RiverOak Strategic Partners

Updated Noise Contour Maps

TR020002/D4/NCM

Examination Document

Project Name:	Manston Airport Development Consent Order
Application Ref:	TR020002
Submission Deadline:	**4**
Date:	8 March 2019

Additional noise figures and data for Manston Airport DCO Deadline 4

This document introduces a set of figures produced after the completion of the Chapter 12 of the ES (Noise) [APP-034] in response to EXA and stakeholder requests. These figures should be read in conjunction with the set of figures originally produced for the ES Chapter 12 (Figures 12.1 to 12.13 [APP-042].

1. Summary of additional figures and data

1.1 N-above 65dB contours

Daytime N-above 65 dB contours have been reproduced in response to EXA's first written question Ns. 1.36:

- Figure 12.14 daytime N-above 65dB contours – opening year
- Figure 12.15 daytime N-above 65dB contours – year of forecast maximum capacity

1.2 Preference for Runway 28 departures / Runway 10 arrivals

The following figures were produced in response to questions relating to the Noise Mitigation Plan commitment to "seek to operate take-offs from Runway 28 and landings on Runway 10 subject to such operations being in accordance with CAA guidance and the aircraft operator's own limitations and safety management systems". Contours for this operational procedure have been predicted on the basis that this type of operation could occur 67.8%. This assumption is based upon work by Osprey Consulting Services[1]. In each figure the contours are compared to the contours predicted with the worst-case operating assumptions used for the ES noise assessment. It is important to note that the contours presented have not been combined with the ground noise predictions as they were in the ES chapter.

- Figure 12.16 Aircraft noise – day-time $L_{Aeq,16hr}$ contours - opening year - Preference for Runway 28 departures / Runway 10 arrivals scheme 67.8% of the time
- Figure 12.17 Aircraft noise – night time $L_{Aeq,8hr}$ contours - opening year - Preference for Runway 28 departures / Runway 10 arrivals scheme 67.8% of the time
- Figure 12.18 Aircraft noise – day-time $L_{Aeq,16hr}$ contours - year of forecast maximum capacity - Preference for Runway 28 departures / Runway 10 arrivals scheme 67.8% of the time
- Figure 12.19 Aircraft noise – night-time $L_{Aeq,8hr}$ contours - year of forecast maximum capacity - Preference for Runway 28 departures / Runway 10 arrivals scheme 67.8% of the time

Table 1 below compares the aircraft noise exposure for the ES scheme with the Noise Mitigation Plan proposal to operate a preference for Runway 28 departures / Runway 10 arrivals 67.8%. For each assessment year the discount cost of health benefits has been calculated using the DfT's transport appraisal guidance

[1] Osprey Consulting Services - Review of Potential Aircraft Noise Abatement Operational Procedures. Report 70992-011 Version 2.1 for RiverOak Strategic Partners 18 December 2017.

WebTAG[2]. The results demonstrate that the runway preference scheme could reduce the negative benefits associated with aircraft noise by approximately 36% in Year 2 and 22% in Year 20.

Table 1: Number of dwellings Impacted by Aircraft Noise as a Result of the assessed route

Indicator	**ES scheme**		**Preference for Runway 28 departures / Runway 10 arrivals scheme 67.8% of the time**	
Daytime (0700 to 2300)	Year 2	Year 20	Year 2	Year 20
>50 dB LAeq,16hr (LOAEL)	4,852	13,046	2,846	11,609
>63 dB LAeq,16hr (SOAEL)	48	115	48	73
Night-time (2300 to 0700)				
>40 dB LAeq,8hr (LOAEL)	10,512	16,465	8,445	15,016
>55 dB LAeq,8hr (SOAEL)	0	225	0	101
WEBTAG Noise: Discounted noise benefits based on 2019 prices and rounded to nearest £1000	-£3,496,000	-£8,092,000	-£2,223,000	-£6,322,000

1.3 Daytime 60dB $L_{Aeq,16hr}$

The following figure was produced to identify the extent of the noise insulation offer for community buildings in the year of forecast maximum capacity:

- Figure 12.20 Aircraft noise – day-time LAeq,16hr contours -year of forecast maximum capacity

[2] Department for Transport (2016) Transport Analysis Guidance: WebTAG [online] Available at https://www.gov.uk/guidance/transport-analysis-guidance-webtag

620000
625000
630000
635000
175000
170000
165000
160000
N
Herne Bay
HERNE BAY
MARGATE
BROADSTAIRS
RAMSGATE
Isle of Thanet
SANDWICH
Sandwich Bay
The Small Downs
0 - 5
6 - 10
11 - 20
21 - 50
51 - 100
0 - 5
6 - 10
11 - 20
21 - 50
51 - 100
0 - 5

Key

Runway
Approaches from the East
Approaches from the West
Departures to the East
Departures to the West

Average number of events exceeding 65 dB L_{ASmax} per day

0 - 5
6 - 10
11 - 20
21 - 50
51 - 100

0 1,000 2,000 3,000 4,000 m
Scale at A3: 1:75,000

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Environmental Statement

Figure 12.15
Aircraft noise – day-time N-above contours - opening year

February 2019

wood.

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620000
625000
630000
635000
175000
170000
165000
160000

Herne Bay
HERNE BAY
MARGATE
BROADSTAIRS
Isle of Thanet
RAMSGATE
Sandwich Bay
SANDWICH
The Small Downs

0 - 5
6 - 10
11 - 20
21 - 50
51 - 100
101 - 200

Key

Runway
Approaches from the East
Approaches from the West
Departures to the East
Departures to the West

Average number of events exceeding 65 dB L_{ASmax} per day

0 - 5
6 - 10
11 - 20
21 - 50
51 - 100
101 - 200

0 1,000 2,000 3,000 4,000 m
Scale at A3: 1:75,000

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Figure 12.15
Aircraft noise – day-time N-above contours - year of forecast maximum capacity

February 2019

wood.

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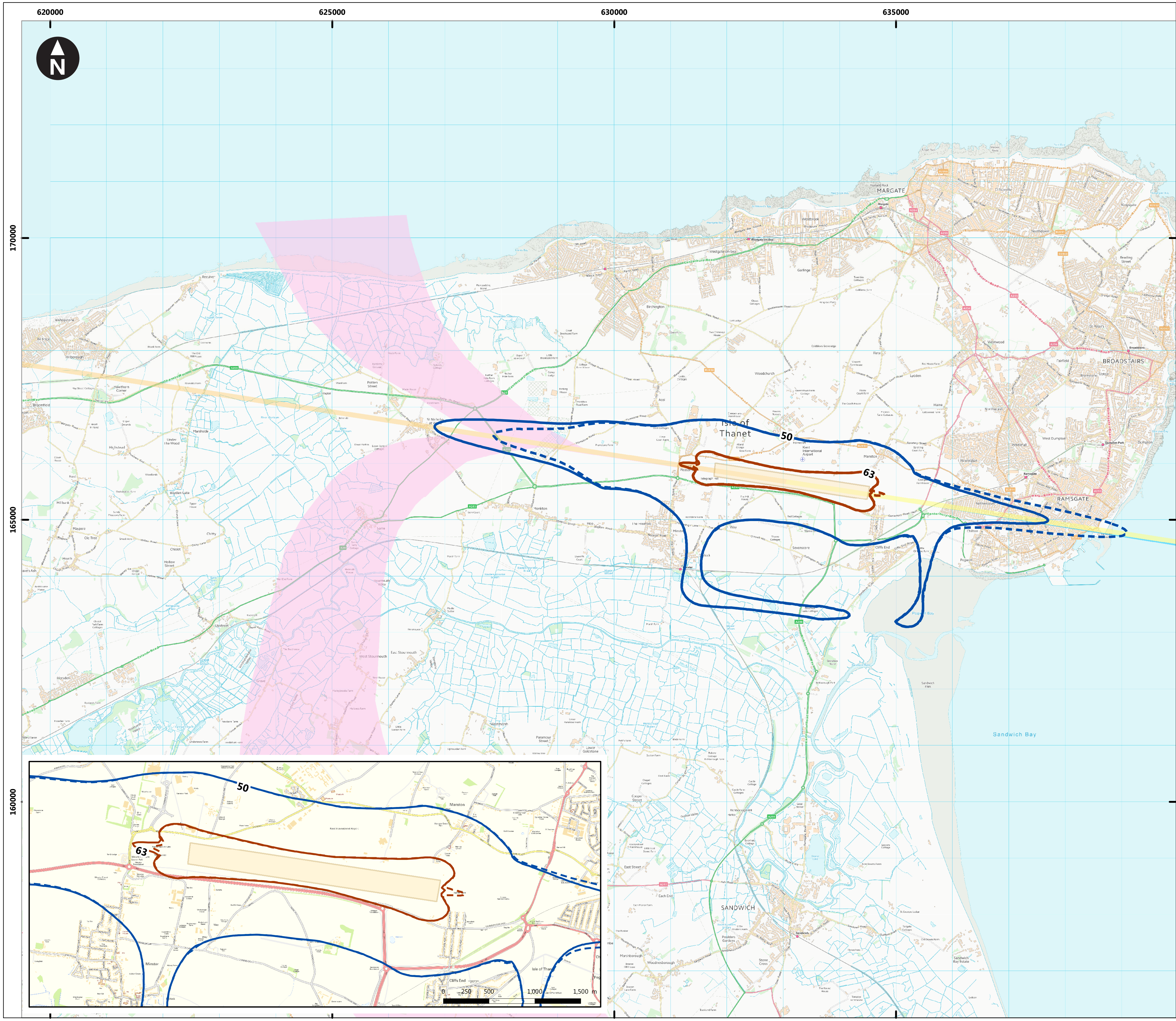

Key

- Runway
- Approaches from the East
- Approaches from the West
- Departures to the East
- Departures to the West

Day-time L

- 50 dB LOAEL Noise Mitigation Plan runway preference
- 63 dB SOAEL Noise Mitigation Plan runway preference
- 50 dB LOAEL ES Scheme
- 63 dB SOAEL ES Scheme

Note:
Air noise only.

0 1,000 2,000 3,000 m
Scale at A3: 1:65,000

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Figure 12.16
Aircraft noise – day-time $L_{Aeq,16hr}$ contours - opening year - Preference for Runway 28 departures / Runway 10 arrivals scheme 67.8% of the time

March 2019

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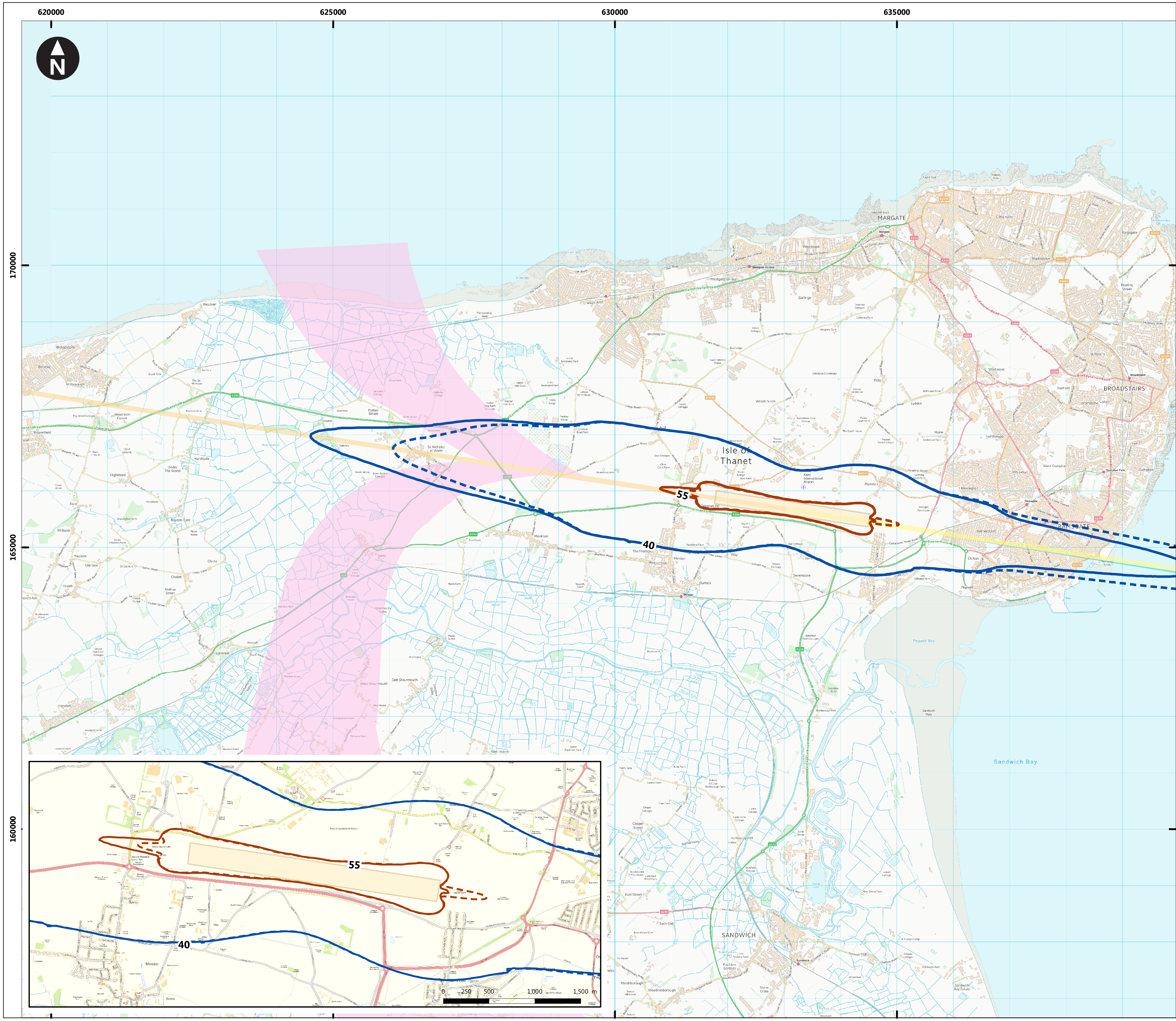

Key

- Runway
- Approaches from the East
- Approaches from the West
- Departures to the East
- Departures to the West

Night-time L

- 40 LOAEL Noise Mitigation Plan runway preference
- 55 SOAEL Noise Mitigation Plan runway preference
- 40 LOAEL ES Scheme
- 55 SOAEL ES Scheme

Note:
Air noise only.

0 1,000 2,000 3,000 m
Scale at A3: 1:65,000

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Figure 12.17
Aircraft noise – night-time $L_{Aeq,8hr}$ contours - opening year - Preference for Runway 28 departures / Runway 10 arrivals scheme 67.8% of the time

March 2019

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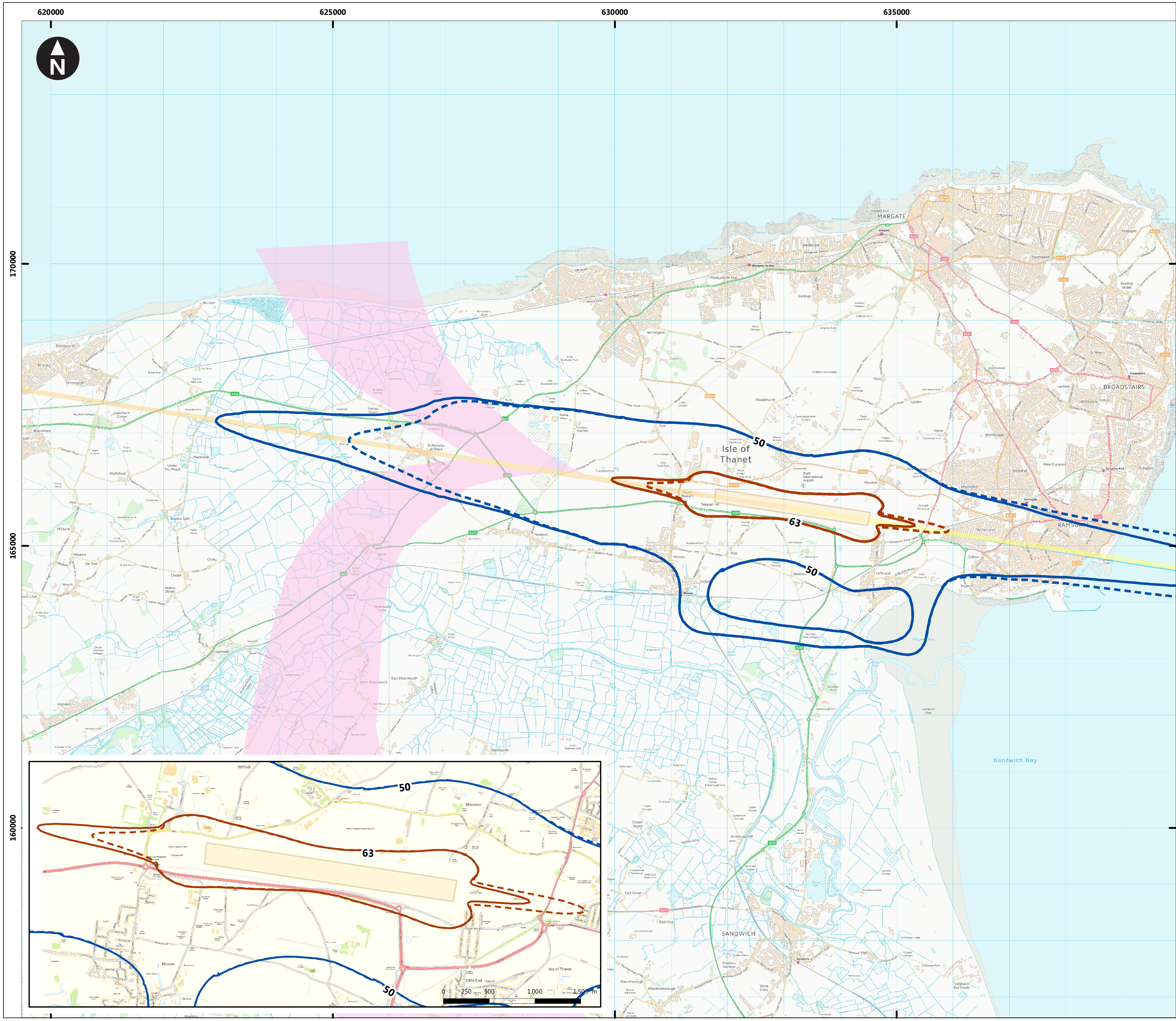

Key

- Runway
- Approaches from the East
- Approaches from the West
- Departures to the East
- Departures to the West

Day-time $L_{Aeq,16hr}$

- 50 LOAEL Noise Mitigation Plan runway preference
- 63 SOAEL Noise Mitigation Plan runway preference
- 50 LOAEL ES Scheme
- 63 SOAEL ES Scheme

Note:
Air noise only.

0 1,000 2,000 3,000 m
Scale at A3: 1:65,000

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Figure 12.18
Aircraft noise –day-time $L_{Aeq,16hr}$ contours - year of forecast maximum capacity - Preference for Runway 28 departures / Runway 10 arrivals scheme 67.8% of the time

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620000
625000
630000
635000
170000
165000
160000
N
40
55
Isle of Thanet
MARGATE
BROADSTAIRS
RAMSGATE
SANDWICH
Sandwich Bay
Pegwell Bay
Manston
Minster
Cliffs End
Isle of Thanet
0 250 500 1,000 1,500 m
40
55

Key

Runway

Approaches from the East

Approaches from the West

Departures to the East

Departures to the West

Night-time $L_{Aeq,8hr}$

40 LOAEL Noise Mitigation Plan runway preference

55 SOAEL Noise Mitigation Plan runway preference

40 LOAEL ES Scheme

55 SOAEL ES Scheme

Note:
Air noise only.

0 1,000 2,000 3,000 m

Scale at A3: 1:65,000

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Figure 12.19
Aircraft noise –day-time $L_{Aeq,8hr}$ contours - year of forecast maximum capacity - Preference for Runway 28 departures / Runway 10 arrivals scheme 67.8% of the time

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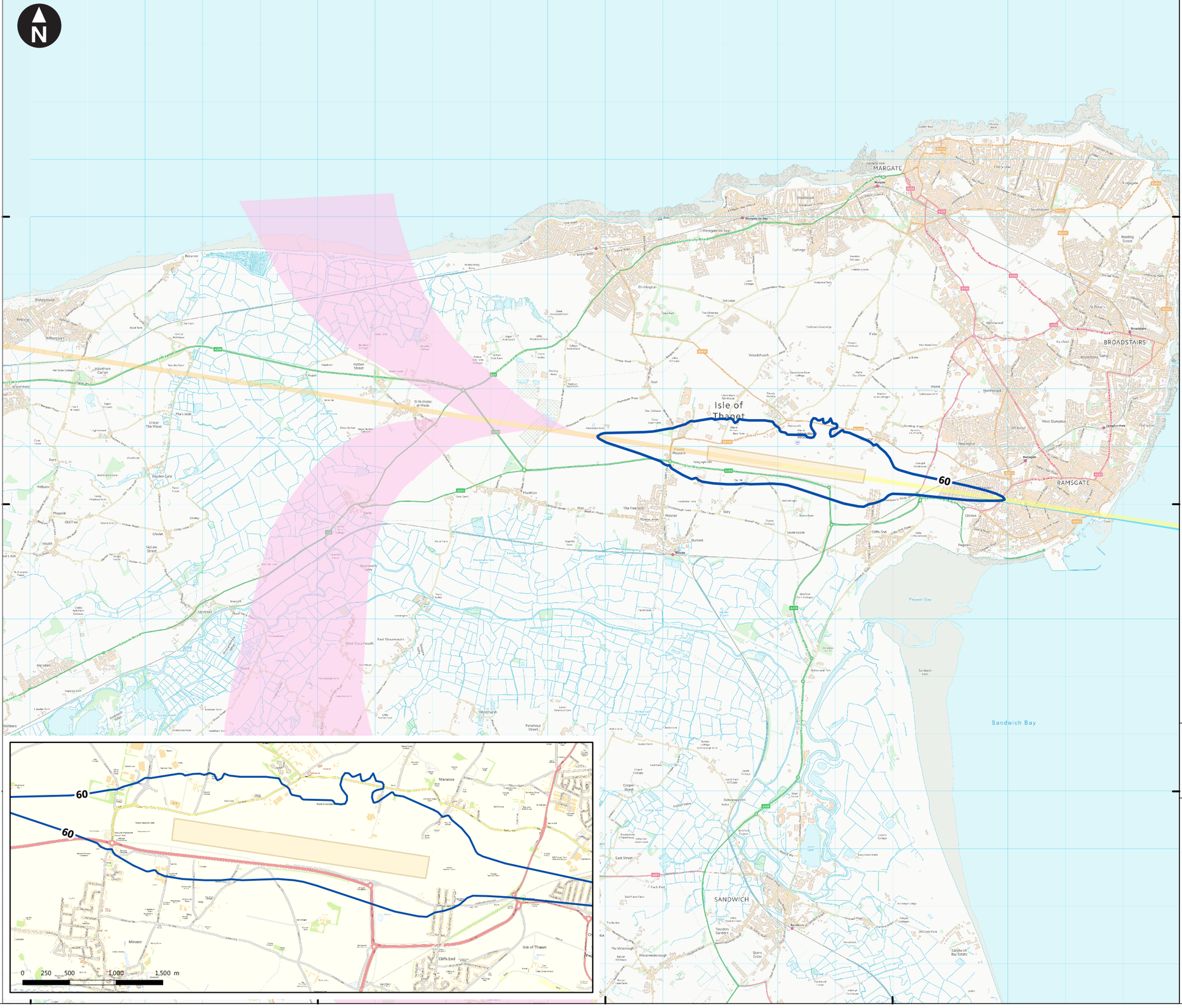
620000 625000 630000 635000

170000 165000 160000



Key

- Runway
- Approaches from the East
- Approaches from the West
- Departures to the East
- Departures to the West

Day-time L

- 60 dB

0 1,000 2,000 3,000 m

Scale at A3: 1:65,000

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Figure 12.20
Aircraft noise – day-time $L_{Aeq,16hr}$ contours - year of forecast maximum capacity

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