetise the benefits associated with each of the interventions.

1.1 Report Structure

This report is structured as follows:

- Section 1 Introduction: this section outlines the purpose and structure of the report;
- Section 2 Project Benefits: scoping and high-level quantification of anticipated project benefits;
- Section 3 Benefit Analysis: summary of key benefits and report of results;
- Section 4 References: details all sources used in the preparation of this report; and
- Section 5 Appendix: summarises the data sources utilised in preparing this report.

Figure 1.1 below illustrates the extent of the Hervey Bay Esplanade Master Plan area. This report does not provide an overview of the master plan and as such the assessment should be read in conjunction with the master plan.

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Figure 1-1 Hervey Bay Esplanade Master Plan area

2 Project Benefits

The Hervey Bay Esplanade Master Plan comprises several initiatives, some represent major interventions across the esplanade while others are small scale changes within key parts of the esplanade.

Key features of the master plan include:

- Provision of a mobility corridor throughout the length of the master plan area to provide a separate pathway for cyclists and mobility device users independent of pedestrians and roadway;
- Major rehabilitation of environmental and dune habitats along the length of the esplanade;
- Re-establishment or establishment of spaces and places celebrating indigenous cultural heritage; and
- Re-configuration of club house facilities to improve efficiencies of club operations.

This benefit analysis considers a range of project benefits including:

- Mobility corridor benefits: benefits accruing to users of the mobility corridor;
- Pedestrian benefits: uplift in pedestrian activity as a result of the master plan;
- Environmental benefits: benefit of rehabilitation and regeneration of habitats and vegetation communities within the master plan area;
- Tourism related benefits: uplift in visitation and consequent expenditure as a result of investment in the esplanade;
- Property uplift benefits: increase in property values of areas proximate to the esplanade; and
- Indigenous cultural heritage benefits.

Benefits associated with reconfiguration of club facilities was not estimated, because this would have required intimate knowledge of club operations. Given the nature of club activities, improvements in club operation will result in a benefit, however such benefits are unlikely to be significant.

This assessment anticipates that the benefits from the Hervey Bay Esplanade Master Plan will commence from 2027 onwards.

2.1 Mobility Corridor Benefits

A key feature of the Hervey Bay esplanade Master Plan is the creation of a mobility corridor which separates cyclists and mobility device users from pedestrians. The mobility corridor is also separated from the road, providing a dedicated corridor for cyclists and mobility device users.

Conflict between users of cyclists and mobility device users and pedestrians can arise. This conflict can result in increased crash incidents between cyclists and mobility device users and pedestrians. Similarly, conflict can arise between cyclists and motor vehicles when cyclists use the road. Provision of a dedicated mobility corridor that separates cyclists and mobility device users from pedestrians will provide an alternative to cyclists riding on the road or running the risk of injuring a pedestrian.

Cyclists and mobility device users will value the mobility corridors for providing safety for cyclists and mobility device users, significantly reducing the risk of coming into conflict with pedestrians and perception of added convenience and reduced need for vigilance.

Raje and Saffey (2013) report research conducted by Borjesson and Eliasson (2012) which estimates the value of using a separated bicycle path relative to using the street in a mixed traffic environment at 5.4 EUR/hr (Mar 2012 value). This converts to $8.52 (2022 Australian dollars). This represents a value based on perceptions of increased safety, convenience and efficiency[1] of being able to use a separated cycle pathway. This value is obviously applicable to cyclists using the proposed mobility corridor. It is also applicable to users of mobility devices, insofar as they too would experience improvements in their perception of safety, convenience and efficiency by being able to use a dedicated mobility corridor that separates them from pedestrians (in the case of using the footpath or existing walking track as an alternative) and motor vehicles (in the case of potentially using the road as an alternative).

Fraser Coast Regional Council conducted pedestrian, cyclist and mobility device user counts at ten locations along the length of the esplanade corridor. These were daily counts conducted for a full week between 17 June 2022 and 23 June 2022. The counts covered time of day between 6:15 am through to 6:00 pm. In this regard they were not full day counts, but could be expected to cover at least 80% of pedestrian, cyclist and mobility device user activity along the Esplanade corridor. The potentially undercounting of pedestrian, cyclist and mobility device users means that benefits estimated for the mobility corridor are likely to underestimate those benefits.

Figure 2-1 Pedestrian, Cycle and Mobility Counter Locations – Hervey Bay, 2022

[1] Efficiency refers to improvements in travel time, vehicle/equipment operating cost and health benefits.

Pedestrian, cyclist and mobility device user counts for each location were converted to a daily average. The relevant users of the mobility corridor will be cyclist and mobility device user, with pedestrians being directed to use the existing pathway, which is currently a shared pathway. The summary results for pedestrian, cyclist and mobility device user counts are provided in the Appendix.

The value of the mobility corridor is calculated with reference to the number of cyclists and mobility device users counted at each count location and assigned a segment length based on the separation of each count station from the next count station. An exception is made for the two count stations at the respective ends of the Esplanade corridor, which are assigned a segment length of two kilometres. The assigned segment lengths are reported in Table 2-1 below.

Table 2-1 Chainage distances between count locations along Hervey bay Esplanade corridor

	Chainage, East-West	Chainage, West-East	Difference	Assumed segment length per cycle or mobility device count
RT14 Esplanade, Pt Vernon	0.0	9.9	-	2
RT15 Esplanade, Pialba	1.0	8.9	-1.0	1
RT 16 Esplanade, Pialba (Taylor Street)	2.3	7.6	-1.3	1.3
RT 17 Esplanade, Pialba (Hervey Street)	2.9	7.0	-0.6	0.6
RT 18 Esplanade, Scarness	3.7	6.3	-0.8	0.8
RT 19 Esplanade, Torquay (b/t Tavistock & Torquay)	4.5	5.4	-0.8	0.8
RT 20 Esplanade, Torquay (b/t Fraser St & Surf Club)	5.2	4.7	-0.7	0.7
RT 21 Esplanade, (b/t Eric & Witt St)	5.9	4.0	-0.7	0.7
RT 23 Esplanade, (b/t Elizabeth St & Urangan)	7.9	2.0	-2.0	2
RT 24 Esplanade, (b/t Jetty Rd & Boat Harbour Dr)	9.9	0.0	-2.0	2

Source: Bull and Bear Economics Assessment (2022)

Bicycle Australia[2] report the average speed of a male cyclist is 25.8km/hr, while the average speed of a female cyclist is 22.6 km/hr based on Strava personal mobility tracking data. Assuming an even split of male and female cyclists the average speed would be 24.2km/hr. Mobility devices that would be used in the mobility corridor range from motorised wheel chairs through to scooters. Motorised wheel chairs typically have a maximum speed of 8km/hr, while motorised scooters are required to be speed limited to 25km/hr. As such, an average speed of 8km/hr has been assigned to mobility devices.

Based on the segment lengths reported in Table 2-1 and the average speeds reported immediately above it is possible to calculate the average time spend on the mobility corridor at each count location. It is important to note that there could be users of the mobility corridor that access and egress the corridor in between counter locations, meaning mobility corridor use could be higher. Based on the estimated time spent on the corridor and the value of use ($/hr) a daily value for the mobility corridor at each counter location can be generated. This is in turn converted to an annual use by multiplying the daily value by 365 days per year.

A value has been generated for 2022 as context and a baseline from which to grow future benefits. The benefits are grown by 1% per annum, which reflects the projected population growth for Fraser Coast Local Government Area[3] (LGA). This is likely to understate growth, because demand growth will most likely be driven by population growth in Hervey Bay, rather than the LGA more broadly.

[2] (Bicycling Australia, 2015)

[3] (Queensland Government Statistician's Office, 2018)

Hervey Bay has experienced population growth above the LGA average. The LGA growth projection is used to ensure benefit estimates tend towards being conservative, rather than optimistic. As with other benefits it is assumed benefits will commence in 2027 and the project life runs to 2056 (30 years).

Table 2-2 Annual benefits of mobility corridor, 2022 (baseline), 2027 (first year benefits) to 2056

	2022	2027	2031	2036	2041	2046	2051	2056
RT14 Esplanade, Pt Vernon								
Cyclist	$49,421	$51,850	$53,879	$56,527	$59,306	$62,221	$65,279	$68,488
Mobility device	$27,323	$28,666	$29,787	$31,252	$32,788	$34,399	$36,090	$37,864
RT15 Esplanade, Pialba								
Cyclist	$31,980	$33,552	$34,865	$36,579	$38,377	$40,263	$42,242	$44,319
Mobility device	$20,048	$21,033	$21,856	$22,931	$24,058	$25,240	$26,481	$27,782
RT 16 Esplanade, Pialba (Taylor Street)								
Cyclist	$52,529	$55,111	$57,267	$60,082	$63,035	$66,134	$69,384	$72,795
Mobility device	$34,076	$35,751	$37,150	$38,976	$40,891	$42,901	$45,010	$47,222
RT 17 Esplanade, Pialba (Hervey Street)								
Cyclist	$27,163	$28,498	$29,613	$31,069	$32,596	$34,198	$35,879	$37,643
Mobility device	$20,792	$21,814	$22,668	$23,782	$24,951	$26,177	$27,464	$28,814
RT 18 Esplanade, Scarness								
Cyclist	$35,028	$36,749	$38,188	$40,065	$42,034	$44,100	$46,268	$48,542
Mobility device	$20,348	$21,348	$22,183	$23,274	$24,418	$25,618	$26,877	$28,198
RT 19 Esplanade, Torquay (b/t Tavistock & Torquay)								
Cyclist	$36,540	$38,336	$39,837	$41,795	$43,849	$46,004	$48,266	$50,638
Mobility device	$19,681	$20,649	$21,457	$22,511	$23,618	$24,779	$25,997	$27,274
RT 20 Esplanade, Torquay (b/t Fraser St & Surf Club)								
Cyclist	$33,168	$34,798	$36,160	$37,937	$39,802	$41,759	$43,811	$45,965
Mobility device	$26,279	$27,570	$28,649	$30,057	$31,535	$33,085	$34,711	$36,417
RT 21 Esplanade, (b/t Eric & Witt St)								
Cyclist	$31,266	$32,803	$34,087	$35,762	$37,520	$39,364	$41,299	$43,329
Mobility device	$14,033	$14,723	$15,299	$16,051	$16,840	$17,668	$18,537	$19,448
RT 23 Esplanade, (b/t Elizabeth St & Urangan)								
Cyclist	$80,116	$84,054	$87,343	$91,636	$96,140	$100,866	$105,824	$111,025
Mobility device	$39,651	$41,600	$43,228	$45,353	$47,582	$49,921	$52,375	$54,949
RT 24 Esplanade, (b/t Jetty Rd & Boat Harbour Dr)								
Cyclist	$19,974	$20,956	$21,776	$22,846	$23,969	$25,147	$26,383	$27,680
Mobility device	$9,441	$9,905	$10,292	$10,798	$11,329	$11,886	$12,470	$13,083
Total	$628,855	$659,765	$685,584	$719,282	$754,637	$791,730	$830,646	$871,475

Source: Bull and Bear Economics Assessment (2022)

2.2 Pedestrian Benefits

As mentioned above the valuation approach adopted for the mobility corridor covers a range of benefits experienced by users of the mobility corridor. Significant investment in the Hervey Bay Esplanade has the potential to increase pedestrian activity along the Esplanade. The induced pedestrian activity will likely be driven by a mix of perceptions about improved amenity and reduced conflict between cyclists, mobility device users and pedestrians. While existing users will perceive benefits from esplanade and public realm improvement works the ability to measure those benefits is limited. A more material source of benefit is the induced use demand from pedestrians.

Raje and Saffey (2013) cite research from Bushell et al (2013) that indicates the introduction of separated cycling infrastructure to replace shared pedestrian-cycle pathways induced a 5%-10% increase in pedestrian volumes along the existing corridor[4] now dedicated to pedestrians. The research indicated the most significant uplift occurred in high volume environments where the risk of cyclist-pedestrian conflicts was greatest. As such, this analysis adopts the lower uplift of 5%, which represents the uplift for a low volume environment.

2.2.1 Recreation Benefits

Recreational activities are a product like any other. Consumers of recreation place a value on recreation. As such, participation in recreation has an implied value. In the case of a free event or facility, the principal source of community benefit is consumer surplus. Consumer surplus represents the difference between the price a consumer would be willing to pay relative to the price that they actually pay. Therefore, in estimating the consumer surplus associated with an event or use of a facility it is necessary to estimate the maximum willingness to pay for recreation. This can be challenging, because the maximum willingness to pay is the price at which the last consumer would be willing to pay for a single unit of any product. At such a price, no service provider would be viable. Hence, any estimates of the maximum willingness to pay by reference to existing prices for recreational activity are likely to significantly understate the maximum willingness to pay. Once a maximum willingness to pay is estimated (or assumed) it is necessary to make an adjustment to that value known as the 'rule of the half' to reflect the downward sloping nature of any given demand curve.

Hence, an estimate of the recreational value or benefit of the proposed project can be formulated; however, it is likely to understate the actual recreation benefit, due to the challenges in quantifying the maximum willingness to pay of participants.

Bull and Bear Economics has identified a number of paid recreational activities that individuals may choose to participate in. Data has been sourced from various venue websites for each activity provided within Fraser Coast region. It is noted that rates may vary between establishments as well as different price rates (i.e. child, adult, casual, contract etc.). Table 2-3 summarises the indicative pricing of selected recreation activities in the region.

Table 2-3 Pricing of Various Recreational Activities within Brisbane

Activity	Indicative. Pricing ($)	Unit	Ave. Duration (Hrs)	Hourly Cost ($/hr)
Mini Golf	$10.00-$20.00	Student/Child (weekday) and Adult	1	$10.00-$20.00
Cinema	$10.00 – $18.00	Child/Adult	2	$5.00 - $9.00
Laser tag	$25.00-$35.00	Child/Adult	2	$12.50-$17.50
Ten Pin Bowling (2 games)	$18.00-$20.00	Child/Adult	1 ½	$12.00-$13.33
Swimming	$4.80-$5.00	Per Person	1	$4.80-$5.00
Indoor Skating	$10.00-$20.00	Per person	2	$5.00-$10.00

Source: Bull and Bear Economics review of venue websites (2022)

Unlike the activities listed in Table 2-3 above, there will be no charge to use the upgraded Hervey Bay Esplanade. However, Fraser Coast residents visiting the upgraded esplanade will still derive a

[4] A corridor was defined as a street that includes footpaths, shared path and road.

recreational benefit from using or experiencing the esplanade. As mentioned above, the benefit calculated is limited to the uplift in use (i.e. 5%), not all users.

To determine the appropriate value of recreation per visitor, two alternative methodologies to calculating a consumer surplus based on an appropriate price to participate in a recreational event have been applied.

- Average shadow price: shadow pricing is used where no market value exists for the value of a good or commodity, in this case utilising the upgraded esplanade, as no entry/use fee is charged. To calculate an appropriate shadow price regard must be given to both the potential range of values and the central tendency of values. As such, an appropriate shadow price would be a value close to an average or median value. The activities outlined in Table 2-3 above incur an average hourly cost of between $4.80 and $20.00 per hour, with the midpoint hourly cost in the order of $12.00 to $13.00 (rounded down to nearest dollar), which represents a potential shadow price for recreation in the region.
- Maximum willingness to pay with 'rule of half' adjustment: under this approach it is necessary to identify what might constitute a maximum willingness to pay for recreation. The maximum willingness to pay is difficult to estimate given that it constitutes the price the first consumer is willing to pay. As such, it is necessary to identify a practical maximum based on the highest cost of recreation within the given market. The information presented in Table 3-1 above would suggest that the maximum willingness to pay is up to $20.00 per hour. Once the maximum value is identified a rule of the half adjustment is made. The rule of the half is intended to reflect the downward sloping nature of demand curves. The 'rule of half' adjustment to the practical maximum willingness to pay yields a value of $10.00 per hour.

Both approaches result in a similar recreational benefit per visitor of somewhere between $10 per hour to $13 per hour. For the purpose of this assessment, we have adopted the lower range value of $10 per hour. The lower value is adopted because of the significant concessional discounts for recreation activities for senior and the Fraser Coast region has an above average incidence of seniors.

2.2.2 Estimating the value of addition recreation time

The value of recreation is calculated based on the increase in time spent recreating multiplied by the value of recreation (in this case $10 per hour). The increase in time spent recreating is based on increasing pedestrian volumes at each count station by 5% (the lower range uplift for providing separate pedestrian-cycle pathways within a corridor reported in the literature). The additional pedestrians are then assumed to walk a distance equal to the segment lengths reported above in Table 2-1. An average walking speed of 4km/hr is applied to the increase in pedestrian distances travelled to estimate an increase in time spent recreating.

The parameter value for recreation ($10/hr) is applied to the increase in time spent recreating by the additional pedestrians (5% of average daily count at each counter station) and then multiplied by 365 days in the year.

A value for 2022 is calculated as this is the reference year for the pedestrian counts. The value is increased by 1% per annum in line with projected population growth for Fraser Coast LGA. Benefits are assumed to commence in 2027. Annual benefits are reported in Table 2-4 below for selected years throughout the project life (including a 2022 baseline year).

Table 2-4 Value of recreation for increased pedestrian activity along Hervey Bay Esplanade, 2022 (baseline), 2027 (first year benefits) to 2056

	2022	2027	2031	2036	2041	2046	2051	2056
RT14 Esplanade, Pt Vernon	$14,470	$15,208	$15,825	$16,632	$17,481	$18,373	$19,310	$20,295
RT15 Esplanade, Pialba	$8,089	$8,501	$8,846	$9,298	$9,772	$10,270	$10,794	$11,345
RT 16 Esplanade, Pialba (Taylor Street)	$16,463	$17,303	$18,006	$18,924	$19,890	$20,904	$21,971	$23,091
RT 17 Esplanade, Pialba (Hervey Street)	$15,115	$15,886	$16,531	$17,374	$18,260	$19,192	$20,171	$21,200
RT 18 Esplanade, Scarness	$28,319	$29,763	$30,972	$32,552	$34,212	$35,957	$37,792	$39,719
RT 19 Esplanade, Torquay (b/t Tavistock & Torquay)	$26,504	$27,856	$28,987	$30,466	$32,020	$33,653	$35,370	$37,174
RT 20 Esplanade, Torquay (b/t Fraser St & Surf Club)	$34,716	$36,487	$37,968	$39,905	$41,941	$44,080	$46,329	$48,692
RT 21 Esplanade, (b/t Eric & Witt St)	$35,971	$37,806	$39,341	$41,347	$43,457	$45,673	$48,003	$50,452
RT 23 Esplanade, (b/t Elizabeth St & Urangan)	$93,557	$98,330	$102,322	$107,542	$113,027	$118,793	$124,853	$131,221
RT 24 Esplanade, (b/t Jetty Rd & Boat harbour Dr)	$9,738	$10,234	$10,650	$11,193	$11,764	$12,364	$12,995	$13,658
Total	$282,941	$297,374	$309,449	$325,234	$341,824	$359,261	$377,587	$396,847

Source: Bull and Bear Economics Assessment (2022)

2.2.3 Pedestrian Health Benefits

Pedestrian health benefits for the Hervey Bay Esplanade Master Plan can be quantified by analysing the positive impacts of physical activity. Physical has positive impacts on person health including reduced morbidity and mortality which ultimately has the impact of reducing health system costs. There are several literature pieces which support these propositions. Health benefits have been embodied in guidance material for the assessment of transport projects.

ATC (2016a) estimate the weighted average health benefits walking (inflated to 2022 dollars) to be as follows:

- mortality/morbidity benefits: $2.22 per kilometre and
- health system benefits: $1.19 per kilometre.

This represents a total health benefit parameter value of $3.41 per kilometre.

The increase in kilometres travelled is again based on the uplift in pedestrian numbers using the corridor. This uplift is 5%, which is based on research cited in Raje and Saffey (2013). The analysis assumes that the additional pedestrians at each count location travel the segment length identified in Table 2-5. The calculation is based on 5% of the average daily pedestrian volumes at each count location multiplied by the segment length assigned to each counter location. The health benefits associated with the increase in pedestrian activity is calculated by multiplying the increase in pedestrian distance (the distance travelled by new pedestrian users) by the total health benefit parameter value of $3.41/km multiplied by 365 days per year.

A health benefit value for 2022 is calculated as this is the reference year for the pedestrian counts. The value is increased by 1% per annum in line with projected population growth for Fraser Coast LGA. Benefits are assumed to commence in 2027. Annual health benefits are reported in Table 2-5 below for selected years throughout the project life (including a 2022 baseline year).

Table 2-5 Value of recreation for increased pedestrian activity along Hervey Bay Esplanade, 2022 (baseline), 2027 (first year benefits) to 2056

	2022	2027	2031	2036	2041	2046	2051	2056
RT14 Esplanade, Pt Vernon	$19,737	$20,743	$21,586	$22,687	$23,844	$25,060	$26,339	$27,682
RT15 Esplanade, Pialba	$11,033	$11,596	$12,067	$12,682	$13,329	$14,009	$14,723	$15,475
RT 16 Esplanade, Pialba (Taylor Street)	$22,456	$23,602	$24,560	$25,813	$27,129	$28,513	$29,968	$31,496
RT 17 Esplanade, Pialba (Hervey Street)	$20,617	$21,668	$22,548	$23,698	$24,907	$26,178	$27,513	$28,917
RT 18 Esplanade, Scarness	$38,627	$40,597	$42,246	$44,401	$46,665	$49,046	$51,548	$54,177
RT 19 Esplanade, Torquay (b/t Tavistock & Torquay)	$36,152	$37,996	$39,539	$41,556	$43,675	$45,903	$48,245	$50,706
RT 20 Esplanade, Torquay (b/t Fraser St & Surf Club)	$47,353	$49,768	$51,789	$54,431	$57,207	$60,125	$63,192	$66,416
RT 21 Esplanade, (b/t Eric & Witt St)	$49,064	$51,567	$53,661	$56,398	$59,275	$62,298	$65,476	$68,816
RT 23 Esplanade, (b/t Elizabeth St & Urangan)	$127,612	$134,122	$139,568	$146,687	$154,169	$162,034	$170,299	$178,986
RT 24 Esplanade, (b/t Jetty Rd & Boat harbour Dr)	$13,282	$13,960	$14,527	$15,268	$16,046	$16,865	$17,725	$18,629
Total	$385,932	$405,619	$422,088	$443,619	$466,248	$490,031	$515,028	$541,300

Source: Bull and Bear Economics Assessment (2022)

2.3 Environmental Benefits

The environmental benefits of the Hervey Bay Esplanade Master Plan will include dune rehabilitation and the improvement of vegetation communities.

The total economic value of an environmental resource or vegetation community consists of both use and non-use values.

- Direct use values: those values derived from physical use of the environmental resource, including commercial activities, such as commercial fishing or tourism, and non-commercial activities, such as recreation (these are scoped in section 2.2**Error! Reference source not found.**).
- Non-use values, such as:
  - ecological function values: the value of the ecological services or functions provided by an environmental resource, such as provision of fish habitats and biodiversity
  - option values: the benefit derived from maintaining the right to use the resource without necessarily doing so
  - quasi option values: the benefit derived from delaying a decision to develop an environmental resource to obtain better information regarding the impacts of that development on the resource
  - vicarious use values: the value derived from individuals from knowing others are using the environmental resource
  - bequest values: the value of maintaining environmental values for the benefit of future generations and
  - existence values: the value derived by members of the community from the knowledge that areas of environmental value exist.

The principal environmental benefit relates to ecological function values, sometimes described as ecosystem services. These represent the services provided by our environment in the form of clean air, water filtration, carbon sequestration, erosion control, etc.

While many environmental valuation studies have been prepared, one particular study been adopted as setting the benchmark in terms of valuation of vegetation communities. Costanza et al (2013) (an update to their previous study in 1998) adopts a meta-analysis approach and as such is able to articulate values for a range of vegetation communities. The outcomes of Costanza et al (2013) are summarised in Table 2-6 below.

Given the size, scale, topography and historical context of the Hervey Bay Esplanade, it is anticipated that a range of vegetation communities would be improved including:

- Hind dunes;
- Fore dunes; and
- Grassland.

The valuation parameters provided in Table 2-6 below also provide guidance on those vegetation communities most likely to generate significant environmental benefits.

Table 2-6 Economic value of ecosystem services provided by vegetation communities

Biome/vegetation community	Unit values	
	USD 2007/ha/yr	AUD 2022/ha/yr
Marine	**$1,368**	**$2,317**
Open Ocean	$660	$1,118
Coastal	$8,944	$15,146
Estuaries	$28,916	$48,966
Seagrass/Algae beds	$28,916	$48,966
Coral reefs	$352,249	$596,494
Shelf	$2,222	$3,763
Terrestrial	**$4,901**	**$8,299**
Forest	$3,800	$6,435
Tropical	$5,382	$9,114
Temperate/boreal	$3,137	$5,312
Grass/rangelands	$4,166	$7,055
Wetlands	**$140,174**	**$237,369**
Tidal marsh/mangroves	$193,843	$328,251
Swamps/floodplains	$25,681	$43,488
Lakes/rivers	$12,512	$21,188
Cropland	$5,567	$9,427
Urban	$6,661	$11,280

Source: Costanza et al (2013)

Pérez-Maqueo, et al., (2013) details the economic value of dunes which provide the ecosystem service of protection. The book references two papers which differ significantly in their value. Mendoza-González et al. 2012 provides a value of $65,743 while Pye et al. 2007 provides a value of $6,661. Pérez-Maqueo, et al., (2013) then provides an average of the two papers which is $36,202 USD (2010). This assessment adopts the average value, inflated to 2022 Australia dollars which is $56,134.

The valuation exercise requires:

- Identify vegetation communities to be rehabilitated;
- Consider the condition or status of vegetation communities prior to rehabilitation;
- Apply appropriate parameter values to rehabilitation area to estimate a gross annual environmental benefit stream; and

- Apply a moderation factor to account for the works being rehabilitation works rather than creation of entirely new vegetation communities.

Table 2-7 details the rehabilitated vegetation areas listed in the Hervey Bay Esplanade Master Plan documents.

Table 2-7 Rehabilitated Vegetation – Hervey Bay Esplanade Master Plan, 2022

Vegetation area	Biome/vegetation community	Area (ha)
Fore dune rehabilitation zone – restricted access	Dune – protection	28.88
Hind dune vegetation	Dune - protection	44.15
Open green space with shade trees	Terrestrial	8.1

Source: Hervey Bay Esplanade Master Plan (2022)

Based on a review of the Hervey Bay Esplanade Master Plan documents the plan would improve approximately 73.03 hectares of coastal vegetation and 8.1 hectares of terrestrial vegetation.

The parameter values applied to these areas are:

- Dunes: $56,134/ha/year; and
- Terrestrial (general): $8,299/ha/year.

As vegetation communities take time to form this analysis has assumed an incremental increase in environmental benefits from 2027 to 2029 when the ultimate per annum benefit is achieved. As such, the gross environmental benefits of establishing new vegetation communities per annum from 2029 onwards totals $4.17 million, consisting of:

- $4.10 million for the dunes; and
- $0.07 million for the terrestrial vegetation / open green space and shade trees.

As already mentioned, the environmental works are for rehabilitation rather than creation of new communities. At this stage there is not a comprehensive assessment of the existing ecological values of areas to be rehabilitated. Some rehabilitation areas might require significant intervention to the extent of re-creation of habitat, while other might only require limited works. In the absence of a comprehensive ecological assessment, it is possible to moderate the environmental valuation by adopting the 'rule of the half' technique. In this situation, the 'rule of the half' implies that there is an even distribution of habitat ranging from highly degraded to nearly pristine. As such, the 'rule of the half' requires the halving of the gross environmental benefit which is calculated under the assumption that new habitat would be created. Therefore the, moderated environmental values are $2.08 million per annum from 2029, comprising:

- $2.05 million for the dunes; and
- $0.03 million for the terrestrial vegetation / open green space and shade trees.

2.4 Tourism Related Benefits

The benefits of a project like the Hervey Bay Esplanade Master Plan in a visitor economy sense is anticipated to manifest in two ways, namely:

- An increase in the length of overnight visitors stay; and
- An increase in the number of domestic day trippers.

The monetisation of visitation benefits relies on increasing length of stay or increasing number of visitors which ultimately increases tourism expenditure and consequently regional economic benefits. The tourism benefits are not anticipated to commence until 2027; therefore, it is

appropriate to use 2019 tourism data as this does not include any enumeration of COVID-19 tourism effects. Where relevant, tourism expenditure values have been adjusted to reflect 2022 dollars (CPI).

In 2019, the number of domestic overnight visitors to Fraser Coast Tourism Region (Fraser Coast LGA) reached 767,000 visitors a 2.4% increase over the previous ten year period and a 6.6% increase over the previous seven year period. Domestic overnight visitation is not expected to sustain an annual growth rate of 6.6% over the long term, as such this assessment has adopted the more conservative ten year average annual growth rate of 2.4% to project future growth. The average length of stay per domestic overnight visitor fluctuates around 4 days, in 2019 the average length of stay was 4.0 days, as such this assessment uses the 2019 average length of stay for future tourism projections.

The number of international overnight visitors closely follows fluctuations in the Australian dollar (AUD), at the start of 2009 the AUD was at a low of 0.6291 which is reflected in the high number of international overnight visitors at 180,000 visitors. The number of visitors decreases from 2010 as the AUD grows stronger and only picks back up again from 2013 onwards once the AUD weakens. In 2013, the number of international overnight visitors to Fraser Coast Tourism Region was 117,000, this grows to 131,000 visitors by 2019. Due to the unusually high visitation levels prior to 2013, this assessment has adopted the 2013 to 2019 average annual growth rate for international overnight visitors which is 1.9%. Over 2009 to 2019 the average length of stay for international overnight visitors was in the range of 4-5 nights, with 4.8 being the average in 2019.

The number of domestic day trippers visiting the Fraser Coast Tourism Region in 2013 was 805,000 growing to 935,000 in 2019 which represents an annual growth rate of 2.5% over the seven year period.

Table 2-8 Tourist Visitor Information – Fraser Coast Tourism Region, 2009-2019

	Domestic Overnight			International Overnight			Day Trip
	Visitors (,000)	Ave. Length of Stay	Visitor Nights (,000)	Visitors (,000)	Ave. Length of Stay	Visitor Nights (,000)	Visitors (,000)
2009	604	4.2	2,551	180	3.9	2,551	np
2010	535	4.0	2,148	163	4.1	2,148	652
2011	602	3.7	2,196	125	4.5	2,196	735
2012	632	3.4	2,152	112	4.6	2,152	943
2013	524	3.6	1,892	117	5.5	1,892	805
2014	595	4.1	2,446	122	5.3	2,446	691
2015	595	3.8	2,231	121	3.8	2,231	722
2016	594	4.3	2,557	140	5.6	2,557	706
2017	675	4.4	2,940	149	4.7	2,940	630
2018	755	4.1	3,079	130	3.9	3,079	834
2019	767	4.0	3,066	131	4.8	3,066	935
AAGR, 2009-2019	2.4%	-0.6%	1.9%	-3.1%	2.0%	1.9%	4.1%
AAGR, 2013-2019	6.6%	1.7%	8.4%	1.9%	-2.4%	8.4%	2.5%

Source: Tourism Research Australia (2022)

Table 2-9 details the average tourism expenditure per night for overnight visitors and per day for day trippers represented in 2022 dollars. In 2019 the average spend per night for domestic overnight visitors was $147.6, whilst international overnight visitors was much less at $80.0. The average spend per day for domestic day trippers was $90.6. These values are all marginally less than the expenditure in 2018 and show marginal growth, if any, over the years. As such, this assessment conservatively adopts the 2019 average tourism spend for future tourism expenditure projections.

Table 2-9 Average Tourism Expenditure per day/night – Fraser Coast Tourism Region, 2009-2019

	Domestic Overnight	International Overnight	Domestic Day Trip
2009	$108.4	$94.0	np
2010	$159.9	$80.9	$153.0
2011	$157.3	$88.0	$91.0
2012	$156.3	$75.1	$77.9
2013	$138.5	$68.5	$151.0
2014	$135.1	$66.7	$228.7
2015	$133.7	$82.0	$137.9
2016	$115.7	$53.5	$150.4
2017	$138.9	$72.7	$142.6
2018	$155.3	$88.3	$105.5
2019	$147.6	$80.0	$90.6
AAGR, 2009-2019	3.1%	-1.6%	-5.6%
AAGR, 2013-2019	1.1%	2.6%	-8.1%

Source: Tourism Research Australia (2022)

As mentioned earlier, a change in overnight visitor length of stay is used to simulate the indicative tourism benefits of delivering the Hervey Bay Esplanade Master Plan and an increase in number of day trippers. The changes can be summarised as follows:

- Domestic overnight: increase length of stay by 0.05 days (~1-1 ½ hrs) incrementally applied across 2027 and 2028 (i.e. 0.025 days in each year);
- International overnight: increase length of stay 0.05 days (~1-1 ½ hrs) incrementally applied across 2027 and 2028 (i.e. 0.025 days in each year); and
- Domestic day trippers: increase annual growth rate by 1% incrementally applied across 2027 and 2028.

In 2019 domestic overnight tourists total expenditure was $412 million without consideration of the benefits of the Hervey Bay Esplanade Master Plan this amount is expected to increase to $498.8 million by 2027 and to $997.5 million by 2056. With the anticipated benefits of the master plan accounted for (as listed above) the total domestic overnight annual expenditure is expected to be $502 million in 2027, growing to $1,010 million in 2056. Representing a $3.1 million project benefit in annual expenditure from domestic overnight tourists in 2027 which grows to a benefit of $12.5 million in 2056.

Total annual expenditure for international overnight tourists in 2019 was $45.6 million, without the master plan, this is expected to increase to $53.2 million in 2027 and $92.6 million in 2056. When taking into consideration the Hervey Bay Esplanade Master Plan project benefits the total annual expenditure for international overnight tourists is anticipated to be $53.5 million in 2027 and $93.6 million in 2056. This reflects an annual project benefit in annual expenditure from international overnight tourists of $0.3 million in 2027, reaching $1.0 million by 2056.

Annual expenditure from domestic day trippers in 2019 was $77.2 million, without the Hervey Bay Esplanade Master Plan, in 2027 it is anticipated that this number will grow to $94.2 million and $193.9 in 2056. Including the anticipated increase in annual day trippers growth rate, annual expenditure from day trippers is expected to be $94.6 million in 2027 and $195.8 million in 2056. As such, annual benefits of the project from day tripper expenditure will be in the order of $0.5 million in 2027 growing to $1.9 million by 2056.

As detailed in Table 2-10 below the Hervey Bay Esplanade Master Plan is anticipated to increase tourism expenditure each year from 2027 onwards. In 2027 total tourism expenditure without the project is expected to be $646.2 million. With the anticipated benefits of the project included (as listed above) this total tourism expenditure is projected to be $650.1 million in 2027, representing a $3.9 million increase which grows each year to a total difference of $15.3 million in 2056.

The gross value added (GVA) represents the portion of tourism consumption which is direct value add as per the Regional Tourism Satellite Accounts for Fraser Coast Regional Tourism area. In 2027 the net benefit in GVA with the completion of the Hervey Bay Esplanade Master Plan is anticipated to be $1.4 million which increases to $5.4 million by 2056.

Table 2-10 Tourism Related Benefits – Fraser Coast Tourism Region, 2019-2056

	2019	2027	2031	2036	2041	2046	2051	2056
Baseline								
Domestic overnight ($m)	$412.0	$498.8	$548.9	$618.5	$697.0	$785.5	$885.1	$997.5
International overnight ($m)	$45.6	$53.2	$57.4	$63.2	$69.5	$76.5	$84.2	$92.6
Daytripper ($m)	$77.2	$94.2	$104.0	$117.8	$133.5	$151.2	$171.2	$193.9
Total	$534.9	$646.2	$710.3	$799.6	$900.0	$1,013.1	$1,140.6	$1,284.0
Project								
Domestic overnight ($m)	$412.0	$502.0	$555.7	$626.3	$705.7	$795.3	$896.2	$1,010.0
International overnight ($m)	$45.6	$53.5	$58.0	$63.8	$70.2	$77.3	$85.0	$93.6
Daytripper ($m)	$77.2	$94.6	$105.1	$119.0	$134.8	$152.7	$172.9	$195.8
Total	$534.9	$650.1	$718.8	$809.1	$910.8	$1,025.3	$1,154.2	$1,299.4
Difference								
Domestic overnight ($m)	$0.0	$3.1	$6.9	$7.7	$8.7	$9.8	$11.1	$12.5
International overnight ($m)	$0.0	$0.3	$0.6	$0.7	$0.7	$0.8	$0.9	$1.0
Daytripper ($m)	$0.0	$0.5	$1.0	$1.2	$1.3	$1.5	$1.7	$1.9
Total	$0.0	$3.9	$8.5	$9.6	$10.8	$12.1	$13.6	$15.3
Net benefit-GVA ($m)	**$0.0**	**$1.4**	**$3.0**	**$3.4**	**$3.8**	**$4.3**	**$4.8**	**$5.4**

Source: Bull and Bear Economics Assessment (2022)

2.5 Property Uplift Benefits

There is an extensive literature base that confirms the notion that investment in high quality public realm spaces, including beaches, greenspaces and mobility corridor improvements, increases the value of nearby land and property and stimulates regeneration, by:

- the provision of high quality places to work, live and play
- attracting skilled workers in pursuit of better levels of amenity and
- the attraction of new investment stimulated by improving land and property values.

The literature is generally based on a method of analysis known as hedonic pricing, which seeks to observe differentials in willingness to pay for property or land adjacent or close to major public spaces or to major investments in public realm outcomes.

Table 2-11 summarises the findings of several studies and literature reviews discussing the value uplift attributable to proximity to quality beaches and other public realms. The studies identified in Table 2-12 confirm that proximity to quality public spaces have significantly positive impacts on property

values. As such, it is reasonable to assume that improvements to public beaches would have a positive impact on adjacent and nearby property values.

Table 2-11 Summary of literature pertaining to value uplift associated with quality public spaces

Literature	Summary
Pompe and Rinehart (1995)	This study found that a one foot increase in beach width, as an indication of beach quality since it provides storm protection and recreational benefits, increased oceanfront property prices in coastal towns in Carolina by over $1,000 (2022 dollars) per property and increased lots located within 0.5 miles from the beach by at least $500 (2022 dollars).
Landry and Hindsley (2011)	This study explores the influence of beach quality on costal property values and how this fluctuates depending on proximity to the coast. The findings support their hypothesis that for houses within 300m from the shore, beach and dune widths increase property values, while properties that are further out do not experience the same effect.
Forestry Commission (2005)	The Bold Colliery Mine was situated east of St Helens, Merseyside (UK). In 1985, the mine was decommissioned. The site covered ~ 130 hectares. In 1986, a project was instigated to regenerate the site by planting a mix of structured and naturalistic woodlands. Subsequently a new housing estate was developed nearby. The Forestry Commission estimated that the development of the community woodland on the Bold Colliery site directly enhanced property values in the surrounding area by ~£15 million. In addition, the development of the community woodland was responsible for new development of ~£75 million.
CABE (2005)	CABE conducted an analysis to assess the impact of park improvements on house prices across the UK. The outcome of the study found that property values were generally 5 % to 7 % higher for properties that directly overlook a park cluster than identical properties in the same market area, but outside the influence of the park.
Phillips (2004)	Phillips (2004) undertook an analysis of rental values and interviews with local experts and park representatives to ascertain the real estate impacts of urban parks. The study was based on six case studies (a limited sample). A key outcome of the study was that (1) development of an urban park induces new development and/or improvement of existing properties; (2) lease/rental rates for units with a view of an urban park command higher rates and in the six case studies examined, the rental premium ranged from 10-40 %; and (3) the introduction of a park into an urban setting can stimulate overall leasing activity
Savills Residential Research (2006)	In 2006, Savills Residential Research (UK) undertook an analysis of house prices overlooking public open space, and determined that properties with such outlooks typically had a 12 % price premium over those in the same location, but without open space views.
Luttik (2000)	An analysis of house prices in the Netherlands determined that a house facing an open water body could increase house prices by 28%, while having a view of water could increase property values by 10%.
Ernst & Young (2003)	This study performed a detailed longitudinal analysis of property values around six major parks within New York. This analysis was supplemented by a summary analysis of 30 other parks within New York to confirm that trends were evident across a range of locations. The findings of the case study analysis were that statutory property value assessments for residential property close to parks were generally 8 %-10 % higher than for similar properties outside the influence of the park, and that actual sale prices for homes were between 8 % and 30 % higher for those homes close to the six parks as opposed to those outside the parks' influence. In relation to commercial property, the analysis found that asking rents near Bryant Park (the only park in the case study group abutting a commercial precinct) increased by between 115 % to 225 % over the 1992 to 2001 period, as compared to increases ranging from 41 % to 73 % in the surrounding areas outside the park's influence over the same period.
Crompton,(2004)	Crompton (2004) conducted a literature review of US studies (~20 studies) seeking to estimate the property uplift value of water-based features. The literature review concluded that the reviewed studies conclusive prove that there is an additional value for property's with a water-based view. The studies reviewed suggest the premiums for full ocean views to be within the range of 30% to 147%. The studies also showed significant positive results for the premium for properties considered to be on the ocean, up to and exceeding $100,000. They also confirm the decay in premiums which occurs as distance between the property and the waterfront increases.
Miller (2001)	Miller (2001) explored the effect of neighbourhood parks on residential property values, based on data from the Dallas (US) metropolitan area. This study found that homes adjacent to parks receive an approximate price premium of 22 % relative to properties half a mile (800

Literature	Summary
	metres) away from the park. The study also found that park size had a positive effect on this premium. It also found that complex and indirect path access to neighbourhood parks diminished the value uplift attributable to proximity to the park.

CBRE (2017) assessed the value of eleven global public realm improvement projects in both qualitative (in terms of the enhanced human experience) and quantitative terms (value uplift resulting from the public realm improvement). Of the eleven public realm projects assessed, quantifiable benefits were presented for six of the projects, as summarised in Table 2-12.

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Table 2-12 Public Realm Projects Analysed in CBRE Analysis and Value Uplift Results

Place	Timeframe	Project Details	Value Uplift
Federation Square, Melbourne	1998-2002	A civic and cultural square was built on a deck above the still fully operational station. The fragile structure of the deck is unable to bear heavy loads, limiting the development of further large buildings on the square. A large screen is used to project key sporting and civic events, which acts as an additional draw.	Difficult to ascertain, as retail rents and capital value uplifts in CBD likely to be also due to public investment in Melbourne's CBD generally
Liverpool One, Liverpool	2004-2008	The project comprised around 200 shops, more than 500 apartments, two hotels, 25 restaurants, a 14 screen Odeon cinema, four office buildings, a revitalised five acre public park and a public transport interchange, all leading towards the waterfront.	Retail rent growth 24.9 % points higher in Liverpool One, than Liverpool as a whole (17.5 % increase vs 7.4 % decrease)
High Line, NYC	2006-2014	Elevated walkway with view of the Hudson River and city that opened in 2009 at a total project cost of approximately US$50 million. Walkway features gardens and amenities such as artworks, sunbathing decks made of reclaimed teak, seasonal food vendors and an amphitheatre.	Luxury residential price growth 9.7 % to 10.7 % points higher in Sections one and two of Highline than luxury tier homes in Manhattan (9.4 %-10.4 % increase vs 0.3 % decline) Asking rents on average 51 % higher for buildings adjacent to High Line Park than in comparable buildings one block away (also due to limited supply - 2012, 4 % availability in precinct vs 21 % availability for buildings one block away)
Porta Nuova, Milan	2006-2012	Three districts redeveloped to form Porta Nuova Garibaldi, Porta Nuova Varesine and Porta Nuova Isola with a green public space to link the three. The 42 acre public realm was integral to the overall plans to create continuity among the three areas and act as a destination in its own right.	Office value uplift 51 % points higher than wider area (46 % increase vs 5 % decline) Office rents uplift 6 % points higher than broader area (19 % increase vs 13 % increase) Residential values 155 % points higher than wider area (150 % increase vs 5 % decline) Residential rents 207 % points higher than wider area (231 % increase vs 23 % increase)
Israel's Square, Tovhalerne, Copenhagen	2008-2014	Area converted to a large open square with two glass and steel framework covered markets, one for affordable stalls and the other for pricier items. During the summer, 80 outdoor stalls fill the rest of the square. A variety of amenities and spaces to meet are provided as well, including a ballgames and skating area.	Impact on real estate values disappointing despite significant positive enhancements in human experience. Property price growth in every sector lower than the CBD.
Place du Marche Saint-Honore, Paris	1997-2002	The redevelopment of the site comprised a transparent five storey building accommodating offices, shops, a parking space and a fire station. The	Retail values up 166 %, values more than trebled in adjacent street of Saint-Honore

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Place	Timeframe	Project Details	Value Uplift
		commercial building covers the existing street axis with an atrium that runs the entire length of the building like a pedestrian street. Outside, the square was remodelled a repaved to provide a welcoming space for the public.	since 2002. Residential values of square increased since 2006 by approximately 53 %
Magellan Terraces, Hafencity, Hamburg	1997-2005	Magellan Terraces contains 4,700 sqm of public spaces, designed to integrate the urban landscape with the waterfront.	No quantitative analysis presented on this case study.
Cheonggyecheon River Park, Seoul	2003-2005	Stream reintroduced with walkway and green spaces alongside to form an urban riverpark. Several historic bridges were restored over the stream to connect each side. As the stream had dried up by the time the project occurred, water had to be pumped from the River Han to sustain flow.	Residential value uplift of 5-6 % for properties within 2km of project. Non-residential values up 33 % within 100m of project, 7.3 % within 500m of project.
Granary Square, King's Cross, London	2008-2012	Granary Square was a brownfield site in central London near King's Cross. The redevelopment project is not completed in some areas. Upon completion, the project is large enough to create a new postcode in London, with 50 new buildings, 1,900 new homes and 20 additional streets. Granany Square, an open space with fountains in the middle surrounded by a variety of restaurants and cocktail bars, opened in 2012.	Average house prices up 13 % points more in King's Cross than Central London over same period (61 % increase vs 48 % increase).
Duke of York Square, London	1998-2003	The Cadogan Estate, purchased the site in 1998 and redeveloped it as a public square with mixed-use buildings and the Saatchi gallery. The square is now used for community activities and large scale events like Chelsea in Bloom.	Residential market appreciated 333 % in value, but this driven by broader market forces. Difficult to determine whether value will be retained if values in broader market fall.
Parc Andre Citroen, Paris	1985-1992	Site purchased by the city of Paris and regenerated as a public park, as part of a wave of policies by the local government at the time to green the city. The park is well landscaped, with spaces designed to enhance bio-diversity and to enable the public to gather and enjoy the space.	Anecdotal evidence suggests some uplift in residential prices but not for offices.

Source: CBRE (2017)

Table 2-11 and Table 2-12 above highlight that the quantifiable benefits can vary significantly between each project and are not always easy to ascertain. Key lessons from the literature include:

- Increasing the quality of the beach (increasing dune width) supports storm protection and recreational benefits both of which add to the value of the properties
- being close and having views of a waterbody generally result in a higher property value uplift than simply being close to a waterbody
- the notion of 'closeness' and proximity are not always well defined
- distance decay in value uplift is measurable and should be taken into consideration when defining a relevant study area for value uplift purposes (e.g. the Cheonggyecheon River Park case study demonstrated that value uplift for non-residential properties can decay quickly, with value uplift of 33 % for non-residential buildings within 100 metres of the project, decreasing to a 7.3 % uplift for non-residential buildings within 500 metres of the project) and
- the potential interaction of other factor in driving value uplift (e.g. Melbourne Federation Square effects could have been influenced by other developments while the New York Highline uplift occurred in the context of a highly supply constrained market).

Public realm improvements do not always result in increased property values. The case studies highlighted potential reasons these improvements may not always translate to increased property values.

- Timing of public realm project: For example, if the public realm project is delivered during a property downturn, when the market recovers there is likely to be a preference towards more established property markets than the new opportunities within the public realm project.
- Design of public realm project: If the design of the public realm project reduces the attractiveness of the area to property occupants (e.g. additional noise can be potentially unappealing to potential residential occupants), this can translate to a decline, rather than increase in property values.
- Oversupply of floor space provision as part of public realm project: If the public realm project provides an abundant supply of floor space that cannot be absorbed by the market in a timely fashion, this is likely to suppress property values relative to the broader region in which it is contained.
- High operating costs: If a public realm project has operating costs above what the ownership body is willing to absorb (e.g. in the case of the Parc Andre Citroen, Paris where the annual operating costs exceeded the public authority's willingness to pay), this will reduce the attractiveness of the public realm project (as it will not be operating at its full potential). This has the potential to negatively affect property prices.

The above literature review has highlighted that public realm improvements have the potential to significantly increase property prices and rents, with the degree of price improvement varying significantly from project to project. There are a range of values that cluster within the 5 % to 15 % range. Given that the project is for a rehabilitation of the dunes, provision of mobility corridor and improvements to existing public realm as opposed to a new development, this analysis adopts a 1% property value uplift for a catchment of properties that is generally in the order of 100 metres from the improved areas. The property value uplift catchment is generally defined by properties along and proximate to the Esplanade from Urangan to Point Vernon.

Figure 2-2 Property Value Uplift Catchment – Hervey Bay, 2022

The statutory valuations for all properties within this catchment were extracted and classified by suburb, namely Pialba, Point Vernon, Scarness, Torquay and Urangan. The total statutory valuation for all properties with the value uplift catchment was $492.2 million.

Table 2-13 below summarises the statutory valuation of property within the property uplift catchment by suburb.

Table 2-13 Total statutory valuation of properties located within value uplift catchment by suburb

Suburb	Total Statutory Valuation ($m)
Pialba	$54.8
Point Vernon	$210.2
Scarness	$42.1
Torquay	$77.4
Urangan	$107.8
Total	**$492.2**

Source: Pricefinder (2022)

A value uplift rate of 1% was applied to these valuation incrementally over a five year period from 2027 to 2032 (that is, a total value uplift of $4.92 million spread over five years at $0.98 million per year). It is relevant to note the aspects of the property value uplift that are conservative, most notably is the use of statutory valuations (as used for the calculation of local government rates and land tax) as opposed to market values, which are typically higher. The adoption of the lower bound estimate is also a conservative measure. An aspect of this assessment that might be contentious is

the inclusion of government and institutionally owned land in the assessment. The reason this land is included is because there would be a value uplift, which could potentially be realised at some time.

Table 2-14 Incremental property value uplift applied over five year period ($m)

	2027	2028	2029	2030	2031
Property Value Uplift	$0.98	$0.98	$0.98	$0.98	$0.98

Source: Bull and Bear Economics Assessment (2022)

2.6 Indigenous Cultural Heritage Benefits

The Hervey Bay Esplanade Master Plan includes several elements that seek to communicate the indigenous cultural heritage significance of parts of the esplanade. In some instances, the master plan reinstates traditional meeting and gathering places. This type of storytelling enhances the destinational appeal of a place, which in turn helps drive changes in tourism visitation. To that extent, benefits of these works are covered by the analysis of tourism benefits. However, there are also likely to be benefits accruing to Indigenous Australians who are able to reconnect with places of historical significance for them and their culture. At present, these benefits have not been successfully monetised in any of the literature. The connection Indigenous Australian have with places defies expression in dollar terms, drawing on cultural values that predate market economics by millennia. At some point in time, the research literature might be able to place a monetary value on indigenous cultural heritage, however a review of the literature indicates this is yet to occur beyond understanding vicarious tourism related benefits of First Nations cultural experiences. None of the literature assigns a value to the underlying cultural values Indigenous Australians might feel towards or at a place. This is not to say such values do not exist, but rather they defy the bounds of market economics.

3 Benefit Analysis

This chapter provides the reporting of the present value of the benefit streams. This analysis applies a discounted cash flow approach to the benefit streams to estimate a present value of project benefits. This represents a capitalised value for the benefit streams.

The calculation of the present value of the benefit streams is influenced by the project life and discount rate applied to the benefit streams.

3.1 Project Life

There is no funding commitment to the Hervey Bay esplanade Master Plan. As such, there is no staging plan. To provide an indication of what might be the value of the master plan when delivered it is necessary to make some assumptions about when, hypothetically, the master plan could reasonably be delivered. This analysis assumes that the master plan would be delivered in the short term (approximately next five years) with the master plan delivered and project benefits commencing in 2027. As already mentioned this is hypothetical, but such an assumption is required so that values can be estimated. In all likelihood the master plan would be delivered in stages, but an opportunity could potentially arise where funding was secured to deliver the master plan in its entirety (e.g. grant program).

A standard project life for a public realm improvement project is 30 years, which is the project life adopted in this assessment. As such, benefits are assumed to commence in 2027 and end in 2056.

3.2 Residual Value

This assessment is a benefit assessment. No costs for the master plan have been generated. A potential benefit stream excluded from this assessment is a residual value. While a project life might be 30 years, interventions or aspects of a project might have a useful life beyond this. Environmental improvement works (revegetation, rehabilitation, restoration, etc) normally have a perpetual useful life. A residual value would be an appropriate benefit to include in the benefit assessment. However, the residual value of a project is normally estimated with reference to the capital expenditure (costs) associated with the project. The residual value would be calculated as follows:

Residual Value = ((project life/useful life) x capital cost) x risk adjustment

Given the absence of any costings a residual value is not included in this benefit assessment, however when the master plan works are costed it would be appropriate to estimate a residual value and include it in a subsequent cost benefit analysis.

3.3 Discount Rates

Present values of project benefits are calculated using a discount rate which equates future with present values. Since all benefits in this assessment are articulated in real dollars, the discount rates used in this analysis are real (as opposed to nominal) discount rates.

A range of discount rates are used by government assessment agencies for the purposes of project evaluation as summarised in Table 3-1 below. This analysis utilises multiple discount rates including 4 %, 6 % and 7 %, which are consistent with the range of discount rates used by Infrastructure Australia.

Fraser Coast Regional Council might also have calculated its own real weighted average cost of capital (WACC) as part of its Local Government Infrastructure plan (LGIP). Council's typically do not

report their WACC, however in most instances the real WACC for local governments ranges between 5% and 8%.

This assessment uses 6% as the test discount rate and sensitivity test rates of 4% and 8%.

Table 3-1 Alternative Discount Rates Adopted by Australian and State Government Agencies

Agency	Real Discount Rate	Notes
NSW	7 %	Sensitivity range of 4 % to 10 %
Infrastructure Australia	4 % & 7 %	-
Victoria	7 %	For roads
Productivity Commission	8 %	-
Office of Best Practice Regulation (Commonwealth)	7 %	Sensitivity range of 3 % to 11 %

3.4 Schedule of Benefit Streams

For completeness a full schedule of benefit streams is provided at Table 3-2 below. Because the master plan benefits are not scheduled to commence until 2027, it is necessary to account for the 2022-2026 period in discounting terms, hence the inclusion of null values in 2022-2026. This ensures that benefits in 2027 are discounted by five years upon their commencement.

bull + bear economics

Table 3-2 Schedule of benefit streams, 2027-2056

Benefit stream	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Mobility corridor benefits	-	-	-	-	-	$0.66	$0.67	$0.67	$0.68	$0.69	$0.69	$0.70	$0.71	$0.71	$0.72
Pedestrian recreation benefits	-	-	-	-	-	$0.30	$0.30	$0.30	$0.31	$0.31	$0.31	$0.32	$0.32	$0.32	$0.33
Pedestrian health benefits	-	-	-	-	-	$0.41	$0.41	$0.41	$0.42	$0.42	$0.43	$0.43	$0.43	$0.44	$0.44
Environmental benefits	-	-	-	-	-	$0.69	$1.39	$2.08	$2.08	$2.08	$2.08	$2.08	$2.08	$2.08	$2.08
Visitor benefits	-	-	-	-	-	$1.36	$2.79	$2.86	$2.93	$3.00	$3.07	$3.15	$3.22	$3.30	$3.38
Property uplift benefits	-	-	-	-	-	$0.98	$0.98	$0.98	$0.98	$0.98	$0.00	$0.00	$0.00	$0.00	$0.00
Total	-	-	-	-	-	$3.75	$5.88	$6.65	$6.72	$6.80	$5.89	$5.98	$6.06	$6.14	$6.23

Source: Bull and Bear Economics Assessment (2022)

Table 3-2 continued

Benefit stream	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Mobility corridor benefits	$0.73	$0.73	$0.74	$0.75	$0.75	$0.76	$0.77	$0.78	$0.78	$0.79	$0.80	$0.81	$0.81	$0.82	$0.83
Pedestrian recreation benefits	$0.33	$0.33	$0.34	$0.34	$0.34	$0.35	$0.35	$0.35	$0.36	$0.36	$0.36	$0.37	$0.37	$0.37	$0.38
Pedestrian health benefits	$0.45	$0.45	$0.46	$0.46	$0.47	$0.47	$0.48	$0.48	$0.49	$0.49	$0.49	$0.50	$0.50	$0.51	$0.52
Environmental benefits	$2.08	$2.08	$2.08	$2.08	$2.08	$2.08	$2.08	$2.08	$2.08	$2.08	$2.08	$2.08	$2.08	$2.08	$2.08
Visitor benefits	$3.46	$3.54	$3.63	$3.71	$3.80	$3.89	$3.99	$4.08	$4.18	$4.28	$4.38	$4.49	$4.60	$4.71	$4.82
Property uplift benefits	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total	$6.32	$6.41	$6.50	$6.60	$6.69	$6.79	$6.89	$7.00	$7.10	$7.21	$7.32	$7.44	$7.55	$7.67	$7.80

Source: Bull and Bear Economics Assessment (2022)

Table 3-2 continued

Benefit stream	2052	2053	2054	2055	2056
Mobility corridor benefits	$0.84	$0.85	$0.85	$0.86	$0.87
Pedestrian recreation benefits	$0.38	$0.39	$0.39	$0.39	$0.40
Pedestrian health benefits	$0.52	$0.53	$0.53	$0.54	$0.54
Environmental benefits	$2.08	$2.08	$2.08	$2.08	$2.08
Visitor benefits	$4.94	$5.05	$5.17	$5.30	$5.43
Property uplift benefits	$0.00	$0.00	$0.00	$0.00	$0.00
Total	$7.92	$8.05	$8.18	$8.31	$8.45

Source: Bull and Bear Economics Assessment (2022)

3.5 Benefit Results

As mentioned above, this analysis adopts 2027 as the commencement year of benefits. Obviously, there is no certainty of this occurring, or the master plan being delivered in its entirety. However to understand the potential benefit of the master plan and understand the composition of benefits it is necessary to adopt a firm commencement year for analytical purposes.

It is considered appropriate to adopt 6% as the main test discount rate and treat 4% and 8% as sensitivity tests. Were Fraser Coast Regional Council to disclose its real WACC (as opposed to nominal WACC) the analysis could be augmented to use the Council real WACC as the discount rate.

At the 6% discount rate the master plan if delivered as scheduled in the analysis would deliver benefits in the order of $70.71 million in present value terms. The most significant driver of benefits is the visitor benefits associated with increased time spent by people visiting the area. Environmental benefits also represented a significant proportion of master plan benefits. Of particular relevance is the mobility corridor which at the 6% discount rate is anticipated to deliver benefits of $7.97 million.

Under the 4% discount rates, master plan benefits are higher. This is purely attributed to the reduction in discounting. Conversely, the present value of benefits falls at the higher discount rate of 8%.

Table 3-3 Present value of benefits at various discount rates

	Real Discount Rates		
	4%	6%	8%
Mobility corridor benefits	$10.94	$7.97	$5.98
Pedestrian recreation benefits	$4.95	$3.61	$2.70
Pedestrian health benefits	$6.75	$4.92	$3.69
Environmental benefits	$29.10	$21.19	$15.86
Visitor benefits	$53.09	$37.72	$27.63
Property uplift benefits	$3.75	$3.28	$2.89
Total	$97.65	$70.71	$52.77

Source: Bull and Bear Economics Assessment (2022)

References

Australian Bureau of Statistics. (2022). Retrieved from Australian Bureau of Statistics: https://www.abs.gov.au/

Australian Taxation Office. (2022, September 15). Consumer price index (CPI) rates. Retrieved from ATO: https://www.ato.gov.au/rates/consumer-price-index/

Bicycling Australia. (2015). Strava Overload. Retrieved from Bicycling Australia: https://bicyclingaustralia.com.au/news/strava-overload/#:~:text=In%20Australia%20Sunday%20was%20the,on%20the%20bike%20doing%20so.

Börjesson, M. & Eliasson, J. (2012). The value of time and external benefits in bicycle appraisal. Transportation Research Part A, 46, 673–683

Bushell, M., Poole, B., Zegeer, C. and Rodriguez, D. (2013) Costs for Pedestrian and Bicyclist Infrastructure Improvements A Resource for Researchers, Engineers, Planners, and the General Public, UNC Highway Safety Research Center

CABE (2005) Does money grow on trees?, Commission for Architecture and the Built Environment, London

CBRE (2017) Placemaking: Value and the Public Realm, CBRE Research, available at: https://www.cbre.com/research-and-reports/Global-Placemaking-Value-and-the-Public-Realm-May-2017

Costanza, R., DeGroot, R., Sutton, P., ven der Ploeg, S., Anderson, S., Kubiszewski, I., Farber, S., Turner, R. (2013) 'Changes in the global value of ecosystem services' Global environmental Change, 26, pp.152-158

Crompton, John L. (2004). The proximate principle: The impact of parks, open space and waterfeatures on residential property values and the property tax base. Ashburn, Virginia: National Recreation and Park Association

Ernest & Young (2003) Analysis of secondary economic impacts of New York city parks. New York City: New Yorkers for Parks.

Forestry Commission (2005) Bold Colliery community woodland, District Valuer report on property values

Landry, C. E., & Hindsley, P. (2011). Valuing Beach Quality with Hedonic Property Models. Land Economics, 92-108.

Luttik, J (2000) 'The value of trees, water and open spaces as reflected by house prices in the Netherlands.' Landscape and Urban Planning, Vol. 48, Issues3-4, May 2000, pp161-167

Miller, Andrew R. (2001). Valuing open space: Land economics and neighbourhood parks. Cambridge, MA: Massachusetts Institute of Technology Centre for Real Estate

Pérez-Maqueo, O., Martínez, ML., Lithgow, D., Mendoza-González, G., Feagin, RA. And Gallego-Fernández, JB. (2013) "The Coast and their Cost", Chapter 18 Restoration of Coastal Dunes, pp.289-305

Phillips, Patrick L. (2004) ERA Issue Paper: Real Estate Impacts of Urban Parks. Los Angeles: Economics Research Associates

Pompe, J. J., & Rinehart, J. R. (1995). Beach Quality and the Enhancement of Recreational Property Values. Journal of Leisure Research, 143-154.

Projections | Queensland Government Statistician's Office. Retrieved from Queensland Government Statistician's Office: https://www.qgso.qld.gov.au/statistics/theme/population/population-projections/state

Raje, F. and Saffrey, A. (2013) The Value of Cycling, Phil Jones & Associates, Department of Transport and University of Birmingham

Savills Residential Research, 2006, 'The impact of nearby open space on property prices', Savills Residential Research, London, June

Appendix

Mobility Corridor Analysis: Pedestrian, Cyclist and Mobility Device Average Daily Counts

RT14 Esplanade Links, Pt Vernon

	Southbound	Northbound	Total
Average daily			
East Footpath			
Pedestrian	82	75	157
Cyclist	51	60	112
Mobility device	20	15	35
Total	153	150	303
West Footpath			
Pedestrian	1	1	2
Cyclist	0	0	0
Mobility device	0	0	1
Total	1	1	2
On Road			
Cyclist	45	35	81
Total			
Pedestrian	82	76	159
Cyclist	96	96	192
Mobility device	20	15	35
Total	199	187	386

RT15 Esplanade Links, Pialba

	Southbound	Northbound	Total
Average daily			
East Footpath			
Pedestrian	97	78	175
Cyclist	83	78	161
Mobility device	27	25	52
Total	207	181	388
West Footpath			
Pedestrian	1	1	2
Cyclist	0	0	0
Mobility device	0	0	0
Total	1	1	2
On Road			
Cyclist	49	38	87
Total			
Pedestrian	98	79	177
Cyclist	133	116	249
Mobility device	27	25	52
Total	257	220	478

RT 16 Esplanade Links, Pialba (Taylor Street)

	Southbound	Northbound	Total
Average daily			
East Footpath			
Pedestrian	119	133	252
Cyclist	107	108	215
Mobility device	27	29	56
Total	253	270	523
West Footpath			
Pedestrian	14	11	26
Cyclist	5	5	10
Mobility device	7	4	11
Total	26	21	47
On Road			
Cyclist	49	41	90
Total			
Pedestrian	133	144	278
Cyclist	161	154	314
Mobility device	34	33	67
Total	328	331	659

RT 17 Esplanade Links, Pialba (Hervey Street)

	Southbound	Northbound	Total
Average daily			
East Footpath			
Pedestrian	238	217	455
Cyclist	129	120	249
Mobility device	44	36	80
Total	411	373	784
West Footpath			
Pedestrian	41	56	97
Cyclist	4	5	9
Mobility device	4	5	9
Total	49	66	116
On Road			
Cyclist	48	46	94
Total			
Pedestrian	279	273	552
Cyclist	182	171	352
Mobility device	47	42	89
Total	508	486	994

RT 18 Esplanade Links, Scarness

	Southbound	Northbound	Total
Average daily			
East Footpath			
Pedestrian	300	291	591
Cyclist	122	119	241
Mobility device	29	26	55
Total	452	436	887
West Footpath			
Pedestrian	84	101	185
Cyclist	5	6	11
Mobility device	3	7	10
Total	92	114	206
On Road			
Cyclist	49	40	89
Total			
Pedestrian	384	392	776
Cyclist	177	164	341
Mobility device	32	33	65
Total	593	589	1,182

RT 19 Esplanade Links, Torquay (b/t Tavistock & Torquay)

	Southbound	Northbound	Total
Average daily			
East Footpath			
Pedestrian	213	224	437
Cyclist	133	124	257
Mobility device	28	25	54
Total	374	374	748
West Footpath			
Pedestrian	129	160	289
Cyclist	5	6	11
Mobility device	4	5	9
Total	139	171	310
On Road			
Cyclist	47	40	87
Total			
Pedestrian	342	384	726
Cyclist	185	170	355
Mobility device	33	31	63
Total	560	585	1,145

RT 20 Esplanade Links, Torquay (b/t Fraser St & Surf Club)

	Southbound	Northbound	Total
Average daily			
East Footpath			
Pedestrian	402	404	806
Cyclist	141	133	274
Mobility device	40	41	81
Total	583	579	1,161
West Footpath			
Pedestrian	129	152	281
Cyclist	5	7	12
Mobility device	6	9	15
Total	141	168	309
On Road			
Cyclist	40	42	82
Total			
Pedestrian	531	556	1,087
Cyclist	186	182	369
Mobility device	46	50	97
Total	764	789	1,552

RT 21 Esplanade Links, (b/t Eric & Witt St)

	Eastbound	Westbound	Total
Average daily			
North Footpath			
Pedestrian	388	400	788
Cyclist	126	129	255
Mobility device	22	24	46
Total	536	553	1,089
South Footpath			
Pedestrian	169	170	339
Cyclist	5	4	9
Mobility device	2	4	6
Total	176	177	353
On Road			
Cyclist	43	40	83
Total			
Pedestrian	556	570	1,126
Cyclist	174	173	348
Mobility device	24	27	52
Total	755	771	1,525

RT 23 Esplanade Links, (b/t Elizabeth St & Urangan)

	Eastbound	Westbound	Total
Average daily			
North Footpath			
Pedestrian	412	386	798
Cyclist	125	122	247
Mobility device	20	24	43
Total	557	531	1,088
South Footpath			
Pedestrian	98	129	228
Cyclist	5	6	11
Mobility device	4	4	8
Total	107	139	247
On Road			
Cyclist	30	23	53
Total			
Pedestrian	510	515	1,025
Cyclist	160	152	312
Mobility device	24	27	51
Total	694	694	1,388

RT 24 Esplanade Links, (b/t Jetty Rd & Boat Harbour Dr)

	Southbound	Northbound	Total
Average daily			
East Footpath			
Pedestrian	6	6	13
Cyclist	1	0	1
Mobility device	0	0	0
Total	7	7	14
West Footpath			
Pedestrian	41	53	94
Cyclist	10	13	23
Mobility device	4	8	12
Total	55	74	129
On Road			
Cyclist	33	21	54
Total			
Pedestrian	47	59	107
Cyclist	43	34	78
Mobility device	4	8	12
Total	95	102	197

Draft Hervey Bay Esplanade Master Plan

Internal Stakeholder Technical Review

The Esplanade – THEN

The Esplanade – TODAY

The Esplanade – TOMORROW

The Hervey Bay Esplanade Master Plan

Help us shape the future, with this transformational legacy project!

Internal Stakeholder Technical Review

Your name:	Combined
Your position title:	Internal stakeholder technical review panel
Date:	12 August 2022
Title of Report Being Reviewed:	*Hervey Bay Esplanade – Preliminary Concept for Community Input – Version G – March 2022* ***(EDOCS #4589848)*** *This document is internal distribution only, at this point in time*

PART 1: General Feedback Form

From your technical discipline perspective, please make comment on the following questions.

	Questions	Your feedback
Q1	What elements of the Hervey Bay Esplanade Master Plan do you strongly support?	• Long term environmental support & preservation • Reduced vehicle speed • Protect from human encroachment • Wider walkways • Lots of parkland • Planning Guidelines Pg 76-78 • Retaining truck access to the various sections of the Esplanade • Dedicated themed nodes • Support regeneration of with look-out points that allow water views to avoid illegal clearing • 40km/hr in business nodes • Garden beds as buffers will provide better tree health. • Strategically placed infrastructure that is actively used • Activation of sites • Reduction in the use of pavers • Increasing options for sports and recreation focussed areas such as beach volleyball courts and water sports. • Upgrade to the sea wall • Delineation between areas with phrases such as 'a place for adventure', 'a place for health and wellbeing' etc, that's great from a communications and marketing perspective • Recommendations for wayfinding are strongly supported • Retention and restoration of the foreshore's natural environment, including large trees and natural dune function • The removal of inappropriate infrastructure and creation of natural spaces for storytelling and education
Q2	What elements of the Hervey Bay Esplanade Master Plan cause you concern, if any?	• Support partial road closure • Carparking & infrastructure encroaching into the foreshore • Limit speed to 40km/hr in main tourist villages only • The Masterplan fails to reinforce the financial, environmental, amenity and practical impacts of mitigating coastal hazards along the full length of the Esplanade • Relies heavily on the assumption that coastal mitigation solutions will be practically and/ or financially viable • More focus on community education is needed about managing Esplanade amid coastal hazards and risks

		• Misalignment with surrounding land uses and/ or land use planning objectives (E.g. zones)
		• Fails to reconcile some of the fundamental conflicts facing the future of the esplanade.
		  • Built v's natural environment.
		  • Practical activation without funds.
		  • Its popularity but limitations in the context of the broader open space network.
		  • Coastal hazards and the appetite for mitigation v's the financial, engineering, statutory, environmental and practical realities of mitigate
		• Waste and litter management is not included
		• Provision of District Park adjacent Seafront Oval with no plans for coastal protection and/or consideration for Butchulla Cultural Significance
		• Impacts of proposed changed traffic/parking arrangements
		• Appropriate tree species (resilient and non-invasive roots)
		• Risk of business losing opportunistic trade if parking is removed
		• Lack of service bays/parking for parks and gardens team, vehicles, and trailers.
		• Use of a large number of timber embellishments require a great deal of maintenance in an open coastal environment.
		• The buffer gardens between the roadway and path will increase garden maintenance with annual mulching, irrigation maintenance and pruning (careful plant and mulch selection required) - Tracking out of gardens will occur from foot traffic from café's to parks
		• Specific food vending sites for food vehicles could also be included similar to Anzac Park to increase vibrancy and encourage safe practices of vendors
		• Consideration needs to be given to the homeless population in this area and implications of architectural design of structures and visibility aspects
		• With recent trends in this area, design aspects need to consider impacts on crime and antisocial behaviour e.g. ,visibility and natural surveillance
		• Proposals that could cause controversy include reference to one way street on page 36, sailing club lease not being renewed (this may or may not be an issue though) and removal of aquarium and waterfront restaurant reference
		• Increased park space where this has limited consideration to the natural environment – especially where views are created (some illegally) and then maintained by Council
		• Potential further loss of Natural functioning dune systems along the foreshore and potential further embellishment and alterations to the foreshore area at Point Vernon

Q3	Are there further opportunities that you would like to see included in the Hervey Bay Esplanade Master Plan? If so what, and why?	• Adequate side / rear street parking • More trees and natural areas • One way street, relocate parking to side/rear streets • Separate walking/wheeled pathways • Greater focus on short-term low-cost activation opportunities • Incorporate an Implementation Plan to manage community expectations, clearly outlining practical and cost constraints • Extend to include the Urangan Harbour to reflect Council's strategic priority for Harbour to be redeveloped and evolve into

		the second major activity node after the HB CBD. Leaving it out does not reflect an alignment of Councils strategic planning • Identify all Local Heritage register sites in the Plan area • Outline management of the Esplanade in context of the broader park and open space network. i.e., The Esplanade should not be expected to deliver all the open space functions and should be planned and managed accordingly • Outline the timeframe for the Masterplan and the implementation approach to be taken • Clarify if/how this supersedes the Precinct Master Plans • Unified bin cages with recycling and bottle return, easily accessible for the collection contractor. Assessment of the number, size and location of bin cages. • Assess bins in front of food outlets • Masterplan lacks priority projects and implementation strategy • More articulation of "natural" areas • Look at Urraween/Boundary as a Connector Street, with shared pathway through to the Urangan Esplanade and then perhaps loop back up to the west to provide full circuit? Appreciate that Esplanade just forms part of this circuit though • Hard surface market areas required for existing markets (street markets like Maryborough to reduce the impact on the green spaces. • Parking sites and drop off zones • School holiday traffic congestion increases Caravan Park use and long and heavy vehicle access. Have one-way traffic zones been considered? Or seasonal closures of roads? • Take the active travel corridor one step further and close an entire traffic lane to accommodate capacity for future growth • Activate the current heavily used areas for day and night activities with lighting and security to reduce the opportunity for illegal activities • Strategically place park furniture and shelters to activate areas for greater community benefit and reduce over-embellishment of sites like dog bags at every beach access • A clear criterion for view retention and removal where justified (e.g., where created illegally or only benefiting a single user/household). No new views should be created in favour of park embellishments • Educational/interpretative signage capturing the values and functions and benefits of the coastal dune, foreshore, and biodiversity links between including historical sites and uses. (E.g. Native grasses and the role in habitat and erosion control) • The natural environment given higher value as important wildlife habitat. Apex Park re-named to Flying Fox Park to make the transition from a playground to flying fox habitat complete. More focus on living with flying foxes
Q4	Is there anything you would like to see excluded from the Hervey Bay Esplanade Master Plan? If so what, and why?	• Reduce amount of embellishments • Limit parking on the Esplanade to disability / elderly • Caravan Parks from the Regional Park categories • Manage elements that could cause controversy as outlined in Q2 (not necessarily excluded)
Q5	What do you see as the key risks associated with the	• Conflict between vehicles & pedestrians • Education strategy about reducing cars/parking from Esplanade

	Hervey Bay Esplanade Master Plan?	• Financial and staff resources to implement brings a significant reputational risk • Future Coastal hazard risks have not been adequately considered in the realistic delivery of the Master Plan • Practical engineering and logistical capacity to mitigate coastal hazards in the way shown in the Master Plan requires more detailed consideration before Council commits to delivery • Failure to plan for adequate and efficient waste management • Caravan Park Strategy • Swimming enclosures • Conflicting uses • Pathway material palette/resilience • Foreshore Management Plan & Coastal Futures Strategy • Prioritising planning and/or implementation • Expectations and timeframes for implementation • Tracking out of gardens will occur from foot traffic from Café to parks, this may cause visibility issues between traffic and pedestrians. • Environmental impact on the already declining remnant foreshore trees • You will never please everyone (greater community and visitor benefit a priority) • No funding to implement. Releasing yet another long-term plan without funds to deliver any of it will add to community cynicism, and creates a perception of all plan, no action • Greater resource investment for attractive items such as playgrounds and park embellishments while the natural environment is insufficiently managed. This is particularly important as the EMP call for extensive areas of dune restoration, maintenance, and repair
Q6	How successful do you think the Hervey Bay Esplanade Master Plan will be in achieving its key principles, once implemented?	**Environment -** preserve and enhance the natural foreshore environment as Hervey Bay's greatest asset ☐ Highly achieved ☐ Substantially achieved ☐ Moderately achieved ☒ Poorly achieved ☐ Not achieved at all • This response is based Council attitude to the natural environment and previous activities conducted e.g., clearing native vegetation for views, and not supporting tree planting where individual views are impacted • There could be a significantly higher demand to further reduce vegetation along the foreshore to improve view or the perceived benefits of not have vegetation buffers along the area • Concerned about Environmental" Greenwashing" as a way to 'appear' to be achieving environmental outcomes. Would not like to see 'hard' structures such as rock walls, groynes etc. ever built as these make environmental issues such as erosion worse, rather than better **Connectivity -** create a safe and functional mobility corridor prioritising pedestrians, cyclists and mobility devices

		☐ Highly achieved ☒ Substantially achieved ☐ Moderately achieved ☐ Poorly achieved ☐ Not achieved at all • The foreshore is a linear park with an existing mobility corridor **Connecting to Country** - preserve and reclaim sacred indigenous spaces to allow traditional rituals and education to continue in their historical contexts ☐ Highly achieved ☐ Substantially achieved ☒ Moderately achieved ☐ Poorly achieved ☐ Not achieved at all • This is a complex issue and will have some successes. • Another area within the plan that would benefit from an interpretive education campaign. • Butchulla connection to Country is essential and could be expanded in this plan **Place Making -** Reinforce the character of the bay as a destination sea side town, reflecting its unique Wide Bay character and environment ☐ Highly achieved ☐ Substantially achieved ☒ Moderately achieved ☐ Poorly achieved ☐ Not achieved at all • The Hervey Bay Foreshore has extensive natural value which is also part of the appeal. This factor is lost in random/ad hoc decision making which generally promotes park embellishments and impact to the natural environment. • It will be vital to ensure that the "natural amenity "of the foreshore is retained. Large scale embellishment will have limited "value add" to the region's identity. The identity comes from the naturally occurring diversity and beauty and this needs to be maintained invested heavily in. • As per the comments above, the natural values of the foreshore are what give it its character and this is a major drawcard for its use **Activation** - enhance the vibrancy of the Esplanade as a vibrant destination for both locals and visitors, day and night ☐ Highly achieved

		☒ Substantially achieved ☐ Moderately achieved ☐ Poorly achieved ☐ Not achieved at all • This is already achieved and is part of the character. It is a seaside destination that is not over embellished and does provide a unique experience to visitors. If greater activation is required, then maybe the Sunshine Coast or Gold Coast is the better option. There must be a limit to activation as where does this end. Passive recreation is also a key element of the foreshore and has the potential of being lost
Q7	Is there any other feedback you would like to provide?	• Manage natural vegetation for long term foreshore rehabilitation • The key principals lack certainty and clarity. Many are not actually principals but more topics or conflicts which remain unresolved e.g., retention of vegetation v's more open parklands. Built environment v's natural environment. The principals should be robust enough to direct decision making for the life of the plan but in the current form leave more questions and room for contention • Please include more service parking for the High-Profile Areas operational team to access the parks and gardens to carry out safe maintenance to the parks, gardens and facilities • It's a really good plan, just worry about capacity to make it happen

If you are really keen, we have also provided a second feedback form for those who have detailed comments to provide. We would appreciate you taking the time to optionally fill in the sections which are particularly relevant to your area of expertise. See overleaf.

PART 2: Detailed Feedback Form

From your technical discipline perspective, please complete any relevant sections with your detailed feedback (or hand mark it up on the plan and we can collect it from you).

Page	Section Heading	Your Feedback
1	Title Page	A better maintained asset could be chosen. Maybe this is intentional
2	Document Register and Contents	
3	Acknowledgement of Country	The acknowledgment should be from Council not the consultants. Council is forming the partnership and way forward

4	Part One - Context	
5		
6	Literature Review	• Remove Sustainable Growth Strategy and Replace with the Fraser Coast Planning Scheme 2014 • The draft Open Space Strategy comments should be updated to reflect the current planning methodology and status
7	Literature Review	Great to see the Hervey Bay Foreshore Management Plan included as a key document. This should be the standard for foreshore management and not the version on Councils website
8	Literature Review	Has the Master Plan considered existing environmental legislative compliance e.g., remnant vegetation, turtle habitat, shorebird roost areas etc as a protection mechanism for integration into the master plan? The National Light Pollution Guidelines for Wildlife National Light Pollution Guidelines for Wildlife (dcceew.gov.au) This should also be relevant to protection and co-existence of flying fox roosts
9	Literature Review	
10	Literature Review	
11	Literature Review	
12	Site Context	All context diagrams heavily focus on what is there at the moment but there is a broader lack of vision for what it may evolve into
13	Green and Blue Infrastructure	• Review the identification of "Urban Waterways" and Storm tide Hazard". These currently do not reflect actual waterways or the currently adopted storm tide extents • Outlet drains are incorrectly identified as "Major Waterways" • Concerns regarding waterbodies, etc and other open space shown on the plans • Concern regarding status of Open Space Analysis influencing the Esplanade Master Plan
14	Open Space Analysis	• Kal'ang on Denmans Camp Road is shown as a District Park in Open Space • Raward Road Drain and Boundary Road are also shown as Regional Parks – query status and relevance to the Esplanade • Increase green infrastructure to be consistent with the Open Space Strategy revised Council Controlled Land mapping

15	Urban Elements and Activities	• Should recognise the role of the High Density Residential Activity nodes in Scarness, Torquay, Urangan and Urangan Harbour in accordance with the Planning Scheme • There needs to be a criterion (Policy) developed for 'key sea views' as this is the most contentious issue on the foreshore. Where views have been created illegally there should not be an option for retention. Essentially the policy would clearly describe where views will not be created and where views will be taken back i.e., illegal vegetation damage. This will also be essential when dune restoration activities are progressed, and the community complains due to views being lost. If this cannot be managed, then I suggest the dune restoration component is questioned as potentially unachievable
16		
17	Contextual Diagram - Point Vernon	• The master plan depicts this area as semi-natural. This is consistent with community engagement and the original Hervey Bay Foreshore Management Plan. Great to see as this also helps protect high value turtle and shorebird areas. Ambient lighting will need to be address. Aboriginal Cultural Heritage is also significant in this area and included the fish traps. • Can an interpretative/education trail (existing pathway network) be referenced as this has been developed and will be installed to promote coastal values of Point Vernon. The intent is to raise awareness of shorebirds and sea turtles in the local Point Vernon area
18	Contextual Diagram - Pialba	• Amend arrow "To town centre". Stocklands is not the town centre • Include Local Heritage Sites • Align with City Centre masterplan aspirations • Retail designation does not align with the development on the ground, the Planning Scheme or the City Centre Master Plan (is this intended to be a picture of only what is on the ground now, or is it what we aspire it to be?). Incorrectly identifies industry area as retail? • There is an opportunity to overlay the City Centre masterplan to this plan
19	Contextual Diagram - Scarness	
20	Contextual Diagram - Torquay	
21	Contextual Diagram - Urangan	• Extend to include Marina for a consistent treatment for Esplanade and ensure connectivity e.g., exclusion south of the Marina misses the opportunity to look at potentially extending the pedestrian connectivity from Pulgul Creek back to Boundary Road/Booral Road

22	**Part Two - Precedent Studies**	
23		
24	Byron Bay Master Plan	• Query value of inclusion in draft for consultation?
25	Southport Spit Master Plan	• Query value of inclusion in draft for consultation?
26	Woolgoolga Beach Reserve Concept Plan	• Query value of inclusion in draft for consultation?

27	Clontarf Foreshore Master Plan	• Query value of inclusion in draft for consultation?
28	Glebe4: The Foreshore Walk	• Query value of inclusion in draft for consultation?
29	Arlie Beach Foreshore	• Query value of inclusion in draft for consultation?
30	Promenade Des Anglais, Nice, France	• Query value of inclusion in draft for consultation?
31	Port Phillip Bay	• Query value of inclusion in draft for consultation? • It would be great to demonstrate where improved environmental outcomes have been achieved in a master plan context. As the natural environment is a key element of the Hervey Bay Foreshore, there is an advantage of introducing example projects where dunes have been reclaimed, restored and/or ambient light has been mitigated. This is going to an ongoing focus of the State and Federal Government and therefore an opportunity to be more proactive within the Esplanade Master Plan. There must be examples where the natural element has been increased beyond landscaping on the edge of park embellishments. Example should include where the natural environment improvement has been achieved through a master planning process

32	**Part Three – Esplanade Principles**	
33		
34	Esplanade Principles	• Placemaking Principle – amend “SEQ” reference to “Wide Bay” or “Fraser Coast” (to be determined)
35	Master Plan Principles - Environment	• Lacks clarity on principles • Heading “Opportunities” is out of context for the following dot points • Environmental Hazards are not “principles” • Include consideration of seabird nesting sites • Include Great Sandy Marine Park restrictions on activities in the Bay • Include Storm tide inundation as a consideration requiring mitigation • Preserve and Enhance the Natural Foreshore environment as Hervey Bay’s greatest asset. Love it, but question if the master plan will actually be able to achieve this outcome, beyond a conceptual drawing. An assessment of assumptions and risk of the plan failing would be highly relevant as these forms the strategic framework for delivery. See previous comment for view creation/removal/retention • I fully support the intent (very idealistic) but question the reality of this being achieved. The idea of ‘hubs’ seems to the most logical approach (consistent with the Esplanade Tourist Plan and Foreshore Management Plan, where other areas are maintained in a semi-natural state • The environmental intent of the master plan is great, but it does not translate to the ground and potentially increases impacts to natural values (including protected species). A prime example is the Gataker’s Bay ‘Recreation Hub’ in a turtle sensitive area and the Gables ‘Node’ which is both sensitive sea turtle area and shorebird roosting area

		• While the hub, node concept is a great approach, there needs to be some consideration where areas should be activated/embellished while other areas should be downgraded to ensure environmental impacts are mitigated. While the Master Plan speaks about environmental values this is not reflected in the plan, beyond large green areas called dune rehabilitation or hind dune vegetation • The two 'gathering space' areas near Tooan Toona creek directly adjoin flying fox roosts and have not considered the practical application of activating these areas further. Currently Apex Park embellishments are being downgraded for this very reason • There needs to be greater classifications. The areas shown as 'hind dune vegetation' are misleading as some of these areas are mown park spaces and not vegetated beyond the odd tree. Additionally, a category for 'environmental protection' and would clearly indicate where threats should be mitigated – where embellishments and increased activity is not relevant and should be discouraged
36	Master Plan Principles - Connectivity	• Extremely important • Future parking will be available in Hillyard Street east of Officeworks • Taylor Street is a key link to/from the Esplanade
37	Master Plan Principles - Connecting to Country	
38	Master Plan Principles - Placemaking	• Placemaking Principle – amend "SEQ" reference to "Wide Bay"/ "Fraser Coast" • Highlight role of High Density Residential Nodes in each location. These are intended to consolidate activity and focus place making opportunities • "flexibility for events of all scales and types" is an unrealistic expectation. Larger events should be held in other locations in the region
39	Master Plan Principles - Activation	• Better 24hr usage • Why is the pier identified as the only opportunity for food and beverage? This should be extended to all HDR nodes and Urangan Harbour to align with the Planning Scheme intents • Opportunity to promote temporary activation activities rather than attempting to implement permanent interventions which do not have community support

40	Part Four - Opportunities	
41		• The vulnerability of these low coastal areas should be further considered to inform proposed investment in these areas. • Ensure consistency between naming and labelling conventions of mobility corridors vs shared pathway
42	Point Vernon	• Recommend speed reduction to 50kph (Beach Road to Point Vernon) given the existing environment. • 40kph reduction will be dependent on significant investment to change the physical environment to ensure compliance
43	Point Vernon - Typical Section - Mobility Corridor Testing	• The conflict of the 3m wide mobility corridor with the parking is a major safety concern. Has feasibility to upgrade the off-road facility been investigated from north of Beach Road?

44	Point Vernon - Key Opportunities	• Has consideration been given to provision of an additional pathway on the "lower terrace" (closer to the water's edge) along the Point Vernon Esplanade? The multiple pathways could be allocated to different users. • Replace pavers (with concrete). • Potentially consider use of the existing road pavement to delineate an area for pedestrians/cyclists (e.g. kerb).
45	*Page intentionally left blank*	
46	Pialba	• Avoid conflicts with sewerage infrastructure • Soften aesthetics of sewerage assets (pump stations) • Maintain operational maintenance / emergency access • Consider uses adjacent to dedicated overflow areas • Align with Hervey Bay City Centre Master Plan and associated strategies (e.g., Wayfinding Strategy) to ensure a seamless expression of the vision for the Pialba node • Support inclusion of speed limit painted on the pavement • Conflicts between desire for events without nearby car parking. Pathways to available car parking will be required e.g., widen path on western side of Main Street from car park in Charles Street to Wetside and/or Taylor Street. • Intersection treatment at Esplanade/Taylor should include pedestrian crossing for connectivity to car parking opportunities (e.g. east of OfficeWorks).
47	Pialba - Typical Section - Mobility Corridor Testing	• Identify future corridor widths to facilitate infrastructure provision and do not plant out, even though succession planting is supported elsewhere
48	Pialba - Key Opportunities	• Identify the Local Heritage Register site – Popps figs • The long term viability of sea front oval as the principal events space on the Esplanade needs to be considered in the context of coastal hazards. Significant investment will be required to protect this area from erosion and permanent inundation from sea level rise. Dune rehabilitation alone will not resolve these hazards. Retreat from this location needs to be considered • Consider whether there are sections where provision is made for one-way on-road lanes and two-way elsewhere • Beach access needs to be maintained for heavy equipment to undertake beach cleaning, sand extraction from Tooan Tooan Creek and to transport equipment and materials for coastal protection capital works and/or maintenance (e.g. rockwalls) Note that jetties, groynes and the Urangan Pier restrict access to sections of the beach and tidal influences significantly impact on the time that beach/coastal protection works can be carried out • Further consideration is needed for coastal protection of existing infrastructure as well as continued investment in this area • Agree with retreat of Wetside boardwalk, as any alignment of a broader coastal protection wall would be required by State Agencies to be located along the existing escarpment • Support vegetated connecting street trees • Ensure that Council's Events Strategy helps administer the size of the events to be held in this location and supported by available parking and/or park and ride arrangements • The retention of cleared vegetation so views can be obtained from the 'mound road edge' contradicts the dune rehabilitation

		zone and also does not consider the impact of ambient lighting on sea turtles • To sufficiently rehabilitate a coastal dune, there is a need to reduce wind blowing directly through the dune (for sand drop and to minimised salt laden winds – impacts to plants), where a view is maintained, the dune will never be functional • While the master plan is a great conceptual picture, I don't feel the intent is being captured and if anything, the large-scale impression of dune / vegetation retention / rehabilitation is false and misleading
49	*Page intentionally left blank*	
50	Scarness	• Identify underground utility corridor for long term planning, operation and maintenance and minimise disruption • The no water craft zone does not necessarily align with the most popular swimming areas where there is a greater conflict between people and motor craft • The provision of the on-road shared pathway will exacerbate queuing when east-bound traffic is exiting to Queens Road and similar side roads. • There are significant trees that are in conflict at Scarness to achieve the infrastructure, including off-street car parking
51	Scarness - Typical Section - Mobility Corridor Testing	• Connectivity and Activation creates potential challenges for waste servicing (crossing the mobility corridor or stopping at strategic locations to service either commercial or open space area bins • Consider service vehicles in the Masterplan • Strongly advocate for the provision of a shared pathway along the (seaside) front of the Scarness Caravan Park, due to conflicts with vegetation along the Esplanade road reserve too.
52	Scarness - Key Opportunities	• Are Cottonwood trees 'sacred' vegetation? • Does 'sacred' refer to medicinal vegetation? • Potential to construct a boardwalk that connects from Maryborough Sailing Club west to join with existing boardwalk back to Neilsons Park • Address ambient light issues from the park and Enzo's. Restricting beach access in Scarness and Torquay is not possible due to fluctuation of beach levels in response to erosion and accretion events
53	Scarness - Water Sports Hub	• Query the value of constructing a highly vulnerable boardwalk in front of Scarness Caravan Park that doesn't connect; Council has also had previous experience with boardwalks being removed (e.g. Torquay). Suggest that shared pathway as close to Caravan Park as possible is a preferred alternative
54	Torquay	• Concerns with safety aspects of shared pathway and reverse parking. • Dune rehabilitation zone terminology is confusing (throughout the document) and may be misleading e.g., there is an existing rock revetment wall in front of the Torquay Caravan Park?
55	Torquay - Typical Section - Mobility Corridor Testing	• Concern with potentially pushing traffic onto backstreets, in the absence of modelling
56	Torquay - Key Opportunities	• Opportunity for additional car parking in Freshwater Street; consideration has already been given to Truro Street by Engineering Services to provide additional parking too. Footpath

		connectivity required from parallel parking on backstreets back to the Esplanade.
57	Torquay - Sailing Hub	• Support consolidation of Sailing Club buildings. • Concern that there is insufficient room to fit the proposed car parking; there is also significant vegetation and manoeuvring to the boat ramp to be retained. Feasibility is questioned and there is concern that concepts will raise community expectations that will not be able to be achieved at the detailed design stage, particularly if vegetation needs to be removed to facilitate.
58	Torquay - Surf Lifesaving and Scouts Hub	• There is no detail about proposed crossings (e.g. raised crossings), but pedestrian crossings will require removal of on-street car parking to facilitate provision. • Engineering Services have some conceptual planning for a crossing near Macks Road. • Has any consideration been given to consolidation or relocation of the Hervey Bay Sea Scouts?
59	*Page intentionally left blank*	
60	Urangan	• Concern regarding details of revetment walls and raising expectations in advance of Coastal Futures Strategy outcomes and feasibility in terms of detailed design requirements?
61	Urangan - Typical Section - Mobility Corridor Testing	
62	Urangan Pier - Key Opportunities	• Significant concern with provision of mobility corridor along Pier and Pilot streets; conflicts with on-street car parking; congestion; safety concerns • The eastern 'viewing node' near the groyne is within the last remaining remnant Eucalyptus Forest on the esplanade
63	Urangan - Dayman Park	• Parking loss at Dayman will push to the streets. This may impact residents that have already raised this concern with the corner store • Removal of car parking may detract from use of space or may increase demand for offset parking in residential areas and need for connecting pathways

64	**Part 5 - Developed Master Plan Concepts**	
65		
66	Dune Rehabilitation	• Practicalities of dune rehabilitation • Confusing terminology given that hard infrastructure is proposed in medium and high intervention options
67	Low Intervention - Dune Rehabilitation	• It is unclear where this intervention is anticipated and if feasible e.g., similar treatments were previously undertaken at Torquay and have progressively eroded over time. Success is likely to be dependent on large-scale beach nourishment, however feasibility is still unknown as Infrastructure Planning is investigating Dayman Spit as a potential source • The diagram does not depict the naturally eroding dunes of Hervey Bay. While some of the elements could be achieved the fencing and all-inclusive access point is questionable. The desire to include boardwalks within the dune is not preferred. People have the opportunity to walk along the pedestrian pathway and

		also the beach. There is no need for walking trails within the actual dune • Large scale dune nourishment is not possible and will not hold due to the current erosion potential. These areas will result in revetment walls where impacts should be considered now. There is limited opportunity for setbacks due to the esplanade road location • Consider if the approach described is actually consistent with the Coastal Futures Strategy and/or can be achieved in reality. It is likely the main treatment from Beach Road to the Pier will be a 'medium intervention – balanced dune rehabilitation with hard infrastructure to 'high intervention – sea wall. This should be depicted in the Master Plan drawings as its misleading to show large swathes of dune restoration area throughout the esplanade
68	Medium Intervention - Balanced Dune Rehabilitation with Hard Infrastructure	• It is unclear where this intervention is anticipated; it may be preferable to not raise expectations in advance of Coastal Futures Implementation
69	High Intervention - Sea Wall	• It is unclear where this intervention is anticipated; it may be preferable to not raise expectations in advance of Coastal Futures Implementation
70	Pedestrian Crossings	• Unsure where some of the pedestrian crossings are proposed in relation to the nominated cross streets. • Do not support upgrading of entry statements at Scarness due to site distances and there being more appropriate locations. • There could be a crossing on Hibiscus Street, but not across Pier Street as it does not connect. • Support Pedestrian Crossing on Pier Street near intersection at King Street.
71	Indicative Pedestrian Crossings	
72	Beach Access Nodes - Framing the view	• These should be limited. The plan speaks about framing identified view locations with pavilions. Is this a practical option or should this be restricted to key locations where infrastructure can accommodate this? It would be relevant to include this within shoreline erosion management and to key these assets into seawalls
73	Beach Access Nodes - Pavilion Variations	• Engineering Services is investigating the impact of the proposed bus stop on the parking (i.e., looking at cross sections). • Is it expected that there will be dedicated car parking areas to ensure the shuttle service is viable • Is there a minimum setback to ensure dune function is not compromised? These pavilions would need to be considered within the shoreline erosion management plan. The example given sits on a stormwater outfall groyne which is limited to two in the bay
74	Green Transport - Esplanade Shuttle	• Support vehicle charging station concept – Masterplan should consider encouraging in side/back streets
75	Green Transport - E-Mobility Infrastructure	• Query whether the minimum continuous clear width is compliant with current standards and sufficient; and/or whether the area available for commercial use could be narrowed? • There is no protection (e.g. bollards and crash barrier with deflection zone) for on-street diners. Need to clarify whether

		there is sufficient space to ensure this concept is viable without introducing hazards
76	Street Footpaths - Planning Guide	
77	Street Footpaths - Planning Guide	• Query how many instances there will be for the roadside verge planting suggested; also concern about how to get out of the vehicles?
78	Street Footpaths - Shady Connector Corridor	• Need to ensure that street trees do not impact on site distances or safety.
79	*Page intentionally left blank*	• There is insufficient detail to demonstrate the impact of proposed concepts on existing car parking and vegetation. • It would be valuable to identify the significant vegetation along the Esplanade to protect, as many of the concepts are likely to threaten existing vegetation.

80	Part Six - Way Finding Opportunities	
81		• The Esplanade Master Plan should have its own look and feel. Effort is required now to ensure this is developed and can be carried throughout the project's development and delivery. As the project develops the 'branding' will be recognisable and provide a direct benefit to engagement. Start with the plan document and supporting brochures. It would be disappointing if the Master Plan duplicates the Natural Environment Style Guide generally, as this has a specific purpose for environmental elements and can be integrated while maintaining this intent
82	Introduction	• Ensure alignment with City Centre Master Plan Way Finding Strategy • Design Wayfinding to avoid creation of visual pollution
83	Way Finding Objectives	
84	Context	
85	Context	
86	User Groups - Who Lives Here? - The Locals	
87		
88	User Groups - Who Visits Here? - Tourists	
89		
90	Branding- Style Guides and Branding	• Integrate with City Centre Wayfinding
91	Community Considerations - Community Priorities for Way Finding	
92	Site Visit	
93	General Impressions - Whole Site	
94	Way Finding Land Use - Site Context	
95		
96	Way Finding Circulation	• Walking times is a great idea
97		

98	Destination Hierarchy	
99		
100	Point Vernon - Destinations and Circulation	
101	Pialba - Destinations and Circulation	
102	Scarness - Destinations and Circulation	
103	Torquay - Destinations and Circulation	
104	Urangan - Destinations and Circulation	
105	*Page intentionally left blank*	
106	Way Finding Recommendations	
107	Way Finding Recommendations	• Interactive panels great concept but subject to frequent damage & expensive repairs.
108	Way Finding Signage - Way Finding Sign Family	
109	Way Finding Signage - Indicative Way Finding Signage Locations	
110	Way Finding Signage - Sign Family	
111	*Page intentionally left blank*	
112	Accessibility	
113		
114	Mapping	• Support mapping. There are a lot of gaps on Google Maps' current cycling layer. • Need clarity around who owns what in terms of signage in parks vs road network, etc.
115	Mapping - Map Design Approach	
116	Material and Form	• Stainless steel is more durable, wood looks nice but needs constant maintenance
117	Material and Form	
118	Language - Dual Language	
119	Language - Tone of Voice	
120	Interpretative Framework	
121	Interpretative Framework	
122	Schematic Interpretative Signage - Interpretative Signage Family	

123	Indicative Interpretative Signage Locations	

124	Part Seven - Artwork Strategy	
125		
126	Introduction to Public Art	Great concept. Like all elements
127	Benefits of Public Art	
128	Artwork Types	
129	Project Context - Project Overview	
130	Historical Context	
131	Recent History	
132	Curatorial Themes	
133	Curatorial Theme 1	
134	Curatorial Theme 2	
135	Curatorial Theme 3	
136	Artwork Opportunities	
137	Artwork Opportunity 1 - Mobility Corridor	
138	Artwork Opportunity 2 - Beach Access Nodes	
139	Artwork Opportunity 3 - Esplanade Footpaths	
140	Artwork Opportunity 4 - Multiple Locations	
141	Artwork Opportunity 5 - Multiple Locations	
142	Artwork Opportunity 6 - Multiple Locations	
143	Governance Arrangements	
144	Public Art Assessment Criteria	
145	Commissioning Models	
146	Commissioning Models (continued)	
147	Artwork Commissioning Methodology	
148	Artwork Commissioning Methodology (continued)	
149	Contacts	Delete this page from Master Plan. No need to include consultants contact details

150	Appendix	
151		
152	Appendix 1 - Kit of Parts	

153	Appendix 1 - Kit of Parts	Show setbacks and key into seawalls
154	Appendix 1 - Kit of Parts	
155	Appendix 1 - Kit of Parts	

General Comments

- This is not in a suitable format for public consultation.
- There are no identified priority projects, no costings, or principles around asset management to better understand affordability for Council along with other strategies e.g., renewal at the end of useful life or when compromised by coastal hazards vs premature renewal or upgrade?
- Is this cost effective to deliver on-road shared facilities for small percentage of potential users at the cost of vehicles?
- How will the on-road shared facilities be implemented? Could on-road facilities be trialled in a section/s between the nodes and then revert to off-road facilities within the nodes? Could significant vegetation be identified in the nodes to then prioritise upgrade for off-road provisions. During the trial, could we also undertake survey to investigate demand and impact on businesses?
- There is no preamble to provide an overview of the deliberative democracy process including key issues for the Master Plan to deliver and what conflicts/impacts may result e.g., the costs of providing a shared on-road facility for the full length of Esplanade.
- Significant trees, even if identified and protected, are likely to succumb to natural attrition at some time (e.g. severe whether event or end of life), can succession planting not be aggressive to offset provider loss of vegetation to protect the natural environment in the longer term and potentially facilitate some infrastructure improvements in the short to medium term?