

June 2023

London Luton Airport Expansion

Planning Inspectorate Scheme Ref: TR020001

Volume 5 Environmental Statement and Related Documents
5.03 Chapter 16 Noise and Vibration Figures 16.29 - 16.36

Application Document Ref: TR020001/APP/5.03

APFP Regulation: 5(2)(a)

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

London Luton Airport Expansion Development Consent Order 202x

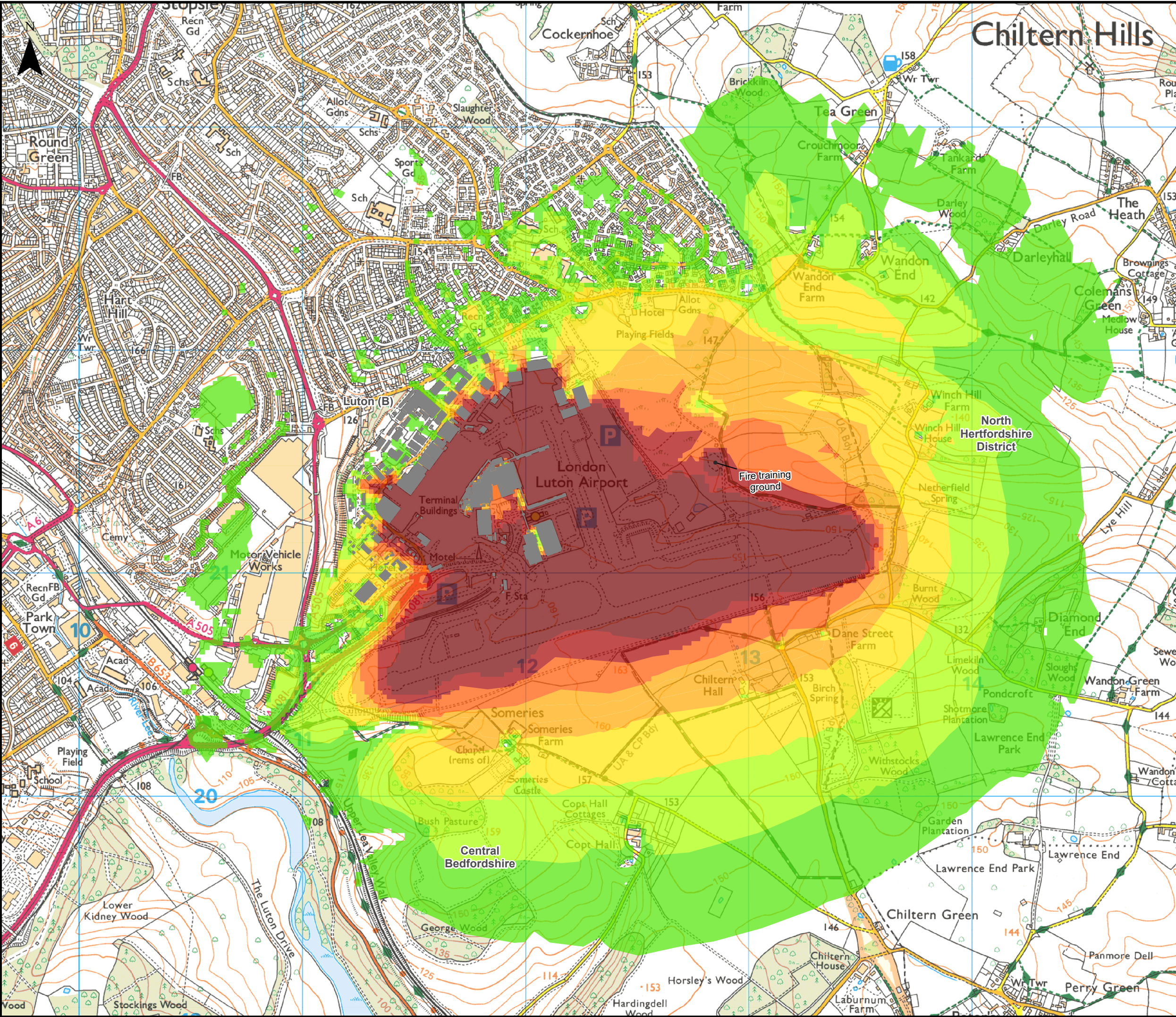
5.03 ENVIRONMENTAL STATEMENT CHAPTER 16 NOISE AND VIBRATION FIGURES 16.29 – 16.36

Regulation number:	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference:	TR020001
Document Reference:	TR020001/APP/5.03
Author:	Luton Rising

Version	Date	Status of Version
Issue 01	February 2023	Application issue
Revision 01	June 2023	Additional submissions (updated in response to Rule 9 letter)

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Legend


- Local Authority Boundary
- Airport Site Buildings

Ground Noise Contours in Decibels (dB)
(2027 Do-Something Daytime LAeq,16h)

- LOAEL - 53 dB
- 54 dB - 56 dB
- 57 dB - 59 dB
- 60 dB - 62 dB
- SOAEL - 65 dB
- 66 dB - 68 dB
- ≥ UAEL

Lowest Observed Adverse Effect Level (LOAEL) = 51 dB
Significant Observed Adverse Effect Level (SOAEL) = 63 dB
Unacceptable Adverse Effect Level (UAEL) = 69 dB

Additional submissions (updated in response to Rule 9 letter)	LP	CS	CS	22/06/23	P02
	LP	CS	CS	31/01/23	P01
Revision History	Drawn	Checked	Approved	Date	Rev.



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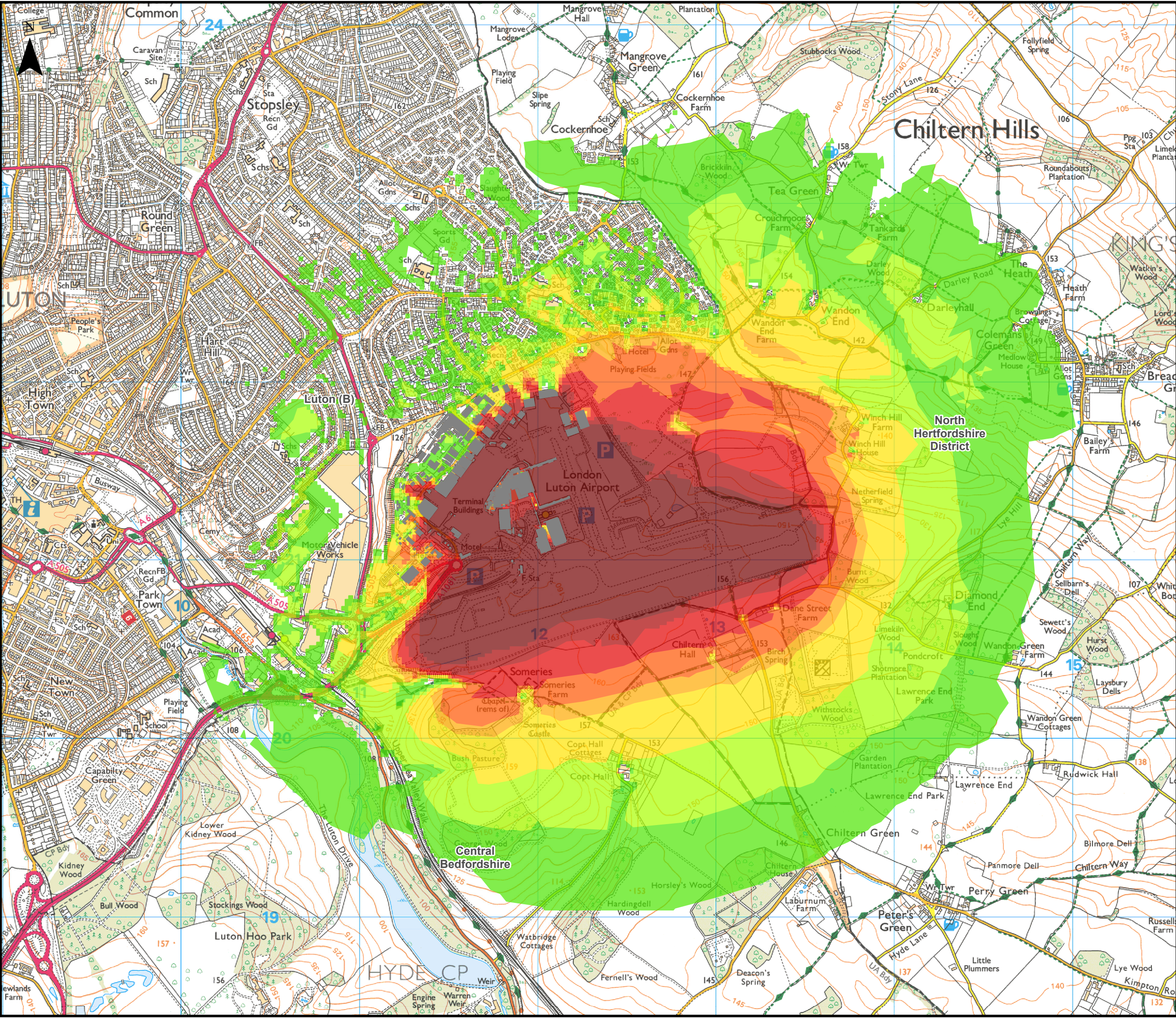
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Drawing Title
Figure 16.29
Extent of 2027 Do-Something Daytime LAeq,16h
Ground Noise Contours

Purpose of issue Additional submissions (updated in response to Rule 9 letter)				Suitability S2	
Drawn LP	Checked CS	Approved CS	Date 22/06/23	Scale 1:16,000	Size A3
DCO Application Ref. TR020001		APFP Regulation APFP 5(2)(a)		DCO Document Ref. TR020001/APP/5.03	
Drawing Number LLADCO-3C-AEC-00-00-DR-YE-0029					Revision P02
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Legend

- Local Authority Boundary
- Airport Site Buildings

**Ground Noise Contours in Decibels (dB)
(2027 Do-Something Night-time LAeq,8h)**

- LOAEL - 47 dB
- 48 dB - 50 dB
- 51 dB - 53 dB
- 54 dB
- SOAEL - 56 dB
- 57 dB - 59 dB
- 60 - 62 dB
- ≥ UAL

Lowest Observed Adverse Effect Level (LOAEL) = 45 dB
Significant Observed Adverse Effect Level (SOAEL) = 55 dB
Unacceptable Adverse Effect Level (UAL) = 63 dB

Additional submissions (updated in response to Rule 9 letter)	LP	CS	CS	22/06/23	P02
First Issue	LP	CS	CS	31/01/23	P01
Revision History	Drawn	Checked	Approved	Date	Rev.

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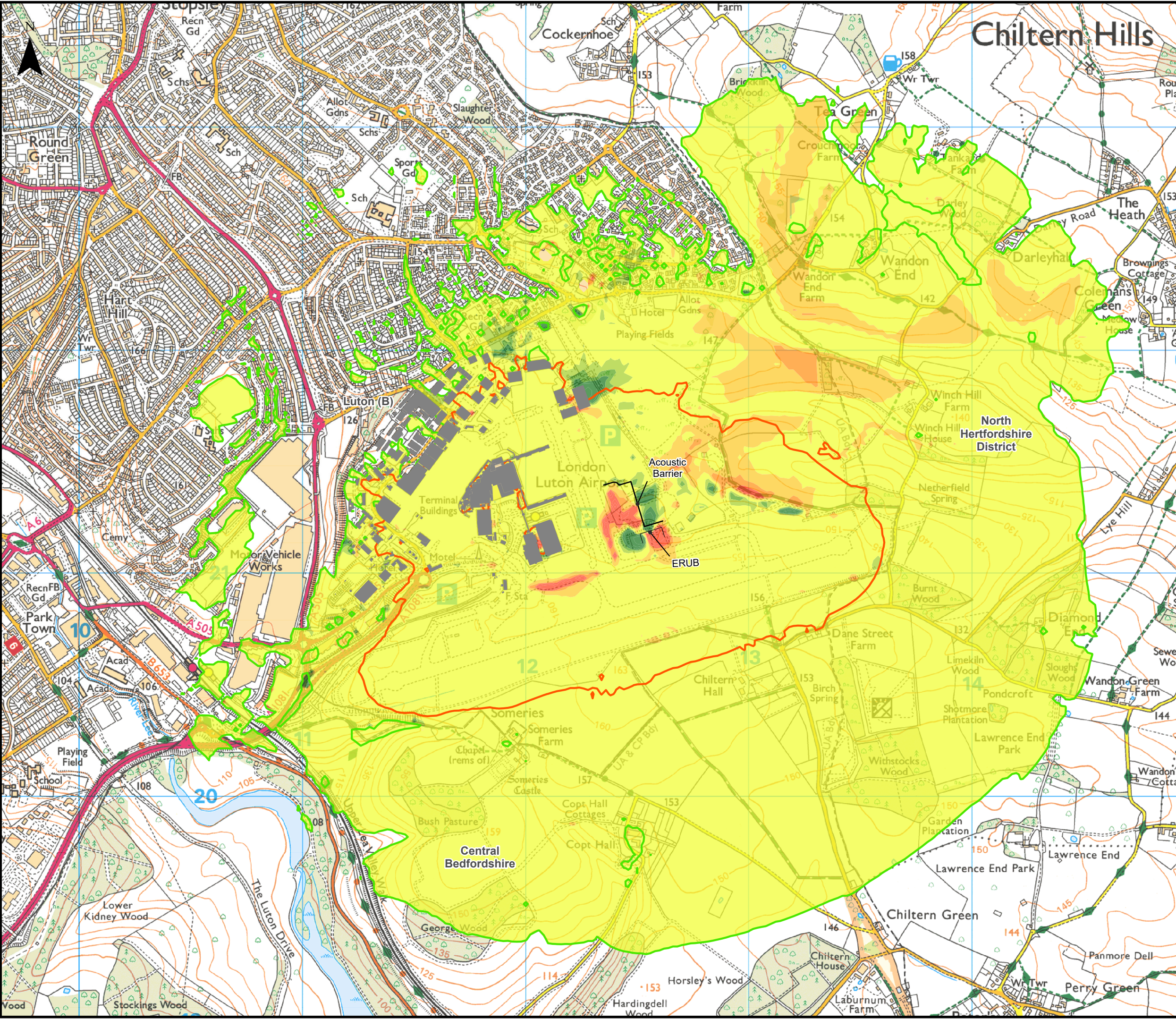
Figure 16.30
Extent of 2027 Do-Something Night-time LAeq,8h
Ground Noise Contours

Purpose of issue				Suitability	
Additional submissions (updated in response to Rule 9 letter)				S2	
Drawn	Checked	Approved	Date	Scale	Size
LP	CS	CS	22/06/23	1:20,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	APFP 5(2)(a)	TR020001/APP/5.03

Drawing Number	Revision
LLADCO-3C-AEC-00-00-DR-YE-0030	P02

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Legend

Local Authority Boundaries

Airport Site Buildings

Change in 2027 Do-Something - Do-Minimum Daytime LAeq,16h Ground Noise Contours

3.0 dB or more increase

2.0 - 2.9 dB decrease

1.0 - 1.9 dB decrease

1.0 dB decrease - 1.0 dB increase

1.0 - 1.9 dB increase

2.0 - 2.9 dB increase

3.0 dB or more increase

Ground Noise Contours in Decibels (dB) (2027 Do-Something Daytime LAeq,16h)

51 dB - Lowest Observed Adverse Effect Level (LOAEL)

63 dB - Significant Observed Adverse Effect Level (SOAEL)

ERUB = Engine Run Up Bay

Additional submissions (updated in response to Rule 9 letter)	LP	CSH	CS	22/06/23	P02
First Issue	LP	CSH	CS	31/01/23	P01
Revision History	Drawn	Checked	Approved	Date	Rev.

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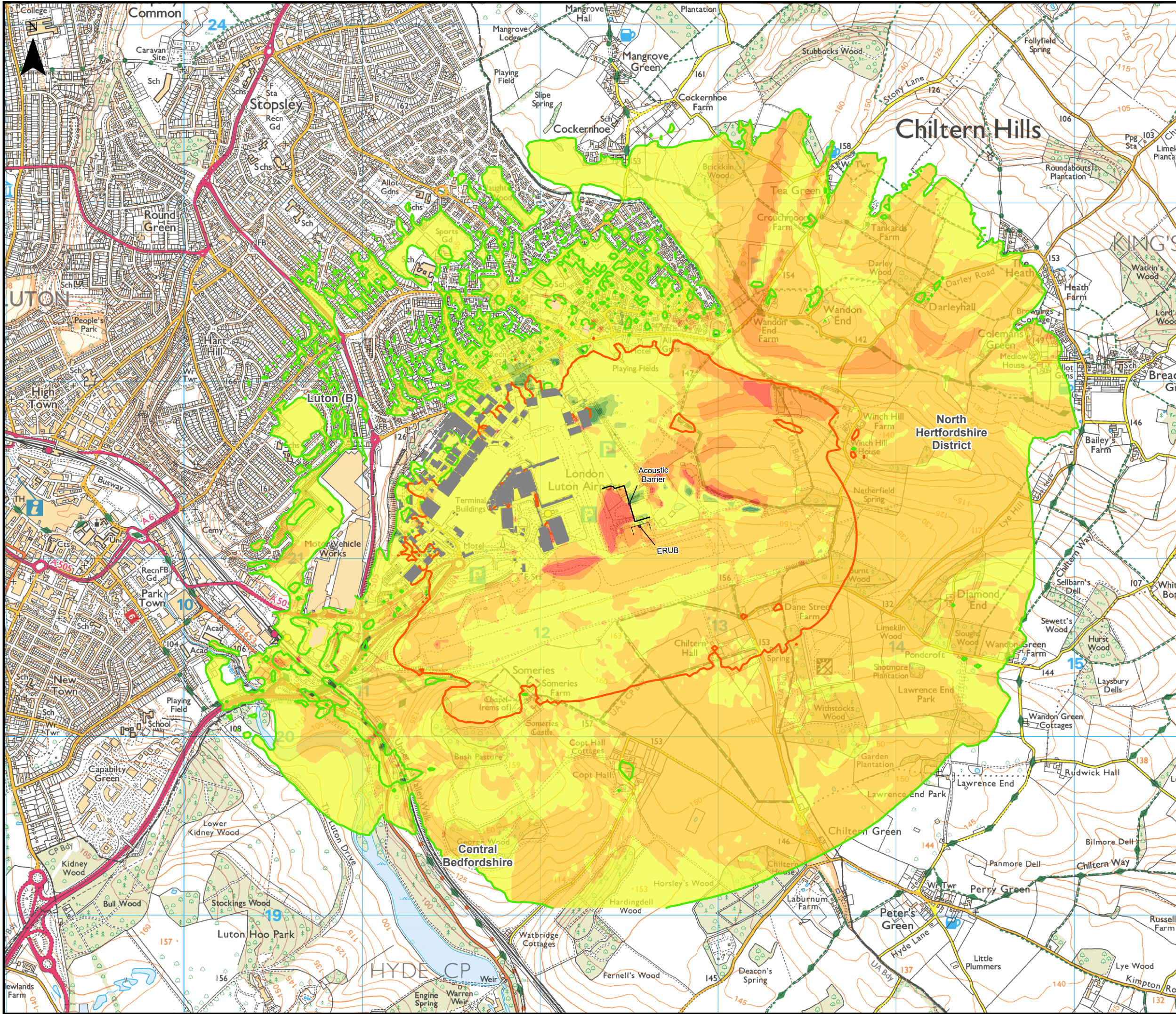
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Drawing Title
Figure 16.31
Change in 2027 Do-Something - Do-Minimum Daytime LAeq Ground Noise Contours

Purpose of issue Additional submissions (updated in response to Rule 9 letter)				Suitability S2	
Drawn	Checked	Approved	Date	Scale	Size
LP	CSH	CS	22/06/23	1:16,000	A3

DCO Application Ref. TR020001	APFP Regulation APFP 5(2)(a)	DCO Document Ref. TR020001/APP/5.03
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Drawing Number LLADCO-3C-AEC-00-00-DR-YE-0031	Revision P02
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Legend

Local Authority Boundaries

Airport Site Buildings

Change in 2027 Do-Something - Do-Minimum Night-time LAeq,8h Ground Noise Contours

- 3.0 dB or more decrease
- 2.0 - 2.9 dB decrease
- 1.0 - 1.9 dB decrease
- 1.0 dB decrease - 1.0 dB increase
- 1.0 - 1.9 dB increase
- 2.0 - 2.9 dB increase
- 3.0 dB or more increase

Ground Noise Contours in Decibels (dB) (2027 Do-Something Night-time LAeq,8h)

- 45 dB - Lowest Observed Adverse Effect Level (LOAEL)
- 55 dB - Significant Observed Adverse Effect Level (SOAEL)

ERUB = Engine Run Up Bay

Additional submissions (updated in response to Rule 9 letter)	LP	CSh	CS	22/06/23	P02
First Issue	LP	CSh	CS	31/01/23	P01
Revision History	Drawn	Checked	Approved	Date	Rev.

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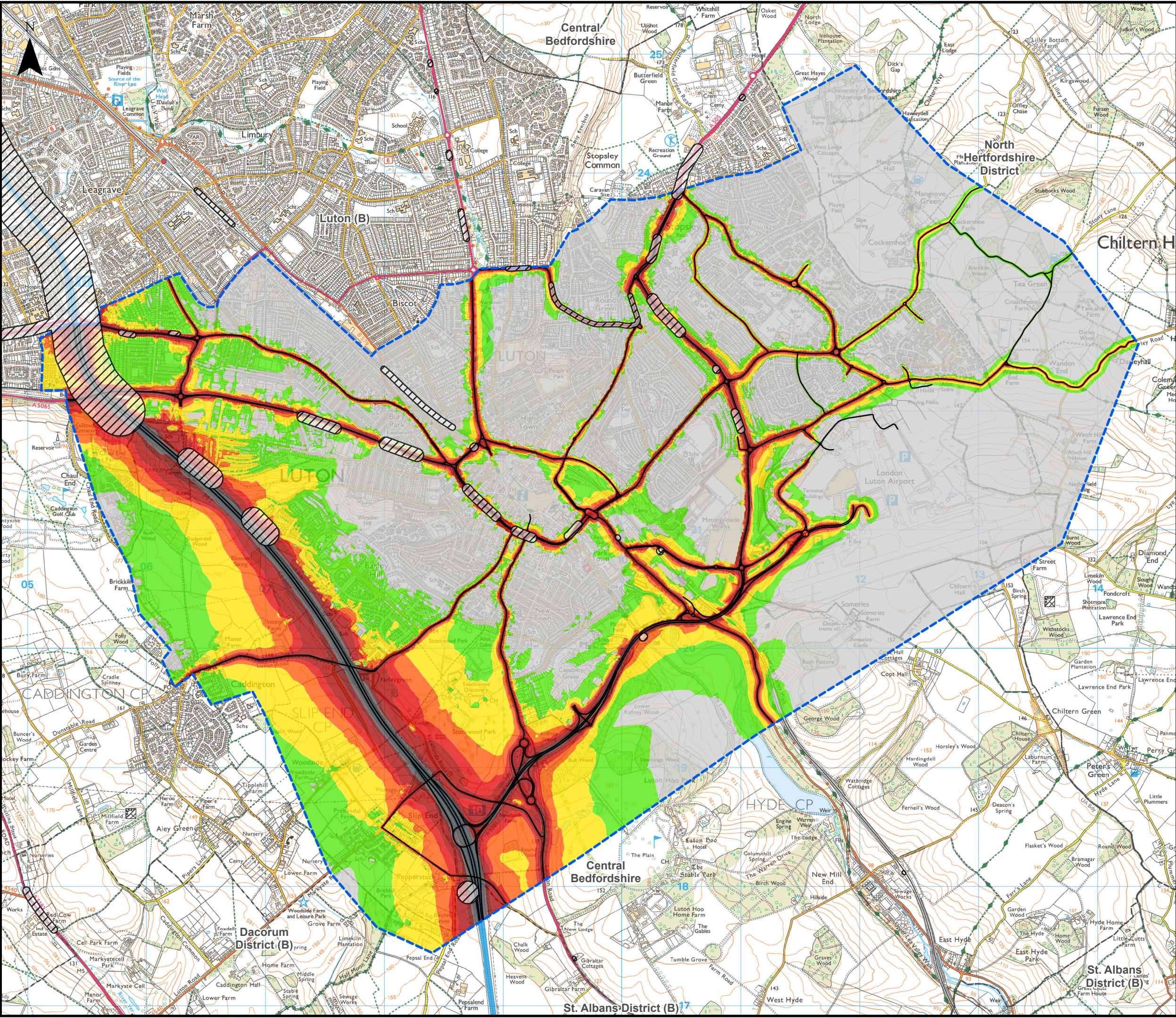
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Drawing Title
Figure 16.32
Change in 2027 Do-Something - Do-Minimum Night-time LAeq Ground Noise Contours

Purpose of issue Additional submissions (updated in response to Rule 9 letter)				Suitability S2	
Drawn LP	Checked CSh	Approved CS	Date 22/06/23	Scale 1:20,000	Size A3

DCO Application Ref. TR020001	APFP Regulation APFP 5(2)(a)	DCO Document Ref. TR020001/APP/5.03
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Drawing Number LLADCO-3C-AEC-00-00-DR-YE-0032	Revision P02
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Legend


- Local Authority Boundary
- Surface Access Noise Calculation Area
- Road Traffic Noise Important Area
- Road

Surface Access Noise Contours in Decibels (dB) (2027 Do-Minimum Daytime LAeq,16h at 4m free-field)

- Below LOAEL
- LOAEL - ≤ 55
- > 55 - ≤ 60
- > 60 - ≤ SOAEL
- > SOAEL - ≤ 65
- > 65 - ≤ 70
- > 70 - ≤ UAEL
- Above UAEL

Lowest Observed Adverse Effect Level (LOAEL)= 50 dB
Significant Observed Adverse Effect Level (SOAEL) = 63 dB
Unacceptable Adverse Effect Level (UAEL) =74 dB

Additional submissions (updated in response to Rule 9 letter)	LP	CSh	CS	22/06/23	P02
First Issue	LP	CSh	CS	31/01/23	P01
Revision History	Drawn	Checked	Approved	Date	Rev.



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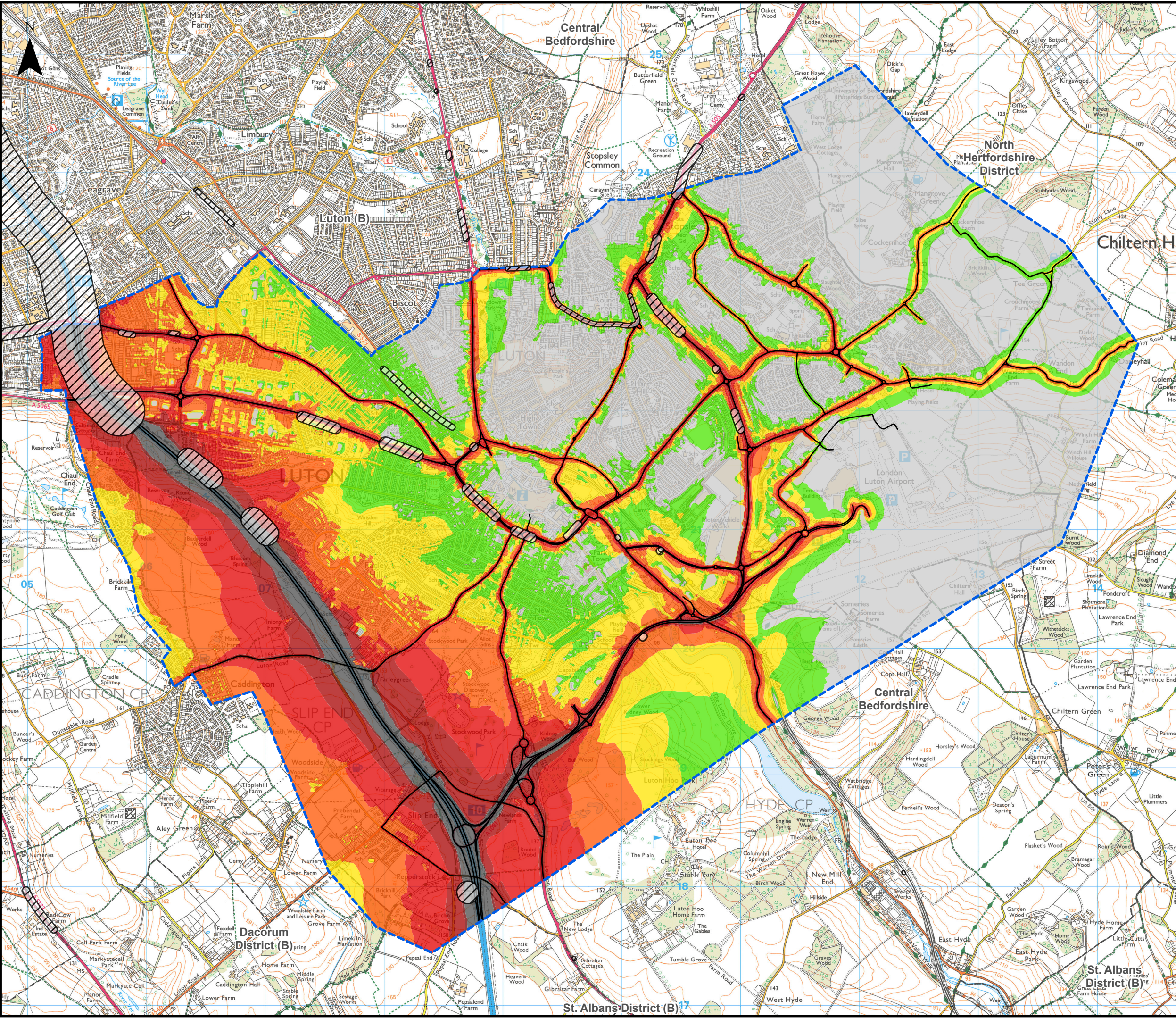
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Drawing Title
Figure 16.33
Extent of 2027 Do-Minimum Daytime LAeq,16h Surface Access Noise Contours

Purpose of issue				Suitability	
Additional submissions (updated in response to Rule 9 letter)				S2	
Drawn	Checked	Approved	Date	Scale	Size
LP	CSh	CS	22/06/23	1:30,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	APFP 5(2)(a)	TR020001/APP/5.03

Drawing Number	Revision
LLADCO-3C-AEC-00-00-DR-YE-0033	P02
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Legend


- Local Authority Boundary
- Surface Access Noise Calculation Area
- Road Traffic Noise Important Area
- Road

Surface Access Noise Contours in Decibels (dB) (2027 Do-Minimum Night-time LAeq,8h at 4m free-field)

- Below LOAEL
- LOAEL - ≤ 45
- > 45 - ≤ 50
- > 50 - ≤ SOAEL
- > 55 - ≤ 60
- > 60 - ≤ 65
- > 65 - ≤ UAEL
- Above UAEL

Lowest Observed Adverse Effect Level (LOAEL) = 40 dB
Significant Observed Adverse Effect Level (SOAEL) = 55 dB
Unacceptable Adverse Effect Level (UAEL) = 66 dB

Additional submissions (updated in response to Rule 9 letter)	LP	CSh	CS	22/06/23	P02
First Issue	LP	CSh	CS	31/01/23	P01
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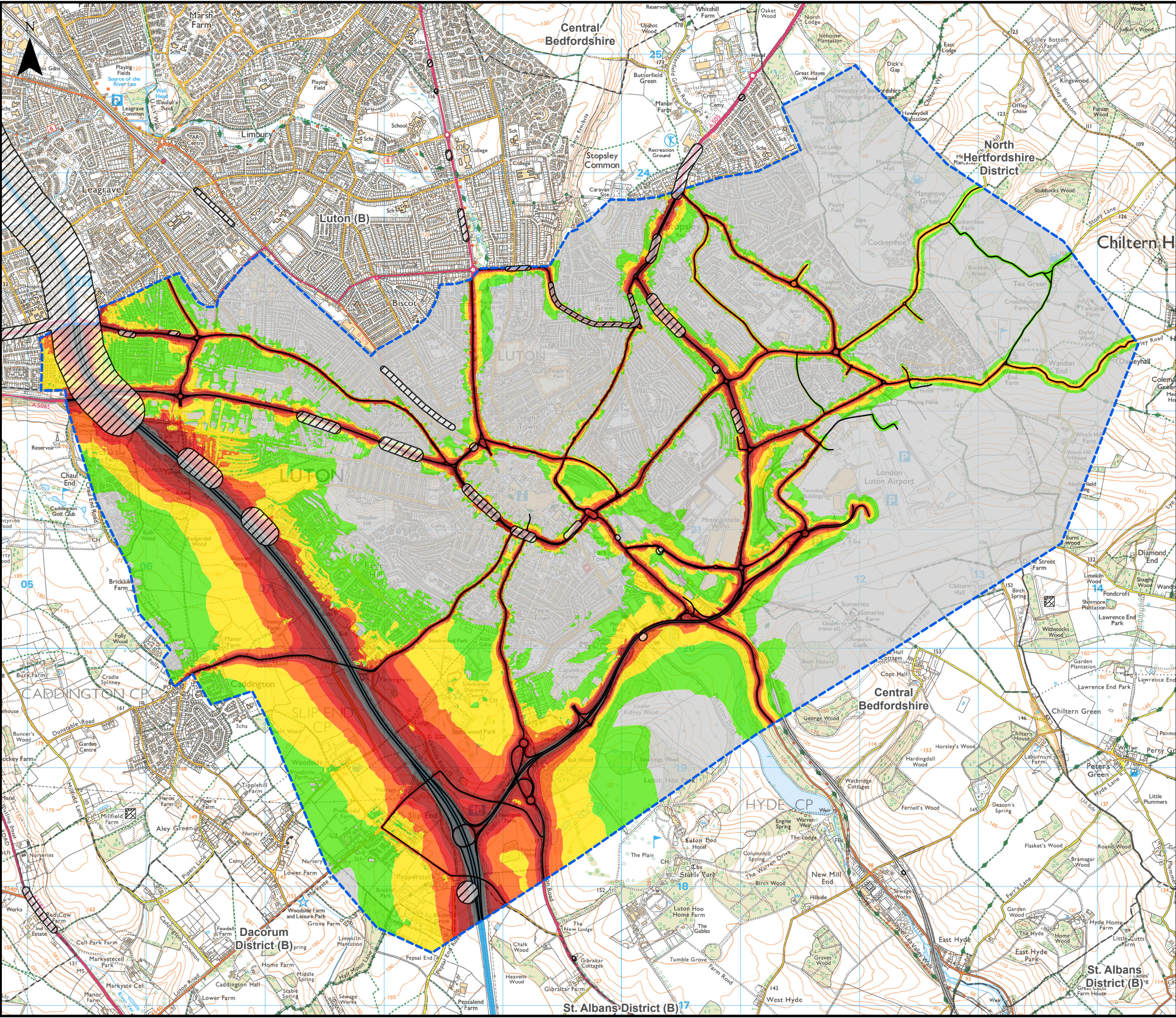
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Drawing Title
Figure 16.34
Extent of 2027 Do-Minimum Night-time LAeq,8h Surface Access Noise Contours

Purpose of issue				Suitability	
Additional submissions (updated in response to Rule 9 letter)				S2	
Drawn	Checked	Approved	Date	Scale	Size
LP	CSh	CS	22/06/23	1:30,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	APFP 5(2)(a)	TR020001/APP/5.03

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Legend

- Local Authority Boundaries
- Surface Access Noise Calculation Area
- Road Traffic Noise Important Area
- Road

Surface Access Noise Contours in Decibels (dB) (2027 Do-Something Daytime LAeq,16h at 4m free-field)

- Below LOAEL
- LOAEL - ≤ 55
- > 55 - ≤ 60
- > 60 - ≤ SOAEL
- > SOAEL - ≤ 65
- > 65 - ≤ 70
- > 70 - ≤ UAEL
- Above UAEL

Lowest Observed Adverse Effect Level (LOAEL) = 50 dB
Significant Observed Adverse Effect Level (SOAEL) = 63 dB
Unacceptable Adverse Effect Level (UAEL) = 74 dB

Additional submissions (updated in response to Rule 9 letter)	LP	CSh	CS	22/06/23	P02
First Issue	LP	CSh	CS	31/01/23	P01
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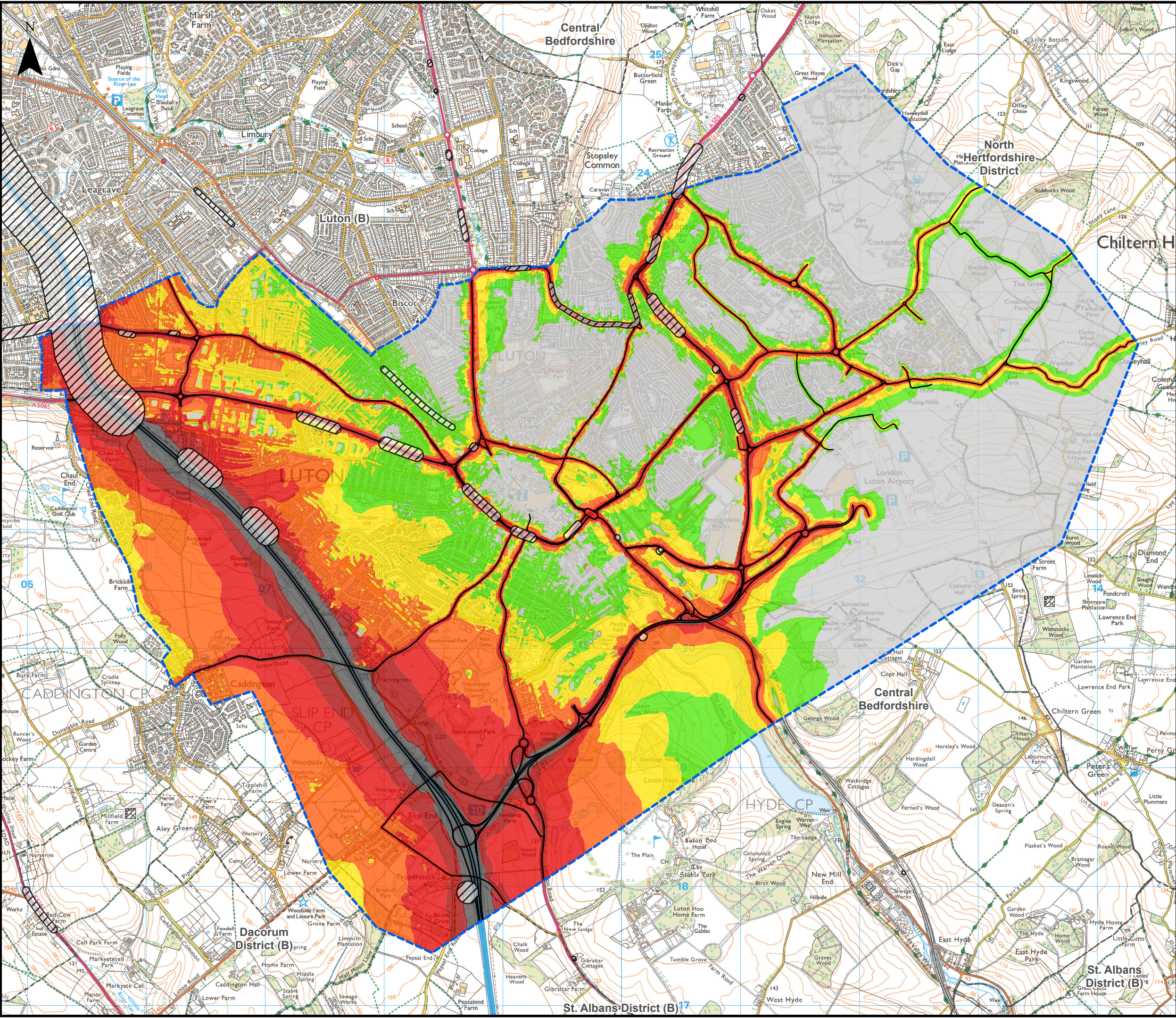
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Drawing Title: Figure 16.35
Extent of 2027 Do-Something Daytime LAeq,16h Surface Access Noise Contours

Purpose of issue				Suitability	
Additional submissions (updated in response to Rule 9 letter)				S2	
Drawn	Checked	Approved	Date	Scale	Size
LP	CSh	CS	22/06/23	1:30,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	APFP 5(2)(a)	TR020001/APP/5.03

Drawing Number	Revision
LLADCO-3C-AEC-00-00-DR-YE-0035	P02
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Legend

- Local Authority Boundaries
- Surface Access Noise Calculation Area
- Road Traffic Noise Important Area
- Road

Surface Access Noise Contours (2027 Do-Something Night-time LAeq, dB at 4m free-field)

- Below LOAEL
- LOAEL - ≤ 45
- $> 45 - \leq 50$
- $> 50 - \leq \text{SOAEL}$
- $> 55 - \leq 60$
- $> 60 - \leq 65$
- $> 65 - \leq \text{UAEL}$
- Above UAEL

Lowest Observed Adverse Effect Level (LOAEL) = 40 dB
Significant Observed Adverse Effect Level (SOAEL) = 55 dB
Unacceptable Adverse Effect Level (UAEL) = 66 dB

Additional submissions (updated in response to Rule 9 letter)	LP	CSh	CS	22/06/23	P02
First Issue	LP	CSh	CS	31/01/23	P01
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Drawing Title
Figure 16.36
Extent of 2027 Do-Something Night-time LAeq,8h Surface Access Noise Contours

Purpose of issue				Suitability	
Additional submissions (updated in response to Rule 9 letter)				S2	
Drawn	Checked	Approved	Date	Scale	Size
LP	CSh	CS	22/06/23	1:30,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	APFP 5(2)(a)	TR020001/APP/5.03

Drawing Number	Revision
LLADCO-3C-AEC-00-00-DR-YE-0036	P02
Project - Phase - Originator - Asset/Zone - Sub Asset - Type - Discp. - Number	