

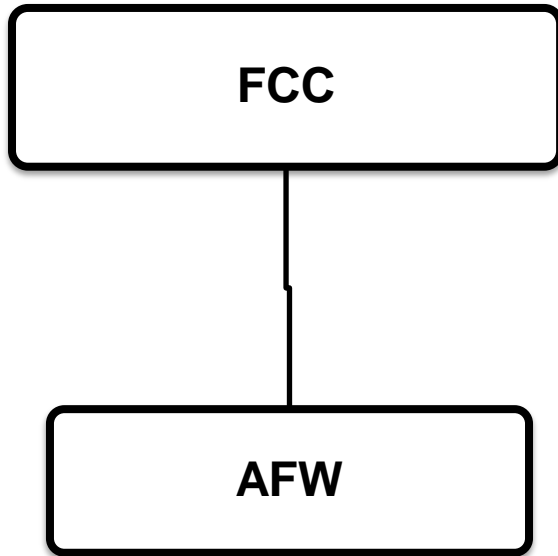
Proposed Residential Noise Insulation Scheme

10th November 2016

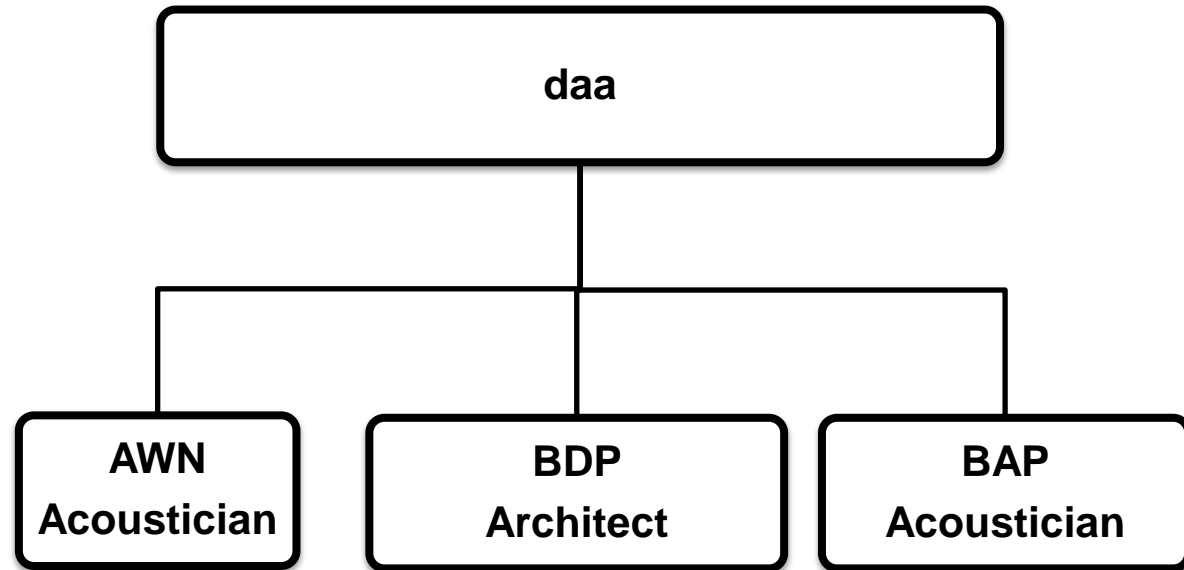
Community Liaison Group (CLG)

Condition 7 - Team

Planning Authority



Insulation Scheme North Runway



Team Profile

BDP.

- BDP is a major international, interdisciplinary practice of architects, engineers and designers, one of the largest of its kind in Europe with 1099 staff within the UK and Ireland. We work in the UK and Ireland and internationally.
- The Dublin office has been operational for 25 years since its opening in 1991.
- Many of our buildings have been recognised as landmark demonstrations of new and innovative sustainable design techniques which have been recognised internationally.



- Ireland's largest independent acoustic consultancy
- Over 100 man-years' experience in building acoustics and the analysis/assessment/control of noise and vibration.
- Authors & peer reviewers of the following documents:
 - Transport Infrastructure Irelands Guidelines on the Treatment of Noise & Vibration in New National Road Schemes
 - EPA Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)
 - Part E of the Building Regulations (2014) Sound

Scheme Requirements



CONDITION 7

Prior to commencement of development, a scheme for the voluntary noise insulation of existing dwellings shall be submitted to and agreed in writing by the planning authority. The scheme shall include all dwellings predicated to fall within the contour of 63 dB LAeq 16 hours within 12 months of the planned opening of the runway for use. The scheme shall include for a review every two years of the dwelling eligible for insulation.

SUMMARY BASELINE

1. Eligibility 63dB LAeq 16 hours Contour
2. Agree Scheme with Fingal County Council
3. Implementation timeline
4. Review eligibility every two years

Scheme Development

1. Review Relevant Guidance
2. Review other Schemes and Best Practice
3. Community Engagement
4. Develop Objective Targets
5. Implementation Plan
6. Quality Control and Effectiveness

Scheme Objective

The proposed scheme will:

1. Improve the sound insulation performance of eligible dwellings
2. Achieve an improvement in sound insulation in the range of 5 to 10dB
3. Adopt the guidelines recommended in BS8233 and by the WHO for internal ambient noise levels where possible
4. Provide an Individual Assessment for each dwelling
5. Provide an eligibility review every two years

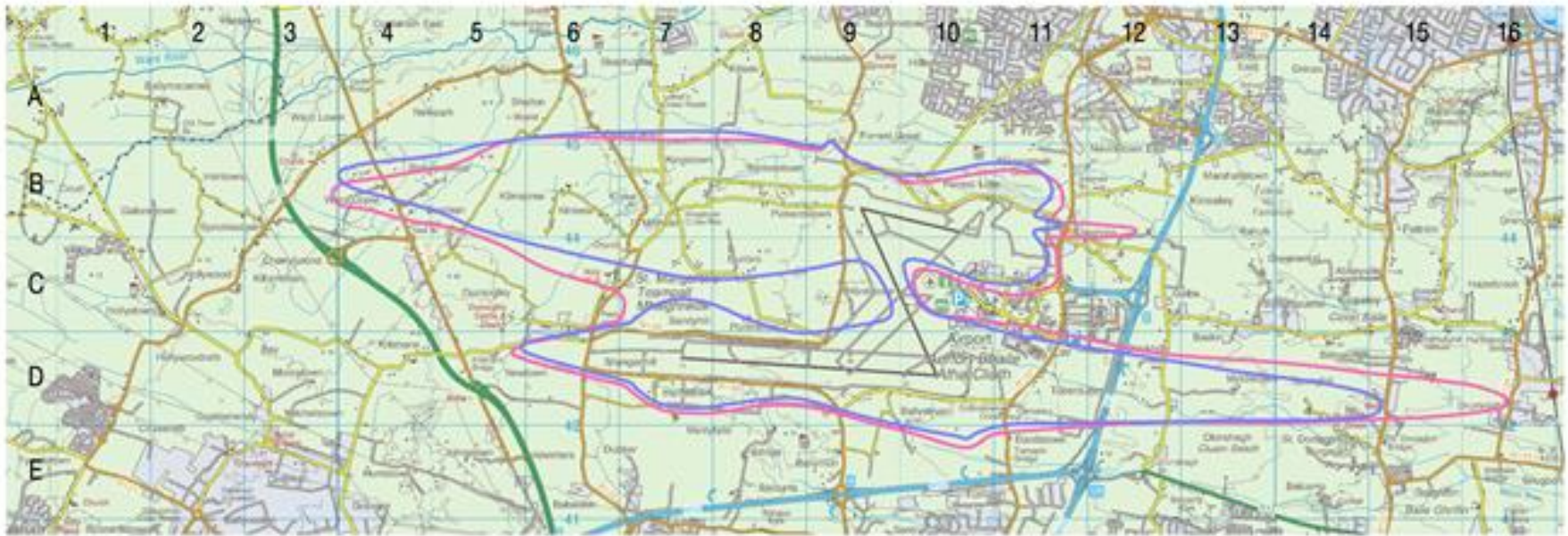
Residential Noise Insulation Scheme Comparisons

Criteria	UK Schemes*	Heathrow Quieter Homes	Dusseldorf	US	North Runway
Attics, windows & vents	✓	✓	✓	✓	✓
Individual Assessment	-	✓	✓	✓	✓
More noise, more insulation	-	✓	✓	✓	✓
Validation Surveys	-	✓	✓	✓	✓
Objective Target (Internal Noise Level or dB reduction)	-	-	✓	✓	✓
Fully paid and done by Airport	-	-	✓	✓	✓

*Heathrow and Gatwick

US programs governed by Federal Aviation Authority rules

Eligibility

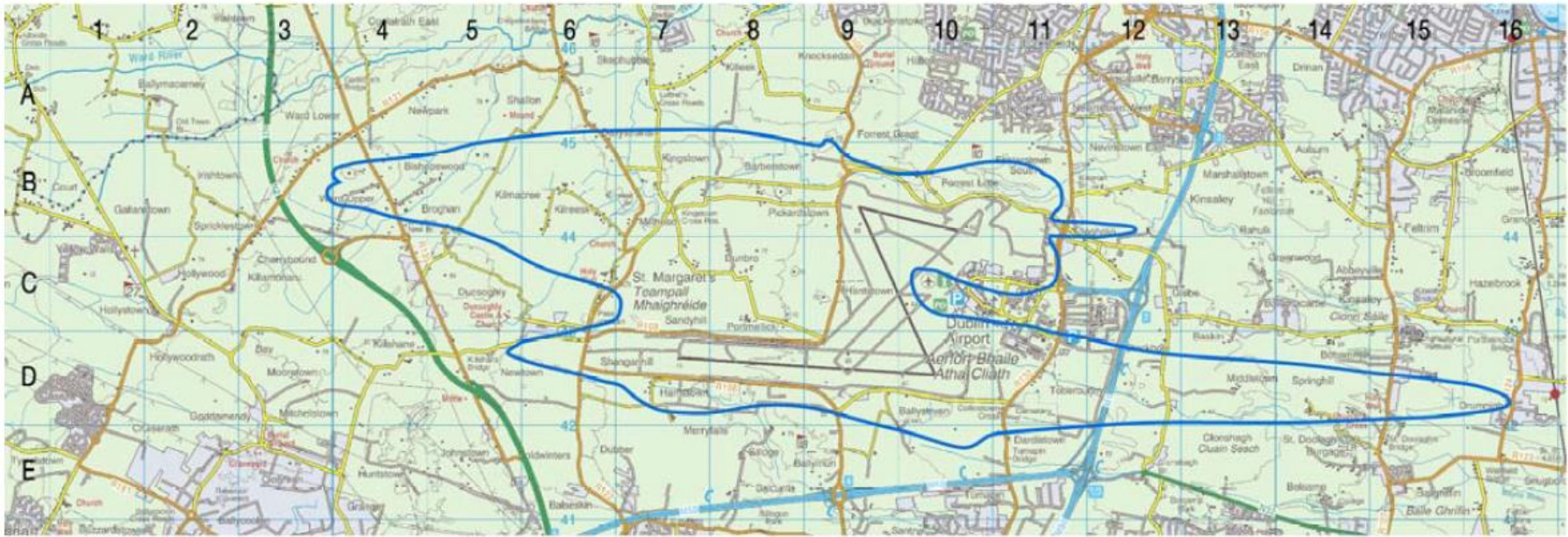


— 63dB Contour produced for Condition 7 (based on 2022 forecast)
— 63dB Contour (2007, based on 2025 forecast)

The union of the 2007 EIS - 63dB contour and the current 2022 forecast 63dB contour, will be used to determine eligibility for the scheme.

Dwellings within the 63dB contour that had insulation works undertaken as part of the previous insulation scheme offered when the southern runway was built, are eligible to opt in to have the performance of previously installed materials reviewed.

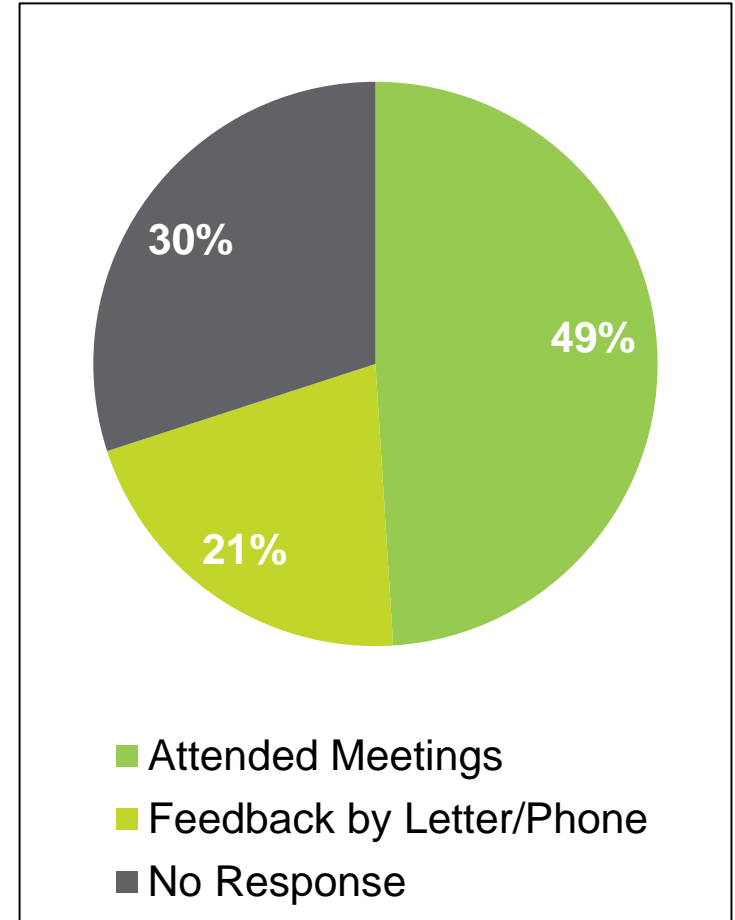
Eligibility



Combined 63dB Contour

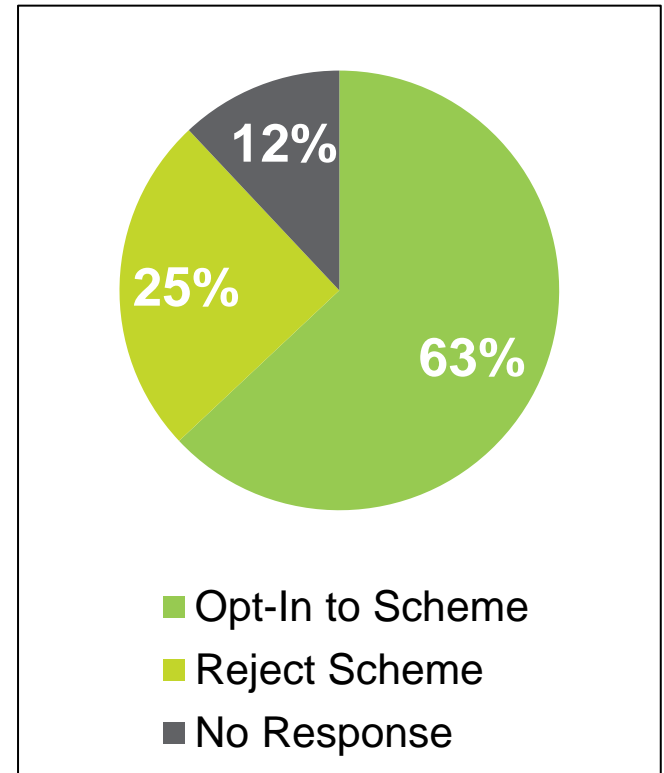
Consultation

1. Insulation process included on boards at first public consultation events
2. Specific insulation consultation events for eligible owners
 - Held over four days in July and August:
 - Monday, 25th / Tuesday, 26th July 2016
 - Monday, 8th / Tuesday, 9th August 2016
 - Attended by
 - 2 representatives from BDP
 - 2 representatives from AWN
 - 4 members of staff from daa
 - 119 invitations issued
 - 113 owners attended (representing 58 dwellings)
3. Range of insulation meetings with individuals



Feedback - Residential Noise Insulation Scheme

1. Participants invited to provide their feedback via a feedback form
2. Feedback generally positive:
 - Pleased that scheme is not grant-based
 - Pleased that daa is taking responsibility for implementation from start to finish.
 - Pleased that scheme will commence implementation after sign off rather than waiting until after opt-in date i.e. December 2017
3. High level of opt in to the scheme
4. Some additional requests and queries – see next slide



Feedback Received from Eligible owners

Typical Queries and Requests for inclusion in scheme:

daa Response:

1. Triple-glazing of windows

High levels of acoustic performance will be achieved using double glazed units with acoustic laminated panes of glass. Triple-glazing of windows will not be offered

2. Glazing of conservatories and bathroom windows.

The scheme will include bathrooms as habitable rooms ensuring that noise insulation measures will be specified for these rooms as required

3. External wall insulation; Air Conditioning or Heat Recovery Ventilation

Air conditioning or heat recovery ventilation will not be offered as these systems are related to the thermal insulation of dwellings. Acoustic vents will be provided as required to ensure adequate background ventilation is achieved in accordance with Part F of the building regulations while also ensuring a good degree of noise insulation.

Feedback Received from Eligible owners

Typical Queries and Requests for inclusion in scheme:

daa Response:

4. Reimbursement of costs for insulation already undertaken

daa will offer to review work already undertaken and to bridge the gap between owners' existing insulation and that offered as part of the daa scheme for dwellings within the 63dB contour; daa will not reimburse costs for previously insulated dwellings

5. Recognition of unique requirements of historic buildings

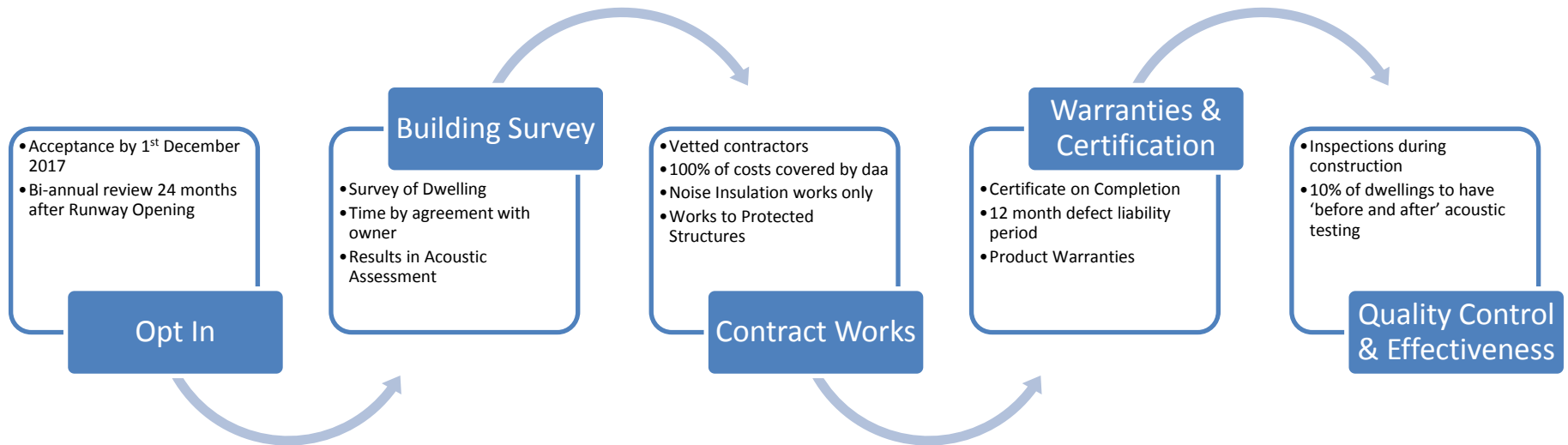
Where the scheme applies to an historic structure of architectural interest or a protected structure, an accredited conservation specialist will be appointed to advise on the suitability or otherwise of proposed measures in respect of potential adverse impact on the cultural heritage value of the structure

6. Relocation while works are underway

Given the nature of the proposed upgrade measures it is not envisaged that dwelling owners will be required to relocate whilst the upgrade works are undertaken

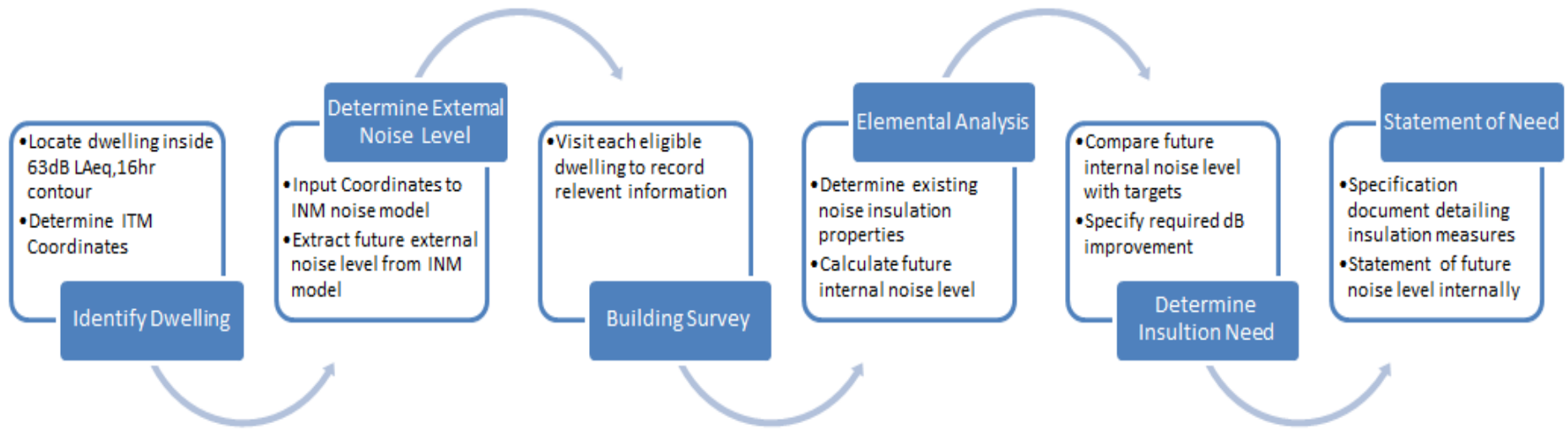
Noise Insulation Scheme

IMPLEMENTATION METHODOLOGY



Noise Insulation Scheme

INDIVIDUAL ASSESSMENT METHODOLOGY



Upgrade Measures

Attic Insulation



Windows and Doors



Vents and Chimneys



Scheme Meets and Exceeds Condition 7

Meets Condition

1. Established 63dB LAeq 16 hours Contour
2. Implementation Timeline
3. Review eligibility every two years

Exceeds Condition

1. Increased the eligibility criteria from the 2022 forecast 63dB LAeq 16 hours Contour to include the 2007 EIS -2025 forecast 63dB LAeq 16 hours Contour
2. Provide an Individual Assessment for each dwelling
3. Target building envelope improvement in the range of 5 to 10dB
4. Survey a representative sample of dwellings before and after to ensure that the works are achieving the targets set out in the statement of need.
5. Review eligibility every two years as well as a survey of the original representative sample of dwellings to ensure the effectiveness of the upgrade works.