APPENDIX Q: Turbine CBW 13
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm

Energy Pacific (Vic) Pty Ltd

Appendix Q4

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Energy Pacific (Vic) Pty Ltd

Appendix Q5

Reference Location

Location 2

20 metres to north upwind (Real)

20 metres to north upwind (Real)

[Graphs showing acoustic data over frequency and time for Reference Location and Location 2]
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm

Appendix Q7

Energy Pacific (Vic) Pty Ltd

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Energy Pacific (Vic) Pty Ltd

Appendix Q8

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Energy Pacific (Vic) Pty Ltd

Appendix Q

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Appendix Q11

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Appendix Q12

Energy Pacific (Vic) Pty Ltd

Reference Location

Location 7

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The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm

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Appendix Q14

Reference Location

Location 9

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Appendix Q17

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Reference Location

Location 13

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The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm
Energy Pacific (Vic) Pty Ltd

Reference Location

Location 14

The Acoustic Group Report 44.5100.R7:MSC
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The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm
Energy Pacific (Vic) Pty Ltd

Location 1

- centre upwind (Real)
- 10 metres to north upwind (Real)

[dB/20u Pa]

centre upwind (Real)
10 metres to north upwind (Real)
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm
Energy Pacific (Vic) Pty Ltd

Appendix Q21

Location 2

- centre upwind (Real)
- 20 metres to north upwind (Real)

[dB/20u Pa]

Hz

20
30
40
50
60
70
80
90
100

20
30
40
50
60
70
80
90
100

centre upwind (Real)
20 metres to north upwind (Real)
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm
Energy Pacific (Vic) Pty Ltd

Location 3

- centre upwind (Real)
- 40 metres to north upwind (Real)

[dB/20u Pa]

X: 25.000 Hz
Y: 51.268 dB/20u Pa

centre upwind (Real)
40 metres to north upwind (Real)
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Energy Pacific (Vic) Pty Ltd

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Energy Pacific (Vic) Pty Ltd

Location 5

- centre upwind (Real)
- downwind north 20m (Real)

[dB/20u Pa]

- centre upwind (Real)
- downwind north 20m (Real)

(cursor values: X: 25.000 Hz, Y: 53.194 dB/20u Pa)
Location 6

- centre upwind (Real)
- downwind north 10m (Real)

[dB/20u Pa]

cursor values:
X: 25.000 Hz
Y: 52.111 dB/20u Pa

centre upwind (Real)
downwind north 10m (Real)

[dB/20u Pa]

cursor values:
X: 12.500 Hz
Y: 58.029 dB/20u Pa

centre upwind (Real)
downwind north 10m (Real)
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm

Location 7

- centre upwind (Real)
- centre downwind (Real)

[Graph showing acoustic levels in dB/20u Pa vs. frequency in Hz]

Energy Pacific (Vic) Pty Ltd

The Acoustic Group Report 44.5100.R7:MSC
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Location 7

- centre upwind (Real)
- downwind centre (Real)

[dB/20u Pa]

Cursor values:
X: 25.000 Hz
Y: 51.493 dB/20u Pa

Cursor values:
X: 12.500 Hz
Y: 55.266 dB/20u Pa
Location 8

- centre upwind (Real)
- downwind 10m south (Real)

![Graph showing acoustic testing results for Location 8](image-url)

- Cursor values:
  - X: 25.000 Hz
  - Y: 49.108 dB/20u Pa
  - centre upwind (Real)
  - downwind 10m south (Real)

![Graph showing acoustic testing results for another location](image-url)

- Cursor values:
  - X: 12.500 Hz
  - Y: 56.287 dB/20u Pa
  - centre upwind (Real)
  - downwind 10m south (Real)
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm

Energy Pacific (Vic) Pty Ltd

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Location 9

- centre upwind (Real)
- downwind 20m south (Real)

[dB/20u Pa]

Cursor values
X: 25.000 Hz
Y: 51.815 dB/20u Pa

centre upwind (Real)
downwind 20m south (Real)

[dB/20u Pa]

Cursor values
X: 12.500 Hz
Y: 54.219 dB/20u Pa

centre upwind (Real)
downwind 20m south (Real)
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm

Energy Pacific (Vic) Pty Ltd

Appendix Q30

Location 10

- centre upwind (Real)
- downwind 40 m south (Real)

[dB/20u Pa]

Hz

0 20 40 60 80 100

centre upwind (Real)
downwind 40 m south (Real)
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm
Energy Pacific (Vic) Pty Ltd

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Energy Pacific (Vic) Pty Ltd

The Acoustic Group Report 44.5100.R7:MSC
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Location 12

- centre upwind (Real)
- upwind 20m south (Real)

[dB/20u Pa]

- centre upwind (Real)
- upwind 20m south (Real)

[dB/20u Pa]
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm
Energy Pacific (Vic) Pty Ltd

Appendix Q33

Location 13

centre upwind (Real)
upwind 10m south (Real)

[ dB/20u Pa ]

[ Hz ]

centre upwind (Real)
upwind 10m south (Real)
Location 14

- centre upwind (Real)
- downwind 10 north 40m behind (Real)

[dB/20u Pa]
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm
Energy Pacific (Vic) Pty Ltd

Location 2

- centre upwind (Real)
- 20 metres to north upwind (Real)

[s] (Relative Time) [dB/20u Pa]

0 5 10 15 20 25 30 35 40 45 50

0 10 20 30 40 50 60 70 80 90 100

[Hz]

0 5 10 15 20 25 30 35 40 45 50

0 10 20 30 40 50 60 70 80 90 100

[Hz]
Location 3

- centre upwind (Real)
- 40 metres to north upwind (Real)

[s] (Relative Time) [Hz] [dB/20u Pa]
Location 4

- centre upwind (Real)

[s] (Relative Time) [dB/20u Pa]

- downwind 40m north (Real)

[s] (Relative Time) [dB/20u Pa]
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm
Energy Pacific (Vic) Pty Ltd

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Location 6

- centre upwind (Real)
- downwind north 10m (Real)

[s] (Relative Time) [Hz] dB/20u Pa

0 5 10 15 20 25 30 35 40 45 50 Hz

40
80
120
160
200
240
280

80
60
40
20
0
-20
-40
-60
-80
-100

20 40 60 80 100 dB/20u Pa

downwind north 10m (Real)

centre upwind (Real)
Location 7

centre upwind (Real)

downwind centre (Real)
Location 8

- centre upwind (Real)

- downwind 10m south (Real)
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm

Energy Pacific (Vic) Pty Ltd

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Location 11

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centre upwind (Real)

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</tbody>
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upwind 40m south (Real)
Location 13

- centre upwind (Real)
- upwind 10m south (Real)

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Energy Pacific (Vic) Pty Ltd

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Location 13

- centre upwind (Real)
- upwind 10m south (Real)

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Energy Pacific (Vic) Pty Ltd

Appendix Q51

Location 3
- centre upwind (Real)
- 40 metres to north upwind (Real)

Location 4
- centre upwind (Real)
- 40 metres to north downwind (Real)
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm
Energy Pacific (Vic) Pty Ltd

Appendix Q52

Location 4
- centre upwind (Real)
- downwind 40m north (Real)

Location 5
- centre upwind (Real)
- downwind north 20m (Real)
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm
Energy Pacific (Vic) Pty Ltd

Location 6
- centre upwind (Real)
- downwind north 10m (Real)

Location 7
- centre upwind (Real)
- centre downwind (Real)
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm

Energy Pacific (Vic) Pty Ltd

Appendix Q54

Location 7
- centre upwind (Real)
- downwind centre (Real)

Location 8
- centre upwind (Real)
- downwind 10m south (Real)
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Energy Pacific (Vic) Pty Ltd

Appendix Q55

Location 9
- centre upwind (Real)
- downwind 20m south (Real)

Location 10
- centre upwind (Real)
- downwind 40 m south (Real)
Location 11

- centre upwind (Real)
- upwind 40m south (Real)

Location 12

- centre upwind (Real)
- upwind 20m south (Real)
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Energy Pacific (Vic) Pty Ltd

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Location 6
- downwind north 10m (Real)

[s] (Relative Time)

Location 7
- downwind centre (Real)
Location 4

![Graph showing acoustic testing results for Location 4](image)

The graph displays acoustic testing results for Location 4, with measurements taken downwind 40m north. The data is presented in terms of relative time and level in dB(A)/20u Pa.
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APPENDIX R: On Site (Wind Farm) Tests – CBW 14

- **Location A:** Base of CBW 14
- **Location B:** 10 m east of CBW 14
- **Location C:** 40 m east of CBW 14
- **Location D:** East of CBW 14, in line with CBW 13 and CBW 15
- **Location E:** 264 m from CBW14, 212 m from CBW 13 and 227 m from CBW 15
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm
Energy Pacific (Vic) Pty Ltd

Appendix R3

Location A: Acceleration: on tower, radial

Location A: Acceleration: base, north-south
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm

Energy Pacific (Vic) Pty Ltd

Appendix R4

Location A, base, north-south (Real)

Location A, on tower, radial (Real)

[m/s²]

[Hz]

Location A: Acceleration on tower, radial

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Appendix R5

Location A: Acceleration: east-west

[m/s²]

Location A, base, east west (Real)
Location A, on tower, radial (Real)

[m/s²]

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Appendix R7

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Appendix R8

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Appendix R12

Location C Acceleration: vertical

Location C Acceleration: east-west

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Appendix R13

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Appendix R14

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Location D: Acceleration: vertical

Location D: Acceleration: east west
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Appendix R18

Location E: Acceleration: vertical
n/m²

Location E: Acceleration: north south
n/m²

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Appendix R

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Appendix R20

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APPENDIX S: Substation Testing

Photograph Locations
The Results of an Acoustic Testing Program – Cape Bridgewater Wind Farm

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Appendix S25

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