

Dublin Agglomeration

Draft Noise Action Plan

2024-2028

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Executive Summary

The Environmental Noise Directive ('END') (2002/49/EC) aims to put in place a European wide system for identifying sources of environmental noise, informing the public about relevant noise data and taking the necessary steps to avoid, prevent or reduce noise exposure.

The END was transposed into Irish Law by the Environmental Noise Regulations 2006 (S.I. 140/2006) (the 'Regulations'). The Regulations were revised by the European Communities (Environmental Noise) Regulations 2018 (S.I. 549/2018) and amended through the European Communities (Environmental Noise) (Amendment) Regulations 2021 (S.I. 663/2021).

Under the Regulations, Dublin City Council (DCC), Dún Laoghaire-Rathdown County Council (DLRCC), Fingal County Council (FCC), South Dublin County Council (SDCC), Kildare County Council (KCC) and Wicklow County Council (WCC) are designated as the Noise-Mapping Bodies (NMBs), for the purpose of making and approving strategic noise maps for the Agglomeration of Dublin (the 'Agglomeration'). These local authorities are also designed as Action Planning Authorities (APAs), responsible for preparing a Noise Action Plan for the Agglomeration.

This is the fourth round of noise action planning for the Agglomerations, and this Noise Action Plan reports the findings of the strategic noise mapping prepared in consultation with Transport Infrastructure Ireland (TII) and Irish Rail (Iarnród Éireann), and the Environment Protection Agency (EPA), and in respect of the calendar year 2021 for noise from the following sources:

- Road traffic;
- Rail traffic; and
- Industrial activity sites, including ports.

Airport noise exposure statistics will be presented within a standalone Noise Action Plan for Dublin Airport and thus is not considered within this agglomeration Noise Action Plan.

This Noise Action Plan has been prepared in accordance with the Regulations and is aimed at strategic long-term management of environmental noise from transport systems, and is based on the results of the strategic noise maps which informed assessments of population exposure and harmful effects of noise.

The results have been used to identify areas within the Agglomeration to be subject to noise management activities during the implementation of the Noise Action Plan. These are referred to as Priority Important Areas.

The APAs will, subject to relevant collaboration with the Noise Mapping Bodies (NMBs), resources and funding, assess these Priority Important Areas and confirm the relevant noise management measures for each Priority Important Area, including processing of cost-benefit analysis and health benefits.

Additionally, the results of the strategic noise mapping have been used to identify areas within the Agglomeration to be considered for preservation for environmental noise quality. These are referred to as Candidate Quiet Areas.

A number of these Candidate Quiet Areas will be investigated during the implementation of the Noise Action Plan to determine their appropriateness for designation as a Quiet Area. Subject to the outcome of the investigations, proposals for delimiting a Candidate Quiet Area as a Quiet Area shall be drawn up for submission to the Environmental Protection Agency (EPA) and the Minister.

This Noise Action Plan includes Strategic Environmental Assessment (SEA) screening checks following the processes outlined in the Environmental Protection Agency (EPA) report *Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland (2001-DS-EEP-2/5) – Synthesis Report* (Appendix B; SEA Checklist). The SEA screening concluded that no SEA is required.

The Noise Action Plan includes an assessment to determine if it is required to be subject to an 'Appropriate Assessment' under the Habitats Directive. The screening assessment concluded that the implementation of the Noise Action Plan in isolation or in combination with any other Action Plans is not directly related to the conservation management of any Natura 2000 site in the assessment area. It was determined that there is no likelihood of a significant impact on a Natura 2000 site. Consequently, there is no need to conduct a 'Stage 2 AA' for the purposes outlined in Article 6(3) of the Habitat Regulations.

This Noise Action Plan is supported by a four-year programme for implementation (2024-2028), with progress reported to the EPA on an annual basis.

The Noise Action Plan is underpinned by a set of overarching noise policy principles outlined in the **Noise Policy Statement**.

These noise policy principles are supported by a series of **Responsible Aims** which Dublin City Council (DCC), Dún Laoghaire-Rathdown County Council (DLRCC), Fingal County Council (FCC), South Dublin County Council (SDCC), Kildare County Council (KCC) and Wicklow County Council (WCC) will strive to achieve in order to manage noise issues within the Dublin Agglomeration.

NOISE POLICY STATEMENT

Dublin City Council, Dún Laoghaire-Rathdown County Council, Fingal County Council, South Dublin County Council, Kildare County Council and Wicklow County Council will adopt a strategic approach to managing environmental noise from road traffic, rail traffic, airports and industrial activity sites, including ports, within its functional area, including the following:

1. **Prevention** – manage the risk of additional members of the community being exposed to undesirable noise levels where it is likely to have significant adverse impact on health and quality of life.
2. **Protection** - protect areas which are desirably quiet, or which offer a sense of tranquillity through a process of identification and validation followed by formal designation of ‘Quiet Areas’.
3. **Mitigation** – identify and prioritise appropriate mitigation measures to reduce noise levels where they are potentially harmful.

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RESPONSIBLE AIMS

Dublin City Council, Dún Laoghaire-Rathdown County Council, Fingal County Council, South Dublin County Council, Kildare County Council and Wicklow County Council commit to the following Responsible Aims during current and future noise action planning:

RA_1 - Policy and Guidance Development – Encourage the integration of noise considerations into the ongoing process of policy and guidance development, and actively promote existing policies and guidance related to noise.

RA_2 - Working Groups – Establish and participate in Noise Action Plan technical and implementation working groups.

RA_3 - Noise Mitigation - In collaboration and consultation with relevant Noise Mapping Bodies, noise management interventions shall be applied on a priority basis during existing maintenance and improvement programs, where appropriate. This application will be based on a relevant evaluation of whole-life costs and benefits

RA_4 - Protection - Assess and, where appropriate, propose Candidate Quiet Areas to the Environmental Protection Agency for designation as Quiet Areas by the Minister

RA_5 - Prevention – Evaluate and condition planning proposals for noise sensitive development near major noise sources.

RA_6 - Community Engagement – Commit to proactive and inclusive engagement with communities and collaboratively address noise issues for the improvement of our shared living environment

RA_7 – Manage Noise Complaints - Review and respond to all environmental noise complaints in accordance with their Customer Charter

RA_8 - Regulatory Engagement – Report the progress on the implementation of Noise Action Plans, including the investigation and implementation of noise management measures in Priority Important Areas, and the assessment of Candidate Quiet Areas for preservation of environmental noise quality, to the Environmental Protection Agency on an annual basis.

Contents

Executive Summary	i
1 Introduction	10
1.1 Purpose of the Agglomeration Noise Action Plan	10
1.2 Scope of the Agglomeration Noise Action Plan.....	12
1.3 Dublin Agglomeration.....	14
1.4 Structure of the Noise Action Plan	16
1.5 Round 4 Timetable	16
1.6 Consultation	17
1.7 Acknowledgements	17
2 Noise Management Legislation and Guidance	18
2.1 Noise and Effects on Health and Quality of Life.....	18
2.2 European Union Legislation and Regulations.....	20
2.3 National Legislation and Regulations	21
3 Regional Noise Management Policy and Guidance	26
3.1 Greater Dublin Area Transport Strategy 2022-2042 (GDATS).....	26
3.2 Eastern & Midland Regional Assembly – Regional Spatial & Economic Strategy (RSES), 2019-2031	26
3.3 Local Noise Management Policy and Guidance, Plans and Projects	27
4 Responsible Authorities for Action Planning	28
4.1 Action Planning Authorities.....	28
5 Summary of the Results of the Noise Mapping Process	30
5.1 CNOSSOS-EU:2020.....	30
5.2 Agglomeration Noise Exposure and Harmful Effects	30
5.3 Key Insights from Strategic Noise Mapping.....	34
6 Identification of Priority Important Areas	42
6.1 Regulatory Background	42
6.2 Scope	42
6.3 Overview of Process	43
6.4 Important Areas (IAs)	44

6.5	Most Important Areas (MIAs).....	45
6.6	Priority Important Areas (PIAs)	46
7	Identification of Candidate Quiet Areas	50
7.1	Regulatory Background	50
7.2	Overview of Process	51
7.3	Stage 1: Identification of Candidate Quiet Areas	51
7.4	Stage 2: Investigation of Candidate Quiet Areas.....	55
7.5	Other Considerations	60
8	Prevention, Protection and Mitigation Measures.....	63
8.1	Introduction.....	63
8.2	Prevention	63
8.3	Protection: Areas to be Preserved for Environmental Noise Quality.....	64
8.4	Mitigation: Areas to be Subject to Noise Management Activities	65
9	Long-term Strategy	73
9.1	Noise Action Plan Implementation Commitments.....	73
9.2	Key Round 5 Timetable.....	74
9.3	Round 4 Noise Action Plan Implementation	74
10	Dublin City Council	75
10.1	Introduction.....	75
10.2	Consultation	76
10.3	Review of Noise Action Plan(s).....	76
10.4	Local Noise Management Policy and Guidance	77
10.5	Relevant Plans, Projects and Strategies	80
10.6	Other Relevant Plans, Studies and Measures.....	85
10.7	Summary of the Results of the Strategic Noise Mapping Process	85
10.8	Noise Management Activities (Industry).....	89
10.9	Priority Important Areas.....	89
10.10	Areas to be Preserved for Environmental Noise Quality.....	94
10.11	Mitigation and Protection Measures and Actions.....	107
10.12	Noise Action Plan Implementation.....	122

10.13	Figures	124
11	Dún Laoghaire-Rathdown County Council	147
11.1	Introduction.....	147
11.2	Consultation	148
11.3	Review of Noise Action Plan(s).....	148
11.4	Local Noise Management Policy and Guidance	148
11.5	Relevant Plans, Projects and Strategies	150
11.6	Other Relevant Plans, Studies and Measures.....	152
11.7	Summary of the Results of the Noise Mapping Process	152
11.8	Noise Management Activities (Industry).....	156
11.9	Priority Important Areas.....	156
11.10	Areas to be Preserved for Environmental Noise Quality.....	161
11.11	Mitigation and Protection Measures and Actions.....	166
11.12	Noise Action Plan Implementation.....	179
11.13	Figures	181
11.14	District Electoral Division of Tibradden	197
12	Fingal County Council	198
12.1	Introduction.....	198
12.2	Consultation	198
12.3	Review of Noise Action Plan(s).....	199
12.4	Local Noise Management Policy and Guidance	199
12.5	Relevant Plans, Projects and Strategies	200
12.6	Other Relevant Plans, Studies and Measures.....	201
12.7	Summary of the Results of the Noise Mapping Process	201
12.8	Noise Management Activities (Industry).....	205
12.9	Priority Important Areas.....	205
12.10	Areas to be Preserved for Environmental Noise Quality.....	210
12.11	Noise Action Plan Implementation.....	214
12.12	Figures	214
13	Kildare County Council	233
13.1	Introduction.....	233

13.2 Consultation	234
13.3 Review of Noise Action Plan(s).....	234
13.4 Local Noise Management Policy and Guidance	234
13.5 Relevant Plans, Projects and Strategies	235
13.6 Summary of the Results of the Noise Mapping Process	235
13.7 Noise Management Activities (Industry).....	240
13.8 Priority Important Areas.....	240
13.9 Areas to be Preserved for Environmental Noise Quality.....	244
13.10 Noise Management Framework - Measures and Actions	246
13.11 Noise Action Plan Implementation.....	252
13.12 Figures	252
14 South Dublin County Council	260
14.1 Introduction.....	260
14.2 Consultation	261
14.3 Review of Noise Action Plan(s).....	261
14.4 Local Noise Management Policy and Guidance	262
14.5 Relevant Plans, Projects and Strategies	263
14.6 Other Relevant Plans, Studies and Measures.....	265
14.7 Summary of the Results of the Noise Mapping Process	266
14.8 Noise Management Activities (Industry).....	270
14.9 Priority Important Areas.....	270
14.10 Areas to be Preserved for Environmental Noise Quality.....	276
14.11 Mitigation and Protection Measures and Actions.....	278
14.12 Noise Action Plan Implementation.....	282
14.13 Figures	282
15 Wicklow County Council	300
15.1 Introduction.....	300
15.2 Consultation	301
15.3 Review of Noise Action Plan(s).....	301
15.4 Local Noise Management Policy and Guidance	301
15.5 Relevant Plans, Projects and Strategies	302

15.6 Other Relevant Plans, Studies and Measures.....	303
15.7 Summary of the Results of the Noise Mapping Process	303
15.8 Noise Management Activities (Industry).....	307
15.9 Priority Important Areas.....	307
15.10 Areas to be Preserved for Environmental Noise Quality.....	312
15.11 Mitigation and Protection Measures and Actions.....	314
15.12 Noise Action Plan Implementation.....	324
15.13 Figures	324
Appendix A: Glossary	337

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1 Introduction

1.1 Purpose of the Agglomeration Noise Action Plan

The Environmental Noise Directive ('END') (2002/49/EC) is a European Union legal instrument vital for protecting public health and the environment by addressing the adverse effects of environmental noise.

The END was transposed into Irish Law by the Environmental Noise Regulations 2006¹ (S.I. 140/2006) (the 'Regulations'). The Regulations were revised by the European Communities (Environmental Noise) Regulations 2018² (S.I. 549/2018) and amended through the European Communities (Environmental Noise) (Amendment) Regulations 2021³ (S.I. 663/2021).

The END does not set any limit values or prescribe noise management measures to fulfil its aims. Through the establishment of noise regulations, the execution of strategic noise maps and implementation of Noise Action Plans, the END strives to raise public awareness, prevent and reduce environmental noise, and preserve environmental noise quality in areas where it is good.

In Ireland, it is recommended that the Noise Action Plans support Policy Objective 65 from the National Planning Framework 2040⁴, which states:

"Promote the pro-active management of noise where it is likely to have significant adverse impacts on health and quality of life and support the aims of the Environmental Noise Regulations through national planning guidance and Noise Action Plans."

This Noise Action Plan, and its subsequent implementation, is critical to ensuring Dublin City Council (DCC), Dún Laoghaire-Rathdown County Council (DLRCC), Fingal County Council (FCC), South Dublin County Council (SDCC), Kildare County Council (KCC) and Wicklow County Council (WCC) achieve the aims and objectives of the END, compliance with national policy and to address local environmental noise issues.

1.1.1 Strategic Environmental Assessment (SEA) Pre-Screening

Strategic Environmental Assessment (SEA) is a formal and systematic process (including the stages of Screening, Scoping and Environmental Assessment) designed to assess the potential significant environmental impacts of implementing a plan or program before deciding to adopt it.

¹ <https://www.irishstatutebook.ie/eli/2006/si/140/made/en/print> [Accessed March 2024]

² <https://www.irishstatutebook.ie/eli/2018/si/549/made/en/print> [Accessed March 2024]

³ <https://www.irishstatutebook.ie/eli/2021/si/663/made/en/print> [Accessed March 2024]

⁴ National Planning Framework 2040: <http://www.gov.ie/en/project-ireland-2040/> [Accessed March 2024]

The requirement for SEA for plans and programs is outlined in European Directive 2001/42/EC ('SEA Directive'). In the context of transport sector plans (which could include a Noise Action Plan), this directive is implemented in Irish law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations, 2004⁵ (S. I. 435/2004). This legislation has been amended by the European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011⁶ (S.I. 200/ 2011).

SEA screening has been undertaken with respect to this Noise Action Plan, to firstly consider the applicability of the regulations, and then consider if this Dublin Agglomeration Noise Action Plan would likely give any significant environmental impacts and therefore that further SEA would be required. SEA Screening has concluded that no further SEA work is required.

1.1.2 Appropriate Screening Assessment

The primary purpose of the Directive 92/43/EEC ('Habitats Directive') is to promote the conservation of natural habitats and wild fauna and flora across the European Union. The Habitats Directive is transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations, 2011⁷ (S. I. 477/2011) ('Habitats Regulations').

The European Environment Agency has designated a network of protected areas ('Natura 2000' sites) covering Europe's most valuable and threatened species and habitats.

The Noise Action Plan has been assessed to determine if it is required to be subject to an 'Appropriate Assessment' under the Habitats Directive. The screening assessment determined that there is no likelihood of a significant impact on a Natura 2000 site. Consequently, there is no need to conduct a 'Stage 2 AA' for the purposes outlined in Article 6(3) of the Habitat Regulations.

1.1.3 Roles and Responsibilities

The Regulations designate the Environmental Protection Agency (EPA) as the national authority (the Agency) responsible for overseeing the implementation of the Regulations and for reporting information relating to strategic noise mapping and Noise Action Planning to the European Commission in accordance with Article 10(2) of the END.

The EPA provides guidance ('EPA Guidance') on the required activities to be undertaken during the implementation of the Regulations. These have been fully accounted for in the preparation of this Noise Action Plan.

Under the Regulations, Dublin City Council, Dún Laoghaire-Rathdown County Council, Fingal County Council, South Dublin County Council, Kildare County Council and Wicklow County Council are

⁵ [S.I. No. 435/2004 - European Communities \(Environmental Assessment of Certain Plans and Programmes\) Regulations 2004 \(irishstatutebook.ie\)](https://www.irishstatutebook.ie/eli/2004/si/435/made/en/print) [Accessed March 2024]

⁶ [S.I. No. 200/2011 - European Communities \(Environmental Assessment of Certain Plans and Programmes\) \(Amendment\) Regulations 2011. \(irishstatutebook.ie\)](https://www.irishstatutebook.ie/eli/2011/si/200/made/en/print) [Accessed March 2024]

⁷ <https://www.irishstatutebook.ie/eli/2011/si/477/made/en/print> [Accessed March 2024]

designated as the Noise-Mapping Bodies (NMBs), for the purpose of making and approving strategic noise maps for the Agglomeration of Dublin (the 'Agglomeration').

These local authorities are also designated as Action Planning Authorities (APAs), and are responsible for preparing a Noise Action Plan for the Agglomeration. Transport Infrastructure Ireland and Iarnród Éireann are designated as Noise Mapping Bodies (NMBs) for the purpose of making strategic noise maps for major roads (National) and major rail.

The APAs must prepare the Noise Action Plan in consultation with the Agency and the NMBs for the strategic noise map involved. Further details on the roles and responsibilities of all parties in respect of their obligations under the Regulations and the collaboration required to deliver the priorities of this Noise Action Plan are set out in **Table 5** in **Section 4.1**.

1.1.4 Scope of the END

The END applies to environmental noise to which humans are exposed in built-up areas, in public parks or other quiet areas in an agglomeration, in quiet areas in open country, near schools, hospitals and other noise sensitive buildings and areas. Noise sources required to be considered within agglomerations are detailed in **Section 1.2**.

The END does not apply to noise that is caused by the exposed person, noise from domestic activities, neighbourhood noise, occupational noise or noise inside means of transport or due to military activities in military areas.

Strategic noise maps are strategic tools and should not be used for the assessment of local noise nuisances or making planning decisions.

1.2 Scope of the Agglomeration Noise Action Plan

This Noise Action Plan has been prepared in accordance with the Regulations and is aimed at strategic long-term management of environmental noise from transport systems referring to the results of the strategic noise maps to inform assessments of population exposure and harmful effects of noise.

The strategic noise maps for the agglomeration of Dublin have been prepared by the NMBs responsible and include Dublin City Council, Dún Laoghaire-Rathdown County Council, Fingal County Council, South Dublin County Council, Kildare County Council and Wicklow County Council, Transport Infrastructure Ireland (TII) and Irish Rail (Iarnród Éireann). The strategic noise maps have been prepared in respect of the calendar year 2021 for noise from the following sources:

- **Road traffic** – all roads and major roads (sections of road with a flow threshold of 3,000,000 vehicle passages per year);
- **Rail traffic** – all rail and major rail (sections of rail route with a flow threshold of 30,000 train passages per year); and
- **Industrial activity sites** - Industrial Emission (IE) sites as regulated by the EPA under the IPPC Directive 96/61 EC, and ports.

The strategic noise maps and associated noise exposure statistics for Dublin Airport will be presented within a standalone Action Plan and are thus not considered within this agglomeration Noise Action Plan.

The Regulations require the strategic noise mapping to be based upon an assessment year of 2021. However, due to COVID-19 related travel restrictions and the operational impacts of the pandemic, noise contour results for 2021 may not be fully representative. The greatest anomalies in transportation noise during this period are likely associated with airport noise, which saw significant reductions in air traffic, and therefore a reduction in most noise contours with fewer people shown to be affected by aircraft noise. Rail and road traffic travel during this period saw some reductions, but not as significant as air travel, therefore the use of the 2021 assessment year for these sources is deemed representative for the purpose of the Round 4 action planning.

There have been three rounds of strategic noise maps and Noise Action Plans in Ireland (2008-2013, 2013-2018 and 2018-2023) with this Noise Action Plan for the Agglomeration being Round 4 (2024-2028)⁸.

The first three rounds of strategic noise maps have been developed using computation methods set out in Environmental Noise Regulations 2006 (S.I. 140/2006). For Round 4, Member States are required to use the Common Noise Assessment Methods for Europe (CNOSSOS-EU). This change in methodology makes a direct comparison of the Round 4 noise exposure statistics with the previous three rounds methodologically complex.

For the noise action planning process, the Regulations require that;⁹

“Each action plan or revision of an action plan shall address priorities which—

(i) may be identified on the basis of exceedances of any relevant noise limit value or other relevant criteria established by the Agency [EPA] in accordance with subparagraph (3), and

(ii) shall, in the first instance, address the most important area or areas, as the case may be, established by strategic noise mapping.”

Furthermore the Regulations require each APA to *“determine the measures to be included in an action plan.”*

Finally, the action plan must *“have as its objective that of also protecting quiet areas in an agglomeration”*.

This Noise Action Plan therefore includes the identification of existing noise emissions, the identification of priority important areas based on an assessment of harmful effects and details of noise management measures for consideration and evaluation at implementation stage. The Noise Action Plan also includes the identification of Candidate Quiet Areas for consideration as Quiet Areas at the implementation stage.

⁸ The European Commission allowed for one additional year for the Round 4 Noise Action Plans, reducing the five-year implementation period to four-years.

⁹ Regulation 12(2)

1.2.1 Noise Indicators

The Regulations specify two main noise indicators which must be used in the preparation of the strategic noise maps:

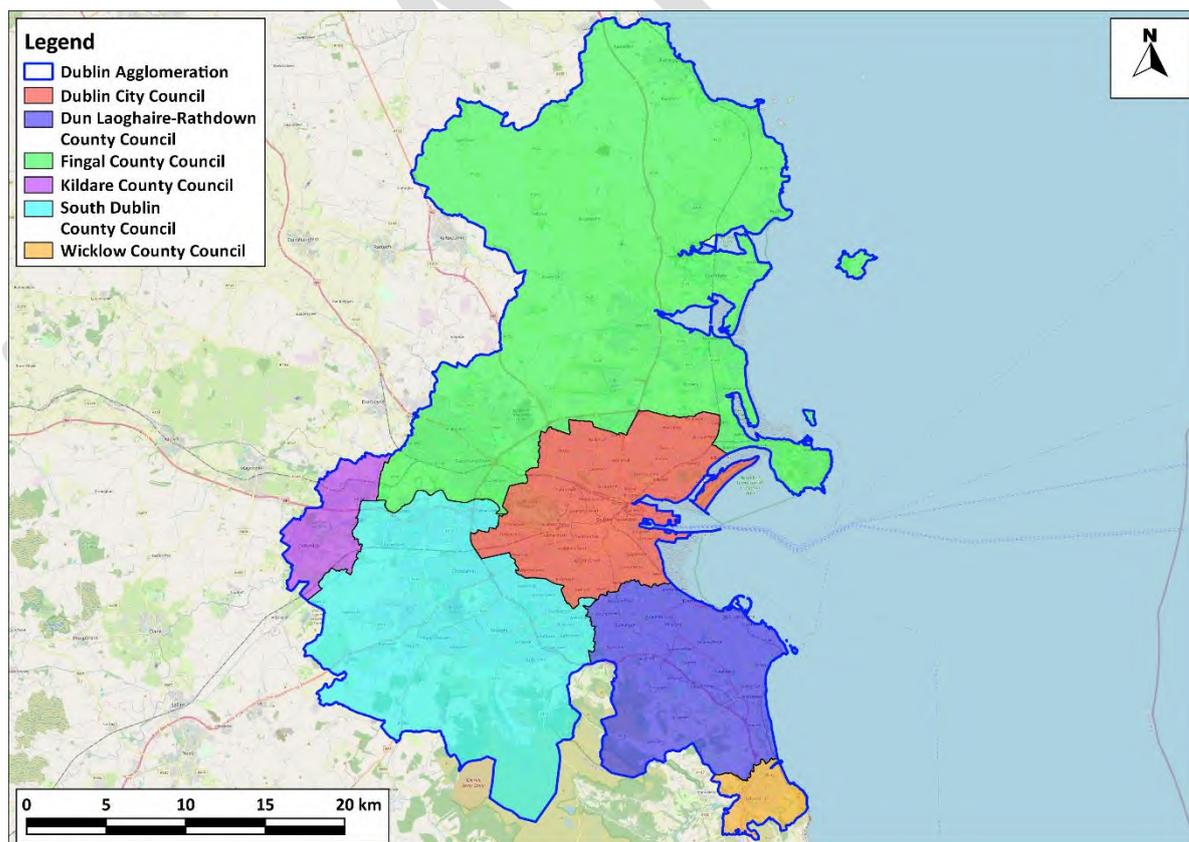
- L_{den} – the annual average noise level for the day, evening and night periods and is designed to indicate overall annoyance; and
- L_{night} – the annual average noise level for the night-time periods, from 23:00 – 07:00 hours, and is designed to indicate sleep disturbance.

Calculations of supplementary noise indicators have also been undertaken, namely the $L_{Aeq, 16hr}$ (the annual average noise level for the daytime/evening periods, from 07:00 – 23:00 hours), which has been approved by the EPA as the appropriate noise indicator to inform the identification of Candidate Quiet Areas.

1.3 Dublin Agglomeration

The Agglomeration is defined in the Regulations and covers an area of 959.9km² with a population of 1,355,968 and is shown in **Figure 1**.

Figure 1: Agglomeration and County Boundaries



A summary of the proportion of APA populations in the Agglomeration is given in **Table 1**.

Table 1: Agglomeration – Total Population

Action Planning Authority	Total Population ¹⁰
Agglomeration	1,355,968
Dublin City Council	501,896
Dún Laoghaire-Rathdown County Council	210,521
Fingal County Council	297,129
Kildare County Council	37,448
South Dublin County Council	278,984
Wicklow County Council	29,990

The total length of road and rail, and the total number of industrial sites¹¹ included in the Agglomeration strategic noise maps is summarised in **Table 2**.

Table 2: Agglomeration - Summary of Strategic Noise Map Sources

Noise Sources	Total Length (km) /No. of Sites
All Roads (including Major Roads)	5,566 km
Major Roads	794 km
All Rail (including Major Rail)	365 km
Major Rail	261 km
Industry	67 sites

The number of noise sensitive buildings (Schools and Hospitals) within the Agglomeration and considered by the strategic noise mapping are summarised in **Table 3**.

¹⁰ CSO Census Data (April 2022)

¹¹ Industrial Emission (IE) sites as regulated by the EPA under the IPPC Directive 96/61 EC, and ports

Table 3: Agglomeration - Total number of Noise Sensitive Buildings

Noise Sensitive Building	Number of Noise Sensitive Buildings
Schools	1091
Hospitals	67

1.4 Structure of the Noise Action Plan

This Noise Action Plan is a combined plan for the agglomeration of Dublin, and its structure is in two parts.

1.4.1 Agglomeration Sections (Section 1 – Section 9)

The first part covers the overarching principles of the Noise Action Plan process, including the existing international, national and regional noise management legislation and guidance, a description of the noise mapping process, and methodologies advocated in the EPA Guidance for identifying and addressing the most important areas, as established by the strategic noise mapping.

The first part includes a four-year implementation plan for the Noise Action Plan. Progress will be tracked through annual progress reporting to the EPA throughout the execution of this plan.

The elements set out in the first part of the Noise Action Plan are relevant to all Agglomeration APAs.

1.4.2 APA Sections (Sections 10 - 15)

The second part includes separate sections for each of the Agglomeration APAs, including an update on the implementation progress of the measures set out in previous Noise Action Plans, and the identification of the specific areas within each region to be considered for noise management measures or as Candidate Quiet Areas for the preservation of environmental noise quality. The specific sections are:

- **Section 10** – Dublin City Council (DCC);
- **Section 11** – Dun Laoghaire-Rathdown County Council (DLRCC);
- **Section 12** – Fingal County Council (FCC) ;
- **Section 13** – Kildare County Council (KCC);
- **Section 14** – South Dublin County Council (SDCC); and
- **Section 15** – Wicklow County Council (WCC).

1.5 Round 4 Timetable

A timetable of the key activities for the development and implementation of the Noise Action Plans for Round 4, and delivery to the European Environment Agency (EEA) by the Authority, is set out below:

- 18 July 2024: Deadline for noise action plans
- 18 August 2024: Deadline for publishing noise action plans
- 18 August 2024: Summaries of noise action plans submitted to the EPA

- 18 January 2025: Noise actions plans to be reported to the EEA by the EPA.

1.6 Consultation

1.6.1 Public Consultation

A Period of public consultation will be completed on this draft Noise Action Plan. A summary of the public consultation will be set out in the final Noise Action Plan.

1.7 Acknowledgements

The background mapping used in the figures presented in this report are taken from OpenStreetMap (© OpenStreetMap contributors. See: <https://www.openstreetmap.org/copyright>).

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2 Noise Management Legislation and Guidance

2.1 Noise and Effects on Health and Quality of Life

2.1.1 Environmental Noise Guidelines (World Health Organization, WHO), 2018

Noise can have a significant and disruptive effect on everyday life. Since the implementation of the Regulations, there have been extensive studies into the links between environmental noise exposure and health.

The World Health Organization (WHO) in its publication ‘Environmental Noise Guidelines for the European Region 2018’¹² and ‘Night Noise Guidelines for Europe 2009’¹³ has also presented several key health outcomes including: noise annoyance; sleep disturbance; cardiovascular health; mental health, wellbeing, and quality of life; and children’s learning.

The Environmental Noise Guidelines for the European Region provides recommendations for protecting human health from exposure to environmental noise originating from various sources including road traffic, railway and aircraft noise.

The recommendations include guideline values using L_{den} and L_{night} metrics in terms of the onset of health effects.

However, no single noise metric best correlates with all adverse health outcomes associated with environmental noise effects, and health effects can be correlated with more than one metric. . The noise metrics which are generally considered to best correlate with the different health effects, and are the subject of this Noise Action Plan, are set out in **Table 4**.

Table 4: Noise Metrics and the Associated Health Effects

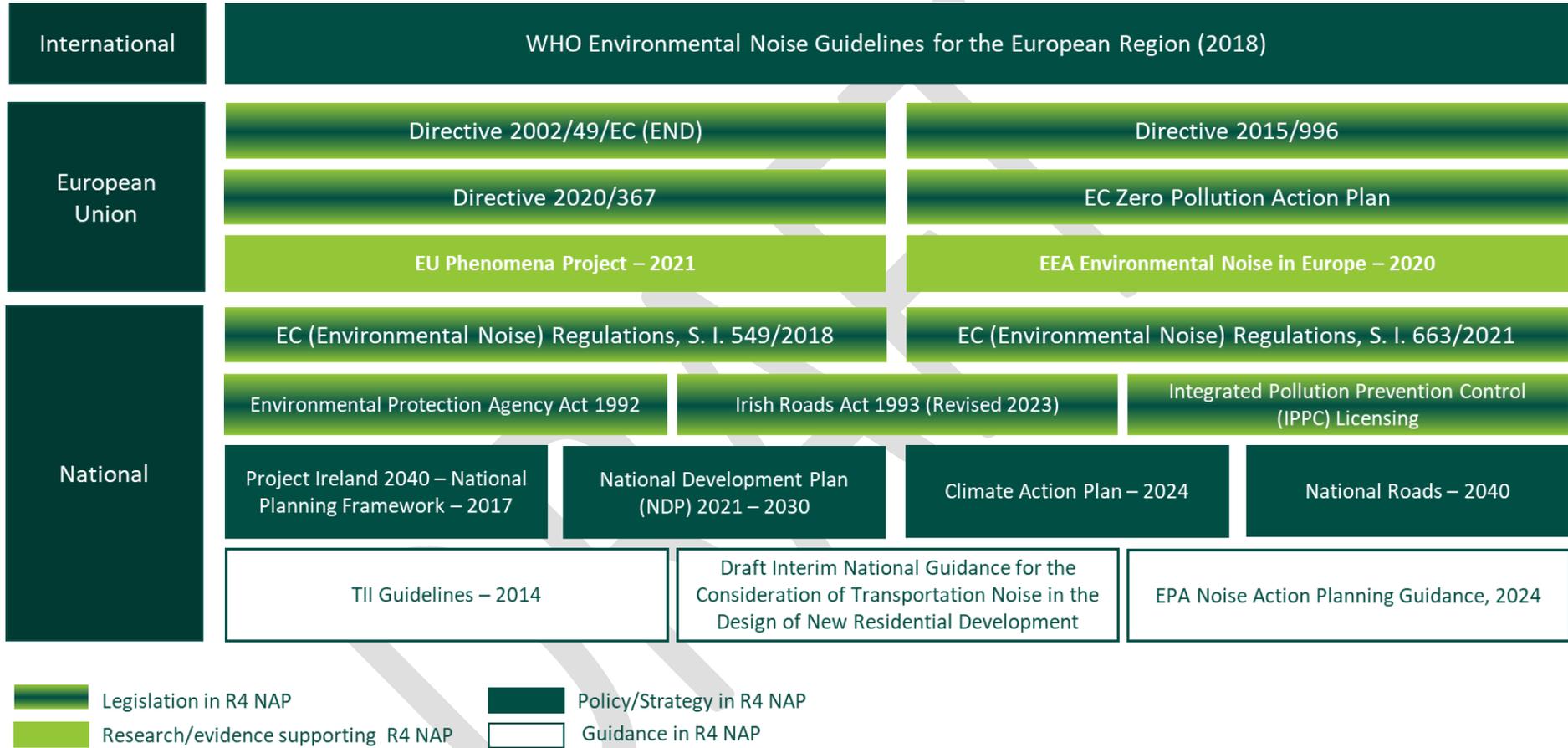
Noise Metric	Health Effects
L_{den}	Cardiovascular disease, Cognitive impairment, and Annoyance
L_{night}	Sleep disturbance and Wellbeing

Existing international, European Union and national noise management legislation and guidance is shown in **Figure 2**, with brief summaries provided in **Section 2.2**.

¹² Environmental Noise Guidelines for the European Region, World Health Organisation, 2018

¹³ Night Noise Guidelines for Europe, World Health Organisation, 2009

Figure 2: Existing Noise Management Legislation and Guidance



2.2 European Union Legislation and Regulations

2.2.1 European Communities Directive 2002/49/ EC

The Environmental Noise Directive ('END') (2002/49/EC) relates to the assessment and management of environmental noise. It is the main instrument of the EU to quantify noise pollution levels and trigger actions within Member States.

The aim of the END is to:

"... define a common approach intended to avoid, prevent or reduce on a prioritized basis the harmful effects, including annoyance, due to exposure to environmental noise."

2.2.2 Commission Directive (EU) 2015/996

Commission Directive EU 2015/996 replaces Annex II of the END and describes the common assessment methods for road, rail and air traffic noise and industrial noise sources, developed within the CNOSSOS-EU project.

Shortly after the publication of Directive 2015/996, some formatting and typographical errors were identified which were addressed in the Corrigendum¹⁴ which was published in 2018

2.2.3 Commission Directive (EU) 2020/367

Commission Directive EU 2020/367 replaces Annex III of Directive 2002/49/EC in describing the assessment of health effects under END.

The Directive adopts the exposure response functions published within the WHO Environmental Noise Guidance, 2018 for the number of people highly annoyed (HA) and highly sleep disturbed (HSD) from road, rail and aircraft noise. The Directive also adopts the calculation of Ischaemic Heart Disease (IHD) with respect to road traffic noise.

2.2.4 European Union Zero Pollution Action Plan (ZPAP), 2021

The European Commission Zero Pollution Action Plan (ZPAP) was adopted in 2021. The vision for 2050 under the ZPAP is for air (including noise), water and soil pollution to be reduced to levels no longer considered harmful to health and natural ecosystems. This is translated into key 2030 targets to speed up reducing pollution at source.

The target for noise includes reducing the share of people chronically disturbed by transport noise by 30%. This target has not been transposed into Irish legislation, however, may be in the future, and therefore should be considered in future iterations of Noise Action Plans.

¹⁴ <https://www.ecac-ceac.org/documents/ecac-documents-and-international-agreements> [Accessed March 2024]

2.2.5 European Commission Assessment of Potential Health Benefits of Noise Abatement Measures in the EU (Phenomena project), 2021

In 2021 the findings of the EU Phenomena project were published. The study aimed to define the potential of measures capable of delivering significant reductions (20%-50%) of health burden arising from the environmental noise of roads, railways and aircraft, and to assess how relevant noise related legislation could increase the implementation of the most effective measures, while considering the constraints and specificities of each transport mode.

The project relied on a combination of policy research, consultation, health economics and environmental assessment. Individual noise abatement measures were examined and their health impact quantified leading to a shortlist of the most effective combinations of measures for each transport mode.

For roads noise, the measures considered included low noise road pavements, low noise zones (speed reductions) and new legislation at an EU level for a low noise tyre fleet. For rail noise, the noise abatement solutions included smooth tracks, quieter vehicles, smooth wheels and quieter tracks.

The analysis found that combination of the road noise abatement measures could achieve health burden reduction by 2030 in the range 18-24%. For rail noise, health burden reductions by 2030 were in the range 37-52%.

2.2.6 European Environment Agency (EEA) Environmental Noise in Europe, 2020

The report summarises the many reviews of evidence on the relationship between environmental noise and specific health effects, including cardiovascular disease, cognitive impairment, sleep disturbance, tinnitus and annoyance.

It is estimated that, in the EU Member States and other western European countries (excluding Turkey) the number of people suffering various health outcomes from the exposure to environmental road noise in urban areas in 2017 was 29,500 for ischaemic heart disease (IHD), 12,525,000 for high annoyance, 3,242,000 for high sleep disturbance and 7,600 due to mortality (from noise related IHD)¹⁵.

2.3 National Legislation and Regulations

The END was transposed into Irish Law by the Environmental Noise Regulations 2006¹⁶ (S.I. 140/2006) (the 'Regulations'), establishing a unified framework for mitigating and minimising the adverse consequences of environmental noise exposure. They identify organisations responsible for noise mapping and the development of strategic noise maps and noise action plans

¹⁵ Table 3.5, Environmental Noise Guidelines for the European Region, World Health Organisation, 2018

¹⁶ <https://www.irishstatutebook.ie/eli/2006/si/140/made/en/print> [Accessed March 2024]

The Regulations were revised by the European Communities (Environmental Noise) Regulations 2018¹⁷ (S.I. 549/2018) and amended through the European Communities (Environmental Noise) (Amendment) Regulations 2021¹⁸ (S.I. 663/2021). A summary of these Regulations is presented in the following sections.

2.3.1 European Communities (Environmental Noise) Regulations, 2018 (S. I. 549/2018)

These Regulations replace the Environmental Noise Regulations 2006 (S.I. No. 140 of 2006) and provide for the implementation in Ireland of a common approach within the European Community to avoid, prevent or reduce, on a prioritised basis, the harmful effects, including annoyance, due to exposure to environmental noise.

The Regulations designate the Environmental Protection Agency (EPA) as the National Authority for the purposes of the Regulations. The Agency's role includes supervisory, advisory and coordination functions in relation to both noise mapping and action planning, as well as reporting requirements for the purpose of the Directive.

2.3.2 European Communities (Environmental Noise) (Amendment) Regulations, 2021 (S. I. 663/2021)

This Regulation amends the European Communities (Environmental Noise) Regulations 2018 (S.I. 549/2018), setting out methods for harmful effects, considering ischaemic heart disease (IHD), high annoyance (HA) and high sleep disturbance (HSD) and requiring each NMB to report details of these harmful effects as part of the noise mapping work.

The Regulations also amended the boundaries of the existing Dublin and Cork agglomerations and defined a new Limerick agglomeration

2.3.3 Environmental Protection Agency Act, 1992

In Ireland, statutory provisions relating to environmental noise pollution come primarily from the Environmental Protection Agency Act (1992).

The Act identifies noise as a form of environmental pollution and contains provisions for dealing with noise deemed 'a nuisance or would endanger human health or damage property or harm the environment'.

With regards to noise, Section 106-107 is most relevant:

- Section 106 gives the relevant Minister certain powers to regulate noise that may give rise to a nuisance or be harmful to health or property;

¹⁷ <https://www.irishstatutebook.ie/eli/2018/si/549/made/en/print> [Accessed March 2024]

¹⁸ <https://www.irishstatutebook.ie/eli/2021/si/663/made/en/print> [Accessed March 2024]

- Section 107 gives power to local authorities or the Agency to serve notice requiring measures to be taken to prevent or limit noise from any premises, processes or works; and
- Section 108 sets out a process whereby noise issues may be taken to District County, which may make any order requiring that the person or body responsible for the noise to take measures for the prevention or limitation of the noise in question.

There is no clear official or statutory guidance which could help promote the effectiveness or clarity of the provisions within the Act; however, within the framework of the Regulations the EPA may consider it appropriate to develop such guidance in the future.

2.3.4 Roads Act, 1993 (Revised 2023)

In Ireland, the Roads Act, 1993¹⁹ (revised 2023²⁰), outlines the responsibilities of the roads authorities for the maintenance and construction of public roads. Under section 77 of the Roads Act 1993, power had been given to the Minister to make regulations requiring relevant road authorities to take measures to mitigate the effects of road traffic noise and to specify limits for road traffic noise which, if exceeded, would require mitigating action from the road authorities. However, Section 77 was repealed under the Public Transport Regulation Act, 2009²¹. There are no Irish statutory noise limits or standards governing road traffic noise for new or existing roads.

2.3.5 Integrated Pollution Prevention Control (IPPC) Licensing

The EPA's Integrated Pollution Prevention Control Licensing terms require that certain bodies must limit environmental pollution caused by industrial activities to obtain a license to operate. The criteria relating to noise pollution are outlined in the EPA publication "*Guidance Note for Noise: Licence Applications, Surveys and Assessment in Relation to Scheduled Activities (NG4)*"- 2016. This document recommends a "Best Available Technique" approach to the assessment and mitigation of noise pollution. The document contains typical limit values for daytime (55 dB $L_{A,r,T}$ ²²), evening (50 dB $L_{A,r,T}$) and nighttime (45 dB $L_{A,r,T}$) noise, at sensitive locations, from licensed facilities. Alternative limit values are provided for quiet areas and areas of low background noise.

2.3.6 Project Ireland 2040 – National Planning Framework, 2017

The National Planning Framework (NPF) is a high-level strategic plan to guide development and investment over the coming years. In addition to setting aims associated with infrastructure and investment, targets are also set around social outcomes.

¹⁹ <https://revisedacts.lawreform.ie/eli/1993/act/14/revised/en/html> [Accessed March 2024]

²⁰ <https://revisedacts.lawreform.ie/eli/1993/act/14/revised/en/html> [Accessed March 2024]

²¹ <https://www.irishstatutebook.ie/eli/2009/act/37/enacted/en/print> [Accessed March 2024]

²² The Rated Noise Level, equal to the L_{Aeq} during a specified time interval (T), plus specified adjustments for tonal character and/or impulsiveness of the sound.

Project Ireland 2040 – National Planning Framework recognises the importance of noise management which is implemented through the following objectives 52 and 65:

National Policy Objective 52

“The planning system will be responsive to our national environmental challenges and ensure that development occurs within environmental limits, having regard to the requirements of all relevant environmental legislation and the sustainable management of our natural capital.”

National Policy Objective 65

“Promote the pro-active management of noise where it is likely to have significant adverse impacts on health and quality of life and support the aims of the Environmental Noise Regulations through national planning guidance and Noise Action Plans.”

2.3.7 National Development Plan (NDP) 2021 – 2030

An investment strategy and budget that aims to transform Ireland and support the largest public housing program in the history of the state.

The plan sets out the broad direction for investment priorities over the coming decade and pledges to allocate public investment of €165 billion across all sectors and regions of Ireland. The plan aims to prepare Ireland for population growth of approximately 1 million between 2016 and 2040 and help deal with the ongoing challenges of COVID-19 and Brexit.

2.3.8 Climate Action Plan, 2024

The Climate Action Plan (CAP24) is the third update to Ireland’s Climate Action Plan. It sets out a roadmap for actions to halve emissions by 2030, and reach net zero no later than 2050.

CAP24 implements carbon budgets and sectoral emissions ceiling with a view to accelerating the actions required to respond to the climate crisis, putting climate solutions at the centre of Ireland’s social and economic development.

2.3.9 National Roads 2040

National Roads 2040 (NR2040) is Transport Infrastructure Ireland’s long-term strategy for planning, operating, and maintaining the National Roads network. The strategy has been developed to support the delivery of National Planning Framework 2040 objectives and to align with the Department of Transport’s National Investment Framework for Transport in Ireland. One of the key visions for the strategy is that the national road network should be environmentally sustainable:

“Environmental sustainability is the bedrock for social and economic sustainability in Ireland; avoiding and where unavoidable mitigating environmental impacts including climate change, air quality and noise as well as biodiversity impacts of National Roads.”

While many of the issues in the strategy surround decarbonisation and the need to reduce greenhouse gas and carbon emissions, as set out in the Climate Action Plan, there are potentially opportunities for mutual gains for noise reduction (e.g., through active travel, integrated mobility, maintenance and improvement works on the existing national road network).

2.3.10 Transport Infrastructure Ireland (TII) Guidelines, 2014

Considering the lack of standardised methods for the assessment of road traffic noise the then National Roads Authority (NRA) published the 'Guidelines for the Treatment of Noise and Vibration in National Road Schemes.' These guidelines propose design goals for noise related to both the construction and operational stages of new road schemes.

Following a review of similar guidelines in the UK and adapting methodologies in line with the requirements of the END, the NRA proposed an operational design goal of $L_{den} \leq 60$ dB free field value. Essentially what this means is that for any new road scheme the Environmental Impact Assessment Report must take this target into account about any existing sensitive residential property likely to be affected by the road scheme.

The guidelines present an approach to mitigating the adverse effects of road construction in so far as possible using measures such as alignment changes, barrier construction e.g., earth mounds, and the use of low noise road surfaces. The responsibility for noise mitigation policy relating to any proposed new sensitive properties in the vicinity of the road scheme lies with the relevant Planning Authority.

2.3.11 Draft Interim National Guidance for the Consideration of Transportation Noise in the Design of New Residential Development, 2021

In the absence of Irish planning guidance for new residential development and the consideration of transportation noise local authorities in 2021 prepared draft guidance under a subgroup of the NIECE National Local Authority Noise Working Group.

This draft guidance includes an overarching aspiration that good acoustic design should be implemented from the outset of the design of new residential developments.

2.3.12 EPA Noise Action Planning Guidance, 2024

The EPA's guidance for strategic noise mapping for Round 4 using the CNOSSOS-EU assessment methods is published in five parts:

- Part 1: Requirements
- Part 2: Calculation Methodology & Noise Modelling
- Part 3: Noise Exposure Assessment
- Part 4: Publication and Reporting
- Part 5: Harmful Effects Assessment

The EPA has also published guidance on noise action planning. These documents are referred to collectively as the 'EPA Guidance'.

3 Regional Noise Management Policy and Guidance

3.1 Greater Dublin Area Transport Strategy 2022-2042 (GDATS)

While the GDATS has a twenty-year life, and the full benefits will not be realized until its completion, it is noteworthy that several phases of the strategy are currently in progress and will be implemented throughout the lifespan of the Noise Action Plan, with completion expected by 2030.

These include the BusConnects network, Dart+, a Luas Green Line upgrade, Greater Dublin Area Cycle Network (Active Travel schemes) and a number of City Centre Management Measures (Dublin City Centre Transport Plan 2023).

Many of these developments will contribute to a collective shift toward more sustainable forms of transportation, subsequently influencing noise levels within the Greater Dublin Area including the Priority Important Areas identified in this Noise Action Plan. While no details are provided for 2028, the Strategy forecasts a reduction in both business and commute vehicle kilometres travelled of -8% and -18% respectively by 2042.

The section of the GDATS dealing with noise (Section 17.2.6) states as a result of the reduction in private car trips for all purposes, it is forecast that the number of people exposed to unacceptable noise levels from traffic will reduce. It notes that growth may lead to an increase in the number of goods vehicles travelling in the Greater Dublin Area, which in turn may lead to some localised impacts in terms of increased noise. However, it is forecast that these adverse effects would arise primarily on the national and strategic road network, rather than on local roads and as such, would not lead to a significant increase in the population exposure to high noise levels. Furthermore it noted that overall the GDATS, in combination with other Government policies and developing technologies, is forecast to lead to a reduction in the numbers of people in the Greater Dublin Area being exposed to high noise levels from transport.

3.2 Eastern & Midland Regional Assembly – Regional Spatial & Economic Strategy (RSES), 2019-2031

The RSES was prepared by the Eastern and Midland Regional Assembly to support the implementation of Project Ireland 2040 and the economic policies and objectives of the Government by providing a long-term strategic planning and economic framework for the development of the Region. The strategy contains a policy objective for noise under Regional Policy Objective 7.8.

“Local authorities shall incorporate the objectives of EU Environmental Noise Directive in the preparation of strategic noise maps and action plans that support proactive measures to avoid, mitigate, and minimise noise, in cases where it is likely to have harmful effects”

The RSES supports the development of strategic noise maps and actions plans, setting out mitigation measures to reduce the harmful effects, including long term exposure to environmental noise from roads, railways and airport traffic and the protection of ‘quiet areas’, which are shown to bring significant health and well-being benefits.

3.2.1 Eastern & Midland Regional Assembly – Regional Planning Guidance

The Eastern and Midland Regional Assembly's Regional Planning Guidelines for the Greater Dublin Area (2010-2022) briefly mentions noise in the context of noise management.

The guidelines state that with respect to the development of physical infrastructure, relevant Local Authorities should include provisions and zoning policies which support the delivery of high quality transport links to Dublin Airport; ensure that suitable lands are appropriately zoned to allow future expansion and restrict (and where appropriate, prohibit) development in public safety zones and approach zones of all GDA airports and airfields, and in **noise zones** associated with airport flight operations. The guidelines also note that in order to ensure the continued viability of Dublin Airport as an international transport hub it is important that the *“Inner and Outer Airport Noise and Public Safety Zones and Approach Zones are suitably protected through Development Plan and Local Area Plans policies and zoning”*.

With respect to the development of green infrastructure, the guidelines include an action to incorporate tree protection, management and planting programmes in urban areas and development projects. This incorporation is informed by considerations of noise mitigation, biodiversity, air quality and climate amelioration effects.

With respect to the development of health and healthcare facilities, *“Planning policies need to consider the added health burden from the effects of air and noise pollution”*. The guideline advocates for high-quality development, and robust local area planning presents a key opportunity to enhance the quality of life for communities. This enhancement involves improvements in health and the provision of real opportunities for interaction, exercise and ease of access to services for all members of the community.

3.3 Local Noise Management Policy and Guidance, Plans and Projects

The noise management policy and guidance, and relevant plans, projects and strategies within each of the APAs are described in **Section 10 - Section 15**.

4 Responsible Authorities for Action Planning

4.1 Action Planning Authorities

The roles and responsibilities of the APAs and the NMBs as set out by the Regulations, and the consultation and collaboration necessary between all parties to address noise from each noise source mapped and ensure the successful implementation of this Dublin Agglomeration Noise Action Plan, are summarised in **Table 5**.

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Table 5: Roles and Responsibilities

Organisation	Strategic Noise-Mapping Body (NMB) Responsibility	Noise Action Plan Preparation - Responsibility	Noise Action Plan Implementation - Responsibility
Dublin City Council (DCC), Dún Laoghaire/ Rathdown County Council (DLRCC), Fingal County Council (FCC), South Dublin County Council (SDCC), Kildare County Council (KCC) and Wicklow County Council (WCC)	NMB responsible for making and approving strategic noise maps for the agglomeration of Dublin	APA responsible for making and approving action plans, in consultation with NMBs, for the agglomeration of Dublin.	Detailed evaluation of Priority Important Areas, in consultation with NMBs, including identification of noise mitigation measures and implementation of those measures within the Local Authority’s areas of competence and responsibility, subject to resources and budget.
Transport Infrastructure Ireland (TII)	NMB responsible for making and approving strategic noise maps for major roads designated as national roads NMB responsible for making and approving strategic noise maps for major railways (LUAS)	Consultee during action planning, with consideration of issues resulting from the strategic noise maps within their area of responsibility including identification of priority important areas to be included within the Noise Action Plan	Consult, engage and collaborate with the APAs to identify and agree noise mitigation measures for locations within TII’s areas of competence and responsibility and implementation of same subject to resources and budget.
Irish Rail	NMB responsible for making and approving strategic noise maps for major railways	Consultee during action planning, with consideration of issues resulting from the strategic noise maps within their area of responsibility including identification of priority important areas to be included within the Noise Action Plan	Consult, engage and collaborate with the APAs to identify and agree noise mitigation measures for areas within Irish Rail’s areas of competence and responsibility and implementation of same subject to resources and budget.

5 Summary of the Results of the Noise Mapping Process

5.1 CNOSSOS-EU:2020

The European Commission (EC) published Directive 2015/996²³ established common noise assessment methods according to the END. It replaced Annex II of the END, removing the Interim Methods and now requiring that Member States apply the Common Noise Assessment Methods for Europe (CNOSSOS-EU) for the noise modelling of road, rail, aircraft and industrial sources.

The use of CNOSSOS-EU has since been transposed into Irish Law via the European Communities (Environmental Noise) (Amendment) Regulations 2021 (S.I. 663/2021) and has been used to produce the strategic noise maps and to calculate the noise exposure statistics and harmful effects (see **Section 5.2**) for roads, rail and industry, where applicable.

Two result formats have been prepared for the noise indicators specified in the Regulations, L_{den} and L_{night} :

- 10m grid format – where the model outputs a result every 10m in a uniform grid. These results are used to produce the strategic noise maps; and
- Façade receiver format - where the model outputs a result at receiver points digitised at the façades of residential, school and hospital buildings. These results are used to calculate the exposure statistics and harmful effects (see **Section 5.2**).

The model was configured to output results down to a minimum of 20 dB L_{den} and L_{night} , which goes beyond the reporting requirements of the END (55 dB L_{den} and 50 dB L_{night}) and the levels required for the calculation of harmful effects.

5.2 Agglomeration Noise Exposure and Harmful Effects

5.2.1 Noise Exposure Assessment

The first three rounds of strategic noise maps have been developed using computation methods set out in Environmental Noise Regulations 2006 (S.I. 140/2006). For Round 4, Member States are required to use the Common Noise Assessment Methods for Europe (CNOSSOS-EU). This change in methodology makes a direct comparison of the Round 4 noise exposure statistics with the previous three rounds methodologically complex.

The Round 4 noise exposure statistics for the Agglomeration are presented in the following section, and at APA level in **Section 10 - Section 15**.

²³ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015L0996&from=PT>

Exposure statistics are assessed independently for each noise source, and are summarised for the noise metrics across the noise exposure bands defined in the Regulations. The population exposure statistics have been rounded to the nearest 100 as required by the Regulations. Airport noise exposure statistics will be presented within a standalone Action Plan for Dublin Airport.

Table 6: Agglomeration - Number of People in Dwellings – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	287,400	33,900	1,700
60-64	160,500	19,300	400
65-69	78,700	14,600	100
70-74	23,100	10,700	0
>=75	2,500	5,700	0

*exposure statistics rounded to the nearest 100.

Table 7: Agglomeration - Percentage of Total Population Exposed to the Noise Source – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	21 %	3 %	0 %
60-64	12 %	1 %	0 %
65-69	6 %	1 %	0 %
70-74	2 %	1 %	0 %
>=75	0 %	0 %	0 %

Table 8: Agglomeration - Number of School Buildings (& Hospital Buildings) – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	260 (12)	36 (03)	01 (01)
60-64	185 (11)	20 (00)	02 (00)
65-69	101 (08)	13 (00)	00 (00)
70-74	30 (04)	09 (05)	00 (00)
>=75	07 (00)	17 (02)	00 (03)

Table 9: Agglomeration - Number of People in Dwellings – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	169,200	22,400	1,100
55-59	78,400	15,500	300
60-64	33,000	10,600	0
65-69	6,300	6,200	0
>=70	400	1,900	0

*exposure statistics rounded to the nearest 100.

Table 10: Agglomeration - Percentage of Total Population Exposed to the Noise Source – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	13 %	2 %	0 %
55-59	6 %	1 %	0 %
60-64	2 %	1 %	0 %
65-69	1 %	1 %	0 %
>=70	0 %	0 %	0 %

Table 11: Agglomeration - Number of School Buildings (& Hospital Buildings) – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	185 (11)	24 (02)	02 (01)
55-59	105 (03)	10 (00)	00 (00)
60-64	46 (09)	12 (03)	00 (00)
65-69	04 (00)	12 (02)	00 (00)
>=70	05 (00)	04 (02)	00 (01)

5.2.2 Harmful Effects Assessment

The European Communities (Environmental Noise) (Amendment) Regulations 2021 (S.I. 663/2021) sets out the assessment methods for harmful effects, which considers ischaemic heart disease (IHD), high annoyance (HA) and high sleep disturbance (HSD).

Ischaemic heart disease is calculated for road traffic noise only, whereas high annoyance and high sleep disturbance are calculated for road traffic, railway and aircraft noise.

The exposure of harmful effect is assessed independently for each source. Where the same people are simultaneously exposed to different noise sources, the harmful effects may not, in general, be cumulated, however can be compared to identify proportional significance.

The method determines harmful effects on population within an assessment area, rather than an accurate assessment of possible health effects at any specific building or location.

Whilst the Regulations set out the equations to be used for calculating harmful effects, it does not define noise thresholds above which health effects should be calculated for, nor does it stipulate the assessment bands that should be used (0.1 dB, 1 dB or 5 dB), these have been provided by the EPA, and are as follows:

- The calculations for harmful effects should be undertaken in 1 dB assessment bands
- The assessment of harmful effects should be undertaken above the following thresholds which are in line with WHO Guidelines:
 - **Road traffic noise:** 53 dB L_{den} , 45 dB L_{night}
 - **Railway noise:** 54 dB L_{den} , 44 dB L_{night}

Harmful effects have therefore been calculated from population exposure statistics in 1 dB bands for the noise level thresholds set out above using the calculation methodology set out in the Regulations.

Table 12 presents the calculated harmful effects in the case of road traffic noise for the Agglomeration, and **Table 13** presents the calculated harmful effects in the case of railway noise.

Table 12: Agglomeration - Health Effects (Road Noise)

Harmful Effect	Number of People		% of Population*	
	All Sources	Major Sources	All Sources	Major Sources
Ischaemic Heart Disease (IHD)	101.22	61.41	0.01%	0.00%
Highly Annoyed (HA)	108,380.07	62,765.18	7.99%	4.63%
Highly Sleep Disturbed (HSD)	28,995.87	19,636.34	2.14%	1.45%

*Total population for Dublin Agglomeration = 1,355,967.68

Table 13: Agglomeration - Harmful Effects (Railway Noise)

Harmful Effect	Number of People		% of Population*	
	All Sources	Major Sources	All Sources	Major Sources
Highly Annoyed (HA)	21,051.97	19,438.74	1.55%	1.43%
Highly Sleep Disturbed (HSD)	10,986.94	10,447.44	0.81%	0.77%

*Total population for Dublin Agglomeration = 1,355,967.68

5.2.3 Strategic Noise Mapping Figures

The model calculations provide results outputs every 10m, which are used to produce the strategic noise maps.

The strategic noise maps are noise contour maps, a graphical representation illustrating the distribution of noise levels over a geographical area. The colours of the noise exposure bands are indicated in the legend, with darker colours representative of higher noise levels.

The Regulations do not set out noise limits which are permissible or impermissible in relation to environmental noise, however, do set the noise exposure bands to be reported, which are reflected in the strategic noise maps. In the absence of noise limits, it could be assumed that the closer the calculated noise level is to the highest noise exposure band set out in the Regulations the more undesirable it is.

The strategic noise maps are shown in the following figures for the two noise indicators specified in the Regulations, L_{den} and L_{night} .

- Figure 3: Agglomeration – Strategic Noise Map – L_{den} – Road Traffic – All Sources
- Figure 4: Agglomeration – Strategic Noise Map – L_{night} – Road Traffic – All Sources
- Figure 5: Agglomeration – Strategic Noise Map – L_{den} – Railway Traffic – All Sources
- Figure 6: Agglomeration – Strategic Noise Map – L_{night} – Railway Traffic – All Sources
- Figure 7: Agglomeration – Strategic Noise Map – L_{den} – Industry
- Figure 8: Agglomeration – Strategic Noise Map – L_{night} – Industry.

5.3 Key Insights from Strategic Noise Mapping

5.3.1 Population Exposure to Noise

The most prevalent noise source within the Agglomeration is from road traffic sources, where (rounded to the nearest 100) there is a total of 552,200 people in dwellings exposed to road traffic noise greater than, or equal to 55 dB L_{den} (in comparison to 84,200 people from railway sources and 2,200 from industry sources. This trend is also reflected for the total population exposed to levels greater than, or equal to 50 dB L_{night} .

The percentage of the total population in dwellings within the Dublin agglomeration that are exposed to noise levels greater than, or equal to 55 dB L_{den} from each source are:

- 41% for road traffic source
- 6% for railway sources
- <1% for industrial sources

The percentage of the total population in dwellings within the Dublin agglomeration that are exposed to noise levels greater than, or equal to 50 dB L_{night} from each source are:

- 21% for road traffic source
- 4% for railway sources
- <1% for industrial sources

More people in dwellings are exposed to noise levels at the highest noise exposures for L_{den} (5,700 people greater than, or equal to 75 dB) and L_{night} (1,900 greater than, or equal to 70 dB L_{night}) from railway sources than any other source.

5.3.2 Harmful Effects

The statistical representation of harmful effects on population within the Agglomeration indicates that more people are at risk of high annoyance from road traffic noise (108,380.07 people) than from railway sources (21,051.97 people). This equates to 7.99% of the population at risk of high annoyance from road traffic noise and 1.55% of the population at risk of high annoyance from railway noise.

The calculation of number of people highly sleep disturbed indicates that more people are at risk of high sleep disturbance from road traffic noise (28,995.87 people) than from railway sources (10,986.94 people). This equates to 2.14% of the population at risk of high sleep disturbance from road traffic noise and 0.81% of the population at risk of high sleep disturbance from railway noise.

The number of people statistically at risk from ischemic heart disease is only calculated for road traffic noise, therefore a comparison with railway noise cannot be made.

Figure 3: Agglomeration – Strategic Noise Map – L_{den} – Road Traffic – All Sources

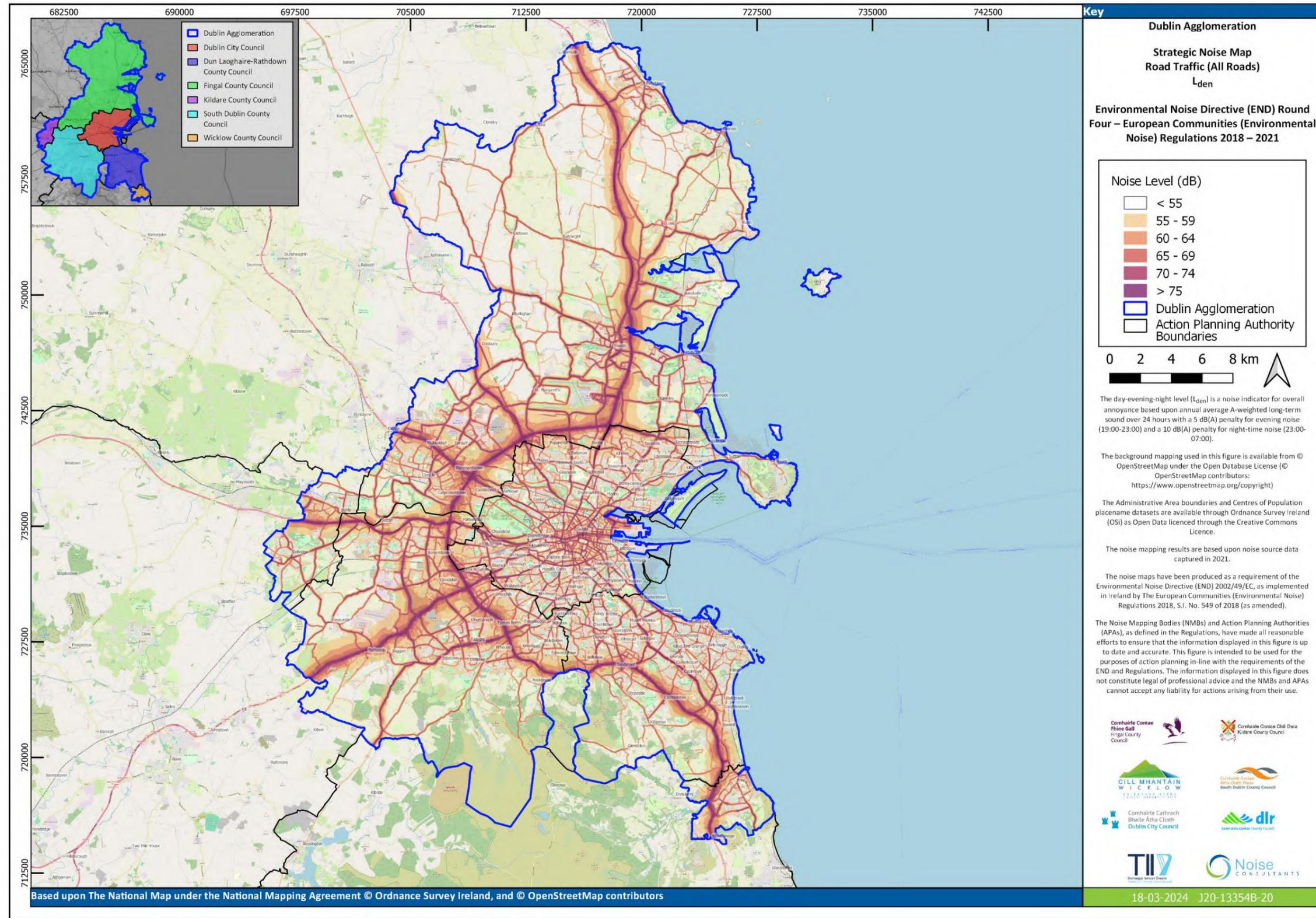


Figure 4: Agglomeration – Strategic Noise Map – L_{night} – Road Traffic – All Sources

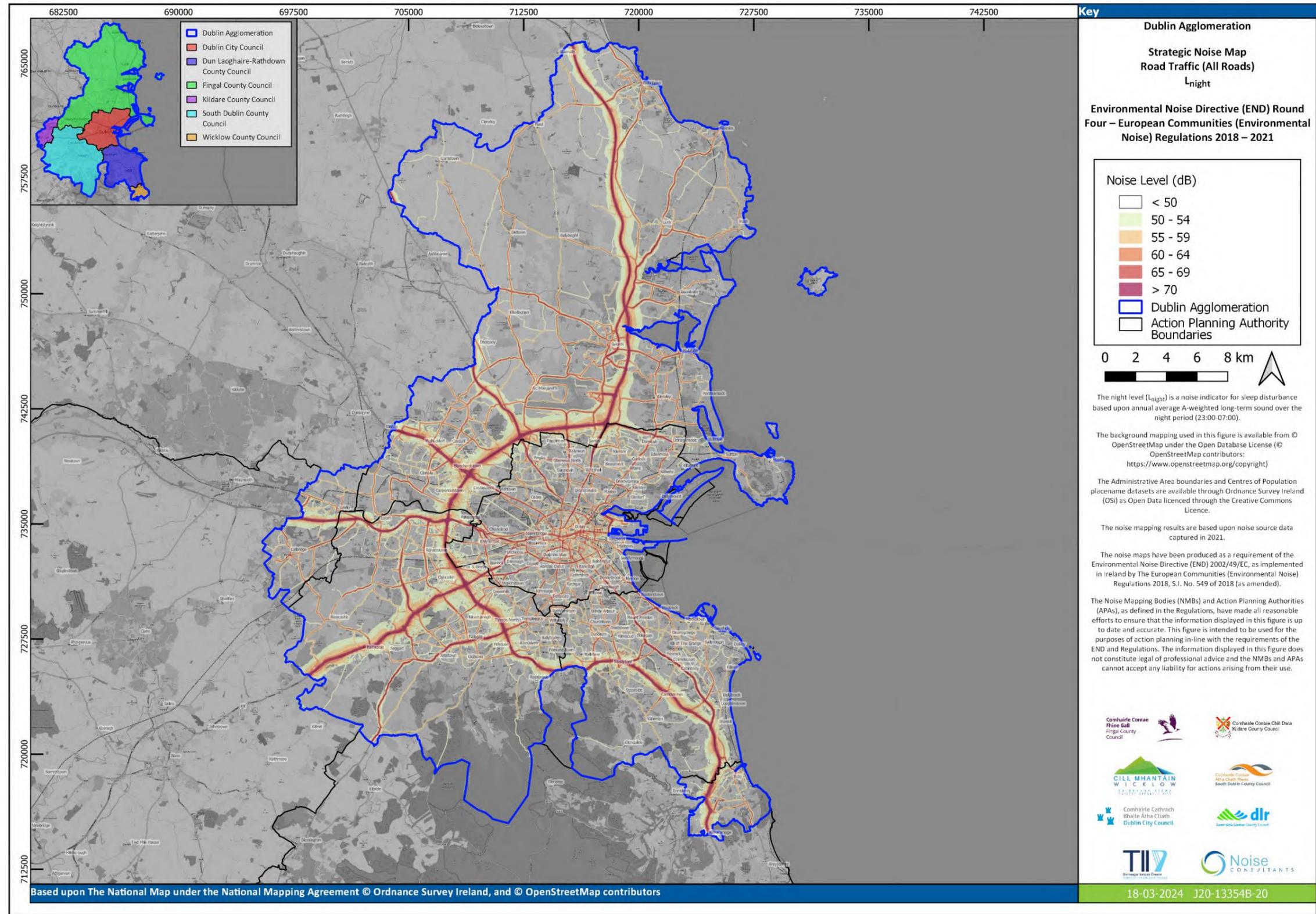


Figure 5: Agglomeration – Strategic Noise Map – L_{den} – Railway Traffic – All Sources

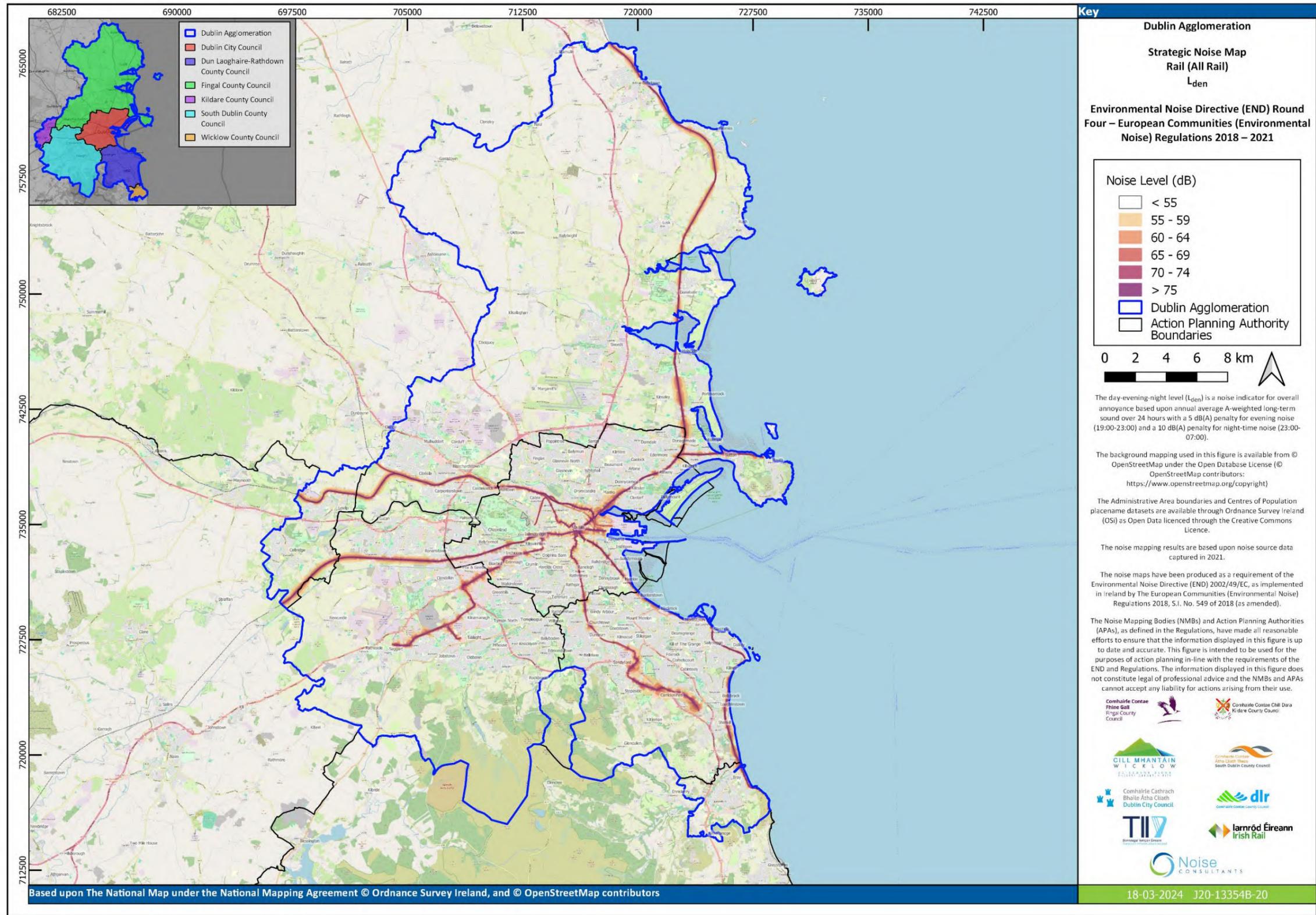


Figure 6: Agglomeration – Strategic Noise Map – L_{night} – Railway Traffic – All Sources

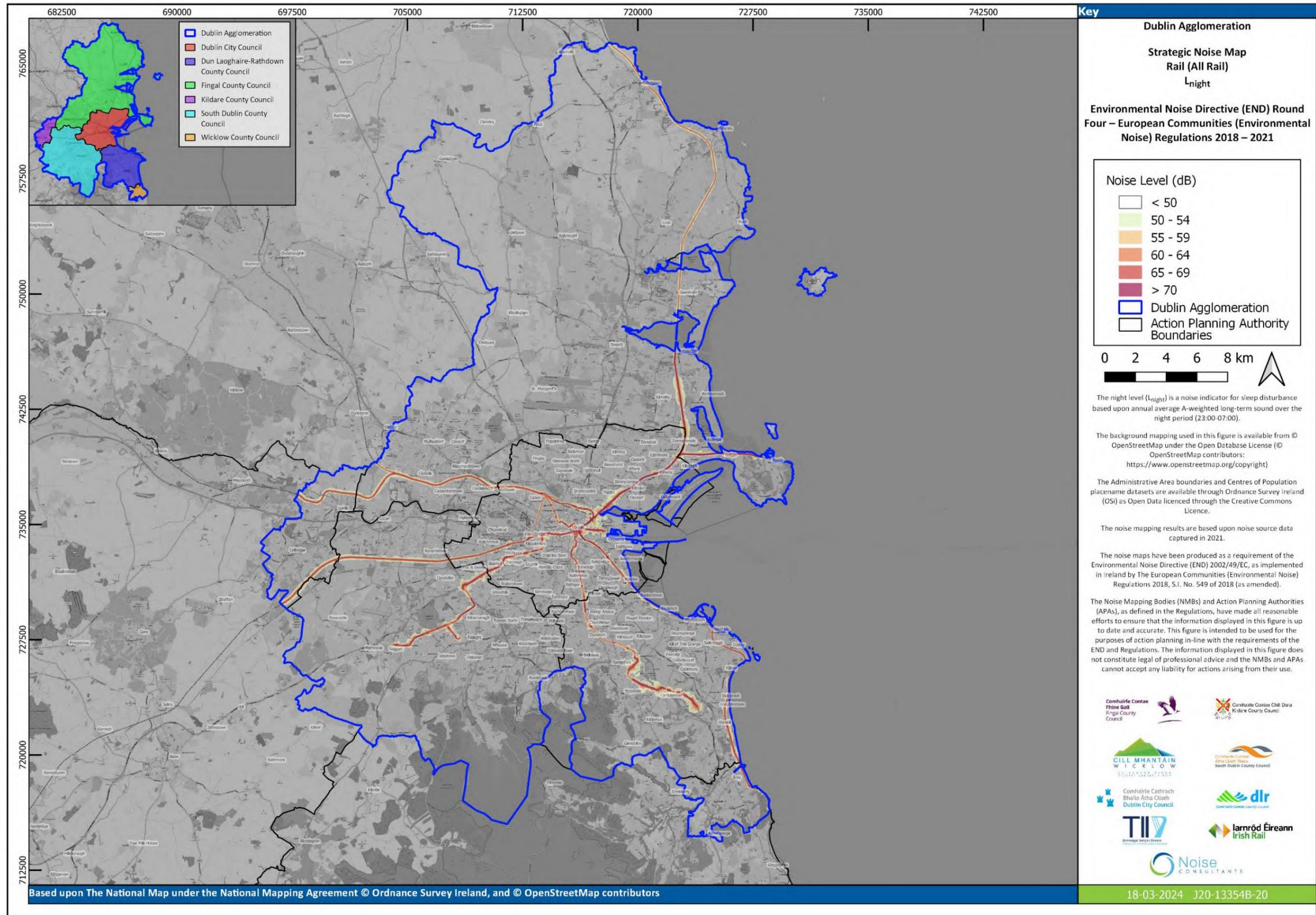


Figure 7: Agglomeration – Strategic Noise Map – L_{den} – Industry

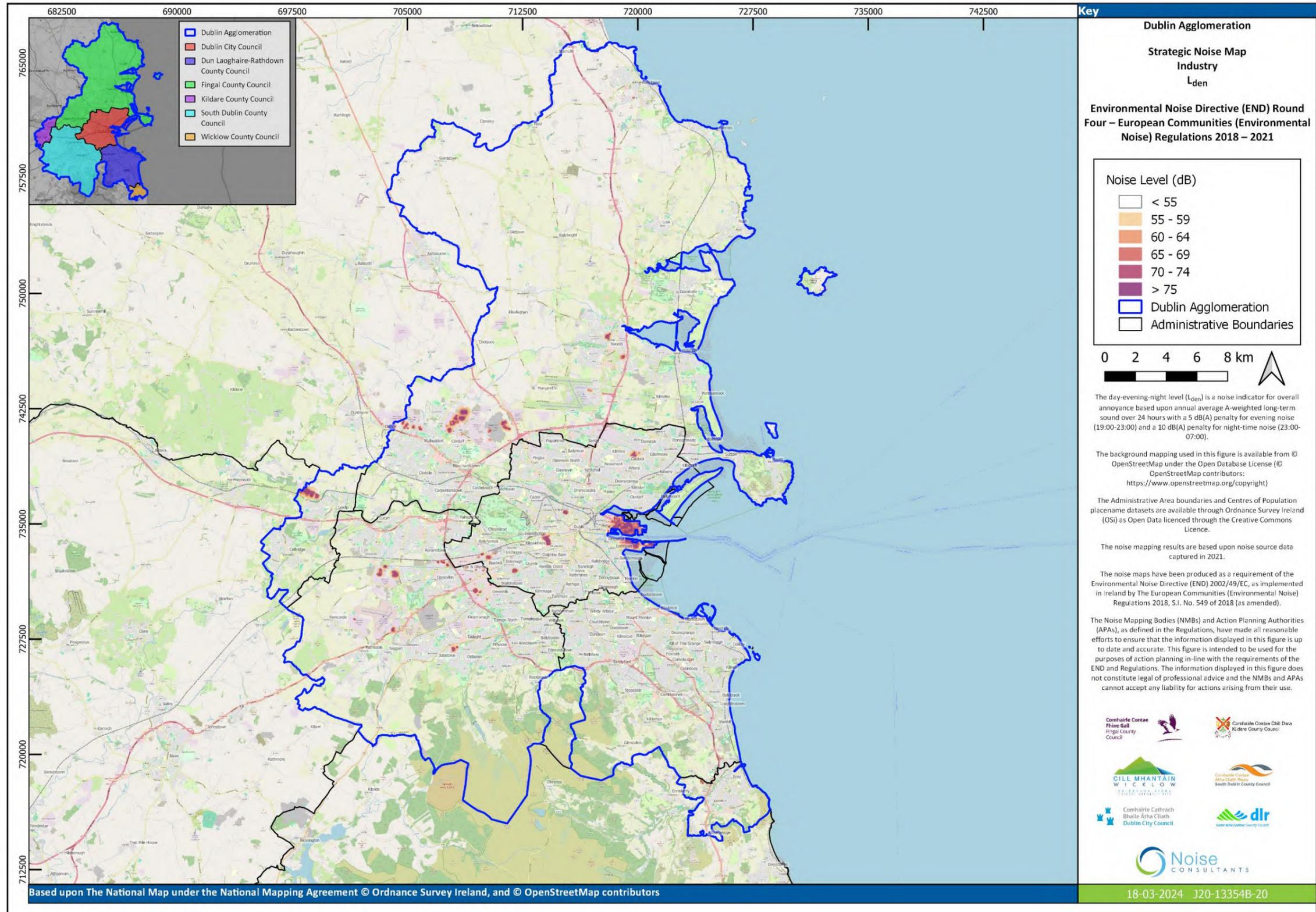
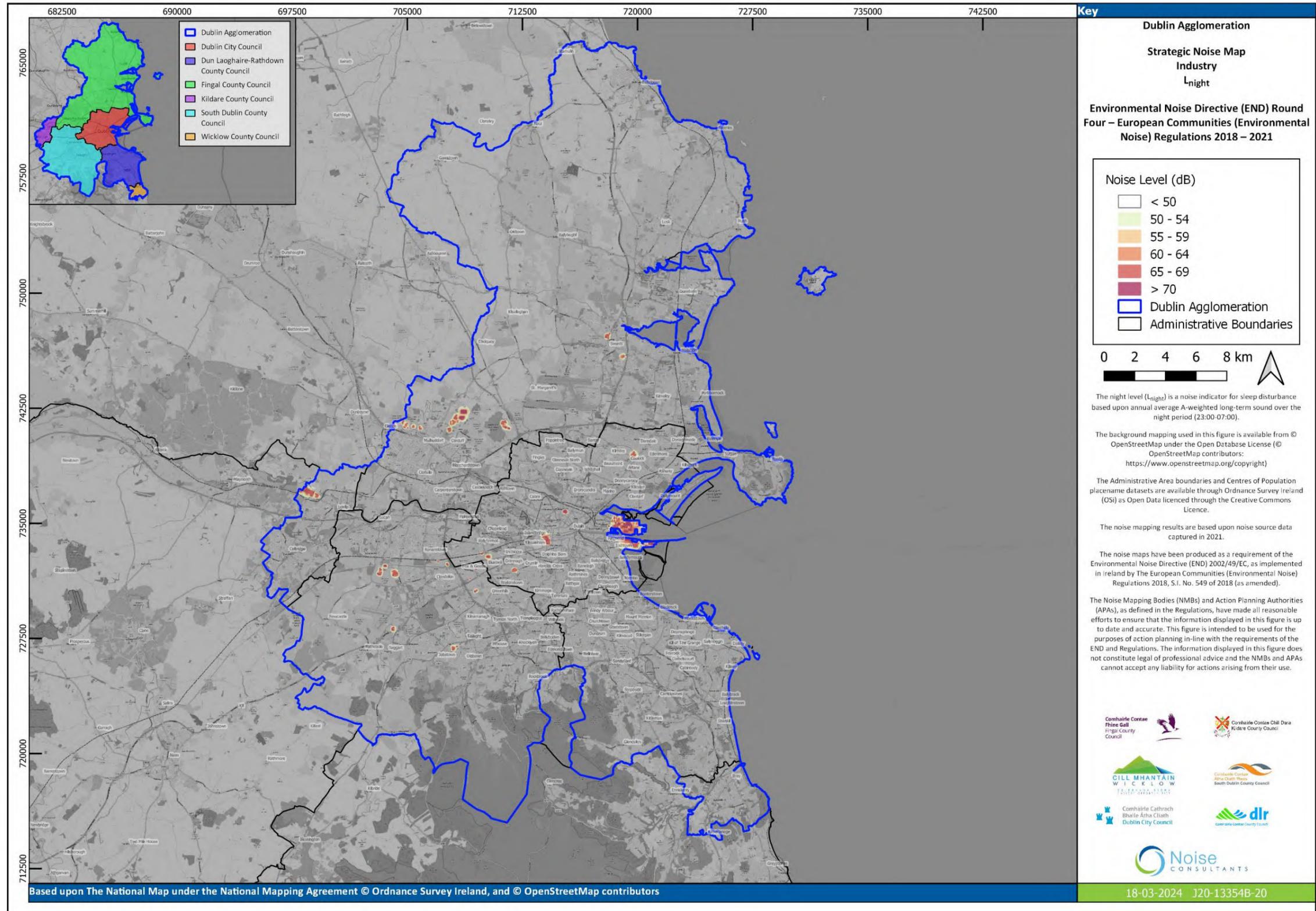


Figure 8: Agglomeration – Strategic Noise Map – L_{night} – Industry



6 Identification of Priority Important Areas

6.1 Regulatory Background

The Regulations require that APA's address "*priorities*" and "*the most important area or areas*" with a view to identifying "*measures*" that will help "*avoid, prevent or reduce*" the "*harmful effects, including annoyance, due to exposure to environmental noise*".

The EPA Guidance provides further guidance on these concepts, and sets out a recommended approach to identifying priorities:

1. **Important Areas (IAs)** – these are locations exposed to environmental noise which exceed "*any relevant noise limit*" as established by the EPA in their guidance;
2. **Most Important Areas (MIAs)** – these locations are a sub-set of Important Areas where the health effects are highest, typically through a product of noise exposure levels and the number of people highly annoyed; and
3. **Priority Important Areas (PIAs)** – between 5 and 10 Most Important Areas or group of similarly affected Most Important Areas, identified, through a prioritisation process, as those which will be evaluated and addressed during the implementation of the Noise Action Plan.

6.2 Scope

The Important Areas, Most Important Areas and Priority Important Areas within the Agglomeration have been identified with respect to noise from roads and railways.

For the identification of areas to be subject to noise management activities due to noise from airports and industrial activities, reference is made to the roles of the associated authorities relevant to the Agglomeration, as summarised below.

6.2.1 Noise from Airports

The Aircraft Noise Competent Authority (ANCA) at Fingal County Council is the designated competent authority for the purpose of aircraft noise regulation at Dublin Airport. A standalone Action Plan for Dublin Airport will be developed by Fingal County Council for 2024 – 2028. The Noise Action Plan will identify priorities in line with the noise abatement objective for the airport, relevant planning conditions at the airport, and any ANCA Regulatory Decision which has been made.

As such no further consideration is given to aircraft Important Areas, Most Important Areas or Priority Important Areas in this Agglomeration Noise Action Plan.

6.2.2 Noise from Industrial Activities, including Ports

The EPA holds the authority to grant licenses for specified industrial establishments in accordance with the IED/IPPC Regulations. In cases where strategic noise mapping reveals a potential need for a noise reduction from industrial areas, it is recommended that the APAs consult and collaborate with the EPA Office of Environmental Enforcement concerning existing license conditions and the facility's present noise management strategies.

Maps showing noise exposure for industry sites modelled are included in **Section 10 - Section 15** of this Noise Action Plan for each APA, where appropriate, for information purposes and to support the management of noise for these sites where queries may arise. No Most Important Areas and Priority Important Areas have been identified with respect to industry noise as there is no commonly accepted methodology that permits the determination of health effects associated with industry, and furthermore the exposure statistics are considerably lower than for rail or road sources.

6.3 Overview of Process

The process of identifying Important Areas, Most Important Areas and Priority Important Areas within the Agglomeration is Stage 1 of a two-stage process for the determination and implementation of noise management actions, as detailed within the Noise Action Plan.

Stage 1 includes using the results of the strategic noise maps to identify the number of people and noise sensitive properties exposed to levels above the limits set by the EPA Guidance which are in line with the 2018 WHO *Environmental Noise Guidelines for the European Region* (WHO ENG 2018)²⁴. These limits for road and rail traffic are set out in **Section 6.4** below.

The findings of the Important Area process are then used to inform an automated process within Geographic Information System (GIS) software to generate raster heatmaps of the relative number of people highly annoyed due to noise in a given area, referred to as Most Important Areas. The APA, in consultation with the NMBs, prioritise the Most Important Areas to identify those which are to be addressed during the implementation of the Noise Action Plan, referred to as Priority Important Areas.

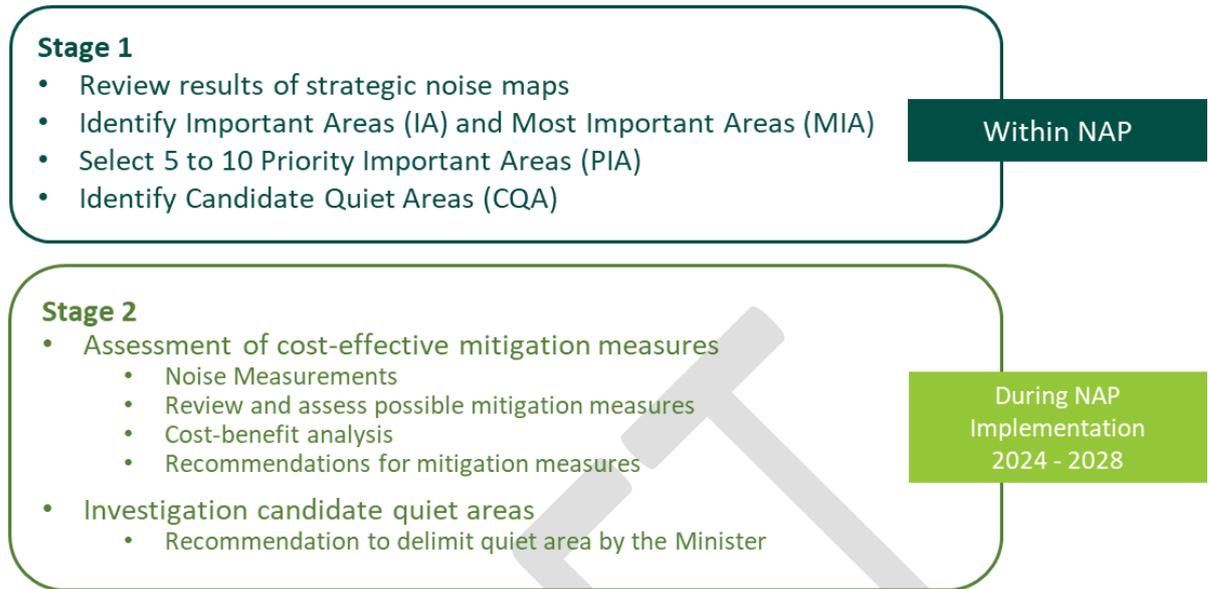
Stage 1 also includes a process for the identification of areas where environmental noise quality is good, and therefore should be considered for protection from increased exposure to environmental noise. The process of identifying these areas ('Candidate Quiet Areas') is discussed in **Section 7**.

Stage 2 of the process takes place during the implementation of the Noise Action Plan, and focuses on undertaking an assessment of each of the identified Priority Important Areas including identification of appropriate noise mitigation measures.

An overview of the two-stage process is set out diagrammatically in **Figure 9**.

²⁴ Environmental noise guidelines for the European Region, WHO 2019. Available at: <https://www.who.int/europe/publications/i/item/9789289053563> [Accessed October 2023]

Figure 9: Overview of Recommended Approach to Determine Actions to be Undertaken, and Quiet Areas to Delimit



6.4 Important Areas (IAs)

The EPA Guidance references the WHO ENG 2018 guidelines in setting the “noise limit value” for identifying Important Areas, namely:

- Railway noise: 54 dB L_{den} and 44 dB L_{night}; and
- Road traffic noise: 53 dB L_{den} and 45 dB L_{night}.

The noise limit values are relevant for the reduction of harmful effects from environmental noise on human health, and a summary of the number of people and number of noise sensitive receptors in the Agglomeration which experience environmental noise above these levels is summarised in **Table 14** and **Table 15**, respectively.

Table 14: Important Areas - Number of People in Dwellings

Noise Source	Noise Limit Value	Number of People in Dwellings Exposed to Level Above Noise Limit Value
Road Traffic	53 dB L _{den}	712,170
	45 dB L _{night}	588,702
Railway	54 dB L _{den}	93,946
	44 dB L _{night}	112,089

Table 15: Important Areas - Number of School Buildings (& Hospital Buildings)

Noise Source	Noise Limit Value	Number of People in Dwellings Exposed to Level Above Noise Limit Value
Road Traffic	53 dB L _{den}	690(38)
	45 dB L _{night}	598(35)
Railway	54 dB L _{den}	108(12)
	44 dB L _{night}	125(15)

6.5 Most Important Areas (MIAs)

The results of the Important Areas have been used to inform the identification of Most Important Areas. The process of identifying the Most Important Areas is set out in the EPA Guidance and is an automated process within GIS software which uses the results of the strategic noise maps assigned to population statistics in areas with exposures greater than the Important Area noise limit values.

The assignment of population to the calculated noise levels is set out within Annex II of the END (CNOSSOS-EU) and provides building level statistics across the Agglomeration. Following the method in Annex II of the END, the harmful effects due to noise are statistically assessed and used to generate a gridded “heatmap” of values which represent (approximately) the number of people highly annoyed per 100m², which is in-line with the approach set out in the EPA Guidance.

Using the heatmap, the areas of higher concentrations of people highly annoyed (HA) are identified and delineated as a digital polygon. The EPA Guidance sets a density criterion of 15 or more people per 100m² as being the most appropriate for Most Important Areas in main urban areas, with lower criteria of 10 and 7.5 people per 100m² appropriate on the edge of urban or in rural areas.

It is crucial to emphasize that the approach to identifying Most Important Areas is of a statistical nature and pertains to the entire population encompassed by the noise maps. It should not be construed as a precise assessment of harmful effects for specific buildings, nor are the extents of the Most Important Areas definitive. Instead, they are indicative in identifying areas with a relatively high number of people highly annoyed due to noise.

6.5.1 Most Important Areas Summary

A summary of the Most Important Areas identified within the Agglomeration using the EPA Guidance density criterion of 15 or more people per 100m² is given in **Table 16**.

Using this criterion, 630 Most Important Areas were identified within the Agglomeration, where Dublin City Council have the most identified (277) and Kildare County Council the least (3). The Most Important Areas within the Agglomeration are shown in **Figure 10**.

Table 16: Agglomeration – Most Important Areas (MIAs) Summary

APA	All Sources	No. of MIA			Total Population*	Harmful Effects Statistics**		
		Road	Rail	Other		HA	HSD	IHD
DCC	277	200	77	0	120,300.24	22,938.52	8,935.14	16.69
DLRCC	85	64	21	0	17,808.18	3,655.09	1,468.58	2.53
FCC	111	88	22	1	34,725.58	6,153.41	2,070.12	5.56
KCC	3	0	3	0	138.44	43.38	23.88	0.00
SDCC	142	127	15	0	33,634.23	6,189.20	2,171.64	5.71
WCC	13	11	2	0	1,896.04	417.51	143.50	0.44
Agglom.	631	490	140	1	208,502.71	39,397.11	14,812.86	30.93

*The total population inside all Most Important Areas (MIA)

** Total harmful effects inside all MIA (the harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building)

6.6 Priority Important Areas (PIAs)

The Most Important Areas established within the Agglomeration are summarised in **Table 16**. Given the number of Most Important Areas identified, a process has been undertaken to identify which should be considered a priority (Priority Important Area), for which an assessment of noise mitigation measures will be undertaken within the life cycle of the Noise Action Plan and those deemed justified implemented subject to funding and resources.

The identification of the Priority Important Areas has been undertaken by the APA in consultation with the NMBs and relevant stakeholders. The EPA Guidance recommends that between 5 and 10 Priority Important Areas are selected.

To inform APA decisions on the selection of Priority Important Areas, consistent with the requirements of the EPA Guidance, associated statistical information has been developed for each Most Important Area, including:

- Noise source identifying the Most Important Area, i.e., railways or roads
- Area (m²)
- Total population
- Number of people highly annoyed (HA)
- Number of people highly sleep disturbed (HSD)
- Population increased risk of ischaemic heart disease (IHD)
- Number of dwellings
- Population noise exposure above END threshold values:

- road traffic noise exposure in 5 dB bands ($L_{den} 55 \rightarrow 75$ dB, $L_{night} 50 \rightarrow 70$ dB)
- railway noise exposure in 5 dB bands ($L_{den} 55 \rightarrow 75$ dB, $L_{night} 50 \rightarrow 70$ dB)

The Priority Important Areas are summarised in **Table 17** and were selected by the APAs based upon those Most Important Area or groups of Most Important Areas with the greatest number of people and consideration of other factors such as planned road maintenance works and traffic plans and projects.

The Agglomeration Priority Important Areas selected cover, statistically speaking, 20,057.70 people highly annoyed (HA) (comprising 15,606.93 people HA due to road sources and 4,450.77 people HA due to rail sources), 7,314.68 people highly sleep disturbed (HSD) (comprising 4,854.81 people HSD due to road sources and 2,459.87 people HA due to rail sources) and 13.42 people at increased risk of ischemic heart disease (IHD) (from road sources), with the potential to benefit from the noise management measures considered.

Table 17: Agglomeration – Priority Important Area (PIA) Summary

APA	No. of PIA					Harmful Effects Statistics**		
	All Sources	Road	Rail	Other	Total Population*	HA	HSD	IHD
DCC	11	7	4	0	61,492.46	11,033.14	4,096.28	8.84
DLRCC	10	7	3	0	9,431.25	1,968.83	848.45	1.24
FCC	11	10	0	1 [#]	20,177.17	3,440.23	1,063.03	3.63
KCC	2	0	2	0	138.44	43.38	23.88	0.00
SDCC	10	8	2	0	16,829.31	3,198.01	1,158.81	2.92
WCC	7	7	0	0	1,716.71	374.11	124.23	0.42
Agglom.	51	39	11	1	109,785.34	20,057.70	7,314.68	13.42

*The total population inside all Most Important Areas (MIA) associated with the Priority Important Areas (PIA)

** Total harmful effects inside all MIA associated with the PIA (the harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building)

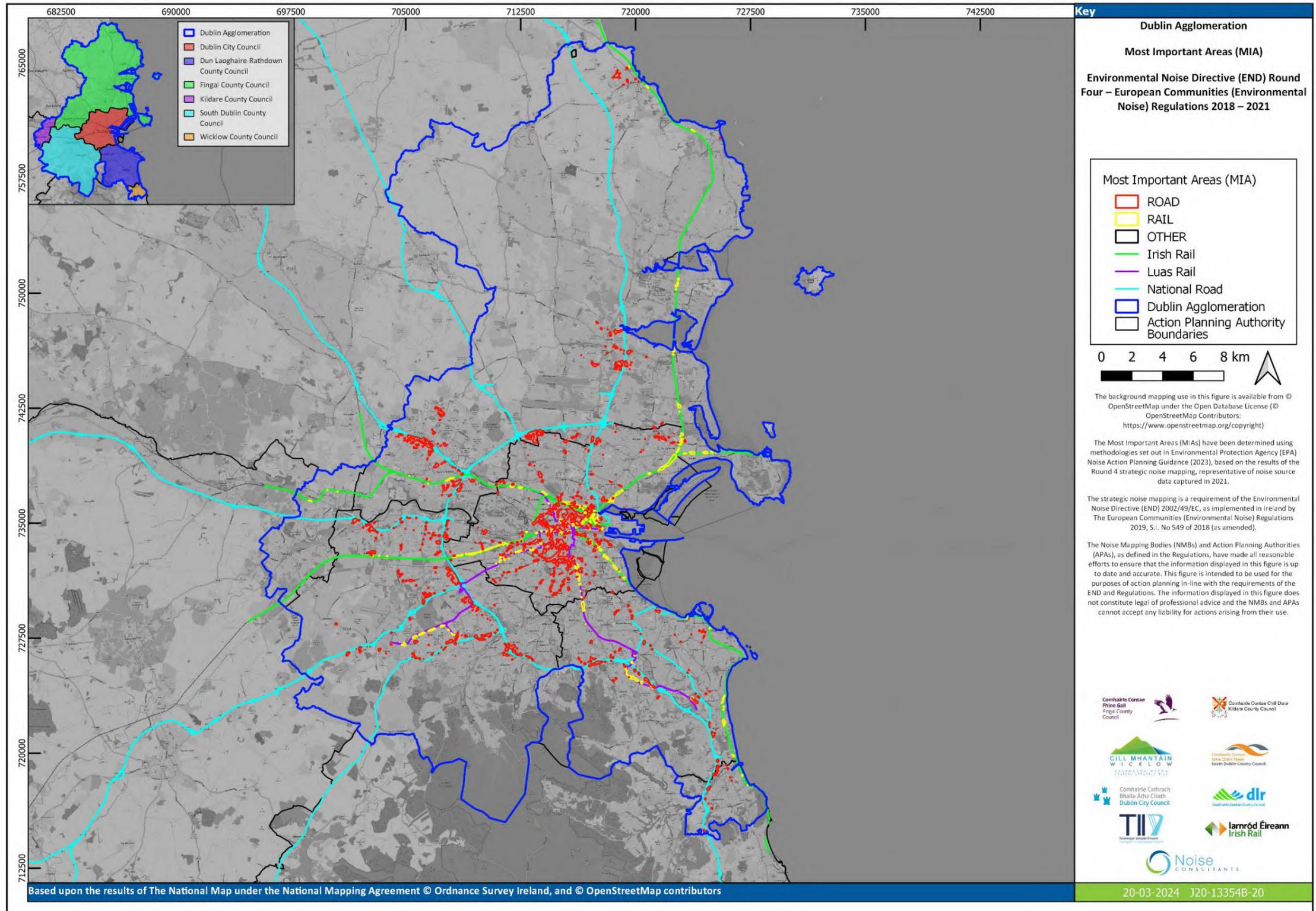
PIA is identified by a road source, however noted as ‘Other’ as selected by Fingal County Council based on local knowledge.

Figure 10 shows the 631 Most Important Areas across the Agglomeration, as summarised in **Table 16**. The Most Important Areas and selected Priority Important Areas specific to each of the APA are set out in **Section 10 - Section 15**.

Noise management measures to be considered in the assessment of noise mitigation for the identified Priority Important Areas are set out in **Section 8**. The progress of investigating these measures will be reported to the EPA throughout the life cycle of the Noise Action Plan.

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Figure 10: Agglomeration – Most Important Areas (MIAs)



7 Identification of Candidate Quiet Areas

7.1 Regulatory Background

The Fourth Schedule of the European Communities (Environmental Noise) Regulations 2018 (S.I. 549/2018) requires APAs to set out actions in relation to measures to preserve Quiet Areas.

At present there is no universally accepted definition by EU Member States²⁵ of what constitutes a Quiet Area; however, they are regarded as areas where environmental noise levels are deemed to be good and therefore protection should be considered in the context of new development.

The process of delimiting an area as a 'Quiet Area' is informed by an investigation by the APA. For those areas where investigation outcomes identify a benefit of delimiting it as a Quiet Area, the evidence is put forward to the EPA for consideration in consultation with the Minister. Successful applications result in a delimitation of the Quiet Area.

7.1.1 Existing Quiet Areas

There are eight existing Quiet Areas delimited within the Agglomeration, located within the Dublin City Council Area:

- Edenmore Park, Raheny;
- Dollymount SAA – Terrestrial Area Only (excluding slob lands) ('North Bull Island');
- St. Annes Park, Raheny;
- Palmerston Park, Dartry;
- The Cabbage Gardens, Cathedral Lane;
- Mount Bernard Park, Shandon Park, Phibsborough;
- Ranelagh Gardens, Ranelagh; and
- Blessington Basin, Blessington St.

These Quiet Areas were delimited under Round 3²⁶ and used a different methodology to that now proposed by the EPA for Round 4.

²⁵ European Parliament, Towards a comprehensive noise strategy, Directorate General for Internal Policies, Policy Department A: Economic and Scientific Policy, 2012

²⁶ <https://www.dublincity.ie/residential/environment/air-quality-monitoring-and-noise-control-unit/dublin-city-noise-maps/quiet-areas-dublin-city>

7.2 Overview of Process

The process of determining which areas should be proposed for delimiting as Quiet Areas is a two Stage process. Stage 1 involves identifying Potential Candidate Quiet Areas and Candidate Quiet Areas using available data sets for green and blue spaces and the results of the strategic noise mapping. Stage 1 is detailed within this Noise Action Plan, and results in Candidate Quiet Areas for inclusion in Stage 2.

For Stage 2, the Candidate Quiet Areas will be the subject of investigations by the APAs during the implementation of the Noise Action Plan. The evidence captured from these investigations will be used to inform recommendations for areas being delimited as a Quiet Area by the Minister.

The subsequent sections provide an overview of the process proposed by the EPA Guidance which has been used to identify Potential Candidate Quiet Areas and Candidate Quiet Areas, as well as that which may be used to confirm Quiet Areas.

7.3 Stage 1: Identification of Candidate Quiet Areas

7.3.1 Potential Candidate Quiet Areas (PCQAs)

EU Member States have adopted several methods for defining Quiet Areas within agglomerations²⁷, including, but not limited to:

- Noise related criteria, based on the results of the strategic noise mapping or measurements;
- Land-use;
- Local amenity value;
- Accessibility;
- User and visitor experience, including soundwalks; and
- Stakeholder engagement, including workshops.

In acknowledgement of the differing approaches in the identification of Quiet Areas across Member States, the identification and evaluation of Quiet Areas in Ireland have been shaped by the national policy approach, definitions, and EPA research.

The EPA Research Program is a Government of Ireland initiative funded by the Department of the Environment, Climate and Communications (DECC), with aims of improving the health and wellbeing of the Irish population. The EPA Research identified evidence for direct positive relationships between the presence of green and blue spaces with health indicators including self-reported health, mortality and disability.

²⁷ European Environment Agency, Good practice guide on quiet areas, EEA Technical report, No 4/ 2014

The EPA Guidance provides a list of primary and secondary public open spaces which could be considered as suitable ‘green spaces’ in the context of the identification of Quiet Areas. These public open spaces include: recreational areas; playing fields; playgrounds; public parks and gardens; beaches; nature reserves; cemeteries; riverbanks; canals, places of worship; hospitals, including nursing and convalescence homes; educational institutions; and childcare/crèche facilities. These green spaces are referred to as Potential Candidate Quiet Areas.

The identification of Potential Candidate Quiet Areas in the Agglomeration has involved consideration of the following spatial data sources: Dublin City Council Parks Strategy 2016²⁸, Dublin City Council Parks Strategy 2017²⁹, Parks Main DLRCC³⁰, DLRCC OpenSpaces³¹, DLRCC Parks³², Playing Pitches FCC³³, Soccer Pitches FCC³⁴, Parks SDC³⁵, National Land Cover Map for Ireland, 2022³⁶, OSi Prime2 data, Corine Land Cover and Land Use Data 2020, and Urban Atlas 2018.

For the purpose of this Noise Action Plan, Potential Candidate Quiet Areas are identified as primarily major parks and gardens within the Agglomeration with an area greater than 1 hectare (area has been rounded to the nearest 1 hectare), and considered to have a higher potential of significant community benefit through Quiet Area delimitation. A summary of these areas is set out in **Table 18**, and shown in **Figure 12**.

²⁸ data.smartdublin.ie/dataset/6fde9a72-2f29-4e5a-b2aa-d02b2a2cdc2d/resource/42fec1fb-5d7e-4946-b996-982037782b3d/download/dcc_parks_strategy2016_park_classification.geojson [Accessed March 2024]

²⁹ https://data.smartdublin.ie/dataset/6fde9a72-2f29-4e5a-b2aa-d02b2a2cdc2d/resource/a0686bc3-022b-4d7c-b148-d67d6ca29620/download/dcc_parks_strategy2016_park_classification.kml [Accessed March 2024]

³⁰ <https://data.smartdublin.ie/dataset/main-parks-dlr> [Accessed March 2024]

³¹ Provided by Dún Laoghaire-Rathdown County Council

³² Provided by Dún Laoghaire-Rathdown County Council

³³ <https://data.smartdublin.ie/dataset/playing-pitches-fcc> [Accessed March 2024]

³⁴ <https://data.smartdublin.ie/dataset/soccer-pitches-sdcc> [Accessed March 2024]

³⁵ <https://data.smartdublin.ie/dataset/parks-sdcc> [Accessed March 2024]

³⁶ <https://www.epa.ie/our-services/monitoring--assessment/assessment/mapping/national-land-cover-map/> [Accessed March 2024]

Table 18: Agglomeration – Potential Candidate Quiet Area: Summary

Action Planning Authority	Number of Potential Candidate Quiet Area
DCC	210
DLRCC	162
FCC	125
KCC	38
SDCC	107
WCC	10
Agglomeration	652

The Potential Candidate Quiet Areas summarised in **Table 18** are evaluated to identify whether they currently have low levels of environmental noise as indicated by the strategic noise mapping, or whether they have levels of environmental noise which are low in comparison to the levels experienced by those living nearby.

For the evaluation, the $L_{Aeq,16hr}$ noise metric has been determined as a 10m grid model output for all noise sources within the scope of the Noise Action Plan (road traffic, rail traffic, airport³⁷ and industrial activity sites). A 10m grid of the maximum noise contribution of any of the noise sources ('max noise grid') is used to identify areas of low noise, and the median noise level of the area.

The evaluation, informed by the max noise grid, allows Potential Candidate Quiet Areas to be described in the following three categories:

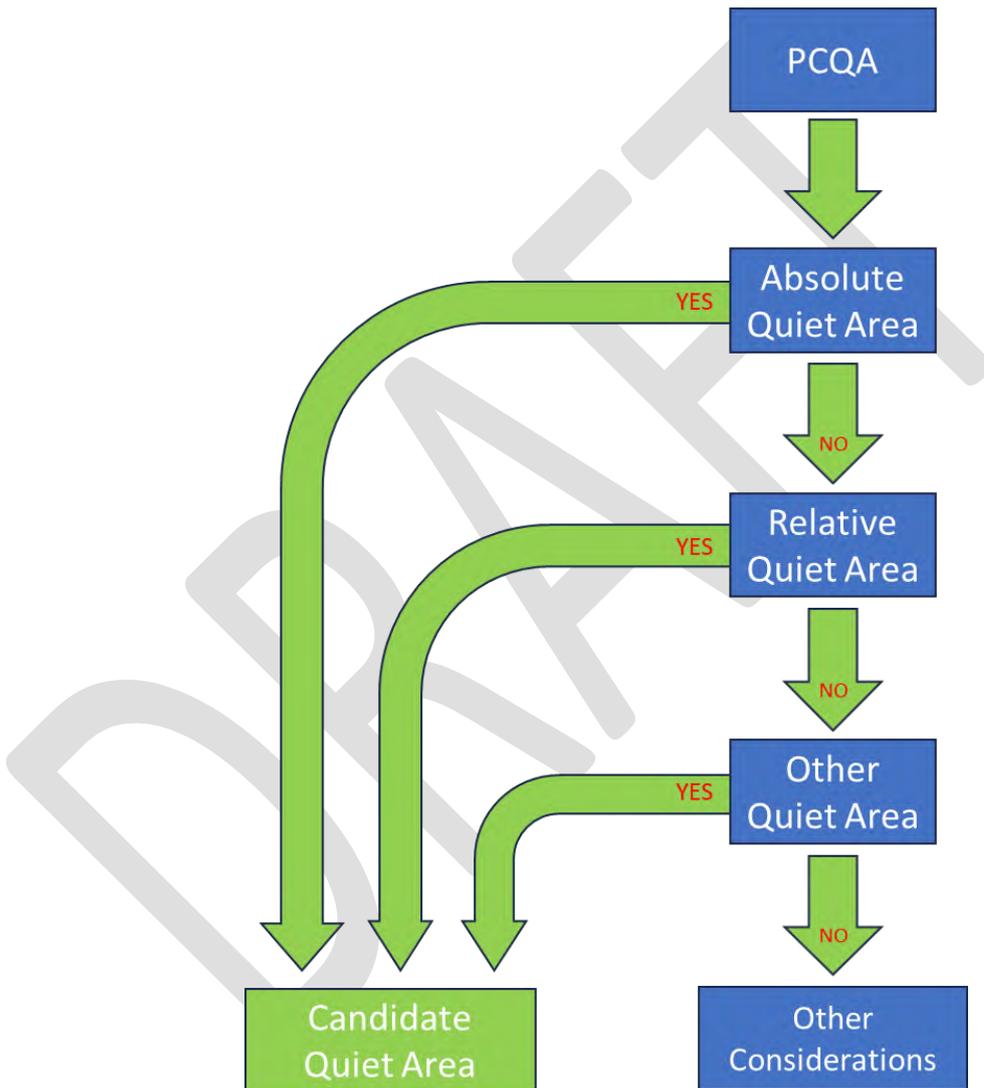
- **Absolute quiet areas:** where environmental noise levels are low (median noise level of a Potential Candidate Quiet Area is less than 50 dB $L_{Aeq,16hr}$) and should be preserved;
- **Relatively quiet areas:** where environmental noise levels are relatively low in comparison to community noise exposures (25% of population within 1000m of Potential Candidate Quiet Areas are exposed to noise 10 dB above the median noise level of the Potential Candidate Quiet Area); and
- **Other quiet areas:** in cases where environmental noise levels, although low, do not meet either of the above Candidate Quiet Area categories, but the Potential Candidate Quiet Area is deemed by the APA as an area of high community value.

³⁷ Airport noise statistics for Dublin Airport shall be presented within a standalone Noise Action Plan. However, as a conservative representation of environmental noise levels in Potential Candidate Quiet Areas, airport noise from Dublin Airport, representative of the 2021 assessment year, has been used.

An automated process within GIS software has been applied to evaluate the Potential Candidate Quiet Areas summarised in **Table 18** determine whether they meet with the ‘absolute’ or ‘relative’ Candidate Quiet Area criteria.

The Candidate Quiet Area process is shown diagrammatically in **Figure 11**, and described in the following sections.

Figure 11: Candidate Quiet Area Process



7.3.2 Candidate Quiet Areas (CQAs)

A summary of those Potential Candidate Quiet Areas (PCQA) which meet the absolute, relative and other Candidate Quiet Areas (CQAs) criteria within the Agglomeration, is given in **Table 19**. The Candidate Quiet Areas are also shown in **Figure 12**.

Table 19: Numbers of Potential Candidate Quiet Areas (PCQAs) and Candidate Quiet Areas (CQAs) in Each Category

Description	Agglomeration	DCC	DLRCC	FCC	KCC	SDCC	WCC
Total PCQAs Considered	652	210	162	125	38	107	10
CQAs Identified							
Absolute	166	62	52	38	2	9	3
Relative	4	2	0	2	3	0	0
Other	10	7	0	2	1	0	0
Total	180	71	52	42	3	9	3

7.4 Stage 2: Investigation of Candidate Quiet Areas

The evaluation outputs summarised in **Table 19** are used by the APA to identify those areas ('Candidate Quiet Areas') which will be subject to an investigation during the implementation of the Noise Action Plan to inform an understanding of the benefit of delimiting as a Quiet Area.

A number of APAs have identified their Candidate Quiet Areas from the areas listed in **Table 19**, while others had committed to shortlist those to be evaluated at Stage 2, during the implementation of the Noise Action Plan. Specific details in each case are included in the relevant APA **Section 10 - Section 15**.

The Stage 2 investigation will be informed by statistical, quantitative and qualitative information, such as:

- Population within 1,000m;
- Area (m²);
- Area (m²), and %area <45 dB L_{Aeq,16hr}³⁸;
- Stakeholder engagement;
- Sound pressure measurements;
- Visitor experience;
- Expert assessments; and
- Other local community evaluation criteria.

³⁸ Sound Pressure Level below which '100% of visitor perceived noise quality as good'. European Environment Agency, Quiet areas in Europe, EEA Technical report, No 14/ 2016, Table 3.2

For each of the areas listed in **Table 19** the aspects that can be determined from the strategic noise mapping (area (m²), population within 1,000m, median noise level, and the Candidate Quiet Area category) are included in **Section 10 - Section 15**.

For aspects that cannot be determined from strategic noise mapping (sound pressure measurements, visitor experience, expert assessment, and other local community evaluation criteria), the APA will undertake assessments during the implementation of the Noise Action Plan. Examples of assessments include evaluations of soundscape³⁹ through organised soundwalks⁴⁰, or promote the use of the Hush City⁴¹ mobile app.

Where an appropriate benefit is determined, the outcomes of the Candidate Quiet Area investigation(s) would be forwarded to the EPA for consideration in consultation with the Minister, with successful applications resulting in a delimitation of the Quiet Area.

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³⁹ See ISO 12913 Acoustics – Soundscape series of standards.

⁴⁰ *A citizen science and soundscape approach to the investigation of quiet areas for Limerick City*, S. Jennings et al., Forum Acusticum 2023.

⁴¹ <https://map.opensourcesoundscapes.org/view-area> [Accessed March 2024]

Figure 12: Agglomeration – Potential Candidate Quiet Areas

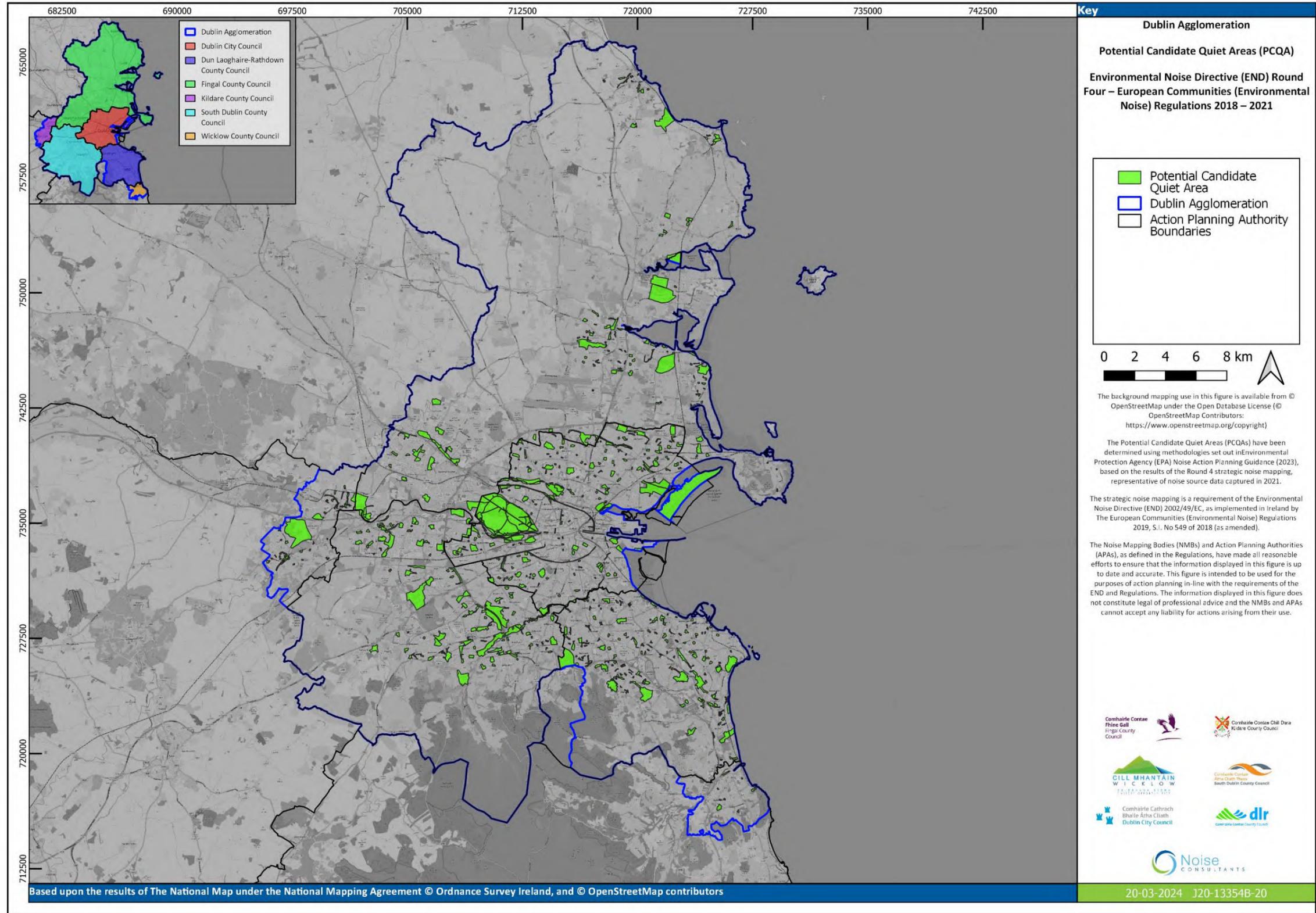
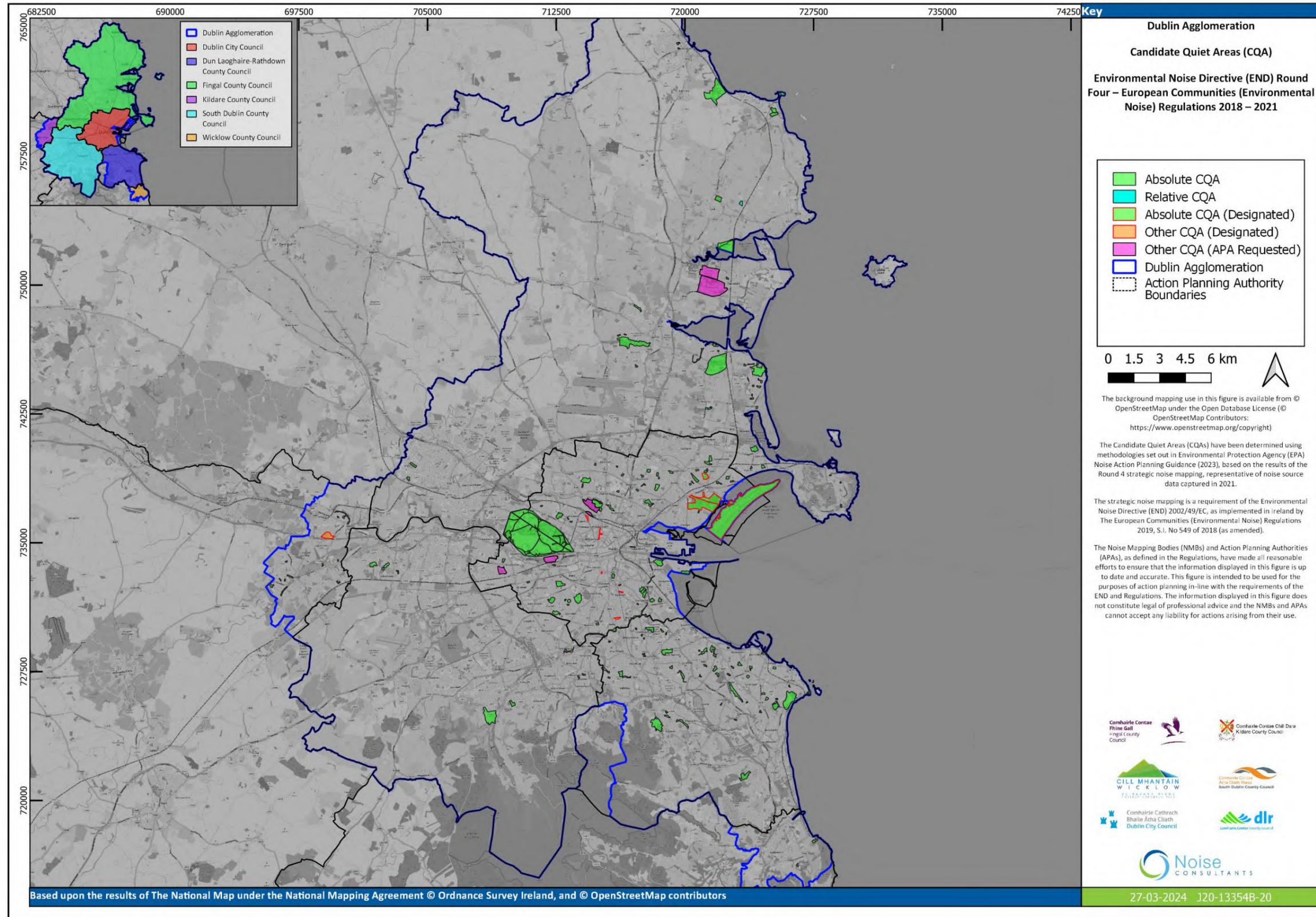


Figure 13: Agglomeration – Candidate Quiet Areas



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7.5 Other Considerations

A desirable outcome of the Regulations is for further increases in environmental noise to be prevented, where practicable, to support the objectives of sustainable development.

Therefore, it is for responsible authorities, including Local Authorities and An Bord Pleanála, to consider appropriate noise management measures, beyond the consideration of noise mitigation for the areas identified through the processes described in **Section 6**. This is consistent with National Planning Policy Objective 65, which supports the aims of the Regulations through national planning guidance.

The appropriate use of the planning system can be used to help avoid, or minimise, the adverse impacts of noise without placing unreasonable restrictions on development.

There are two main scenarios in development where noise could be viewed as a material consideration:

1. Bringing people to noise

- New housing, hospital, school, nursing home etc developments near to existing road, rail, industrial or airport noise;
- Noise levels outside the façade, in gardens, in public open spaces;
- Noise levels inside the building.

2. Bringing noise to people

- New or altered roads, railways, industrial sites or airports or commercial developments which would alter the noise environment in the vicinity of noise sensitive locations.

To effectively employ the planning process for consistent noise exposure avoidance or mitigation, it is deemed beneficial to incorporate guidelines on noise exposure levels during the initial proposal and design phase of planning applications. Descriptions of guidance adopted in the Agglomeration is set out below.

7.5.1 ProPG: Planning & Noise - New Residential Development

The *Draft Interim National Guidance for the Consideration of Transportation Noise in the Design of New Residential Development* (2021) (described in **Section 2.3.11**), which the Local Authorities have cognisance of, recommends that consideration is given to the potential impact of transportation noise in line with Professional Planning Guidance (ProPG) on Planning & Noise: New Residential Development (ProPG, 2017).

ProPG was published in May 2017 by the Acoustics and Noise Consultants (ANC), Chartered Institute of Environmental Health and UK Institute of Acoustics (IOA). Its primary goal is to aid in planning to deliver sustainable development by promoting good health and well-being in relation to noise. It encourages the use of good acoustic design process in and around proposed new residential development, having regard to national policy.

Any issues related to noise should be given consideration at the earliest stages of the development process to facilitate streamlined decision making in planning. ProPG follows a systematic, proportionate, risk based, two-stage, approach.

Stage One is an Initial Site Noise Risk Assessment which should be conducted to establish the level of risk from noise, not including any mitigation measures. There are four noise risk categories (negligible, low, medium and high). The outcome of this assessment should not directly inform a decision, rather to allow for the consideration of good acoustic design.

Stage Two is a full noise assessment including four recommended key elements:

- Element 1 - demonstrating a “Good Acoustic Design Process” avoiding “unreasonable” and preventing “unacceptable” acoustic conditions;
- Element 2 - observing “Internal Noise Level Guidelines”;
- Element 3 - undertaking an “External Amenity Area Noise Assessment”;
- Element 4 - consideration of “Other Relevant Issues”.

To support proposals for a development an Acoustic Design Statements should be produced which will aid recommendations formulated by the decision maker.

7.5.2 Acoustic Ventilation and Overheating, Residential Design Guide (AVO)

In 2020 the ANC and IOA jointly published the Acoustic Ventilation and Overheating, Residential Design Guide (AVO), which provides an approach as to how the competing aspects of thermal and acoustic comfort can be managed, which is particularly important in situations where acoustic requirement may call for closed windows.

It is recommended in guidance for action planning authorities prepared by the EPA that AVO guidance should be used after reasonably practicable attempts to use good acoustic design to achieve the internal target levels recommended by the ProPG have been exhausted.

7.5.3 BS 8233:2014: Guidance on sound Insulation and Noise Reduction for Buildings

BS 8233:2014 is intended to provide recommendations for the control of noise in and around buildings. It suggests appropriate criteria and limits for different situations, which are primarily intended to guide the design of new or refurbished buildings undergoing a change of use rather than to assess the effect of external noise sources. The guidelines for noise levels in a residential property are generally in accordance with WHO Guidelines for Community Noise and Night Noise Guidelines.

The standard suggests suitable internal noise levels within different types of buildings including residential dwellings for steady external noise sources. BS 8233:2014 recommended maximum ambient noise levels, as summarised in **Table 20**.

Table 20: BS 8233 Recommended Internal L_{Aeq} Target Levels for Overall Noise in the Design of a Building

Location	$L_{Aeq, 16hr}$ (0700-2300 hrs)*	$L_{Aeq, 8hr}$ (2300-0700 hrs)*
Living Rooms	35 dB	-
Dining Rooms	40 dB	-
Bedrooms	35 dB	30 dB

*see BS 8233:2014 for caveats and notes

Regarding noise levels in external amenity areas, BS 8233:2014 states:

“it is desirable that the steady state noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$...it is also recognized that these guideline values are not achievable in all circumstances.”

BS 8233:2014 also provides guidance on appropriate internal noise levels within different types of workplaces such as offices.

In designing buildings to control noise levels internally, BS 8233:2014 suggests the following sequence:

- a) assess the site, identify significant existing and potential noise sources,
- b) measure or estimate noise levels and evaluate layout options;
- c) determine design noise levels for spaces in and around the building(s);
- d) determine sound insulation of the building envelope, including the ventilation strategy;
- e) identify internal sound insulation requirements;
- f) identify and design appropriate noise control measures;
- g) establish quality control and ensure good quality workmanship.

7.5.4 ISO 19488:2021 Acoustics: Acoustic classification of dwellings

The purpose of the international standard is to aid developers to specify a classified level of acoustic quality for a dwelling. The document can be used as a tool to characterise the quality of the existing housing stock.

The document does not have legal status, unless adopted by national or relevant authorities. An additional purpose of the standard is to help national authorities and standardisation organisations to develop or revise national building regulations and acoustic classification schemes.

8 Prevention, Protection and Mitigation Measures

8.1 Introduction

The management of noise within the Agglomeration adopts three approaches:

1. **Prevention** – measures which seek to avoid additional members of the community being exposed to undesirable noise conditions. In the Agglomeration, preventative measures consist of planning policy in respect of not locating residential developments and other noise sensitive buildings in potentially noisy environments and in particular adjacent to transportation infrastructure.
2. **Protection** – relates to the preservation of environmental noise quality through the identification of Candidate Quiet Areas, and the processes of investigating the Candidate Quiet Areas for delimitation as Quiet Areas; and
3. **Mitigation Measures** – relates to the identification and prioritisation of appropriate mitigation measures to reduce and/or mitigate noise levels in areas where they are potentially harmful to human health.

8.2 Prevention

8.2.1 Planning Guidance

Applications for new residential developments in the Agglomeration will be assessed in accordance with the policies and goals outlined in the relevant City and County Development Plans. Where applicable, these include adoption of the principles of Professional Planning Guidance (ProPG) on *Planning & Noise: New Residential Development*, as described in **Section 7.5.1**.

Where the assessment outcome determines the likelihood of an adverse noise impact, planning applications should be supplemented by an Acoustic Design Statement carried out by appropriately qualified acousticians and competent persons⁴². The Acoustic Design Statement should demonstrate that all facets of ProPG have been followed.

8.2.2 Noise and the Public Realm

A healthy acoustic environment in public areas depends on environmental noise levels as well as a variety of subjective factors such as the intended use of space, the preferences of people, their expectations and their attitudes and sensitivity to the sounds they hear. The management of

⁴² The Council's definition of competent persons is based on the EPA's interpretation in their Guidance Note for Noise in Relation to Scheduled Facilities.

environmental noise in the public realm should have a broad focus with a consideration of noise levels as well as the need to create the right acoustic environment for the right time and place.

There are synergies between the mitigation of traffic-related noise and air pollution because the source of emissions is often similar. Early input in the design of public spaces by considering air quality and the acoustic environment offers the opportunity to maximise the benefits of taking an integrated approach to design.

In designing public spaces to maximise the contribution in terms of maintaining good air quality, reducing environmental noise and improving the quality of sound then consideration should be given to measures including:

- Using novel environmentally friendly methods (e.g., Holistic and sustainable abatement of noise by optimized combinations of natural and artificial means (HOSANNA)⁴³, funded by the European Union Seventh Framework Programme, FP7/2007–2013⁴⁴) such as barrier designs, the appropriate planting of trees, shrubs, or bushes, ground and road surface treatments, and greening of building façades and roofs;
- pedestrianising streets and the use of green infrastructure to reduce the likelihood of citizens being present in locations where air and noise pollution are highest, and creating attractive, accessible places where pollution levels are lower;
- providing options for active travel along routes other than beside busy roads, making walking and cycling increasingly attractive alternatives to private vehicle use. This will reduce citizens' exposure to air and noise pollution, and potentially vehicular emissions;
- providing and protecting tranquil outdoor environments and positive acoustic environments. This may reduce annoyance for citizens living near busy roads and ensure people have options other than being indoors when they want to enjoy respite from noise;
- encouraging exercise and other outdoor recreation to improve citizens health and well-being due to health risks posed by air and noise pollution; and
- providing alternative acoustic interventions to create new positive types of sounds that mask environmental noise.

8.3 Protection: Areas to be Preserved for Environmental Noise Quality

Candidate Quiet Areas identified within the Agglomeration are summarised in **Table 19**, and detailed in **Section 10 - Section 15**. The Candidate Quiet Areas are areas of favourably low environmental noise levels, and potential candidates to be delimited as Quiet Areas.

⁴³ <https://cordis.europa.eu/project/id/234306> [Accessed March 2024]

⁴⁴ <https://eur-lex.europa.eu/EN/legal-content/summary/seventh-framework-programme-2007-to-2013.html> [Accessed March 2024]

During the implementation of the plan the APA shall consider measures to ensure the environmental noise quality in these areas are preserved, with careful management of activities which would impact upon the acoustic environment. After proposing the delimiting of a Quiet Area, a corresponding policy statement should be suggested, detailing how the Local Authority might aid in safeguarding the Quiet Area. Draft versions of any policy statement, and associated measures, should form part of a consultation process. To promote their consideration within future development plans, Quiet Areas should be considered within City or County Development Plans, and relevant Local Area Plans.

8.4 Mitigation: Areas to be Subject to Noise Management Activities

Priority Important Areas, (see **Section 6.6**), have been identified within the Agglomeration as those where noise management activities are to be considered during the implementation of the Noise Action Plan.

As noted in **Section 6**, the Priority Important Areas have been identified with respect to noise from roads and railways only, as the management of noise due to airports and industrial activities are primarily with the associated authorities.

Considering the multitude and diversity of noise management options, choosing a noise mitigation measure necessitates evaluating its potential effectiveness in reducing noise exposure and adverse effects, while also considering its associated costs. The general steps in this process, which will be considered by the APA in consultation and collaboration with the NMBs during the implementation of the Noise Action Plan, are:

1. Noise measurements at Priority Important Areas.
2. Review of the assumptions used to identify the Priority Important Areas
3. Re-evaluation and confirmation of Priority Important Areas
4. Identification of practical noise mitigation measures
5. Appraisal of noise mitigation measures monetised benefits to health
6. Financial assessment of noise mitigation measures
7. Cost-benefit analysis
8. Recommendation of noise mitigation measure(s)

Each of these steps is further elaborated upon in the subsequent sections. The appraisal of the noise mitigation measures shall be undertaken during the implementation of the plan.

1. Noise measurements at Priority Important Areas

The assessment of Priority Important Areas is guided by an initial undertaking of noise measurements at locations representative of the area identified. The surveys will be conducted by the relevant Local Authority, and/ or other pertinent infrastructure owners.

The primary objective of the noise survey is to verify that the measured noise exposures accurately corresponds to the results obtained from the strategic noise maps. The results of the noise measurements will service to authenticate the strategic noise models, providing a basis upon which the noise mitigation measures can be evaluated.

2. Review of the assumptions used to identify the Priority Important Areas

If disparities arise between the noise measurements and the results obtained from the strategic noise maps, investigations will be conducted into factors such as road surface, traffic speeds, traffic counts, presence of barriers etc, and these findings will be compared against the assumptions within the noise models utilised for development the strategic noise maps.

3. Re-evaluation of Priority Important Areas

A re-evaluation of the identified Priority Important Area to ensure the analysis is representative of the 2021 assessment year, and appropriate amendments to the model parameters have been incorporated. This is likely to be informed by consultation between the APA and NMBs, and may include re-running the adjusted noise model and/or a review of any noise measurements.

4. Identification of practical noise mitigation measures

The APAs, in consultation with NMBs will identify and agree on practical noise mitigation measures in relation to the Priority Important Areas that remain following steps 1-3 (above). The practicality of the measures will take into consideration its potential impact in terms of noise exposure and harmful effects reduction, planning, land-use, cost and available technology.

The noise mitigation measures are collectively described as a noise management framework, and can be considered both in isolation, and in combination. Consideration will also be given to measures that may result from existing road management, traffic and rail projects and works programmes.

Examples of noise management frameworks for road traffic noise and railway traffic noise are displayed in the following figures:

- Figure 14: Road Traffic Noise Management Framework
- Figure 15: Railway Traffic Noise Management Framework

The EPA is responsible for issuing Waste, Industrial Emission (IE) and Integrated Pollution Control (IPC) licenses. Within the licensing systems, specific activities and operations are subject to license conditions that regulate noise emissions. The requirement for industry noise mitigation measures would be identified by the EPA and evaluated on a case-by-case basis, accounting for the facilities existing licensing conditions and present noise mitigation strategies.

Industrial noise exposures within the Agglomeration are summarised in **Section 5.2**, and show the number of people exposed is relatively low compared to road and rail noise. The focus of the Noise Action Plan is therefore strategic noise management activities associated with road and rail noise.

With regards to aircraft noise, the Aircraft Noise Competent Authority (ANCA) at Fingal County Council is the designated competent authority for the purpose of aircraft noise regulation at Dublin Airport. A standalone Action Plan for Dublin Airport will be developed by Fingal County Council for 2024 – 2028. A noise management framework for aircraft noise is not specifically considered in this agglomeration Noise Action Plan. There are no other major airports within the Dublin Agglomeration.

5. Appraisal of noise mitigation measures monetised benefits to health

An assessment of the identified practical noise mitigation measures, which will likely include testing of the measures using the revised CNOSSOS-EU (or other appropriate methodology) detailed computational noise model to determine the noise exposure and health benefits of the measures.

In Ireland there is no recommended method for monetising the health benefits of noise mitigation measures. In the absence of an Irish method, the EPA Guidance recommends that appraisals use the UK environmental impact appraisal methodology within the English Department for Transport, Transport Analysis Guidance (WebTAG) to inform a cost benefit assessment.

WebTAG provides guidelines and tools for translating the expected benefits of road, rail and aviation mitigation measures into monetary terms. WebTAG is informed by noise calculation results for a year during the implementation of the plan (2024-2028) and a future year, (typically 15 years ahead), with and without the noise mitigation measure(s) in place. The WebTAG noise workbook⁴⁵ calculates the monetary value of long-term effects on sleep disturbance, amenity (annoyance), AMI (acute myocardial infarction), stroke, and dementia during the daytime, and sleep disturbance at night.

The WebTAG outcomes provide the net present value of the noise level change resulting from the assessed mitigation scheme in Pounds Sterling. This value will require conversion to Euros using the prevailing exchange rate, enabling a comparison with the estimated implementation costs.

6. Financial assessment of noise mitigation measures

The estimated cost of implementing mitigation measure(s) will be determined, considering costs over the measure's lifetime, encompassing construction and maintenance expenses. The selection of specific mitigation measure(s) will result from an appraisal of their benefits to health, monetised accordingly.

Many measures are likely to involve road re-surfacing, either in addressing road traffic noise independently or in combination with other measures. An example illustrating the potential for noise mitigation through the use of quieter road surfaces will be further explored for the Agglomeration.

Example of Potential noise mitigation measure through road re-surfacing

Quiet road surfaces can be an effective way of reducing road traffic noise at receptors. The characteristics of a quiet road surface generally consist of its enhanced ability to absorb sound rather than reflect it, and a smoother surface so tyres encounter fewer irregularities.

The noise reduction of a quiet road surface can be between 1 – 5 dB^{46 47} when compared with a common dense asphalt concrete road surface type. Larger reductions are possible, particularly when replacing worn roads with optimised quiet road surfaces.

A review of the road surface assumptions in the strategic noise mapping identified Priority Important Areas in the Agglomeration where there is a higher proportion (greater than 25%) of standard road

⁴⁵ <https://www.gov.uk/government/publications/tag-environmental-impacts-worksheets> [Accessed October 2023]

⁴⁶ J. Sliggers: Road surface label, Push and Pull for Noise Emission Reduction from Road Traffic in the NLs and EU, Informal document GRB-65-27 (65th GRB, February 2017, agenda item 10)

⁴⁷ F. G. Praticò, F. Anfosso-Lédée, Trends And Issues In Mitigating Traffic Noise Through Quiet Pavements, Procedia - Social and Behavioral Sciences 53 (2012) 203 – 212

surfaces, such as Hot Rolled Asphalt (HRA) in their vicinity⁴⁸ than quieter road surfaces, such as Stone Mastic Asphalt (SMA).

A summary of these areas is given in **Table 21**, constituting 986,472 m² of road with the potential to contribute to noise exposure reductions within the associated Priority Important Areas through the implementation of quieter road surfaces. A key component of the re-evaluation of Priority Important Areas discussed earlier, will be confirmation of these road surface parameters within the noise model.

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⁴⁸ Within 100m set-back area of the Priority Important Area

Table 21: Example Mitigation Measure – Priority Important Area Quiet Road Surfacing

APA	Priority Important Area (PIA)	Source	Total Road Area (m ²)	Total Standard* Road Area (m ²)	Percentage of Standard Road of Total Road Area (%)
DCC	DCC_1	ROAD	350,895	189,547	54%
DCC	DCC_2	ROAD	207,859	121,349	58%
DCC	DCC_3	ROAD	195,412	107,181	55%
DCC	DCC_5	ROAD	137,398	89,169	65%
DCC	DCC_6	ROAD	73,576	42,784	58%
DCC	DCC_7	ROAD	35,996	27,691	77%
DCC	DCC_8	ROAD	46,280	16,542	36%
FCC	FCC_1	ROAD	173,769	54,746	32%
FCC	FCC_2	ROAD	188,381	154,887	82%
FCC	FCC_4	ROAD	104,259	89,228	86%
SDCC	SD_4	ROAD	72,936	24,388	33%
SDCC	SD_6	ROAD	34,890	10,003	29%
SDCC	SD_8	ROAD	36,315	11,437	31%
SDCC	SD_9	ROAD	95,043	28,821	30%
WCC	WCC_1	ROAD	45,942	12,161	26%
WCC	WCC_5	ROAD	11,001	2,933	27%
WCC	WCC_6	ROAD	8,568	3,606	42%

*Standard road surfaces assumed to be: Hot Rolled Asphalt (HRA) and cobbles

The specific costs per square metre of a standard road surface compared with a quieter road surface can be commercially sensitive, however the Phenomena project (2021), discussed in **Section 2.2.5**, notes these cost increases can be 5-10%.

The financial assessment of noise mitigation would be developed through consultation between the APA, NMB and appropriate Local Authority departments.

7. Cost-benefit analysis

A comparison of benefits to health versus the cost of the noise mitigation measure. This is presented as a cost-benefit ratio (the ratio of costs over benefit).

Cost-benefit ratios of less than 1.0 indicate the benefits to health outweigh the costs.

8. Recommendation of noise mitigation measure(s)

The final step in the process, which allows all of the noise mitigation scenarios to be compared through the outcomes of the cost-benefit analysis.

The most cost-effective noise mitigation measures will be proposed in collaboration with NMBs and appropriate authorities, and will (subject to resources and funding) seek to be implemented.

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Figure 14: Road Traffic Noise Management Framework



Figure 15: Railway Traffic Noise Management Framework



9 Long-term Strategy

9.1 Noise Action Plan Implementation Commitments

This Noise Action Plan is supported by a four-year programme for implementation (2024-2028), with progress reported to the EPA on an annual basis.

The Noise Action Plan is underpinned by a set of overarching noise policy principles outlined in the **Noise Policy Statement**.

These noise policy principles are supported by general commitments (**Responsible Aims**) by Dublin City Council (DCC), Dún Laoghaire-Rathdown County Council (DLRCC), Fingal County Council (FCC), South Dublin County Council (SDCC), Kildare County Council (KCC) and Wicklow County Council (WCC).

9.1.1 Noise Policy Statement

The Agglomeration APAs will adopt a strategic approach to managing environmental noise from road traffic, rail traffic, airports and industrial activity sites, including ports, within its functional area, with the following overarching policy principles:

- **Prevention** – manage the risk of additional members of the community being exposed to undesirable noise levels where it is likely to have significant adverse impact on health and quality of life.
- **Protection** - protect areas which are desirably quiet, or which offer a sense of tranquillity through a process of identification and validation followed by formal designation of ‘Quiet Areas’.
- **Mitigation Measures** – identify, and prioritise, appropriate mitigation measures to reduce noise levels where they are potentially harmful.

9.1.2 Responsible Aims

Responsible aims, which underpin the Noise Policy Statement:

- **RA_1 - Policy and Guidance Development** – Encourage the integration of noise considerations into the ongoing process of policy and guidance development, and actively promote existing policies and guidance related to noise.
- **RA_2 – Working Groups** – Establish and participate in Noise Action Plan technical and implementation working groups.
- **RA_3 - Noise Mitigation** – In collaboration and consultation with relevant Noise Mapping Bodies, noise management measures shall be applied on a priority basis during existing maintenance and improvement programs, where appropriate. This application will be based on a relevant evaluation of whole-life costs and benefits.
- **RA_4 - Protection** – Assess and, where appropriate, propose Candidate Quiet Areas to the Environmental Protection Agency for designation as Quiet Areas by the Minister.

- **RA_5 - Prevention** – Evaluate and condition planning proposals for noise sensitive development near major noise sources.
- **RA_6 - Community Engagement** – Commit to proactive and inclusive engagement with communities and collaboratively address noise issues for the improvement of our shared living environment.
- **RA_7 – Manage Noise Complaints** – Review and respond to all environmental noise complaints in accordance with their Customer Charter.
- **RA_8 - Regulatory Engagement** – Report the progress on the implementation of Noise Action Plans, including the investigation and implementation of noise management measures in Priority Important Areas, and the assessment of Candidate Quiet Areas for preservation of environmental noise quality, to the Environmental Protection Agency on an annual basis.

9.2 Key Round 5 Timetable

The Round 4 noise action plan timetable is set out in **Section 1.5**, with the deadline for the submission of the Noise Action Plan to the European Environment Agency (EEA) on 18 January 2025.

Specific dates relating to Round 5 Noise Action Plans are to be determined, but are expected to be:

- 18 July 2028: Deadline for noise action plans
- 18 August 2028: Deadline for publishing noise action plans
- 18 August 2028: Summaries of noise action plans submitted to the EPA
- 18 January 2029: Noise actions plans to be reported to the EEA by the EPA

9.3 Round 4 Noise Action Plan Implementation

The implementation of the Noise action Plan spans a four-year time frame, beginning in 2024.

Key measures and actions associated with its implementation have been developed which reflect the policy principles set out in the **Noise Policy Statement (Section 9.1.1)** and in support of the **Responsible Aims (Section 9.1.2)**, and with reference to key regulatory dates.

The approach to implementation is presented for each APA in the Agglomeration separately through **Section 10 - Section 15**.

Implementation is subject to resources, appropriate funding being made available and collaboration with relevant key stakeholders and infrastructure owners.

10 Dublin City Council

10.1 Introduction

Section 1 – Section 9 of this Noise Action Plan sets out the overarching principles of the Noise Action Plan process, including the existing international, national and regional noise management legislation and guidance, a description of the noise mapping process, and methodologies advocated in the EPA Guidance for identifying and addressing the most important areas, as established by the strategic noise mapping.

This section presents the results of the Noise Action Plan process specifically for the Dublin City Council administrative area and sets out the considerations, measures and actions that are specific to Dublin City Council.

The referenced Action Planning Authority (APA) in this section is Dublin City Council.

This section includes the following details:

- contact details;
- the APA's consultation process;
- the APA's historical noise action planning process;
- the APA specific noise management policy and guidance;
- the APA specific plans, projects and strategies relevant to noise;
- the results of the strategic noise mapping;
- the areas to be subject to noise management activities ('Priority Important Areas' (PIAs));
- the areas to be considered for preservation for environmental noise quality ('Candidate Quiet Areas' (CQAs));
- the mitigation and protection measures and actions; and
- associated graphical figures.

10.1.1 Name and Contact Details for Responsibly Authority

Dublin City Council

Civic Offices

Wood Quay

Dublin 8

Co. Dublin

10.2 Consultation

10.2.1 Stakeholder Consultation

A Period of public consultation will be completed on this draft Noise Action Plan. A summary of the public consultation will be set out in the final Noise Action Plan.

10.3 Review of Noise Action Plan(s)

10.3.1 Round 3 Noise Action Plan (2018-2023)

As in previous plans, the Round 3 Noise Action Plan primarily centres on road traffic noise, identified as the major noise source in the Dublin City Council Area based on the strategic noise maps.

Many actions initiated in the past three Noise Action Plans will persist and be reaffirmed in this Noise Action Plan. The current and past policies, as well as the direction regarding the principles of avoidance, prevention, and reduction, where necessary, on a prioritised basis of harmful effects, including annoyance, due to long-term exposure to environmental noise, will continue to guide the implementation of the actions.

A summary of the actions undertaken over the course of the Round 3 Noise Action Plan are set out below;

- Road re-surfacing and repairs.
- Completion of Round 4 strategic noise mapping.
- Progress on cycle routes, BusConnects, bike share schemes and the EV fleet expanded.
- Engagement with Planning Department preparing next City Development Plan 2022- 2028 regarding strengthening policy on Environmental Noise. Implement Noise Action Plan into CDP.
- Continue the assessment of areas identified as requiring further assessment for mitigation measures.
- Development of the noise app
- In 2019, the Council launched a real-time air and noise monitoring website (<https://dublincityairandnoise.ie/>) which gives the public real time access to data for the City and provides an evidence-base for the development of policy to address local air quality and noise issues.
- Track the implementation of Regional Strategies such as Transport strategy for the Greater Dublin Area, 2016 to 2030; Smarter Travel – A Sustainable Transport Future 2009-2020 and the National Cycle Policy Framework 2009-2020, to ensure opportunities to introduce noise mitigation in conjunction with their implementation are not missed.
- Carry out yearly reviews of the Action Plan in order to assess progress and whether new developments need to be included in the Action Plan.

10.4 Local Noise Management Policy and Guidance

10.4.1 Dublin City Development Plan 2022-2028

The Dublin City Development Plan sets out how the city will develop to meet the needs of all residents, workers and visitors. The aim is to improve the quality of life for all and the make sure Dublin City is an attractive place to live, work and visit.

It lays out the strategic approach to achieving a sustainable, climate resilient Dublin. This includes a move to more sustainable movement through the provision of an integrated transport network and encouraging the provision of greater choice of public transport and active travel including walking and cycling. Building on the modal shift away from fossil fuel vehicles is key to sustainable transport whilst recognising the challenges to accommodate and encourage the use of these new forms of mobility. The resultant reduction in traffic on the streets of Dublin will help greatly in the reduction of road traffic noise.

To preserve and maintain noise quality in the City in accordance with good practice and relevant legislation a number of strategic measures which relate to noise mitigation have been incorporated into the Dublin City Development Plan 2022-2028. The policy statements and objectives are reproduced below.

- **SI35 Ambient Noise Quality:** To seek to preserve and maintain noise quality in the City in accordance with good practice and relevant legislation.
- **SI36 Noise Management:** To support pro-active management of noise in the City through measures such as appropriate road surfaces to avoid, mitigate, minimise noise in accordance with good practice and relevant legislation, in-line with the Dublin Agglomeration Environmental Noise Action Plan 2018-2023 (and subsequent plans).
- **SI37 Noise Sensitive Development:** To give careful consideration to the location, design and construction of noise sensitive developments, including the horizontal and vertical layout of apartment schemes, so as to ensure they are protected from major noise sources, where practical, and to minimise the potential for noise disturbance.
- **SI38 Noise Sensitive Development:** To ensure that new residential development close to approved commercial uses is suitably sound insulated.
- **SI39 Protection of Designated Quiet Areas:** To protect the designated Quiet Areas within the City from increased exposure to noise.
- **SI40 Dublin Airport Noise Zones and Other Noise Plans:** To take account of the Dublin Airport Local Area Plan (2020) and Noise Action Plan for Dublin Airport 2019-2023 as part of the development management process in order to ensure the protection/prevention of noise sensitive uses within this zone whilst facilitating the continued operation of Dublin Airport, and to develop similar appropriate plans for areas adjacent to Dublin Port.
- **SI023 Dublin Agglomeration Environmental Noise Action Plan:** To support the implementation of the Dublin Agglomeration Environmental Noise Action Plan 2018-2023 and subsequent plans in co-operation with the other Dublin local authorities.

- **SIO24 Noise Monitoring and Enforcement:** To support and facilitate the monitoring and enforcement by the environmental health department of noise reduction measures in areas experiencing excess noise.

The proactive management of noise in the city through the implementation of this Noise Action Plan is a key policy objective of the City Development Plan.

Dublin City Council's Air Quality Monitoring and Noise Control Unit (hereafter referred to as 'the Unit') investigate noise complaints from members of the public, primarily related to commercial enterprises operating within Dublin City Council's functional area. The unit adheres to the National protocol for Local Authorities when dealing with noise complaints.

There are a number of approaches used to reduce the exposure of the existing and future populations of Dublin City to undesirably high noise levels: prevention, protection and mitigation. These approaches form the basis of the Noise Policy Statement set out in **Section 9.1.1** and which govern the overarching principles of this Noise Action Plan and the noise management framework proposed by Dublin City Council in **Section 10.11**.

The Unit engages with the planning department within the Council. Where applicable, planning applications are assessed for the likelihood of an adverse noise impact at the planning stage. The planning system has the potential to exercise a significant influence on the control of future exposures to environmental noise and can play a key role in the improvement of amenity. The appropriate use of the planning system can help avoid, or minimise, the adverse impacts of noise without placing unreasonable restrictions on development. Scope exists within the planning and development management process to manage increased levels of noise arising from new development where exposure levels can be harmful to health.

The Unit has produced a guide to Good Practice for Construction and Demolition in relation to air and noise emissions for construction sites undergoing development within the city. It also has developed a number of guidance documents in relation to planning conditions for example:

- Noise from plant
- Noise from Entertainment Venues/ Concerts
- Deliveries
- Gymnasiums.

10.4.2 Dublin City Corporate Plan 2020-2024

The Dublin City Council Corporate Plan for 2020-2024 provides a strategic framework for the Council's vision for the County, its goals for the next five years and the core values which will guide the Council's work over the lifetime of the Plan.

10.4.3 Dublin City Parks Strategy 2019-2022

This strategy focuses on the 17% of the land area of the city which form Dublin City's Parks and its goal of maintaining a provision of between 2.5ha and 3.6ha of parks per 1000 population in its administrative area, with special focus on increasing the provision of open space per person within the inner-city.

These parks will in turn provide possible tranquil areas for the public to find a quiet area away from the noise of the city. Eight of the city's parks have been designated as Quiet Areas from previous rounds of Noise Action Planning.

10.4.4 A Short Guide to Three Dublin City Woodlands

This booklet produced in association with the Department of Housing, Local Government and Heritage outlines three of the areas in Dublin which are heavily wooded and, if well managed, can increase urban biodiversity, as well as providing valuable amenity areas and reducing air pollution and noise.

The three areas include:

- St Anne's Park
- Tolka Valley Park
- Bushy Park.

St Anne's Park is currently a designated Quiet Area.

10.4.5 Your City Space Public Realm

This Draft Dublin City Public Realm Strategy sets out actions to be taken to improve the quality of public realm in the city. These include developing Service Level Standards for public spaces to protect and improve noise control standards.

There are eight designated Quiet Areas in Dublin City and these relate to city parks and greenspaces with low environmental sound levels. The Noise Action Plan seeks to protect these areas from future increases in environmental noise, so that they remain 'tranquil' and quiet.

The Council, through the planning system, can minimise the adverse impacts of noise pollution by controlling developments which are noise intensive and keeping them away from more sensitive residential areas.

10.4.6 Dublin City Tree Strategy 2016-2020

The Dublin City Tree Strategy provides a co-ordinated approach and vision for the management of public trees to a long-term plan. The city's 'urban forest' consists of street trees, garden trees, trees in parks and open spaces, hedge lines and woodlands. Trees bring extensive benefits to the city by humanising space, enhancing the environment and minimising the impacts of climate change. They provide ecosystem services such as cleaning air, providing natural water management / flood control and creating diverse habitats while also storing carbon, cooling the urban environment, masking noise and acting as a wind barrier. Trees link green spaces, make attractive streets and neighbourhoods and promote a general sense of well-being.

10.5 Relevant Plans, Projects and Strategies

10.5.1 Road Schemes

The Air Quality Monitoring and Noise Control Unit (the Unit) proactively engages with cross-sectoral factors contributing to the city's air and noise pollution, including collaboration with the National Transport Authority (NTA). High volumes of vehicular traffic are identified as a significant source of noise problems. The increasing volume of traffic not only impacts air quality but also affects the acoustic environment. The Unit has an Ambient Air Quality and Noise Network. There are 15 noise monitoring stations located throughout the Dublin City functional area. This information is available at <https://dublincityairandnoise.ie/>.

The Greater Dublin Area Transport Strategy 2022 – 2042 provides a framework for a sustainable transport network for the long term which will reduce the traffic in the city, resulting in improved air quality and reduced noise emissions.

Key projects include:

- MetroLink from Charlemont to Swords via Dublin Airport, with construction date due to commence during the plan period;
- The BusConnects programme which includes the following:
 - Dublin Area Bus Network Redesign which provides for significantly enhanced bus services, with a completion date by 2024; and
 - The Core Bus Corridor Projects which will provide bus priority on the radial routes, with a completion date by 2030;
- DART+ Programme, with construction to commence during the plan period;
- Luas Finglas with construction estimated to commence during the plan period; and
- Greater Dublin Area Cycle Network Plan.

10.5.2 Road Maintenance Works

Road Maintenance Services (RMS) in Dublin City Council complete an annual road programme of road carriageway resurfacing works. A review of the known road surface types from with the databases available to Dublin City Council suggest that the main road surface types used in annual maintenance works are Hot Rolled Asphalt (HRA) and Stone Mastic Asphalt (SMA).

SMA is considered to be a lower noise road surface type than HRA. While it is not always possible to replace HRA with SMA, RMS will review each scheme on a case-by-case basis and where possible will consider the use of SMA over HRA where noise impacts are considered an issue. RMS have an annual budget of approx. €9m to invest in road carriageway upgrades. Annual carriageway works programmes are identified based on road condition and other relevant criteria such as customer enquiries, road safety etc.

10.5.3 Dublin City Centre Transport Plan 2023

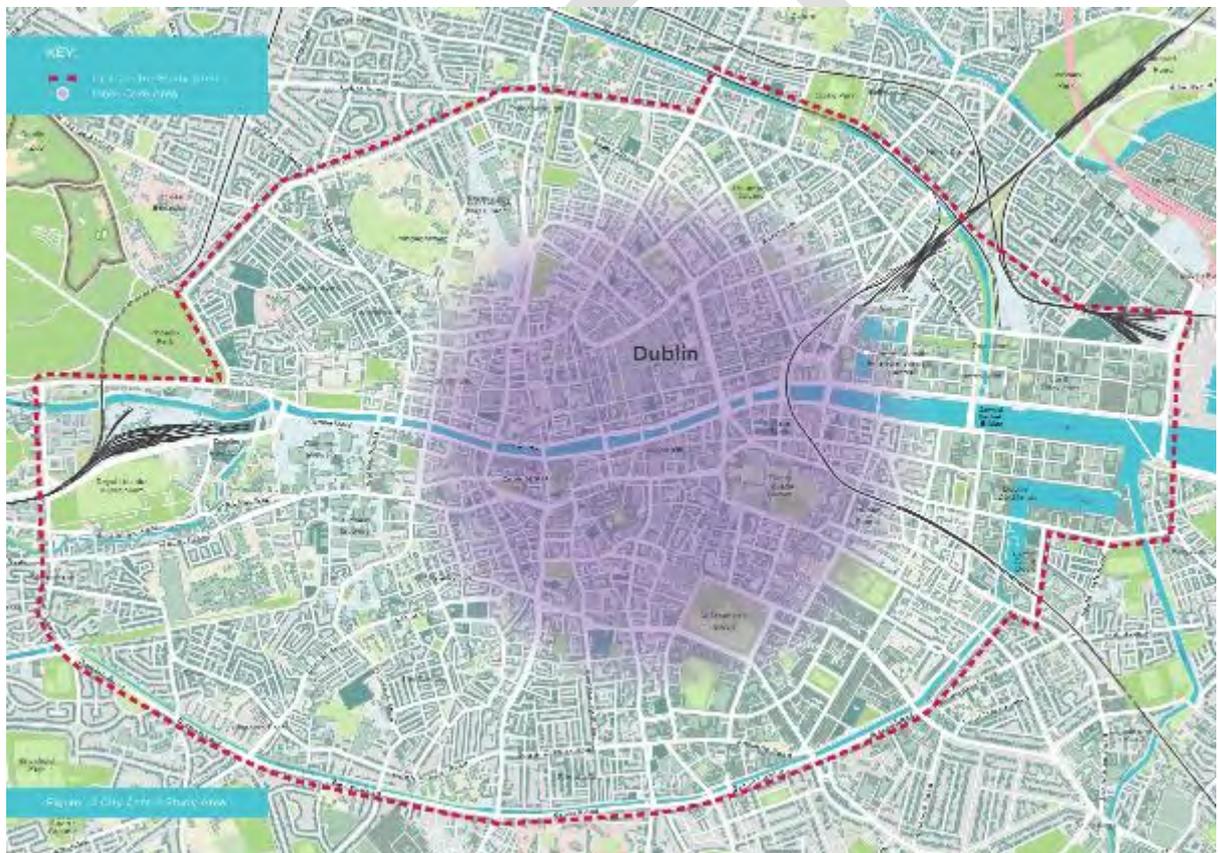
The Dublin City Centre Transport Plan 2023 ('The Transport Plan') provides a framework for the managed implementation of transport projects across the City Centre. The Transport Plan is a key

instrument to help implement the vision and objectives of the Dublin City Development Plan 2022-2028 ('The Development Plan') in making Dublin a more sustainable climate resilient city. The Transport Plan also helps deliver on one of the Development Plans objectives [SMT05] which states:

“To review the City Centre Transport Plan 2016 in collaboration with the NTA in the lifetime of the plan, setting out a clear strategy to prioritise active travel modes and public transport use, whilst ensuring the integration of high quality public realm.”

The Transport Plan covers mainly the area bounded by the Royal and Grand Canals and includes a central inner-city core. Analysis of travel data suggests that as much as 60% of the car traffic travelling through the Inner Core has a destination outside it. A key aim of the Transport Plan is to reduce the volume of private cars entering the Plan area and particularly the Inner Core and promote the use of public transport and active travel modal shift.

Figure 16: Dublin City Centre Transport Plan 2023



A key objective of the Transport Plan is *“To Provide a Significantly Enhanced City Centre Environment”* including the transition to a low traffic City Centre with reduced transport and traffic noise as two of the sub-objectives.

The Transport Plan proposed to implement a number of key traffic management and public realm proposals in a phased manner over the lifetime of the Transport Plan (2023 – 2028) as well as supporting active travel schemes and other public transport projects. The overall aim being to remove as much through traffic from the city centre as possible. Details of the various proposed traffic management proposals can be found in the Transport Plan.

It is forecast that the implementation of the Transport Plan could reduce the car traffic in the inner core by as much as 60%. This will promote benefits through reduced CO₂ emissions, improved air quality and reduction of people exposed to traffic noise.

The Strategic Environmental Assessment completed on the Transport Plan noted that there may be minor negative impacts due to displacement of traffic to other areas and that these would relate mainly to air quality and noise. In this regard monitoring of these issues would be required to help mitigate any negative impacts that may emerge. Overall, the Transport Plan offered significant wider benefits to the study area.

10.5.4 Active Travel Programme

In 2023 the National Transport Authority (NTA) allocated a total of €290m to support the delivery of active travel projects across Ireland. Dublin City Council's Active Travel Team⁴⁹ are currently working on the delivery of 25 projects to be completed by the end of 2024, which will provide an additional 57km of Active Travel network. A further 27 projects are scheduled to be completed between 2025 and 2027 adding a further 83km. **Figure 17** shows all of the projects for 2022 – 2024, 2025 – 2027 and beyond.

The rollout of the active travel network over the period of the Noise Action Plan will promote the reduction in road traffic noise through the encouragement of a modal shift to a more sustainable mode of traffic which will reduce traffic volumes.

Dublin City Council's Active Travel project team have confirmed that road resurfacing on the projects will incorporate a low noise road surface type such as Stone Mastic Asphalt (SMA) 10.

⁴⁹ [Active Travel Network Delivery Programme | Dublin City Council](#)

Figure 17: Active Travel Programme



10.5.5 BusConnects

There are 12 Dublin Core Bus Corridor Schemes⁵⁰, shown in **Figure 18**, for which the NTA has applied to An Bord Pleanála. In discussions surrounding the Zero Emissions Bus Fleet and the government giving the project the green light, it is stated that the aim is to contribute to a more liveable city by reducing noise pollution.

⁵⁰ [Core Bus Corridor Schemes | Busconnects](#)

Figure 18: BusConnects



10.5.6 Aircraft Noise

Areas on the north-eastern periphery of the city fall within Dublin Airport Aircraft Noise Zone C, within which the effects of aircraft noise on sensitive developments must be adequately considered by the planning authority as part of the development management process.

In line with the land-use planning policy of the Dublin Airport Local Area Plan and Fingal County Development Plan 2017-2023, it is a requirement that certain proposals for noise sensitive development in Zone C be accompanied by a noise assessment which should consider issues of noise annoyance and sleep disturbance at the design stage and to ensure, where appropriate, that noise insulation is incorporated within a proposed development.

10.5.7 Dublin City Council Climate Action Plan 2024-2029

The Dublin City Council Climate Action Plan includes a range of actions which are aimed at helping the city achieve a 51% reduction in greenhouse gas emissions by 2030 while striving for neutrality by 2050. The Plan recognises that the measure of climate action success can also be measured through monitoring of other key vitals which include noise levels across the city. In this regard, it is evident that many of the actions that will help achieve climate mitigation and resilience will also contribute to mitigating environmental noise and preserving quiet areas for the future.

10.6 Other Relevant Plans, Studies and Measures

10.6.1 BreathLife Campaign

In February 2020 Dublin City Council signed up for the BreathLife Campaign which is led by the World Health Organization (WHO), the Climate & Clean Air Coalition, The UN Environmental Programme and the World Bank to raise awareness about the health risks of short-lived climate pollutants, which contribute significantly to global warming and air pollution. Dublin City Council is committed to reducing the number of cars in the city which will help to reduce noise emissions.

10.6.2 Dublin Region Air Quality Plan 2021

The Dublin Region Air Quality Plan sets out a series of measures which are aimed at improving air quality. These measures will also help to reduce traffic noise by reducing the volume of traffic entering the city. The measures include active travel, city parking restrictions and remote working.

10.6.3 Ambient Noise Monitoring

Dublin City Council provides real-time noise monitoring data from its network of ambient noise monitoring stations across the city. These real-time results and station locations can be found at <https://dublincityairandnoise.ie/>.

This site provides direct access to Dublin City Council's network of environmental sound level monitors. These monitors are placed in locations that are of value to the community or give a good indication of ambient sound levels within the general area. These sites were chosen to ensure that various sound sources were captured and represented. Sound levels are measured 24 hours a day to build up a profile of the environmental quality at each site. This information is used to generate plans for reducing noise exposure and for making better environmental policy decisions.

10.7 Summary of the Results of the Strategic Noise Mapping Process

The Round 4 noise exposure statistics and harmful effects assessment are presented below for the Dublin City Council administrative area. The statistics at Agglomeration level are presented in **Section 5.2**.

Exposure statistics are assessed independently for each noise source, and are summarised for the noise metrics across the noise exposure bands defined in the Regulations. The population exposure statistics have been rounded to the nearest 100 as required by the Regulations.

10.7.1 Exposure Statistics

Table 22: DCC: Number of People in Dwellings – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	90,300	18,700	1,400
60-64	55,900	10,500	300
65-69	39,700	7,800	100
70-74	12,300	6,600	0
>=75	400	4,400	0

*exposure statistics rounded to the nearest 100.

Table 23: DCC: Percentage of Total Population Exposed to the Noise Source – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	18 %	4 %	0 %
60-64	11 %	2 %	0 %
65-69	8 %	2 %	0 %
70-74	3 %	1 %	0 %
>=75	0 %	1 %	0 %

Table 24: DCC: Number of School Buildings (& Hospital Buildings) – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	88 (09)	26 (03)	01 (01)
60-64	67 (08)	13 (00)	01 (00)
65-69	61 (07)	08 (00)	00 (00)
70-74	23 (00)	03 (04)	00 (00)
>=75	00 (00)	16 (02)	00 (03)

Table 25: DCC: Number of People in Dwellings – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	50,700	12,700	1,000
55-59	33,400	8,200	200
60-64	19,200	6,800	0
65-69	2,600	3,900	0
>=70	0	1,700	0

*exposure statistics rounded to the nearest 100.

Table 26: DCC: Percentage of Total Population Exposed to the Noise Source – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	10 %	3 %	0 %
55-59	7 %	2 %	0 %
60-64	4 %	1 %	0 %
65-69	1 %	1 %	0 %
>=70	0 %	0 %	0 %

Table 27: DCC: Number of School Buildings (& Hospital Buildings) – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	58 (07)	17 (02)	01 (01)
55-59	54 (03)	07 (00)	00 (00)
60-64	35 (04)	05 (02)	00 (00)
65-69	01 (00)	10 (02)	00 (00)
>=70	00 (00)	04 (02)	00 (01)

Table 28: DCC: Total number of Noise Sensitive Buildings

Noise Sensitive Building	Number of Noise Sensitive Buildings
Schools	491
Hospitals	46

10.7.2 Harmful Effects

The exposure of harmful effects is assessed independently for each source. Where the same people are simultaneously exposed to different noise sources, the harmful effects may not, in general, be cumulated, however they can be compared to identify proportional significance.

Table 29 presents the calculated harmful effects in the case of road traffic noise for the Agglomeration, and **Table 30** presents the calculated harmful effects from railway noise.

As shown in **Table 30** the statistical proportion of the total population with harmful effects associated with road traffic noise in the Dublin City Council administrative area is consistent with that across the Agglomeration. For rail, the statistical proportion of the population highly annoyed is around 1% greater when compared with the Agglomeration. This is shown in **Table 32** and is reflective of the concentration of rail infrastructure in the Dublin City Council administrative area.

Table 29: DCC: Breakdown of Harmful Effects in the Case of Road Noise – Total Number of People – All Sources

Harmful Effect	Dublin Agglomeration	Dublin City Council
Ischaemic Heart Disease	101.22	40.02
Highly Annoyed	108,380.07	40,727.19
Highly Sleep Disturbed	28,995.87	10,641.09

Total Populations

Dublin Agglomeration: 1,355,967.68,

APA Proportions within Agglomeration: Dublin City Council: 501,896.48, Fingal County Council: 297,128.60, South Dublin County Council: 278,984.11, Dún Laoghaire County Council: 210,520.78, Kildare County Council: 37,447.86, Wicklow County Council: 29,989.86

Table 30: DCC: Breakdown of Harmful Effects in the Case of Road Noise – % of Population – All Sources

Harmful Effect	Dublin Agglomeration	Dublin City Council
Ischaemic Heart Disease	0.01%	0.01%
Highly Annoyed	7.99%	8.11%
Highly Sleep Disturbed	2.14%	2.12%

Table 31: DCC: Breakdown of Harmful Effects in the Case of Railway Noise – Total Number of People – All Sources

Harmful Effect	Dublin Agglomeration	Dublin City Council
Highly Annoyed	21,051.97	12,406.00
Highly Sleep Disturbed	10,986.94	6,630.31

Table 32: DCC: Breakdown of Harmful Effects in the Case of Railway Noise – % of Population – All Sources

Harmful Effect	Dublin Agglomeration	Dublin City Council
Highly Annoyed	1.55%	2.47%
Highly Sleep Disturbed	0.81%	1.32%

10.8 Noise Management Activities (Industry)

The industry sites included within the Agglomeration strategic noise maps are limited to Industrial Emission (IE) sites as regulated by the EPA under the IPPC Directive 96/61 EC, and any ports. Strategic noise maps of the industrial noise emissions at agglomeration level are shown in **Figure 7** and **Figure 8** listed in **Section 5.2**. Maps for the Dublin City Council administrative area are provided in **Figure 20** to **Figure 26** in **Section 10.13**.

The data upon which the industry noise emission models have been developed includes default values, therefore model outputs are a strategic representation of industry noise levels, rather than being site specific.

The Noise Action Plan does not include any Priority Important Areas for industry mainly due to the lower exposure statistics reported. Notwithstanding, there will be a need for ongoing management of noise issues from industrial sites through noise complaints, development and licence application. In this regard the APA may use the maps to support this process and should continue to consult and collaborate with the EPA who have overall responsibility for site specific noise management of waste, Industrial Emission (IE) and Integrated Pollution Control (IPC) licensed sites.

10.9 Priority Important Areas

The methodology for identifying the Most Important Areas and the shortlist of Priority Important Areas, which will be subject to noise management activities, is set out in **Section 8.4**. The Priority Important Areas for Dublin City Council are listed in **Table 33** to **Table 36**, which summarise a range of statistics and information for each area, as follows:

Table 33 presents the statistics for each Priority Important Area including population, details of the harmful effects and numbers of people exposed to noise levels above the Important Areas noise limit value.

Table 34 repeats the key statistics but presents the population and harmful effects statistics as a percentage of the total population of the Dublin City Council administrative area.

Table 35 presents the number of people exposed to road traffic noise (L_{den} and L_{night}) in each road Priority Important Area broken down by noise exposure bands set out in the Regulations.

Table 36 presents the number of people exposed to rail traffic noise (L_{den} and L_{night}) in each rail Priority Important Area broken down by noise bands set out in the Regulations.

It should be noted that Ischemic Heart Disease (IHD) is not calculated for railway noise, where Statutory Instrument No. 663/2021 – European Communities (Environmental Noise) (Amendment) Regulations 2021 (S.I 663/2021)⁵¹ states:

“For IHD in the case of railway and aircraft noise, the population exposed above adequate L_{den} levels is estimated as subject to an increased risk of IHD, while the exact number N of cases of IHD cannot be calculated.”

With reference to the noise management frameworks described in **Section 8.4**, a summary of potential noise mitigation measures for the Priority Important Area is given in **Table 39**. It should be noted that this table is not exhaustive and these and other measures may be considered at the Priority Important Area evaluation stage during the Noise Action Plan implementation.

Dublin City Council will, subject to resources and funding, undertake an assessment of the noise mitigation measure options relating to the Priority Important Area within the life cycle of the Noise Action Plan. This will include discussions across relevant sections within Dublin City Council, Iarnród Éireann and Transport Infrastructure Ireland in the case of rail Priority Important Areas.

Figures presenting the Most Important Areas and Priority Important Areas are included in **Section 10.13**.

- **Figure 27** shows the full set of Most Important Areas for Dublin City Council and from which the shortlist of Priority Important Areas have been selected.
- **Figure 28** presents an overview of all the shortlisted Priority Important Areas in Dublin City Council.
- **Figure 29 to Figure 39** present a more detailed plan of each Priority Important Area.

⁵¹ <https://www.irishstatutebook.ie/eli/2021/si/663/made/en/print> [Accessed March 2024]

Table 33: DCC Priority Important Area (PIA) Summary (1)

PIA	Source	MIA Criterion (People HA per 100m ²)	Area (m ²)	Total Population*	Harmful Effects Statistics**			Number of People Above Important Areas Noise Limit Value***			
					HA	HSD	IHD	Road 53dB Lden	Road 45dB Lnight	Railway 54dB Lden	Railway 44dB Lnight
DCC_1	ROAD	15	879,900	16,685.03	2,618.78	784.17	2.82	12,998.16	12,560.78	-	-
DCC_2	ROAD	15	608,900	11,571.9	1,796.93	533.53	1.98	9,160.49	8,628.79	-	-
DCC_3	ROAD	15	529,100	8,552.08	1,469.8	454.35	1.63	7,187.47	6,454.75	-	-
DCC_4	RAIL	15	653,900	7,745.62	1,627.34	796.56	-	-	-	6,267.32	7,042.45
DCC_5	ROAD	15	289,900	5,057.57	855.23	260.24	0.96	4,141.97	3,955.12	-	-
DCC_6	ROAD	15	167,400	3,112.38	556.34	174.28	0.65	2,426.84	2,658.08	-	-
DCC_7	ROAD	15	126,700	1,945.59	387.91	136.68	0.46	1,506.29	1,565.69	-	-
DCC_8	ROAD	15	114,900	1,870.21	300.47	88.03	0.34	1,583.82	1,556.75	-	-
DCC_9	RAIL	15	232,900	1,793.32	614.85	401.17	-	-	-	1,643.48	1,721.12
DCC_10	RAIL (Luas)	15	112,400	1,786.54	440.14	277.15	-	-	-	1,221.57	1,348.42
DCC_11	RAIL (Luas)	15	153,900	1,372.22	365.35	190.12	-	-	-	1,163.06	1,272.89

* Total population inside all Most Important Areas (MIAs) associated with the Priority Important Area (PIA)

** The harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building

*** The total population that are exposed to noise levels above the Important Areas noise limit value (see Section 6.4) within the MIA(s) associated with the PIA

Table 34: DCC: Priority Important Area (PIA) Summary (2)

PIA	Source	MIA Criterion (People HA per 100m ²)	Area (m ²)	Total Population*	Harmful Effects Statistics**			Percentage Population***	Percentage Harmful Effects****		
					HA	HSD	IHD		HA	HSD	IHD
DCC_1	ROAD	15	879,900	16,685.03	2,618.78	784.17	2.82	3.3%	6.4%	7.4%	7.0%
DCC_2	ROAD	15	608,900	11,571.9	1,796.93	533.53	1.98	2.3%	4.4%	5.0%	4.9%
DCC_3	ROAD	15	529,100	8,552.08	1,469.8	454.35	1.63	1.7%	3.6%	4.3%	4.1%
DCC_4	RAIL	15	653,900	7,745.62	1,627.34	796.56	-	1.5%	13.1%	12.0%	-
DCC_5	ROAD	15	289,900	5,057.57	855.23	260.24	0.96	1.0%	2.1%	2.4%	2.4%
DCC_6	ROAD	15	167,400	3,112.38	556.34	174.28	0.65	0.6%	1.4%	1.6%	1.6%
DCC_7	ROAD	15	126,700	1,945.59	387.91	136.68	0.46	0.4%	1.0%	1.3%	1.1%
DCC_8	ROAD	15	114,900	1,870.21	300.47	88.03	0.34	0.4%	0.7%	0.8%	0.8%
DCC_9	RAIL	15	232,900	1,793.32	614.85	401.17	-	0.4%	5.0%	6.1%	-
DCC_10	RAIL (Luas)	15	112,400	1,786.54	440.14	277.15	-	0.4%	3.5%	4.2%	-
DCC_11	RAIL (Luas)	15	153,900	1,372.22	365.35	190.12	-	0.3%	2.9%	2.9%	-

* Total population inside all Most Important Areas (MIAs) associated with the Priority Important Area (PIA)

** The harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building

*** Percentage of the total population inside all MIAs associated with the PIA from the total population in the APA administrative area

**** Percentage of the total harmful effect inside all MIAs associated with the PIA from the harmful effects of the APA administrative area

Table 35: DCC: Priority Important Area (PIA) Summary (Road Noise – All Sources)

PIA	Source	Number of People in Noise Exposure Band (dB L _{den})					Number of People in Noise Exposure Band (dB L _{night})				
		55-59	60-64	65-69	70-74	>=75	50-54	55-59	60-64	65-69	>=70
DCC_1	ROAD	3714.51	4040.41	3180.77	1464.08	87.2	3300.44	3058.56	1806.72	507.53	4.7
DCC_2	ROAD	2119.44	2976.4	3020.01	574.44	0	2925.13	2569.59	1158.46	65.63	0
DCC_3	ROAD	1401.13	1306.37	2987.8	784.82	0	1033.37	2589.7	1501.43	65.79	0
DCC_5	ROAD	1145.45	1093.64	1187.47	589.78	0	1085.41	878.85	908.19	61.79	0
DCC_6	ROAD	490.19	915.55	969.44	278.22	0	667.69	1147.18	394.65	18.23	0
DCC_7	ROAD	217.03	269.95	318.55	720.44	1.95	325.05	198.57	324.53	463.57	0
DCC_8	ROAD	246.8	886.3	321.9	14.35	0	893.74	224.6	104.93	0	0

Table 36: DCC: Priority Important Area (PIA) Summary (Rail Noise – All Sources)

PIA	Source	Number of People in Noise Exposure Band (dB L _{den})					Number of People in Noise Exposure Band (dB L _{night})				
		55-59	60-64	65-69	70-74	>=75	50-54	55-59	60-64	65-69	>=70
DCC_4	RAIL	1873.69	2207.87	1134.57	739.15	473.65	2464.24	1263.93	794.02	377.29	142.42
DCC_9	RAIL	199.21	189.75	296.82	335.27	627.85	225.1	195.55	317.6	610.55	224.41
DCC_10	RAIL (Luas)	113.66	222.8	231.35	164.7	472.84	222.13	199.83	129.38	272.35	296.87
DCC_11	RAIL (Luas)	212.51	318.3	274.83	311.19	136.03	364.54	258.61	280.97	205.5	0

10.10 Areas to be Preserved for Environmental Noise Quality

10.10.1 Existing Quiet Areas

There are eight existing Quiet Areas delimited within Dublin City Council as follows:

- Edenmore Park, Raheny;
- Dollymount SAA – Terrestrial Area Only(excluding slob lands) ('North Bull Island');
- St. Annes Park, Raheny;
- Palmerston Park, Dartry;
- The Cabbage Gardens, Cathedral Lane;
- Mount Bernard Park, Shandon Park, Phibsborough;
- Ranelagh Gardens, Ranelagh; and
- Blessington Basin, Blessington St.

10.10.2 Proposed Candidate Quiet Areas (CQAs)

The approach and criteria used to identify Candidate Quiet Areas for the Agglomeration has been explained in **Section 7.3**, and the Candidate Quiet Areas are presented in **Section 7.3.2**. Those located within the Dublin City Council administrative area are summarised in **Table 37** and shown in **Figure 40** presented in **Section 10.13**.

The list of Candidate Quiet Areas contains 71 areas which consist of publicly accessible parks and gardens above 1 hectare (area has been rounded to the nearest 1 hectare) in size. Most, but not all, are in the ownership and management of Dublin City Council. A number are owned and managed by third parties such as the Office of Public Works (OPW) and will require consultation at the evaluation stage.

The list of 71 includes the eight existing designated Quiet Areas. These are highlighted green within **Table 37**. This leaves 63 Candidate Quiet Area to be investigated and considered for delimiting as Quiet Areas.

Investigations into whether there is an appropriate benefit to delimiting the Candidate Quiet Area as a Quiet Area may include consideration of sound pressure measurements, visitor experience, expert assessment, and other local community evaluation criteria, see **Section 7.4** for more details.

Given the resources available it is not possible to investigate all 63 Candidate Quiet Areas during the implementation of the Noise Action Plan. As such, Dublin City Council has shortlisted 11 areas from the overall list of Candidate Quiet Areas for evaluation and consideration as Quiet Areas over the period of the Noise Action Plan.

This selection process has considered the aspects such as the median noise level, population within 1,000m, size of the area and relevant local factors such as amenity/community value. Furthermore, selection has considered the distribution of the existing Quiet Areas and Candidate Quiet Areas geographically across the Dublin City Council's local areas and attempted to ensure each area is represented.

The 11 Candidate Quiet Areas which have been selected for investigation as part of the implementation of the Noise Action Plan are included within the full list presented in **Table 37**. However, for clarity they are also shown separately in **Table 38** together with the existing Quiet Areas. The existing Quiet Areas and the 11 selected Candidate Quiet Areas are also shown in **Figure 41**..

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Table 37: DCC: Summary of Candidate Quiet Areas (CQAs)

CQA ID	Name	Committee Area	Easting	Northing	Area (m²)	Pop. within 1,000m	Noise Level, L_{Aeq, 16hr}, dB	Area of CQA below 45 dB L_{Aeq, 16hr} (m²)	CQA Criteria
DCC_4	Griffith Park	Central	715648	737031	43,843	18,668	47	1,572	A
DCC_5	National Botanic Gardens	Central	714901	737165	188,805	22,845	47	43,500	A
DCC_5a	Glasnevin Cemetery (N)	Central	714901	737165	318,772	29,128	54	493	#
DCC_5b	Glasnevin Cemetery (S)	Central	714901	737165	49,443	21,739	63	0	#
DCC_8	Pope John Paul II Park	Central	712690	736573	82,297	17,100	47	18,210	A
DCC_20	Park at Park Road Assington	Central	711640	737140	6,590	13,349	49	0	A
DCC_34	Area beside Nat. Botanic Gardens	Central	714896	737459	23,450	15,082	46	845	A
DCC_61	Park of Commons St, IFSC	Central	716960	734755	11,601	23,794	50	1,257	R
DCC_68	Area at Drumcliffe Rd, Cabra	Central	713370	736220	8,468	18,304	47	0	A

CQA ID	Name	Committee Area	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DCC_149	Mount Bernard Park, Shandon Park, Phibsborough	Central	714309	736456	21,149	20,056	56	0	#, *
DCC_169	Blessington Basin, Blessington St. (inc Royal Canal Bank)	Central	715075	735544	18,686	39,697	48	4,534	A, *
DCC_195	Area at Killala Road, Cabra	Central	713194	736416	5,751	15,998	48	0	A
DCC_13	Area at Coolgreena Cl, Beaumont	North Central	717515	738885	12,852	20,221	47	322	A
DCC_15	Grange Woobine Pitch, Edenmore	North Central	721302	739214	10,659	20,098	46	2,181	A
DCC_17	Edenmore Park, Raheny	North Central	721201	738885	95,479	23,309	46	26,447	A, *
DCC_19	Area at Mount Prospect Grove	North Central	720808	736804	7,841	9,281	47	0	A
DCC_28	Courtlands Park	North Central	716089	737991	10,640	11,329	46	1,184	A
DCC_36	Streamville Park	North Central	721363	739800	90,491	28,707	49	1,251	A

CQA ID	Name	Committee Area	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DCC_45	St John Vianney Football Club	North Central	719173	739113	23,671	17,077	46	555	A
DCC_50	Area at Foxfield Road	North Central	722000	738475	19,323	15,468	41	17,409	A
DCC_74	Mc Auley Park, Artane	North Central	720316	738408	8,604	14,426	48	0	A
DCC_75	Rockfield Park	North Central	718388	738222	63,993	23,329	45	32,262	A
DCC_90	St Malachy's Football Club, Edenmore	North Central	720591	738782	58,950	19,766	48	3,819	A
DCC_95	Area at Collinswood, Whitehall	North Central	717522	738342	5,027	19,265	47	0	A
DCC_99	Cameron Park, Edenmore	North Central	720723	739231	13,566	15,533	49	0	A
DCC_110	St Kevin's Football Club, Santry	North Central	716364	738933	11,909	14,010	45	6,269	A
DCC_132	Ardmore Park, Beaumont	North Central	718404	738982	19,741	20,013	46	3,027	A

CQA ID	Name	Committee Area	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DCC_137	Area at Collinswood, Whitehall	North Central	717653	738399	5,534	19,146	49	0	A
DCC_142	Beauvale Park, Beaumont	North Central	718491	738769	5,135	18,874	45	2,357	A
DCC_145	St Vincent's GAA Grounds, Marino	North Central	717922	737374	66,344	23,802	46	3,963	A
DCC_150	Beaumont Woods, Beaumont	North Central	717892	739183	30,545	19,271	48	20	A
DCC_153	Dollymount SAA – Terrestrial Area Only(excluding slob lands)	North Central	723429	736899	3,603,066	10781	42	3,003,586	A, *
DCC_159	Whitehall Stadium, Whitehall	North Central	717239	738058	9,878	17,832	48	40	A
DCC_166	Area at Lein Road, Artane	North Central	720454	738513	6,713	14,654	48	0	A
DCC_172	Area at Roseglen Road, Kilbarrack	North Central	722484	738788	25,685	15,895	48	0	A

CQA ID	Name	Committee Area	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DCC_178	St Monica's GAA, Edenmore	North Central	721207	739150	18,525	19,789	45	10,402	A
DCC_180	St. Annes Park, Raheny*	North Central	721139	737362	1,227,589	27,630	42	869,420	A, *
DCC_202	San Park, Kilbarrack	North Central	722748	738573	12,510	12,265	45	4,102	A
DCC_203	Casino at Marino	North Central	718051	737191	21,149	20,243	49	473	A
DCC_23	Whiteacre Park	North West	716047	739435	5,549	14,305	45	2,767	A
DCC_38	Area at Fairways Park	North West	714032	738336	10,687	16,745	45	4,299	A
DCC_100	Johnstown Park	North West	714223	738638	124,361	22,547	45	54,337	A
DCC_168	Area at Pinewood Cres, Finglas	North West	714781	739569	9,561	16,293	49	0	A
DCC_1	Bernard Curtis Park, Bluebell	South Central	710870	732706	11,615	13,713	49	2,031	A
DCC_123	Turvey Park, Kilmainham	South Central	712362	733698	6,446	14,982	45	3,503	A

CQA ID	Name	Committee Area	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DCC_174	Area behind St Seton's School, Ballyfermot	South Central	709443	733962	24,346	16,906	48	377	A
DCC_108	Phoenix Park	South Central and Central	711467	735582	6,799,280	53,278	48	1,510,117	A
DCC_7	Dartmouth Square	South East	716207	732536	7,933	20,560	51	0	R
DCC_9	Willie Pearse Park	South East	712222	731649	83,185	27,107	48	10,012	A
DCC_30	Stannaway Park	South East	712510	730927	63,364	23,848	48	746	A
DCC_39	Palmerston Park, Dartry	South East	716070	730610	25,864	18,738	50	200	#, *
DCC_42	Herzog Park	South East	714901	730280	16,077	18,590	46	4,020	A
DCC_54	Area at Beech Hill Ave, Belfield	South East	717729	730760	11,575	9,116	47	21	A
DCC_82	Brickfield Park	South East	712755	732607	111,849	29,707	48	890	A
DCC_92	Wanderers Football Club	South East	718557	731682	29,113	10,601	47	1,579	A
DCC_97	Area at Leighlin Road, Kimmage	South East	713040	731665	6,497	19,565	49	0	A

CQA ID	Name	Committee Area	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DCC_105	Ranelagh Gardens, Ranelagh	South East	716275	732133	11,646	24,022	57	117	#, *
DCC_116	Irishtown Nature Park	South East	720042	733269	72,237	1,152	47	14,382	A
DCC_122	Ringsend Park	South East	718459	733832	136,810	14,688	49	1,482	A
DCC_126	Clonmacnoise Park	South East	713254	731611	29,429	21,804	49	0	A
DCC_152	Area at Lismore Road, Kimmage	South East	713195	731385	6,464	20,710	49	0	A
DCC_155	Herbert Park	South East	717560	732103	130,786	18,905	48	5,040	A
DCC_157	Iveagh Gardens	South East	715828	733078	34,730	24,497	46	13,359	A
DCC_158	The Cabbage Gardens, Cathedral Lane	South East	715147	733256	5,610	30,110	43	4,787	A, *
DCC_175	Dartry Park, Dartry	South East	715743	729934	36,113	15,751	45	21,360	A
DCC_183	Ollie Campbell Park, Donnybrook	South East	718092	731656	39,640	10,843	48	3,062	A
DCC_185	Area along Dodder, Donnybrook	South East	716330	731858	90,288	61,144	49	15,620	A

CQA ID	Name	Committee Area	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DCC_198	Eamonn Ceannt Park	South East	713765	731763	166,979	31,422	48	4,375	A
DCC_200	St Mary's Lawn Tennis Club	South East	717255	731436	5,472	13,558	45	1,311	A
DCC_118	War Memorial Gardens	South Central	712197	734028	233,457	15,425	55	2,351	#
DCC_64	Le Fanu Park	South Central	709332	733380	156,301	17,039	52	745	#

CQA Criteria: A – Absolute CQA, R – Relative CQA, * - Existing designated Quiet Area, # - APA requested CQA

Table 38: DCC: Summary of Existing Quiet Areas and Candidate Quiet Areas (CQAs) to be Investigated

CQA ID	Name	Committee Area	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DCC_149	Mount Bernard Park, Shandon Park, Phibsborough	Central	714309	736456	21,149	20,056	56	0	#, *
DCC_169	Blessington Basin, Blessington St. (inc Royal Canal Bank)	Central	715075	735544	18,686	39,697	48	4,534	A, *
DCC_17	Edenmore Park, Raheny	North Central	721201	738885	95,479	23,309	46	26,447	A, *
DCC_153	Dollymount SAA – Terrestrial Area Only(excluding slob lands)	North Central	723429	736899	3,603,066	10781	42	3,003,586	A, *
DCC_180	St. Annes Park, Raheny*	North Central	721139	737362	1,227,589	27,630	42	869,420	A, *
DCC_39	Palmerston Park, Dartry	South East	716070	730610	25,864	18,738	50	200	#, *
DCC_105	Ranelagh Gardens, Ranelagh	South East	716275	732133	11,646	24,022	57	117	#, *

CQA ID	Name	Committee Area	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DCC_158	The Cabbage Gardens, Cathedral Lane	South East	715147	733256	5,610	30,110	43	4,787	A, *
DCC_5	National Botanic Gardens	Central	714901	737165	188,805	22,845	47	43,500	A
DCC_5a	Glasnevin Cemetery (N)	Central	714901	737165	318,772	29,128	54	-	#
DCC_5b	Glasnevin Cemetery (S)	Central	714901	737165	49,443	21,739	63	-	#
DCC_145	St Vincent's GAA Grounds, Marino	North Central	717922	737374	66,344	23,802	46	3,963	A
DCC_203	Casino at Marino	North Central	718051	737191	21,149	20,243	49	473	A
DCC_23	Whiteacre Park	North West	716047	739435	5,549	14,305	45	2,767	A
DCC_100	Johnstown Park	North West	714223	738638	124,361	22,547	45	54,337	A
DCC_108	Phoenix Park	South Central and Central	711467	735582	6,799,280	53,278	48	1,510,117	A
DCC_122	Ringsend Park	South East	718459	733832	136,810	14,688	49	1,482	A

CQA ID	Name	Committee Area	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DCC_198	Eamonn Ceannt Park	South East	713765	731763	166,979	31,422	48	4,375	A
DCC_118	War Memorial Gardens	South Central	712197	734028	233,457	15,425	55	-	#
DCC_64	Le Fanu Park	South Central	709332	733380	156,301	17,039	52	-	#

CQA Criteria: A – Absolute CQA, R – Relative CQA, * - Existing designated Quiet Area, # - APA requested CQAAA

10.11 Mitigation and Protection Measures and Actions

An overview of the general prevention, protection and mitigation measures that could be considered for the management of noise from road, rail and industry within the Agglomeration is presented within **Section 8**.

This section considers those measures in a local context, together with key local noise management related policy guidelines and local and regional projects and set out the framework that Dublin City Council intends to follow to help manage and mitigate the effects of exposure to environmental noise.

The environmental noise management measures within the framework are presented across the three policy principle categories covered by the **Noise Policy Statement**, together with a fourth supporting 'General' category as follows;

- General – Noise Management Measures
- Prevention – Noise Management Measures
- Protection – Noise Management Measures
- Mitigation – Noise Management Measures.

In some instances, measures do not necessarily stand in isolation and may be relevant for, or overlap, with other categories.

Furthermore, the measures collectively support the **Responsible Aims** which underpin the **Noise Policy Statement**. A summary of **Responsible Aims** that are achieved, or partially achieved, through the proposed measures is set out in **Table 40**.

When considering the broader framework of measures and actions aimed at mitigating exposure to environmental noise from the transport and industry sectors, it is important to emphasize that Dublin City Council, in some instances, does not have exclusive ownership or influence over certain noise sources, areas, and the measures presented in this Noise Action Plan. Many of the measures and actions will require input, collaboration, and execution by other infrastructure owners, along with support from government departments and bodies through relevant legislation and funding.

In addition to third-party collaboration, the successful implementation of this Noise Action Plan will also depend on the availability of adequate resources to execute the proposed measures and actions.

The measures are described below across each of the four categories. The measures, and associated actions are presented in **Table 40**.

10.11.1 General – Noise Management Measures

General noise management measures cover a range of activities to support the implementation of the Noise Action Plan including other measures across the three policy principle categories.

Measure DCC_M1: Support the Development of National Noise and Other Related Policy and Guidance

At present there is no national policy relating specifically to noise other than specific objectives set out within a range of national plans and strategies such as Policy Objective 65 from the National Planning Framework 2040. Furthermore, there is no adopted consistent approach for Local Authorities to apply in the evaluation of noise issues at the planning application stage. Some have developed their own guidelines, and many apply the ProPG (2017) approach which is used within the UK. Development of national policy and guidelines will be the responsibility of the Department of Environment, Climate and Communications (DECC).

In addition to specific national policy and guidance relating to noise, other national policy and guidance can have an indirect impact on noise related issues. An example includes the National Speed Limit Review led by the Department of Transport and published in September 2023.

Dublin City Council will actively support and engage with the development of national policy and guidance on the subject of noise and all related policy.

Measure DCC_M2: Dublin City Council Noise Working Group

It is proposed to establish a noise working group to co-ordinate the activities and actions from the Noise Action Plan and to foster an approach of collaboration across all relevant departments and sections. The noise working group will include representatives from the Air Quality Monitoring and Noise Control Unit, the Technical Support Division, Road Maintenance Services, Road Design, Traffic, Active Travel, Parks and the Planning Department. The objective of the group will be to facilitate an understanding of the work and progress of each section and provide a forum to influence noise related actions within the broader context of Dublin City Council services and projects.

Measure DCC_M3: Noise Action Plan Working Group(s) - Action Planning Authorities and Transport Infrastructure Owners

Dublin City Council will support the establishment of relevant noise working groups to co-ordinate and collaborate with other Dublin Agglomeration APAs and the relevant NMBs (Transport Infrastructure Ireland, Iarnród Éireann and Dublin Airport Authority) in respect of noise management issues in general and mitigation measures at a Priority Important Area level.

Measure DCC_M4: Annual Report to Environment Protection Agency (EPA)

Dublin City Council will prepare an annual report for the EPA setting out progress made in respect of the implementation of the Noise Action Plan including the investigations of Priority Important Areas and implementation of noise mitigation measures for those areas and other general areas.

In addition, progress with respect to the assessment of the Candidate Quiet Areas will be presented together with any recommendations for referring any of these areas to the EPA and the Minister for designating as a Quiet Area. Dublin City Council will liaise with relevant third party infrastructure

owners in respect of progress made by them with implementing actions that may be relevant for them and their infrastructure.

Measure DCC_M5: Continued Investigation and Management of Noise Complaints

Dublin City Council's Air Quality Monitoring and Noise Control Unit investigates complaints under the provisions of the Environmental Protection Agency Act 1992 (Noise) Regulations 1994. The Unit has regard to best international best practice guidelines and standards.

Measure DCC_M6: Stakeholder Collaboration

Dublin City Council's Air Quality Monitoring and Noise Control Unit actively collaborates with a number of stakeholders in relation to potential and existing air /noise nuisances:

- **EPA - IPC Licences** - The Air Quality Monitoring and Noise Control Unit refers noise complaints received in relation to IPC licences directly to the EPA. The Unit assists the EPA with the investigation of these complaints where required. While no Priority Important Areas relating to industry have been identified within this Plan, the industry strategic noise maps presented in **Section 10.13** will be reviewed and any issues of importance brought to the attention of the EPA as part of this ongoing collaboration and their review of any relevant IPC licences.
- **Irish Rail** - The Air Quality Monitoring and Noise Control Unit liaises with Irish Rail in relation to complaints, night time works, and infrastructure projects which may increase noise levels.
- **Dublin Port** - The Air Quality Monitoring and Noise Control Unit engages directly with Dublin Port in relation to noise emissions and noise monitoring in the Dublin Port area. The Unit was recently involved in consultations with Dublin Port in respect of agreeing noise mitigation measures which helped reduce the noise levels from trucks at their Roll on/Roll off Ferry terminal.

Collaboration is not necessarily limited to the above stakeholders and will include others where required. In respect of LUAS related Priority Important Areas, this will require close collaboration with Transport Infrastructure Ireland.

Measure DCC_M7: Ongoing Community Engagement

A key requirement in the development of the strategic noise maps and Noise Action Plan is that the information is made available to the public in a clear, comprehensible, and accessible manner. Furthermore, the public should be consulted on the preparation of the Noise Action Plan, provided with the opportunity to participate and comment on the Noise Action Plan, and the feedback from public engagement should be considered when finalizing the Plans.

To date the strategic noise maps, together with background information, has been published on the Air Quality Monitoring and Noise Control Unit website and a period of formal public consultation held on the draft Noise Action Plan. Furthermore, engagement has been on-going through the elected representatives of Dublin City Council through the relevant Strategic Policy Committee and Local Area Committee meetings.

As part of the implementation of the Noise Action Plan, it is proposed to continue with, and build on this public engagement as part of the evaluation of the Priority Important Areas and also through engagement on relevant existing Plans and Projects. This engagement will include:

- ongoing engagement with elected members
- presentation of the finding of the detailed appraisal of mitigation measures on Dublin City Council's Air Quality Monitoring and Noise Control Unit website
- presentation of the findings of the evaluation of the candidate Quiet Areas on Dublin City Council's Air Quality Monitoring and Noise Control Unit website
- formal public consultation on proposed measures, candidate Quiet Areas and other Plans and Projects, where appropriate
- use of relevant social media and information services to report findings and progress
- meetings with local area resident groups, as appropriate.

10.11.2 Prevention – Noise Management Measures

Measure DCC_M8: Planning Application Advice, Conditioning and Enforcement

Dublin City Council's Air Quality Monitoring and Noise Control Unit consults directly with the Planning Department advising on planning applications and enforcement of planning conditions in relation to noise emissions. The Unit has standard planning conditions for this purpose.

In reviewing and advising on planning applications the Unit will give due consideration to the existing strategic noise maps and this Noise Action Plan and in particular the existing Quiet Areas and any Candidate Quiet Areas.

Furthermore Dublin City Council's Air Quality Monitoring and Noise Control Unit has developed a Good Practice Guide for Construction and Demolition in respect of managing noise. For the construction phase of all developments that require planning permission adherence to this guide is a condition of the permission.

Measure DCC_M9: Maintain Existing Ambient Noise Monitoring Network

Dublin City Council's Air Quality Monitoring and Noise Control Unit has established an ambient noise network. The locations and results, real time and historic, can be viewed by accessing this link <https://dublincityairandnoise.ie/>.

This network will continue to be maintained and expanded over the life of this Noise Action Plan. This will include a review of the existing stations in the context of the latest results of the strategic noise mapping and the proposed noise mitigation measures including monitoring requirements to gauge effectiveness of same.

10.11.3 Protection - Noise Management Measures

Measure DCC_M10: Evaluation of Shortlisted Candidate Quiet Areas

Dublin City Council will complete an evaluation of each of the 11 shortlisted Candidate Quiet Areas identified **Section 10.10.2, Table 38**. The objective of the evaluation process will be to confirm the validity of the Candidate Quiet Area for delimiting as a Quiet Area.

The evaluation will include some or all the elements described in **Section 7.4**. For instance, in order to assess the value of each site to the local community, it may be appropriate to evaluate the

soundscape of each site through the visitor experience and stakeholder engagement process and by undertaking organized soundwalks or other applicable methodologies.

The results of the evaluation will be used to make a recommendation on whether to designate the site as a Quiet Area or not. The public, the EPA and relevant Stakeholders will then be consulted on the outcome before a final proposal for each area is made to the EPA and the Minister.

Measure DCC_M11: Proposal for Quiet Area(s) Designation

For each of the Candidate Quiet Areas that are recommended for designation as Quiet Area, a proposal will be prepared setting out the findings of the investigations and the feedback from the consultation process to support the recommendation for the area being designated as a Quiet Area.

This will be consulted with the EPA before being issued to the Minister of the Environment, Climate and Communications to approve the delimitation of the recommended Candidate Quiet Areas as a Quiet Area.

10.11.4 Mitigation – Noise Management Measures

Existing Plans, Projects and Strategies

Measure DCC_M12: Implementation of the Dublin City Centre Transport Plan 2023 [The Transport Plan]

The Transport Plan while not prepared specifically to mitigate environmental noise from traffic related activity, will when completed provide significant indirect noise reduction benefits through improved road layouts, enhanced planting and reduced traffic volumes within the city centre, with a reduction of as much as 60% forecast for the core city centre area. This Noise Action Plan identifies seven road traffic related Priority Important Areas which are required to be evaluated to identify appropriate noise mitigation measures for implementation, subject to economic justification.

All seven Priority Important Areas are located within the city centre and within the area covered by the Transport Plan. In this regard, the Transport Plan is a fundamental noise mitigation measure that once implemented will play a significant role in reducing traffic volumes, thus mitigating traffic noise in each of the seven Priority Important Areas and the city centre area. Furthermore, the implementation period of the Transport Plan aligns with the period of this Noise Action Plan (2024 – 2028).

Measure DCC_M13: Support the Implementation of Other Relevant Plans, Projects and Strategies

There are a number of existing plans, projects and strategies which aim to deliver more sustainable infrastructure and services for the city of Dublin and its surrounding areas. The successful implementation of these will bring indirect benefits for noise reduction through encouraging more sustainable modes of transport in combination with reduced traffic volumes. Key examples with noise benefit synergies include;

- the Active Travel Programme
- the Greater Dublin Area Transport Strategy
- the Dublin City Council Climate Action Plan.

This measure aims to work collaborative with each of these to support their implementation and engage on aspects for noise management and benefits.

Priority Important Areas

Measure DCC_M14: Evaluation of each Priority Important Area

Dublin City Council will complete an evaluation of each of the 11 Priority Important Areas identified in this chapter of the Noise Action Plan. Where the Priority Important Area relates to infrastructure that is exclusively the responsibility of and managed by Dublin City Council, then the evaluation will be completed exclusively by Dublin City Council. This includes the seven road traffic related Priority Important Areas. Where the Priority Important Area relates to infrastructure for which a third party has overall responsibility, then the evaluation will require significant input from the relevant infrastructure owner. This includes the four rail related Priority Important Areas where significant input will be required from Transport Infrastructure Ireland and Irish Rail.

The objective of the evaluation process will be to confirm the validity of the Priority Important Area and identify the most appropriate noise mitigation measures through detailed economic and health benefits appraisal. The steps in the evaluation process are described in **Section 8.4**.

Measure DCC_M15: Review Road Maintenance Works Programme for Noise Benefits within PIAs and other Areas

The Roads Maintenance Services (RMS) section of Dublin City Council implements an annual programme of road maintenance works. The works packages included within each annual programme are identified based on road condition and other relevant criteria such as customer enquiries, road safety etc.

It is proposed to work with RMS to review their proposed annual roads maintenance programme in the context of the Priority Important Areas identified and the strategic noise maps produced to incorporate, where possible, road noise within the decision criteria process and to support the use of low noise road surface types where feasible and appropriate to do so.

This will include a review of the pavement management system within the existing Transportation Asset Management System (TAMS) and other road condition methodologies in use, in conjunction with the strategic noise mapping results. In particular consideration will be given to developing a prioritisation list of those areas where road surface improvements would have the greatest noise reduction impact and a methodology to enable these to be considered in conjunction with road condition when considering locations for inclusion within annual works programmes.

Measure DCC_M16: Road Surface Noise Mitigation Desktop Study

The road surface type is a key parameter which influences the level of road traffic noise. While a range of road surface types exist and/or are used within the Dublin City Council area, the two most common are Hot Rolled Asphalt (HRA) and Stone Mastic Asphalt (SMA). The former is known to contribute to higher road traffic noise emissions than the latter. However, the consideration of road surface type must consider a wider range of criteria in addition to that of noise. This would include durability, whole life costs and carbon life cycle.

To support measures to promote the use of SMA over HRA, a desktop study is proposed to review the relative merits of road surface types for noise benefits in addition to addressing the range of other criteria that must also be considered. The study shall consider an appraisal of these elements as part of the evaluation of one Priority Important Area. While primarily a desktop study, a period of noise and traffic measurements may be considered at an existing HRA and SMA site to support the appraisal process.

Measure DCC_M17: Implementation of Recommended Noise Mitigation Measures

Subject to the outcome of DCC_M14, Dublin City Council will implement measures deemed technically, economically, and environmentally justified as part of this round of the Noise Action Plan or future rounds, contingent upon resources and funding.

Implementation will involve reviewing the effectiveness of the measures through monitoring where appropriate. The implementation of measures related to infrastructure not under Dublin City Council's responsibility should be carried out by the third parties responsible for that infrastructure. Dublin City Council will coordinate with these parties in monitoring progress and reporting to the EPA as part of the annual report.

Consideration will be given to funding sources and will include liaising with relevant Dublin City Council sections and projects as well as third parties and government departments with a view to securing funding for relevant measures or ensuring the noise measures are incorporated within existing funding streams for existing projects.

Potential Priority Important Area Noise Mitigation Measures

Measure DCC_M14 commits to undertaking an evaluation of each Priority Important Area including the identification of appropriate noise mitigation measures for each area. **Table 39** below provides a summary of some of the potential noise mitigation measures that could be considered for each area, including where appropriate reference to relevant measures set out in this section (measure number is included in brackets).

It should be noted that the measures presented in the table below are for consideration only and would need to be fully evaluated through the completion of Measure DCC_M14 to confirm their appropriateness and justification for each Priority Important Area. Rail related potential measures would need to be reviewed, discussed and agreed with both Irish Rail and Transport Infrastructure Ireland for the relevant rail Priority Important Areas.

Table 39: DCC: Priority Important Area (PIA) Example Mitigation Measure Considerations

PIA	Source	Noise Reduction at Source	Noise Abatement Operating Procedures	Community Engagement and Responsible Actions	Operational Restrictions	Land-Use Planning and Management	Comments
DCC_1	ROAD	Low Noise Road Surfacing Road Resurfacing (DCC_M13 & DCC_M15)	The Transport Plan (DCC_M12)	Noise Measurement and Reporting (DCC_M9) Community & Stakeholder Engagement (DCC_M5 & M6)	The Transport Plan (DCC_M12) Speed Limit Review Traffic Calming & Management	The Transport Plan (DCC_M12) Planning Applications (DCC_M8) Policy & Guidance (DCC_M1)	Noise barriers not suitable for urban city centre environment
DCC_2	ROAD	Low Noise Road Surfacing Road Resurfacing (DCC_M13 & DCC_M15)	The Transport Plan (DCC_M12)	Noise Measurement and Reporting (DCC_M9) Community & Stakeholder Engagement (DCC_M5 & M6)	The Transport Plan (DCC_M12) Speed Limit Review Traffic Calming & Management	The Transport Plan (DCC_M12) Planning Applications (DCC_M8) Policy & Guidance (DCC_M1)	Noise barriers not suitable for urban city centre environment
DCC_3	ROAD	Low Noise Road Surfacing Road Resurfacing	The Transport Plan (DCC_M12)	Noise Measurement and Reporting (DCC_M9) Community & Stakeholder	The Transport Plan (DCC_M12) Speed Limit Review	The Transport Plan (DCC_M12) Planning Applications (DCC_M8)	Noise barriers not suitable for urban city centre environment

PIA	Source	Noise Reduction at Source	Noise Abatement Operating Procedures	Community Engagement and Responsible Actions	Operational Restrictions	Land-Use Planning and Management	Comments
DCC_4	RAIL	(DCC_M13 & DCC_M15)		Engagement (DCC_M5 & M6)	Traffic Calming & Management	Policy & Guidance (DCC_M1)	
		Increasing the Elasticity Track Superstructure		Noise Measurement and Reporting (DCC_M14)	Speed Restrictions	Noise Barriers	Sections of elevated railway through urban environment, potential for noise barriers to be reviewed with Irish Rail
		Rail Fleet Renewal Electrification of lines - DART+ (DCC_M13)	Train Scheduling	Community & Stakeholder Engagement (DCC_M5 & M6)	Route Use Restrictions Idle time management using adequate signalling	Planning Applications (DCC_M8) Policy & Guidance (DCC_M1)	
DCC_5	ROAD	Low Noise Road Surfacing	The Transport Plan (DCC_M12)	Noise Measurement and Reporting (DCC_M9)	The Transport Plan (DCC_M12)	The Transport Plan (DCC_M12)	Noise barriers not suitable for urban city centre environment
		Road Resurfacing (DCC_M13 & DCC_M15)		Community & Stakeholder Engagement (DCC_M5 & M6)	Speed Limit Review Traffic Calming & Management	Planning Applications (DCC_M8) Policy & Guidance (DCC_M1)	
DCC_6	ROAD	Low Noise Road Surfacing	The Transport Plan (DCC_M12)	Noise Measurement and Reporting (DCC_M9)	The Transport Plan (DCC_M12)	The Transport Plan (DCC_M12)	Noise barriers not suitable for urban city centre environment

PIA	Source	Noise Reduction at Source	Noise Abatement Operating Procedures	Community Engagement and Responsible Actions	Operational Restrictions	Land-Use Planning and Management	Comments
		Road Resurfacing (DCC_M13 & DCC_M15)		Community & Stakeholder Engagement (DCC_M5 & M6)	Speed Limit Review Traffic Calming & Management	Planning Applications (DCC_M8) Policy & Guidance (DCC_M1)	
DCC_7	ROAD	Low Noise Road Surfacing Road Resurfacing (DCC_M13 & DCC_M15)	The Transport Plan (DCC_M12)	Noise Measurement and Reporting (DCC_M9) Community & Stakeholder Engagement (DCC_M5 & M6)	The Transport Plan (DCC_M12) Speed Limit Review Traffic Calming & Management	The Transport Plan (DCC_M12) Planning Applications (DCC_M8) Policy & Guidance (DCC_M1)	Noise barriers not suitable for urban city centre environment
DCC_8	ROAD	Low Noise Road Surfacing Road Resurfacing (DCC_M13 & DCC_M15)	The Transport Plan (DCC_M12)	Noise Measurement and Reporting (DCC_M9) Community & Stakeholder Engagement (DCC_M5 & M6)	The Transport Plan (DCC_M12) Speed Limit Review Traffic Calming & Management	The Transport Plan (DCC_M12) Planning Applications (DCC_M8) Policy & Guidance (DCC_M1)	Noise barriers not suitable for urban city centre environment
DCC_9	RAIL	Increasing the Elasticity Track Superstructure	Train Scheduling	Noise Measurement and Reporting (DCC_M14)	Speed Restrictions	Noise Barriers	1.5km of railway through an urban environment,

PIA	Source	Noise Reduction at Source	Noise Abatement Operating Procedures	Community Engagement and Responsible Actions	Operational Restrictions	Land-Use Planning and Management	Comments
		Rail Fleet Renewal		Community & Stakeholder Engagement (DCC_M5 & M6)	Route Use Restrictions	Planning Applications (DCC_M8)	potential for noise barriers to be reviewed with Irish Rail
		Electrification of lines - DART+ (DCC_M13)			Idle time management using adequate signalling	Policy & Guidance (DCC_M1)	
DCC_10	RAIL (Luas)	Increasing the Elasticity Track Superstructure	Train Scheduling	Noise Measurement and Reporting (DCC_M14) Community & Stakeholder Engagement (DCC_M5 & M6)	Route Use Restrictions	Planning Applications (DCC_M8) Policy & Guidance (DCC_M1)	600m of Luas Light Rail through an urban city centre environment (Dominic Street Lower) – noise barrier not suitable
DCC_11	RAIL (Luas)	Increasing the Elasticity Track Superstructure	Train Scheduling	Noise Measurement and Reporting (DCC_M14) Community & Stakeholder Engagement (DCC_M5 & M6)	Route Use Restrictions	Noise Barriers Planning Applications (DCC_M8) Policy & Guidance (DCC_M1)	1km of Luas Light Rail through an urban environment, potential for noise barriers to be reviewed with TII

10.11.5 Noise Management Framework – Summary of Actions

A summary of the proposed noise management measures is set out in **Table 40** below together with details of the proposed action(s) for each. **Table 40** also sets out the **Responsible Aims** that each measure helps to support through the implementation of the Plan.

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Table 40: DCC: Noise Management Framework – Summary of Actions

Measure	Responsible Aim (RA)	Measure Description	Action
General – Noise Management Measures			
DCC_M1	RA_1 & 5	Support the Development of National Noise and Other Related Policy and Guidance	Support the Department of Environment, Climate and Communications (DECC) and other government departments and bodies in the development of national noise and other related policies and guidance, and assist in their implementation once in place.
DCC_M2	RA_2, 3, 4 & 5	Dublin City Council Noise Working Group	Establish terms of reference and membership of the working group and meet at least twice per year.
DCC_M3	RA_2, 3.4 & 5	Noise Action Plan Working Group(s) - Action Planning Authorities and Transport Infrastructure Owners	Establish terms of reference and membership for the Noise Action Plan Working Group. Hold meetings twice yearly or more frequently as matters require.
DCC_M4	RA_8	Annual Report to Environment Protection Agency (EPA)	Prepare an annual progress report regarding the implementation of the Noise Action Plan and submit it to the EPA.
DCC_M5	RA_5 & 7	Continued Investigation and Management of Noise Complaints	Review and investigate all noise complaints received in a timely manner and in accordance with national and international best practice.
DCC_M6	RA_3, 4 & 5	Stakeholder Collaboration	Continue liaison and collaboration with a range of key stakeholders to address noise-related issues and complaints to ensure the effective management of noise from related industry and infrastructure sites.

DCC_M7	RA_3, 4, 5 & 6	Ongoing Community Engagement	Publish the final Noise Action Plan and provide updates on the progress made with its implementation, including the findings of the appraisal of Priority Important Areas and evaluation of Candidate Quiet Areas, on the Dublin City Council’s Air Quality Monitoring and Noise Control Unit website. This information will also be communicated through ongoing engagement in Local Areas Committee meetings and formal public consultations
Prevention – Noise Management Measures			
DCC_M8	RA_5	Planning Application Advice, Conditioning and Enforcement	Review relevant planning applications for noise related issues in the context of existing Strategic Noise Maps, this Noise Action Plan and existing or candidate Quiet Areas and condition developments as appropriate.
DCC_M9	RA_5	Maintain Existing Ambient Noise Monitoring Network	Maintain the existing ambient noise monitoring network and review the need for expansion in accordance with the needs or monitoring requirements of this Noise Action Plan and other projects.
Protection – Noise Management Measures			
DCC_M10	RA_4	Evaluation of Shortlisted Candidate Quiet Areas	For each shortlisted Candidate Quiet Area carry out an investigation of the area and make a recommendation on whether to designate each area as a Quiet Area or not.
DCC_M11	RA_4	Proposal for Quiet Area(s) Designation	For all Candidate Quiet Areas recommended for designation, prepare proposal for EPA consultation and Ministerial Approval.
Mitigation – Noise Management Measures			
Existing Plans, Projects and Strategies			
DCC_M12	RA_3	Implementation of the Dublin City Centre Transport Plan 2023 [The Transport Plan]	Collaborate with the traffic section through the established noise working group to support the implementation of the Transport Plan, including an evaluation of the benefits on the Priority Important Areas and the coordination of sound monitoring measurements where required between both Plans.

DCC_M13	RA_3 & 5	Support Implementation of Other Relevant Plans, Projects & Strategies	<p>Collaborate with relevant Dublin City Council sections and 3rd Party organisations to support the implementation of the following;</p> <ul style="list-style-type: none"> • Dublin City Council’s Active Travel Programme • Greater Dublin Area Transport Strategy 2022-2042 • Dublin City Council’s Climate Action Plan 2024-2029
Priority Important Areas			
DCC_M14	RA_3	Evaluation of each Priority Important Area	<p>For each Priority Important Area, conduct a review and update of the noise model used in the development of the strategic noise maps, including the completion of sound measures where appropriate. Additionally, perform a detailed appraisal of the noise mitigation measures in each area to identify the preferred measure(s) for implementation, if any.</p>
DCC_M15	RA_3	Review Road Maintenance Works Programme for Noise Benefits within PIAs and other Areas	<p>Develop a road condition and road noise impacts heat map to support road maintenance decision-making. Meet with RMS as required to review the proposed annual works program including consideration of works locations and road surface type in the context of existing Priority Important Areas and in general.</p>
DCC_M16	RA_3	Road Surface Noise Mitigation Desktop Study	<p>Complete desktop review of noise characteristics of various road surface types. For one Priority Important Area, complete an appraisal to evaluate the benefits and disadvantages of the main road surface types used by Dublin City Council for noise, durability, sustainability & economics.</p>
DCC_M17	RA_3	Implementation of Recommended Noise Mitigation Measures	<p>Liaise with relevant Dublin City Council sections, third parties, and government departments to secure funding for noise mitigation measures. Implement the measures for which Dublin City Council has responsibility and support third parties in the implementation of their measures.</p>

10.12 Noise Action Plan Implementation

A summary of the proposed noise management measures is set out in **Table 40** together with details of the proposed action(s) for each. The table also sets out the **Responsible Aims** that each measure helps to support through the implementation of the Plan.

Figure 19 below provides a summary of the Dublin City Council measures in respect of their timescale for implementation over the period of the Plan and beyond, and the **Responsible Aims** which the measure supports, as set out in **Section 9.1.2**.

The timescales presented relate to the period of the Plan, 2024 - 2028, and beyond and with the following definitions assumed;

- 'Short term' indicates implementation by 2026
- 'Medium-term' indicates implementation by 2030
- 'Long-term' indicates implementation beyond 2030.

As can be seen from **Figure 19**, many of the measures relate to ongoing management activities, maintenance works and longer-term plans and projects. In this regard many of the measures overlap and will be continuous over the period of the Plan.

The establishment of the Dublin City Council and Noise Action Plan working groups will significantly improve the co-ordination and collaboration across all parties and will be essential to ensure successful implementation of the measures within and beyond the life of the Plan.

Successful implementation will also be subject to resources and funding.

Figure 19: DCC: Implementation Plan - Mitigation and Protection Measures and Actions

Dublin City Council Measures	Responsible Aim (RA)	Time scale	2024				2025				2026				2027				2028				2029+	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Noise Action Plan Preparation																								
	Noise Action Plan Completion	18th July 2024																						
General - Noise Management Measures																								
DCC_M1	Support National Policy & Guidance	RA_1 & 5	Short to Long-term																					
DCC_M2	Dublin City Council Noise Working Group	RA_2, 3, 4 & 5	Bi-annual																					
DCC_M3	Noise Action Plan Working Group(s)	RA_2, 3, 4 & 5	Bi-annual																					
DCC_M4	Annual Report to EPA	RA_8	Annual																					
DCC_M5	Manage Noise Complaints	RA_5 & 7	Ongoing																					
DCC_M6	Stakeholder Collaboration	RA_3, 4 & 5	Ongoing																					
DCC_M7	Ongoing Community Engagement	RA_3, 4, 5 & 6	As Required																					
Prevention - Noise Management Measures																								
DCC_M8	Planning Applications	RA_5	Ongoing																					
DCC_M9	Maintain Existing Noise Monitoring Network	RA_5	Ongoing																					
Protection - Noise Management Measures																								
DCC_M10	Evaluate Shortlisted CQAs	RA_4	Short to Medium-term																					
DCC_M11	Proposal for Quiet Area Designation	RA_4	Annually																					
Mitigation - Noise Management Measures																								
Existing Plans, Projects and Strategies																								
DCC_M12	Dublin City Centre Transport Plan 2023	RA_3	Short to Medium-term																					
DCC_M13	Support Other Plans, Projects & Strategies	RA_3 & 5	Ongoing																					
Priority Important Areas																								
DCC_M14	Evaluation of each PIAs	RA_3	Short to Medium-term																					
DCC_M15	Road Maintenance Works Programme	RA_3	Ongoing																					
DCC_M16	Road Surface Noise Mitigation Study	RA_3	Short-term																					
DCC_M17	Implement Noise Mitigation Measures	RA_3	Medium to Long-term																					

10.13 Figures

Figures supporting the strategic noise mapping results for Dublin City Council are set out in the following section. The figures include a graphical representation of:

- Industry noise contours – carried out to facilitate engagement between Dublin City Council and the EPA regarding the evaluation of issues related to industry regulation;
- the Most Important Areas – locations with the greatest concentration of harmful effects;
- the Priority Important Areas – Most Important Areas, or groups of Most Important Areas which will be addressed during the implementation of the Noise Action Plan; and
- the Candidate Quiet Areas identified as candidates to be preserved for their environmental noise quality, and those identified for investigation.

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Figure 20: DCC: Industry – Noise Exposures Exceeding 55 dB L_{den}

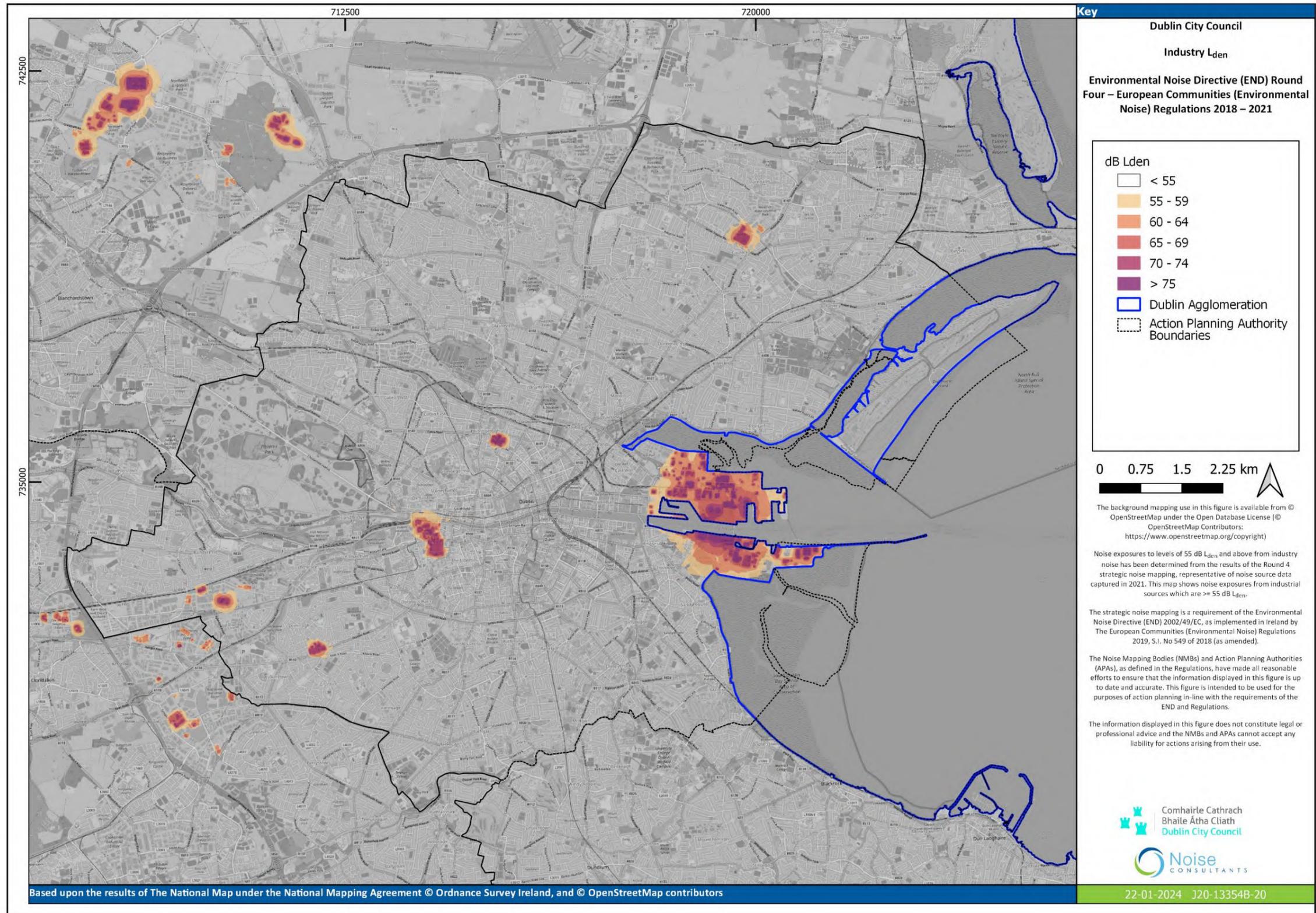


Figure 21: DCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 1)

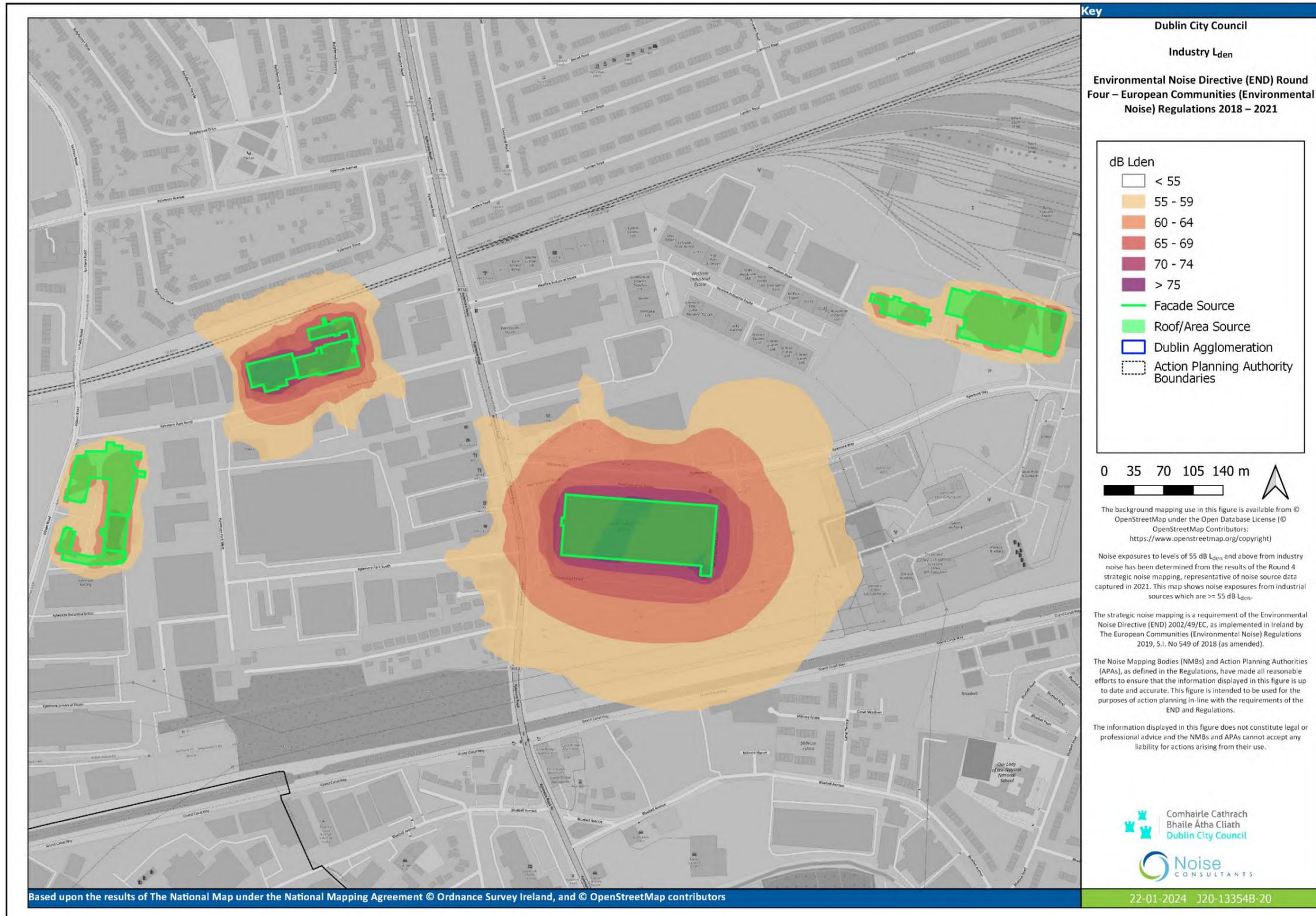


Figure 22: DCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 2)

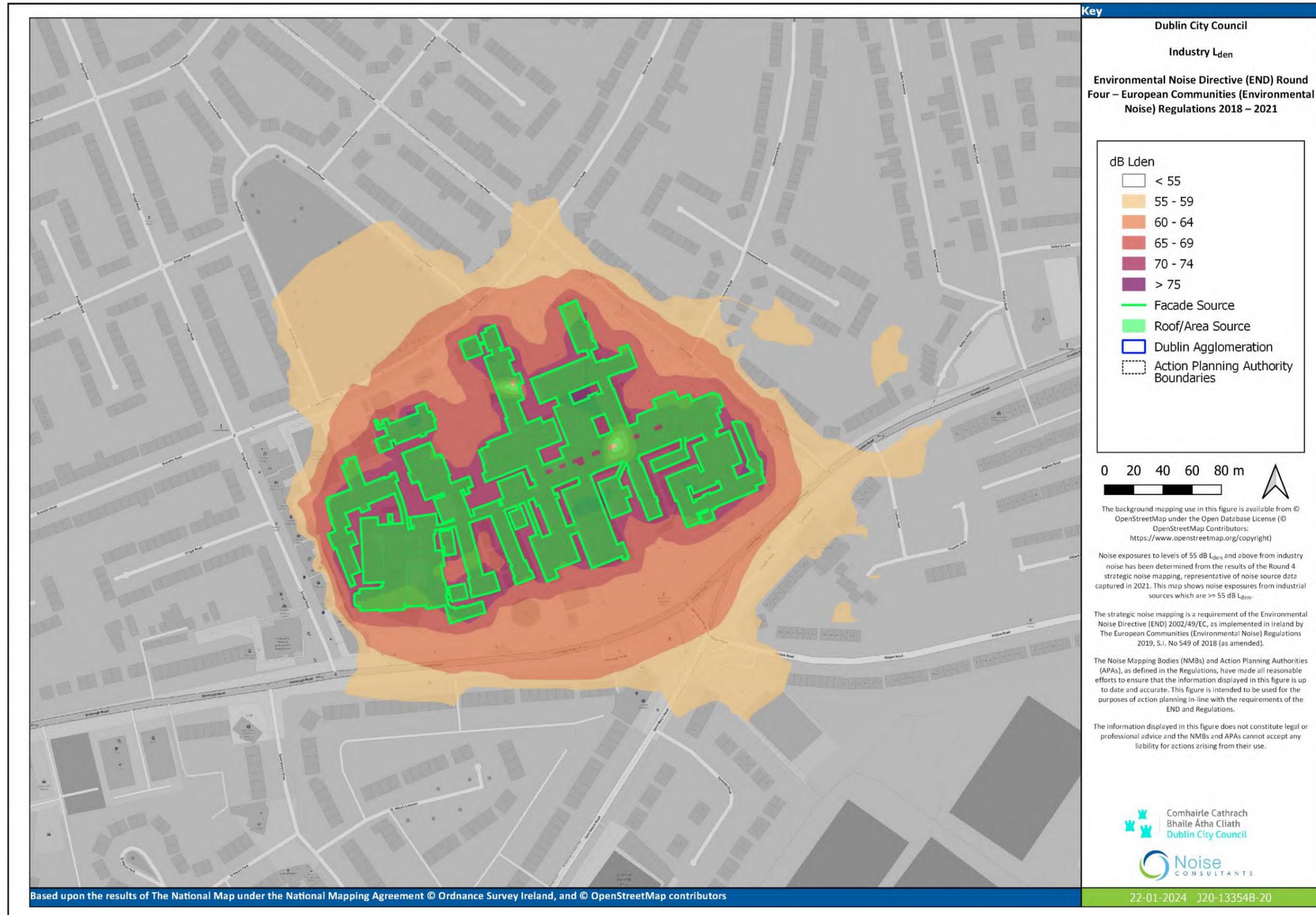


Figure 23: DCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 3)

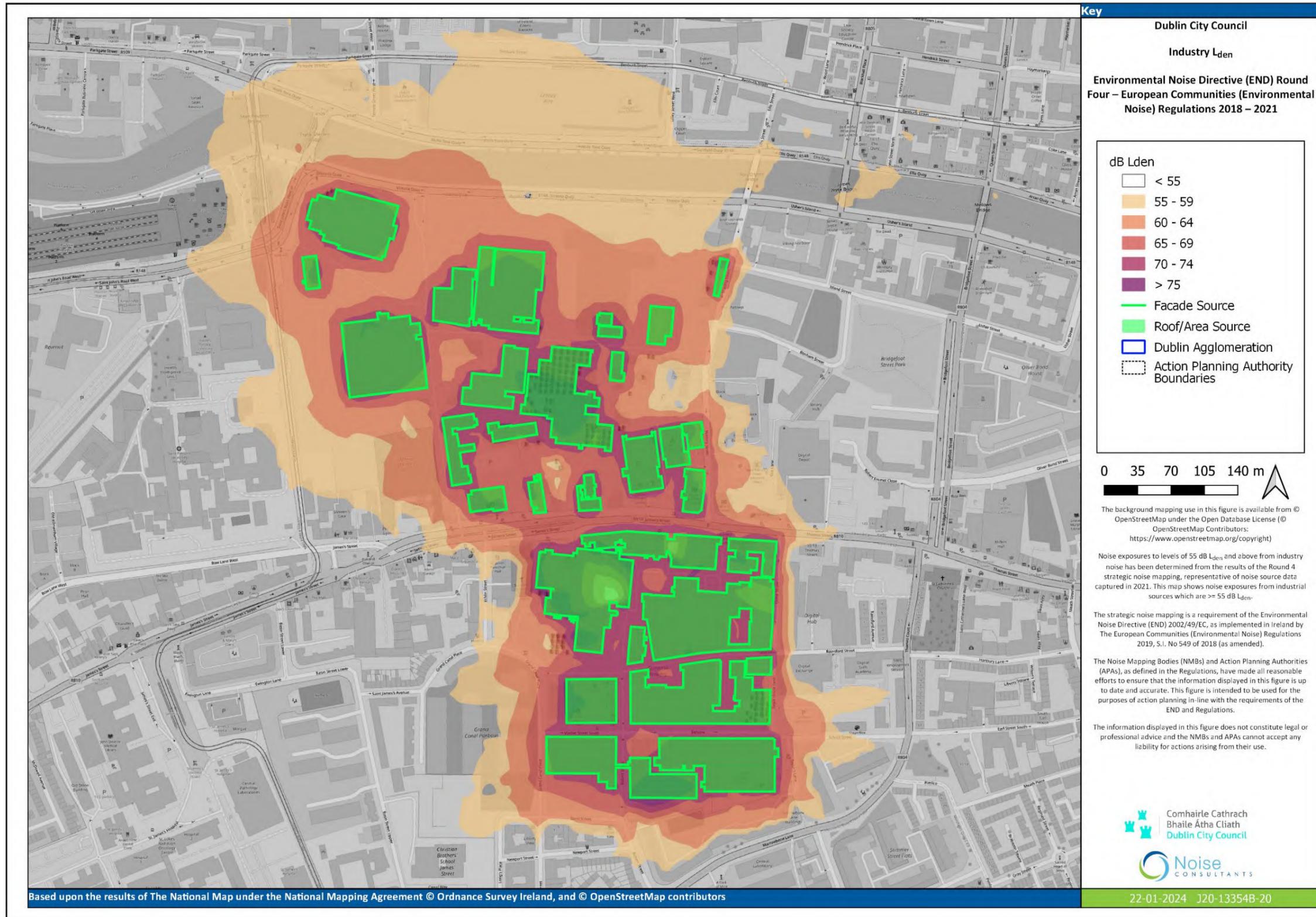


Figure 24: DCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 4)

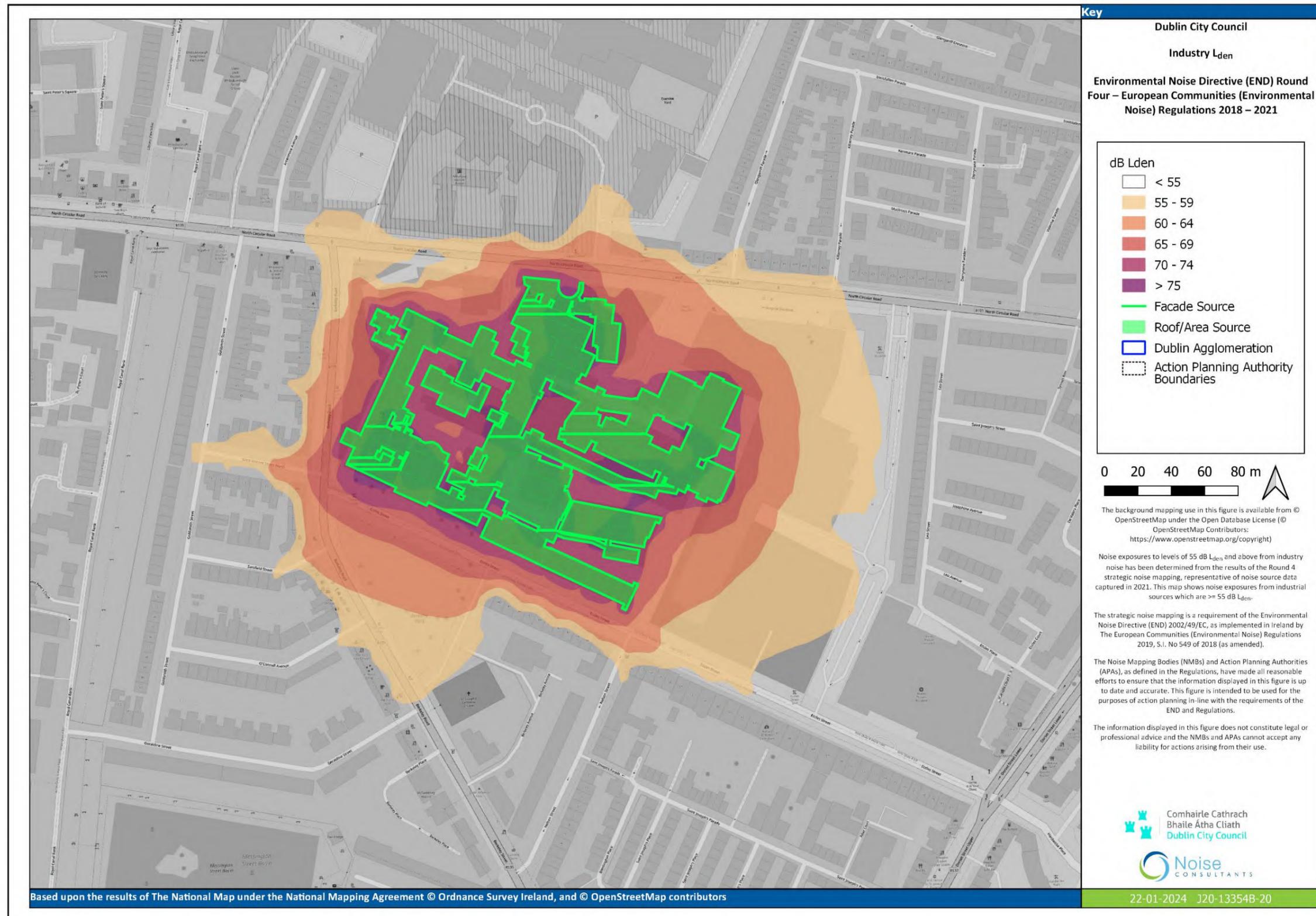


Figure 25: DCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 5)

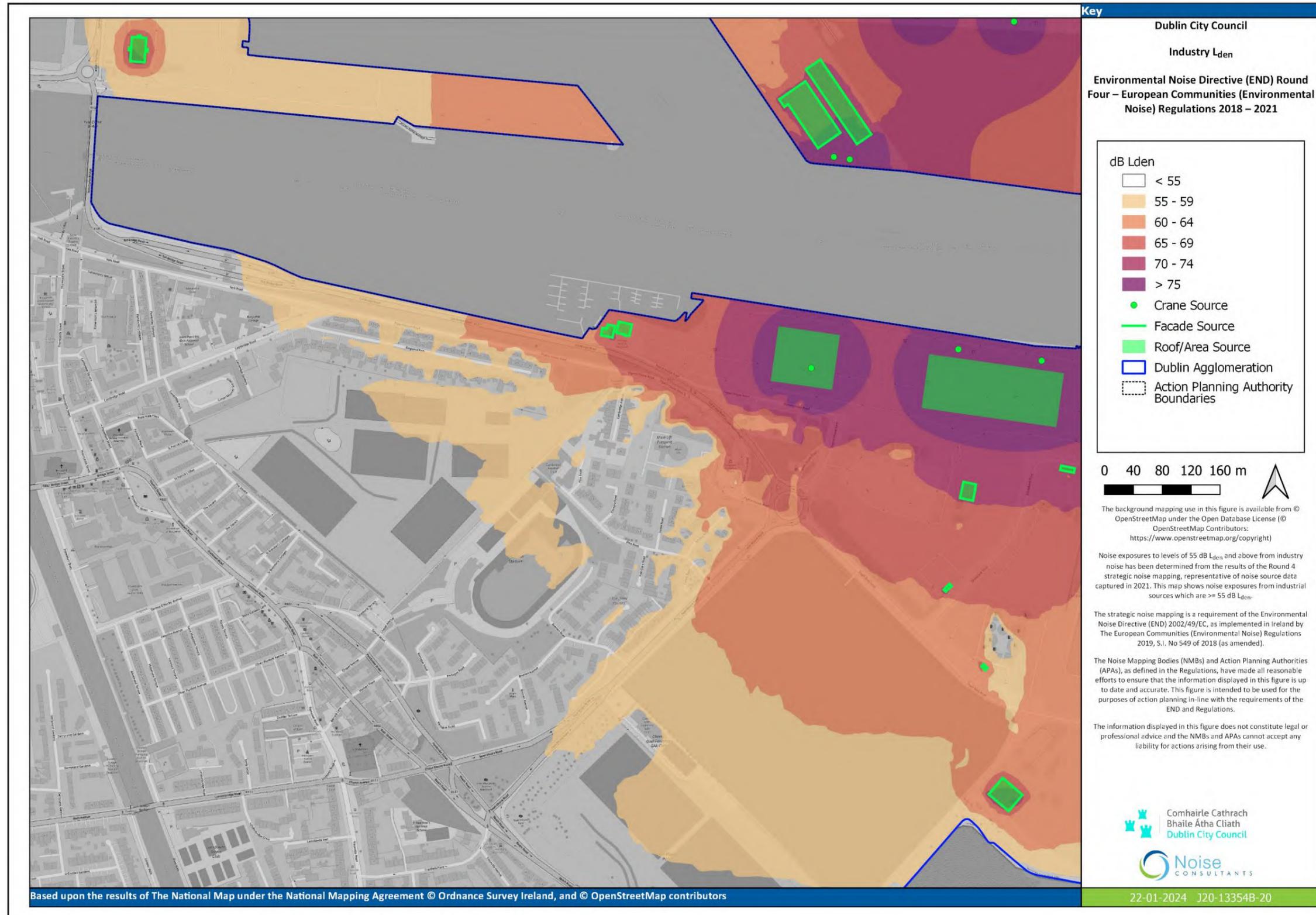


Figure 26: DCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 6)

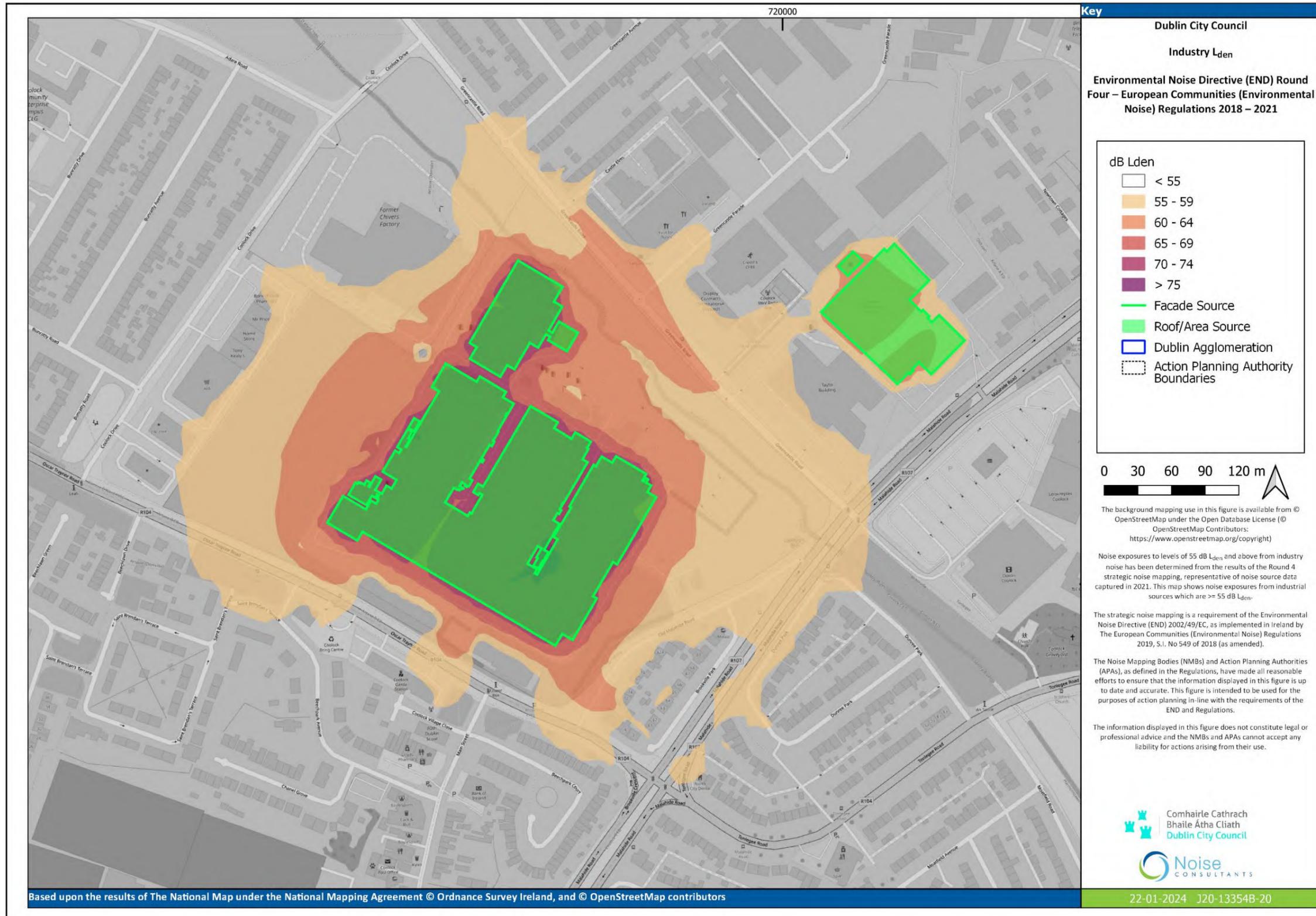


Figure 27: DCC: Most Important Areas (MIAs)

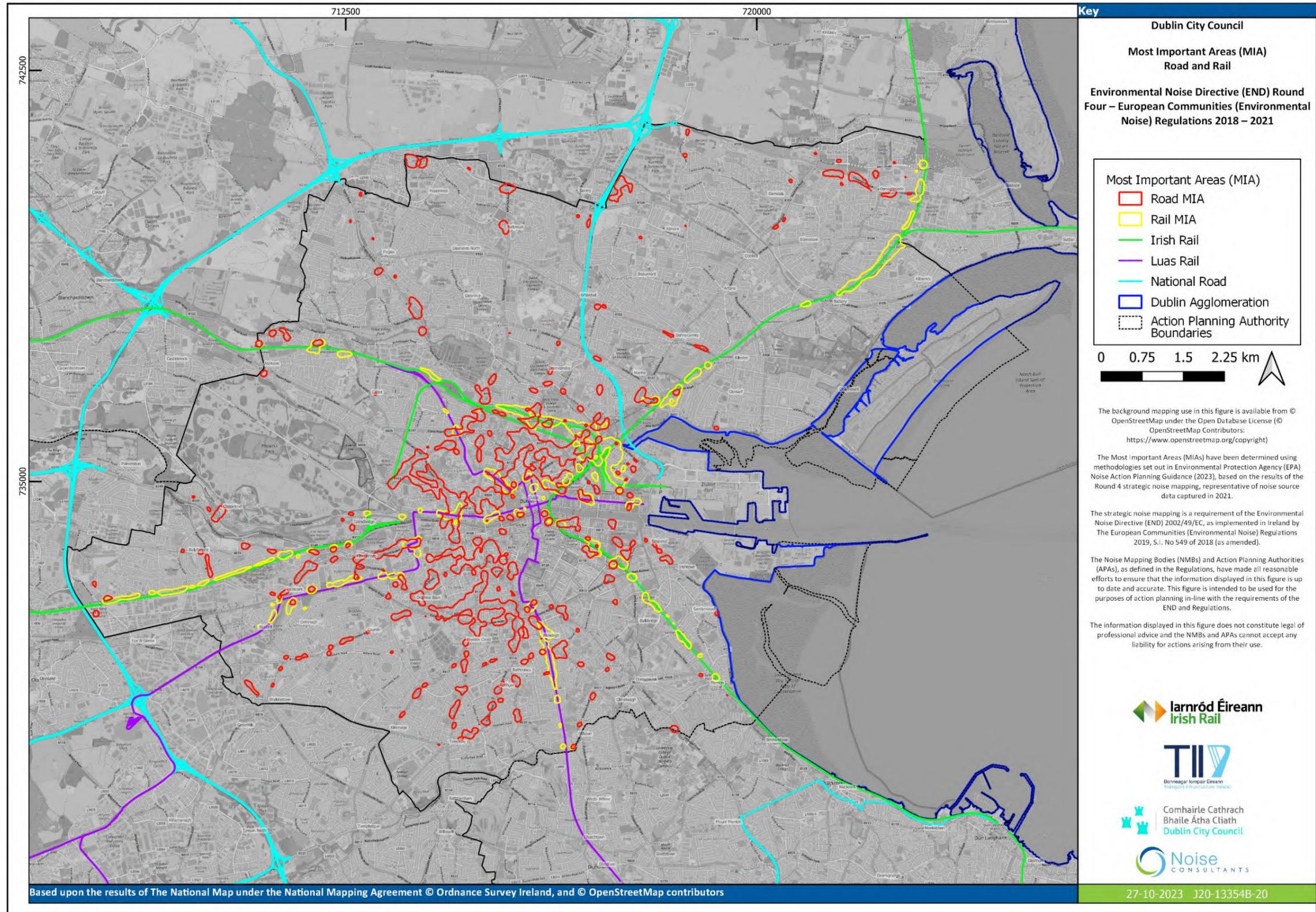


Figure 28: DCC: Priority Important Areas (PIAs)

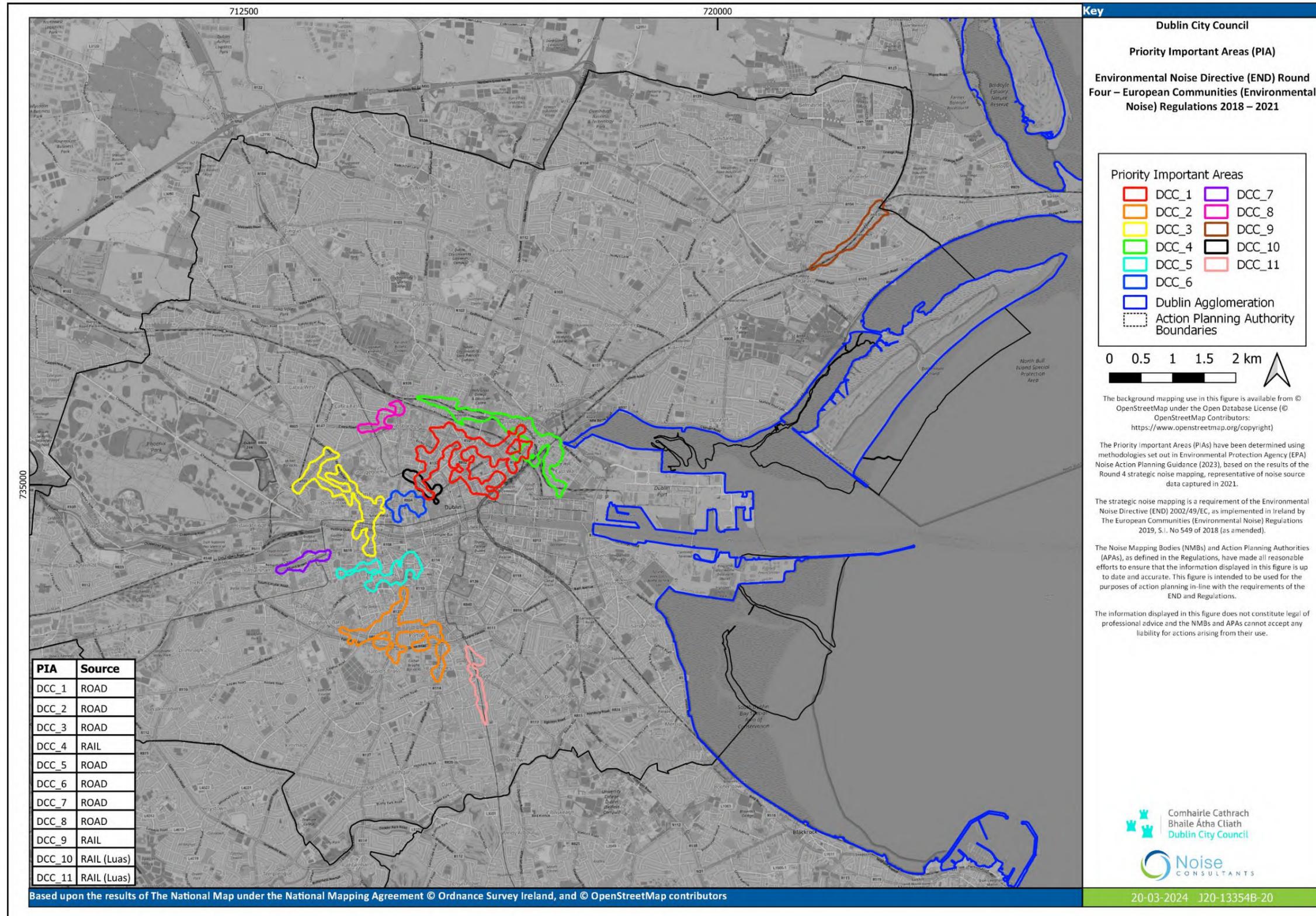


Figure 29: DCC: Priority Important Area 1 (PIA 1)

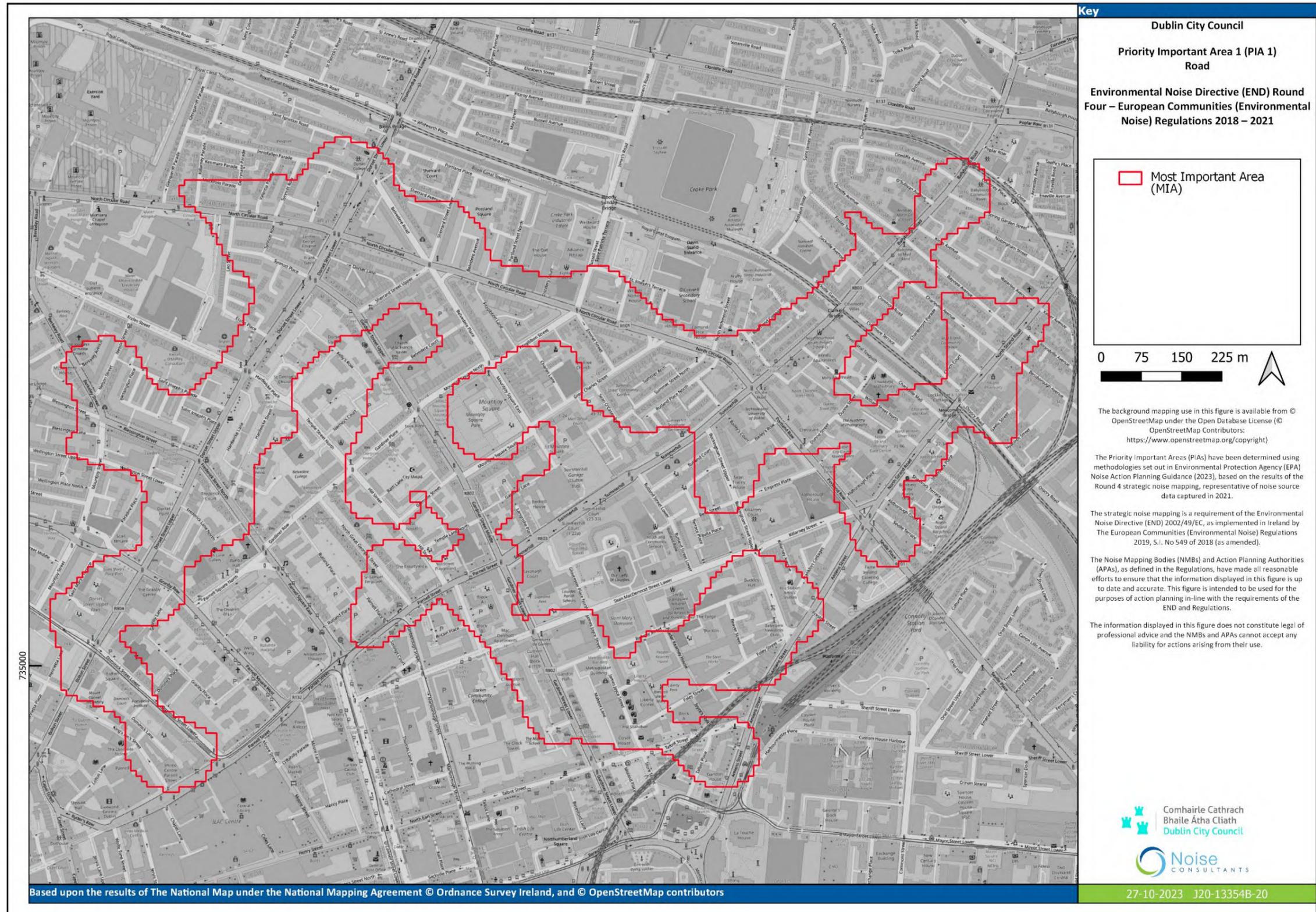


Figure 30: DCC: Priority Important Area 2 (PIA 2)

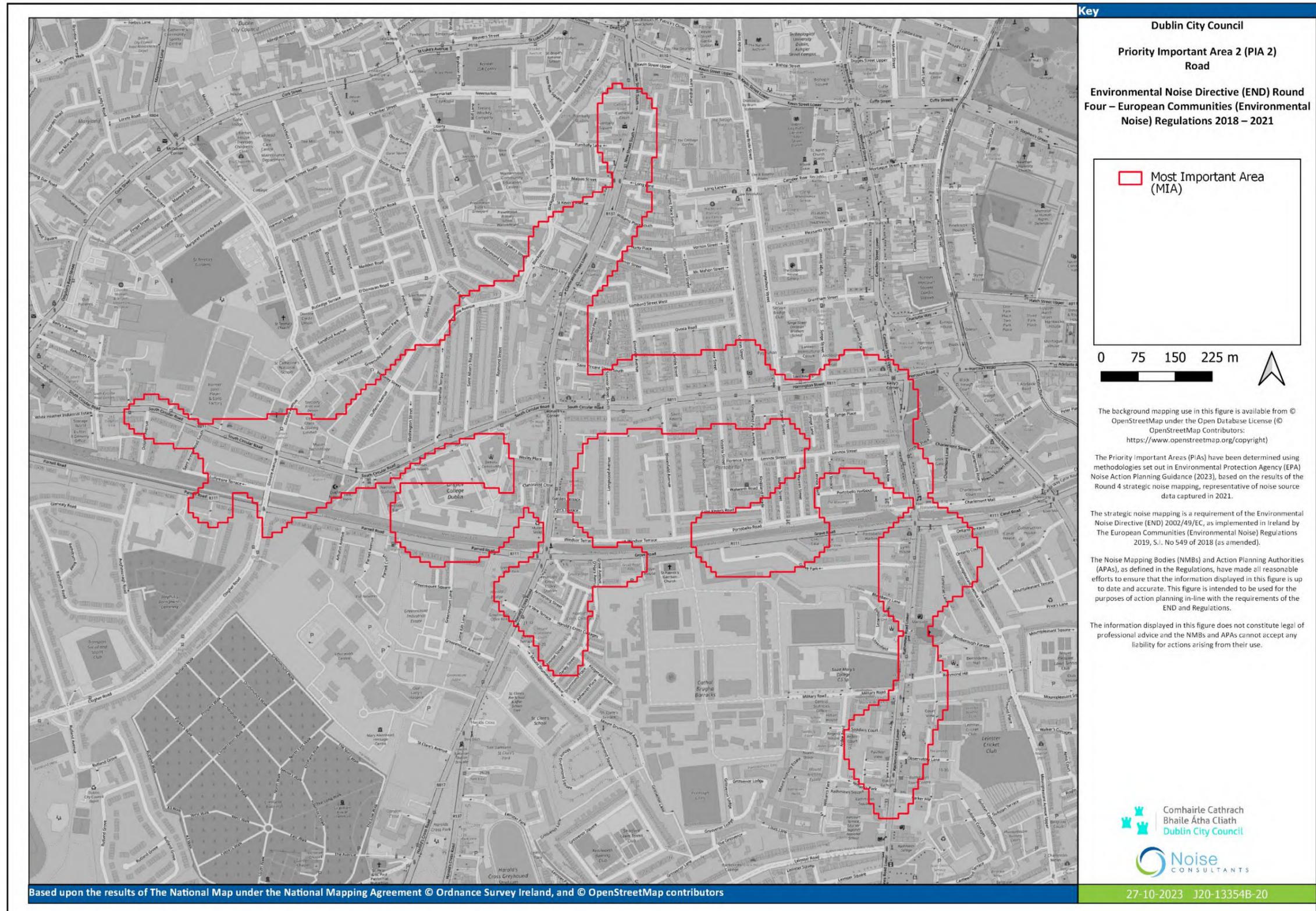


Figure 31: DCC: Priority Important Area 3 (PIA 3)

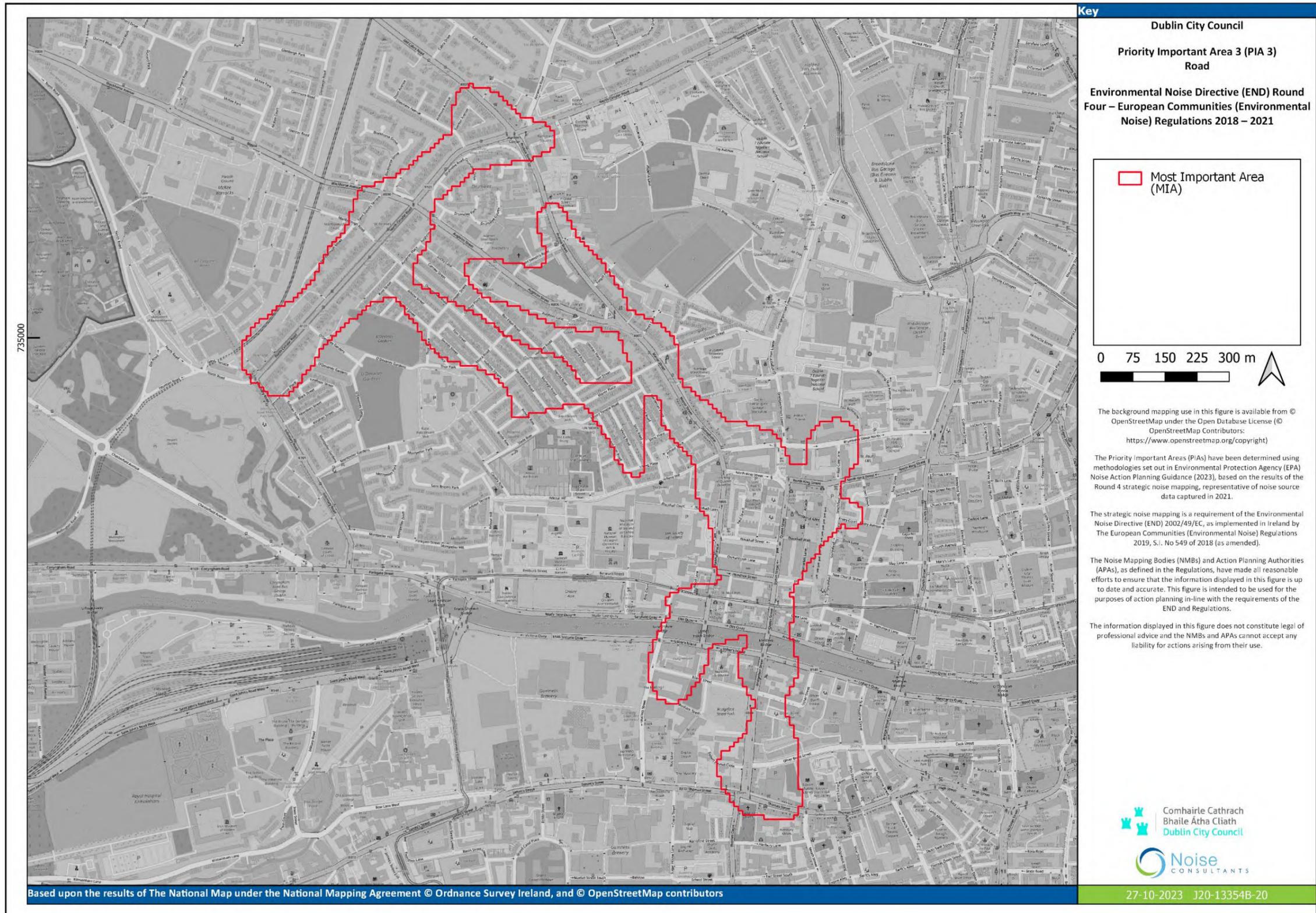


Figure 32: DCC: Priority Important Area 4 (PIA 4)

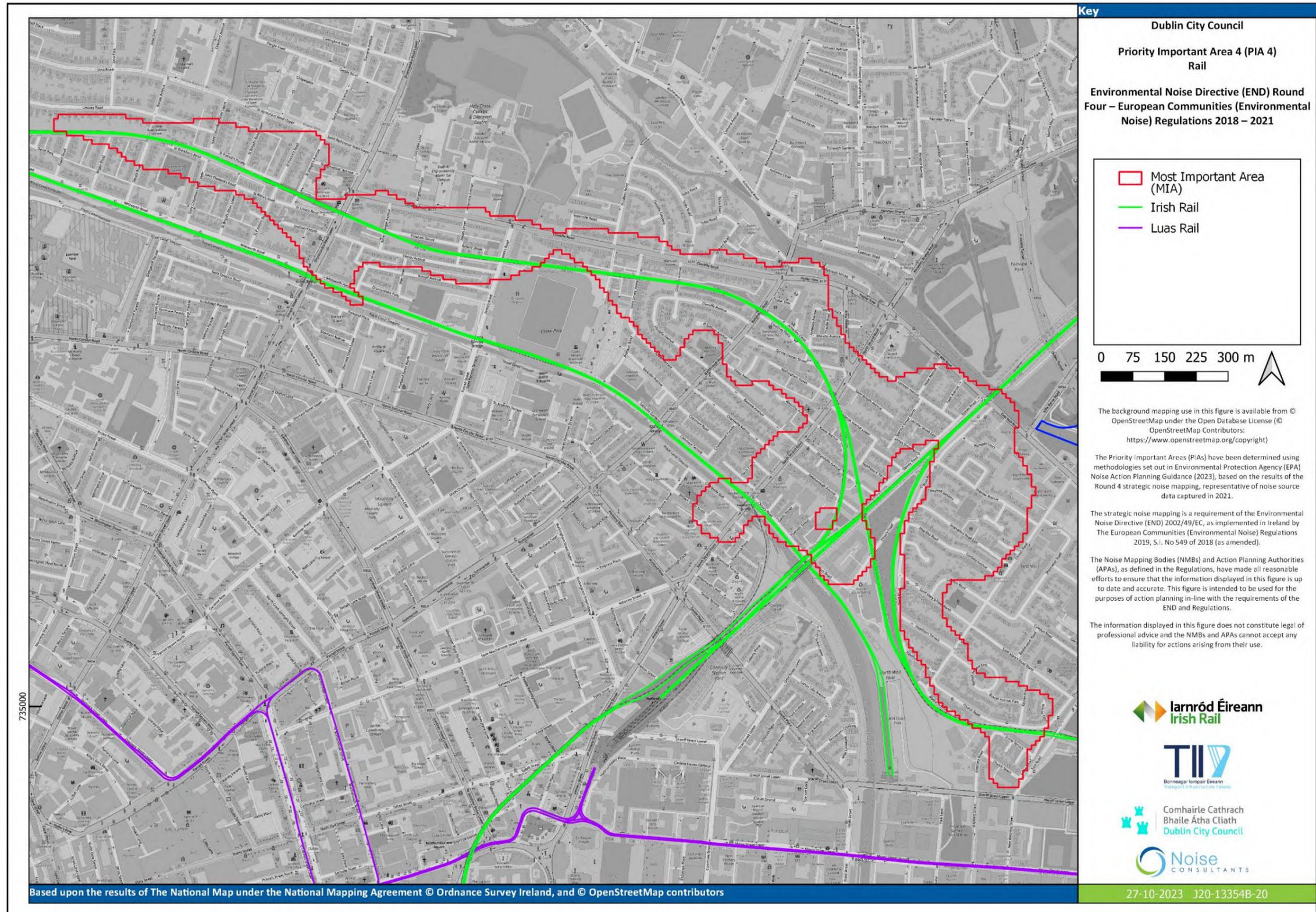


Figure 33: DCC: Priority Important Area 5 (PIA 5)

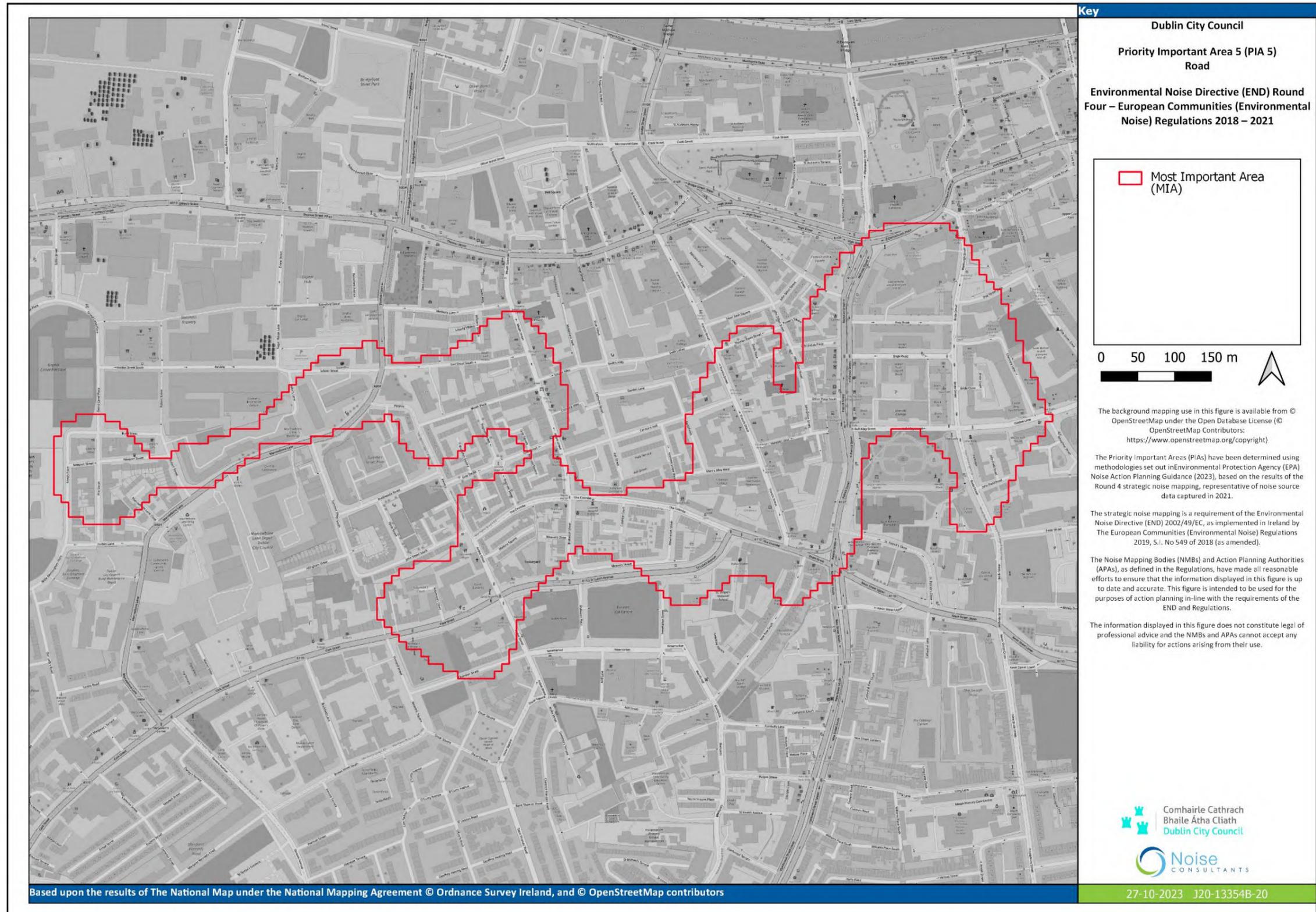


Figure 34: DCC: Priority Important Area 6 (PIA 6)

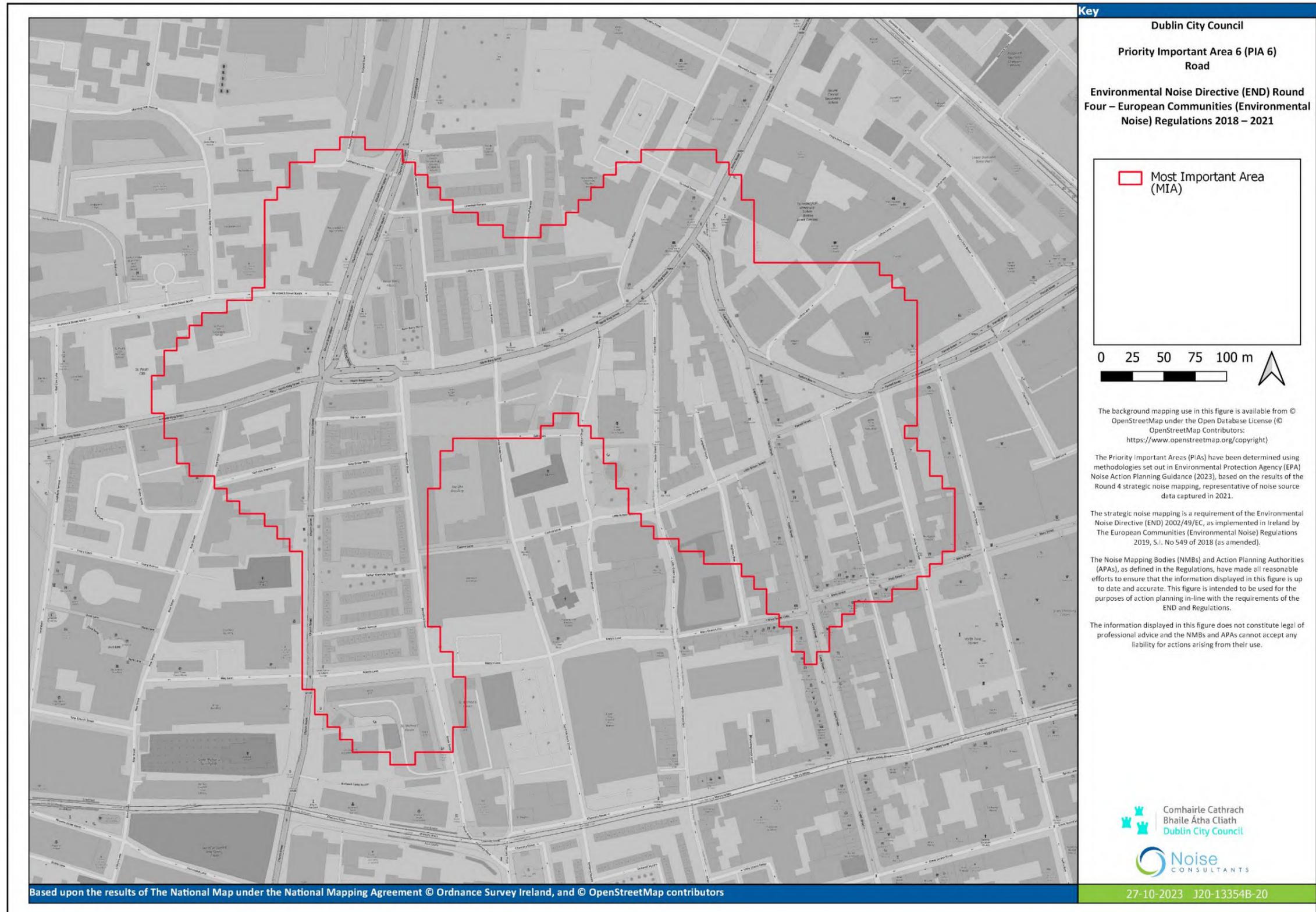


Figure 35: DCC: Priority Important Area 7 (PIA 7)

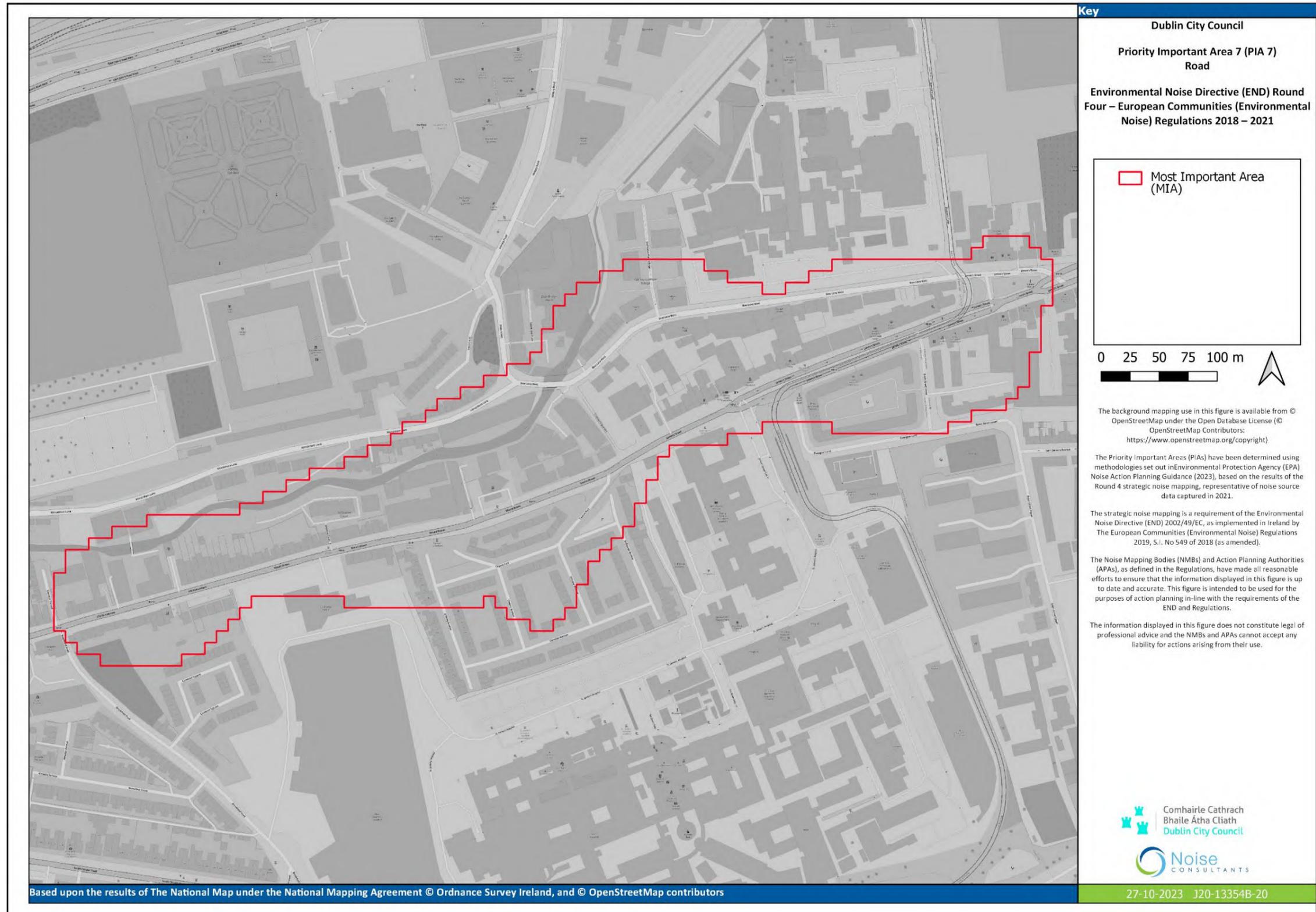


Figure 36: DCC: Priority Important Area 8 (PIA 8)

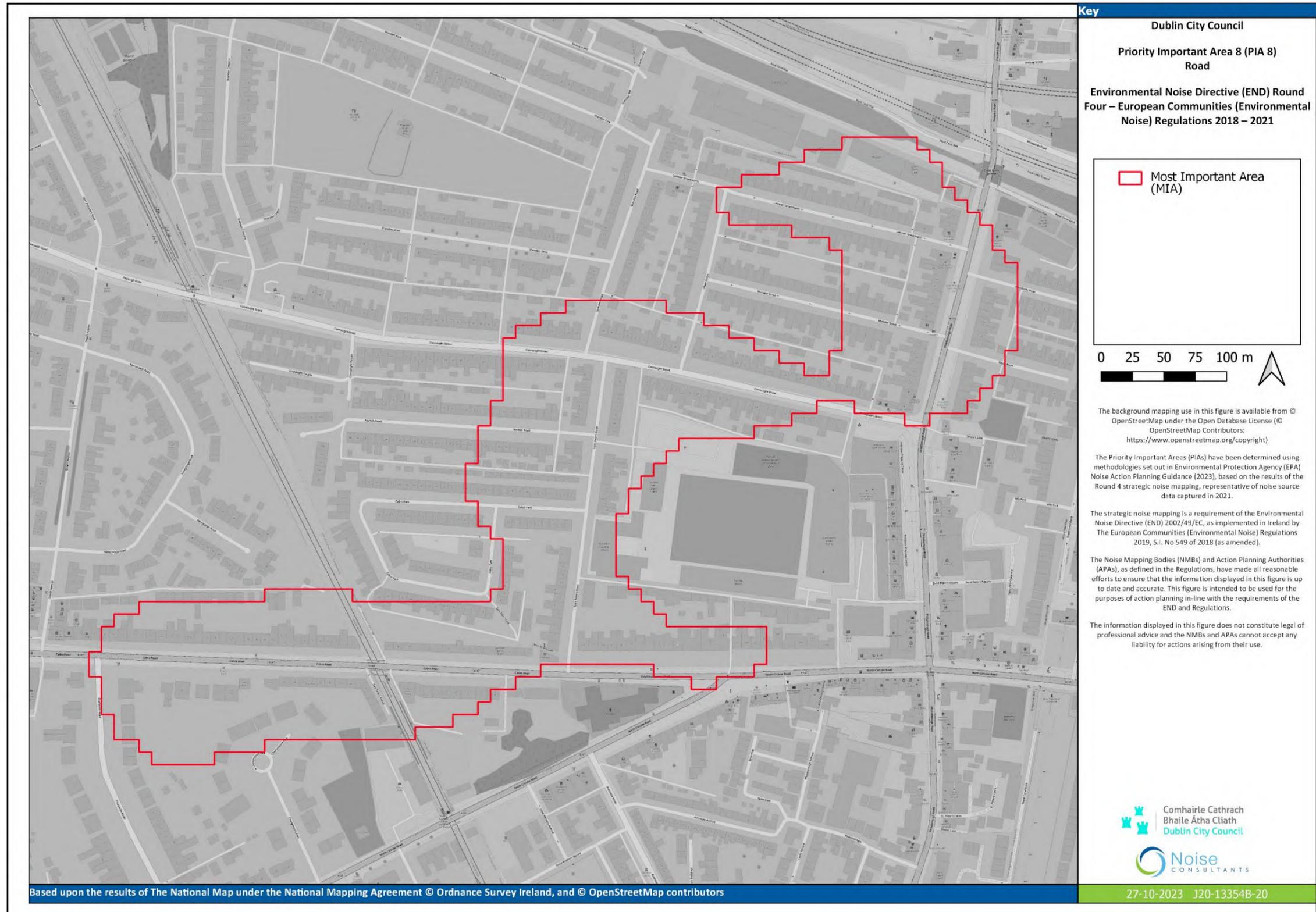


Figure 37: DCC: Priority Important Area 9 (PIA 9)

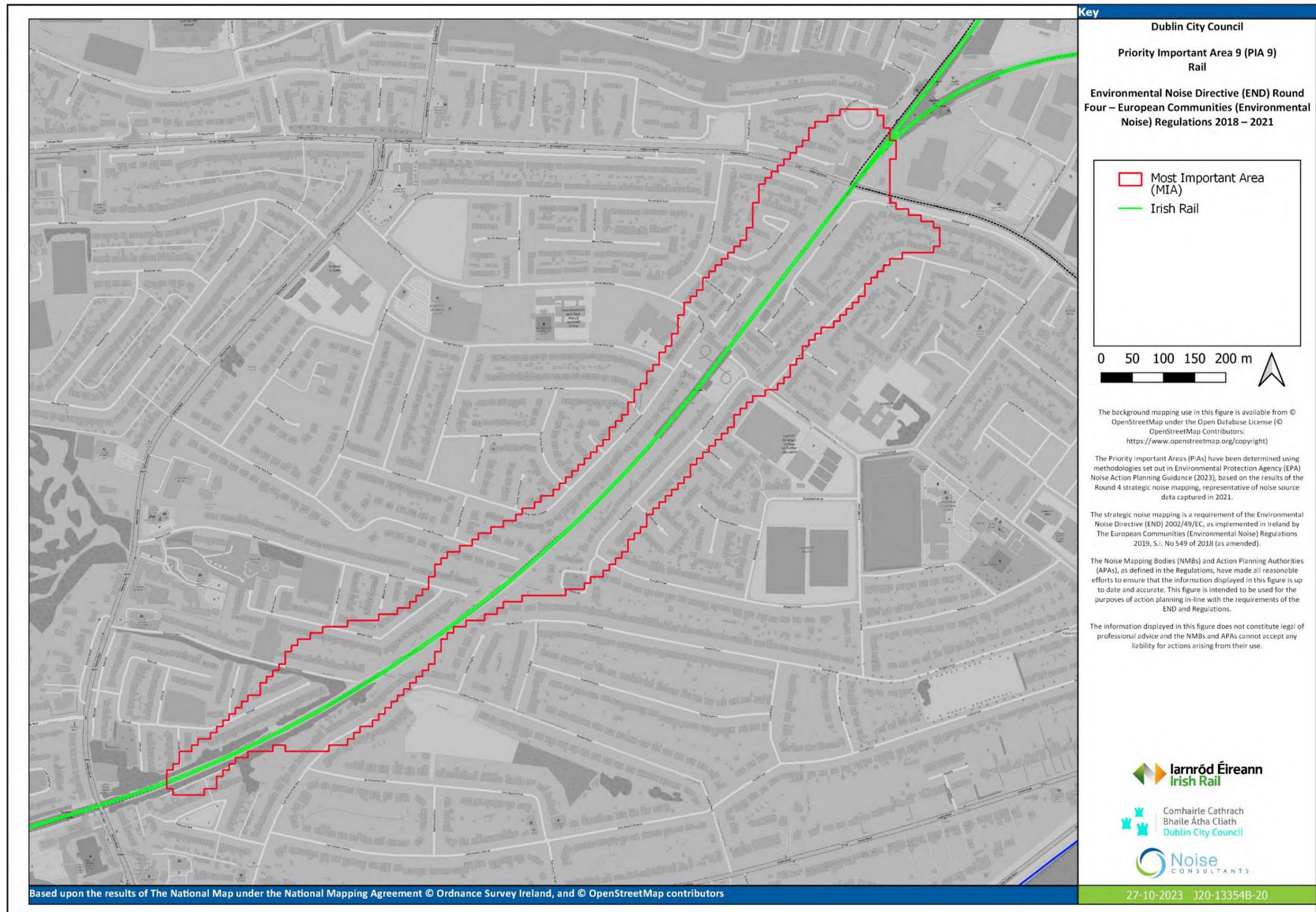


Figure 38: DCC: Priority Important Area 10 (PIA 10)

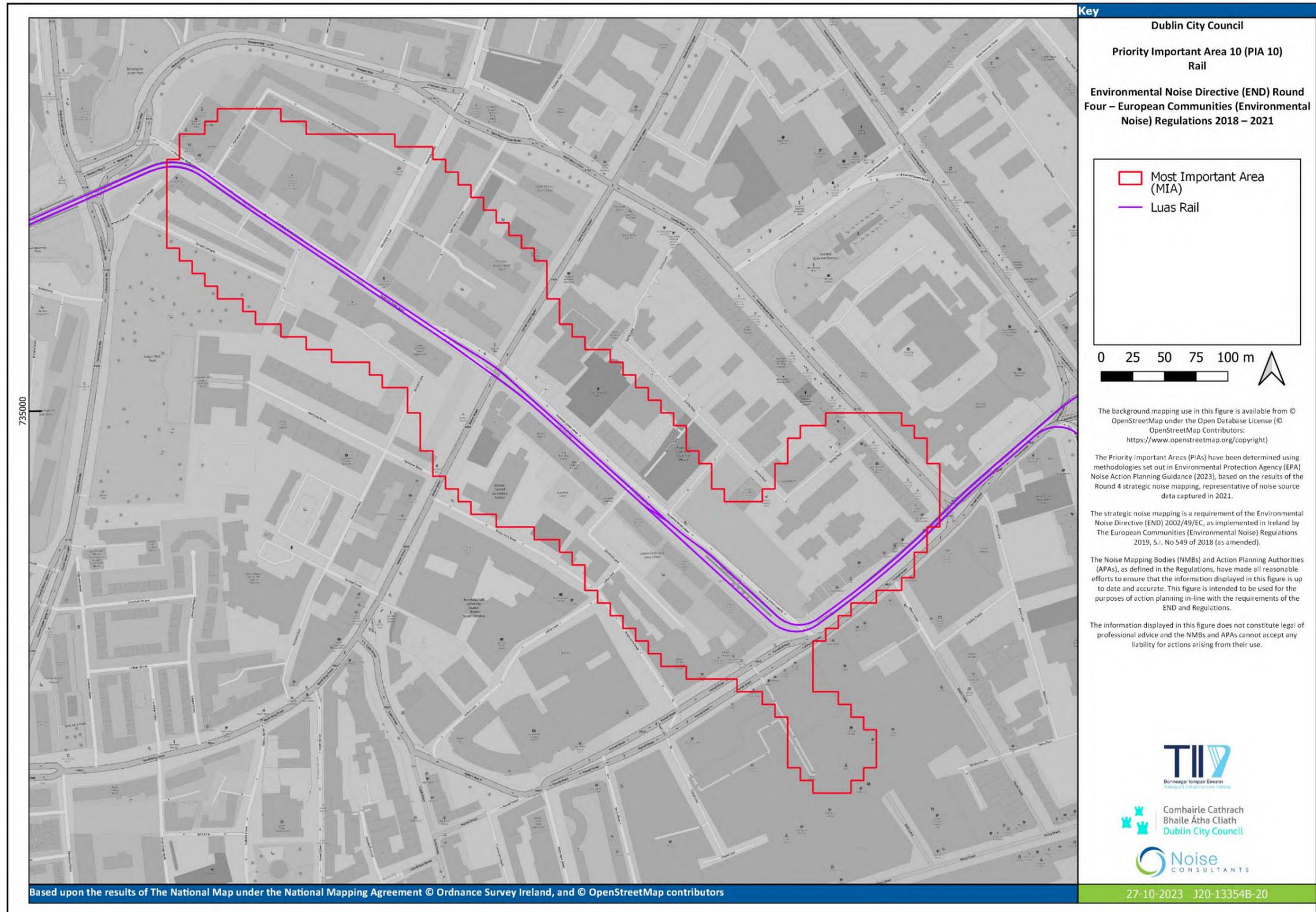


Figure 39: DCC: Priority Important Area 11 (PIA 11)

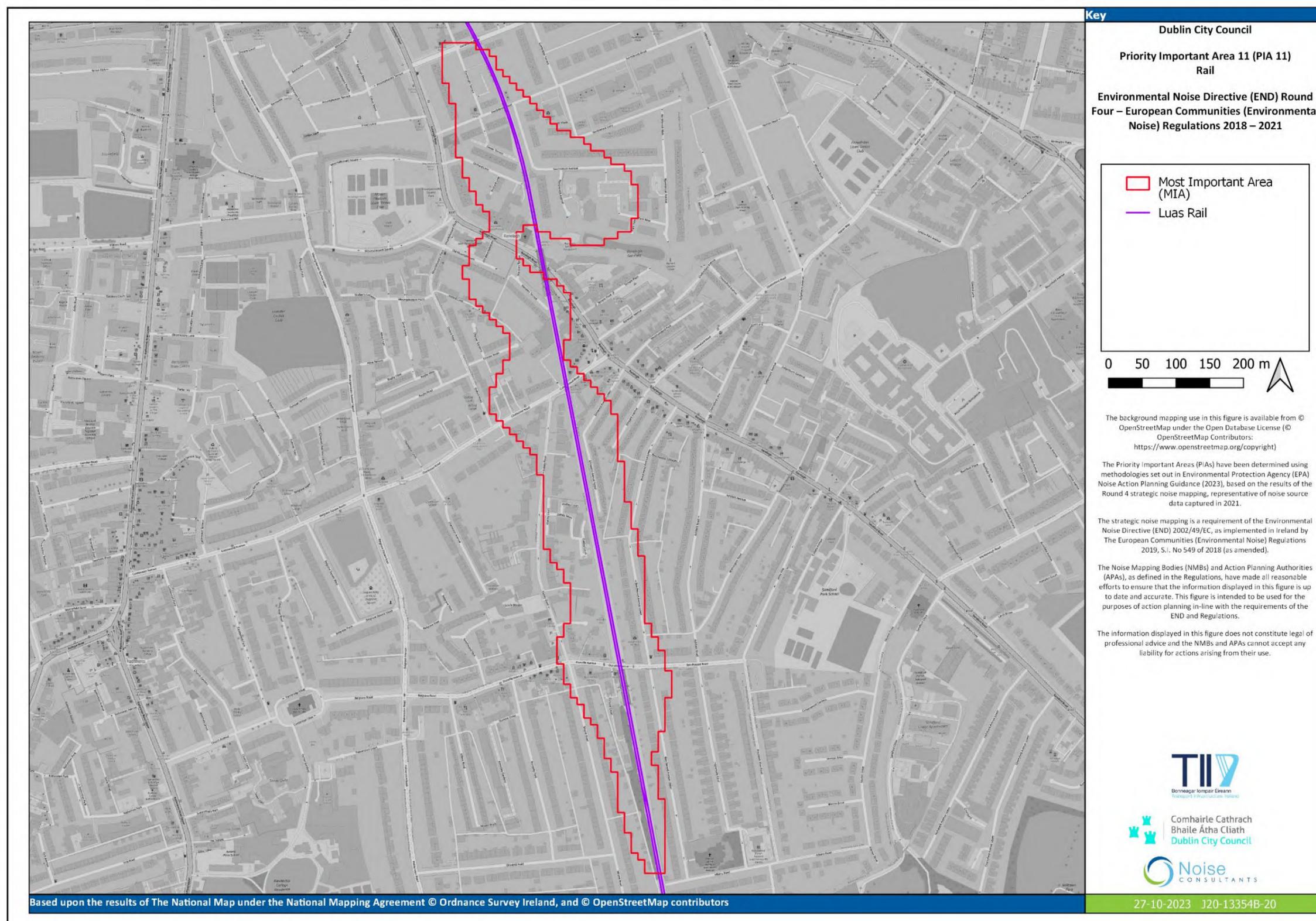


Figure 40: DCC: Candidate Quiet Areas (CQAs)

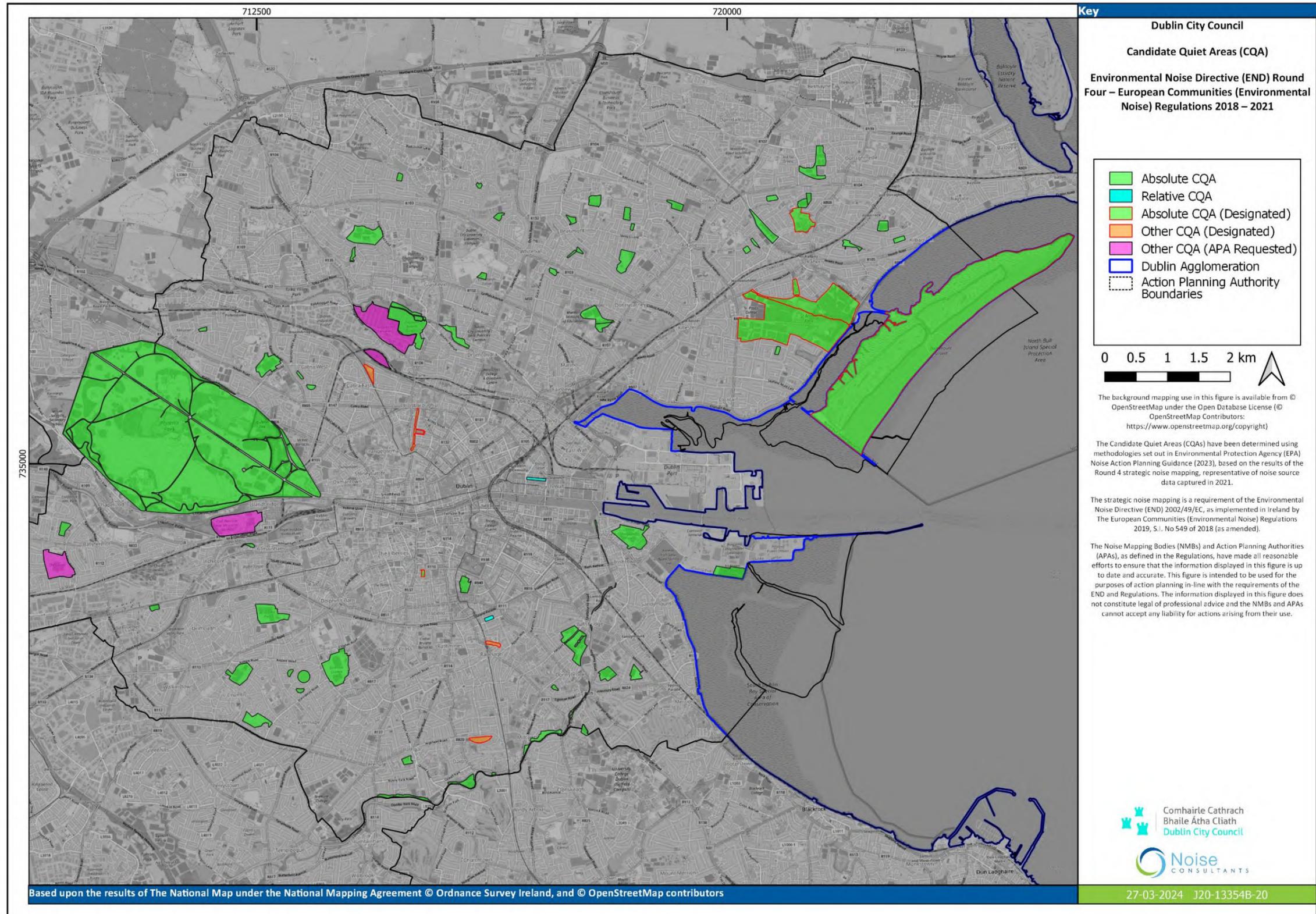
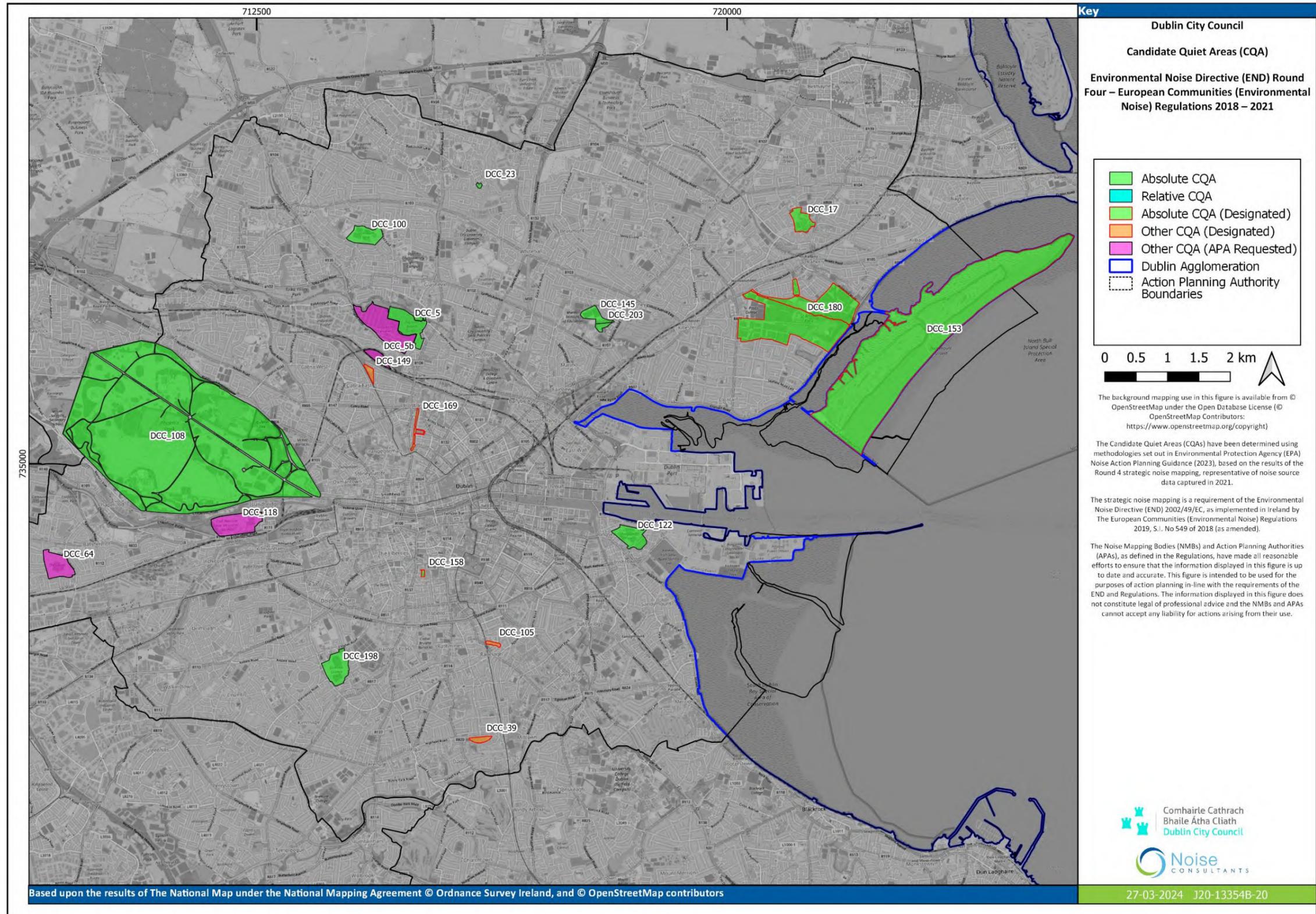


Figure 41: DCC: Candidate Quiet Areas (CQAs) to be Investigated



11 Dún Laoghaire-Rathdown County Council

11.1 Introduction

Section 1 – Section 9 of this Noise Action Plan sets out the overarching principles of the Noise Action Plan process, including the existing international, national and regional noise management legislation and guidance, a description of the noise mapping process, and methodologies advocated in the EPA Guidance for identifying and addressing the most important areas, as established by the strategic noise mapping.

This section presents the results of the Noise Action Plan process specifically for the Dún Laoghaire-Rathdown County Council administrative area and sets out the considerations and actions that are specific to Dún Laoghaire-Rathdown County Council.

The referenced Action Planning Authority (APA) in this section is Dún Laoghaire-Rathdown County Council.

This section includes details of:

- contact details;
- the APA's consultation process;
- the APA's historical noise action planning process;
- the APA specific noise management policy and guidance;
- the APA specific plans, projects and strategies relevant to noise;
- the results of the strategic noise mapping;
- the areas to be subject to noise management activities ('Priority Important Areas' (PIAs));
- the areas to be considered for preservation for environmental noise quality ('Candidate Quiet Areas' (CQAs));
- the mitigation and protection measures and actions; and
- associated graphical figures.

11.1.1 Name and Contact Details for Responsibly Authority

Dún Laoghaire-Rathdown County Council

County Hall

Municipal Services Department

Marine Road

Dún Laoghaire

Co. Dublin

11.2 Consultation

11.2.1 Stakeholder Consultation

A Period of public consultation will be completed on this draft Noise Action Plan. A summary of the public consultation will be set out in the final Noise Action Plan.

11.3 Review of Noise Action Plan(s)

11.3.1 Round 3 Noise Action Plan (2018-2023)

The Round 3 Noise Action Plan had ‘Traffic Noise Reduction and Prevention Measures’ as the first and best way to reduce noise in the County. The Noise Action Plan identified sustainable travel initiatives which were intended to encourage more people to walk, cycle and use public transport as opposed to using private cars, thereby reducing traffic noise.

Throughout the life of the Round 3 Noise Action Plan Dún Laoghaire-Rathdown County Council has been actively promoting quieter electric vehicles, both within the Council’s own fleet and by facilitating electric vehicle charging points. The following outlines a sample of the actions carried out during the plan. Additionally, numerous small-scale measures have been implemented, including additional protection for cyclists approaching junctions.

In 2022, Dún Laoghaire-Rathdown County Council undertook a Quiet Neighbourhoods scheme. The Drummartin Park scheme was a safe and quiet streets initiative where we collaborated with the local residents to instal modal filters and improved public realm. Result of which is the through traffic numbers are reduced. In Eden Park four modal filters were installed. As a result of this the traffic count was significantly reduced from 7,000 movements per day to just the residents. Post implementation traffic counts were then completed.

Throughout the life of the Noise Action Plan, Dún Laoghaire-Rathdown County Council made Cycle parking available on request to Schools and Sports clubs. New pedestrian crossings were installed as required to improve modal shift. Licenses were extended for bike share schemes to operate station-less bike share schemes in the County, with the licence fees waived as part of the Covid-19 measures. Dún Laoghaire-Rathdown County Council continue to promote the use of electric vehicles (EV) with EV parking required in new developments.

11.4 Local Noise Management Policy and Guidance

11.4.1 DL RCC County Development Plan 2022 -2028

Dún Laoghaire-Rathdown County Council has developed specific guidance with respect to noise in the planning process. The council has published on its website, with specific reference to noise advice, the ‘Guidance for Environmental Management of Construction Projects’, August 2022.

In April 2022, the County Development Plan 2022- 2028 took effect, which includes policy objectives in relation to noise, namely T27 Traffic Noise and EI14 Air and Noise Pollution.

Policy Objective T27: Traffic Noise

A policy objective to ensure that traffic noise levels are considered as part of new developments along major roads/rail lines in accordance with best practice guidelines.

The roads section of Dún Laoghaire-Rathdown County Council, when reviewing planning applications, ensure that cognisance is given to the National Road Authority document 'Guidelines for the Treatment of Noise and Vibration in National Road Schemes' (2004) and to the subsequent supplementary document 'Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes' (2014).

Policy Objective EI14 Air and Noise Pollution

It is a Policy Objective:

- To implement the provisions of national and EU Directives on air and noise pollution and other relevant legislative requirements in conjunction with other agencies as appropriate. (Consistent with RPO 10.10 of the RSES).
- To support the implementation of objectives of the 'Dublin Agglomeration Environmental Noise Action Plan 2018-2023'.

Specific requirements are set out in some detail in Chapter 12.9.2 Development Management of the CDP. These requirements are enshrined in the above referenced guidance document.

11.4.2 DLRCC Corporate Plan 2020-2024

The Dún Laoghaire-Rathdown County Council Corporate Plan for 2020-2024 provides a strategic framework for the Council's vision for the County, its goals for the next five years and the core values which will guide the Council's work over the lifetime of the Plan.

Eight specific Corporate Goals that the Council has adopted are aimed at enhancing quality of life and maximising opportunity in the County. These are listed in **Table 41**.

Table 41: DLRCC: Corporate Plan

Corporate Goal	Relevant to Noise Action Plan
1. Showing leadership in protecting the environment through education and in how we work.	Yes.
2. Facilitate the development of a variety of housing options enabling improved choice, that drives quality of life for all.	Yes.
3. Enhance people’s lives through access to sustainable travel choices across our network of communities.	Yes – co-benefit of this is reduction in transport related road noise.
4. Provide quality community, recreational, sporting and cultural opportunities for all who live, work and visit the County.	Yes – candidate quiet areas provide areas for recreation and respite in busy urban environments.
5. Enhance the vitality of our town and villages while preserving our natural and built heritage.	Indirect benefits.
6. Engage with businesses to support their presence and growth in the County.	Indirect benefits.
7. Promote equality and human rights by implementing the Public Sector Equality and Human Rights Duty.	No.
8. Optimise human, financial and physical resources to deliver accessible customer focused quality services.	No.

11.4.3 DLRCC Climate Action Plan 2024-2029

The Climate Action Plan 2024-2029 sets out the actions that will be taken by the Council to prepare our County and people living here for the known impacts of climate change – flooding, sea level rise, extreme weather events and, drought. The Climate Action Plan 2024-2029 was adopted by elected members in February 2024 and sets out to achieve, by no later than the end of 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral County.

Aligned to the Government’s National Climate Objective (as set out in the national Climate Action Plan 2024), the Plan outlines mitigation and adaptation climate action measures across the following six thematic areas - Energy & Buildings, Transport, Flood Resilience, Nature Based Solutions, Circular Economy & Resource Management and Citizen Engagement. The actions in these themes collectively address the four targets of this plan:

- 50% improvement in DLRCC's energy efficiency by 2030
- 51% reduction in DLRCC's greenhouse gas emissions by 2030
- To make Dublin a climate resilient region, by reducing the impacts of future climate change-related events, and
- To actively engage and inform our communities on climate action.

11.5 Relevant Plans, Projects and Strategies

Several transport infrastructure projects are planned for the Dún Laoghaire-Rathdown County Council area during the life of the Noise Action Plan. While not their primary purpose, they will have the potential to impact on the noise environment both positively and negatively. These include road schemes, roads maintenance, active travel schemes, and BusConnects.

11.5.1 Road Schemes

There are several road schemes planned as part of the Dún Laoghaire-Rathdown County Council Capital Programme such as **M50 Junction 14 Link Road**. The scheme is part of the Sandyford Urban Framework Plan, and comprises of the following:

- Provision of a new road link between the existing signalised roundabout at M50 Junction 14 and Blackthorn Road
- A link from the new road above to the existing cul-de-sac at Arena Road
- Replacement of the signalised roundabout at Junction 14 with a signalised junction
- Construction of a new signalised junction on Blackthorn Road
- Improvements to pathways, cycleways, and crossings and improvement of lighting and the local public realm.

The scheme will reduce the impact of noise in this area through a renewed road surface as well as improvements to cycling infrastructure.

11.5.2 Roads Maintenance Works

In Dún Laoghaire-Rathdown County Council the Road Resurfacing Programme has been referred to as the 'Roads' programme in previous years and it is primarily concerned with resurfacing and/or reconstruction of relatively long lengths of roads.

The Road Maintenance section tend to look at the roads holistically when carrying out works under this programme strand and, as well as resurfacing, works can include footpath and cycle track upgrades, drainage repairs and often includes an element of cross-departmental working to upgrade the public realm, generally. This can include working with the Parks Department on necessary tree removal and re-planting or the Traffic & Road Safety section where traffic calming measures or cycle track improvements can be incorporated within the scheme.

All roads resurfaced as part of this programme utilise Smooth Mastic Asphalt (SMA) to reduce the noise impact compared to traditional road surfaces.

11.5.3 Active Travel

Various active travel schemes are currently underway in Dún Laoghaire-Rathdown County Council, currently these include:

- Deansgrange Road - new cycling infrastructure.
- Stillorgan Park Road - upgraded cycle infrastructure.
- Dún Laoghaire Central 3km of new / upgraded infrastructure.

- Living Streets: Blackrock – Village Upgrade
- Living Streets: Coastal Mobility Route – extension to existing route
- Living Street: Dún Laoghaire – Currently out to Part 8
- Cabinteely Greenway – New infrastructure connecting Cornelscourt to Cherrywood
- Grange Road – Infrastructure upgrade

11.5.4 N11/M11 Bus Priority Interim Scheme

The N11/M11 Bus Priority Interim Scheme is currently evaluating the possibility of implementing exclusive bus lanes along the stretch of the current N11/M11 route, spanning from Loughlinstown roundabout in the north to N11 Junction 9 (Glenview) in the south.

This initiative covers areas under the jurisdiction of two local authorities, with the northern segment falling within Dún Laoghaire-Rathdown County Council's jurisdiction and the rest within Wicklow County Council's. The primary aim of this scheme is to formulate a plan for implementing bus priority measures during peak hours.

11.6 Other Relevant Plans, Studies and Measures

11.6.1 Dublin Region Air Quality Plan, 2021

The Dublin Region Air Quality Plan sets out a series of measures which are aimed at improving air quality. These measures will also help to reduce traffic noise by reducing the volume of traffic in the County. The measures include active travel, parking restrictions and remote working.

11.7 Summary of the Results of the Noise Mapping Process

The Round 4 noise exposure statistics and harmful effects assessment are presented below for the Dún Laoghaire-Rathdown County Council administrative area. The statistics at Agglomeration level are presented in **Section 5.2**.

Exposure statistics are assessed independently for each noise source, and are summarised for the noise metrics across the noise exposure bands defined in the Regulations. The population exposure statistics have been rounded to the nearest 100 as required by the Regulations.

11.7.1 Exposure Statistics

Table 42: DLRCC: Number of People in Dwellings – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	41,000	5,600	0
60-64	24,200	3,300	0
65-69	8,000	2,500	0
70-74	2,400	1,500	0
>=75	400	800	0

*exposure statistics rounded to the nearest 100.

Table 43: DLRCC: Percentage of Total Population Exposed to the Noise Source – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	20 %	3 %	0 %
60-64	12 %	2 %	0 %
65-69	4 %	1 %	0 %
70-74	1 %	1 %	0 %
>=75	0 %	0 %	0 %

Table 44: DLRCC: Number of School Buildings (& Hospital Buildings) – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	43 (03)	02 (00)	00 (00)
60-64	29 (01)	02 (00)	00 (00)
65-69	05 (00)	03 (00)	00 (00)
70-74	02 (02)	01 (00)	00 (00)
>=75	00 (00)	01 (00)	00 (00)

Table 45: DLRCC: Number of People in Dwellings – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	23,900	3,600	0
55-59	8,300	2,900	0
60-64	3,400	1,500	0
65-69	1000	1,000	0
>=70	0	100	0

*exposure statistics rounded to the nearest 100.

Table 46: DLRCC: Percentage of Total Population Exposed to the Noise Source – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	11 %	2 %	0 %
55-59	4 %	1 %	0 %
60-64	2 %	1 %	0 %
65-69	1 %	1 %	0 %
>=70	0 %	0 %	0 %

Table 47: DLRCC: Number of School Buildings (& Hospital Buildings) – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	26 (02)	02 (00)	00 (00)
55-59	09 (00)	02 (00)	00 (00)
60-64	03 (02)	02 (00)	00 (00)
65-69	00 (00)	01 (00)	00 (00)
>=70	00 (00)	00 (00)	00 (00)

Table 48: DLRCC: Total number of Noise Sensitive Buildings

Noise Sensitive Building	Number of Noise Sensitive Buildings
Schools	186
Hospitals	12

11.7.2 Harmful Effects

The exposure of harmful effects is assessed independently for each source. Where the same people are simultaneously exposed to different noise sources, the harmful effects may not, in general, be cumulated, however can be compared to identify proportional significance.

Table 49 presents the calculated harmful effects in the case of road traffic noise for the Agglomeration, and **Table 51** presents the calculated harmful effects from railway noise.

As shown in **Table 50** and **Table 52** the statistical proportion of the total population with harmful effects associated with road traffic and rail noise in the Dún Laoghaire-Rathdown County Council administrative area is consistent with that across the Agglomeration.

Table 49: DLRC: Breakdown of Harmful Effects in the Case of Road Noise – Total Number of People – All Sources

Harmful Effect	Dublin Agglomeration	Dún Laoghaire-Rathdown County Council
Ischaemic Heart Disease	101.22	13.32
Highly Annoyed	108,380.07	14,660.76
Highly Sleep Disturbed	28,995.87	3,849.74
Total Populations		
Dublin Agglomeration: 1,355,967.68,		
APA Proportions within Agglomeration: Dublin City Council: 501,896.48, Fingal County Council: 297,128.60, South Dublin County Council: 278,984.11, Dún Laoghaire County Council: 210,520.78, Kildare County Council: 37,447.86, Wicklow County Council: 29,989.86		

Table 50: DLRC: Breakdown of Harmful Effects in the Case of Road Noise – % of Population – All Sources

Harmful Effect	Dublin Agglomeration	Dún Laoghaire-Rathdown County Council
Ischaemic Heart Disease	0.01%	0.01%
Highly Annoyed	7.99%	6.96%
Highly Sleep Disturbed	2.14%	1.83%

Table 51: DLRC: Breakdown of Harmful Effects in the Case of Railway Noise – Total Number of People – All Sources

Harmful Effect	Dublin Agglomeration	Dún Laoghaire-Rathdown County Council
Highly Annoyed	21,051.97	3,353.35
Highly Sleep Disturbed	10,986.94	1,733.71

Table 52: DL RCC: Breakdown of Harmful Effects in the Case of Railway Noise – % of Population – All Sources

Harmful Effect	Dublin Agglomeration	Dún Laoghaire-Rathdown County Council
Highly Annoyed	1.55%	1.59%
Highly Sleep Disturbed	0.81%	0.82%

11.8 Noise Management Activities (Industry)

The industry sites included within the Agglomeration strategic noise maps are limited to Industrial Emission (IE) sites as regulated by the EPA under the IPPC Directive 96/61 EC, and any ports. Strategic noise maps of the industrial noise emissions at agglomeration level are shown in **Figure 7** and **Figure 8** listed in **Section 5.2**. Maps for Dún Laoghaire-Rathdown County Council administrative area are provided in **Figure 43** and **Figure 44** in **Section 11.13**.

The data upon which the industry noise emission models have been developed includes default values, therefore model outputs are a strategic representation of industry noise levels, rather than being site specific.

The Noise Action Plan does not include any Priority Important Areas for industry mainly due to the lower exposure statistics reported. Notwithstanding, there will be a need for ongoing management of noise issues from industrial sites through noise complaints, development and licence application. In this regard the APA may use the maps to support this process and should continue to consult and collaborate with the EPA who have overall responsibility for site specific noise management of waste, Industrial Emission (IE) and Integrated Pollution Control (IPC) licensed sites.

11.9 Priority Important Areas

The methodology for identifying the Most Important Areas and the shortlist of Priority Important Areas, which will be subject to noise management activities, is set out in **Section 8.4**. The Priority Important Areas for Dún Laoghaire-Rathdown County Council are listed in **Table 53** to **Table 56**, which summarise a range of statistics and information for each area, as follows:

Table 53 presents the statistics for each Priority Important Area including population, details of the harmful effects and numbers of people exposed to noise levels above the Important Areas noise limit value.

Table 54 repeats the key statistics but presents the population and harmful effects statistics as a percentage of the total population of the Dún Laoghaire-Rathdown County Council administrative area.

Table 55 presents the number of people exposed to road traffic noise (L_{den} and L_{night}) in each road Priority Important Area broken down by noise exposure bands set out in the Regulations.

Table 56 presents the number of people exposed to rail traffic noise (L_{den} and L_{night}) in each rail Priority Important Area broken down by noise bands set out in the Regulations.

It should be noted that Ischemic Heart Disease (IHD) is not calculated for railway noise, where Statutory Instrument No. 663/2021 – European Communities (Environmental Noise) (Amendment) Regulations 2021 (S.I 663/2021)⁵² states:

“For IHD in the case of railway and aircraft noise, the population exposed above adequate Lden levels is estimated as subject to an increased risk of IHD, while the exact number N of cases of IHD cannot be calculated.”

With reference to the noise management frameworks described in **Section 8.4**, a summary of potential noise mitigation measures for the Priority Important Area is given in **Table 58**. It should be noted that this table is not exhaustive and these and other measures may be considered at the Priority Important Area evaluation stage during the Noise Action Plan implementation.

Dún Laoghaire-Rathdown County Council will, subject to resources and funding, undertake an assessment of the noise mitigation measure options relating to the Priority Important Area within the life cycle of the Noise Action Plan. This will include discussions across relevant sections within Dún Laoghaire-Rathdown County Council, Iarnród Éireann and Transport Infrastructure Ireland in the case of rail Priority Important Areas.

Figures presenting the Most Important Areas and Priority Important Areas are included in **Section 11.13**.

- **Figure 45** shows the full set of Most Important Areas for Dún Laoghaire-Rathdown County Council and from which the shortlist of Priority Important Areas have been selected.
- **Figure 46** presents an overview of all the shortlisted Priority Important Areas in Dún Laoghaire-Rathdown County Council.
- **Figure 47 to Figure 56** present a more detailed plan of each Priority Important Area.

⁵² <https://www.irishstatutebook.ie/eli/2021/si/663/made/en/print> [Accessed March 2024]

Table 53: DLRCC Priority Important Area (PIA) Summary (1)

PIA	Source	MIA Criterion (People HA per 100m ²)	Area (m ²)	Total Population*	Harmful Effects Statistics**			Number of People Above Important Areas Noise Limit Value***			
					HA	HSD	IHD	Road 53dB L _{den}	Road 45dB L _{night}	Railway 54dB L _{den}	Railway 44dB L _{night}
DL_1	ROAD	15	122,500	1,788	345.19	116.32	0.38	1,677.57	1788	-	-
DL_2	RAIL (Luas)	15	72,700	1,303.77	248.59	131.3	-	-	-	1,123.7	1,234.11
DL_3	RAIL (Luas)	15	139,200	1,339.38	363.85	212.12	-	-	-	1,224.83	1,315.85
DL_4	ROAD	15	41,000	874.56	110.41	30.93	0.09	761.71	785.62	-	-
DL_5	ROAD	15	130,400	1,622.73	338.37	115.11	0.39	1,474.91	1,585.96	-	-
DL_6	ROAD	15	50,200	680.1	131.48	43.86	0.14	659.86	680.1	-	-
DL_7	RAIL (Luas)	15	77,200	503.75	209.83	128.77	-	-	-	467.85	486.59
DL_8	ROAD	15	31,600	465.47	90.3	31.2	0.1	398.81	455.91	-	-
DL_9	ROAD	15	11,500	450.03	37.21	6.34	0.03	300.07	195.72	-	-
DL_10	ROAD	15	32,400	403.46	93.6	32.5	0.11	337.5	337.58	-	-

* Total population inside all Most Important Areas (MIAs) associated with the Priority Important Area (PIA)

** The harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building

*** The total population that are exposed to noise levels above the Important Areas noise limit value (see Section 6.4) within the MIA(s) associated with the PIA

Table 54: DLRCC: Priority Important Area (PIA) Summary (2)

PIA	Source	MIA Criterion (People HA per 100m ²)	Area (m ²)	Total Population *	Harmful Effects Statistics **			Percentage Population ***	Percentage Harmful Effects ****		
					HA	HSD	IHD		HA	HSD	IHD
DL_1	ROAD	15	122,500	1,788	345.19	116.32	0.38	0.8%	2.4%	3.0%	2.9%
DL_2	RAIL (Luas)	15	72,700	1,303.77	248.59	131.3	-	0.6%	7.4%	7.6%	-
DL_3	RAIL (Luas)	15	139,200	1,339.38	363.85	212.12	-	0.6%	10.9%	12.2%	-
DL_4	ROAD	15	41,000	874.56	110.41	30.93	0.09	0.4%	0.8%	0.8%	0.7%
DL_5	ROAD	15	130,400	1,622.73	338.37	115.11	0.39	0.8%	2.3%	3.0%	2.9%
DL_6	ROAD	15	50,200	680.1	131.48	43.86	0.14	0.3%	0.9%	1.1%	1.1%
DL_7	RAIL (Luas)	15	77,200	503.75	209.83	128.77	-	0.2%	6.3%	7.4%	-
DL_8	ROAD	15	31,600	465.47	90.3	31.2	0.1	0.2%	0.6%	0.8%	0.8%
DL_9	ROAD	15	11,500	450.03	37.21	6.34	0.03	0.2%	0.3%	0.2%	0.2%
DL_10	ROAD	15	32,400	403.46	93.6	32.5	0.11	0.2%	0.6%	0.8%	0.8%

* Total population inside all Most Important Areas (MIAs) associated with the PIA

** The harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building

*** Percentage of the total population inside all MIAs associated with the PIA from the total population in the APA

**** Percentage of the total harmful effect inside all MIAs associated with the PIA from the harmful effect of the APA

Table 55: DLRCC: Priority Important Area (PIA) Summary (Road Noise – All Sources)

PIA	Source	Number of People in Noise Exposure Band (dB L _{den})					Number of People in Noise Exposure Band (dB L _{night})				
		55-59	60-64	65-69	70-74	>=75	50-54	55-59	60-64	65-69	>=70
DL_1	ROAD	597.48	476.2	511.68	162.08	0	598.1	306.69	481.96	8.4	0
DL_4	ROAD	513.59	178.71	0	0	0	239.4	0	0	0	0
DL_5	ROAD	416.43	506.19	310.53	216.85	106.41	582.93	352.39	208.94	214.24	3.47
DL_6	ROAD	302.38	117.82	131.96	121.1	0	181.15	64.85	198.97	0	0
DL_8	ROAD	81.18	200.93	74.37	75.33	0	169.78	116	76.96	29.09	0
DL_9	ROAD	272.11	0	0	0	0	0	0	0	0	0
DL_10	ROAD	65	73.34	39.98	87.51	82.42	73.91	70.16	51.06	125.41	2.09

Table 56: DLRCC: Priority Important Area (PIA) Summary (Rail Noise – All Sources)

PIA	Source	Number of People in Noise Exposure Band (dB L _{den})					Number of People in Noise Exposure Band (dB L _{night})				
		55-59	60-64	65-69	70-74	>=75	50-54	55-59	60-64	65-69	>=70
DL_2	RAIL (Luas)	274.28	305.48	454.41	11	0	146.79	545.79	133.39	0	0
DL_3	RAIL (Luas)	247.88	358.44	269.19	300.29	115.88	308.92	349.7	192.64	281.62	16.82
DL_7	RAIL (Luas)	30.54	34.79	38.71	76.02	304.68	52.2	35.29	69.53	274.25	42.29

11.10 Areas to be Preserved for Environmental Noise Quality

The approach and criteria used to identify Candidate Quiet Areas for the Agglomeration has been explained in **Section 7.3**, and the Candidate Quiet Areas are presented in **Section 7.3.2**. Those located within the Dún Laoghaire-Rathdown County Council administrative area are summarised in **Table 57** and shown in **Figure 57** presented in **Section 11.13**.

Investigations into whether there is an appropriate benefit to delimiting the Candidate Quiet Area as a Quiet Area may include consideration of sound pressure measurements, visitor experience, expert assessment, and other local community evaluation criteria (see **Section 7.4**).

Given the resources available it may not be possible to investigate all Candidate Quiet Areas summarised in **Table 57** during the implementation of the Noise Action Plan. Therefore, Dún Laoghaire-Rathdown County Council will aim to prioritise a shortlist of areas for initial focus. This selection process shall consider aspects such as the median noise level, population within 1,000m, size of the area and relevant local factors such as amenity/community value.

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Table 57: DLRCC: Summary of Candidate Quiet Areas (CQAs)

CQA ID	Name	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DLRCC_10	Galloping Green / Belmont	720904	727259	7,744	12,264	49	8	A
DLRCC_19		724786	725919	21,656	11,616	48	71	A
DLRCC_20	Moran Park	724520	728591	8,915	8,908	35	7,728	A
DLRCC_27	Clonmore Park	719832	727229	55,076	14,615	49	345	A
DLRCC_31	St Fintan's Park	722569	727316	13,440	14,589	48	1,084	A
DLRCC_32		722531	728885	7,969	8,734	48	0	A
DLRCC_34	Roche's Hill	725317	725484	96,658	8,542	46	21,249	A
DLRCC_39	Gledswood Park	717498	729605	6,986	11,733	46	466	A
DLRCC_42		724585	726228	15,451	12,279	46	1,060	A
DLRCC_44	St Augustine's Park	721184	727844	11,324	13,944	49	627	A
DLRCC_45		717155	729989	7,535	10,254	48	2,211	A
DLRCC_50	Ballinaclea open space	725359	725898	8,819	7,118	42	8,480	A
DLRCC_51		719571	724646	8,933	14,684	47	117	A
DLRCC_56		718666	729898	14,967	7,887	46	4,285	A
DLRCC_57	Dillon's Park	727271	726287	18,302	1,754	35	12,673	A

CQA ID	Name	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DLRCC_61		727155	726267	6,566	1,896	46	3,119	A
DLRCC_71	Roebuck Downs	717616	729431	5,136	11,259	46	878	A
DLRCC_72	Rathmichael Wood	723508	721428	147,474	906	47	20,187	A
DLRCC_74		717951	729926	81,695	11,548	44	75,041	A
DLRCC_81	Roches Hill	725331	725732	5,306	6,328	40	5,306	A
DLRCC_83		723677	727211	20,247	16,927	45	7,091	A
DLRCC_84	Deerpark	718965	728642	134,228	17,233	47	2,837	A
DLRCC_87	Hillside, Dalkey	726095	726658	6,771	8,571	43	5,219	A
DLRCC_88	Redwood Court	715614	729247	6,570	9,572	47	516	A
DLRCC_93	Roches Hill	725175	725638	7,971	7,314	45	1,965	A
DLRCC_95	Taney Ave	717618	728456	13,051	13,280	47	1,832	A
DLRCC_96	Clonkeen Park	722977	726292	150,180	20,704	48	4,657	A
DLRCC_107	Johnstown Lane / Park	723620	725709	5,067	10,650	48	0	A
DLRCC_108	Sandyford Hall	718941	725147	9,079	12,972	46	4	A
DLRCC_109		719193	727759	18,674	11,259	46	1,058	A
DLRCC_111		715393	727574	37,346	16,476	48	1,101	A
DLRCC_112	Churchview Park	724408	725181	9,667	10,027	49	0	A

CQA ID	Name	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DLRCC_114		722115	725615	6,681	8,821	47	202	A
DLRCC_121		718978	724896	25,205	14,866	47	3,587	A
DLRCC_122		716483	727347	85,446	21,550	49	1,060	A
DLRCC_123	Beach Gardens, Dun Laoghaire	724750	728542	7,753	9,574	49	1,330	A
DLRCC_124	Killiney Hill Park	726115	725829	445,022	9,336	42	299,887	A
DLRCC_126	Hudson Road Park	725226	727712	17,340	12,349	43	12,601	A
DLRCC_133		719933	724446	59,963	14,631	49	49,89	A
DLRCC_139		721888	727313	23,314	14,560	46	25,30	A
DLRCC_142		722949	724685	5,838	6,667	49	3	A
DLRCC_150	Springhill Park, Mount Albany	721752	727668	39,587	15,977	45	10,975	A
DLRCC_157	Dunedin Park	723205	727960	29,429	18,214	46	5,094	A
DLRCC_159	Llewellyn Lawn	715582	727149	7,801	12,687	47	0	A
DLRCC_166		723847	727681	23,724	20,044	43	21,143	A
DLRCC_169		717733	730761	11,922	9,158	47	14	A
DLRCC_173	Carysfort Park	721051	728667	55,622	15,356	46	16,370	A
DLRCC_177		718905	729710	7,826	8,856	49	0	A

CQA ID	Name	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
DLRCC_184		722772	727755	12,553	15,470	48	2,020	A
DLRCC_185		720851	728720	6,019	11,764	47	381	A
DLRCC_188		721657	728681	82,812	16,718	45	38,069	A
DLRCC_192	Fernhill Park & Gardens	718357	724427	321,152	10,385	47	41,907	A

CQA Criteria: A – Absolute CQA, R – Relative CQA, * - Existing designated Quiet Area, # - APA requested CQA

11.11 Mitigation and Protection Measures and Actions

An overview of the general prevention, protection and mitigation measures that could be considered for the management of noise from road, rail and industry within the Agglomeration is presented within **Section 8**.

This section considers those measures in a local context, together with key local noise management related policy guidelines and local and regional projects and set out the framework that Dún Laoghaire Rathdown County Council intends to follow to help manage and mitigate the effects of exposure to environmental noise.

The environmental noise management measures within the framework are presented across the three policy principle categories covered by the **Noise Policy Statement**, together with a fourth supporting 'General' category as follows;

- General – Noise Management Measures
- Prevention – Noise Management Measures
- Protection – Noise Management Measures
- Mitigation – Noise Management Measures.

In some instances, measures do not necessarily stand in isolation and may be relevant for, or overlap, with other categories.

Furthermore, the measures collectively support the **Responsible Aims** which underpin the **Noise Policy Statement**. A summary of the **Responsible Aims** that are achieved, or partially achieved, through the proposed measure is set out in **Table 58**.

When considering the broader framework of measures and actions aimed at mitigating exposure to environmental noise from the transport and industry sectors, it is important to emphasize that Dún Laoghaire Rathdown County Council, in some instances, does not have exclusive ownership or influence over certain noise sources, areas, and the measures presented in this Noise Action Plan. Many of the measures and actions will require input, collaboration, and execution by other infrastructure owners, along with support from government departments and bodies through relevant legislation and funding.

In addition to third-party collaboration, the successful implementation of this Noise Action Plan will also depend on the availability of adequate resources to execute the proposed measures and actions.

The measures are described below across each of the four categories. The measures, and associated actions are presented in **Table 58**.

11.11.1 General – Noise Management Measures

General noise management measures cover a range of activities to support the implementation of the Noise Action Plan including other measures across the three policy principle categories.

Measure DLR_M1: Support the Development of National Noise and Other Related Policy and Guidance

At present there is no national policy relating specifically to noise other than specific objectives set out within a range of national plans and strategies such as Policy Objective 65 from the National Planning Framework 2040. Furthermore, there is no adopted consistent approach for Local Authorities to apply in the evaluation of noise issues at the planning application stage. Some have developed their own guidelines, and many apply the ProPG (2017) approach which is used within the UK. Development of national policy and guidelines will be the responsibility of the Department of Environment, Climate and Communications (DECC).

In addition to specific national policy and guidance relating to noise, other national policy and guidance can have an indirect impact on noise related issues. An example includes the National Speed Limit Review led by the Department of Transport and published in September 2023.

Dún Laoghaire Rathdown County Council will actively support and engage with the development of national policy and guidance on the subject of noise and all related policy.

Measure DLR_M2: Dún Laoghaire Rathdown County Council Noise Working Group

It is proposed to establish a noise working group to co-ordinate the activities and actions from the Noise Action Plan and to foster an approach of collaboration across all relevant departments and sections. The noise working group will be established by the Environmental Enforcement Unit and will include representatives from road maintenance, road design, traffic management, active travel and planning. The objective of the group will be to facilitate an understanding of the work and progress of each section and provide a forum to influence noise (from traffic, rail and industry) related actions within the broader context of Dún Laoghaire-Rathdown County Council services and projects.

Measure DLR_M3: Noise Action Plan Working Group(s) - Action Planning Authorities and Transport Infrastructure Owners

Dún Laoghaire-Rathdown County Council will support the establishment of relevant noise working groups to co-ordinate and collaborate with other Dublin agglomeration APAs and the relevant NMBs (Transport Infrastructure Ireland and Iarnród Éireann) in respect of noise management issues in general and mitigation measures at a Priority Important Area level.

Measure DLR_M4: Annual Report to Environment Protection Agency (EPA)

Dún Laoghaire-Rathdown County Council will prepare an annual report for the EPA setting out progress made in respect of the implementation of the Noise Action Plan including the investigations of Priority Important Areas and implementation of noise mitigation measures for those areas and other general areas.

In addition, progress with respect to the assessment of the Candidate Quiet Areas will be presented together with any recommendations for referring any of these areas to the EPA and the Minister for designating as a Quiet Area. Dún Laoghaire-Rathdown County Council will liaise with relevant third

party infrastructure owners in respect of progress made by them with implementing actions that may be relevant for them and their infrastructure.

Measure DLR_M5: Continued Investigation and Management of Noise Complaints

Dún Laoghaire-Rathdown County Council Environmental Enforcement Unit investigates complaints under the provisions of the Environmental Protection Agency Act 1992 (Noise) Regulations 1994. The Unit has regard to best international best practice guidelines and standards and adheres to the national guidance 'National Protocol for Dealing with Noise Complaints for Local Authorities'.

Measure DLR_M6: Stakeholder Collaboration

Dún Laoghaire-Rathdown County Council's Environmental Enforcement Unit actively collaborates with a number of stakeholders in relation to potential and existing noise nuisances:

- **EPA - IPC Licences** - The Environmental Enforcement Unit refers noise complaints received in relation to IPC licences directly to the EPA. The Unit assists the EPA with the investigation of these complaints where required. While no PIAs relating to industry have been identified within this Plan, the industry strategic noise maps presented in **Section 11.13** will be reviewed and any issues of importance brought to the attention of the EPA as part of this ongoing collaboration and their review of any relevant IPC licences.
- **Irish Rail** - The Environmental Enforcement Unit liaises with Irish Rail in relation to complaints, nighttime works, and infrastructure projects which may increase noise levels.

Measure DLR_M7: Ongoing Community Engagement

A key requirement in the development of the strategic noise maps and Noise Action Plan is that the information is made available to the public in a clear, comprehensible, and accessible manner. Furthermore, the public should be consulted on the preparation of the Noise Action Plan, provided with the opportunity to participate and comment on the Noise Action Plan, and the feedback from public engagement should be considered when finalizing the Plans.

To date the strategic noise maps, together with background information, has been published on the Dún Laoghaire-Rathdown County Council website and a period of formal public consultation held on the draft Noise Action Plan. Furthermore, engagement has been on-going through the elected representatives of Dún Laoghaire-Rathdown County Council through the relevant Strategic Policy Committee.

As part of the implementation of the Noise Action Plan, it is proposed to continue with, and build on this public engagement as part of the evaluation of the Priority Important Areas and also through engagement on relevant existing Plans and Projects. This engagement will include:

- on-going engagement with elected members
- presentation of the finding of the detailed appraisal of mitigation measures on Dún Laoghaire-Rathdown County Council website
- presentation of the findings of the evaluation of the candidate Quiet Areas on Dún Laoghaire-Rathdown County Council website

- formal public consultation on proposed measures, candidate Quiet Areas and other Plans and Projects, where appropriate
- use of relevant social media and information services to report findings and progress
- meetings with local area resident groups, as appropriate.

11.11.2 Prevention – Noise Management Measures

Measure DLR_M8: Planning Application Advice, Conditioning and Enforcement

Dún Laoghaire-Rathdown County Council Environmental Enforcement Unit consults directly with the Planning Department advising on planning applications and enforcement of planning conditions in relation to noise emissions. The Unit has standard planning conditions for this purpose.

In reviewing and advising on planning applications the Unit will give due consideration to the existing strategic noise maps and this Noise Action Plan and in particular Quiet Areas (if established) . In this way conditioning developments that may have the potential to generate noise will ensure no increase in the ambient noise level.

Furthermore, Dún Laoghaire-Rathdown County Council Environmental Enforcement Unit has developed a Good Practice Guide for Construction and Demolition in respect of managing noise. For the construction phase of all developments that require planning permission adherence to this guide is a condition of the permission.

Measure DLR_M9: Develop Ambient Noise Monitoring Network

Dún Laoghaire-Rathdown County Council Environmental Enforcement Unit will roll out during the lifetime of this plan an Ambient Noise Monitoring Network. This will include a review of the latest results of the strategic noise mapping and the proposed noise mitigation measures including monitoring requirements to gauge effectiveness of same.

11.11.3 Protection - Noise Management Measures

Measure DLR_M10: Evaluation of Shortlisted Candidate Quiet Areas

Dún Laoghaire-Rathdown County Council will complete an initial evaluation of the Candidate Quiet Areas identified, and follow this with a more detailed evaluation of a shortlist. The objective of the evaluation process will be to confirm the validity of the Candidate Quiet Area for delimiting as a Quiet Area.

The evaluation will include some or all the elements described in **Section 7.3.2**. For instance, in order to assess the value of each site to the local community, it may be appropriate to evaluate the soundscape of each site through the visitor experience and stakeholder engagement process and by undertaking organized soundwalks or other applicable methodologies.

The results of the evaluation will be used to make a recommendation on whether to designate the site as a Quiet Area or not.

Measure DLR_M11: Proposal for Quiet Area(s) Designation

For each of the Candidate Quiet Areas that are recommended for designation as Quiet Area, a proposal will be prepared setting out the findings of the investigations and the feedback from the consultation process to support the recommendation for the area being designated as a Quiet Area.

This will be consulted with the EPA before being issued to the Minister of the Environment, Climate and Communications to approve the delimitation of the recommended Candidate Quiet Areas as a Quiet Area.

11.11.4 Mitigation – Noise Management Measures

Existing Plans, Projects and Strategies

Measure DLR_M12: Support the Implementation of Relevant Plans, Projects and Strategies

There are a number of existing plans, projects and strategies which aim to deliver more sustainable infrastructure and services for Dún Laoghaire Rathdown and the Dublin area. The successful implementation of these will bring indirect benefits for noise reduction through encouraging more sustainable modes of transport in combination with reduced traffic volumes. Key examples with noise benefit synergies include;

- the Dún Laoghaire Rathdown Active Travel Programme
- the Greater Dublin Area Transport Strategy
- the Dún Laoghaire Rathdown Climate Action Plan.

This measure aims to work collaborative with each of these to support their implementation and engage on aspects for noise management and benefits.

Priority Important Areas

Measure DLR_M13: Evaluation of each Priority Important Area

Dún Laoghaire-Rathdown County Council will complete an evaluation of each of the 10 Priority Important Areas identified in this chapter of the Noise Action Plan. Where the Priority Important Area relates to infrastructure that is exclusively the responsibility of and managed by Dún Laoghaire-Rathdown County Council, then the evaluation will be completed exclusively by Dún Laoghaire-Rathdown County Council. Where the Priority Important Area relates to infrastructure for which a third party has overall responsibility, then the evaluation will require significant input from the relevant infrastructure owner such as Transport Infrastructure Ireland and/or Irish Rail.

The objective of the evaluation process will be to confirm the validity of the Priority Important Area and identify the most appropriate noise mitigation measures through detailed economic and health benefits appraisal. The steps in the evaluation process are described in **Section 8.4**.

Measure DLR_M14: Review Road Maintenance Works Programme for Noise Benefits within PIAs and other Areas

The Roads Maintenance Section (ICC Department) implements an annual programme of road maintenance works. The projects in various programme are identified based on road condition (PSCI rating) and other relevant criteria such road classification, level of traffic use, local representation etc.

It is proposed to work with Roads Maintenance to review their proposed annual roads maintenance programme in the context of the Priority Important Areas identified and the strategic noise maps

produced to consider, where possible, road noise within the decision criteria process and to support the use of low noise road surface types where feasible and appropriate to do so.

Potential Priority Important Area Noise Mitigation Measures

Measure DLR_M13 commits to undertaking an evaluation of each Priority Important Area including the identification of appropriate noise mitigation measures for each area. **Table 58** below provides a summary of some of the potential noise mitigation measures that could be considered for each area.

It should be noted that the measures presented in the table below are for consideration only and would need to be fully evaluated through the completion of Measure DLR_M13 to confirm their appropriateness and justification for each Priority Important Area. Rail related potential measures and measures relating to national roads would need to be reviewed, discussed and agreed with Transport Infrastructure Ireland for the relevant Priority Important Areas.

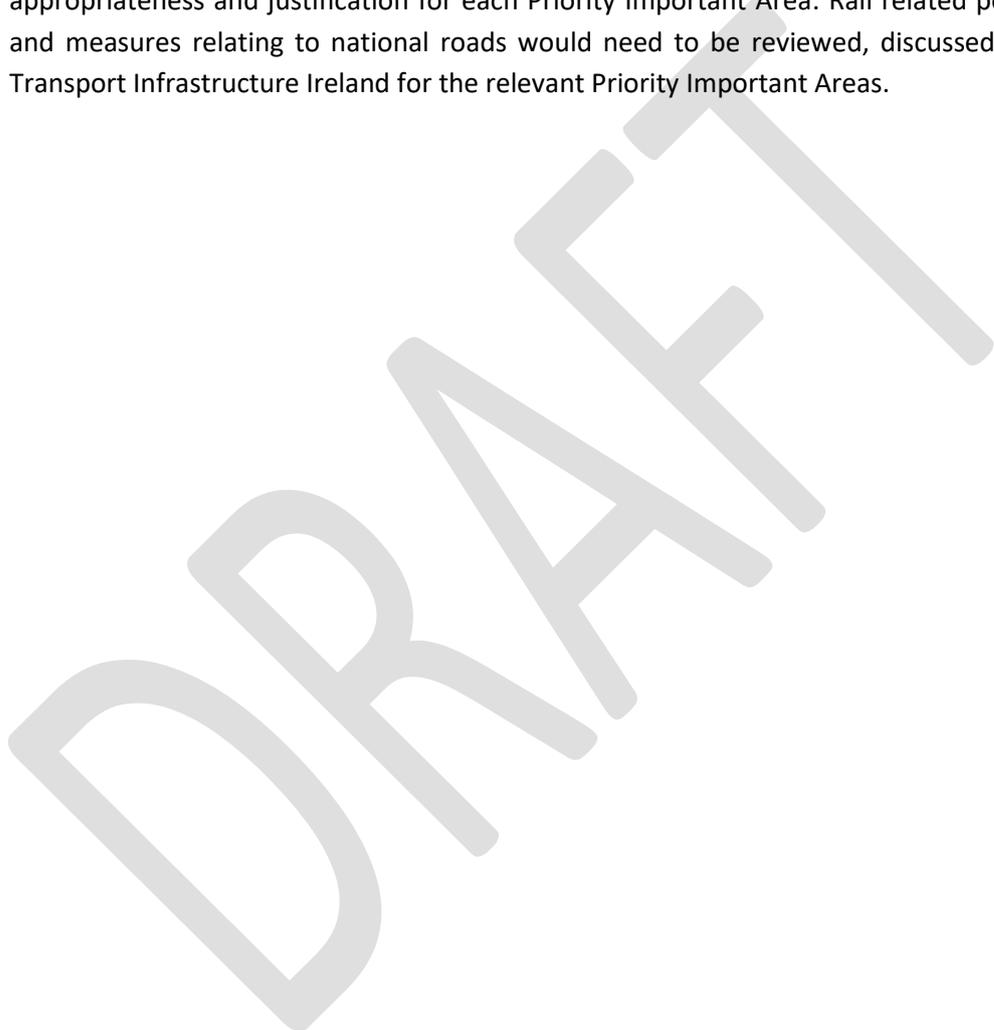


Table 58: DLRCC: Priority Important Area (PIA) Example Mitigation Measure Considerations

PIA	Source	Noise Reduction at Source	Noise Abatement Operating Procedures	Community Engagement and Responsible Actions	Operational Restrictions	Land-Use Planning and Management	Opportunities for Noise Barrier(s)
DL_1	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such as earth bunds, along 1km of the M50
DL_2	RAIL	Increasing the Elasticity Track Superstructure	Train Scheduling	Noise Measurement and Reporting	Route Use Restrictions	Noise Barriers	750m of Luas Light Rail through an urban environment in the vicinity of properties on Valley Drive, with potentially limited opportunity for noise barriers
DL_3	RAIL	Increasing the Elasticity Track Superstructure	Train Scheduling	Noise Measurement and Reporting	Route Use Restrictions	Noise Barriers	300m and 700m sections of Luas Light Rail through an urban environment in the vicinity of properties on Ballyogan Road, with potentially limited opportunity for noise barriers

PIA	Source	Noise Reduction at Source	Noise Abatement Operating Procedures	Community Engagement and Responsible Actions	Operational Restrictions	Land-Use Planning and Management	Opportunities for Noise Barrier(s)
DL_4	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	500m of roads in urban environment in the vicinity of properties on Valley Drive, with potentially limited opportunity for noise barriers
DL_5	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such as earth bunds, along 1.8km of the M50
DL_6	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such as earth bunds, along 350km of the M11
DL_7	RAIL	Increasing the Elasticity Track Superstructure	Train Scheduling	Noise Measurement and Reporting	Route Use Restrictions	Noise Barriers	600m of Luas Light Rail through an urban environment in the vicinity of properties on St. Columbanus Road, with potentially limited

PIA	Source	Noise Reduction at Source	Noise Abatement Operating Procedures	Community Engagement and Responsible Actions	Operational Restrictions	Land-Use Planning and Management	Opportunities for Noise Barrier(s)
							opportunity for noise barriers
DL_8	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers along 200m of the N11
DL_9	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers along 200m of the R117 Enniskerry Road
DL_10	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers along 300m of the N31

11.11.5 Noise Management Framework – Summary of Actions

A summary of the proposed noise management measures is set out in **Table 59** below together with details of the proposed action(s) for each. **Table 59** also sets out the **Responsible Aims** that each measure helps to support through the implementation of the Plan.

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Table 59: DLRCC: Noise Management Framework – Summary of Actions

Measure	Responsible Aim (RA)	Measure Description	Action
General – Noise Management Measures			
DLR_M1	RA_1 & 5	Support the Development of National Noise and Other Related Policy and Guidance	Dún Laoghaire Rathdown County Council will support the Department of Environment, Climate and Communications (DECC) and other government departments and bodies in the development of national noise and other related policies and guidance and assist in their implementation once in place.
DLR_M2	RA_2, 3, 4 & 5	DLRCC Noise Working Group	Establish terms of reference and membership of the working group and meet at least four times per year.
DLR_M3	RA_2, 3.4 & 5	Noise Action Plan Working Group(s) - Action Planning Authorities and Transport Infrastructure Owners	Participate in Noise Action Plan Working Group. Attend and contribute to meetings twice yearly or more frequently as matters require.
DLR_M4	RA_8	Annual Report to Environment Protection Agency (EPA)	Prepare an annual progress report regarding the implementation of the Noise Action Plan and submit it to the EPA.
DLR_M5	RA_5 & 7	Continued Investigation and Management of Noise Complaints	Review and investigate all noise complaints received in a timely manner and in accordance with national and international best practice.
DLR_M6	RA_3, 4 & 5	Stakeholder Collaboration	Continue liaison and collaboration with a range of key stakeholders to address noise-related issues and complaints. Provide a framework for the effective management of noise from related industry and infrastructure sites.
DLR_M7	RA_3, 4, 5 & 6	Ongoing Community Engagement	Publish the final Noise Action Plan and provide updates on the progress made with its implementation, including the findings of the appraisal of Priority Important Areas and evaluation of Candidate Quiet Areas, on the Dún Laoghaire-Rathdown County Council

website. This information will also be communicated through ongoing engagement in Special Purpose Committee meetings and formal public consultations.

Prevention – Noise Management Measures

DLR_M8	RA_5	Planning Application Advice, Conditioning and Enforcement	Continue to update and refine Dún Laoghaire-Rathdown County Council guidance with respect to the management of noise during construction and operation of new residential developments.
DLR_M9	RA_5	Develop Ambient Noise Monitoring Network	Assess appropriate locations for, tender and install a network of ambient noise monitors.

Protection – Noise Management Measures

DLR_M10	RA_4	Evaluation of Candidate Quiet Areas	For each Candidate Quiet Area carry out an initial shortlist exercise and thereafter investigation of the area and make a recommendation on whether to designate each area as a Quiet Area or not.
DLR_M11	RA_4	Proposal for Quiet Area(s) Designation	For all Candidate Quiet Areas recommended for designation, prepare proposal for EPA consultation and Ministerial Approval.

Mitigation – Noise Management Measures

Existing Plans, Projects and Strategies

DLR_M12	RA_3 & 5	Support Implementation of Relevant Plans, Projects & Strategies	<p>Collaborate with relevant Dún Laoghaire Rathdown County Council sections and 3rd Party organisations to support the implementation of the following;</p> <ul style="list-style-type: none"> • Dún Laoghaire Rathdown County Council’s Active Travel Programme • Greater Dublin Area Transport Strategy 2022-2042 • Dún Laoghaire Rathdown County Council’s Climate Action Plan
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Priority Important Areas

DLR_M13	RA_3	Evaluation of each Priority Important Area	For each Priority Important Area, conduct a review and update of the noise model used in the development of the strategic noise maps. Additionally, perform a detailed appraisal of the noise mitigation measures in each area to identify the preferred measure(s) for implementation, if any.
DLR_M14	RA_3	Review Road Maintenance Works Programme for Noise Benefits within PIAs and other Areas	It is proposed to work with Roads Maintenance to review their proposed annual roads maintenance programme in the context of the Priority Important Areas identified and the strategic noise maps produced to consider, where possible, road noise within the decision criteria process and to support the use of low noise road surface types where feasible and appropriate to do so.

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11.12 Noise Action Plan Implementation

A summary of the proposed noise management measures is set out in **Table 59** together with details of the proposed action(s) for each. The table also sets out the **Responsible Aims** that each measure helps to support through the implementation of the Plan.

Figure 42 below provides a summary of the Dún Laoghaire Rathdown County Council measures in respect of their timescale for implementation over the period of the Plan and beyond, and the **Responsible Aims** which the measure supports, as set out in **Section 9.1.2**.

The timescales presented relate to the period of the Noise Action Plan, 2024 - 2028, and beyond and with the following definitions assumed;

- “Short term” indicates implementation by 2026
- “Medium-term” indicates implementation by 2030
- “Long-term” indicates implementation beyond 2030.

As can be seen from **Figure 42**, many of the measures relate to ongoing management activities, maintenance works and longer-term plans and projects. In this regard many of the measures overlap and will be continuous over the period of the Plan.

The establishment of the Dún Laoghaire Rathdown County Council and Noise Action Plan working groups will significantly improve the co-ordination and collaboration across all parties and will be essential to ensure successful implementation of the measures within and beyond the life of the Plan.

Successful implementation will also be subject to resources and funding.

Figure 42: DLRC: Noise Action Plan Implementation

Dún Laoghaire Rathdown County Council Measures	Responsible Aim (RA)	Time scale	2024				2025				2026				2027				2028				2029+	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Noise Action Plan Preparation																								
Noise Action Plan Completion		July 2024																						
General - Noise Management Measures																								
DLR_M1	Support the Development of National Noise and Other Related Policy and Guidance	RA_1 & 5	Ongoing																					
DLR_M2	DLRCC Noise Working Group	RA_2, 3, 4 & 5	Quarterly																					
DLR_M3	Noise Action Plan Working Group(s)	RA_2, 3, 4 & 5	Bi-annual																					
DLR_M4	Annual Report to EPA	RA_8	Annual																					
DLR_M5	Manage Noise Complaints	RA_5 & 7	Ongoing																					
DLR_M6	Stakeholder Collaboration	RA_3, 4 & 5	Ongoing																					
DLR_M7	Ongoing Community Engagement	RA_3, 4, 5 & 6	Ongoing																					
Prevention - Noise Management Measures																								
DLR_M8	Planning Application Advice	RA_5	Ongoing																					
DLR_M9	Develop Ambient Noise Monitoring Network	RA_5	Short to Medium-term																					
Protection - Noise Management Measures																								
DLR_M10	Evaluate Shortlisted CQAs	RA_4	Short to Medium-term																					
DLR_M11	Proposal for Quiet Area Designation	RA_4	Short to Medium-term																					
Mitigation - Noise Management Measures																								
Existing Plans, Projects and Strategies																								
DLR_M12	Support Other Plans, Projects & Strategies	RA_3 & 5	Ongoing																					
Priority Important Areas																								
DLR_M13	Evaluation of each PIAs	RA_3	Short to Medium-term																					
DLR_M14	Road Maintenance Works Programme	RA_3	Ongoing																					

11.13 Figures

Figures supporting the strategic noise mapping results for Dún Laoghaire Rathdown County Council are set out in the following section. The figures include a graphical representation of:

- Industry noise contours – carried out to facilitate engagement between Dún Laoghaire Rathdown County Council and the EPA regarding the evaluation of issues related to industry regulation;
- the Most Important Areas – locations with the greatest concentration of harmful effects;
- the Priority Important Areas – Most Important Areas, or groups of Most Important Areas which will be addressed during the implementation of the Noise Action Plan; and
- the Candidate Quiet Areas identified as candidates to be preserved for their environmental noise quality, and those identified for investigation.

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Figure 43: DLRCC: Industry – Noise Exposures Exceeding 55 dB L_{den}

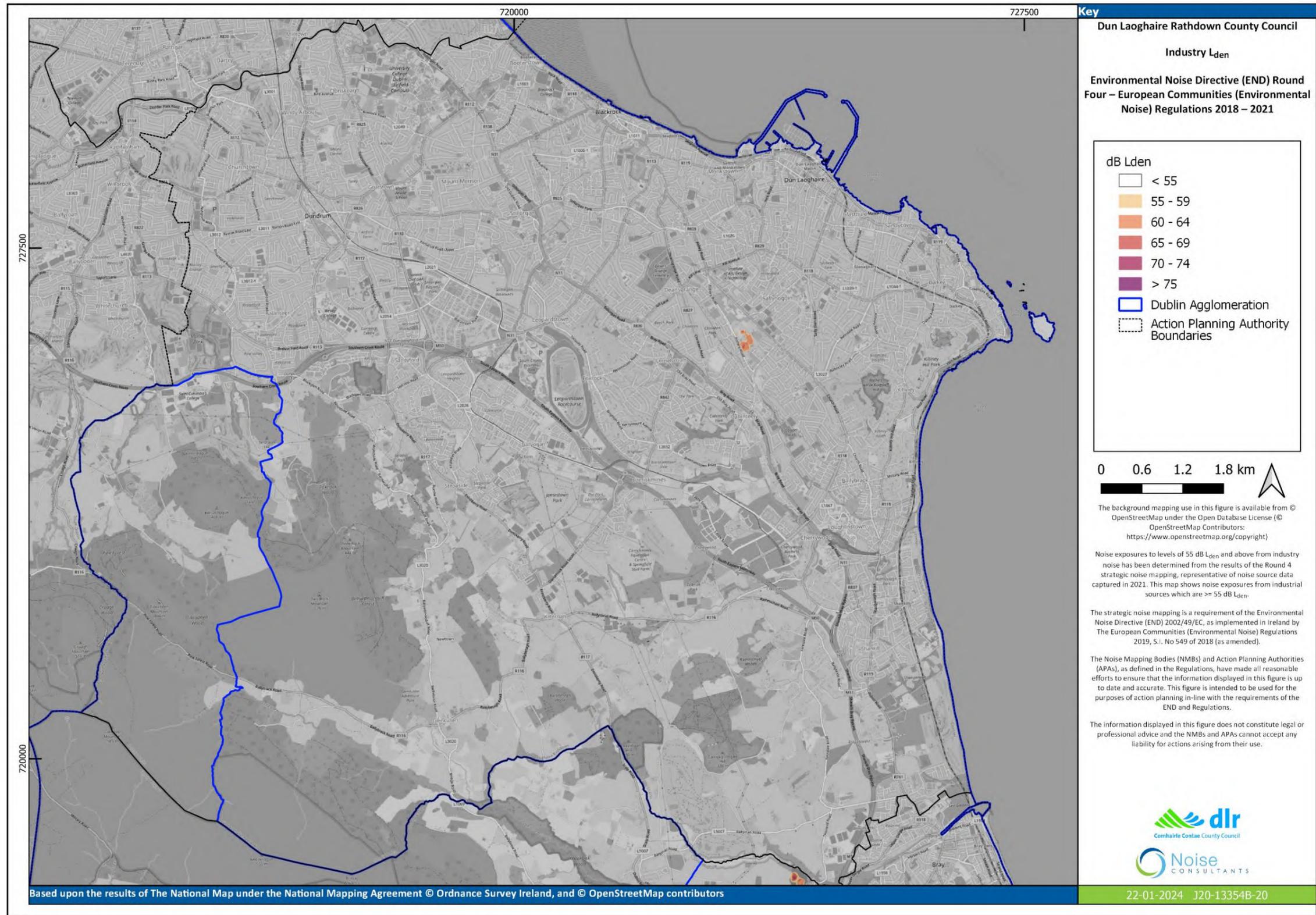


Figure 44: DLRCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 1)

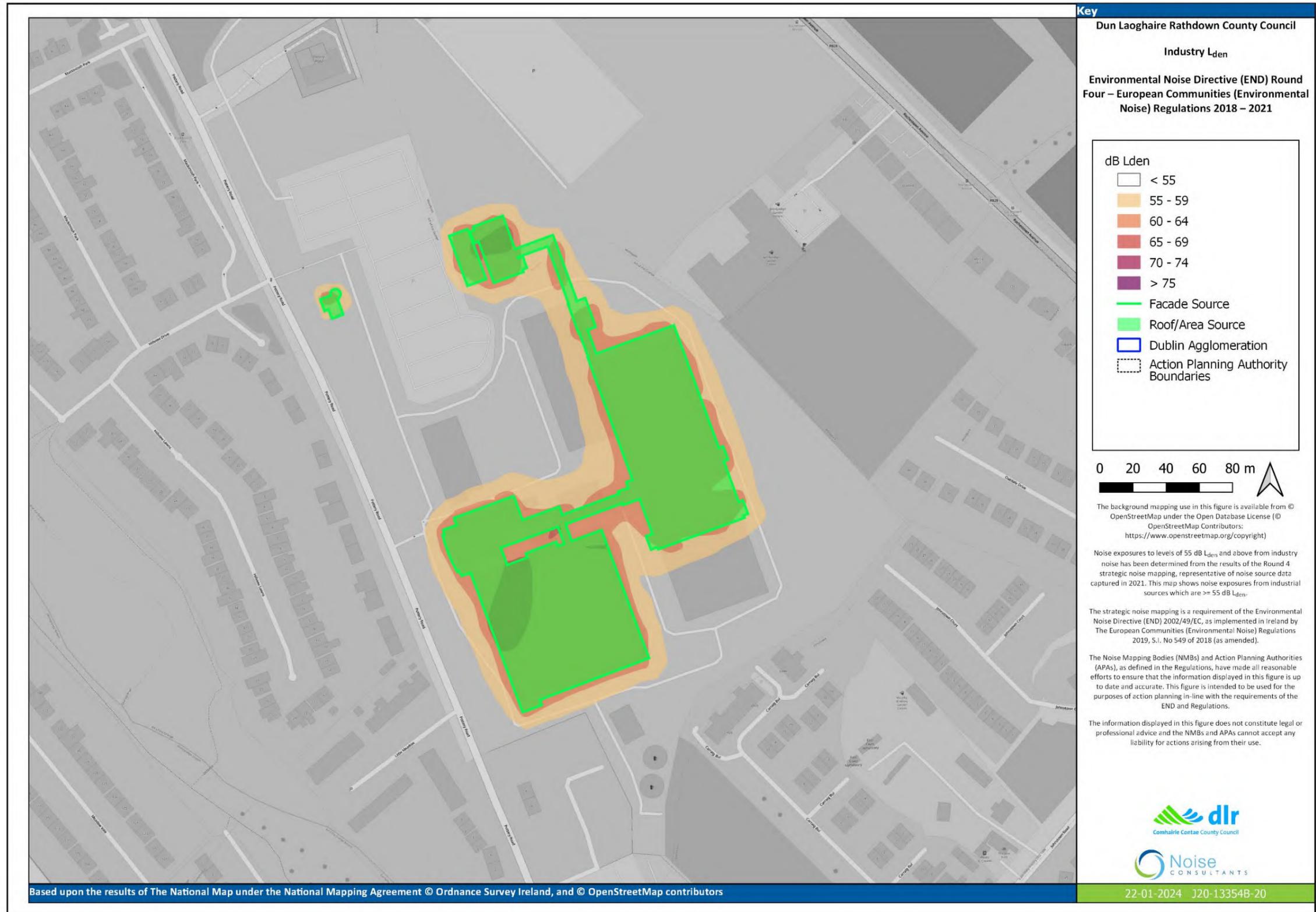


Figure 45: DLRCC: Most Important Areas (MIAs)

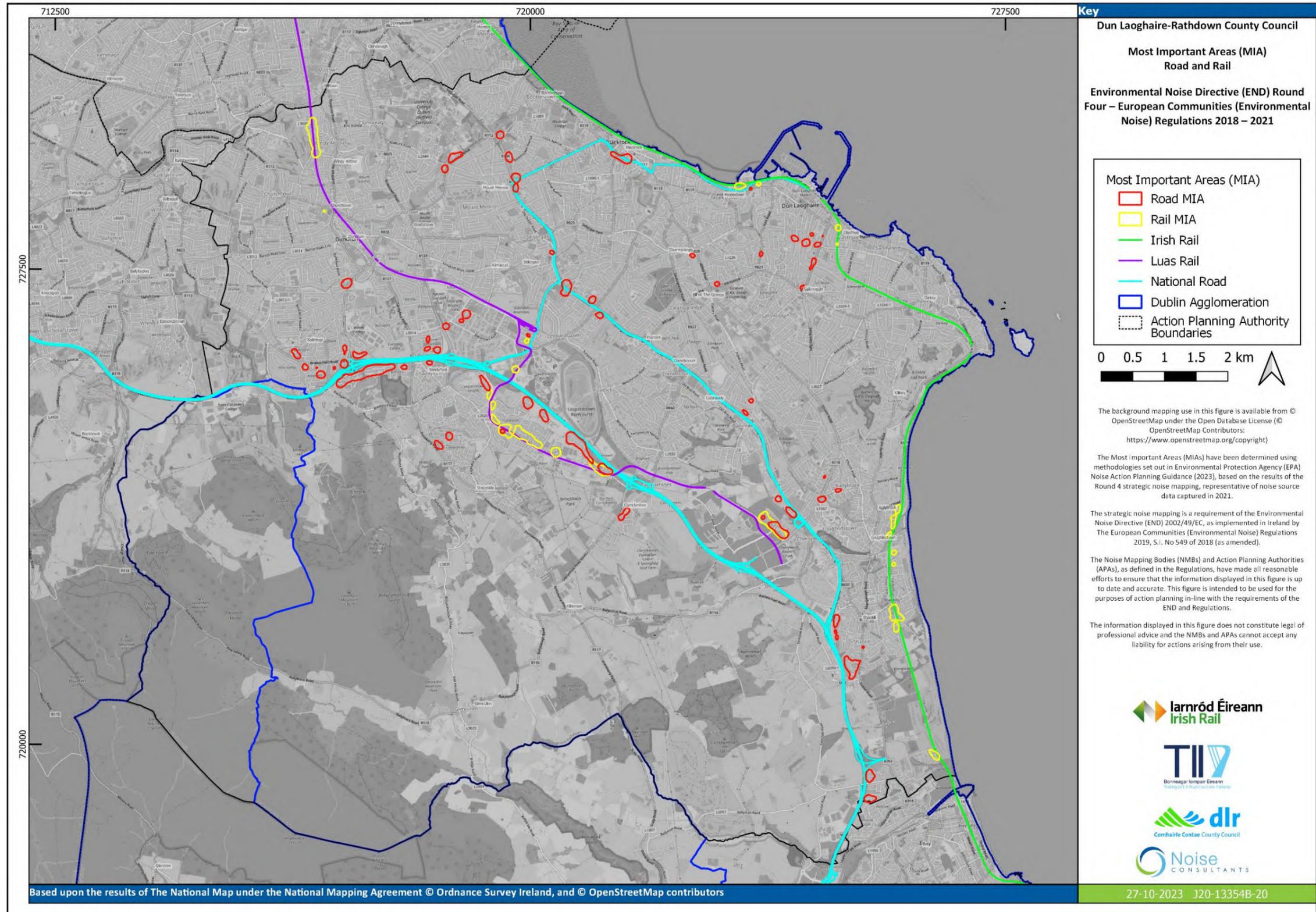


Figure 46: DLRC – Priority Important Areas (PIAs)

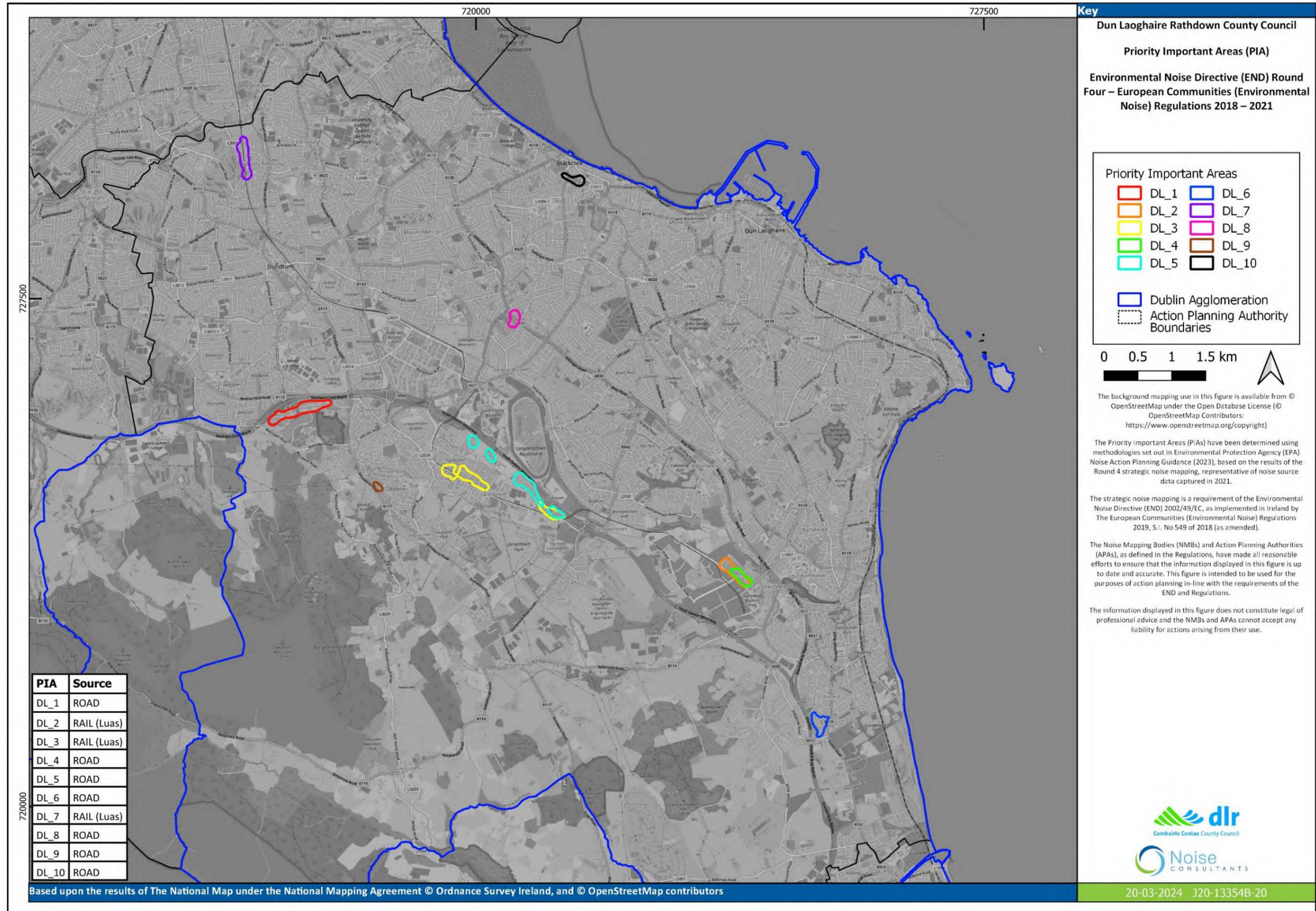


Figure 47: DLRCC: Priority Important Area 1 (PIA 1)

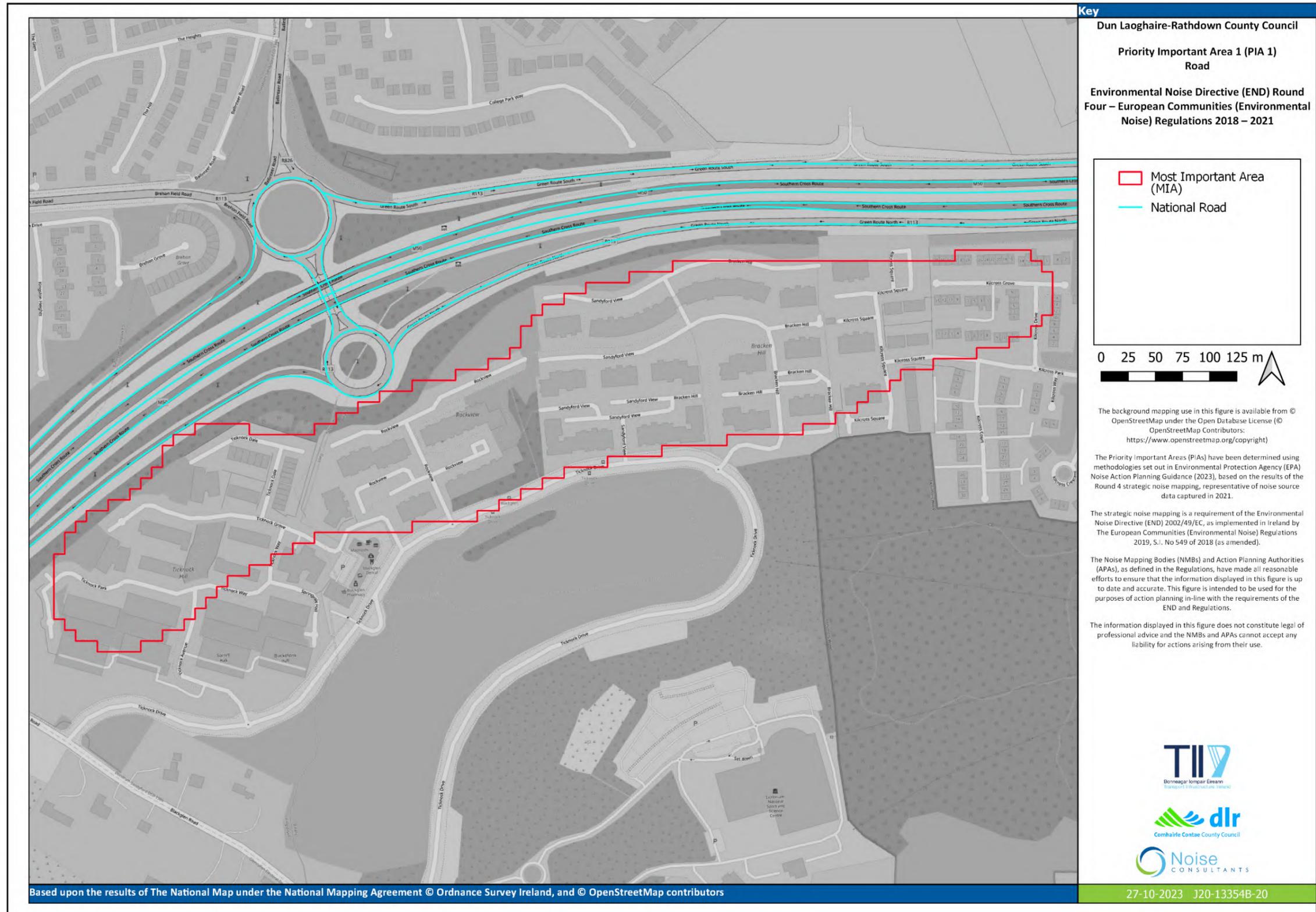


Figure 48: DLRCC: Priority Important Area 2 (PIA 2)

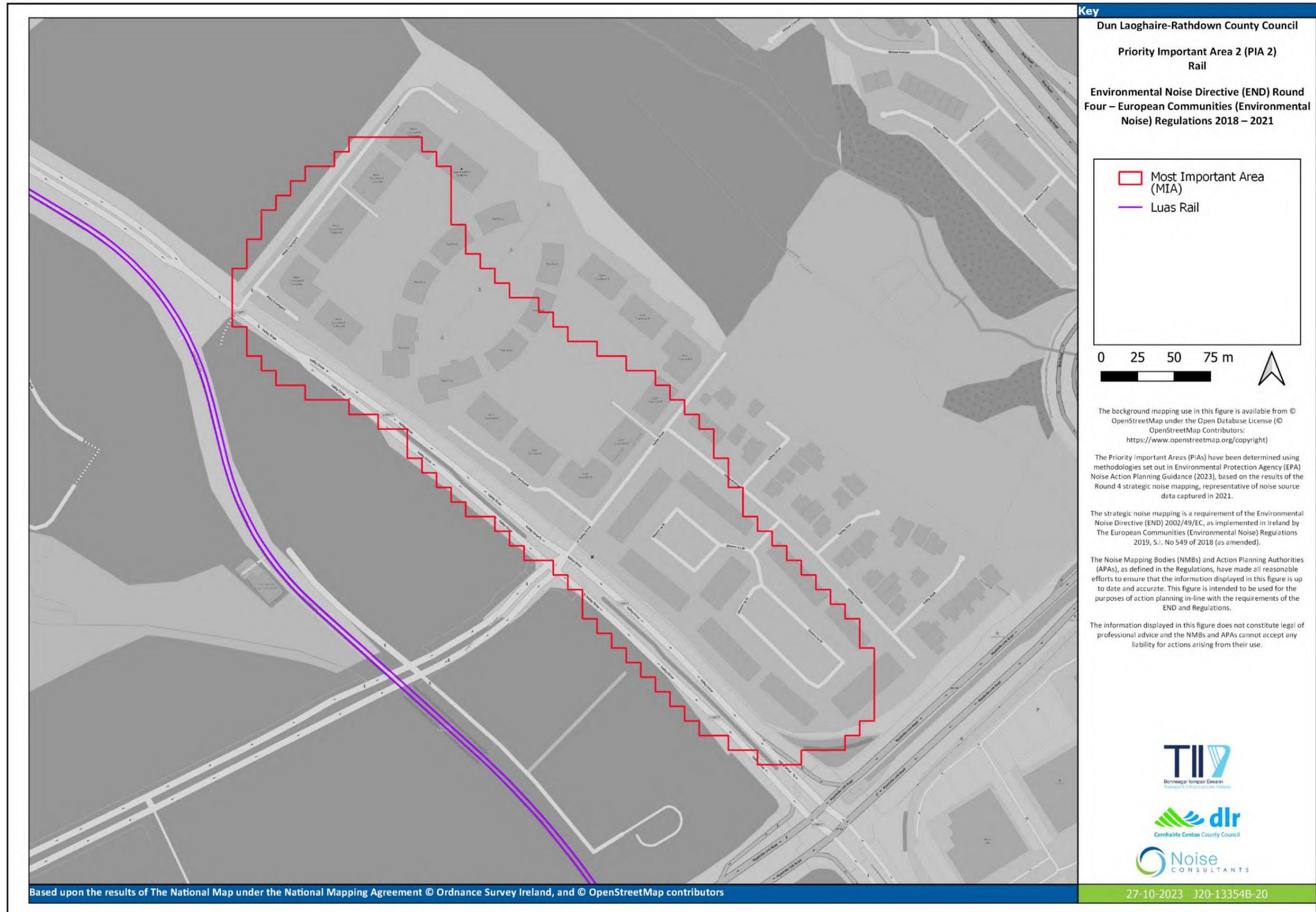


Figure 49: DLRCC: Priority Important Area 3 (PIA 3)

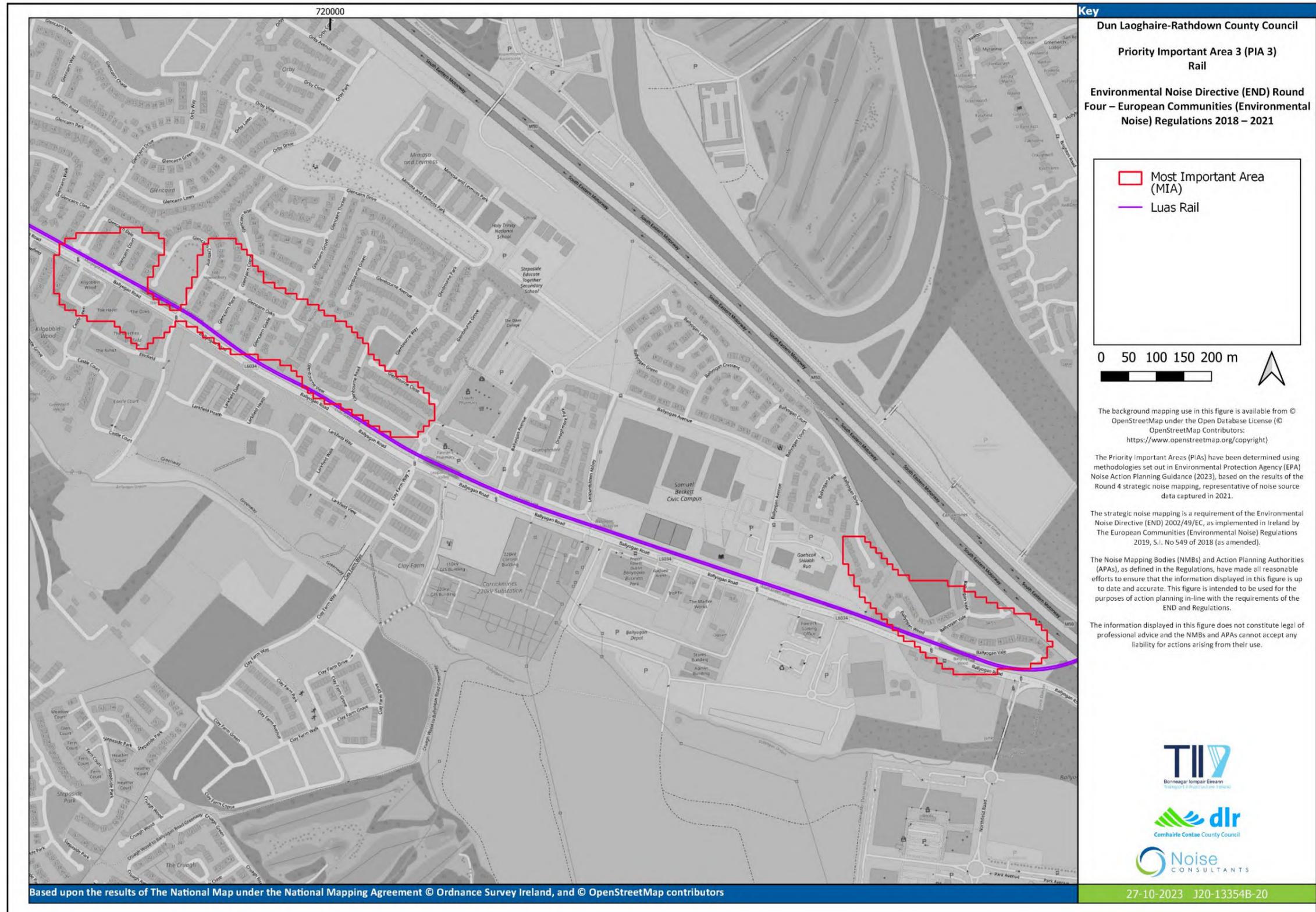


Figure 50: DLRCC: Priority Important Area 4 (PIA 4)

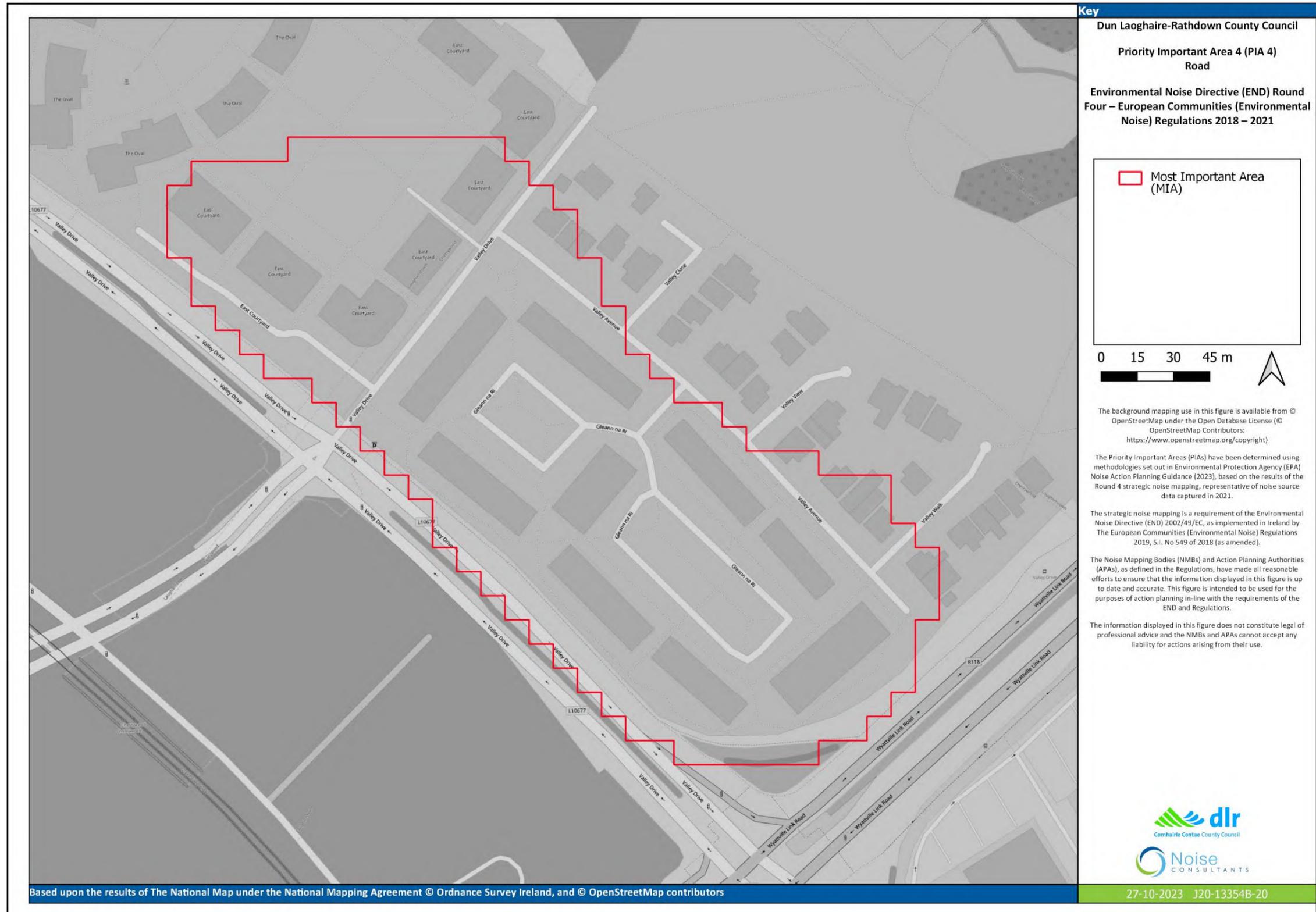


Figure 51: DLRC: Priority Important Area 5 (PIA 5)

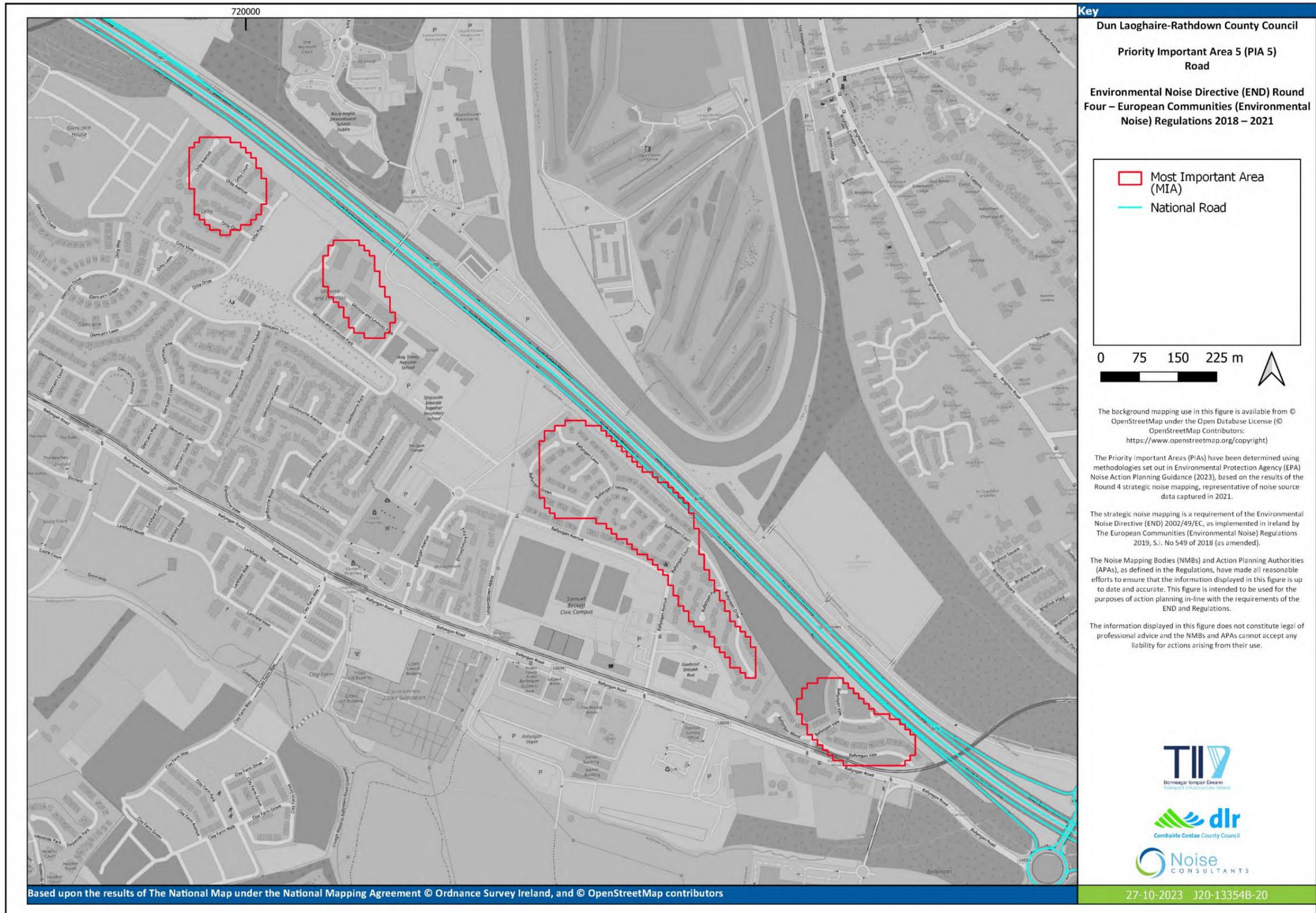


Figure 52: DLRCC: Priority Important Area 6 (PIA 6)

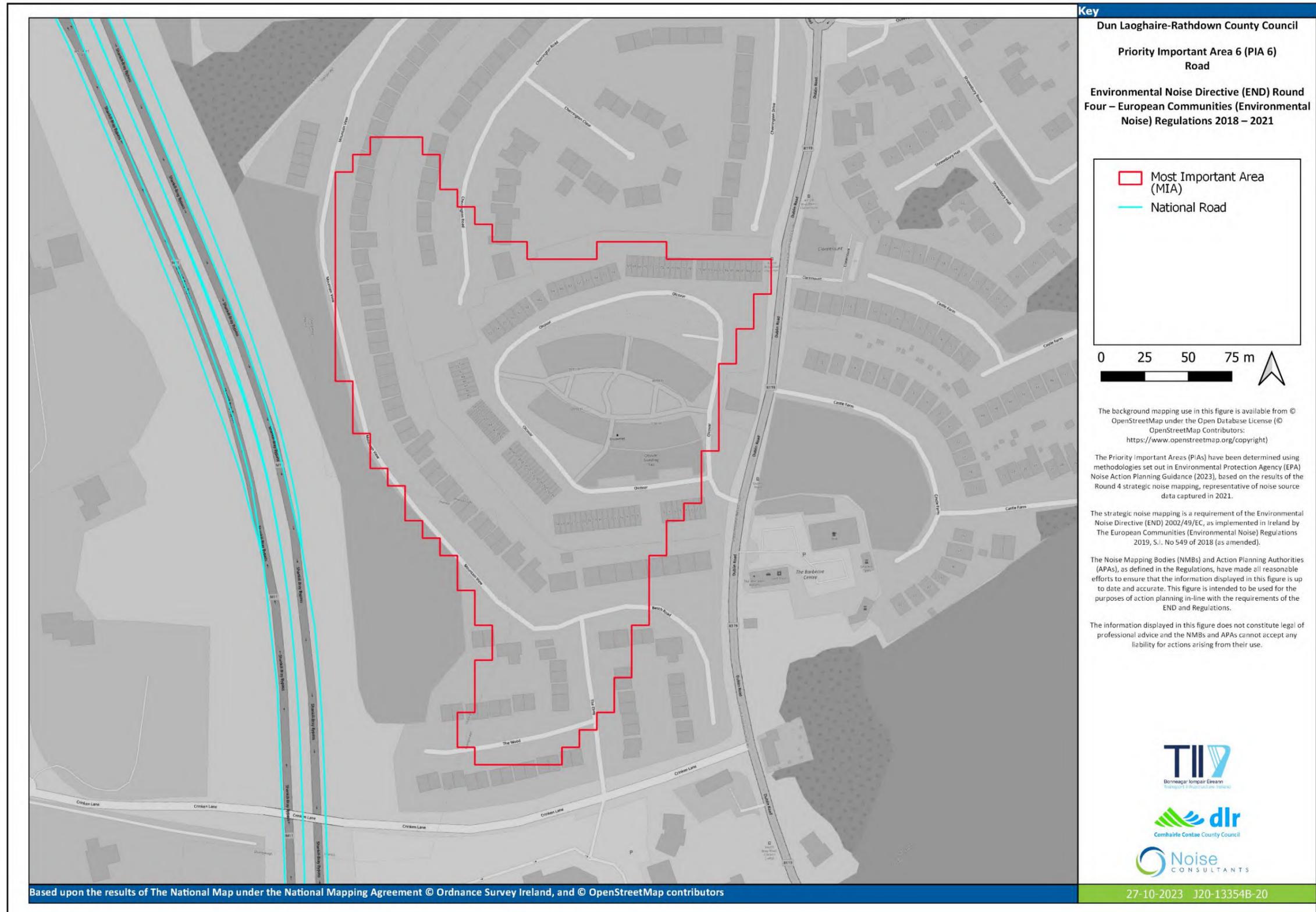


Figure 53: DLRCC: Priority Important Area 7 (PIA 7)

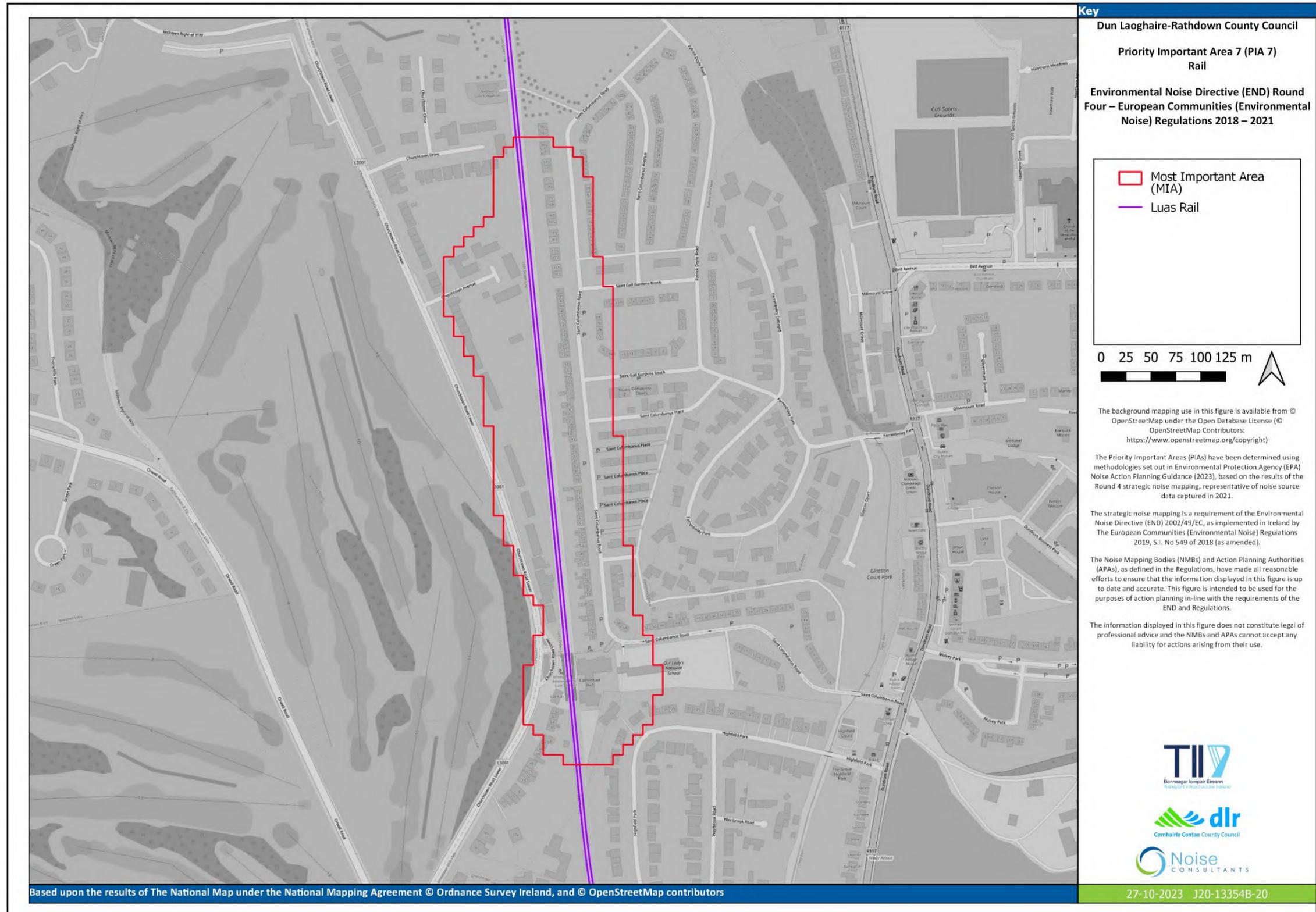


Figure 54: DLRC: Priority Important Area 8 (PIA 8)

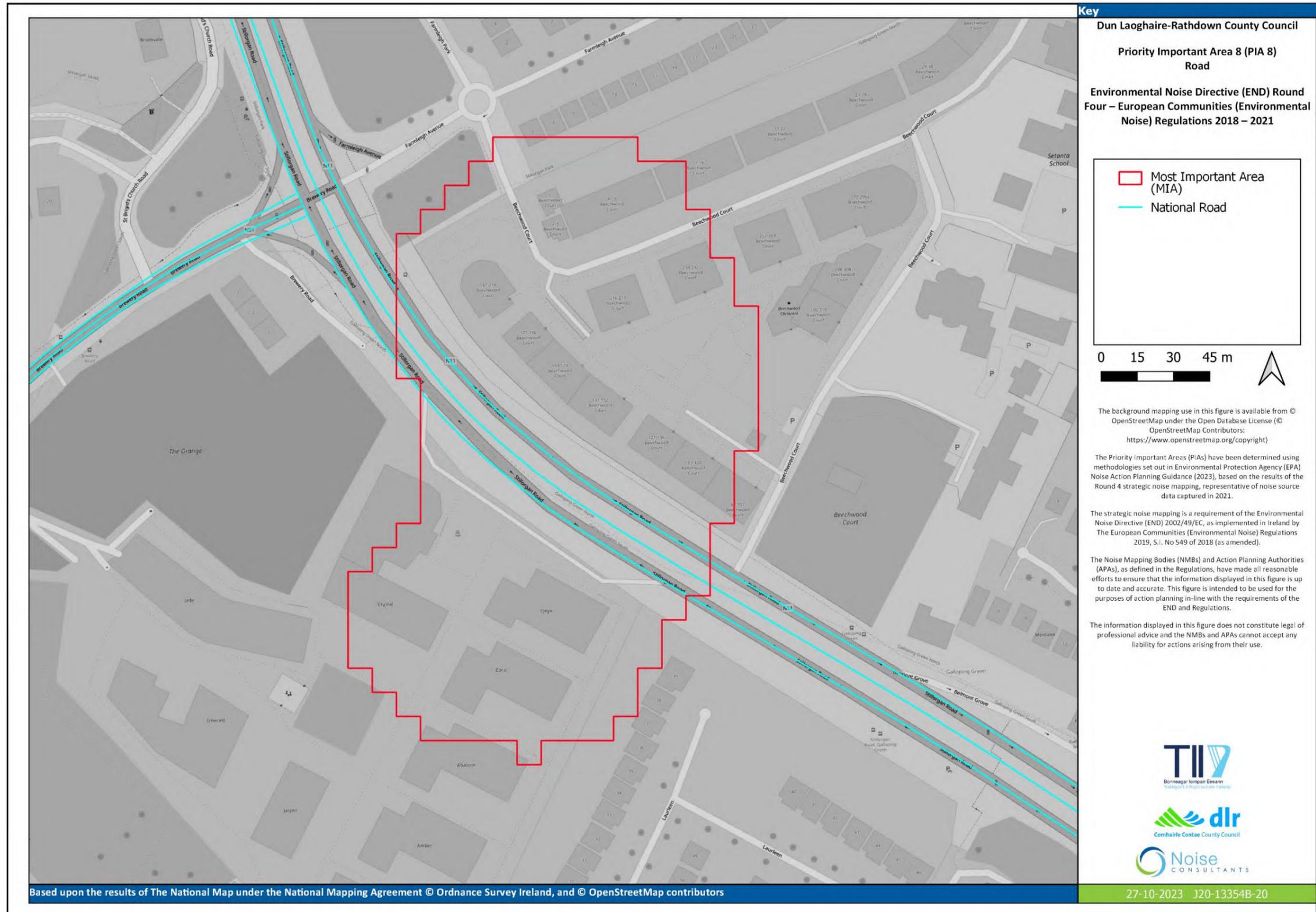


Figure 55: DLRCC: Priority Important Area 9 (PIA 9)

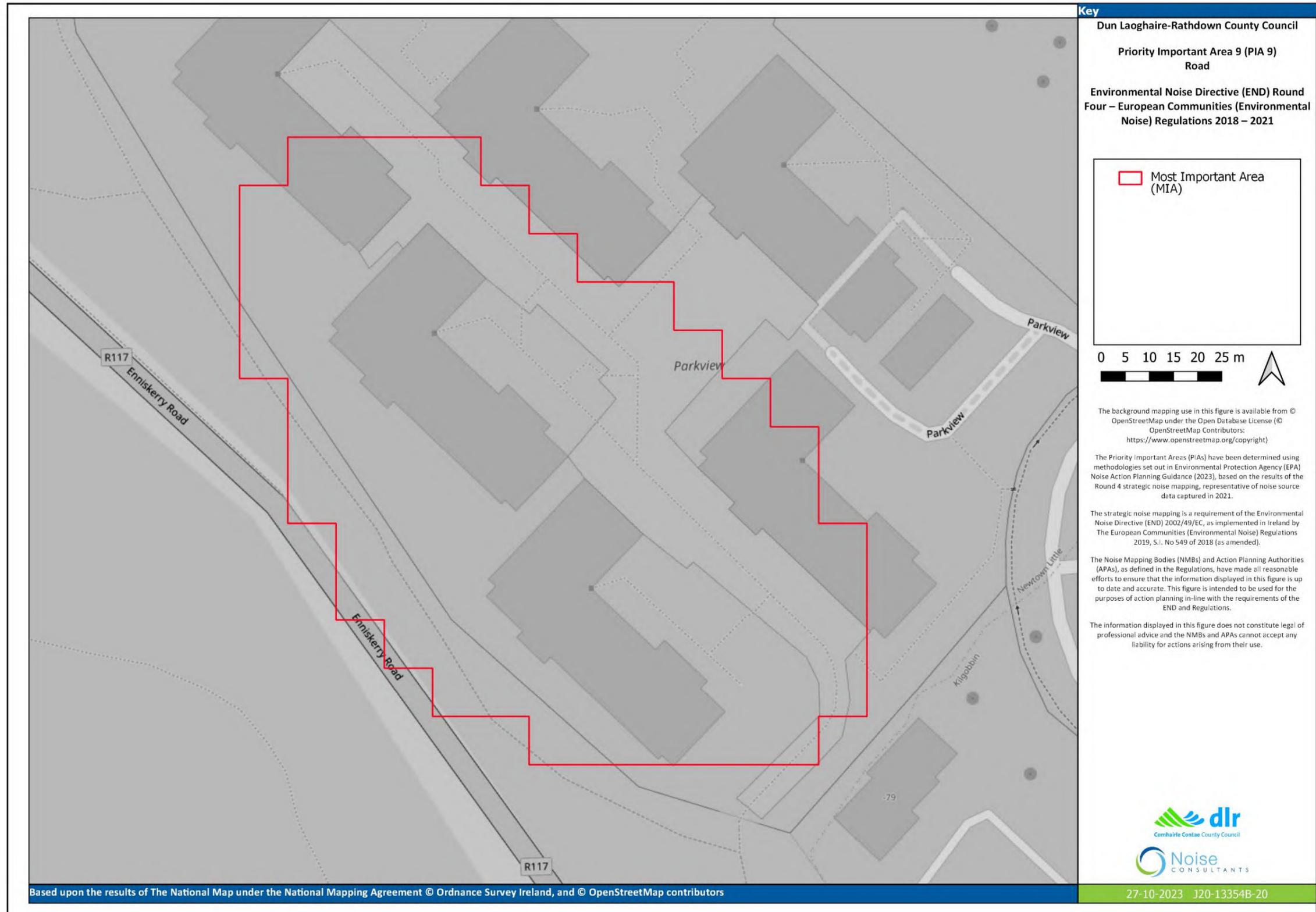


Figure 56: DLRCC: Priority Important Area 10 (PIA 10)

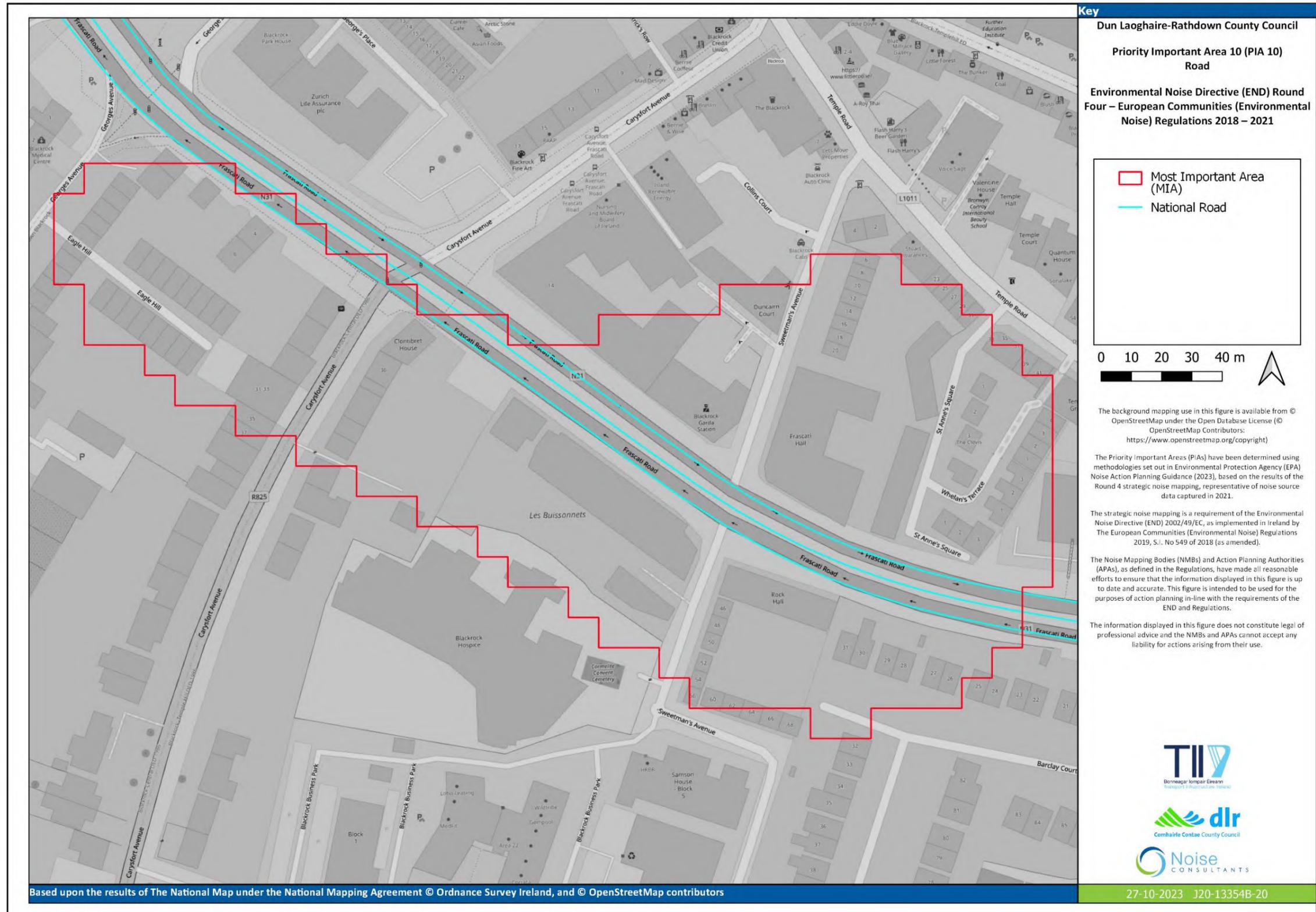
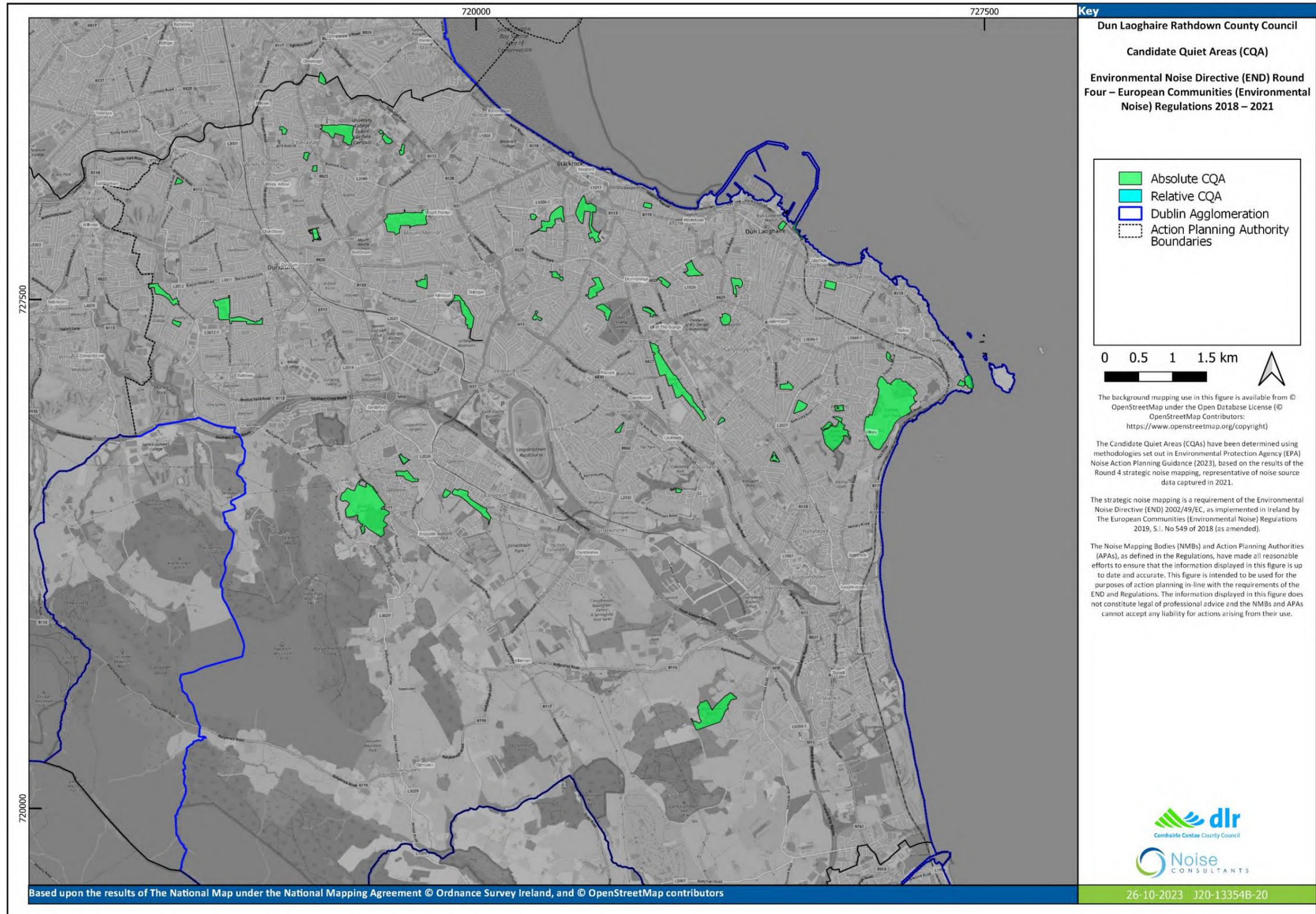


Figure 57: DLRC: Candidate Quiet Areas (CQAs)



11.14 District Electoral Division of Tibbradden

The Tibbradden Electoral Division has not been included in the Dublin Agglomeration since 2006 when the Agglomeration boundary was established. In 2018, during the process of revising the Agglomeration definition, there was no requirement identified to include this area within the Agglomeration, mainly due to the rural nature of the district and not being considered a built up area.

In the past, the Dublin Agglomeration Noise Action Plans drawn up under Rounds 1 to 3 have not specifically mentioned this district, nor has there been a standalone Noise Action Plan for major roads covering this single district within Dún Laoghaire Rathdown County Council. The inclusion of the district as part of Round 5 of the Noise Action Plan post 2028 will be considered.

Notwithstanding the above and in the interest of completeness modelling was completed as a small section of the M50 transects the northern end of the district. The results of the modelling confirmed that there were no Important Areas, Most Important Areas or Priority Important Areas identified within the district. Similarly, no Candidate Quiet Areas were identified in the district.

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12 Fingal County Council

12.1 Introduction

Section 1 – Section 9 of this Noise Action Plan sets out the overarching principles of the Noise Action Plan process, including the existing international, national and regional noise management legislation and guidance, a description of the noise mapping process, and methodologies advocated in the EPA Guidance for identifying and addressing the most important areas, as established by the strategic noise mapping.

This section presents the results of the Noise Action Plan process specifically for the Fingal County Council administrative area and sets out the considerations and actions that are specific to Fingal County Council.

The referenced Action Planning Authority (APA) in this section is Fingal County Council.

This section includes details of:

- contact details;
- the APA's consultation process;
- the APA's historical noise action planning process;
- the APA specific noise management policy and guidance;
- the APA specific plans, projects and strategies relevant to noise;
- the results of the strategic noise mapping;
- the areas to be subject to noise management activities ('Priority Important Areas' (PIAs));
- the areas to be considered for preservation for environmental noise quality ('Candidate Quiet Areas' (CQAs)); and
- associated graphical figures.

12.1.1 Name and Contact Details for Responsibly Authority

Fingal County Council
Environmental Division
County Hall, Main St Swords
Co Dublin

12.2 Consultation

12.2.1 Stakeholder Consultation

A Period of public consultation will be completed on this draft Noise Action Plan. A summary of the public consultation will be set out in the final Noise Action Plan.

12.3 Review of Noise Action Plan(s)

12.3.1 Round 3 Noise Action Plan (2018-2023)

The Round 3 Noise Action Plan included an implementation plan, of which the proposed principal actions were as follows:

- Identify priority action areas, carry out noise assessment and develop an action programme for mitigation
- Implementation of cost-effective noise mitigation measures
- Identification of quiet areas for submission to the Minister

The implementation of the Round 3 Noise Action Plan has not progressed any of the proposed principal actions listed above.

The majority of high noise exposure from roads in the Fingal City Council administrative area is from the Transport Infrastructure Ireland managed road network (M50, N3, M1 N2). Mitigation of noise from these roads is largely outside the control of Fingal County Council. The mitigation from these roads is unlikely to be undertaken by Transport Infrastructure Ireland unless as part of a resurfacing or other project modifying the road.

Other actions include a variation of the County Development Plan, which was made to insert noise standards for new developments potentially subject of unacceptable environmental noise (external noise ingress).

12.4 Local Noise Management Policy and Guidance

12.4.1 Fingal Development Plan, 2023-2029

The Fingal Development Plan outlines the long-term vision and objectives for the development and growth of Fingal. Its primary purposes include: guiding development, spatial planning, infrastructure planning, and environmental protection.

With respect to noise, the Fingal Development Plan aims to promote sustainable development, addressing the needs of its residents by requiring noise assessments to follow the principles of good acoustics design, in line with ProPG (2017). Developments are to be designed to achieve acceptable internal noise levels, in keeping with thresholds advocated in BS 8233 (see **Section 7.5.3**)

12.4.2 Fingal County Council Corporate Plan, 2019-2024

The Fingal County Council Corporate Plan is a strategic document which is statement of the Counties vision, values and objectives. The Plan seeks to ensure a high-quality environment and take early action to protect it. In relation to this, the Plan also endeavours to provide high quality parks and open spaces, to create a healthy environment.

12.5 Relevant Plans, Projects and Strategies

12.5.1 Road Schemes

Two significant road projects (excluding greenways and other active travel initiatives) are included in the Fingal County Council development program.

- **N3 from Meath to the M50 scheme** – a project, which if goes ahead, may provide an opportunity to resurface the carriageway with lower road noise surfacing and enhanced noise barriers which could provide substantial noise mitigation.
- **Sword Western Bypass** – a project which is unlikely to provide mitigation of existing noise, but could be a source of noise pollution itself. The noise impact of the scheme if it goes to planning will be required to assess the noise impact as part of the Environmental Impact assessment.
- **Donabate Roads Project** - there is potential to reduce the noise impact on Newbridge Demensne if the Hearse road is upgraded and includes low road noise surfaces. However adverse effects could occur if traffic speeds and volumes increase.
- **Kellystown and Ongar Barnhill distributor roads** – the roads are intended to serve new development areas, thus they are unlikely to significantly reduce noise for existing residents. The road surfaces for these projects will not include Hot Rolled Asphalt, but Stone Mastic Asphalt or other lower road noise surface.
- **R132 Connectivity Scheme (Swords)** - will mitigate noise due to the reduction in the speed limit proposed as part of this scheme. There is limited resurfacing of this section of road, and most of the road will remain surfaced with Hot Rolled Asphalt Material. Further changes to this road in conjunction with MetroLink could provide the opportunity to resurface with quieter materials.

12.5.2 Road Maintenance Works

Road resurfacing as part of the Fingal Road maintenance programme. The replacement of Hot Rolled Asphalt with Stone Mastic Asphalt in Urban areas on both the Transport Infrastructure Ireland managed road network and in other high traffic and higher speed urban roads, has the potential to provide significant mitigation. Fingal County Council in its own road maintenance programme will use lower noise road surfacing material in urban areas (Stone Mastic Asphalt) where suitable and avoid using Hot Rolled Asphalt.

12.5.3 Traffic Management:

While the primary goal of speed reduction is to reduce accidents, it can have the added benefit of noise mitigation depending on the measures taken (some traffic ramps can increase noise) particularly in towns and villages. Fingal in implementing traffic management schemes will assess noise reduction as part of the scheme design.

12.5.4 Active Travel Schemes

There are numerous active travel schemes in the Fingal County Council area. While they may help alleviate existing noise issues by reducing speed or replacing noisy road surfaces, they typically do

not address noise from major sources, such as the Transport Infrastructure Ireland-managed road network.

12.5.5 Fingal County Council Climate Action Plan 2024-2029

The Plan covers a broad spectrum of climate actions across six thematic areas, including the newly introduced Community Engagement category, reflecting Fingal County Councils ambitious objectives. Other focal points encompass Energy and Buildings, Transport, Flood Resilience, Nature-Based Solutions, Circular Economy, and Resource Management.

This Plan underscores Fingal County Councils steadfast commitment to climate action by proposing innovative adaptation and mitigation measures. It revolves around four key targets:

- 50% improvement in the Council’s energy efficiency by 2030.
- 51% reduction in the Council’s greenhouse gas emissions by 2030.
- To make Dublin a climate resilient region, by reducing the impacts of future climate change-related events; and
- To actively engage and inform our communities on climate action.

12.6 Other Relevant Plans, Studies and Measures

12.6.1 Dublin Region Air Quality Plan, 2021

The Dublin Region Air Quality Plan sets out a series of measures which are aimed at improving air quality. These measures will also help to reduce traffic noise by reducing the volume of traffic in the County. The measures include active travel, parking restrictions and remote working.

12.7 Summary of the Results of the Noise Mapping Process

The Round 4 noise exposure statistics and harmful effects assessment are presented below for the Fingal County Council administrative area. The statistics at Agglomeration level are presented in **Section 5.2**.

Exposure statistics are assessed independently for each noise source, and are summarised for the noise metrics across the noise exposure bands defined in the Regulations. The population exposure statistics have been rounded to the nearest 100 as required by the Regulations.

12.7.1 Exposure Statistics

Table 60: FCC: Number of People in Dwellings – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	60,200	4,800	200
60-64	35,500	2,900	0
65-69	15,700	1,900	0
70-74	3,800	1,600	0
>=75	700	300	0

*exposure statistics rounded to the nearest 100.

Table 61: FCC: Percentage of Total Population Exposed to the Noise Source – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	20 %	2 %	0 %
60-64	12 %	1 %	0 %
65-69	5 %	1 %	0 %
70-74	1 %	1 %	0 %
>=75	0 %	0 %	0 %

Table 62: FCC: Number of School Buildings (& Hospital Buildings) – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	46 (00)	02 (00)	00 (00)
60-64	33 (01)	02 (00)	00 (00)
65-69	20 (01)	02 (00)	00 (00)
70-74	3 (01)	02 (00)	00 (00)
>=75	1 (00)	00 (00)	00 (00)

Table 63: FCC: Number of People in Dwellings – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	38,800	3,100	100
55-59	16,900	1,900	0
60-64	4,800	1,000	0
65-69	1,000	800	0
>=70	100	0	0

*exposure statistics rounded to the nearest 100.

Table 64: FCC: Percentage of Total Population Exposed to the Noise Source– L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	13 %	1 %	0 %
55-59	6 %	1 %	0 %
60-64	2 %	0 %	0 %
65-69	0 %	0 %	0 %
>=70	0 %	0 %	0 %

Table 65: FCC: Number of School Buildings (& Hospital Buildings) – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	37 (01)	02 (00)	00 (00)
55-59	19 (00)	01 (00)	00 (00)
60-64	4 (02)	02 (00)	00 (00)
65-69	1 (00)	01 (00)	00 (00)
>=70	0 (00)	00 (00)	00 (00)

Table 66: FCC: Total number of Noise Sensitive Buildings

Noise Sensitive Building	Number of Noise Sensitive Buildings
Schools	176
Hospitals	6

12.7.2 Harmful Effects

The exposure of harmful effects is assessed independently for each source. Where the same people are simultaneously exposed to different noise sources, the harmful effects may not, in general, be cumulated, however can be compared to identify proportional significance.

Table 67 presents the calculated harmful effects in the case of road traffic noise for the Agglomeration, and **Table 69** presents the calculated harmful effects from railway noise.

As shown in **Table 68** and **Table 70** the statistical proportion of the total population with harmful effects associated with road traffic and rail noise in the Fingal County Council administrative area is broadly consistent with that across the Agglomeration, with some lower percentages of high sleep disturbance associated with rail noise effects.

Table 67: FCC: Breakdown of Harmful Effects in the Case of Road Noise – Total Number of People – All Sources

Harmful Effect	Dublin Agglomeration	Fingal County Council
Ischaemic Heart Disease	101.22	20.99
Highly Annoyed	108,380.07	22,433.25
Highly Sleep Disturbed	28,995.87	5,974.78

Total Populations

Dublin Agglomeration: 1,355,967.68,

APA Proportions within Agglomeration: Dublin City Council: 501,896.48, Fingal County Council: 297,128.60, South Dublin County Council: 278,984.11, Dún Laoghaire County Council: 210,520.78, Kildare County Council: 37,447.86, Wicklow County Council: 29,989.86

Table 68: FCC: Breakdown of Harmful Effects in the Case of Road Noise – % of Population – All Sources

Harmful Effect	Dublin Agglomeration	Fingal County Council
Ischaemic Heart Disease	0.01%	0.01%
Highly Annoyed	7.99%	7.55%
Highly Sleep Disturbed	2.14%	2.01%

Table 69: FCC: Breakdown of Harmful Effects in the Case of Railway Noise – Total Number of People – All Sources

Harmful Effect	Dublin Agglomeration	Fingal County Council
Highly Annoyed	21,051.97	2,700.04
Highly Sleep Disturbed	10,986.94	1,239.47

Table 70: FCC: Breakdown of Harmful Effects in the Case of Railway Noise – % of Population – All Sources

Harmful Effect	Dublin Agglomeration	Fingal County Council
Highly Annoyed	1.55%	0.91%
Highly Sleep Disturbed	0.81%	0.42%

12.8 Noise Management Activities (Industry)

The industry sites included within the Agglomeration strategic noise maps are limited to Industrial Emission (IE) sites as regulated by the EPA under the IPPC Directive 96/61 EC, and any ports. Strategic noise maps of the industrial noise emissions at agglomeration level are shown in **Figure 7** and **Figure 8** listed in **Section 5.2**. Maps for Fingal County Council administrative area are provided in **Figure 58** to **Figure 61** in **Section 12.12**.

The data upon which the industry noise emission models have been developed includes default values, therefore model outputs are a strategic representation of industry noise levels, rather than being site specific.

The Noise Action Plan does not include any Priority Important Areas for industry mainly due to the lower exposure statistics reported. Notwithstanding, there will be a need for ongoing management of noise issues from industrial sites through noise complaints, development and licence application. In this regard the APA may use the maps to support this process and should continue to consult and collaborate with the EPA who have overall responsibility for site specific noise management of waste, Industrial Emission (IE) and Integrated Pollution Control (IPC) licensed sites.

12.9 Priority Important Areas

The methodology for identifying the Most Important Areas and the shortlist of Priority Important Areas, which will be subject to noise management activities, is set out in **Section 8.4**. The Priority Important Areas for Fingal County Council are listed in **Table 71** to **Table 72**, which summarise a range of statistics and information for each area, as follows:

Table 71 presents the statistics for each Priority Important Area including population, details of the harmful effects and numbers of people exposed to noise levels above the Important Areas noise limit value.

Table 72 repeats the key statistics but presents the population and harmful effects statistics as a percentage of the total population of the Fingal County Council administrative area.

Table 73 presents the number of people exposed to road traffic noise (L_{den} and L_{night}) in each road Priority Important Area broken down by noise exposure bands set out in the Regulations.

With reference to the noise management frameworks described in **Section 8.4**, Fingal County Council will, subject to resources and funding, undertake an assessment of the noise mitigation measure options relating to the Priority Important Area within the life cycle of the Noise Action Plan. This will include discussions across relevant sections within Fingal County Council, and Transport Infrastructure Ireland.

Figures presenting the Most Important Areas and Priority Important Areas are included in **Section 12.12**.

- **Figure 62** shows the full set of Most Important Areas for Fingal County Council and from which the shortlist of Priority Important Areas have been selected.
- **Figure 63** presents an overview of all the shortlisted Priority Important Areas in Fingal County Council.
- **Figure 64 to Figure 74** present a more detailed plan of each Priority Important Area.

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Table 71: FCC Priority Important Area (PIA) Summary (1)

PIA	Source	MIA Criterion (People HA per 100m ²)	Area (m ²)	Total Population*	Harmful Effects Statistics**			Number of People Above Important Areas Noise Limit Value***			
					HA	HSD	IHD	Road 53dB Lden	Road 45dB Lnight	Railway 54dB Lden	Railway 44dB Lnight
FCC_1	ROAD	15	328,200	5,205.68	834.17	258.92	0.88	4,511.44	4,759.29	-	-
FCC_2	ROAD	15	411,900	4,671.87	938.15	313.02	1.04	4,055.52	4,647.47	-	-
FCC_3	ROAD	15	113,200	1,953.83	302.92	76.79	0.31	1,648.64	1,405.51	-	-
FCC_4	ROAD	15	177,500	1,848.82	378.25	127.97	0.43	1,641.31	1,848.83	-	-
FCC_5	ROAD	15	88,400	1,540.42	223.56	54.53	0.22	1,173.56	1,255.22	-	-
FCC_6	ROAD	15	64,800	878.08	147.31	44.6	0.15	810.4	846.57	-	-
FCC_7	ROAD	15	89,700	1,252.03	212.72	69.75	0.22	1,117.39	1,247.37	-	-
FCC_8	ROAD	15	68,900	760.93	134.72	43.28	0.15	654.61	760.93	-	-
FCC_9	ROAD	15	46,700	1,318.75	145.07	35.16	0.11	1,065.69	923.91	-	-
FCC_10	ROAD	15	50,600	712.48	115.88	36.46	0.11	678.48	688.81	-	-
FCC_11	OTHER	FCC#	115,825	34.28	7.48	2.55	0.01	34.28	34.28	-	-

* Total population inside all Most Important Areas (MIAs) associated with the Priority Important Area (PIA)

** The harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building

*** The total population that are exposed to noise levels above the Important Areas noise limit value (see Section 6.4) within the MIA(s) associated with the PIA

PIA is identified by a road source, however noted as 'Other' as selected by Fingal County Council based on local knowledge.

Table 72: FCC: Priority Important Area (PIA) Summary (2)

PIA	Source	MIA			Harmful Effects Statistics**				Percentage Harmful Effects****		
		Criterion (People HA per 100m ²)	Area (m ²)	Total Population*	HA	HSD	IHD	Percentage Population***	HA	HSD	IHD
FCC_1	ROAD	15	328,200	5,205.68	834.17	258.92	0.88	1.8%	3.7%	4.3%	4.2%
FCC_2	ROAD	15	411,900	4,671.87	938.15	313.02	1.04	1.6%	4.2%	5.2%	5.0%
FCC_3	ROAD	15	113,200	1,953.83	302.92	76.79	0.31	0.7%	1.4%	1.3%	1.5%
FCC_4	ROAD	15	177,500	1,848.82	378.25	127.97	0.43	0.6%	1.7%	2.1%	2.0%
FCC_5	ROAD	15	88,400	1,540.42	223.56	54.53	0.22	0.5%	1.0%	0.9%	1.0%
FCC_6	ROAD	15	64,800	878.08	147.31	44.6	0.15	0.3%	0.7%	0.7%	0.7%
FCC_7	ROAD	15	89,700	1,252.03	212.72	69.75	0.22	0.4%	0.9%	1.2%	1.0%
FCC_8	ROAD	15	68,900	760.93	134.72	43.28	0.15	0.3%	0.6%	0.7%	0.7%
FCC_9	ROAD	15	46,700	1,318.75	145.07	35.16	0.11	0.4%	0.6%	0.6%	0.5%
FCC_10	ROAD	15	50,600	712.48	115.88	36.46	0.11	0.2%	0.5%	0.6%	0.5%
FCC_11	OTHER	Other	115,825	34.28	7.48	2.55	0.01	<0.1%	<0.1%	<0.1%	<0.1%

* Total population inside all Most Important Areas (MIAs) associated with the Priority Important Area (PIA)

** The harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building

*** Percentage of the total population inside all MIAs associated with the PIA from the total population in the APA administrative area

**** Percentage of the total harmful effect inside all MIAs associated with the PIA from the harmful effects of the APA administrative area

Table 73: FCC: Priority Important Area (PIA) Summary (Road Noise – All Sources)

PIA	Source	Number of People in Noise Exposure Band (dB L _{den})					Number of People in Noise Exposure Band (dB L _{night})				
		55-59	60-64	65-69	70-74	>=75	50-54	55-59	60-64	65-69	>=70
FCC_1	ROAD	1,455.47	2,010.31	866.56	55.32	56.35	2,224.69	1,115.88	65.21	62.39	23.49
FCC_2	ROAD	1,164.26	1,963.47	544.17	614.93	256.09	2,117.74	785.95	537.92	365.01	62.67
FCC_3	ROAD	440.97	611.53	380.74	67.94	0	538.84	309.3	111.56	0	0
FCC_4	ROAD	311.09	849.51	505	106.77	73.83	820.58	616.05	230.8	88.93	5.65
FCC_5	ROAD	332.77	911.57	19.12	0	0	681.1	4.78	0	0	0
FCC_6	ROAD	313.84	222.51	257.21	0	0	233.94	265.96	12.38	0	0
FCC_7	ROAD	440.46	542.58	118.25	78.21	0	691.36	127.38	142.85	3.51	0
FCC_8	ROAD	218.12	406.55	130.31	6.16	0	533.34	172.12	33.88	0	0
FCC_9	ROAD	761.08	130.21	0	0	0	118.47	0	0	0	0
FCC_10	ROAD	356.89	151.89	46.45	76.33	0	198.73	74.3	73.25	11.21	0
FCC_11	Other	0	17.14	14.29	2.86	0	5.71	20.00	8.57	0	0

12.10 Areas to be Preserved for Environmental Noise Quality

The approach and criteria used to identify Candidate Quiet Areas for the Agglomeration has been explained in **Section 7.3**, and the Candidate Quiet Areas are presented in **Section 7.3.2**. Those located within the Fingal County Council administrative area are summarised in **Table 74** and shown in **Figure 75** presented in **Section 12.12**

Investigations into whether there is an appropriate benefit to delimiting the Candidate Quiet Area as a Quiet Area may include consideration of sound pressure measurements, visitor experience, expert assessment, and other local community evaluation criteria (see **Section 7.4**).

Given the resources available it may not be possible to investigate all Candidate Quiet Areas summarised in **Table 74** during the implementation of the Noise Action Plan. Therefore, Fingal County Council will aim to prioritise a shortlist of areas for initial focus. This selection process shall consider aspects such as the median noise level, population within 1,000m, size of the area and relevant local factors such as amenity/community value.

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Table 74: FCC: Summary of Candidate Quiet Areas (CQAs)

CQA ID	Name	Electoral Area	Easting	Northing	Area (m ²)	Pop. Within 1,000m	Noise Level, LAeq, 16hr, dB	Area of CQA below 45 dB LAeq, 16hr (m ²)	CQA Criteria
FCC_116		Balbriggan LEA-5	719649	763785	5,569	14,608	49	32	A
FCC_53	The Kybe	Balbriggan LEA-5	725180	760179	68,110	7,737	45	39,052	A
FCC_57		Balbriggan LEA-5	725191	759941	71,083	7,329	47	15,750	A
FCC_58		Balbriggan LEA-5	719622	764064	15,862	15,989	47	188	A
FCC_70		Balbriggan LEA-5	725631	761136	41,746	2,140	39	38,846	A
FCC_84		Balbriggan LEA-5	721765	761268	785,723	1,589	47	348,877	A
FCC_10		Howth-Malahide LEA-7	723852	745393	11,380	6,839	47	3,836	A
FCC_101		Howth-Malahide LEA-7	721390	742824	30,301	816	52	0	R
FCC_105		Howth-Malahide LEA-7	729078	738508	5,189	3,897	42	4,546	A
FCC_106		Howth-Malahide LEA-7	723983	744126	8,117	6,813	42	8,117	A
FCC_114		Howth-Malahide LEA-7	728483	738929	5,862	3,267	40	5,603	A
FCC_115		Howth-Malahide LEA-7	720991	746050	23,671	9,721	48	6	A
FCC_122		Howth-Malahide LEA-7	724313	744075	18,796	6,816	42	18,417	A
FCC_123	Racecourse Park	Howth-Malahide LEA-7	724051	740470	99,042	10,972	45	40,351	A
FCC_15		Howth-Malahide LEA-7	723914	743587	5,549	7,354	44	5,428	A
FCC_25		Howth-Malahide LEA-7	723510	745357	11,099	7,286	41	10,661	A

CQA ID	Name	Electoral Area	Easting	Northing	Area (m ²)	Pop. Within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
FCC_27		Howth-Malahide LEA-7	723869	739375	10,292	11,336	46	547	A
FCC_31	Chalfont Park	Howth-Malahide LEA-7	721949	746165	5,019	5,828	48	168	A
FCC_38		Howth-Malahide LEA-7	723695	744502	5,002	8,304	49	79	A
FCC_39		Howth-Malahide LEA-7	724191	742862	10,516	3,974	49	0	A
FCC_50		Howth-Malahide LEA-7	729104	737144	12,451	1,083	46	4,793	A
FCC_55	Gainsborough Green	Howth-Malahide LEA-7	720680	745678	27,091	12,041	48	4	A
FCC_56		Howth-Malahide LEA-7	724391	744438	17,553	6,685	48	2,543	A
FCC_72		Howth-Malahide LEA-7	721770	746512	37,397	7,184	47	3,499	A
FCC_8		Howth-Malahide LEA-7	721804	745399	1,059,084	12,620	49	19,376	A
FCC_87	Robswall Park	Howth-Malahide LEA-7	724234	745109	352,728	8,873	42	270,217	A
FCC_93		Howth-Malahide LEA-7	723906	743404	15,212	6,147	46	0	A
FCC_99	Sutton Park	Howth-Malahide LEA-7	724582	739431	27,130	8,909	46	9,268	A
FCC_111		Ongar LEA-5	703873	738711	23,288	10,280	48	93	A
FCC_76		Ongar LEA-5	704171	739526	41,454	22,045	48	788	A
FCC_109	Newbridge House and Demesne	Rush-Lusk LEA-5	721543	749897	1,415,423	5,390	51	5,938	#

CQA ID	Name	Electoral Area	Easting	Northing	Area (m ²)	Pop. Within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
FCC_112	Rogerstown Park	Rush-Lusk LEA-5	722362	752281	457,137	743	47	159,623	A
FCC_12	Lusk Recreational Hub	Rush-Lusk LEA-5	721942	755012	85,895	6,283	48	291	A
FCC_34	Turveyland Adventure Centre	Rush-Lusk LEA-5	721448	750732	586,833	3,737	50	5,431	#
FCC_79		Rush-Lusk LEA-5	722483	750401	11,307	7,021	49	0	A
FCC_82	Taylors Point Field	Rush-Lusk LEA-5	727267	753771	9,685	2,940	41	7,080	A
FCC_85	PlaneTree Park	Rush-Lusk LEA-5	723281	754759	32,622	109	53	0	R
FCC_125		Swords LEA-7	717179	745296	12,250	10,360	49	2	A
FCC_14	Ward River Valley Park	Swords LEA-7	717027	746635	588,638	25,760	48	139,295	A
FCC_35		Swords LEA-7	716526	747122	6,050	11,584	49	0	A
FCC_40		Swords LEA-7	716153	747077	11,524	8,766	47	0	A
FCC_95	Broadmeadow Linear Park	Swords LEA-7	717253	748660	44,268	9,702	47	0	A

CQA Criteria: A – Absolute CQA, R – Relative CQA, * - Existing designated Quiet Area, # - APA requested CQA

12.11 Noise Action Plan Implementation

This Noise Action Plan is supported by a four-year programme for implementation (2024-2028), with progress reported to the EPA on an annual basis.

The Noise Action Plan is founded on a series of overarching noise policy principles detailed in the **Noise Policy Statement**, which is grounded in **Responsible Aims**.

Throughout the implementation of the Noise Action Plan, Fingal County Council shall endeavour to further develop key measures and actions, which reflect these principles.

Implementation of these measures and actions is subject to resources, appropriate funding being made available and collaboration with relevant key stakeholders and infrastructure owners.

12.12 Figures

Figures supporting the strategic noise mapping results for Fingal County Council are set out in the following section. The figures include a graphical representation of:

- Industry noise contours – carried out to facilitate engagement between Fingal County Council and the EPA regarding the evaluation of issues related to industry regulation;
- the Most Important Areas – locations with the greatest concentration of harmful effects;
- the Priority Important Areas – Most Important Areas, or groups of Most Important Areas which will be addressed during the implementation of the Noise Action Plan; and
- the Candidate Quiet Areas identified as candidates to be preserved for their environmental noise quality, and those identified for investigation.

Figure 58: FCC: Industry – Noise Exposures Exceeding 55 dB L_{den}

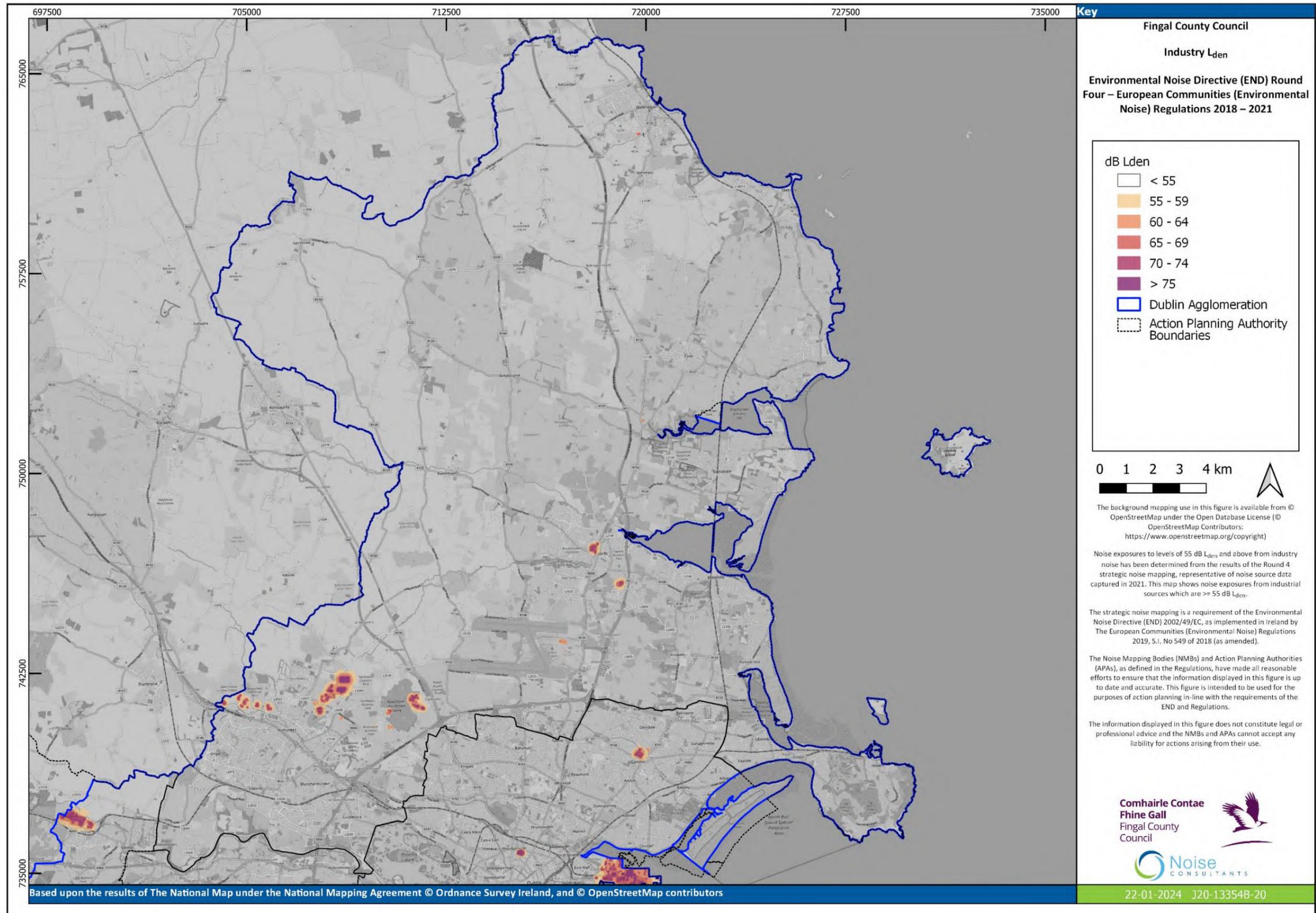


Figure 59: FCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 1)

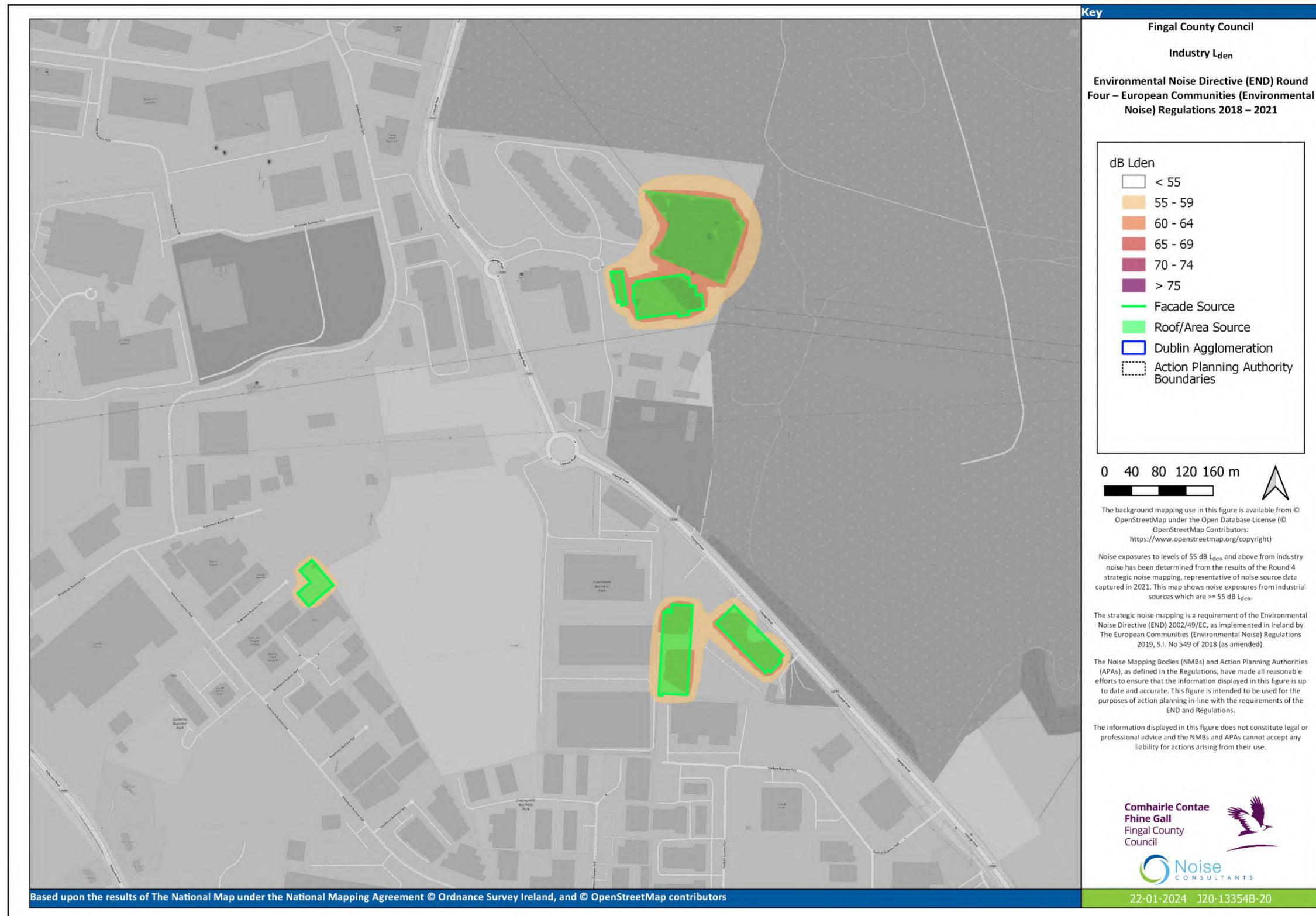


Figure 60: FCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 2)

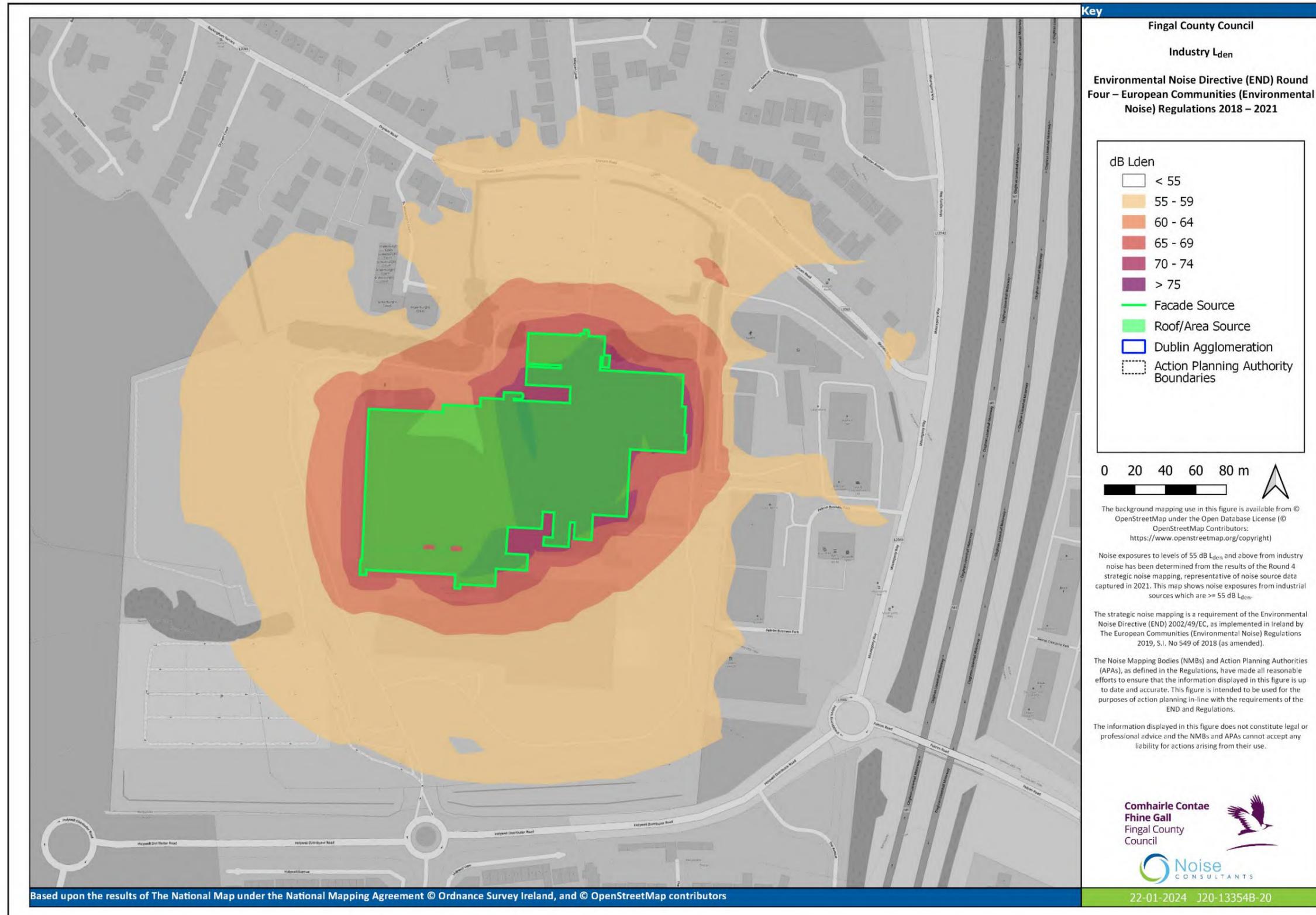


Figure 61: FCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 3)

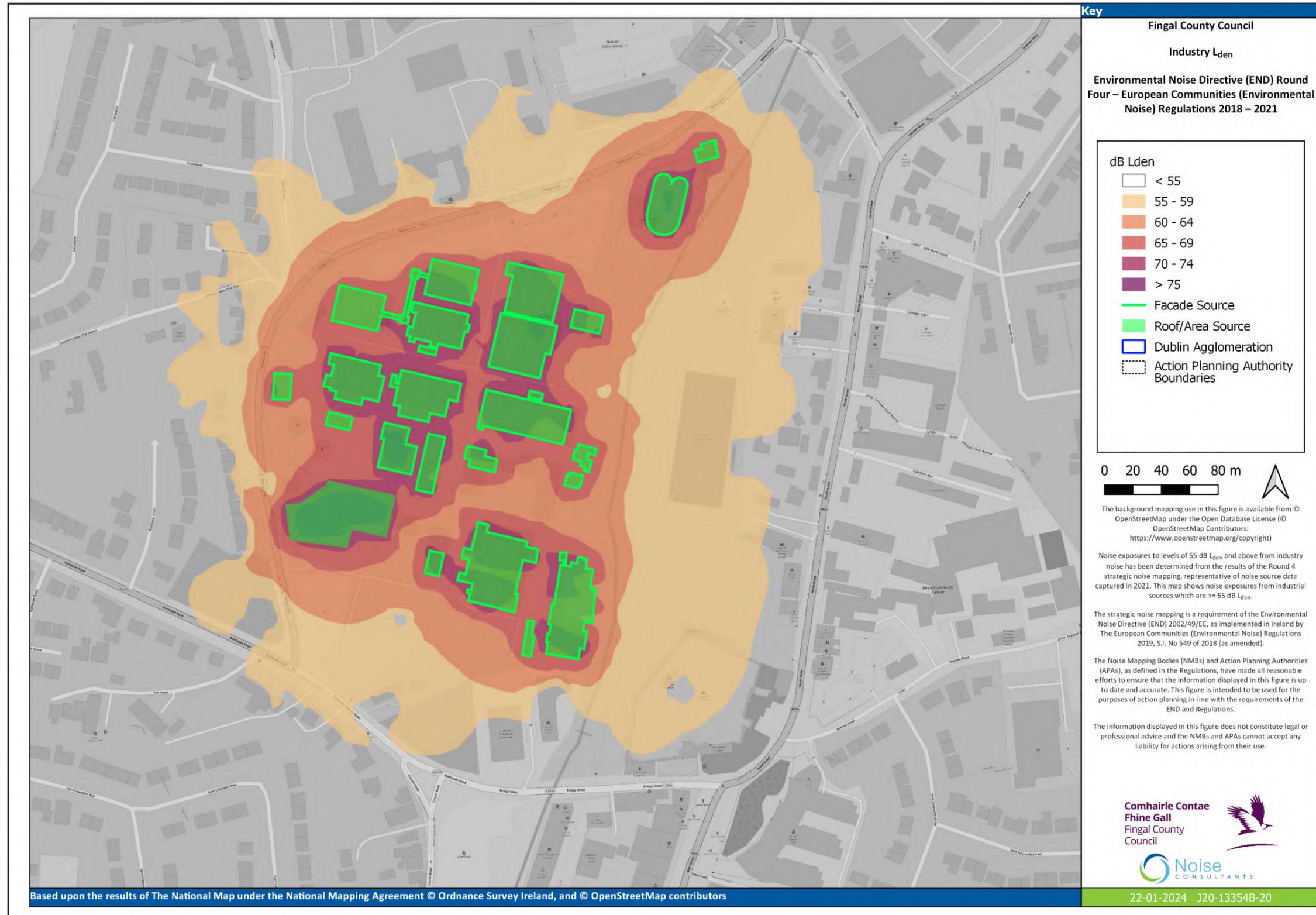


Figure 62: FCC: Most Important Areas (MIAs)

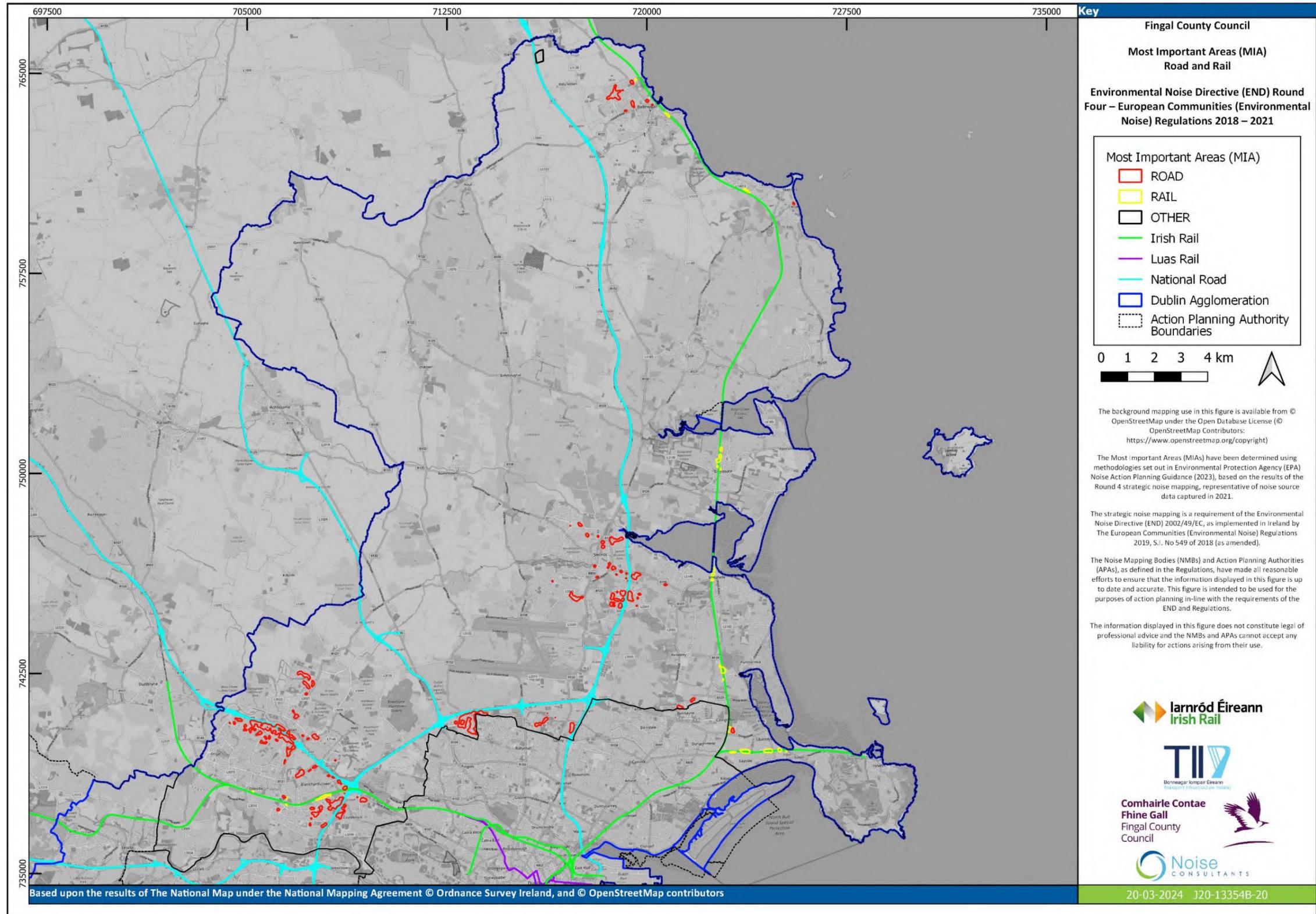


Figure 63: FCC: Priority Important Areas (PIAs)

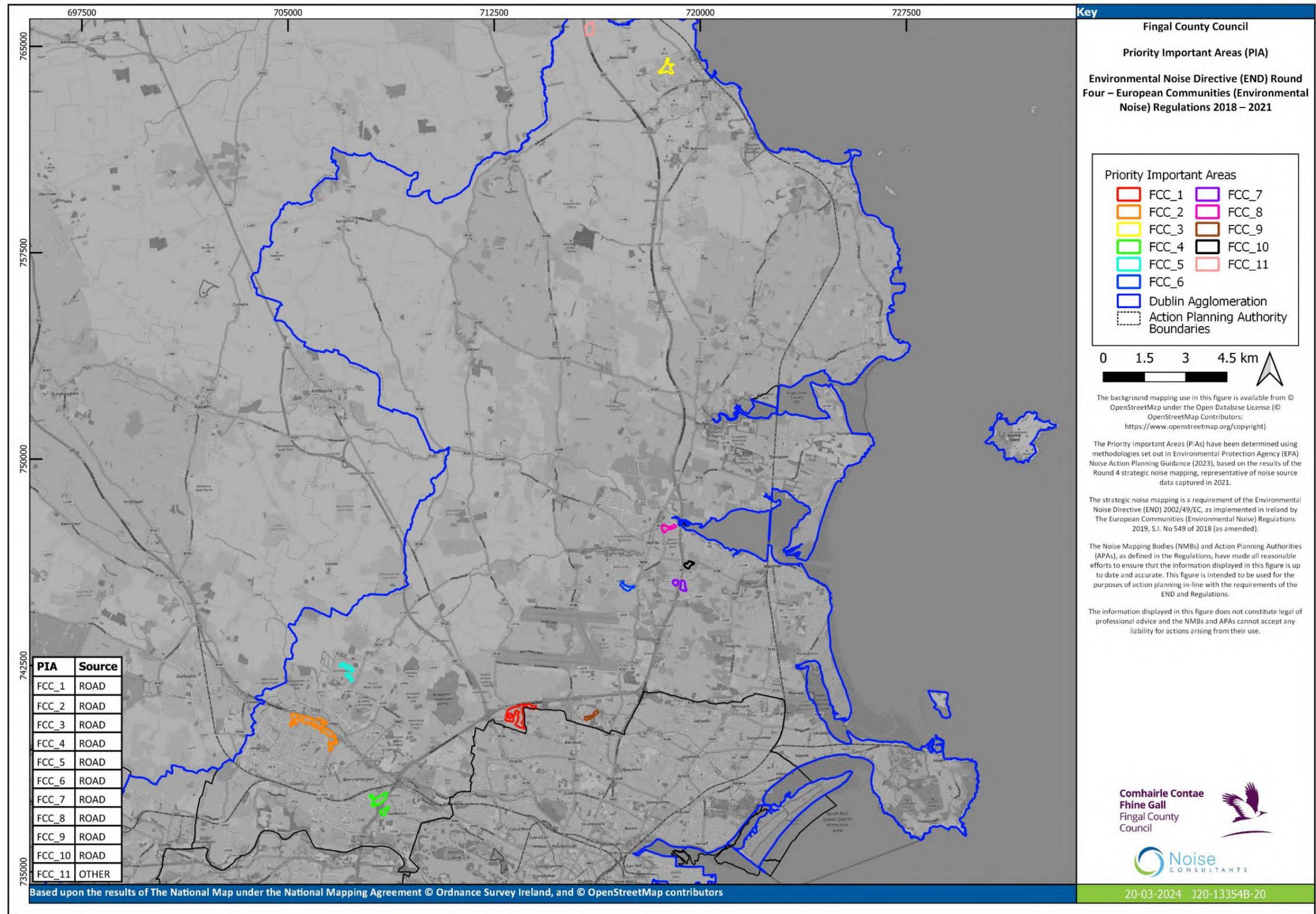


Figure 64: FCC: Priority Important Area 1 (PIA 1)

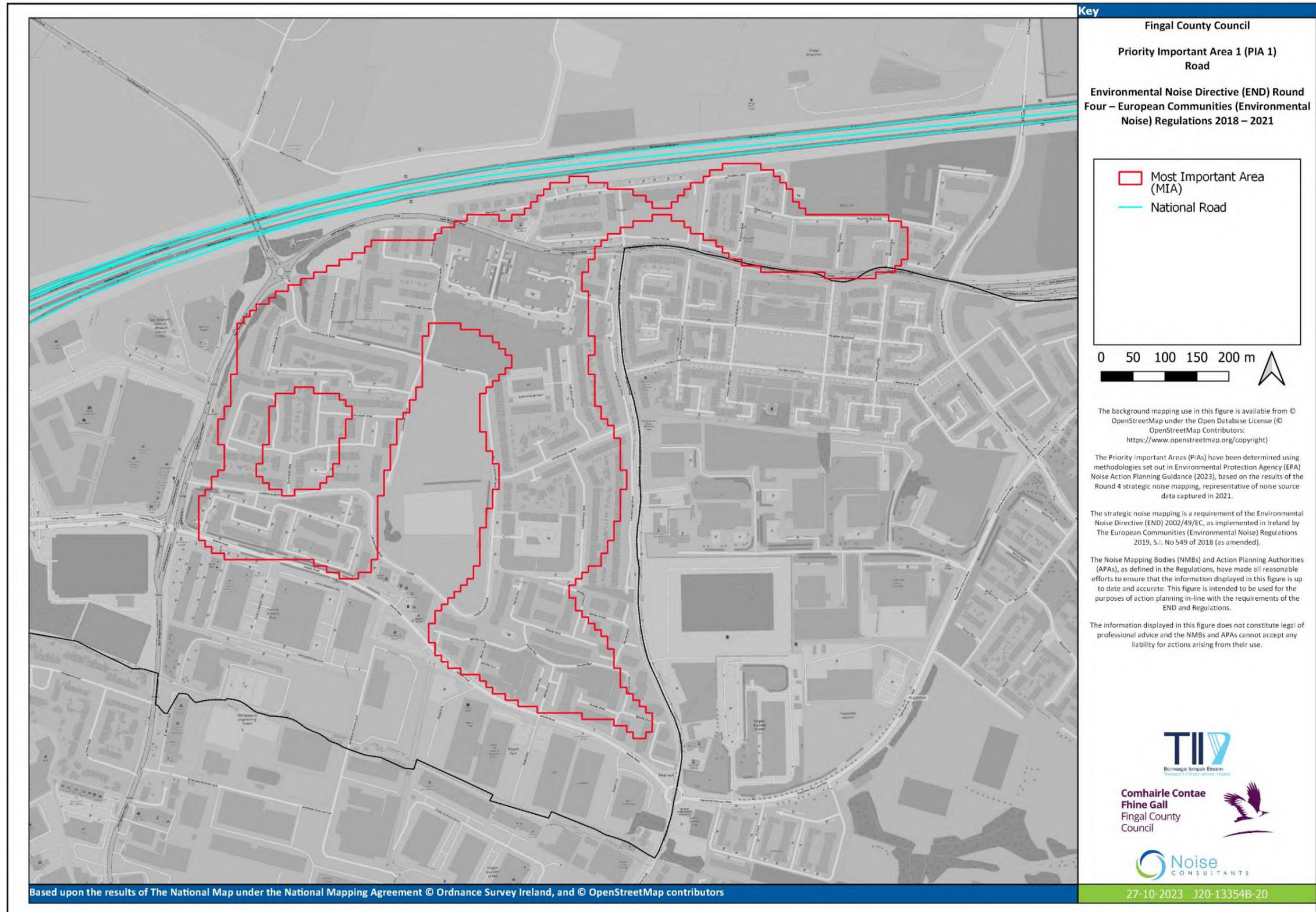


Figure 65: FCC: Priority Important Area 2 (PIA 2)

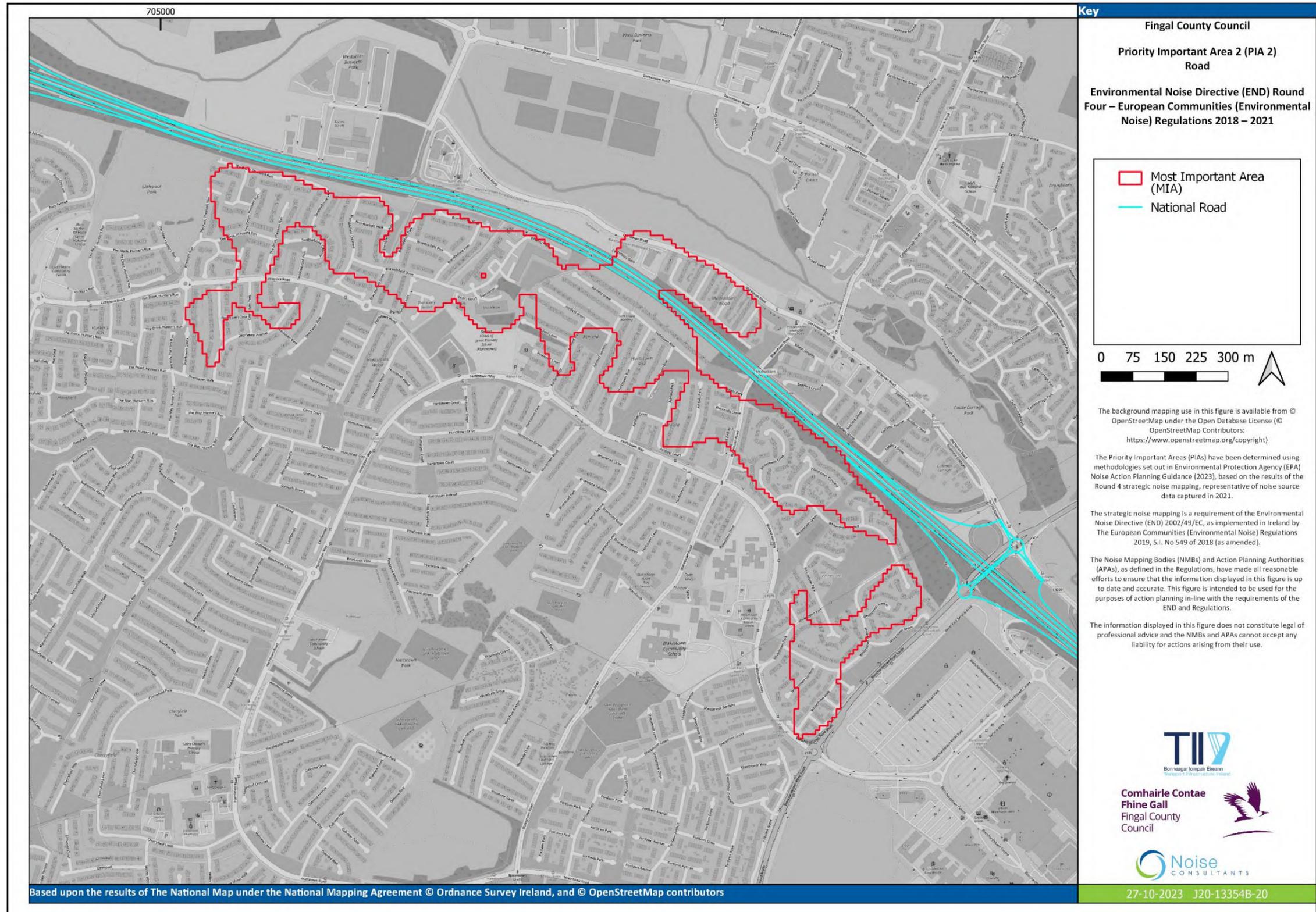
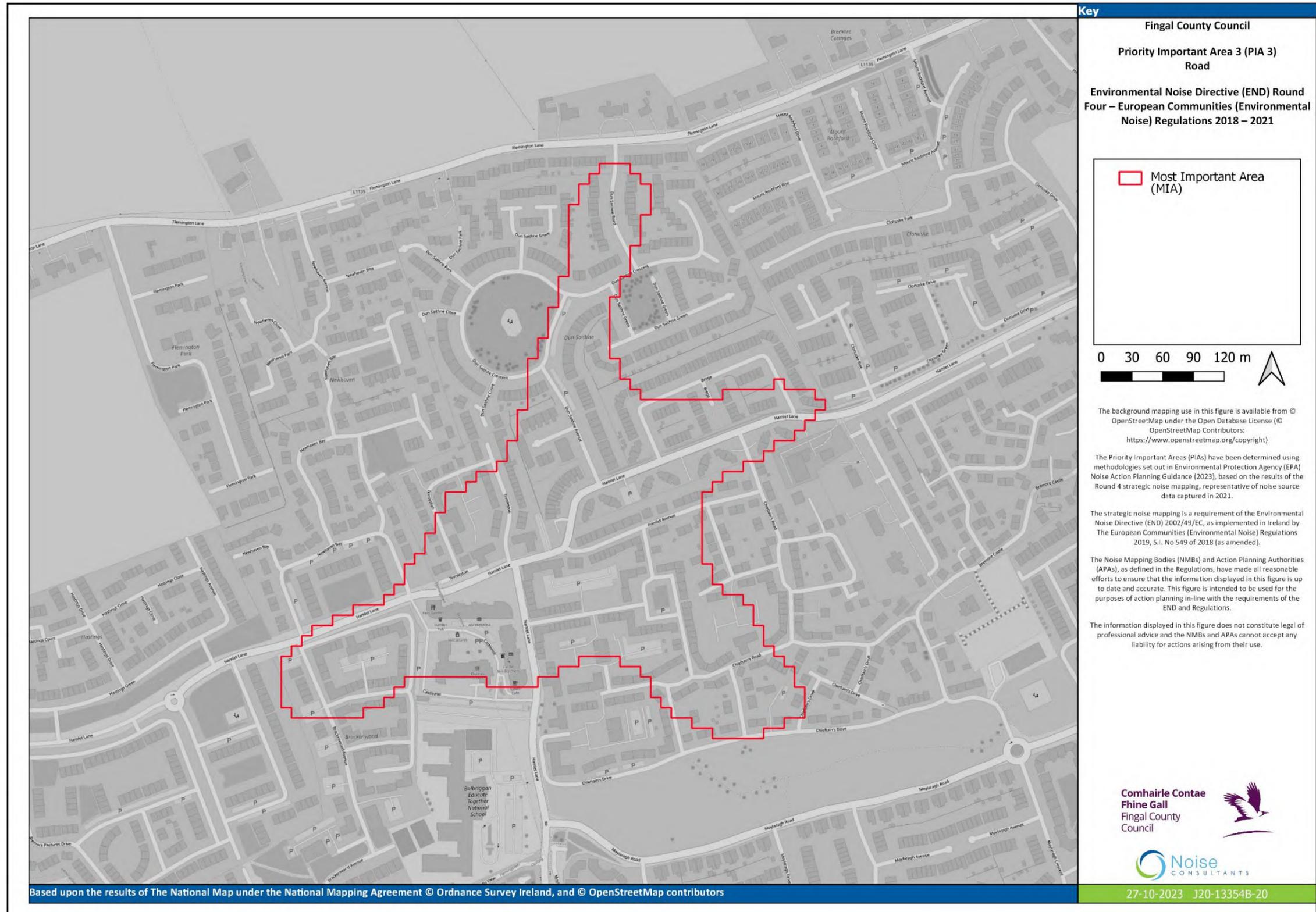


Figure 66: FCC: Priority Important Area 3 (PIA 3)



Based upon the results of The National Map under the National Mapping Agreement © Ordnance Survey Ireland, and © OpenStreetMap contributors

Figure 67: FCC: Priority Important Area 4 (PIA 4)

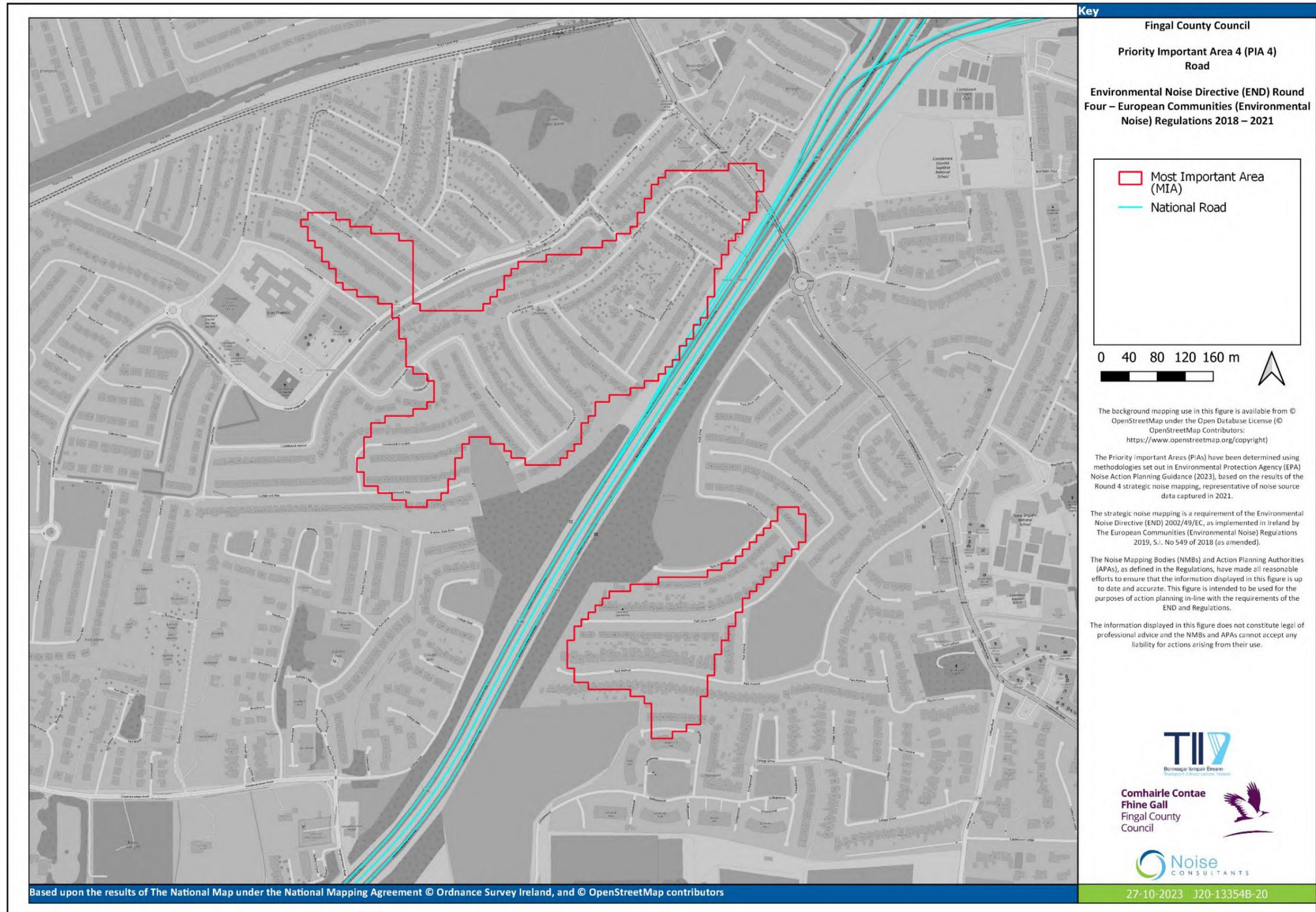


Figure 68: FCC: Priority Important Area 5 (PIA 5)

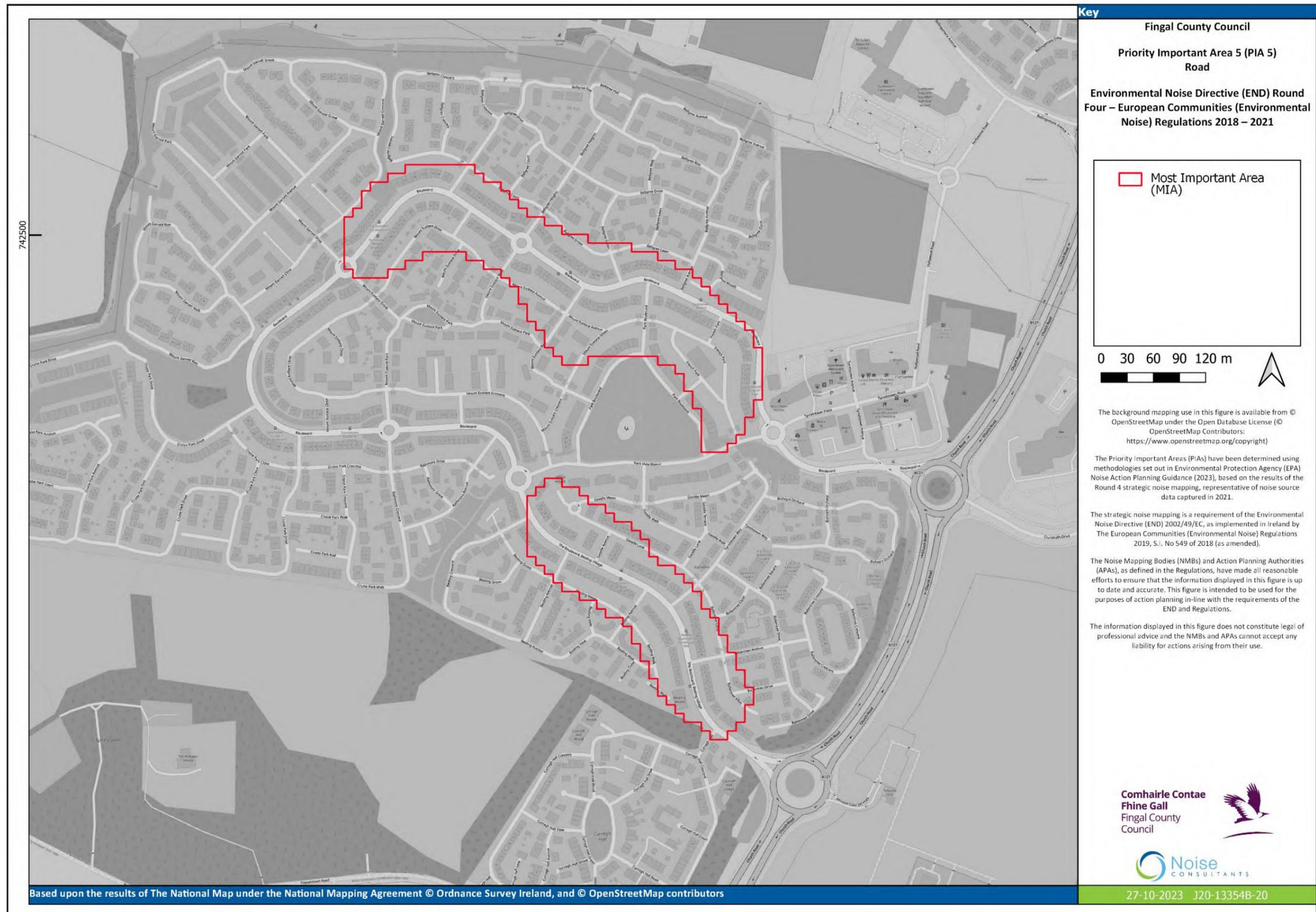


Figure 69: FCC: Priority Important Area 6 (PIA 6)

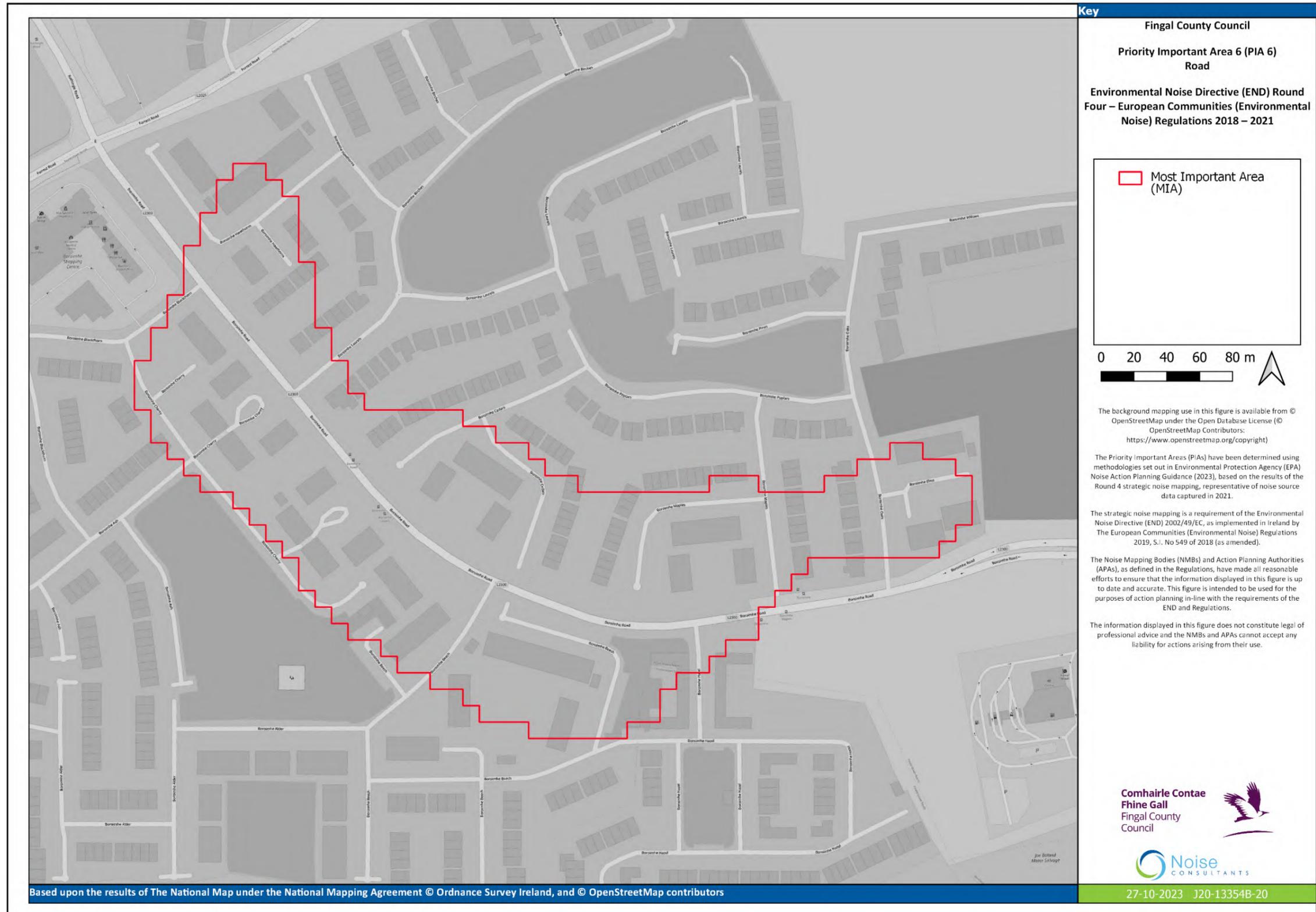


Figure 70: FCC: Priority Important Area 7 (PIA 7)

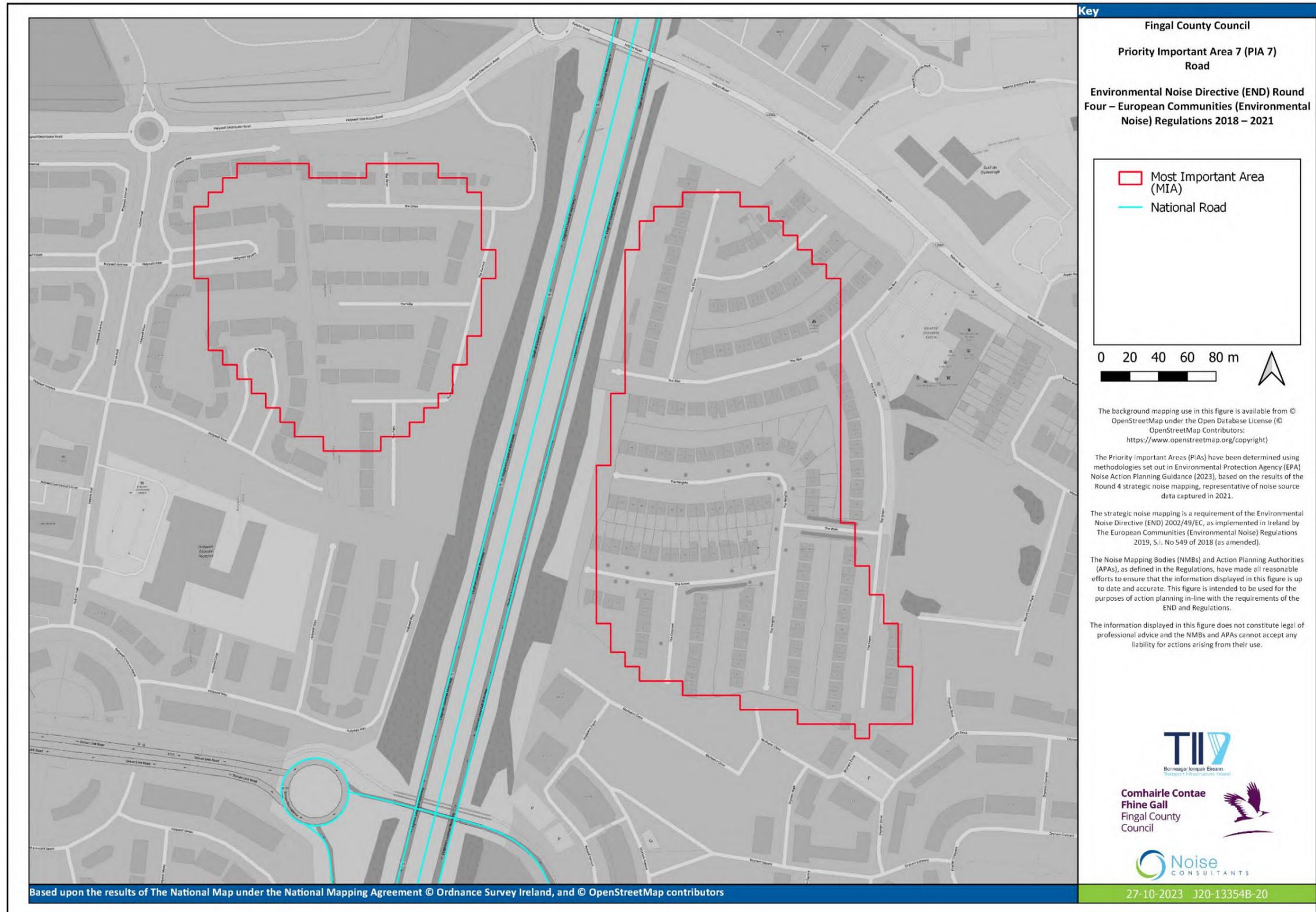


Figure 71: FCC: Priority Important Area 8 (PIA 8)

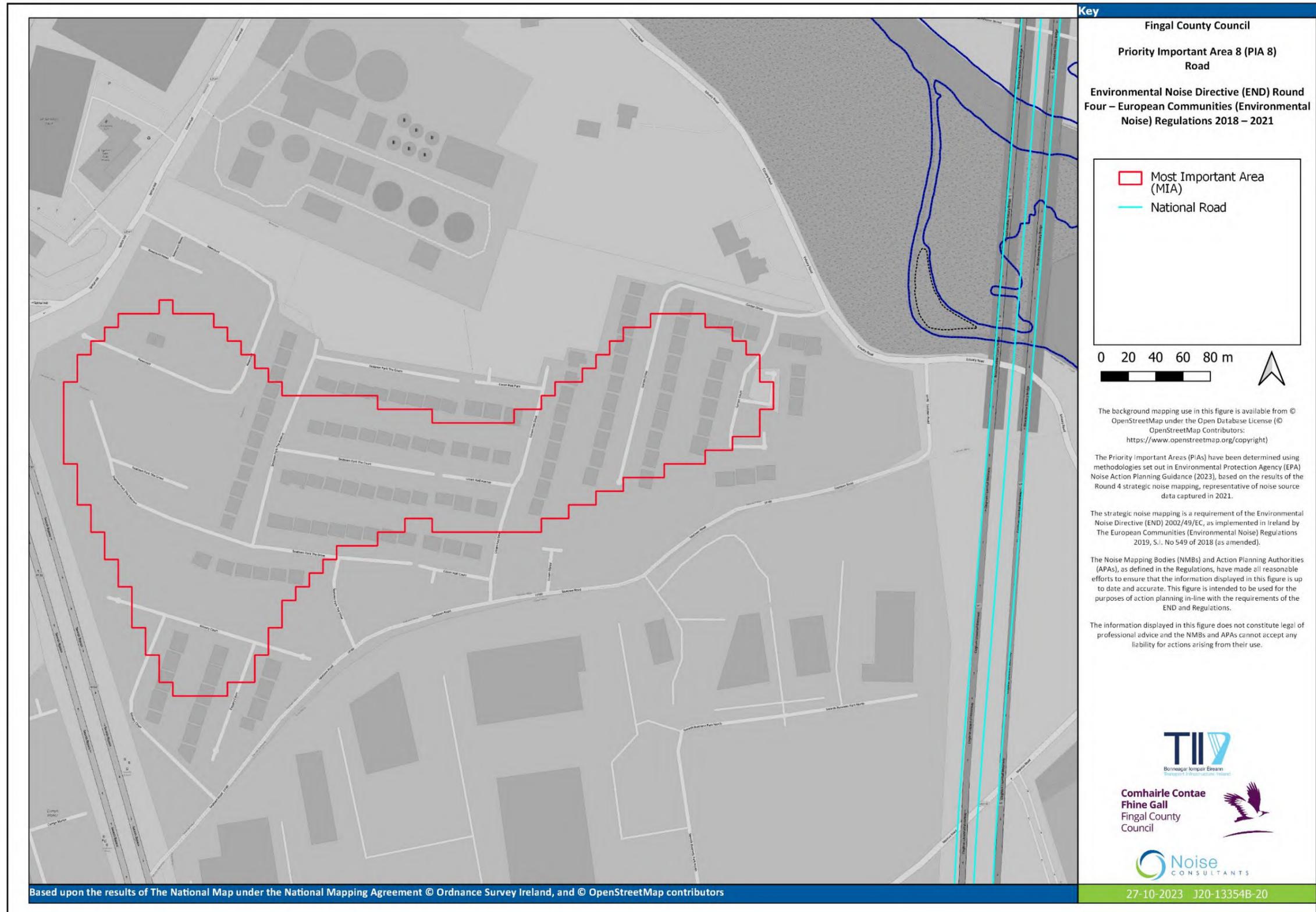


Figure 72: FCC: Priority Important Area 9 (PIA 9)

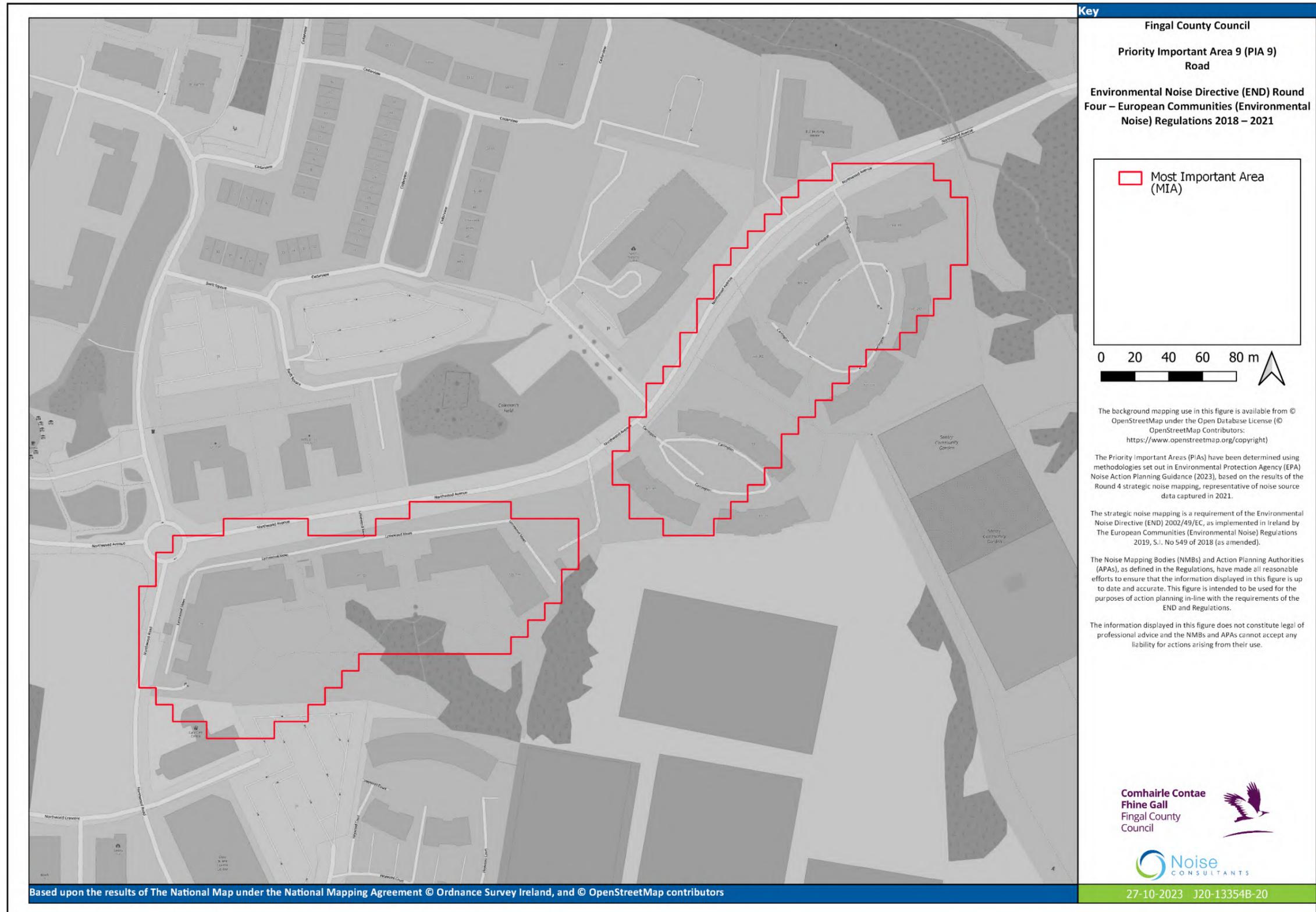


Figure 73: FCC: Priority Important Area 10 (PIA 10)

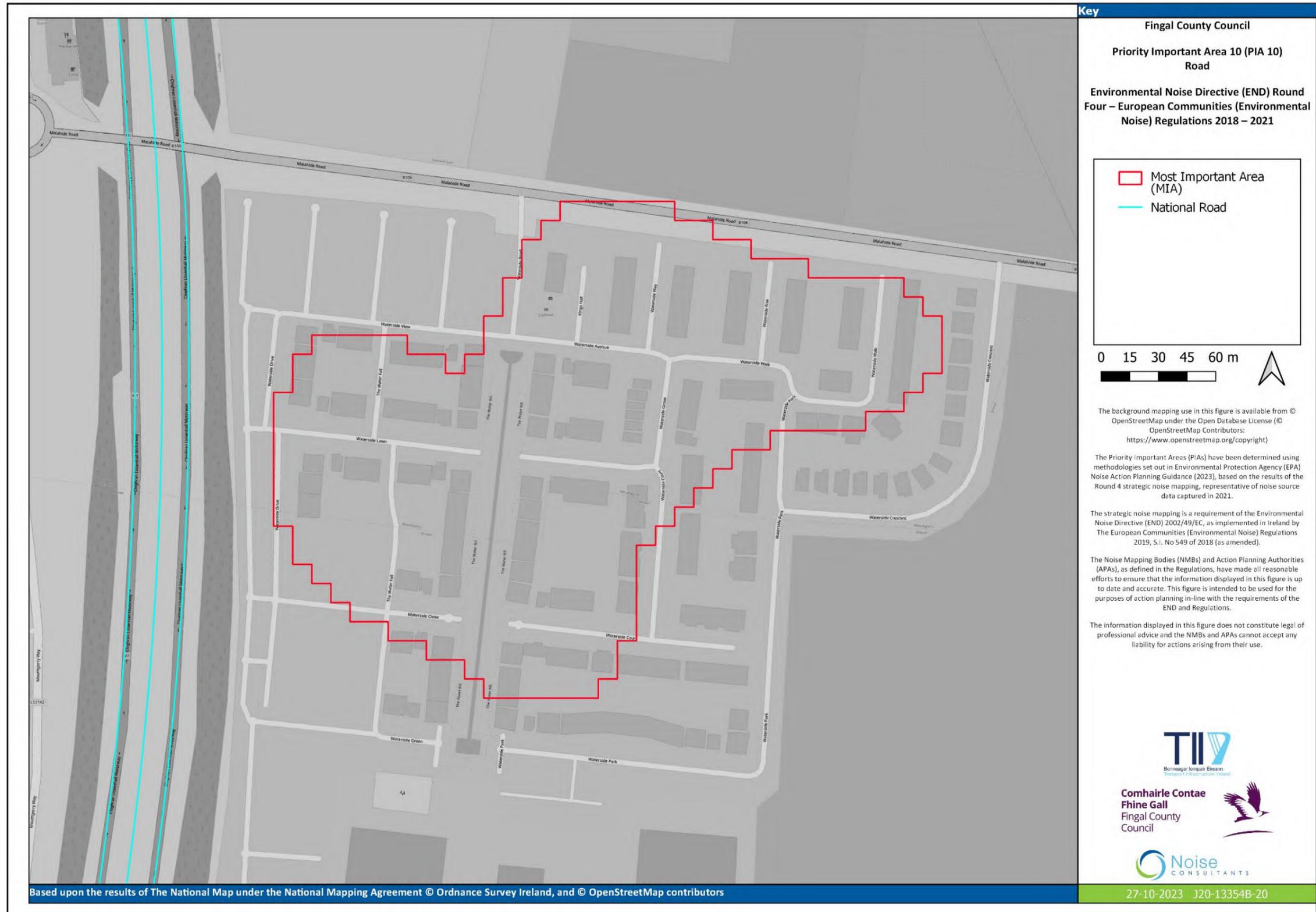


Figure 74: FCC: Priority Important Area 11 (PIA 11)

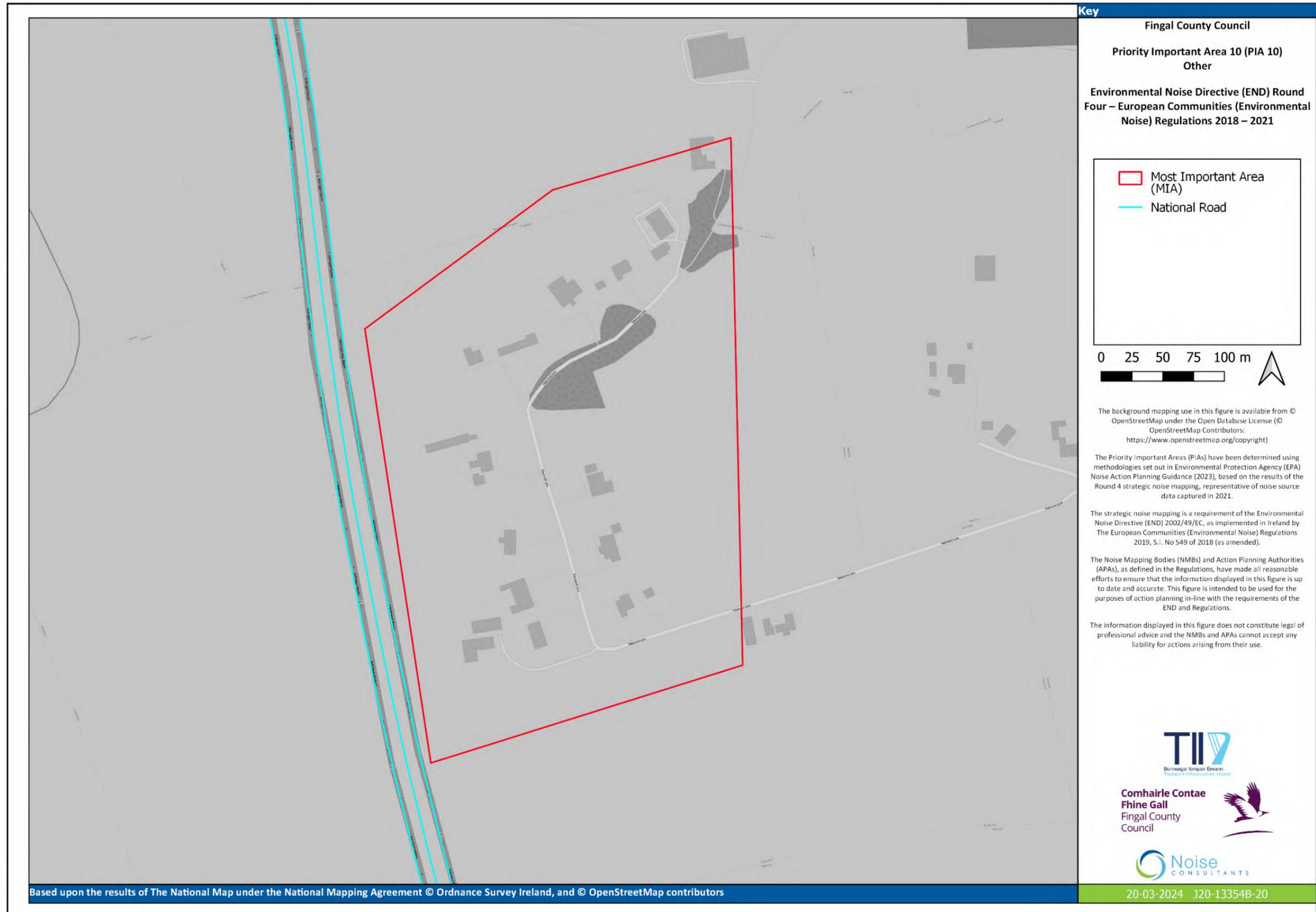
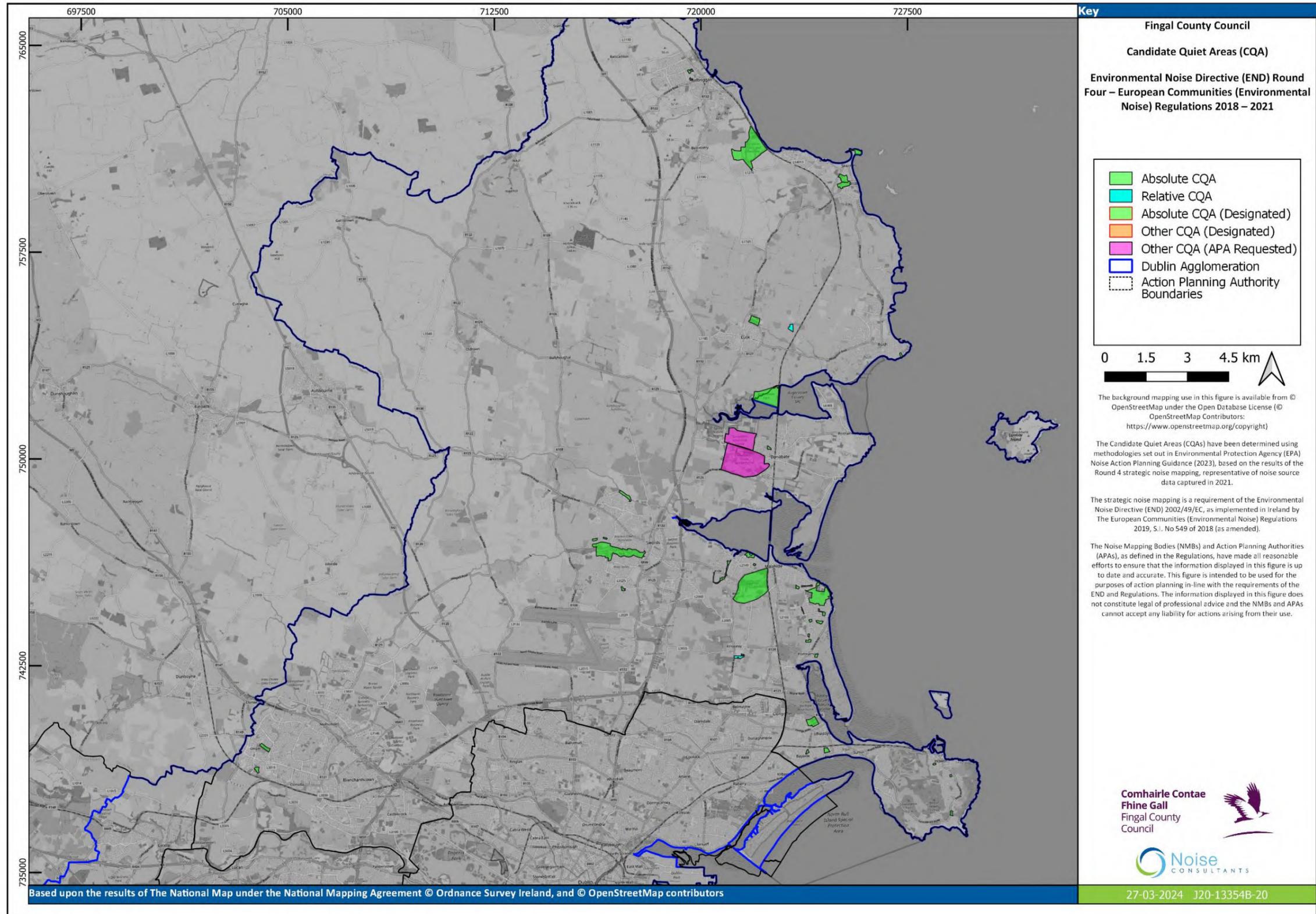


Figure 75: FCC: Candidate Quiet Areas (CQAs)



13 Kildare County Council

13.1 Introduction

Section 1 – Section 9 of this Noise Action Plan sets out the overarching principles of the Noise Action Plan process, including the existing international, national and regional noise management legislation and guidance, a description of the noise mapping process, and methodologies advocated in the EPA Guidance for identifying and addressing the most important areas, as established by the strategic noise mapping.

This section presents the results of the Noise Action Plan process specifically for the Kildare County Council administrative area within the Agglomeration and sets out the considerations and actions that are specific to Kildare County Council.

The referenced Action Planning Authority (APA) in this section is Kildare County Council.

This section includes details of:

- contact details;
- the APA's consultation process;
- the APA's historical noise action planning process;
- the APA specific noise management policy and guidance;
- the APA specific plans, projects and strategies relevant to noise;
- the results of the strategic noise mapping;
- the areas to be subject to noise management activities ('Priority Important Areas' (PIAs));
- the areas to be considered for preservation for environmental noise quality ('Candidate Quiet Areas' (CQAs));
- the mitigation and protection measures and actions; and
- associated graphical figures.

13.1.1 Name and Contact Details for Responsible Authority

Kildare County Council

Áras Chill Dara

Devoys Park

Naas

Co. Kildare

13.2 Consultation

13.2.1 Stakeholder Consultation

A Period of public consultation will be completed on this draft Noise Action Plan. A summary of the public consultation will be set out in the final Noise Action Plan.

13.3 Review of Noise Action Plan(s)

13.3.1 Round 3 Noise Action Plan (2018-2023)

Round 4 is the first occasion that administrative areas of Kildare County Council have been included in the Dublin Agglomeration.

13.4 Local Noise Management Policy and Guidance

13.4.1 Kildare County Development Plan 2023-2029

Kildare County Development Plan 2023-2029 is the key strategy document which structures the proper planning and sustainable development of land-use across the Kildare County Council administrative area. Within that plan there are goals which include the management of environmental noise from commercial activity sources and from transportation sources which covers most noise nuisance in the county.

- **Chapter 5 Sustainable Mobility & Transport** - Sustainable Transport has positive impacts on noise reduction, removal of sources, lower speeds particularly in urban centres.
- **Chapter 6 Infrastructure & Environmental Services** - Future developments are designed so that noise levels generated by new and existing developments are controlled and in cases where there are licences, monitored.
- **Chapter 14 Urban Design, Placemaking and Regeneration** - Design of our built environment has a direct impact on our health and wellbeing and the reduction of noise is a goal through the provision of public transport, lower speeds and infrastructure designed to achieve these goals.
- **Chapter 15 Development Management Standards** - A key noise from transportation issue in the Kildare County Council administrative area is those residences adjacent to busy transportation corridors. Proposals for residential developments near busy roads in urban areas and adjacent to transportation corridors will be required to demonstrate how the impacts of noise are avoided, prevented, or mitigated and shall have regard to planning guidance issued by the Local Authority and national guidance.

13.4.2 Kildare County Council Corporate Plan 2019-2024

The Kildare County Council Corporate Plan 2019-2024 outlines the strategic goals and initiatives guiding the council's activities over the period of the Plan. It includes considers factors related to infrastructure development, economic growth, environmental sustainability, social inclusion, and governance.

13.4.3 Leixlip Strategic Transportation Assessment, 2019

The Leixlip Strategic Transportation (STA) study informs the revised Local Area Plan (LAP) for Leixlip, aiming to promote active transportation modes. It identifies new paths to enhance access for non-motorized modes to key destinations, aligning with the Greater Dublin Area Cycle Network Plan. Additionally, strategic link routes, if implemented, will improve traffic flows and reduce transportation noise in the urban centre.

13.4.4 Celbridge Local Area Plan 2017-2023

The Celbridge Local Area Plan 2017-2023 outlines development objectives and guidelines for Celbridge's growth and infrastructure over the specified period. It addresses issues such as land use, transportation, housing, environmental protection, and community amenities. The Plan aims to promote sustainable development, enhance quality of life, and ensure that Celbridge continues to thrive as a vibrant community.

13.5 Relevant Plans, Projects and Strategies

13.5.1 BusConnects

Phase 5A of the BusConnects Network Redesign introduces three new bus routes that offer improved access across Kildare and Dublin. This expansion enhances the existing Transport for Ireland (TFI) network by providing upgraded bus services.

13.5.2 Kildare County Council Climate Action Plan 2024-2029

The Kildare County Council Climate Action Plan 2024-2029 outlines strategic initiatives and goals to address climate change within the county. It includes measures to reduce greenhouse gas emissions, promote renewable energy, enhance energy efficiency, improve transportation systems, increase resilience to climate impacts, and engage communities in climate action efforts. The plan likely emphasizes collaboration with stakeholders, integration of climate considerations into decision-making processes, and monitoring of progress towards climate targets.

13.5.3 Noise from Transportation Sources – Planning Advice Note for Applicants, Consultants and Planners

Kildare County Council has issued guidance primarily targeting new developments situated near major transportation corridors, aiming to ensure sustainable development practices across various project types. This guidance specifically addresses noise nuisance stemming from external sources upon the development, focusing primarily on residential applications and noise sensitive locations.

Kildare County Council requires new development to be spatially located or acoustically shielded to achieve the lowest noise levels possible for the particular site and the use of the EPA thresholds to trigger assessment (70dB L_{den} / 57dB L_{night}) is generally regarded as appropriate to infill, legacy and in some cases, common good developments.

13.6 Summary of the Results of the Noise Mapping Process

The Round 4 noise exposure statistics and harmful effects assessment are presented below for the Kildare County Council administrative area. The statistics at Agglomeration level are presented in **Section 5.2**. Exposure statistics are assessed independently for each noise source, and are

summarised for the noise metrics across the noise exposure bands defined in the Regulations. The population exposure statistics have been rounded to the nearest 100 as required by the Regulations.

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13.6.1 Exposure Statistics

Table 75: KCC: Number of People in Dwellings – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	7,100	600	0
60-64	3,000	300	0
65-69	700	500	0
70-74	200	200	0
>=75	0	0	0

*exposure statistics rounded to the nearest 100.

Table 76: KCC: Percentage of Total Population Exposed to the Noise Source – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	19 %	2 %	0 %
60-64	8 %	1 %	0 %
65-69	2 %	1 %	0 %
70-74	1 %	1 %	0 %
>=75	0 %	0 %	0 %

Table 77: KCC: Number of School Buildings (& Hospital Buildings) – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	04 (00)	00 (00)	00 (00)
60-64	04 (00)	00 (00)	00 (00)
65-69	02 (00)	00 (00)	00 (00)
70-74	00 (00)	00 (00)	00 (00)
>=75	00 (00)	00 (00)	00 (00)

Table 78: KCC: Number of People in Dwellings – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	3,700	300	0
55-59	700	400	0
60-64	200	300	0
65-69	0	0	0
>=70	0	0	0

*exposure statistics rounded to the nearest 100.

Table 79: KCC: Percentage of Total Population Exposed to the Noise Source – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	10 %	1 %	0 %
55-59	2 %	1 %	0 %
60-64	1 %	1 %	0 %
65-69	0 %	0 %	0 %
>=70	0 %	0 %	0 %

Table 80: KCC: Number of School Buildings (& Hospital Buildings) – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	04 (00)	00 (00)	00 (00)
55-59	02 (00)	00 (00)	00 (00)
60-64	00 (00)	00 (00)	00 (00)
65-69	00 (00)	00 (00)	00 (00)
>=70	00 (00)	00 (00)	00 (00)

Table 81: KCC: Total number of Noise Sensitive Buildings

Noise Sensitive Building	Number of Noise Sensitive Buildings
Schools	18
Hospitals	0

13.6.2 Harmful Effects

The exposure of harmful effects is assessed independently for each source. Where the same people are simultaneously exposed to different noise sources, the harmful effects may not, in general, be cumulated, however can be compared to identify proportional significance.

Table 82 presents the calculated harmful effects in the case of road traffic noise for the Agglomeration, and **Table 84** presents the calculated harmful effects from railway noise.

As shown in **Table 83** and **Table 85** the statistical proportion of the total population with harmful effects associated with road traffic and rail noise in the Kildare County Council administrative area is slightly lower than those across the Agglomeration.

Table 82: KCC: Breakdown of Harmful Effects in the Case of Road Noise – Total Number of People – All Sources

Harmful Effect	Dublin Agglomeration	Kildare County Council
Ischaemic Heart Disease	101.22	1.70
Highly Annoyed	108,380.07	2,046.50
Highly Sleep Disturbed	28,995.87	525.59

Total Populations

Dublin Agglomeration: 1,355,967.68,

APA Proportions within Agglomeration: Dublin City Council: 501,896.48, Fingal County Council: 297,128.60, South Dublin County Council: 278,984.11, Dún Laoghaire County Council: 210,520.78, Kildare County Council: 37,447.86, Wicklow County Council: 29,989.86

Table 83: KCC: Breakdown of Harmful Effects in the Case of Road Noise – % of Population – All Sources

Harmful Effect	Dublin Agglomeration	Kildare County Council
Ischaemic Heart Disease	0.01%	0.00%
Highly Annoyed	7.99%	5.46%
Highly Sleep Disturbed	2.14%	1.40%

Table 84: KCC: Breakdown of Harmful Effects in the Case of Railway Noise – Total Number of People – All Sources

Harmful Effect	Dublin Agglomeration	Kildare County Council
Highly Annoyed	21,051.97	368.84
Highly Sleep Disturbed	10,986.94	182.22

Table 85: KCC: Breakdown of Harmful Effects in the Case of Railway Noise – % of Population – All Sources

Harmful Effect	Dublin Agglomeration	Kildare County Council
Highly Annoyed	1.55%	0.98%
Highly Sleep Disturbed	0.81%	0.49%

13.7 Noise Management Activities (Industry)

The industry sites included within the Agglomeration strategic noise maps are limited to Industrial Emission (IE) sites as regulated by the EPA under the IPPC Directive 96/61 EC, and any ports. Strategic noise maps of the industrial noise emissions at agglomeration level are shown in **Table 7** and **Figure 8** listed in **Section 5.2**. Maps for the Kildare County Council administrative area are provided **Figure 76** in to **Figure 77** in **Section 13.12**.

The data upon which the industry noise emission models have been developed includes default values, therefore model outputs are a strategic representation of industry noise levels, rather than being site specific.

The Noise Action Plan does not include any Priority Important Areas for industry mainly due to the lower exposure statistics reported. Notwithstanding, there will be a need for ongoing management of noise issues from industrial sites through noise complaints, development and licence application. In this regard the APA may use the maps to support this process and should continue to consult and collaborate with the EPA who have overall responsibility for site specific noise management of waste, Industrial Emission (IE) and Integrated Pollution Control (IPC) licensed sites.

13.8 Priority Important Areas

The methodology for identifying the Most Important Areas and the shortlist of Priority Important Areas, which will be subject to noise management activities, is set out in **Section 8.4**. The Priority Important Areas for Kildare City Council are listed in **Table 86** and **Table 87**, which summarise a range of statistics and information for each area, as follows:

Table 86 presents the statistics for each Priority Important Area including population, details of the harmful effects and numbers of people exposed to noise levels above the Important Areas noise limit value.

Table 87 repeats the key statistics but presents the population and harmful effects statistics as a percentage of the total population of the Kildare County Council administrative area.

Table 88 presents the number of people exposed to rail traffic noise (L_{den} and L_{night}) in each rail Priority Important Area broken down by noise bands set out in the Regulations.

It should be noted that Ischemic Heart Disease (IHD) is not calculated for railway noise, where Statutory Instrument No. 663/2021 – European Communities (Environmental Noise) (Amendment) Regulations 2021 (S.I 663/2021)⁵³ states:

“For IHD in the case of railway and aircraft noise, the population exposed above adequate Lden levels is estimated as subject to an increased risk of IHD, while the exact number N of cases of IHD cannot be calculated.”

With reference to the noise management frameworks described in **Section 8.4**, Kildare County Council will, subject to resources and funding, undertake an assessment of the noise mitigation measure options relating to the Priority Important Area within the life cycle of the Noise Action Plan. This will include discussions across relevant sections within Kildare County Council, Iarnród Éireann and Transport Infrastructure Ireland in the case of rail Priority Important Areas.

Figures presenting the Most Important Areas and Priority Important Areas are included in **Section 13.12**.

- **Figure 78** shows the full set of Most Important Areas for Kildare County Council and from which the shortlist of Priority Important Areas have been selected.
- **Figure 79** presents an overview of all the shortlisted Priority Important Areas in Kildare County Council.
- **Figure 80** and **Figure 81** present a more detailed plan of each Priority Important Area.

⁵³ <https://www.irishstatutebook.ie/eli/2021/si/663/made/en/print> [Accessed March 2024]

Table 86: KCC Priority Important Area (PIA) Summary (1)

PIA	Source	MIA Criterion (People HA per 100m ²)	Area (m ²)	Total Population*	Harmful Effects Statistics**			Number of People Above Important Areas Noise Limit Value***			
					HA	HSD	IHD	Road 53dB L _{den}	Road 45dB L _{night}	Railway 54dB L _{den}	Railway 44dB L _{night}
KCC_1	RAIL	15	9,000	89.7	30.2	17.1	-	-	89.7	89.7	
KCC_2	RAIL	15	3,900	48.74	13.18	6.78	-	-	42.51	48.75	

* Total population inside all Most Important Areas (MIAs) associated with the Priority Important Area (PIA)

** The harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building

*** The total population that are exposed to noise levels above the Important Areas noise limit value (see Section 6.4) within the MIA(s) associated with the PIA

Table 87: KCC: Priority Important Area (PIA) Summary (2)

PIA	Source	MIA Criterion (People HA per 100m ²)	Area (m ²)	Total Population *	Harmful Effects Statistics**			Percentage Population ***	Percentage Harmful Effects****		
					HA	HSD	IHD		HA	HSD	IHD
KCC_1	RAIL	15	9,000	89.7	30.2	17.1	0.2%	1.5%	3.3%		
KCC_2	RAIL	15	3,900	48.74	13.18	6.78	0.1%	0.6%	1.3%		

* Total population inside all Most Important Areas (MIAs) associated with the Priority Important Area (PIA)

** The harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building

*** Percentage of the total population inside all MIAs associated with the PIA from the total population in the APA administrative area

**** Percentage of the total harmful effect inside all MIAs associated with the PIA from the harmful effects of the APA administrative area

Table 88: KCC: Priority Important Area (PIA) Summary (Rail Noise – All Sources)

PIA	Source	Number of People in Noise Exposure Band (dB L _{den})					Number of People in Noise Exposure Band (dB L _{night})				
		55-59	60-64	65-69	70-74	>=75	50-54	55-59	60-64	65-69	>=70
KCC_1	RAIL	3.98	0	30	55.72	0	0	15	70.72	0	0
KCC_2	RAIL	3.14	24.92	0	20.64	0	24.97	3.09	20.64	0	0

13.9 Areas to be Preserved for Environmental Noise Quality

The approach and criteria used to identify Candidate Quiet Areas for the Agglomeration has been explained in **Section 7.3**, and the Candidate Quiet Areas are presented in **Section 7.3.2**. Those located within the Kildare County Council administrative area are summarised in **Table 89** and shown in **Figure 82** presented in **Section 13.12**.

Investigations into whether there is an appropriate benefit to delimiting the Candidate Quiet Area as a Quiet Area may include consideration of sound pressure measurements, visitor experience, expert assessment, and other local community evaluation criteria (see **Section 7.4**).

Given the resources available it may not be possible to investigate all Candidate Quiet Areas summarised in **Table 89** during the implementation of the Noise Action Plan. Therefore, Kildare County Council will aim to prioritise a shortlist of areas for initial focus. This selection process shall consider aspects such as the median noise level, population within 1,000m, size of the area and relevant local factors such as amenity/community value.

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Table 89: KCC: Summary of Candidate Quiet Areas (CQAs)

CQA ID	Name	Easting	Northing	Area (m ²)	Pop. Within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
KCC_17	Celbridge Abbey	696633	732188	31,431	9,105	49	7,136	A
KCC_23		700042	736465	71,734	11,962	47	21,918	A
KCC_1		699786	733971	6,128	173	52	0	R
KCC_20		698891	733703	8,410	434	50	25	R
KCC_26		699794	732699	15,708	156	54	364	R
KCC_13	The Wonderful Barn, Leixlip	699197	735405	174,493	8,683	62	500	#

CQA Criteria: A – Absolute CQA, R – Relative CQA, * - Existing designated Quiet Area, # - APA requested CQA

13.10 Noise Management Framework - Measures and Actions

An overview of the general prevention, protection and mitigation measures that could be considered for the management of noise from road, rail and industry within the Agglomeration is presented within **Section 8**.

This section considers those measures in a local context, together with key local noise management related policy guidelines and local and regional projects and set out the framework that Kildare County Council intends to follow to help manage and mitigate the effects of exposure to environmental noise from the Dublin Agglomeration. A portion of Kildare County Councils functional area is adjacent and included in the Dublin Agglomeration for continuity and impact in the noise assessment exercise.

The environmental noise management measures within the framework are presented across the three policy principal categories covered by the Noise Policy Statement, together with a fourth supporting 'General' category as follows.

- General – Noise Management Measures
- Prevention – Noise Management Measures
- Protection – Noise Management Measures
- Mitigation – Noise Management Measures.

In some instances, measures do not necessarily stand in isolation and may be relevant for, or overlap, with other categories.

Furthermore, the measures collectively support the Responsible Aims which underpin the Policy Statement.

When considering the broader framework of measures and actions aimed at mitigating exposure to environmental noise from the transport and industry sectors, it is important to emphasize that Kildare County Council, in some instances, does not have exclusive ownership or influence over certain noise sources, areas, and the measures presented in this Noise Action Plan (NAP). Many of the measures and actions will require input, collaboration, and execution by other infrastructure owners, along with support from government departments and bodies through relevant legislation and funding.

In addition to third-party collaboration, the successful implementation of this NAP will also depend on the availability of adequate resources to execute the proposed measures and actions.

The measures are described below, across each of the four categories.

13.10.1 General – Noise Management Measures

General noise management measures cover a range of activities to support the implementation of the Noise Action Plan including other measures across the other policy principal categories.

Measure KCC_M1: Support the Development of National Noise and Other Related Policy and Guidance

At present there is no national policy relating specifically to noise other than specific objectives set out within a range of national plans and strategies such as Policy Objective 65 from the National Planning Framework 2040. Furthermore, there is no adopted consistent national approach for Local Authorities to apply in the evaluation of noise issues at the planning application stage. Some have developed their own guidelines, and many apply the ProPG approach which is used within the UK. Development of national policy and guidelines will be the responsibility of the Department of Environment, Climate and Communications (DECC).

In addition to specific national policy and guidance relating to noise, other national policy and guidance can have an indirect impact on noise related issues. An example includes the National Speed Limit Review. Kildare County Council aim to carry out that review (commencing mid 2024) which will (pending the issue of guidance) result in considerably lower speed limits and a corresponding reduction in noise from Transportation on Local and Urban Roads.

Kildare County Council has published its own planning guidance document in the absence of national guidance, available as a download from the Kildare County Council website, for new development, aimed at informing applicants and their agents, and will also actively support and engage with the development of national policy and guidance on the subject of noise and all related policy. Link is:

<https://kildarecoco.ie/YourCouncil/Publications/Roads/KCC%20Transportation%20Noise%20Planning%20Advice%20Note%20Feb%202022.pdf>

Measure KCC_M2: Noise Action Plan Working Group(s) - Action Planning Authorities and Transport Infrastructure Owners

Kildare County Council will support the establishment of relevant noise working groups to coordinate and collaborate with other Dublin agglomeration APAs and the relevant Noise Mapping Bodies (Transport Infrastructure Ireland, Iarnród Éireann and Dublin Airport Authority) in respect of noise management issues in general and mitigation measures at a Priority Important Area level.

Measure KCC_M3: Annual Report to Environment Protection Agency (EPA)

Kildare County Council will prepare an annual report for the EPA setting out progress made in respect of the implementation of the Noise Action Plan, including the investigations of

Priority Important Areas and implementation of noise mitigation measures for those areas and other general areas.

In addition, progress with respect to the assessment of the Candidate Quiet Areas will be presented together with any recommendations for referring any of these areas to the EPA and the Minister for designating as a Quiet Area. Kildare County Council will liaise with relevant third-party infrastructure owners in respect of progress made by them with implementing actions that may be relevant for them and their infrastructure.

Measure KCC_M4: Investigation and Management of Noise Complaints

Kildare County Councils Environment Section investigates complaints under the provisions of the Environmental Protection Agency Act 1992 (Noise) Regulations 1994 and has regard to best national/ international best practice guidelines and standards and planning enforcement where deemed appropriate.

Measure KCC_M5: Stakeholder Collaboration

Kildare County Councils Environment Section actively collaborates with a number of stakeholders in relation to potential and existing noise nuisances:

- **EPA - IPC Licences** - KCC refers noise complaints received in relation to IPC licences directly to the EPA, assists the EPA with the investigation of these complaints where required.
- **Irish Rail /Public Bus Company Services** – Both the Environment and Transportation sections of the Council collaborate where necessary and liaise with Irish Rail /Bus Companies in relation to complaints, nighttime works, and infrastructure projects which may increase noise levels.

Collaboration is not necessarily limited to the above stakeholders and will include others where required.

Measure KCC_M67: Ongoing Community Engagement

A key requirement in the development of the strategic noise maps and Noise Action Plan is that the information is made available to the public in a clear, comprehensible, and accessible manner. Furthermore, the public should be consulted on the preparation of the Noise Action Plan, provided with the opportunity to participate and comment on the Noise Action Plan, and the feedback from public engagement should be considered when finalizing the Plans.

To date the strategic noise maps, together with background information, has been published on Kildare County Councils website. Furthermore, engagement is proposed through the relevant Strategic Policy Committee.

13.10.2 Prevention – Noise Management Measures

Measure KCC_M7: Planning Application Advice, Conditioning and Enforcement

Kildare County Council's Environment Section consults directly with the Planning Department advising on planning applications and enforcement of planning conditions in relation to noise emissions. The Unit has standard planning conditions for this purpose.

In reviewing and advising on planning applications Kildare County Council will give due consideration to the existing strategic noise maps and this Noise Action Plan. For the construction phase and the operational phase of all developments (that require planning permission) appropriate limits and/or other requirements will be set in planning conditions. As noted in KCC_M1 above, Transportation Section perform a similar function and ensure developers/applicants are aware of the Councils requirements as per the local planning guidance document "Noise from Transportation Sources" available from the Kildare County Council website

13.10.3 Protection – Noise Management Measures

Measure KCC_M8: Evaluation of Shortlisted Candidate Quiet Areas

In addition to co-operating with the Dublin Local Authorities on Candidate Quiet Areas that straddle the County Kildare and Dublin administrative boundary, the agglomeration will be included in Kildare County Council's GIS system, to provide ease of consideration of planning conditions to retain, and improve, if possible, their recreational value.

Subject to resources, the council will undertake organised "sound-walks" or other applicable methodologies to make a recommendation on improvements and awareness of the Candidate Quiet Areas.

13.10.4 Mitigation – Noise Management Measures

Existing Plans, Projects and Strategies

Measure KCC_M9: Support the Implementation of Relevant Plans, Projects and Strategies

Kildare County Council will support the implementation of relevant plans and projects which aim to deliver more sustainable infrastructure and services. Key examples include;

- The Greater Dublin Area Transport Strategy
- The National Transport Authority Sustainable Transportation Program
- Kildare Public Realm Program
- Various urban relief road projects.

Given the very gradual positive impact on noise reduction programs that infrastructure works have, it is proposed, subject to resources, to commence an annual rolling noise measurement program in the larger urban areas, to gather information and confirm the expected decrease in noise nuisance. This will include the impact of other measures, Government policy to considerably lower speed limits in the first two-years of this plan

(which will principally reduce tyre noise in urban areas), electrification of public transport vehicles, smaller commercial vehicles and of cars (which will reduce engine noise), during the lifetime of this plan. This will apply countywide and include the portion of Kildare in the Agglomeration of Dublin.

Priority Important Areas

Measure KCC_M10: Evaluation of each Priority Important Area

Kildare County Council will complete an evaluation of each of the two rail Priority Important Areas identified in this chapter of the Noise Action Plan. The infrastructure owner in relation to these noise sources is Irish rail and as such it will be critical that the evaluation includes significant input from Irish Rail.

The objective of the evaluation process will be to confirm the validity of the Priority Important Areas and identify the most appropriate noise mitigation measures through detailed economic and health benefits appraisal. The steps in the evaluation process are described in **Section 8.4**.

Measure KCC_M11: Review Road Maintenance Works Programme for Noise Benefits in Noise Sensitive areas/buildings

Kildare County Council implements an annual programme of road maintenance works. The works packages included within each annual programme are identified based on road condition and other relevant criteria such as customer enquires, road safety etc.

While no road-related Priority Important Areas have been identified for the Kildare part of the Dublin agglomeration, it is nevertheless proposed to work with the Road maintenance section to provide GIS data to assist, where possible, road noise within the decision criteria process and to support the use of low noise road surface types where feasible and appropriate to do so.

In particular consideration will be given to developing a prioritisation list of those areas where road surface improvements would have the greatest noise reduction impact (adjacent to noise sensitive locations) and a methodology to enable these to be considered in conjunction with road condition when considering locations for inclusion within annual works programmes.

The road surface type is a key parameter which influences the level of road traffic noise. While a range of road surface types exist and/or are used within Kildare urban areas, the two most common are Hot Rolled Asphalt (HRA) and, more recently Stone Mastic Asphalt (SMA). The former is known to result in higher road traffic noise emissions, the latter as a lower noise surface. Kildare County Council will continue the existing policy to promote the use of SMA over HRA, subject to other overriding engineering concerns.

Measure KCC_M12: Implementation of Recommended Noise Mitigation Measures

Subject to financial and personnel resources, Kildare County Council will implement measures deemed technically, economically, and environmentally justified as part of this round of the Noise Action Plan or future rounds.

Implementation will involve reviewing the effectiveness of the measures through monitoring where appropriate as outlined in the above paragraphs. The implementation of measures related to infrastructure not under Kildare County Council responsibility should be carried out by the third parties responsible for that infrastructure or where agreed as a collaborative effort involving both bodies, working for the common good. Kildare County Council will coordinate with all parties, in monitoring progress and in reporting to the EPA as part of the annual report.

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13.11 Noise Action Plan Implementation

A summary of the proposed noise management measures and actions is set out in **Section 13.10.1**.

This Noise Action Plan is supported by a four-year programme for implementation (2024-2028), with progress reported to the EPA on an annual basis.

Implementation of these measures and actions is subject to resources, appropriate funding being made available and collaboration with relevant key stakeholders and infrastructure owners.

13.12 Figures

Figures supporting the APAs strategic noise mapping results are set out in the following section. The figures include a graphical representation of:

- Industry noise contours – to assist with the engagement between the APA, NMBs and EPA;
- the Most Important Areas – locations where harmful effects are highest;
- the Priority Important Areas – Most Important Area or groups of Most Important Areas which will be addressed during the implementation of the Noise Action Plan; and
- the Candidate Quiet Areas identified as candidates to be preserved for their environmental noise quality.

Figure 76: KCC: Industry – Noise Exposures Exceeding 55 dB L_{den}

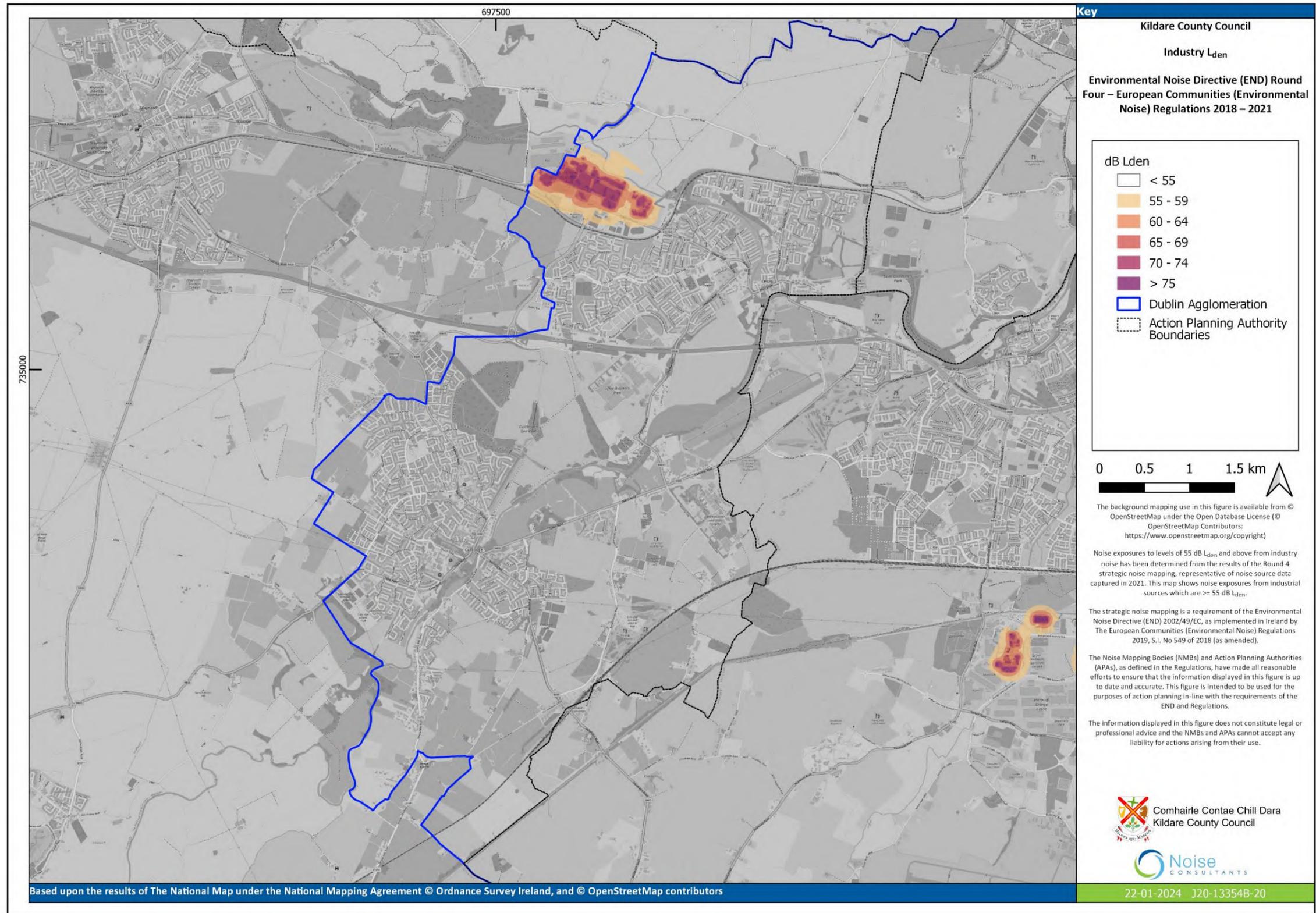


Figure 77: KCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 1)

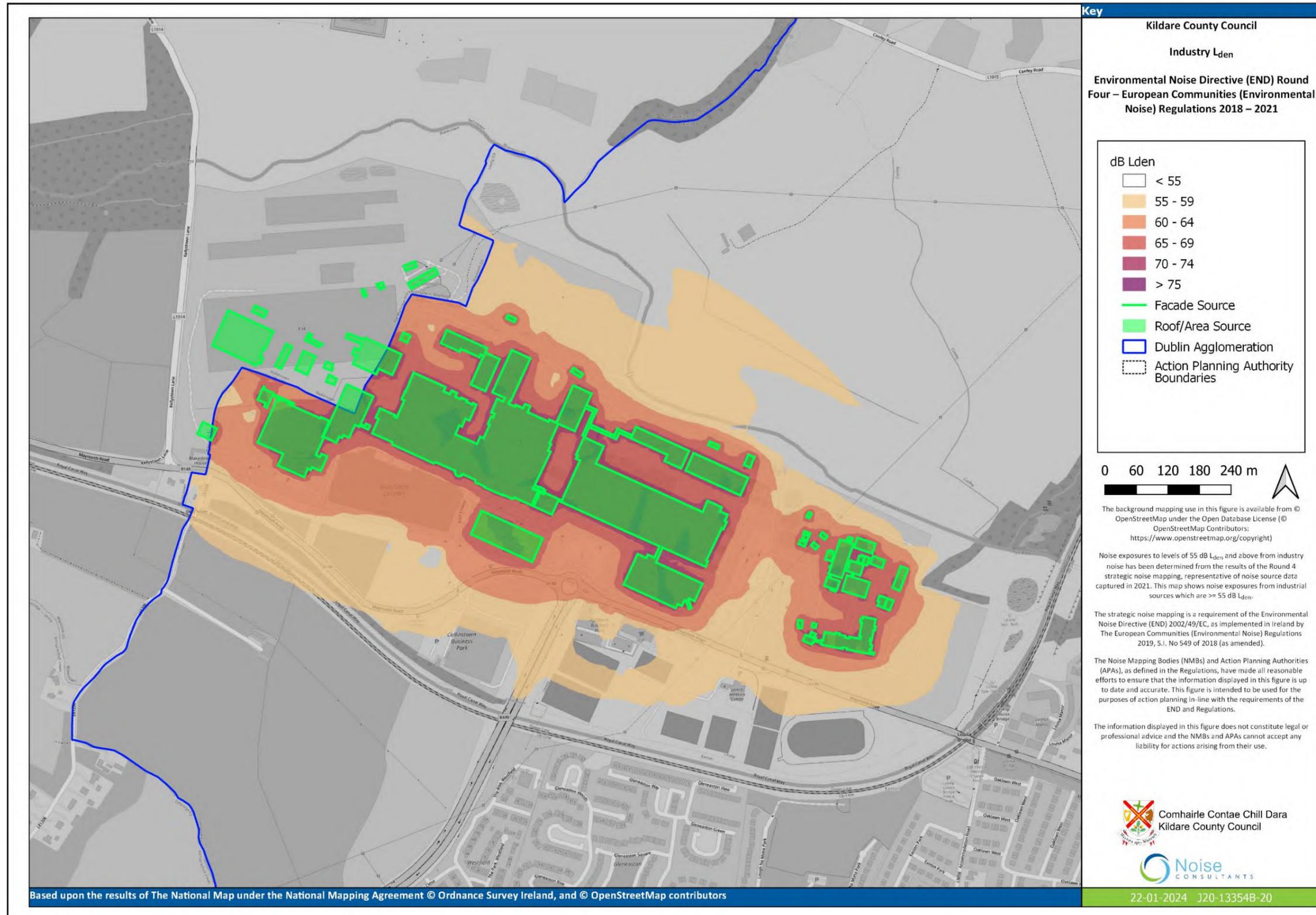


Figure 78: KCC: Most Important Areas (MIAs)

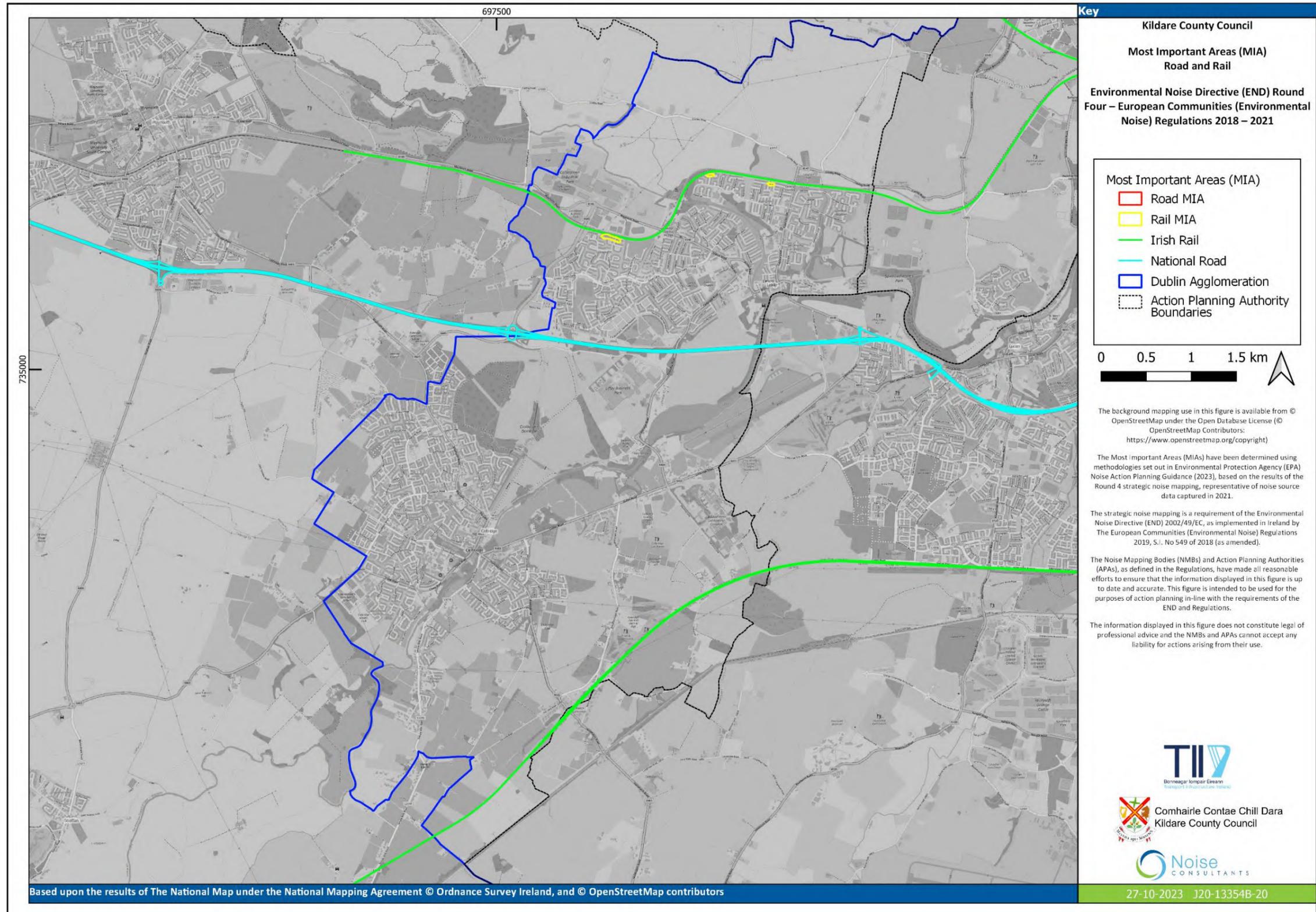


Figure 79: KCC: Priority Important Areas (PIAs)



Figure 80 KCC: Priority Important Area 1 (PIA 1)

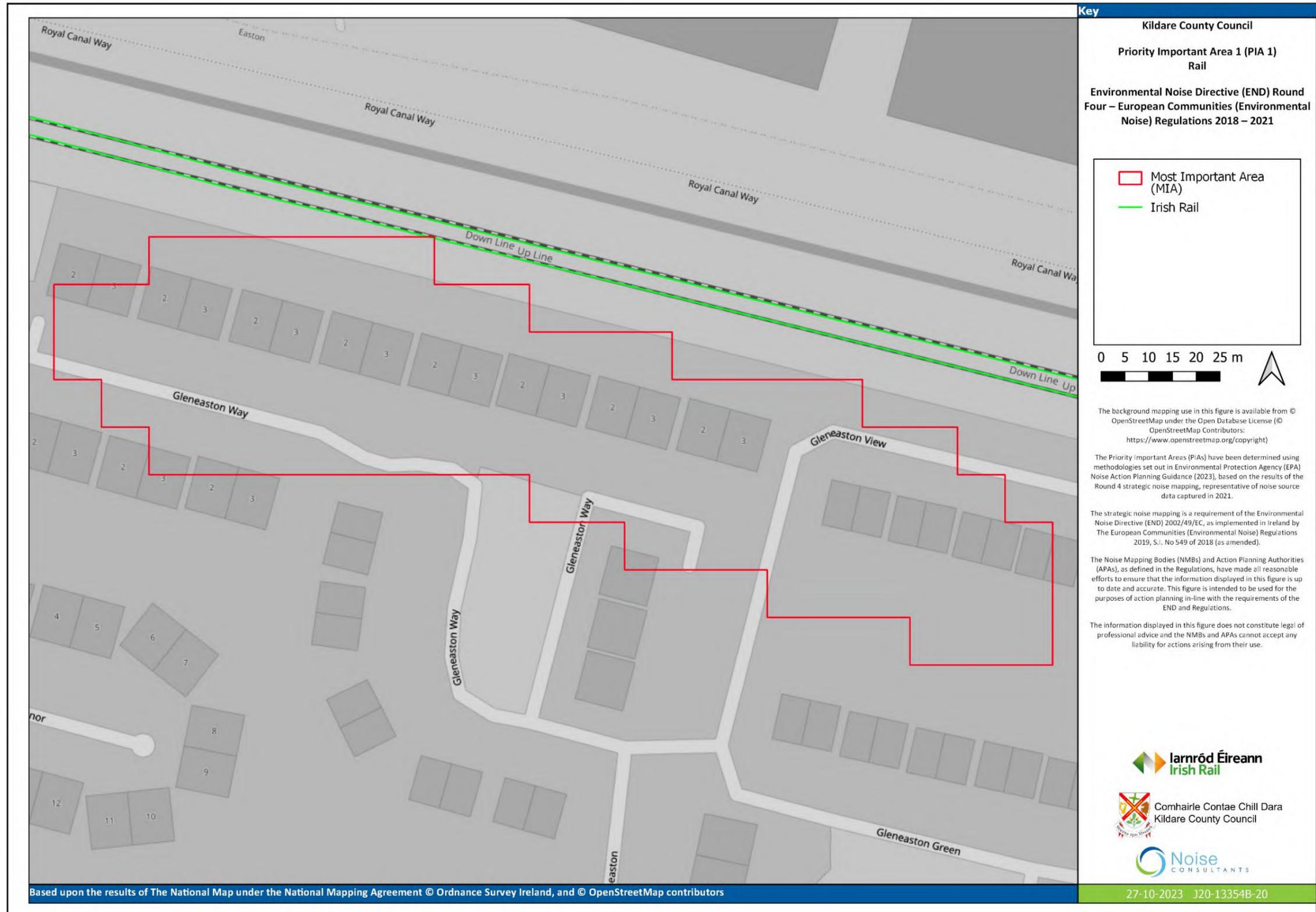
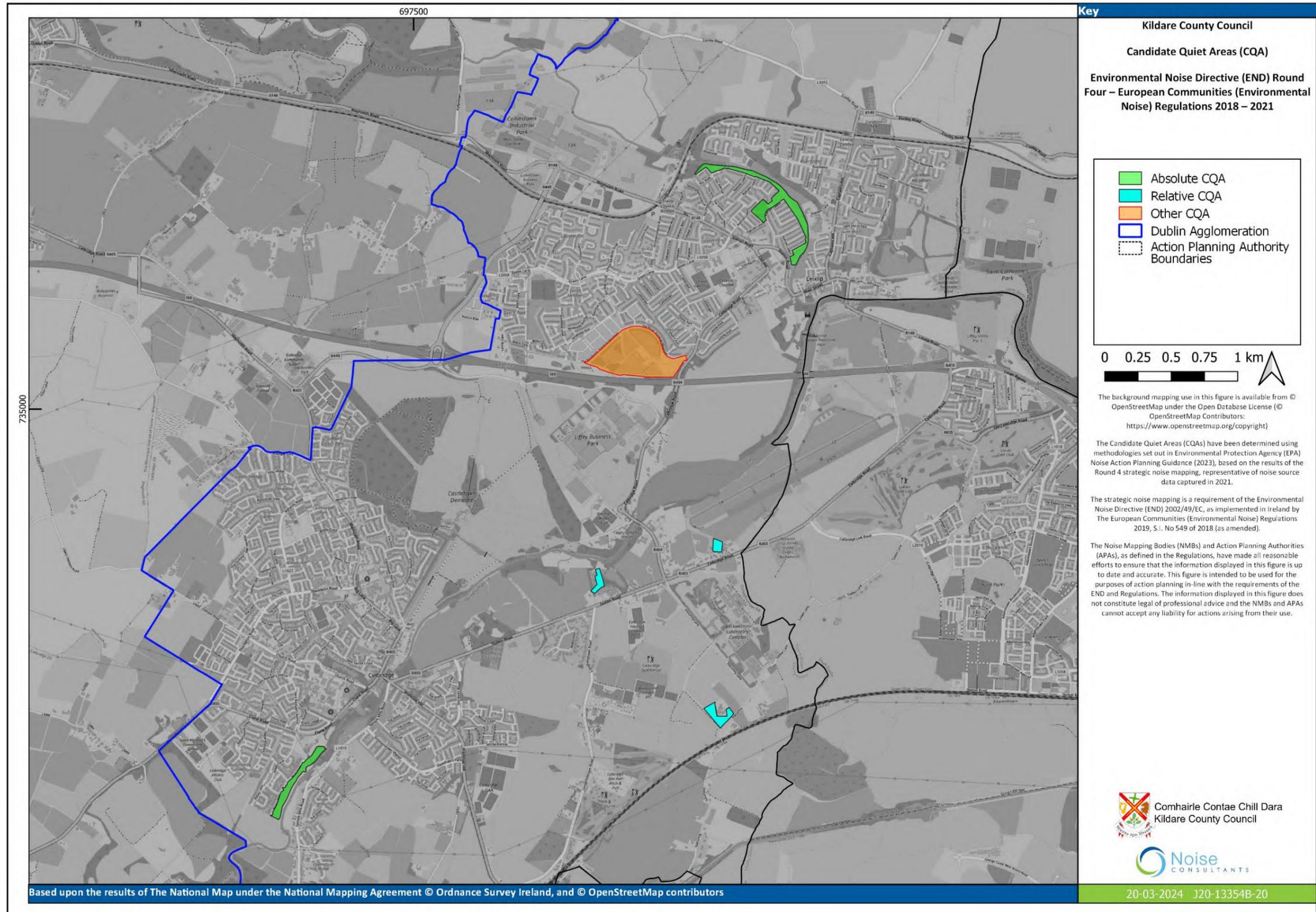


Figure 81: KCC: Priority Important Area 2 (PIA 2)



Figure 82: KCC: Candidate Quiet Areas (CQAs)



14 South Dublin County Council

14.1 Introduction

Section 1 – Section 9 of this Noise Action Plan sets out the overarching principles of the Noise Action Plan process, including the existing international, national and regional noise management legislation and guidance, a description of the noise mapping process, and methodologies advocated in the EPA Guidance for identifying and addressing the most important areas, as established by the strategic noise mapping.

This section presents the results of the Noise Action Plan process specifically for the South Dublin County Council administrative area and sets out the considerations and actions that are specific to South Dublin County Council.

The referenced Action Planning Authority (APA) in this section is South Dublin County Council.

This section includes details of:

- contact details;
- the APA's consultation process;
- the APA's historical noise action planning process;
- the APA specific noise management policy and guidance;
- the APA specific plans, projects and strategies relevant to noise;
- the results of the strategic noise mapping;
- the areas to be subject to noise management activities ('Priority Important Areas' (PIAs));
- the areas to be considered for preservation for environmental noise quality ('Candidate Quiet Areas' (CQAs));
- the mitigation and protection measures and actions; and
- associated graphical figures.

14.1.1 Name and Contact Details for Responsible Authority

South Dublin County Council
Environmental Health Section
County Hall
Tallaght
Dublin 24

14.2 Consultation

14.2.1 Stakeholder Consultation

A Period of public consultation will be completed on this draft Noise Action Plan. A summary of the public consultation will be set out in the final Noise Action Plan.

14.3 Review of Noise Action Plan(s)

14.3.1 Round 3 Noise Action Plan (2018-2023)

As per the previous plans, the Round 3 Noise Action Plan in the South Dublin County Council administrative area focused mainly on road traffic sound emissions. Round 3 noise maps had shown it to be the major sound source in the South Dublin County Council area, which has four major National Routes traversing the county and linking Dublin City with the west and south of Ireland.

Many of the actions commenced over the past three plans will continue to be implemented and strengthened in this Noise Action Plan. The current policy and direction for noise control from road traffic noise is one of reduction, avoidance and prevention wherever and whenever possible, on a prioritised basis. Such policies and actions are founded on the modelling to reduce the level of annoyance, and sleep deprivation to residents due to long-term exposure to environmental noise. This has commenced and will continue to be implemented in future Noise Action Plans.

A summary of the actions undertaken over the course of the Round 3 Noise Action Plan are set out below:

- road re-surfacing and repairs.
- completion of Round 4 strategic noise mapping.
- progress on cycle routes, bus connects, bike share schemes and the electric vehicle fleet expanded.
- liaised with South Dublin County Council's Planning Department preparing next County Development Plan 2022- 2028 regarding strengthening policy on Environmental Noise.
- continue the assessment of areas identified as requiring further mitigation measures.
- track the implementation of regional strategies such as the National Transport Authority's transport strategy for the Greater Dublin Area 2016 – 2035, Smarter Travel – A Sustainable Transport Future 2009-2020 and the National Cycle Policy Framework 2009-2020, to ensure opportunities to introduce noise mitigation in conjunction with their implementation are not missed.
- carry out yearly reviews of the Noise Action Plan in order to assess progress and whether new developments need to be included in the Noise Action Plan.
- specific measures from road resurfacing and maintenance works in 2023 and proposed for 2024 in the South Dublin County Council administrative area included the following:
 - Total Budget 2023 - €8.15m; and

- Total Budget 2024 - €8.9m (breakdown: road resurfacing – €3.2m, footpath repairs/improvements - €3.9m, cycle track maintenance - €400k, social housing estate upgrades - €300k, quality bus corridor upgrades - €100k, and routine maintenance works - €1m).

The total number of road resurfacing and maintenance schemes to be covered in 2024 is 155 (breakdown: road resurfacing – 61, footpath repairs – 79, cycle track maintenance – 7, social housing estate upgrades – 6, quality bus corridor updates – 2)

14.4 Local Noise Management Policy and Guidance

14.4.1 South Dublin County Development Plan 2022-2028

The South Dublin County Development Plan is a strategic framework for actions over the next five years. The plan sets out the framework to guide future development within the County with a focus on the places we live, the places we work, and how we interact and move between these places while protecting our environment. The vision set out in this Plan is to make South Dublin County Council administrative area a place that our communities are proud of, that our businesses can thrive in and that will help us to live greener and healthier lives.

The policies and objectives contained in the Plan all contribute towards this vision placing increased policy emphasis on mitigating and adapting to climate change. This includes a move to more sustainable movement. A key objective is to increase the number of people walking, cycling and using public transport and reduce the need for car journeys, resulting in a more active and healthy community, a more attractive public realm, safer streets, less congestion, reduced carbon emissions, better air quality, quieter neighbourhoods and a positive climate impact.

The South Dublin County Development Plan incorporates relevant national and regional policy objectives related to environmental noise as reproduced below.

- *Policy IE8: Environmental Quality - Seek to take appropriate steps to reduce the effects of noise pollution on environmental quality and residential amenity in line with European, National and Regional policy and legislation., to achieve the following objectives;*

To implement the provisions of national and EU Directives on air and noise pollution and other relevant legislative requirements in conjunction with other agencies as appropriate, consistent with regional policy objective 10.10 of the RSES.

To implement the relevant spatial planning recommendations and actions of the Dublin Agglomeration Environmental Noise Action Plan 2018-2023 or any superseding action plan.

To ensure that future developments are designed and constructed to minimise noise disturbance and consider the multi-functional uses of streets including movement and recreation as detailed in the Urban Design Manual (2009) and the Design Manual for Urban Roads and Streets (2013, updated 2019).

To ensure that noise sensitive development in proximity to national and other roads provides a noise impact assessment and includes appropriate mitigation measures, such as noise barriers, set back

landscaping and / or buffer zones between areas of land where development is proposed and existing and proposed national and other roads.

To work alongside relevant stakeholders National Transport Authority, Transport Infrastructure Ireland, EPA to promote and improve safer noise protection infrastructure in line with population growth and traffic increases along all our national roads.

- *Policy SM3: Public Transport - Promote a significant shift from car-based travel to public transport in line with County targets and facilitate the sustainable development of the County by supporting and guiding national agencies in delivering major improvements to the public transport network.*
- *Policy SM6: Traffic and Transport Management - Effectively manage and minimise the impacts of traffic within the County, in order to achieve the following objectives;*

To protect sensitive areas from inappropriate levels of traffic through design measures that will calm and / or reroute traffic.

To ensure that appropriate design and mitigation measures are applied to all transport schemes to reduce the impact of noise and air pollution within residential communities in accordance with the EU directive on Assessment and Management of Environmental Noise.

14.4.2 Planning Applications

The Planning Authority will have regard to the Dublin Agglomeration Environmental Noise Action Plan (2018-2023), or superseding plan, when assessing development proposals along major road and rail transport corridors, with a view to reducing noise from new sources and to identify and protect areas of low sound levels.

The Planning Authority will carefully consider the location of noise sensitive developments to ensure they are protected from major noise sources where practical. Furthermore, the provision of appropriate mitigation measures for existing areas adjacent to major noise sources is supported and will be considered having regard to the visual amenity and the proper planning and sustainable development of the area.

14.5 Relevant Plans, Projects and Strategies

14.5.1 Rail Schemes

- **DART Expansion Programme** - This will provide DART+ services as far as Hazelhatch on the Kildare Line, serving Adamstown, the Grange Castle Business Park, Clondalkin and the Strategic Development Zone (SDZ) lands at Clonburris where a community of 23,000 population is planned.
- **Luas to Lucan** - The National Transport Authority strategy provides for the extension of the Luas to Lucan, which will deliver a high-capacity radial service from this area to the City Centre, sufficient to cater for the high transport demand along this corridor. The Luas will extend, subject to a preferred route, into the centre of Lucan's large residential areas to the

south of the N4 and will connect to the city centre serving Lucan Village, Liffey Valley and Ballyfermot along its route.

- Metro / Luas to Dublin South West - The Council will continue to engage with the National Transport Authority having regard to the National Transport Authority’s Transport Strategy for the Greater Dublin Area 2016-2035, as updated to 2042, regarding public transport options for Dublin south-west including the feasibility of Metro and / or Luas to serve the area.

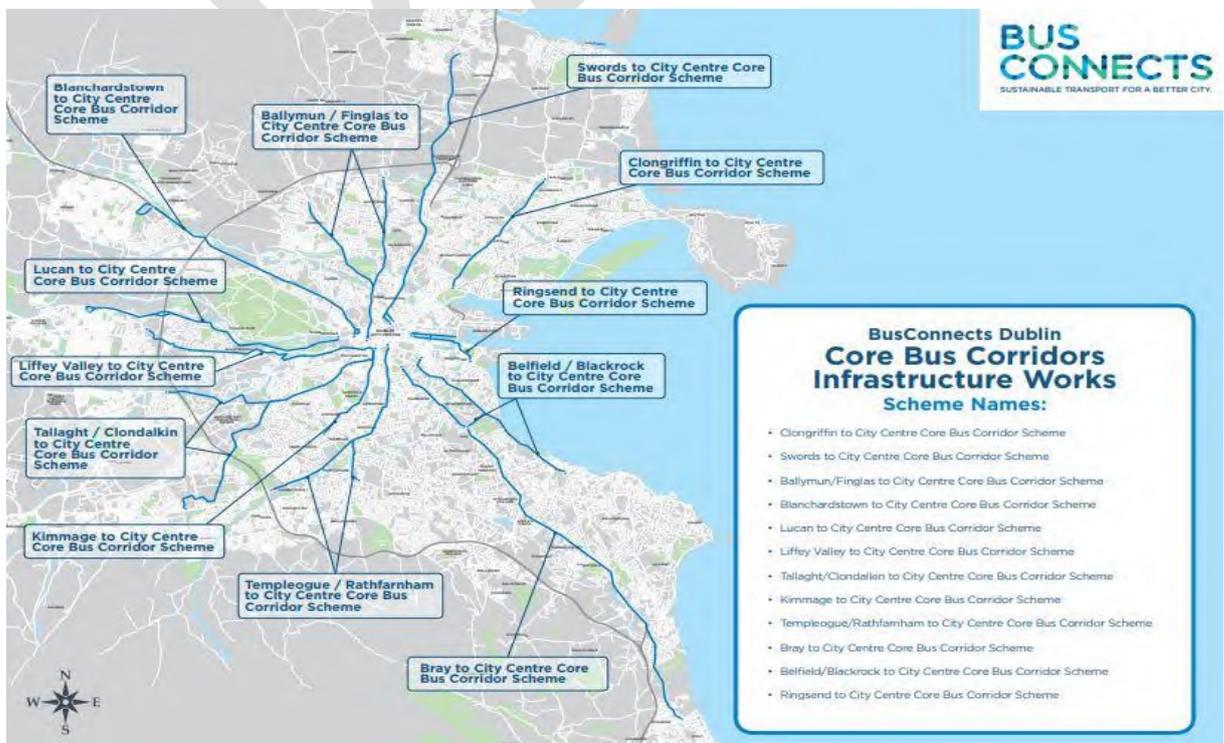
14.5.2 Active Travel

While investment in active travel and public transport infrastructure remains at the top of the hierarchy, there will continue to be a need to invest in new road and street infrastructure. It is also acknowledged that the creation of more road space to cater for traffic is expensive and may serve to attract more cars to the network. Managing travel demand and freeing up road and street space will be one of the key challenges that South Dublin County Council will face.

14.5.3 BusConnects

BusConnects is the National Transport Authority programme for improvement of bus services in Dublin and other cities across Ireland and is a key part of Government policy to improve public transport and address climate change with the transition to a low emissions bus fleet. This will contribute to an enhanced living environment with the reduction in noise emissions and an improvement in air quality.

Figure 83: BusConnects



14.5.4 Cycle South Dublin

Cycle South Dublin is a Council programme of works that aims to provide a well-connected, well designed, and safe walking and cycling network that offers people of all ages and abilities an attractive and credible alternative to using the car. It proposes a set of projects that would deliver nearly 260km of new and improved cycle lanes over the next ten years. Since 2016, traffic congestion in South Dublin County has grown by 11% on main roads and this will become ever more challenging as the County's population continues to grow over the coming years. A further separate phase of works to facilitate cycling will be delivered by the National Transport Authority associated with the BusConnects project.

14.5.5 School Streets Initiative

The aim of the School Streets initiative is to restrict motorised traffic within an agreed street, or zone, outside the school gate to create a safer environment in which children can feel encouraged to cycle, walk or scoot to school. South Dublin County Council and the National Transport Authority are partners in the initiative. A key objective is to improve the local environment and air quality and to reduce noise by reducing dependence on motorised vehicles.

14.5.6 South Dublin County Council Climate Action Plan 2024-2029

The South Dublin County Council Climate Action Plan outlines measures for mitigating and adapting to climate change, aiming to establish a low-carbon and climate-resilient county. Aligned with the Government's National Climate Objective for a climate-neutral economy by 2050, the plan addresses key areas such as Energy & Buildings, Transport, Flood Resilience, Nature-Based Solutions, Circular Economy & Resource Management, and Citizen Engagement.

14.5.7 Airports and Aerodromes

South Dublin is located approximately 10km from Dublin Airport at its boundary, as such; the airport has limited direct implications for the county in respect of safety and noise. Weston Airport provides what is referred to as 'general aviation' for commercial and economic activities within the aviation sector in Ireland. It is also the base for the National Flight Centre pilot academy. Casement Aerodrome, being a military aerodrome, does not come under the control of the Irish Aviation Authority but the ICAO Standards and Recommended Practices are applied as policy by the Department of Defence.

It is a policy of South Dublin County Council to discourage noise-sensitive developments such as nursing homes, schools, hospitals and conference centres in the immediate vicinity of airports and aerodromes.

For residential development and other noise vulnerable land uses, an appropriate noise assessment with accompanying mitigation measures to protect residential amenity should be submitted to the planning authority.

14.6 Other Relevant Plans, Studies and Measures

In 2022, South Dublin County Council participated with the EPA and An Taisce as part of the Dublin wide Nitrogen Dioxide pilot study at 1,000 domestic residential locations across the region. Later that year and again in 2023, South Dublin County Council was a committed participant with the EPA

Diffusion Tube study at 10 specific public locations along the road network within our county, relating to Nitrogen Dioxide levels.

14.6.1 Dublin Region Air Quality Plan, 2021

The Dublin Region Air Quality Plan sets out a series of measures which are aimed at improving air quality. These measures will also help to reduce traffic noise by reducing the volume of traffic in the County. The measures include active travel, parking restrictions and remote working.

14.7 Summary of the Results of the Noise Mapping Process

The Round 4 noise exposure statistics and harmful effects assessment are presented below for the South Dublin County Council administrative area. The statistics at Agglomeration level are presented in **Section 5.2**.

Exposure statistics are assessed independently for each noise source, and are summarised for the noise metrics across the noise exposure bands defined in the Regulations. The population exposure statistics have been rounded to the nearest 100 as required by the Regulations.

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14.7.1 Exposure Statistics

Table 90: SDCC: Number of People in Dwellings – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	82,500	3,900	100
60-64	38,000	2,000	0
65-69	13,100	1,700	0
70-74	3,600	800	0
>=75	900	200	0

*exposure statistics rounded to the nearest 100.

Table 91: SDCC: Percentage of Total Population Exposed to the Noise Source – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	30 %	1 %	0 %
60-64	14 %	1 %	0 %
65-69	5 %	1 %	0 %
70-74	1 %	0 %	0 %
>=75	0 %	0 %	0 %

Table 92: SDCC: Number of School Buildings (& Hospital Buildings) – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	67 (00)	00 (00)	00 (00)
60-64	44 (01)	00 (00)	00 (00)
65-69	13 (00)	00 (00)	00 (00)
70-74	02 (01)	00 (00)	00 (00)
>=75	05 (00)	00 (00)	00 (00)

Table 93: SDCC: Number of People in Dwellings – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	48,200	2,400	0
55-59	15,900	2,000	0
60-64	4,400	900	0
65-69	1,500	400	0
>=70	200	0	0

*exposure statistics rounded to the nearest 100.

Table 94: SDCC: Percentage of Total Population Exposed to the Noise Source – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	17 %	1 %	0 %
55-59	6 %	1 %	0 %
60-64	2 %	0 %	0 %
65-69	1 %	0 %	0 %
>=70	0 %	0 %	0 %

Table 95: SDCC: Number of School Buildings (& Hospital Buildings) – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	00 (00)	00 (00)	00 (00)
55-59	00 (00)	00 (00)	00 (00)
60-64	00 (00)	00 (00)	00 (00)
65-69	00 (00)	00 (00)	00 (00)
>=70	00 (00)	00 (00)	00 (00)

Table 96: SDCC: Total number of Noise Sensitive Buildings

Noise Sensitive Building	Number of Noise Sensitive Buildings
Schools	188
Hospitals	3

14.7.2 Harmful Effects

The exposure of harmful effects is assessed independently for each source. Where the same people are simultaneously exposed to different noise sources, the harmful effects may not, in general, be cumulated, however can be compared to identify proportional significance.

Table 97 shows the calculated harmful effects in the case of road traffic noise for the Agglomeration, and **Table 99** presents the calculated harmful effects from railway noise.

As shown in **Table 98** the statistical proportion of the total population with high annoyance associated with road traffic noise is higher in the South Dublin County Council administrative area when compared with the Agglomeration.

The statistical proportion of the total population with harmful effects associated with rail noise in the South Dublin County Council administrative area, as shown in **Table 100**, is broadly half of that across the Agglomeration. This is reflective of the lower concentration of rail infrastructure in the South Dublin County Council administrative area.

Table 97: SDCC: Breakdown of Harmful Effects in the Case of Road Noise – Total Number of People – All Sources

Harmful Effect	Dublin Agglomeration	South Dublin County Council
Ischaemic Heart Disease	101.22	22.80
Highly Annoyed	108,380.07	25,966.00
Highly Sleep Disturbed	28,995.87	7,345.06

Total Populations

Dublin Agglomeration: 1,355,967.68,

APA Proportions within Agglomeration: Dublin City Council: 501,896.48, Fingal County Council: 297,128.60, South Dublin County Council: 278,984.11, Dún Laoghaire County Council: 210,520.78, Kildare County Council: 37,447.86, Wicklow County Council: 29,989.86

Table 98: SDCC: Breakdown of Harmful Effects in the Case of Road Noise – % of Population – All Sources

Harmful Effect	Dublin Agglomeration	South Dublin County Council
Ischaemic Heart Disease	0.01%	0.01%
Highly Annoyed	7.99%	9.31%
Highly Sleep Disturbed	2.14%	2.63%

Table 99: SDCC: Breakdown of Harmful Effects in the Case of Railway Noise – Total Number of People – All Sources

Harmful Effect	Dublin Agglomeration	South Dublin County Council
Highly Annoyed	21,051.97	1,991.44
Highly Sleep Disturbed	10,986.94	1,082.58

Table 100: SDCC: Breakdown of Harmful Effects in the Case of Railway Noise – % of Population – All Sources

Harmful Effect	Dublin Agglomeration	South Dublin County Council
Highly Annoyed	1.55%	0.71%
Highly Sleep Disturbed	0.81%	0.39%

14.8 Noise Management Activities (Industry)

The industry sites included within the Agglomeration strategic noise maps are limited to Industrial Emission (IE) sites as regulated by the EPA under the IPPC Directive 96/61 EC, and any ports. Strategic noise maps of the industrial noise emissions at agglomeration level are shown in **Figure 7** and **Figure 8** listed in **Section 5.2**. Maps for South Dublin County Council administrative area are provided in **Figure 84 – Figure 87** in **Section 14.13**.

The data upon which the industry noise emission models have been developed includes default values, therefore model outputs are a strategic representation of industry noise levels, rather than being site specific.

The Noise Action Plan does not include any Priority Important Areas for industry mainly due to the lower exposure statistics reported. Notwithstanding, there will be a need for ongoing management of noise issues from industrial sites through noise complaints, development and licence application. In this regard the APA may use the maps to support this process and should continue to consult and collaborate with the EPA who have overall responsibility for site specific noise management of waste, Industrial Emission (IE) and Integrated Pollution Control (IPC) licensed sites.

14.9 Priority Important Areas

The methodology for identifying the Most Important Areas and the shortlist of Priority Important Areas, which will be subject to noise management activities, is set out in **Section 8.4**. The Priority Important Areas for South Dublin County Council are listed in **Table 101** and **Table 102**, which summarise a range of statistics and information for each area, as follows:

Table 101 presents the statistics for each Priority Important Area including population, details of the harmful effects and numbers of people exposed to noise levels above the Important Areas noise limit value.

Table 102 repeats the key statistics but presents the population and harmful effects statistics as a percentage of the total population of the South Dublin County Council administrative area.

Table 103 presents the number of people exposed to road traffic noise (L_{den} and L_{night}) in each road Priority Important Area broken down by noise exposure bands set out in the Regulations.

Table 104 presents the number of people exposed to rail traffic noise (L_{den} and L_{night}) in each rail Priority Important Area broken down by noise bands set out in the Regulations.

It should be noted that Ischemic Heart Disease (IHD) is not calculated for railway noise, where Statutory Instrument No. 663/2021 – European Communities (Environmental Noise) (Amendment) Regulations 2021 (S.I 663/2021)⁵⁴ states:

“For IHD in the case of railway and aircraft noise, the population exposed above adequate L_{den} levels is estimated as subject to an increased risk of IHD, while the exact number N of cases of IHD cannot be calculated.”

With reference to the noise management frameworks described in **Section 8.4**, a summary of potential noise mitigation measures for the Priority Important Area is given in **Table 106**. It should be noted that this table is not exhaustive and these and other measures may be considered at the Priority Important Area evaluation stage during the Noise Action Plan implementation.

South Dublin County Council will, subject to resources and funding, undertake an assessment of the noise mitigation measure options relating to the Priority Important Area within the life cycle of the Noise Action Plan. This will include discussions across relevant sections within South Dublin County Council, Iarnród Éireann and Transport Infrastructure Ireland in the case of rail Priority Important Areas.

Figures presenting the Most Important Areas and Priority Important Areas are included in **Section 14.13**.

- **Figure 88** shows the full set of Most Important Areas for South Dublin County Council and from which the shortlist of Priority Important Areas have been selected.
- **Figure 89** presents an overview of all the shortlisted Priority Important Areas in Dún Laoghaire-Rathdown County Council.
- **Figure 90 to Figure 99** present a more detailed plan of each Priority Important Area.

⁵⁴ <https://www.irishstatutebook.ie/eli/2021/si/663/made/en/print> [Accessed March 2024]

Table 101: SDCC Priority Important Area (PIA) Summary (1)

PIA	Source	MIA Criterion (People HA per 100m ²)	Area (m ²)	Total Population*	Harmful Effects Statistics**			Number of People Above IA Guideline Level***			
					HA	HSD	IHD	Road 53dB Lden	Road 45dB Lnight	Railway 54dB Lden	Railway 44dB Lnight
SD_1	ROAD	15	325,600	4,181.36	733.14	242.48	1	3,560.02	4,181.36	-	-
SD_2	ROAD	15	215,800	2,609.47	470.75	158.76	2	2,366.8	2,609.46	-	-
SD_3	ROAD	15	79,300	1,421.68	203.6	46.14	5	1,078.89	872.67	-	-
SD_4	ROAD	15	151,700	2,112.57	446.79	143.54	3	1,914.41	1,957.46	-	-
SD_5	RAIL (Luas)	15	51,700	981.11	237.65	145.2	-	-	-	781.3	854.78
SD_6	ROAD	15	69,800	868.97	156.77	50.99	6	752.07	859.39	-	-
SD_7	ROAD	15	68,500	739.47	146.15	47.61	7	716.01	690.43	-	-
SD_8	ROAD	15	58,400	669.35	101.64	32.43	8	518.35	669.35	-	-
SD_9	ROAD	15	157,400	1,685.89	401.73	138.06	4	1,622.51	1,680.72	-	-
SD_10	RAIL (Luas)	15	108,100	1,559.44	299.79	153.6	-	-	-	1,267.06	1,368.87

* Total population inside all Most Important Areas (MIAs) associated with the Priority Important Area (PIA)

** The harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building

*** The total population that are exposed to noise levels above the Important Areas noise limit value (see Section 6.4) within the MIA(s) associated with the PIA

Table 102: SDCC: Priority Important Area (PIA) Summary (2)

PIA	Source	MIA Criterion (People HA per 100m ²)	Area (m ²)	Total Population*	Harmful Effects Statistics**			Percentage Population***	Percentage Harmful Effects****		
					HA	HSD	IHD		HA	HSD	IHD
SD_1	ROAD	15	325,600	4,181.36	733.14	242.48	1	1.5%	2.8%	3.3%	3.6%
SD_2	ROAD	15	215,800	2,609.47	470.75	158.76	2	0.9%	1.8%	2.2%	2.2%
SD_3	ROAD	15	79,300	1,421.68	203.6	46.14	5	0.5%	0.8%	0.6%	1.0%
SD_4	ROAD	15	151,700	2,112.57	446.79	143.54	3	0.8%	1.7%	2.0%	2.2%
SD_5	RAIL (Luas)	15	51,700	981.11	237.65	145.2	-	0.4%	11.9%	13.4%	-
SD_6	ROAD	15	69,800	868.97	156.77	50.99	6	0.3%	0.6%	0.7%	0.7%
SD_7	ROAD	15	68,500	739.47	146.15	47.61	7	0.3%	0.6%	0.6%	0.6%
SD_8	ROAD	15	58,400	669.35	101.64	32.43	8	0.2%	0.4%	0.4%	0.4%
SD_9	ROAD	15	157,400	1,685.89	401.73	138.06	4	0.6%	1.5%	1.9%	2.1%
SD_10	RAIL (Luas)	15	108,100	1,559.44	299.79	153.6	-	0.6%	15.1%	14.2%	-

* Total population inside all Most Important Areas (MIAs) associated with the Priority Important Area (PIA)

** The harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building

*** Percentage of the total population inside all MIAs associated with the PIA from the total population in the APA administrative area

**** Percentage of the total harmful effect inside all MIAs associated with the PIA from the harmful effects of the APA administrative area

Table 103: SDCC: Priority Important Area (PIA) Summary (Road Noise – All Sources)

PIA	Source	Number of People in Noise Exposure Band (dB L _{den})					Number of People in Noise Exposure Band (dB L _{night})				
		55-59	60-64	65-69	70-74	>=75	50-54	55-59	60-64	65-69	>=70
SD_1	ROAD	1,135.21	2,333.97	646.4	66.55	0	2,756.87	1,073.12	147.67	0	0
SD_2	ROAD	981.75	1,053.54	383.2	186.9	4.39	1,391.58	576.78	302.58	28.79	0
SD_3	ROAD	265.05	227.89	506.73	0	0	539.23	118.5	0	0	0
SD_4	ROAD	368.49	856.12	278.02	226.13	195.92	871.99	393.34	156.9	207.55	99.19
SD_6	ROAD	276.55	381.32	108.26	49.34	19.8	488.14	147.7	64.19	24.75	4.95
SD_7	ROAD	210	105.91	14.95	167.77	55.54	162.22	22.54	74.94	155.94	0
SD_8	ROAD	255.8	370.08	14.95	0	0	381.55	69.27	0	0	0
SD_9	ROAD	251.84	474.12	344.06	355.65	179.92	315.12	481.47	313.02	313.8	11.4

Table 104: SDCC: Priority Important Area (PIA) Summary (Rail Noise – All Sources)

PIA	Source	Number of People in Noise Exposure Band (dB L _{den})					Number of People in Noise Exposure Band (dB L _{night})				
		55-59	60-64	65-69	70-74	>=75	50-54	55-59	60-64	65-69	>=70
SD_5	RAIL	209.95	104.88	27.18	316.3	106.2	113.95	7.77	157.02	266.76	23.31
SD_10	RAIL	388.3	296.78	483.01	85.35	8.86	324.58	494.2	195.67	8.86	0

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14.10 Areas to be Preserved for Environmental Noise Quality

The approach and criteria used to identify Candidate Quiet Areas for the Agglomeration has been explained in **Section 7.3**, and the Candidate Quiet Areas are presented in **Section 7.3.2**. Those located within the South Dublin County Council administrative area are summarised in **Table 105** and shown in **Figure 100** presented in **Section 14.13**.

Investigations into whether there is an appropriate benefit to delimiting the Candidate Quiet Area as a Quiet Area may include consideration of sound pressure measurements, visitor experience, expert assessment, and other local community evaluation criteria (see **Section 7.4**).

Given the resources available it may not be possible to investigate all Candidate Quiet Areas summarised in **Table 105** during the implementation of the Noise Action Plan. Therefore, South Dublin County Council will aim to prioritise a shortlist of areas for initial focus. This selection process shall consider aspects such as the median noise level, population within 1,000m, size of the area and relevant local factors such as amenity/community value.

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Table 105: SDCC: Summary of Candidate Quiet Areas (CQAs)

CQA ID	Name	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
SDCC_16	DODDER VALLEY PARK	713244	728746	46,119	16,448	48	346	A
SDCC_42	ALLENTON PARK	709940	725653	59,498	11,385	44	46,474	A
SDCC_44		714113	727333	12,640	13,787	49	25	A
SDCC_67	TANDYS LANE PARK	702549	733615	67,051	14,949	46	17,329	A
SDCC_69		701861	733731	80,667	7,561	45	54,203	A
SDCC_78		713807	727180	10,950	13,635	48	104	A
SDCC_80	KILTIPPER PARK	708632	724921	458,749	11,800	42	312,964	A
SDCC_100		703246	733294	12,761	13,621	48	0	A
SDCC_102	DODDER VALLEY PARK	715010	729624	5,783	14,542	49	0	A

CQA Criteria: A – Absolute CQA, R – Relative CQA, * - Existing designated Quiet Area, # - APA requested CQA

14.11 Mitigation and Protection Measures and Actions

Environmental noise management measures are presented across the three policy principle categories covered by the **Noise Policy Statement**, together with a fourth supporting ‘General’ category as follows;

- General – Noise Management Measures
- Prevention – Noise Management Measures
- Protection – Noise Management Measures
- Mitigation – Noise Management Measures.

In some instances, measures do not necessarily stand in isolation and may be relevant for, or overlap, with other categories.

An overview of the general prevention, protection and mitigation measures that could be considered for the management of noise from road, rail and industry within the Agglomeration is presented within **Section 8**.

South Dublin County Council commits to undertaking an evaluation of each Priority Important Area including the identification of appropriate noise mitigation measures for each area. **Table 106** provides a summary of some of the potential noise mitigation measures that could be considered for each area.

It should be noted that the measures presented in **Table 106** are for consideration only and would need to be fully evaluated during the implementation of the Noise Action Plan to confirm their appropriateness and justification for each Priority Important Area.

Rail related potential measures and measures relating to national roads would need to be reviewed, discussed and agreed with Transport Infrastructure Ireland for the relevant Priority Important Areas.

Table 106: SDCC: Priority Important Area (PIA) Example Mitigation Measure Considerations

PIA	Source	Noise Reduction at Source	Noise Abatement Operating Procedures	Community Engagement and Responsible Actions	Operational Restrictions	Land-Use Planning and Management	Opportunities for Noise Barrier(s)
SD_1	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such as earth bunds, along 1km of the M50.
SD_2	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such as earth bunds, along 400m northbound and 1.4km southbound side of the M50.
SD_3	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	4km of roads, including Adamstown Avenue and Castlegate Way, in residential area with potentially limited opportunity for noise barriers.
SD_4	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such as low walls, along 800m of the N81. Also, traffic noise contributions at properties near to

PIA	Source	Noise Reduction at Source	Noise Abatement Operating Procedures	Community Engagement and Responsible Actions	Operational Restrictions	Land-Use Planning and Management	Opportunities for Noise Barrier(s)
							Cookstown Way, with potentially limited opportunities for noise barriers.
SD_5	RAIL	Increasing the Elasticity Track Superstructure	Train Scheduling	Noise Measurement and Reporting	Route Use Restrictions	Noise Barriers	400m of Luas Light Rail through an urban environment in the vicinity of properties on Old Blessington Road and Cookstown Way, with potentially limited opportunity for noise barriers
SD_6	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such as earth bunds and walls, along 450m of the M4.
SD_7	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such as earth bunds and walls, along 300m eastbound and 500m westbound side of the N4 - Lucan Bypass.

PIA	Source	Noise Reduction at Source	Noise Abatement Operating Procedures	Community Engagement and Responsible Actions	Operational Restrictions	Land-Use Planning and Management	Opportunities for Noise Barrier(s)
SD_8	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such as low walls, along 300m of the N7 - Naas Road. Also, traffic noise contributions at properties near to Old Naas Road with potentially limited opportunities for noise barriers.
SD_9	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such as earth bunds and walls, along 650m eastbound and 500m westbound side of the N81.
SD_10	RAIL	Increasing the Elasticity Track Superstructure	Train Scheduling	Noise Measurement and Reporting	Route Use Restrictions	Noise Barriers	1.5km section of Luas Light Rail through a Cheeverstown residential area, with potentially opportunity for noise barriers

14.12 Noise Action Plan Implementation

This Noise Action Plan is supported by a four-year programme for implementation (2024-2028), with progress reported to the EPA on an annual basis.

The Noise Action Plan is founded on a series of overarching noise policy principles detailed in the **Noise Policy Statement**, which is grounded in **Responsible Aims**.

Throughout the implementation of the Noise Action Plan, South Dublin County Council shall endeavour to further develop key measures and actions, which reflect these principles.

Implementation of these measures and actions is subject to resources, appropriate funding being made available and collaboration with relevant key stakeholders and infrastructure owners.

14.13 Figures

Figures supporting the strategic noise mapping results for South Dublin County Council are set out in the following section. The figures include a graphical representation of:

- Industry noise contours – carried out to facilitate engagement between South Dublin County Council and the EPA regarding the evaluation of issues related to industry regulation;
- the Most Important Areas – locations with the greatest concentration of harmful effects;
- the Priority Important Areas – Most Important Areas, or groups of Most Important Areas which will be addressed during the implementation of the Noise Action Plan; and
- the Candidate Quiet Areas identified as candidates to be preserved for their environmental noise quality, and those identified for investigation.

Figure 84: SDCC: Industry – Noise Exposures Exceeding 55 dB L_{den}

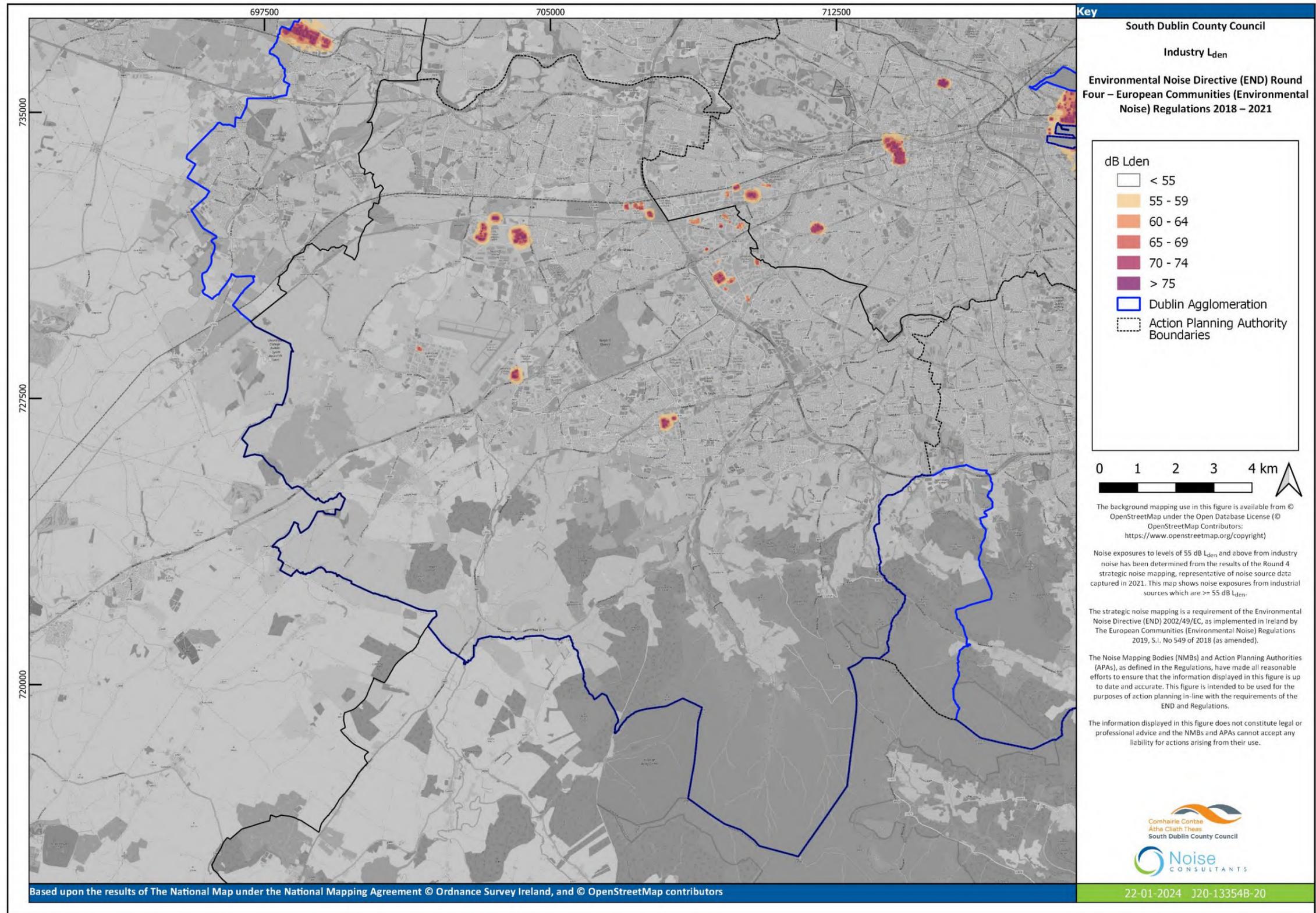


Figure 85: SDCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 1)

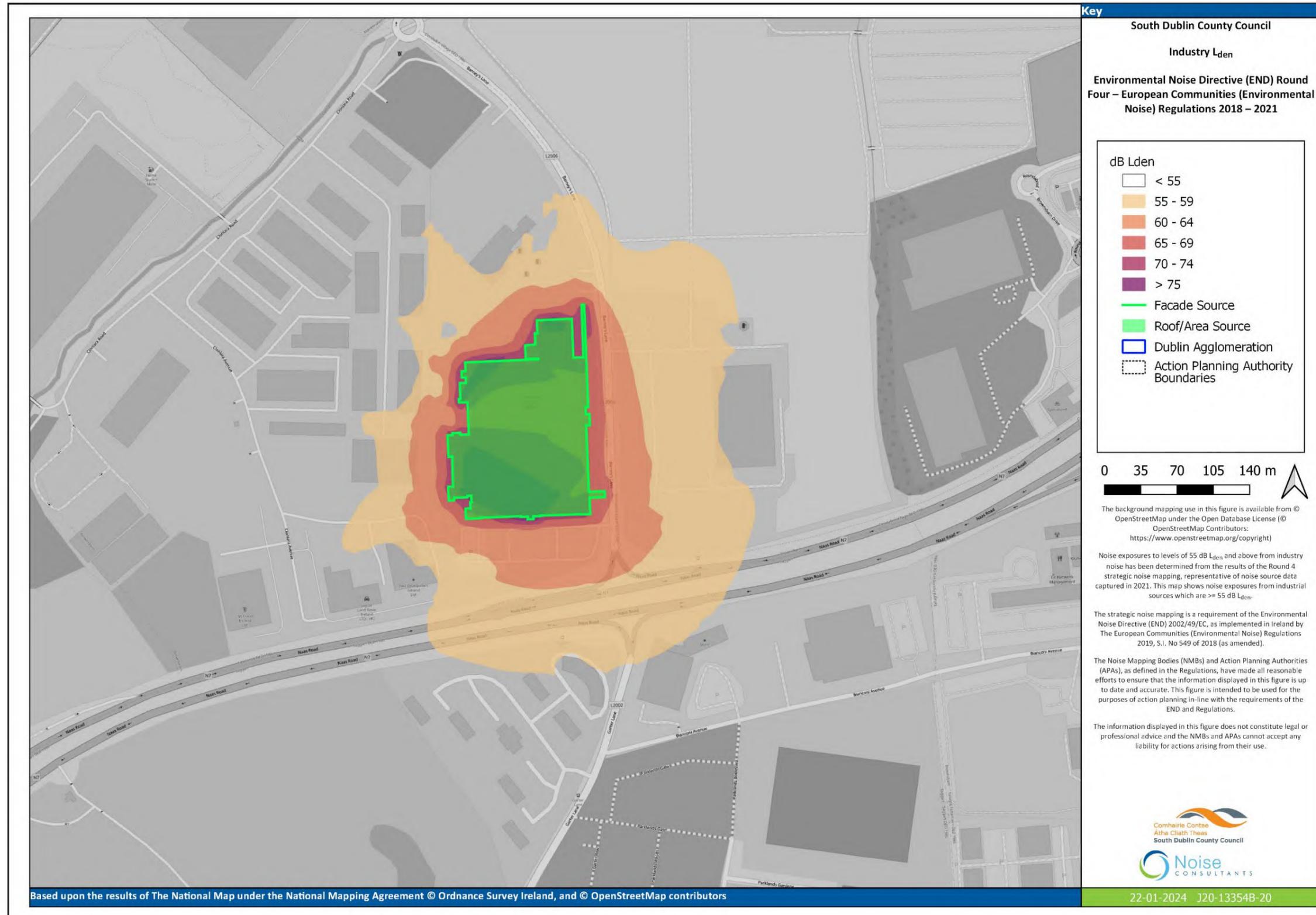


Figure 86: SDCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 2)

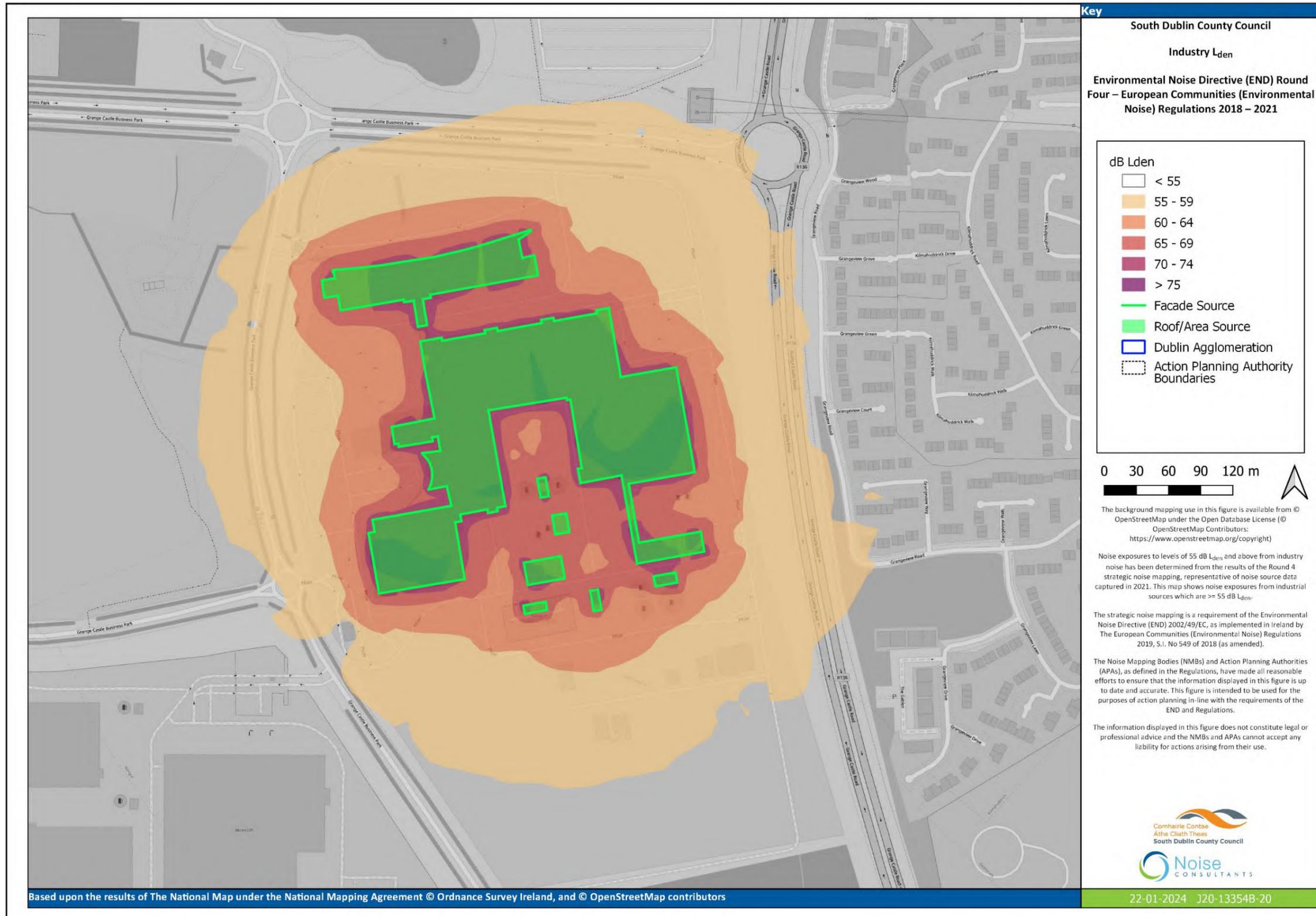


Figure 87: SDCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 3)

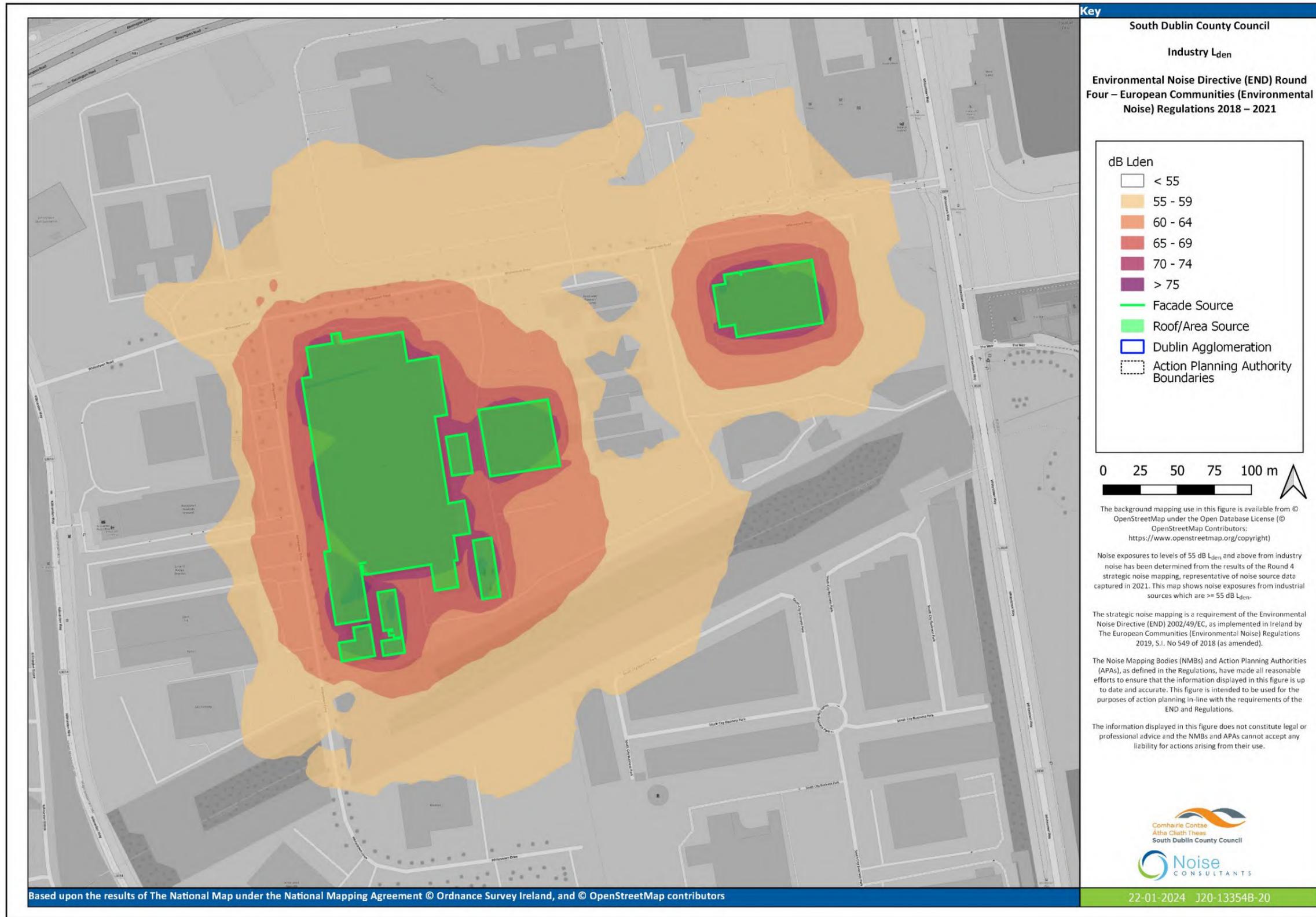


Figure 88: SDCC: Most Important Areas (MIAs)

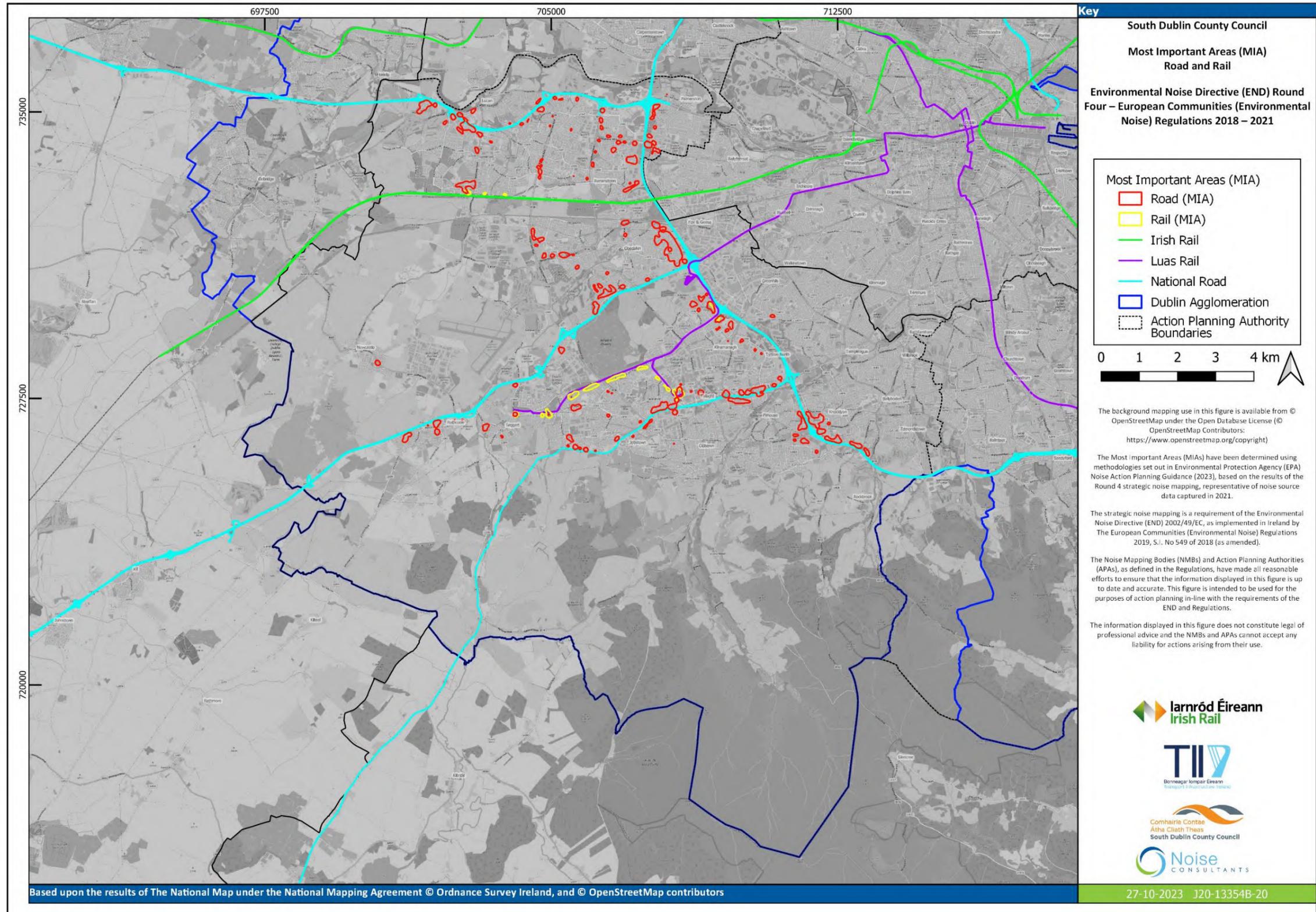


Figure 89: SDCC: Priority Important Areas (PIAs)

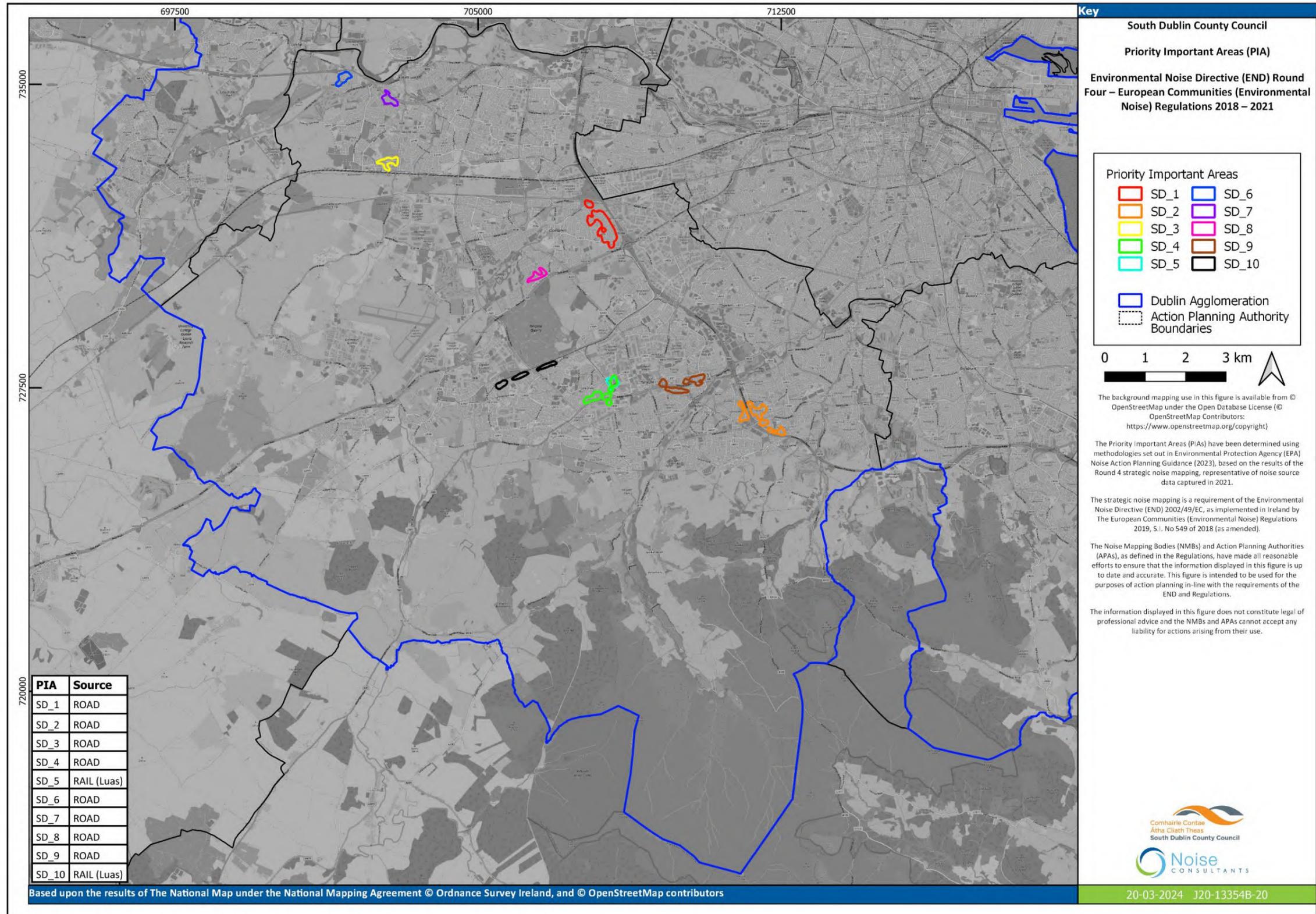


Figure 90: SDCC: Priority Important Area 1 (PIA 1)

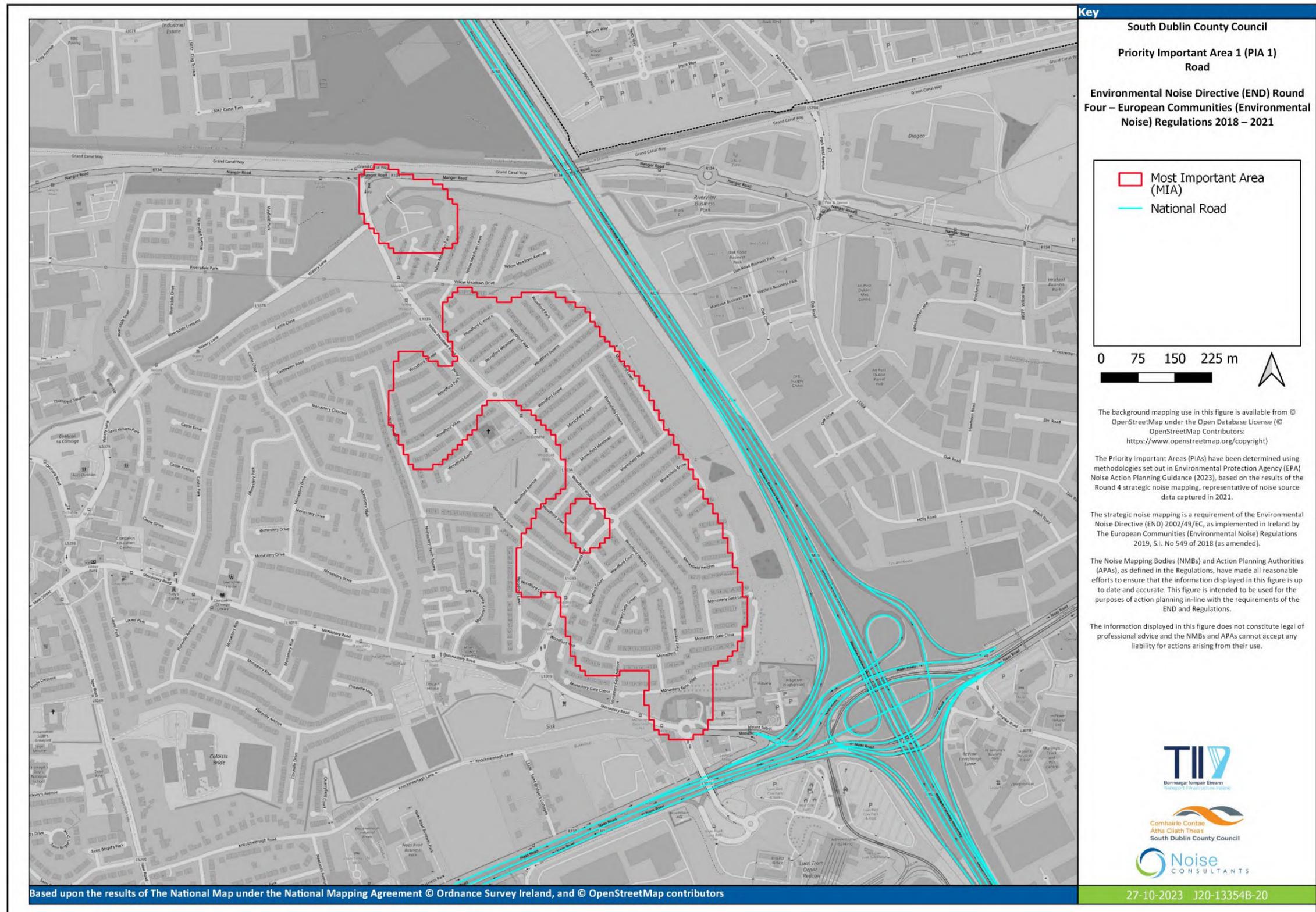


Figure 91: SDCC: Priority Important Area 2 (PIA 2)

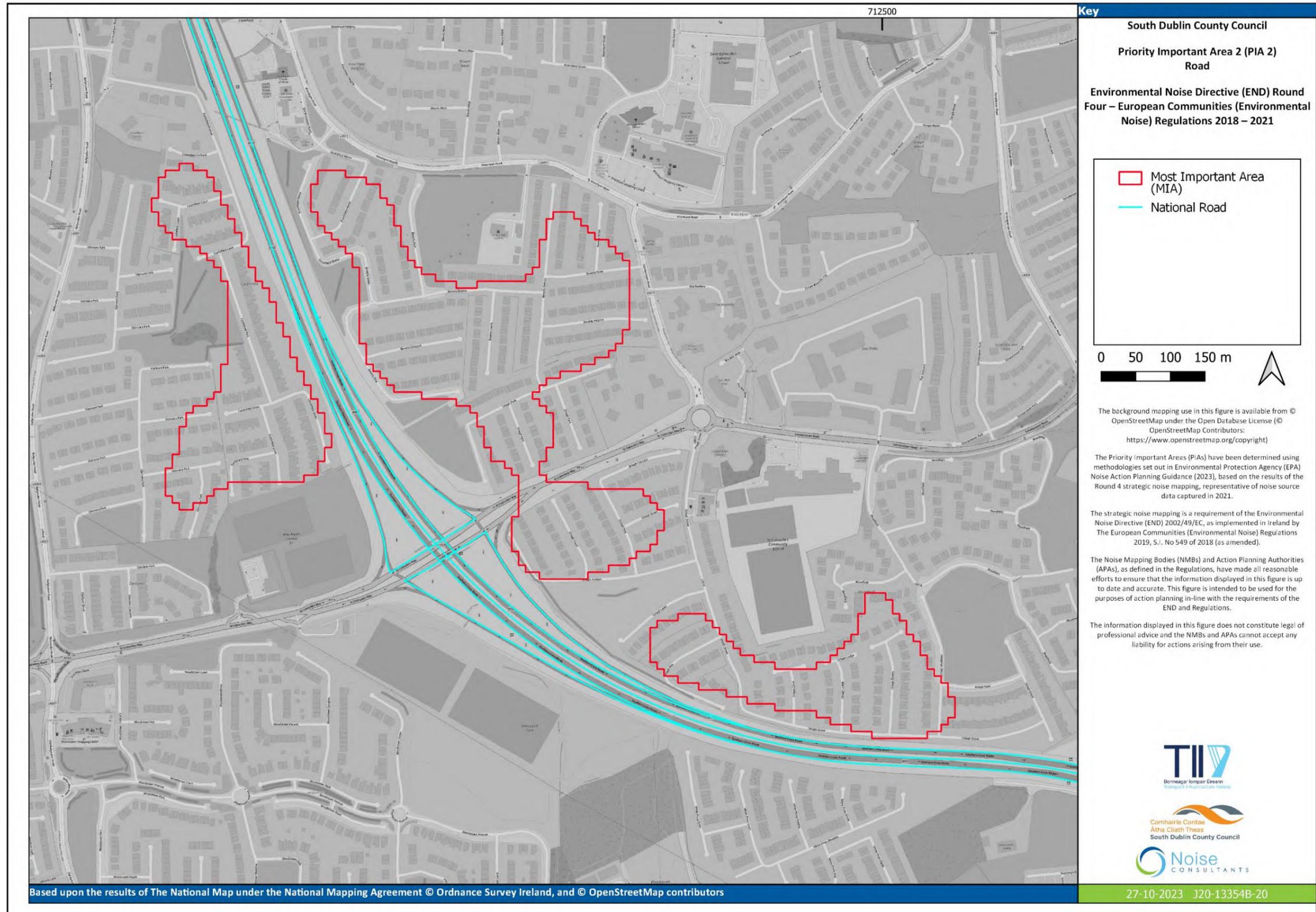


Figure 92: SDCC: Priority Important Area 3 (PIA 3)

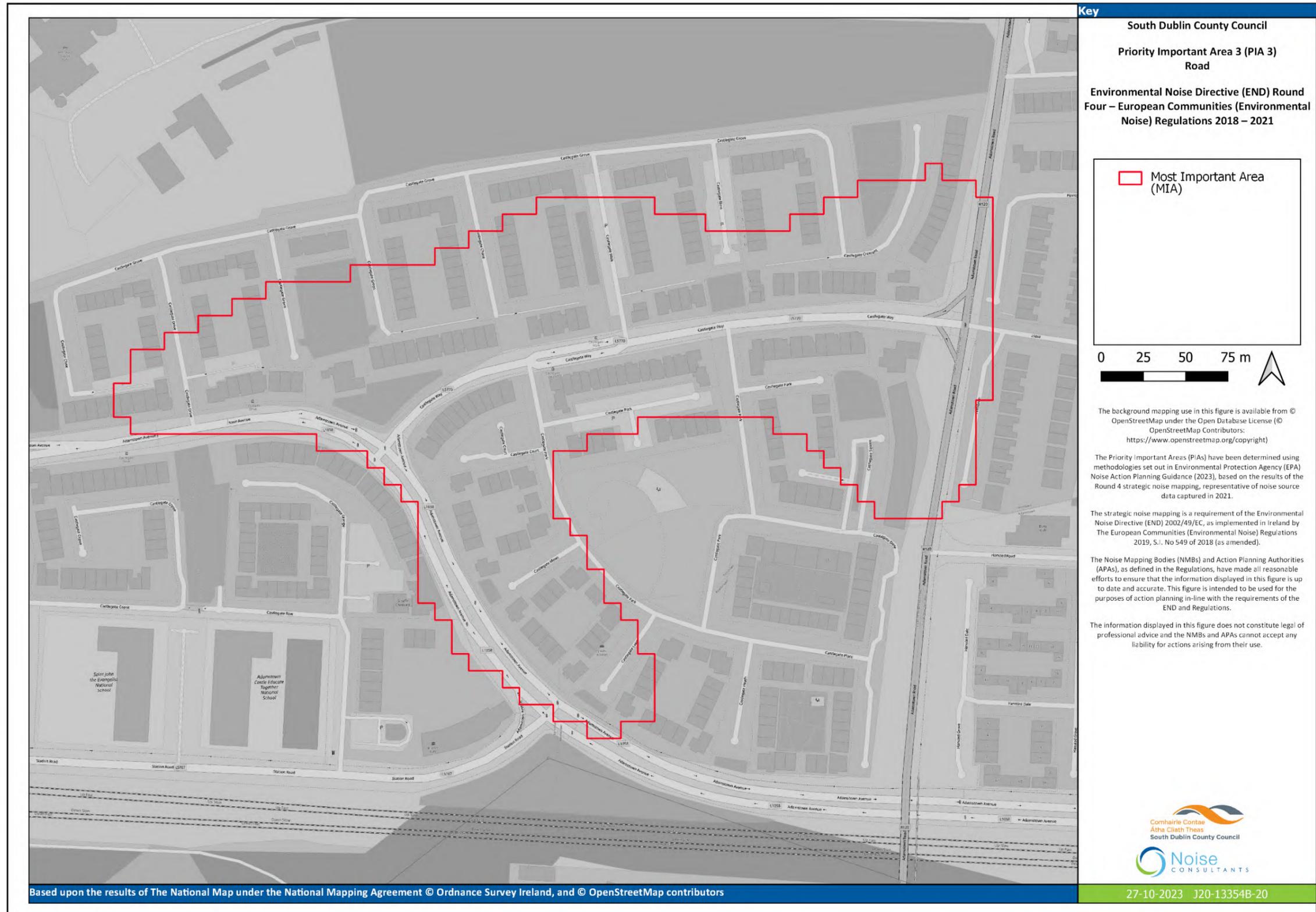


Figure 93: SDCC: Priority Important Area 4 (PIA 4)

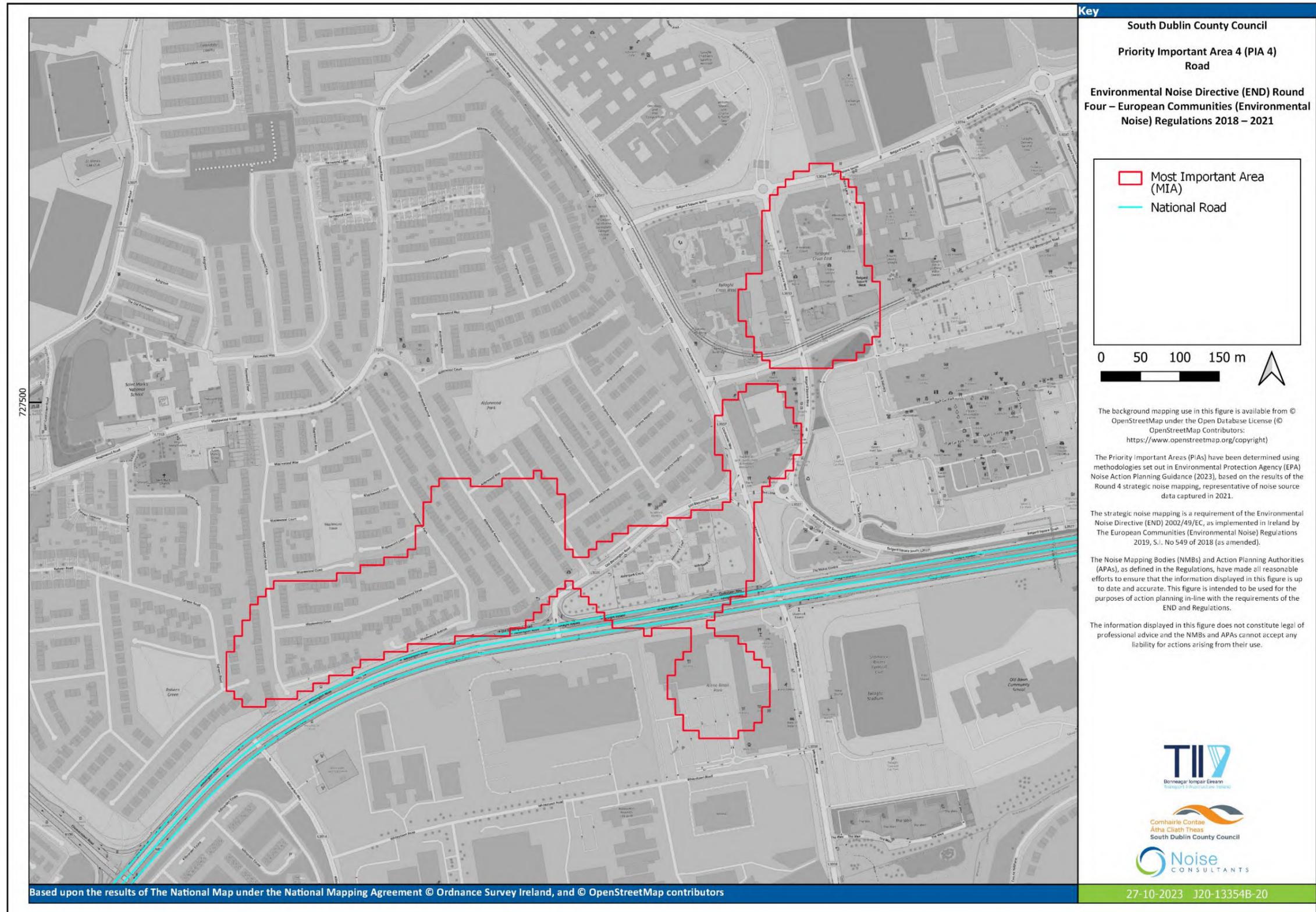


Figure 94: SDCC: Priority Important Area 5 (PIA 5)

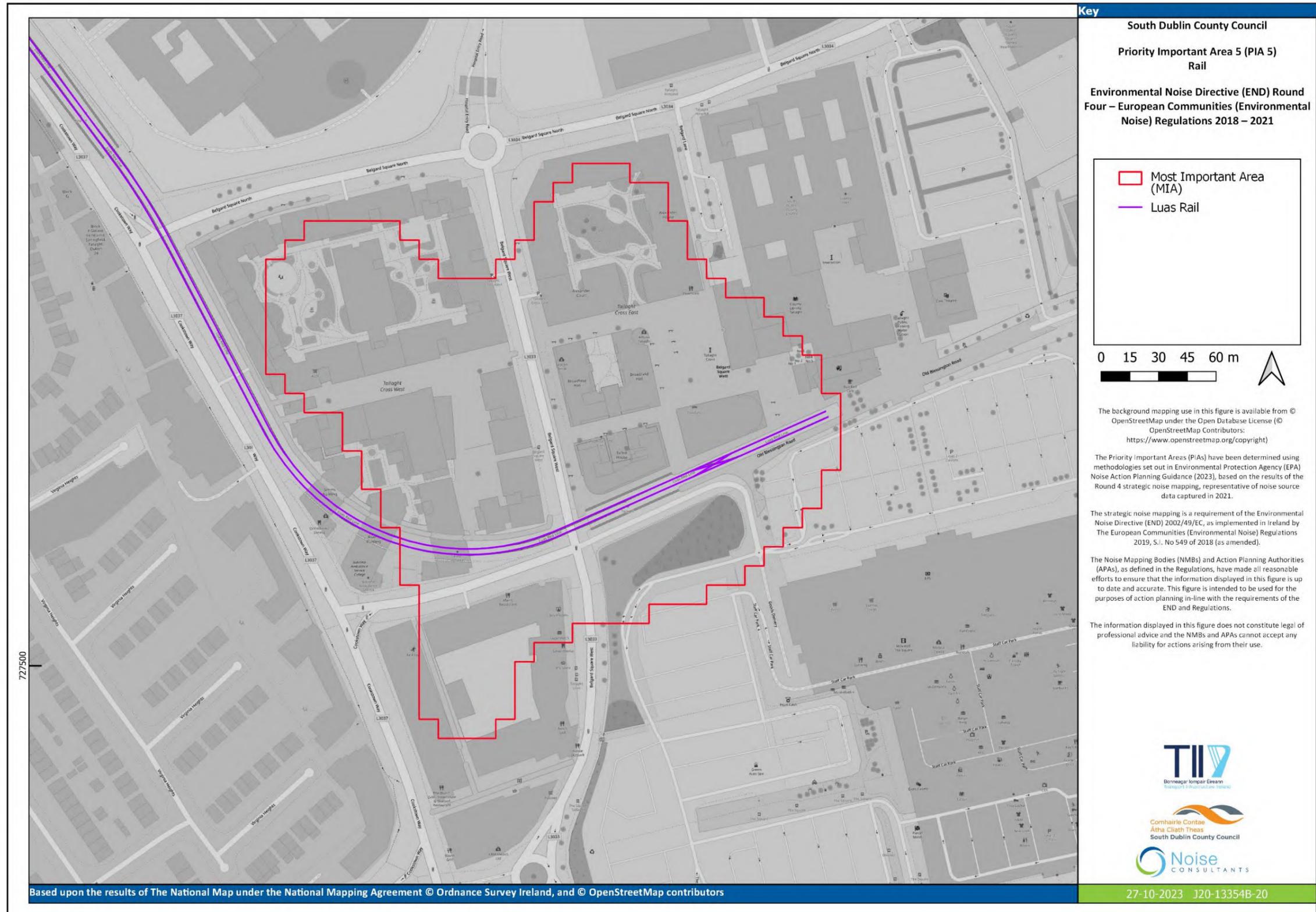


Figure 95: SDCC: Priority Important Area 6 (PIA 6)

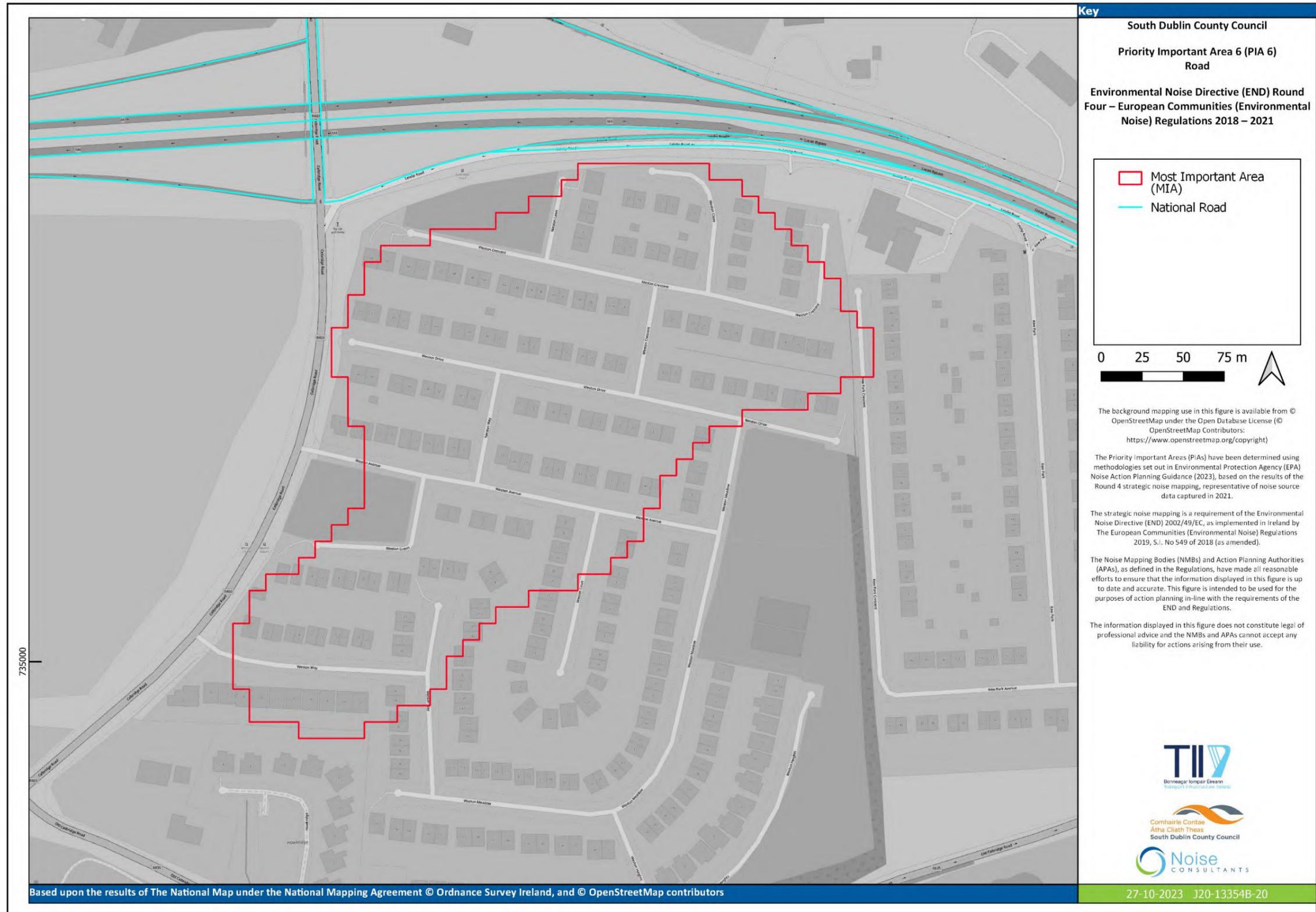


Figure 96: SDCC: Priority Important Area 7 (PIA 7)

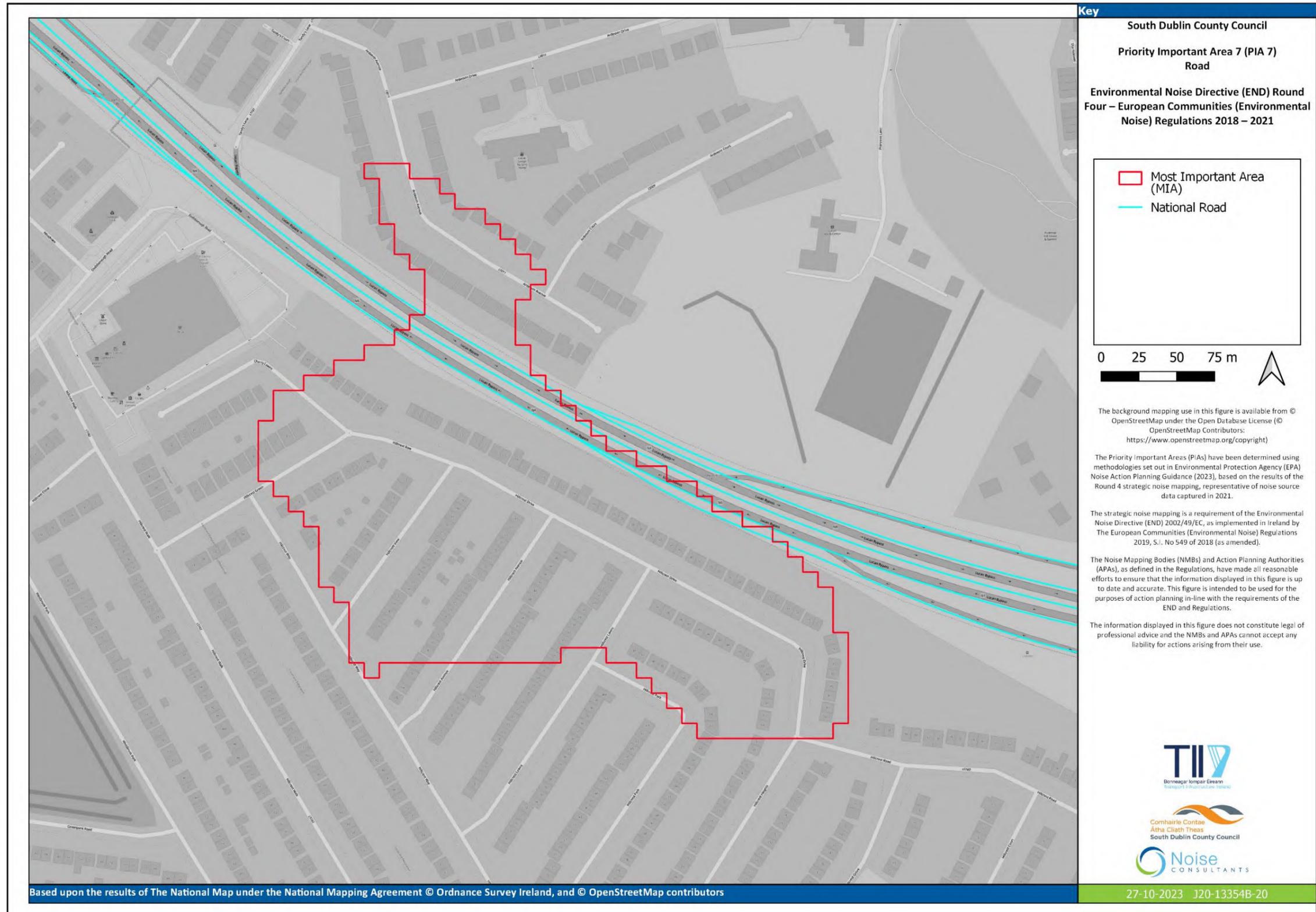


Figure 97: SDCC: Priority Important Area 8 (PIA 8)

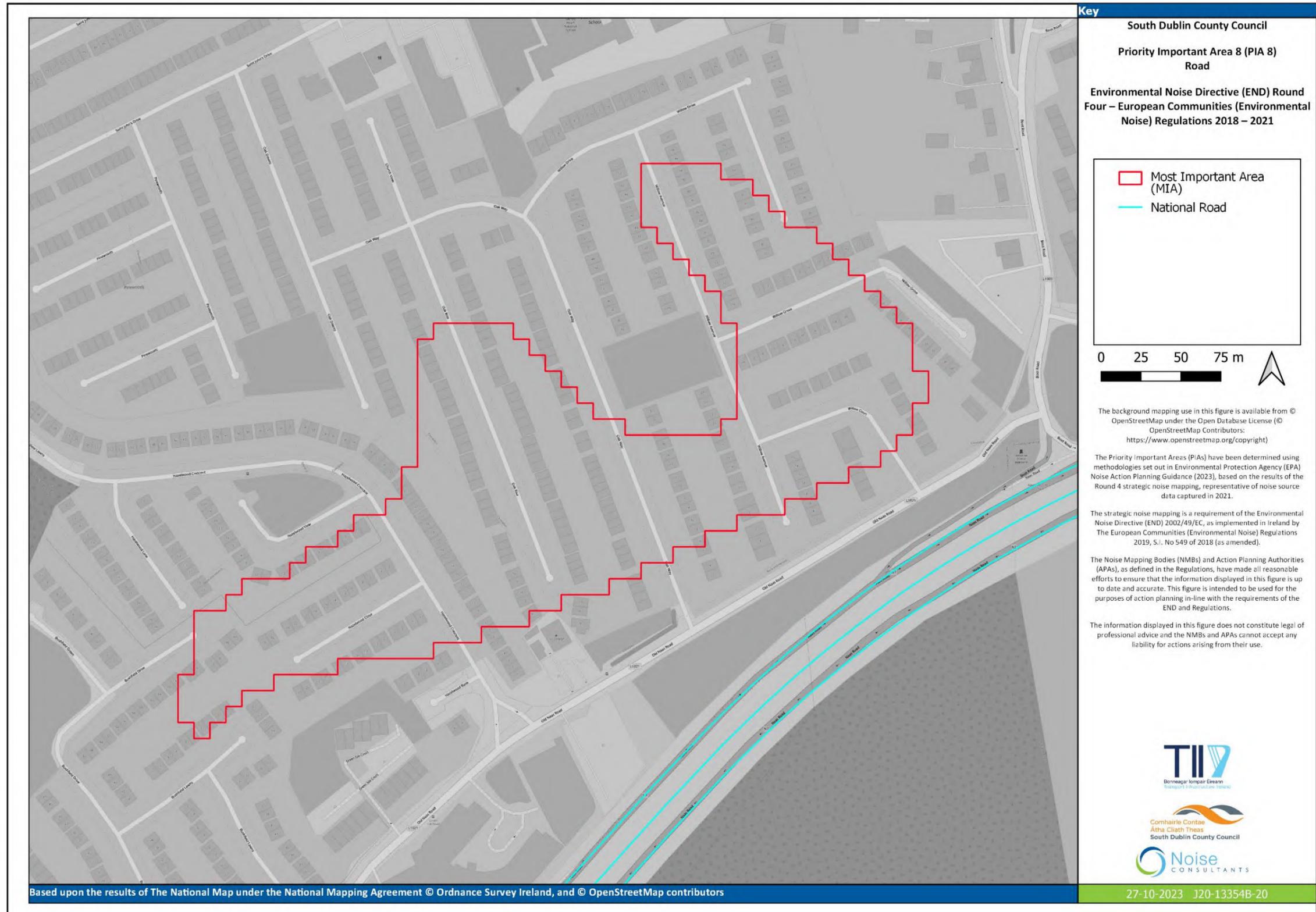


Figure 98: SDCC: Priority Important Area 9 (PIA 9)

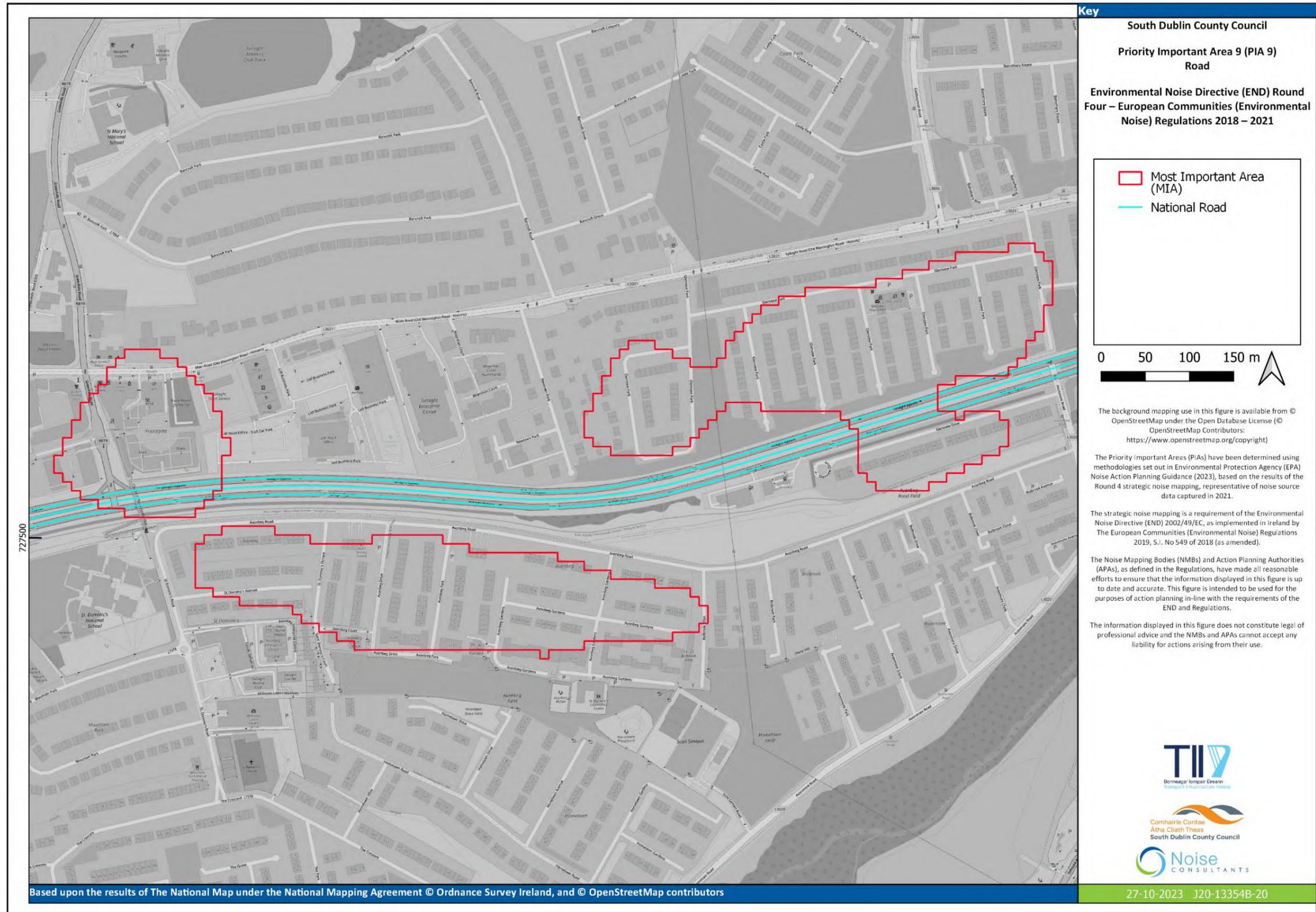


Figure 99: SDCC: Priority Important Area 10 (PIA 10)

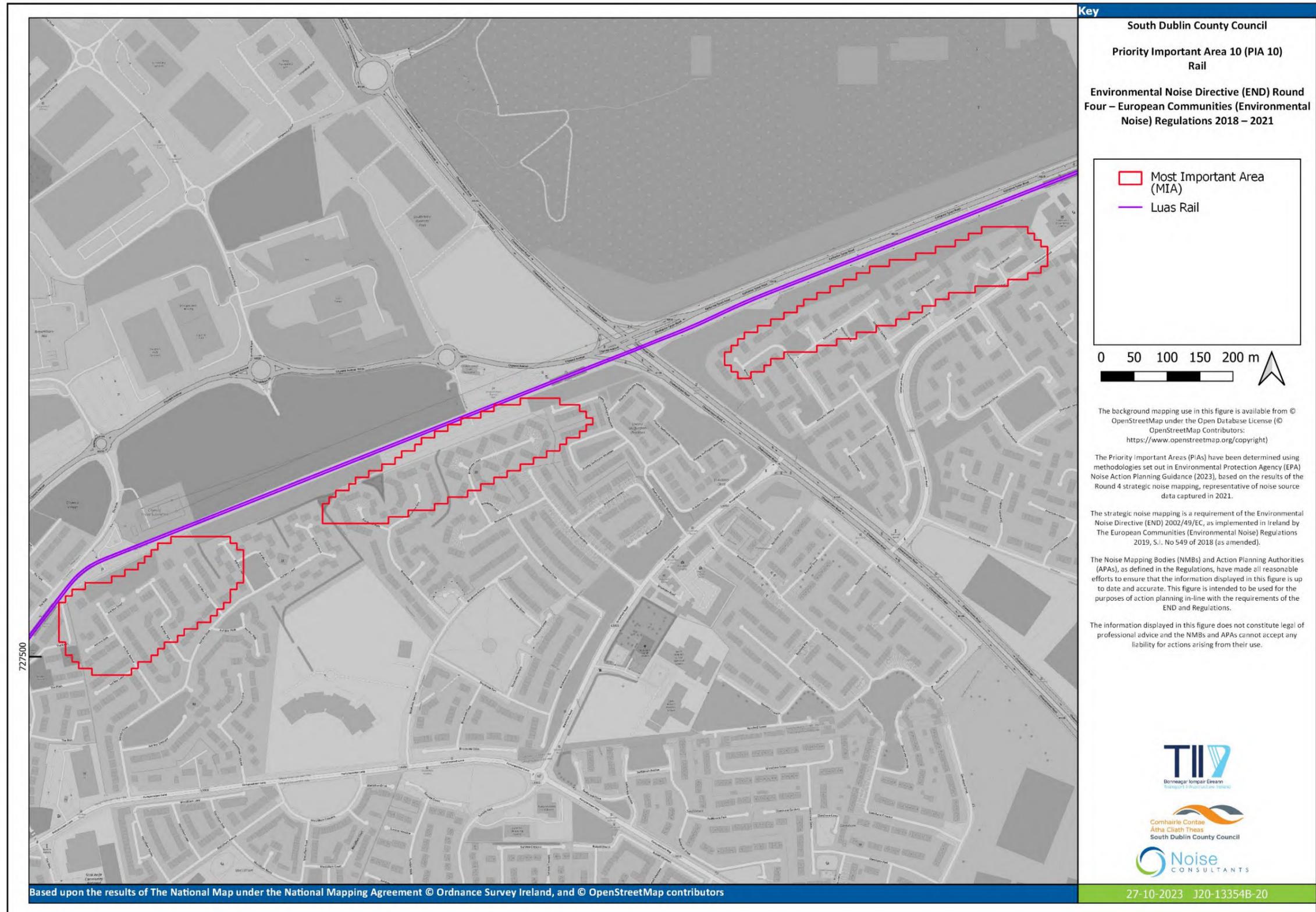
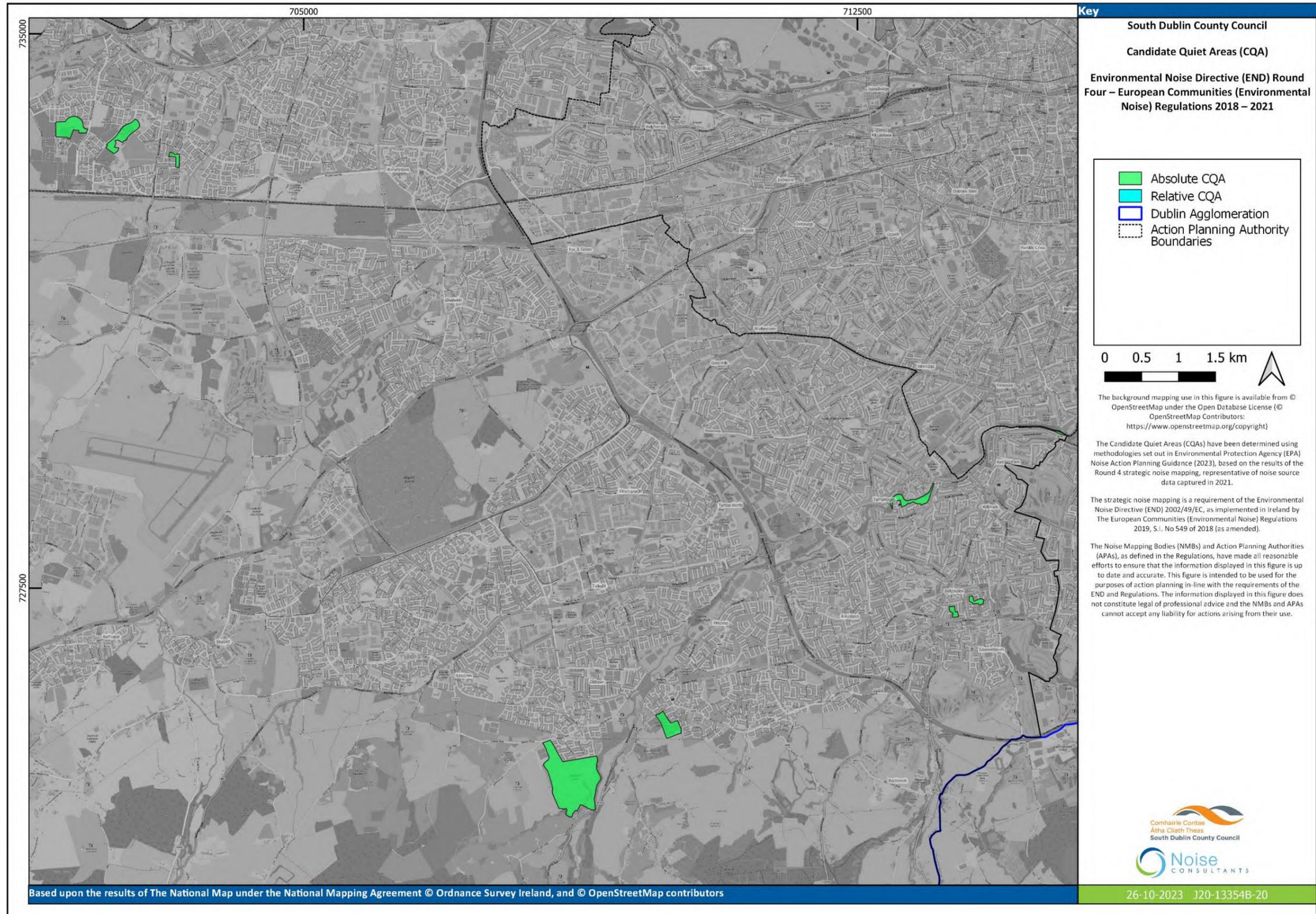


Figure 100: SDCC: Candidate Quiet Areas (CQAs)



15 Wicklow County Council

15.1 Introduction

Section 1 – Section 9 of this Noise Action Plan sets out the overarching principles of the Noise Action Plan process, including the existing international, national and regional noise management legislation and guidance, a description of the noise mapping process, and methodologies advocated in the EPA Guidance for identifying and addressing the most important areas, as established by the strategic noise mapping.

This section presents the results of the Noise Action Plan process specifically for the Wicklow County Council administrative area within the Agglomeration and sets out the considerations and actions that are specific to Wicklow County Council.

The referenced Action Planning Authority (APA) in this section is Wicklow County Council.

This section includes details of:

- contact details;
- the APA's consultation process;
- the APA's historical noise action planning process;
- the APA specific noise management policy and guidance;
- the APA specific plans, projects and strategies relevant to noise;
- the results of the strategic noise mapping;
- the areas to be subject to noise management activities ('Priority Important Areas' (PIAs));
- the areas to be considered for preservation for environmental noise quality ('Candidate Quiet Areas' (CQAs));
- the mitigation and protection measures and actions; and
- associated graphical figures.

15.1.1 Name and Contact Details for Responsible Authority

Wicklow County Council

County Buildings

Whitegates

Wicklow Town

Co. Wicklow

A67FW96

Tel. 0404 20100

Fax: 0404 67792

15.2 Consultation

15.2.1 Stakeholder Consultation

A Period of public consultation will be completed on this draft Noise Action Plan. A summary of the public consultation will be set out in the final Noise Action Plan.

15.3 Review of Noise Action Plan(s)

15.3.1 Round 3 Noise Action Plan (2018-2023)

The Round 3 Noise Action Plan centres on road traffic noise, identified as the major noise source in the Wicklow County Council area based on the strategic noise maps.

Many actions initiated in the past three Noise Action Plans will persist and be reaffirmed in this Noise Action Plan. The current and past policies, as well as the direction regarding the principles of avoidance, prevention, and reduction, where necessary, on a prioritised basis of harmful effects, including annoyance, due to long-term exposure to environmental noise, will continue to guide the implementation of the actions.

A summary of the actions undertaken over the course of the Round 3 Noise Action Plan are set out below;

- road re-surfacing and repairs.
- completion of Round 4 strategic noise mapping.
- progress on cycle routes, BusConnects, bike share schemes and the EV fleet expanded.
- engagement with the Planning Department in the preparation of the Wicklow County Development Plan 2022 – 2028 regarding strengthening policy on Environmental Noise.
- continue the assessment of areas identified as requiring further assessment for mitigation measures.
- carry out yearly reviews of the Action Plan in order to assess progress and whether new developments need to be included in the Noise Action Plan.

15.4 Local Noise Management Policy and Guidance

15.4.1 Wicklow County Development Plan 2022-2028

The Wicklow County Development Plan is a development framework for actions over the six years to 2028. The strategy brings through national and regional objectives related to noise within Chapter 15 Waste & Environmental Emissions to an environmentally sustainable carbon neutral economy:

“To implement the Wicklow County Council Noise Action Plan 2018-2023 (and any subsequent Plan) in order to avoid, prevent and reduce the harmful effects, including annoyance, due to environmental noise exposure.”

15.5 Relevant Plans, Projects and Strategies

Several transport infrastructure projects are planned for the Wicklow County Council administrative area during the life of the Noise Action Plan. While not their primary purpose, they will have the potential to impact on the noise environment both positively and negatively.

15.5.1 N11/M11 Bus Priority Interim Scheme

The severity of traffic congestion issues on the N11/M11, particularly at peak travel times, requires an early intervention to start addressing the problems on the corridor.

The N11/M11 Bus Priority Improvement Scheme (BPIS) seeks to assess the feasibility of providing bus lanes on the N11/M11 corridor. The project is a multi-authority project involving Transport Infrastructure Ireland, the National Transport Authority, Wicklow County Council and Dún-Laoghaire Rathdown County Council.

The overarching objective of N11/M11 BPIS is to formulate a proposal for the implementation of bus priority measures, in both directions, during peak periods on the N11/M11 national road. These priority facilities allow buses and coaches to navigate less congested traffic lanes, aiming to reduce the current unsustainable reliance on private cars. Where feasible, it is anticipated that the N11/M11 BPIS could be considered for implementation ahead of the larger and more comprehensive N11/M11 Junction 4 to Junction 14 Improvement Scheme, which is concurrently being progressed by Wicklow County Council

The N11/M11 BPIS is examining the feasibility of providing dedicated bus lanes along the section of existing N11/M11 route extending from Loughlinstown roundabout in the north to N11 Junction 9 (Glenview) in the south. While it is desirable that the provided lanes would be continuous, some level of discontinuity may be considered where the impacts to adjacent constraints by providing full continuity would be considered excessive or disproportionate, within the context of an interim scheme.

This section of the N11/M11 corridor traverses two local authorities, with the northern portion of the scheme located within the boundary of Dún Laoghaire-Rathdown County Council and the remaining extent within Wicklow County Council.

The N11/M11 route is identified within the National Transport Authority's Transport Strategy for the Greater Dublin Area 2016 – 2035 (GDA Strategy) as a 'Regional Corridor' as part of the 'Core Bus Network'. As outlined in the GDA Strategy, in order to develop an efficient, reliable and effective bus system, the core bus network should be developed to achieve:

- Continuous priority for bus movement on the portions of the Core Bus Network;
- Enhanced bus lane provisions on these corridors;
- Removal of current delays on the bus network, enabling the bus to provide a faster alternative to car traffic along these routes;

A more efficient core bus system with faster bus journeys means that more people can be moved with the same level of vehicle and driver resources.

15.6 Other Relevant Plans, Studies and Measures

15.6.1 Dublin Region Air Quality Plan, 2021

The Dublin Region Air Quality Plan sets out a series of measures which are aimed at improving air quality. These measures will also help to reduce traffic noise by reducing the volume of traffic in the County. The measures include active travel, parking restrictions and remote working.

15.7 Summary of the Results of the Noise Mapping Process

The Round 4 noise exposure statistics and harmful effects assessment are presented below for the Wicklow County Council administrative area. The statistics at Agglomeration level are presented in **Section 5.2**.

Exposure statistics are assessed independently for each noise source, and are summarised for the noise metrics across the noise exposure bands defined in the Regulations. The population exposure statistics have been rounded to the nearest 100 as required by the Regulations.

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15.7.1 Exposure Statistics

Table 107: WCC: Number of People in Dwellings – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	6,400	300	0
60-64	4,000	300	0
65-69	1,400	200	0
70-74	800	100	0
>=75	100	0	0

*exposure statistics rounded to the nearest 100.

Table 108: WCC: Percentage of Total Population Exposed to the Noise Source – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	21 %	1 %	0 %
60-64	13 %	1 %	0 %
65-69	5 %	1 %	0 %
70-74	3 %	0 %	0 %
>=75	0 %	0 %	0 %

Table 109: WCC: Number of School Buildings (& Hospital Buildings) – L_{den}

Noise Exposure (dB L _{den})	All Roads	All Railway	All Industry
55-59	12 (00)	01 (00)	00 (00)
60-64	08 (00)	01 (00)	00 (00)
65-69	00 (00)	00 (00)	00 (00)
70-74	00 (00)	00 (00)	00 (00)
>=75	01 (00)	00 (00)	00 (00)

Table 110: WCC: Number of People in Dwellings – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	3,900	200	0
55-59	1,300	200	0
60-64	900	200	0
65-69	200	0	0
>=70	0	0	0

*exposure statistics rounded to the nearest 100.

Table 111: WCC: Percentage of Total Population Exposed to the Noise Source – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	13 %	1 %	0 %
55-59	4 %	1 %	0 %
60-64	3 %	1 %	0 %
65-69	1 %	0 %	0 %
>=70	0 %	0 %	0 %

Table 112: WCC: Number of School Buildings (& Hospital Buildings) – L_{night}

Noise Exposure (dB L _{night})	All Roads	All Railway	All Industry
50-54	08 (00)	00 (00)	00 (00)
55-59	02 (00)	00 (00)	00 (00)
60-64	00 (00)	00 (00)	00 (00)
65-69	01 (00)	00 (00)	00 (00)
>=70	00 (00)	00 (00)	00 (00)

Table 113: WCC: Total number of Noise Sensitive Buildings

Noise Sensitive Building	Number of Noise Sensitive Buildings
Schools	32
Hospitals	0

15.7.2 Harmful Effects

The exposure of harmful effects is assessed independently for each source. Where the same people are simultaneously exposed to different noise sources, the harmful effects may not, in general, be cumulated, however can be compared to identify proportional significance.

Table 114 presents the calculated harmful effects in the case of road traffic noise for the Agglomeration, and **Table 116** presents the calculated harmful effects from railway noise. As shown in **Table 115** the statistical proportion of the total population with harmful effects associated with road traffic noise is broadly consistent with the Agglomeration.

The statistical proportion of the total population with harmful effects associated with rail noise in the Kildare County Council administrative area, as shown in **Table 117**, is broadly half of that across the Agglomeration. This is reflective of the lower concentration of rail infrastructure in the area.

Table 114: WCC: Breakdown of Harmful Effects in the Case of Road Noise – Total Number of People – All Sources

Harmful Effect	Dublin Agglomeration	Wicklow County Council
Ischaemic Heart Disease	101.22	2.37
Highly Annoyed	108,380.07	2,546.36
Highly Sleep Disturbed	28,995.87	659.61
<u>Total Populations</u>		
Dublin Agglomeration: 1,355,967.68,		
APA Proportions within Agglomeration: Dublin City Council: 501,896.48, Fingal County Council: 297,128.60, South Dublin County Council: 278,984.11, Dún Laoghaire County Council: 210,520.78, Kildare County Council: 37,447.86, Wicklow County Council: 29,989.86		

Table 115: WCC: Breakdown of Harmful Effects in the Case of Road Noise – % of Population – All Sources

Harmful Effect	Dublin Agglomeration	Wicklow County Council
Ischaemic Heart Disease	0.01%	0.01%
Highly Annoyed	7.99%	8.49%
Highly Sleep Disturbed	2.14%	2.20%

Table 116: WCC: Breakdown of Harmful Effects in the Case of Railway Noise – Total Number of People – All Sources

Harmful Effect	Dublin Agglomeration	Wicklow County Council
Highly Annoyed	21,051.97	232.30
Highly Sleep Disturbed	10,986.94	118.66

Table 117: WCC: Breakdown of Harmful Effects in the Case of Railway Noise – % of Population – All Sources

Harmful Effect	Dublin Agglomeration	Wicklow County Council
Highly Annoyed	1.55%	0.77%
Highly Sleep Disturbed	0.81%	0.40%

15.8 Noise Management Activities (Industry)

The industry sites included within the Agglomeration strategic noise maps are limited to Industrial Emission (IE) sites as regulated by the EPA under the IPPC Directive 96/61 EC, and any ports. Strategic noise maps of the industrial noise emissions at agglomeration level are shown in **Figure 7** and **Figure 8** listed in **Section 5.2**. Maps for Wicklow County Council administrative area are provided in **Figure 101** and **Figure 102**, in **Section 11.13**.

The data upon which the industry noise emission models have been developed includes default values, therefore model outputs are a strategic representation of industry noise levels, rather than being site specific.

The Noise Action Plan does not include any Priority Important Areas for industry mainly due to the lower exposure statistics reported. Notwithstanding, there will be a need for ongoing management of noise issues from industrial sites through noise complaints, development and licence application. In this regard the APA may use the maps to support this process and should continue to consult and collaborate with the EPA who have overall responsibility for site specific noise management of waste, Industrial Emission (IE) and Integrated Pollution Control (IPC) licensed sites.

15.9 Priority Important Areas

The methodology for identifying the Most Important Areas and the shortlist of Priority Important Areas, which will be subject to noise management activities, is set out in **Section 8.4**. The Priority Important Areas for Wicklow County Council are listed in **Table 118** and **Table 119**, which summarise a range of statistics and information for each area, as follows:

Table 118 presents the statistics for each Priority Important Area including population, details of the harmful effects and numbers of people exposed to noise levels above the Important Areas noise limit value.

Table 119 repeats the key statistics but presents the population and harmful effects statistics as a percentage of the total population of the Dún Laoghaire-Rathdown County Council administrative area.

Table 120 presents the number of people exposed to road traffic noise (L_{den} and L_{night}) in each road Priority Important Area broken down by noise exposure bands set out in the Regulations.

With reference to the noise management frameworks described in **Section 8.4**, a summary of potential noise mitigation measures for the Priority Important Area is given in **Table 122**. It should be noted that this table is not exhaustive and these and other measures may be considered at the Priority Important Area evaluation stage during the Noise Action Plan implementation.

Wicklow County Council will, subject to resources and funding, undertake an assessment of the noise mitigation measure options relating to the Priority Important Area within the life cycle of the Noise Action Plan. This will include discussions across relevant sections within Wicklow County Council, Iarnród Éireann and Transport Infrastructure Ireland in the case of rail Priority Important Areas.

Figures presenting the Most Important Areas and Priority Important Areas are included in **Section 11.13**.

- **Figure 103** shows the full set of Most Important Areas for Dún Laoghaire-Rathdown County Council and from which the shortlist of Priority Important Areas have been selected.
- **Figure 104** presents an overview of all the shortlisted Priority Important Areas in Dún Laoghaire-Rathdown County Council.
- **Figure 105** to **Figure 111** present a more detailed plan of each Priority Important Area.

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Table 118: WCC Priority Important Area (PIA) Summary (1)

PIA	Source	MIA Criterion (People HA per 100m ²)	Area (m ²)	Total Population*	Harmful Effects Statistics**			Number of People Above Important Areas Noise Limit Value***			
					HA	HSD	IHD	Road 53dB Lden	Road 45dB Lnight	Railway 54dB Lden	Railway 44dB Lnight
WCC_1	ROAD	15	74,600	793.31	150.58	50.58	0.17	699.8	793.31	-	-
WCC_2	ROAD	15	31,900	410.24	121.39	42.03	0.15	410.25	410.25	-	-
WCC_3	ROAD	15	9,000	159.32	28.64	8.88	0.03	141.28	147.29	-	-
WCC_4	ROAD	15	11,200	104.47	28.57	9.74	0.03	99.37	104.47	-	-
WCC_5	ROAD	15	7,900	86.27	13.99	4	0.01	77.6	84.24	-	-
WCC_6	ROAD	15	3,400	85.88	14.3	3.43	0.01	85.88	64.89	-	-
WCC_7	ROAD	15	6,300	77.22	16.64	5.57	0.02	60.68	77.22	-	-

* Total population inside all Most Important Areas (MIAs) associated with the Priority Important Area (PIA)

** The harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building

*** The total population that are exposed to noise levels above the Important Areas noise limit value (see Section 6.4) within the MIA(s) associated with the PIA

Table 119: WCC: Priority Important Area (PIA) Summary (2)

PIA	Source	MIA Criterion (People HA per 100m ²)	Area (m ²)	Total Population *	Harmful Effects Statistics **			Percentage Population ***	Percentage Harmful Effects ****		
					HA	HSD	IHD		HA	HSD	IHD
WCC_1	ROAD	15	74,600	793.31	150.58	50.58	0.17	2.6%	5.9%	7.7%	7.2%
WCC_2	ROAD	15	31,900	410.24	121.39	42.03	0.15	1.4%	4.8%	6.4%	6.3%
WCC_3	ROAD	15	9,000	159.32	28.64	8.88	0.03	0.5%	1.1%	1.3%	1.3%
WCC_4	ROAD	15	11,200	104.47	28.57	9.74	0.03	0.3%	1.1%	1.5%	1.3%
WCC_5	ROAD	15	7,900	86.27	13.99	4	0.01	0.3%	0.5%	0.6%	0.4%
WCC_6	ROAD	15	3,400	85.88	14.3	3.43	0.01	0.3%	0.6%	0.5%	0.4%
WCC_7	ROAD	15	6,300	77.22	16.64	5.57	0.02	0.3%	0.7%	0.8%	0.8%

* Total population inside all Most Important Areas (MIAs) associated with the Priority Important Area (PIA)

** The harmful effects presented in this table are determined from a statistical approach across the whole population covered by the noise maps, and should not be considered to be an accurate assessment of the possible health effects at any specific building

*** Percentage of the total population inside all MIAs associated with the PIA from the total population in the APA administrative area

**** Percentage of the total harmful effect inside all MIAs associated with the PIA from the harmful effects of the APA administrative area

Table 120: WCC: Priority Important Area (PIA) Summary (Road Noise – All Sources)

PIA	Source	Number of People in Noise Exposure Band (dB L _{den})					Number of People in Noise Exposure Band (dB L _{night})				
		55-59	60-64	65-69	70-74	>=75	50-54	55-59	60-64	65-69	>=70
WCC_1	ROAD	191.54	366.74	155.17	67.96	3.06	319.53	217.97	100	24.8	0
WCC_2	ROAD	0	0	169.06	207.92	33.26	0	76.67	289.21	44.35	0
WCC_3	ROAD	0	102.17	39.07	0	0	54.09	87.15	0	0	0
WCC_4	ROAD	2.55	25.5	12.75	56.1	2.55	25.5	7.65	33.15	30.6	0
WCC_5	ROAD	46.25	27.04	4.08	6.98	0	29.08	4.08	6.98	0	0
WCC_6	ROAD	31.5	10.5	10.5	12.39	0	10.5	10.5	12.39	0	0
WCC_7	ROAD	5.52	46.92	2.76	22.08	0	38.64	16.56	22.08	0	0

15.10 Areas to be Preserved for Environmental Noise Quality

The approach and criteria used to identify Candidate Quiet Areas for the Agglomeration has been explained in **Section 7.3**, and the Candidate Quiet Areas are presented in **Section 7.3.2**. Those located within the Wicklow County Council administrative area are summarised in **Table 121** and shown in **Figure 112** presented in **Section 15.13**.

Investigations into whether there is an appropriate benefit to delimiting the Candidate Quiet Area as a Quiet Area may include consideration of sound pressure measurements, visitor experience, expert assessment, and other local community evaluation criteria (see **Section 7.4**).

Given the resources available it may not be possible to investigate all Candidate Quiet Areas summarised in **Table 121** during the implementation of the Noise Action Plan. Therefore, Wicklow County Council will aim to prioritise a shortlist of areas for initial focus. This selection process shall consider aspects such as the median noise level, population within 1,000m, size of the area and relevant local factors such as amenity/community value.

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Table 121: WCC: Summary of Candidate Quiet Areas (CQAs)

CQA ID	Name	Easting	Northing	Area (m ²)	Pop. within 1,000m	Noise Level, L _{Aeq, 16hr} , dB	Area of CQA below 45 dB L _{Aeq, 16hr} (m ²)	CQA Criteria
WCC_2	Bray Head	727576	717645	38,855	4,556	40	34,412	A
WCC_6	Seafront Park	727256	718201	5,541	5,782	49	0	A
WCC_8	Kilruddery	726550	716244	11,501	5,548	45	5,909	A

CQA Criteria: A – Absolute CQA, R – Relative CQA, * - Existing designated Quiet Area, # - APA requested CA

15.11 Mitigation and Protection Measures and Actions

An overview of the general prevention, protection and mitigation measures that could be considered for the management of noise from road, rail and industry within the Agglomeration is presented within **Section 8**.

This section considers those measures in a local context, together with key local noise management related policy guidelines and local and regional projects and set out the framework that Wicklow County Council intends to follow to help manage and mitigate the effects of exposure to environmental noise.

The environmental noise management measures within the framework are presented across the three policy principle categories covered by the Noise Policy Statement, together with a fourth supporting 'General' category as follows;

- General – Noise Management Measures
- Prevention – Noise Management Measures
- Protection – Noise Management Measures
- Mitigation – Noise Management Measures.

In some instances, measures do not necessarily stand in isolation and may be relevant for, or overlap, with other categories.

Furthermore, the measures collectively support the Responsible Aims which underpin the Policy Statement. A summary of Responsible Aim that is achieved, or partially achieved, through the proposed measure is set out in **Table 122**.

When considering the broader framework of measures and actions aimed at mitigating exposure to environmental noise from the transport and industry sectors, it is important to emphasize that Wicklow County Council, in some instances, does not have exclusive ownership or influence over certain noise sources, areas, and the measures presented in this Noise Action Plan. Many of the measures and actions will require input, collaboration, and execution by other infrastructure owners, along with support from government departments and bodies through relevant legislation and funding.

In addition to third-party collaboration, the successful implementation of this Noise Action Plan will also depend on the availability of adequate resources to execute the proposed measures and actions.

The measures are described below across each of the four categories. The measures, and associated actions are presented in **Table 123**.

15.11.1 General – Noise Management Measures

General noise management measures cover a range of activities to support the implementation of the Noise Action Plan including other measures across the three policy principle categories.

Measure WCC_M1: Support the Development of National Noise and Other Related Policy and Guidance

At present there is no national policy relating specifically to noise other than specific objectives set out within a range of national plans and strategies such as Policy Objective 65 from the National Planning Framework 2040. Furthermore, there is no adopted consistent approach for Local Authorities to apply in the evaluation of noise issues at the planning application stage. Some have developed their own guidelines, and many apply the ProPG (2017) approach which is used within the UK. Development of national policy and guidelines will be the responsibility of the Department of Environment, Climate and Communications (DECC).

In addition to specific national policy and guidance relating to noise, other national policy and guidance can have an indirect impact on noise related issues. An example includes the National Speed Limit Review led by the Department of Transport and published in September 2023.

Wicklow County Council will actively support and engage with the development of national policy and guidance on the subject of noise and all related policy.

Measure WCC_M2: Noise Mapping and Action Planning Steering Group

It is proposed to continue collaborating with the EPA and other NMBs to co-ordinate the activities and actions for Noise Action Planning.

Measure WCC_M3: Noise Action Plan Working Group(s) - Action Planning Authorities and Transport Infrastructure Owners

Wicklow County Council will support the establishment of relevant noise working groups to co-ordinate and collaborate with other Dublin agglomeration APAs and the relevant NMBs (Transport Infrastructure Ireland) in respect of noise management issues in general and mitigation measures at a Priority Important Area level.

Measure WCC_M4: Annual Report to Environment Protection Agency (EPA)

Wicklow County Council will prepare an annual report for the EPA setting out progress made in respect of the implementation of the Noise Action Plan including the investigations of Priority Important Areas and implementation of noise mitigation measures for those areas and other general areas.

In addition, progress with respect to the assessment of the Candidate Quiet Areas will be presented together with any recommendations for referring any of these areas to the EPA and the Minister for designating as a Quiet Area. Wicklow County Council will liaise with relevant third party infrastructure owners in respect of progress made by them with implementing actions that may be relevant for them and their infrastructure.

Measure WCC_M5: Continued Investigation and Management of Noise Complaints

Wicklow County Council's Environment and Transportation Departments investigate complaints under the provisions of the Environmental Protection Agency Act 1992 (Noise) Regulations 1994.

Measure WCC_M6: Ongoing Community Engagement

A key requirement in the development of the strategic noise maps and Noise Action Plan is that the information is made available to the public in a clear, comprehensible, and accessible manner. Furthermore, the public should be consulted on the preparation of the Noise Action Plan, provided with the opportunity to participate and comment on the Noise Action Plan, and the feedback from public engagement should be considered when finalising the Plans.

To date, the strategic noise maps, together with background information, has been published on the Wicklow County Council website. Furthermore, engagement has been on-going through the elected representatives of Wicklow County Council through the relevant Strategic Policy Committee and Local Area Committee meetings.

As part of the implementation of the Noise Action Plan, it is proposed to continue with, and build on this public engagement as part of the evaluation of the Priority Important Areas and also through engagement on relevant existing Plans and Projects. This engagement will include:

- ongoing engagement with elected members
- presentation of the finding of the detailed appraisal of mitigation measures on Wicklow County Council's website
- presentation of the findings of the evaluation of the candidate Quiet Areas on Wicklow County Council's website
- formal public consultation on proposed measures, candidate Quiet Areas and other Plans and Projects, where appropriate
- use of relevant social media and information services to report findings and progress
- meetings with local area resident groups, as appropriate.

15.11.2 Prevention – Noise Management Measures**Measure WCC_M7: Planning Application Advice, Conditioning and Enforcement**

Wicklow County Council's Transportation and Environment Departments consult directly with the Planning Department advising on planning applications and enforcement of planning conditions in relation to noise emissions.

In reviewing and advising on planning applications the Unit will give due consideration to the existing strategic noise maps and this Noise Action Plan and in particular the existing Quiet Areas and any Candidate Quiet Areas. In this way conditioning developments that may have the potential to generate noise will ensure no increase in the ambient noise level.

15.11.3 Protection – Noise Management Measures

Measure WCC_M8: Evaluation of Shortlisted Candidate Quiet Areas

Wicklow County Council will complete an evaluation of each of the three shortlisted Candidate Quiet Areas identified above. The objective of the evaluation process will be to confirm the validity of the Candidate Quiet Area for delimiting as a Quiet Area.

The evaluation will include some or all the elements described in **Section 7.3.2**. For instance, in order to assess the value of each site to the local community, it may be appropriate to evaluate the soundscape of each site through the visitor experience and stakeholder engagement process and by undertaking organized soundwalks or other applicable methodologies.

The results of the evaluation will be used to make a recommendation on whether to designate the site as a Quiet Area or not.

Measure WCC_M9: Proposal for Quiet Area(s) Designation

For each of the Candidate Quiet Areas that are recommended for designation as Quiet Area, a proposal will be prepared setting out the findings of the investigations and the feedback from the consultation process to support the recommendation for the area being designated as a Quiet Area.

This will be consulted with the EPA before being issued to the Minister of the Environment, Climate and Communications to approve the delimitation of the recommended Candidate Quiet Areas as a Quiet Area.

15.11.4 Mitigation – Noise Management Measures

Measure WCC_M10: Evaluation of each Priority Important Area

Wicklow County Council will complete an evaluation of each of the seven Priority Important Areas identified in this chapter of the Noise Action Plan. Where the Priority Important Area relates to infrastructure that is exclusively the responsibility of and managed by Wicklow County Council, then the evaluation will be completed by Wicklow County Council and other agencies where required.

The objective of the evaluation process will be to confirm the validity of the Priority Important Area and identify the most appropriate noise mitigation measures through detailed economic and health benefits appraisal. The steps in the evaluation process are described in **Section 8.4**.

Measure WCC_M11: Implementation of Recommended Noise Mitigation Measures

Wicklow County Council will implement measures deemed technically, economically, and environmentally justified as part of this round of the Noise Action Plan or future rounds, contingent upon resources and funding.

Implementation will involve reviewing the effectiveness of the measures through monitoring where appropriate. The implementation of measures related to infrastructure not under Wicklow County Council's responsibility should be carried out by the third parties responsible for that infrastructure. Wicklow County Council will coordinate with these parties in monitoring progress and reporting to the EPA as part of the annual report.

Consideration will be given to funding sources and will include liaising with relevant Wicklow County Council sections and projects as well as third parties and government departments with a view to

securing funding for relevant measures or ensuring the noise measures are incorporated within existing funding streams for existing projects.

Potential Priority Important Area Noise Mitigation Measures

Measure WCC_M10 commits to undertaking an evaluation of each Priority Important Area including the identification of appropriate noise mitigation measures for each area. **Table 122** below provides a summary of some of the potential noise mitigation measures that could be considered for each area.

It should be noted that the measures presented in **Table 122** are for consideration only and would need to be fully evaluated to confirm their appropriateness and justification for each Priority Important Area. National Road related potential measures would need to be reviewed, discussed and agreed with Transport Infrastructure Ireland for the relevant Priority Important Areas.

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Table 122: WCC: Priority Important Area (PIA) Example Mitigation Measure Considerations

PIA	Source	Noise Reduction at Source	Noise Abatement Operating Procedures	Community Engagement and Responsible Actions	Operational Restrictions	Land-Use Planning and Management	Opportunities for Noise Barrier(s)
WCC_1	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such as earth bunds, along 600m of the M11.
WCC_2	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such as earth bunds, along 250m of the N11.
WCC_3	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Traffic noise contributions at properties on R767 - Killarney Road and L1003. Approximately 150m of road with potential opportunities for noise barriers.
WCC_4	ROAD	Low Noise Road Surfacing	Promotion of Noise	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such

PIA	Source	Noise Reduction at Source	Noise Abatement Operating Procedures	Community Engagement and Responsible Actions	Operational Restrictions	Land-Use Planning and Management	Opportunities for Noise Barrier(s)
			Preferential Routes				as walls, along 150m of the N11.
WCC_5	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Traffic noise contributions at properties on Cronans Road and R761 - Castle Steet. Approximately 200m of road with potentially limited opportunities for noise barriers.
WCC_6	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Traffic noise contributions at properties on R767 - Killarney Road. Approximately 80m of road with potentially limited opportunities for noise barriers.
WCC_7	ROAD	Low Noise Road Surfacing	Promotion of Noise Preferential Routes	Noise Measurement and Reporting	Speed Restrictions	Noise Barriers	Potential for noise barriers to complement existing noise barrier features, such as earth bunds, along 200m of the N11.

15.11.5 Noise Management Framework – Summary of Actions

A summary of the proposed noise management measures is set out in **Table 123** below together with details of the proposed action(s) for each. **Table 123** also sets out the **Responsible Aims** that each measure helps to support through the implementation of the Plan.

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Table 123: WCC: Noise Management Framework – Summary of Actions

Measure	Responsible Aim (RA)	Measure Description	Action
General – Noise Management Measures			
WCC_M1	RA_1 & 5	Support the Development of National Noise and Other Related Policy and Guidance	Support the Department of Environment, Climate and Communications (DECC) and other government departments and bodies in the development of national noise and other related policies and guidance, and assist in their implementation once in place.
WCC_M2	RA_2, 3, 4 & 5	Noise Mapping and Action Planning Steering Group	Collaborate with the EPA, government departments and bodies to co-ordinate the activities of NMBs and the production Noise Action Plans and Reports.
WCC_M3	RA_2, 3.4 & 5	Noise Action Plan Working Group(s) - Action Planning Authorities and Transport Infrastructure Owners	Support the establishment of relevant noise working groups to co-ordinate and collaborate with other Dublin agglomeration APAs and the relevant NMBs in respect of noise management issues.
WCC_M4	RA_8	Annual Report to Environment Protection Agency (EPA)	Prepare an annual progress report regarding the implementation of the Noise Action Plan and submit it to the EPA.
WCC_M5	RA_5 & 7	Continued Investigation and Management of Noise Complaints	Review and investigate all noise complaints received in a timely manner and in accordance with national and international best practice.
WCC_M6	RA_3, 4, 5 & 6	Ongoing Community Engagement	Publish the final Noise Action Plan and provide updates on the progress made with its implementation, including the findings of the appraisal of Priority Important Areas and evaluation of Candidate Quiet Areas, on the Wicklow County Council website. This information will also be communicated through ongoing engagement in Local Areas Committee meetings and formal public consultations where deemed necessary.
Prevention – Noise Management Measures			

WCC_M7	RA_5	Planning Application Advice, Conditioning and Enforcement	Liaise with the Planning Department to ensure acoustic measures are implemented for new developments that may be impacted by adverse noise.
Protection – Noise Management Measures			
WCC_M8	RA_4	Evaluation of Shortlisted Candidate Quiet Areas	For each shortlisted Candidate Quiet Area carry out an investigation of the area and make a recommendation on whether to designate each area as a Quiet Area or not.
WCC_M9	RA_4	Proposal for Quiet Area(s) Designation	For all Candidate Quiet Areas recommended for designation, prepare proposal for EPA consultation and Ministerial Approval.
Mitigation – Noise Management Measures			
WCC_M10	RA_3	Evaluation of each Priority Important Area	For each Priority Important Area, conduct a review of the noise model used in the development of the strategic noise maps. Additionally, perform a detailed appraisal of the noise mitigation measures in each area to identify the preferred measure(s) for implementation, if any.
WCC_M11	RA_3	Implementation of Recommended Noise Mitigation Measures	Liaise with relevant Wicklow County Council sections, third parties, and government departments to secure funding for noise mitigation measures. Implement the measures for which Wicklow County Council has responsibility and support third parties in the implementation of their measures.

15.12 Noise Action Plan Implementation

A summary of the proposed noise management measures is set out in **Table 123** together with details of the proposed action(s) for each. The table also sets out the **Responsible Aims** that each measure helps to support through the implementation of the Plan.

This Noise Action Plan is supported by a four-year programme for implementation (2024-2028), with progress reported to the EPA on an annual basis.

Implementation of these measures and actions is subject to resources, appropriate funding being made available and collaboration with relevant key stakeholders and infrastructure owners.

15.13 Figures

Figures supporting the strategic noise mapping results for Wicklow County Council are set out in the following section. The figures include a graphical representation of:

- Industry noise contours – carried out to facilitate engagement between Wicklow County Council and the EPA regarding the evaluation of issues related to industry regulation;
- the Most Important Areas – locations with the greatest concentration of harmful effects;
- the Priority Important Areas – Most Important Areas, or groups of Most Important Areas which will be addressed during the implementation of the Noise Action Plan; and
- the Candidate Quiet Areas identified as candidates to be preserved for their environmental noise quality, and those identified for investigation.

Figure 101: WCC: Industry – Noise Exposures Exceeding 55 dB L_{den}

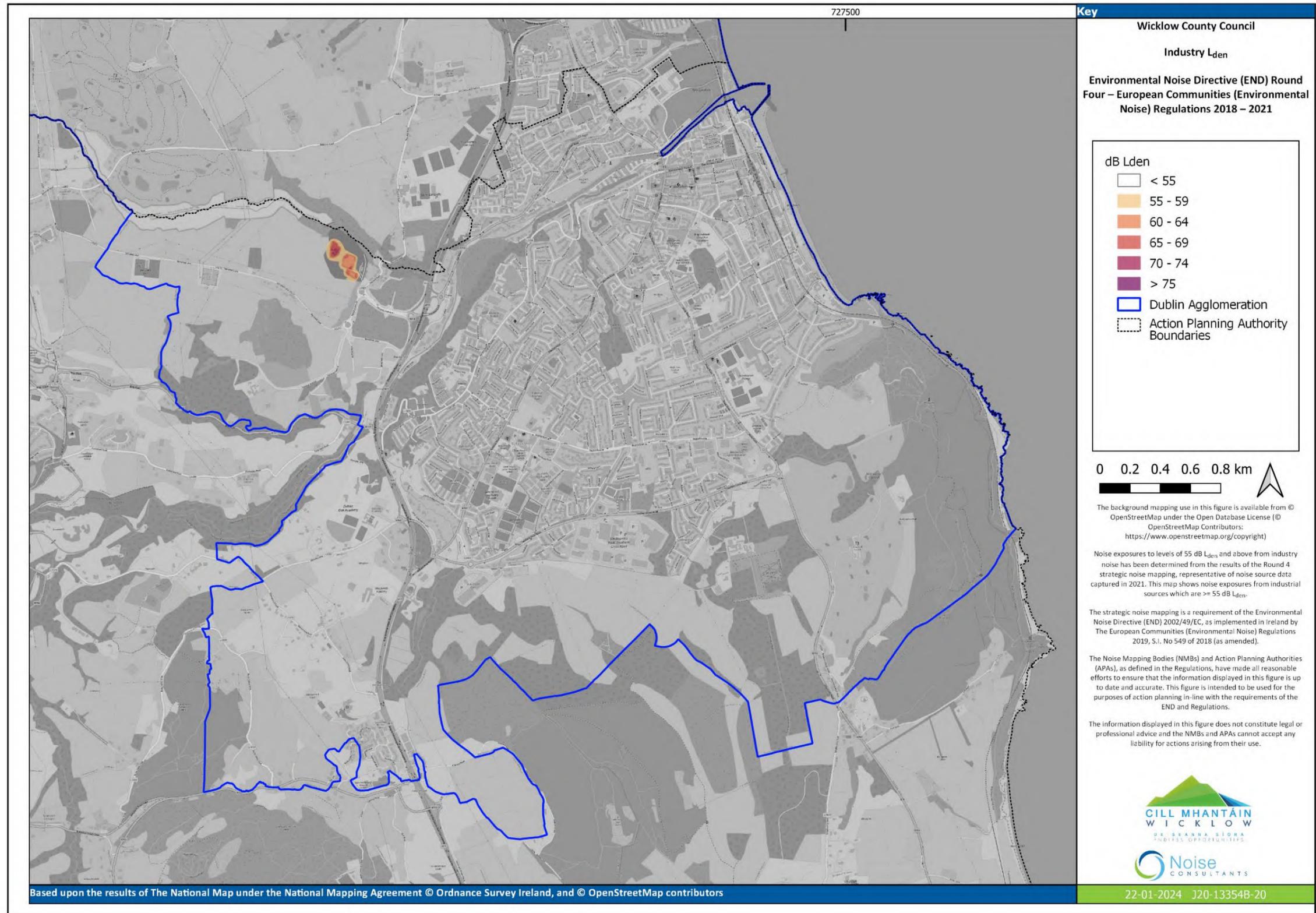


Figure 102: WCC: Industry – Noise Exposures Exceeding 55 dB L_{den} (Focussed Area 1)

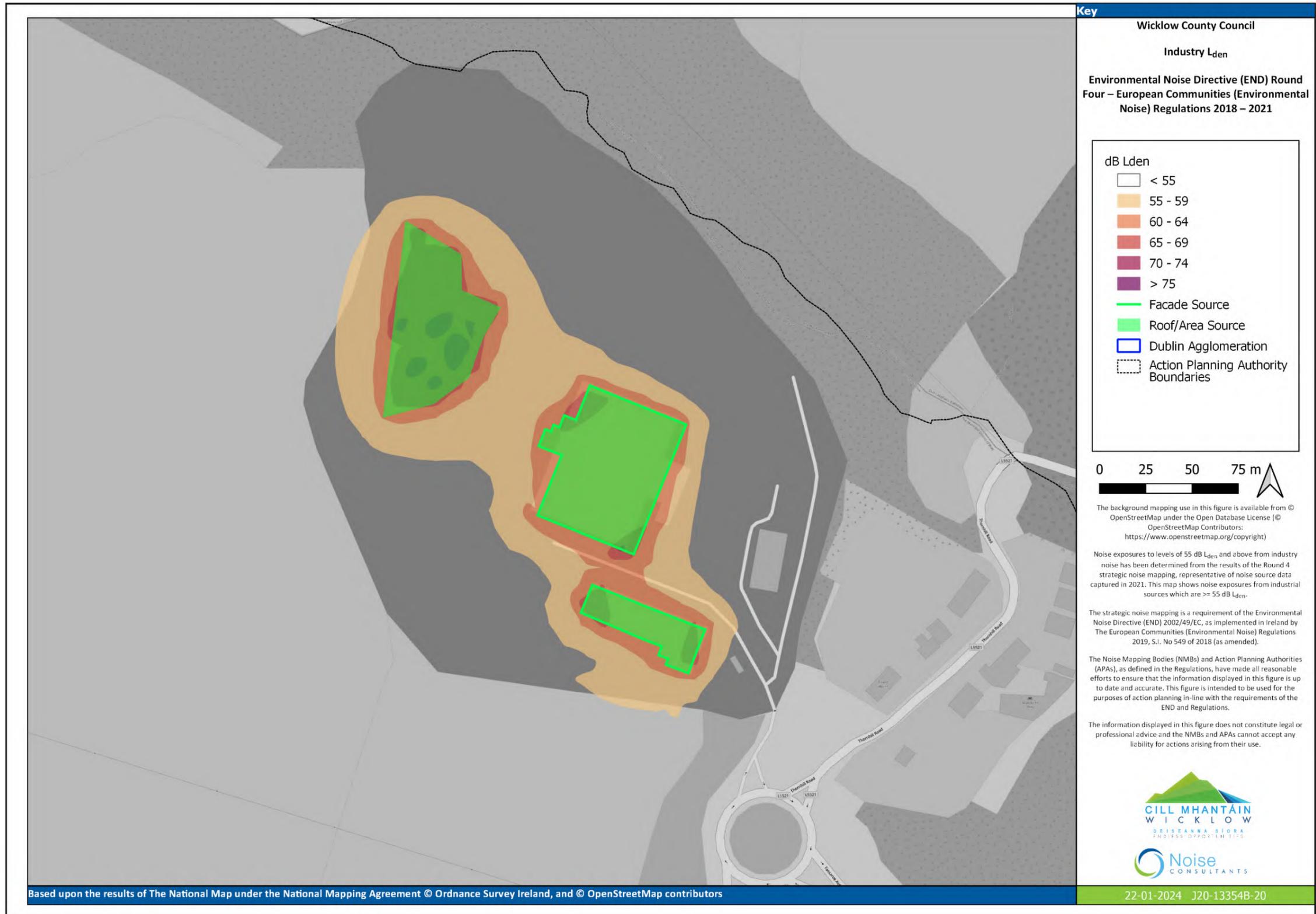


Figure 103: WCC: Most Important Areas (MIAs)

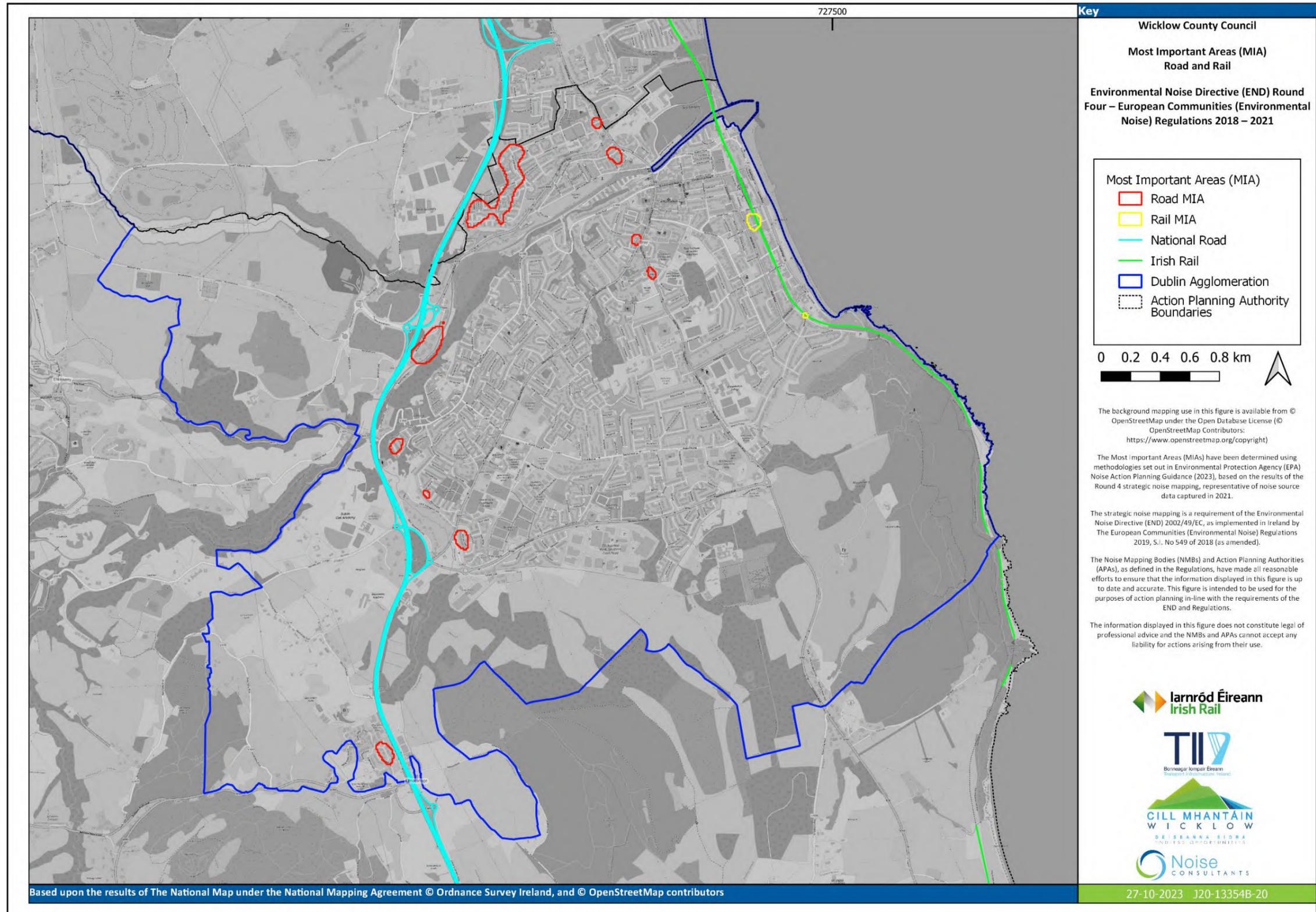


Figure 104: WCC: Priority Important Areas (PIAs)

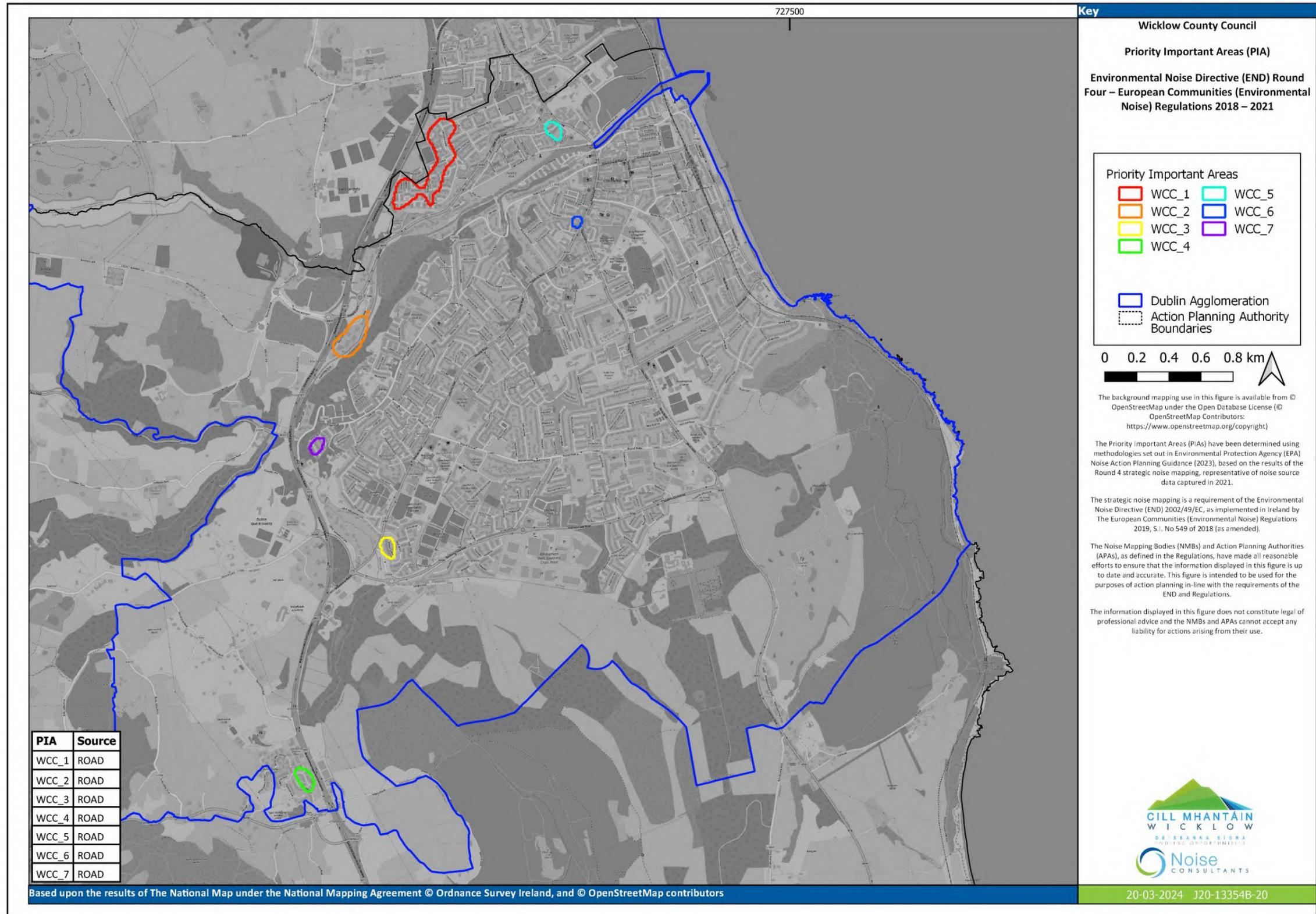


Figure 105: WCC: Priority Important Area 1 (PIA 1)

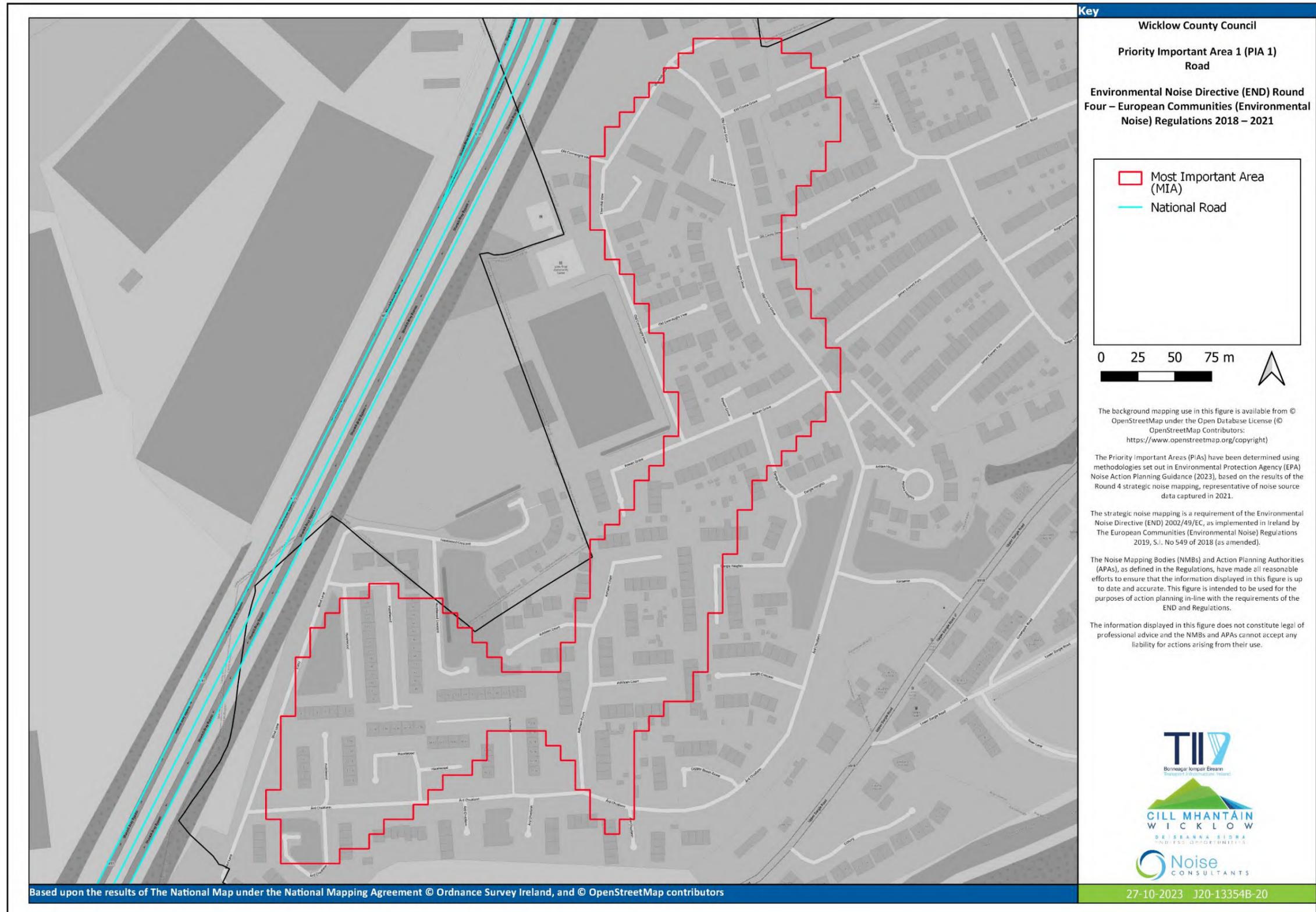


Figure 106: WCC: Priority Important Area 2 (PIA 2)

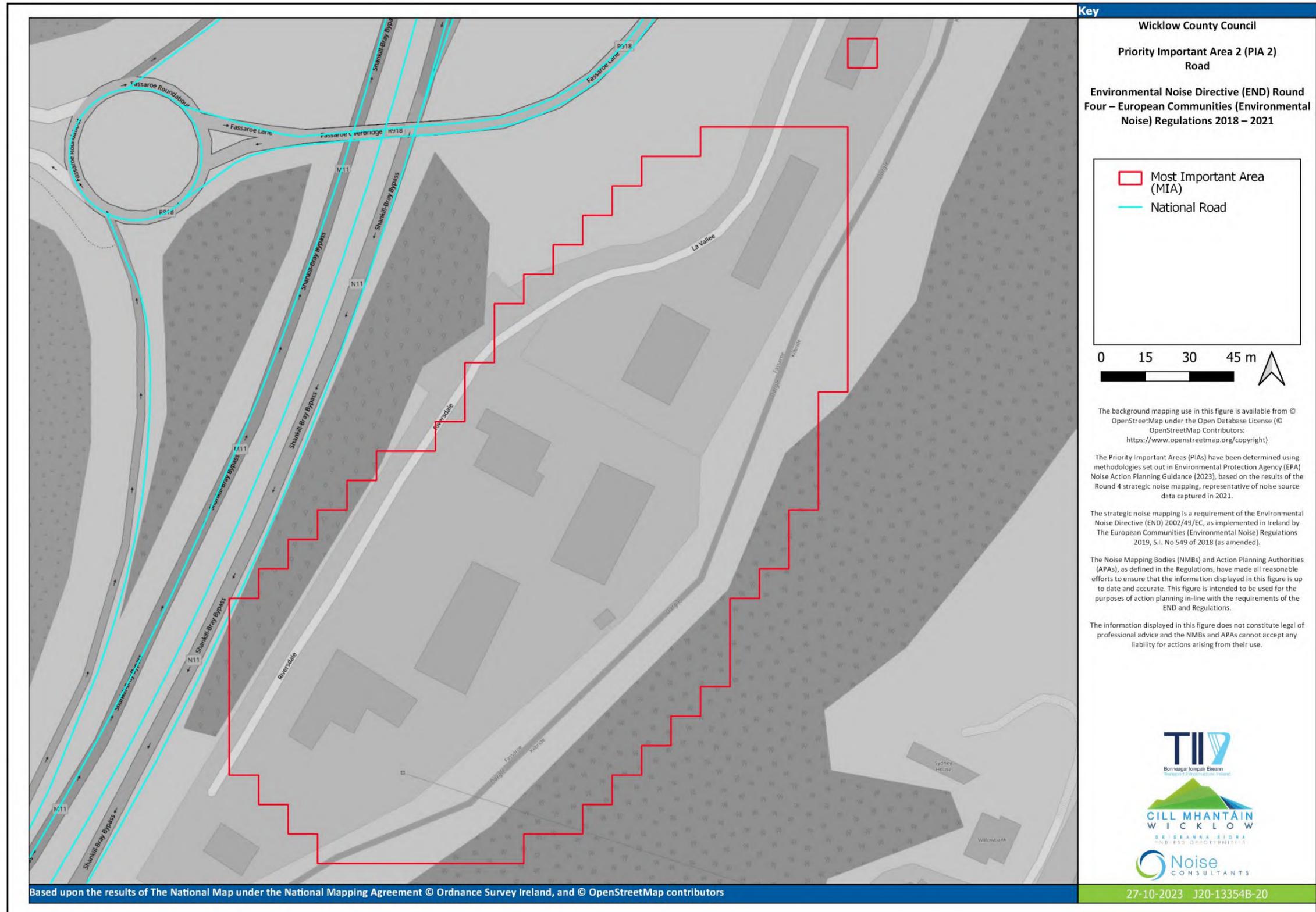


Figure 107: WCC: Priority Important Area 3 (PIA 3)

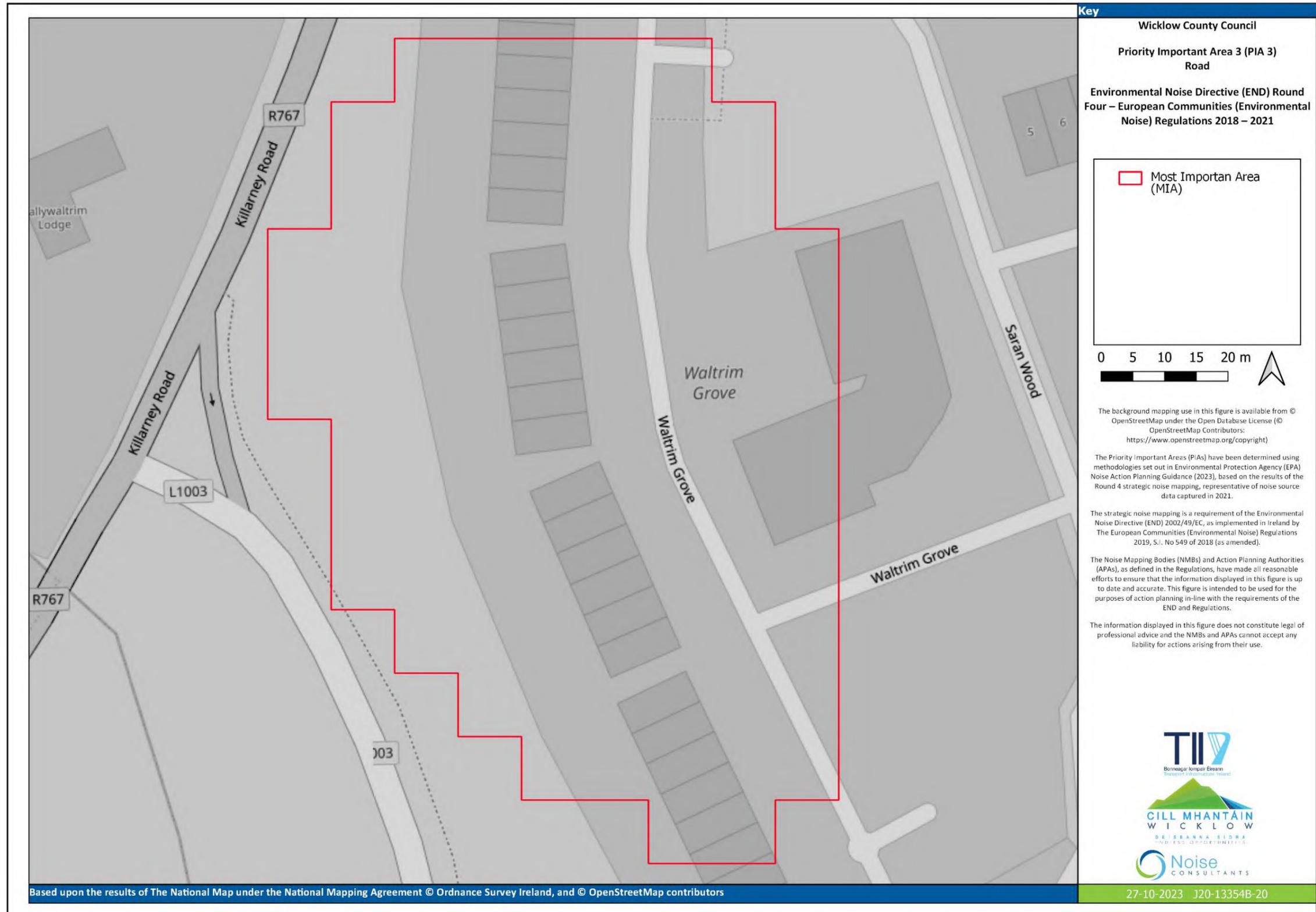


Figure 108: WCC: Priority Important Area 4 (PIA 4)

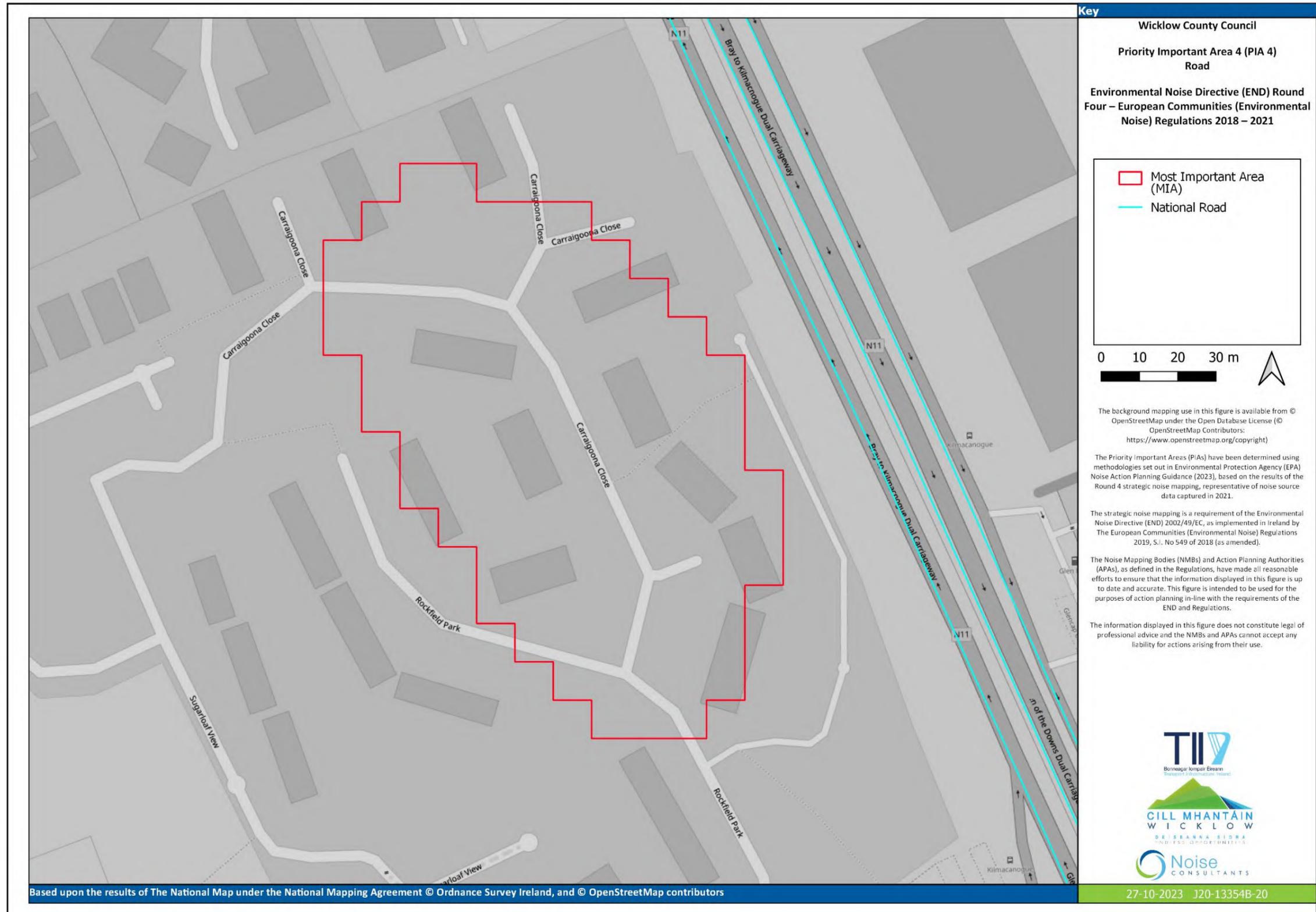


Figure 109: WCC: Priority Important Area 5 (PIA 5)

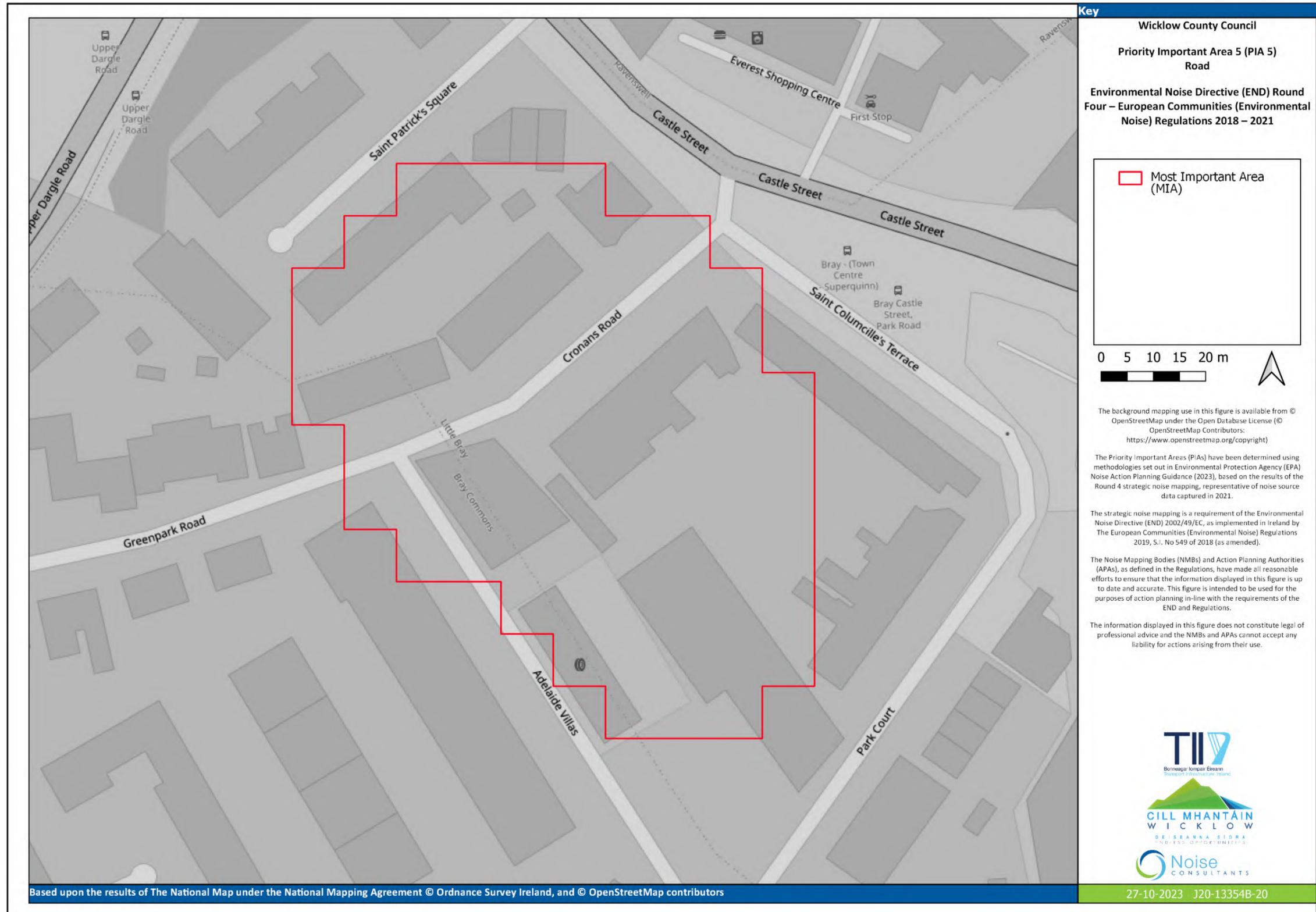


Figure 110: WCC: Priority Important Area 6 (PIA 6)

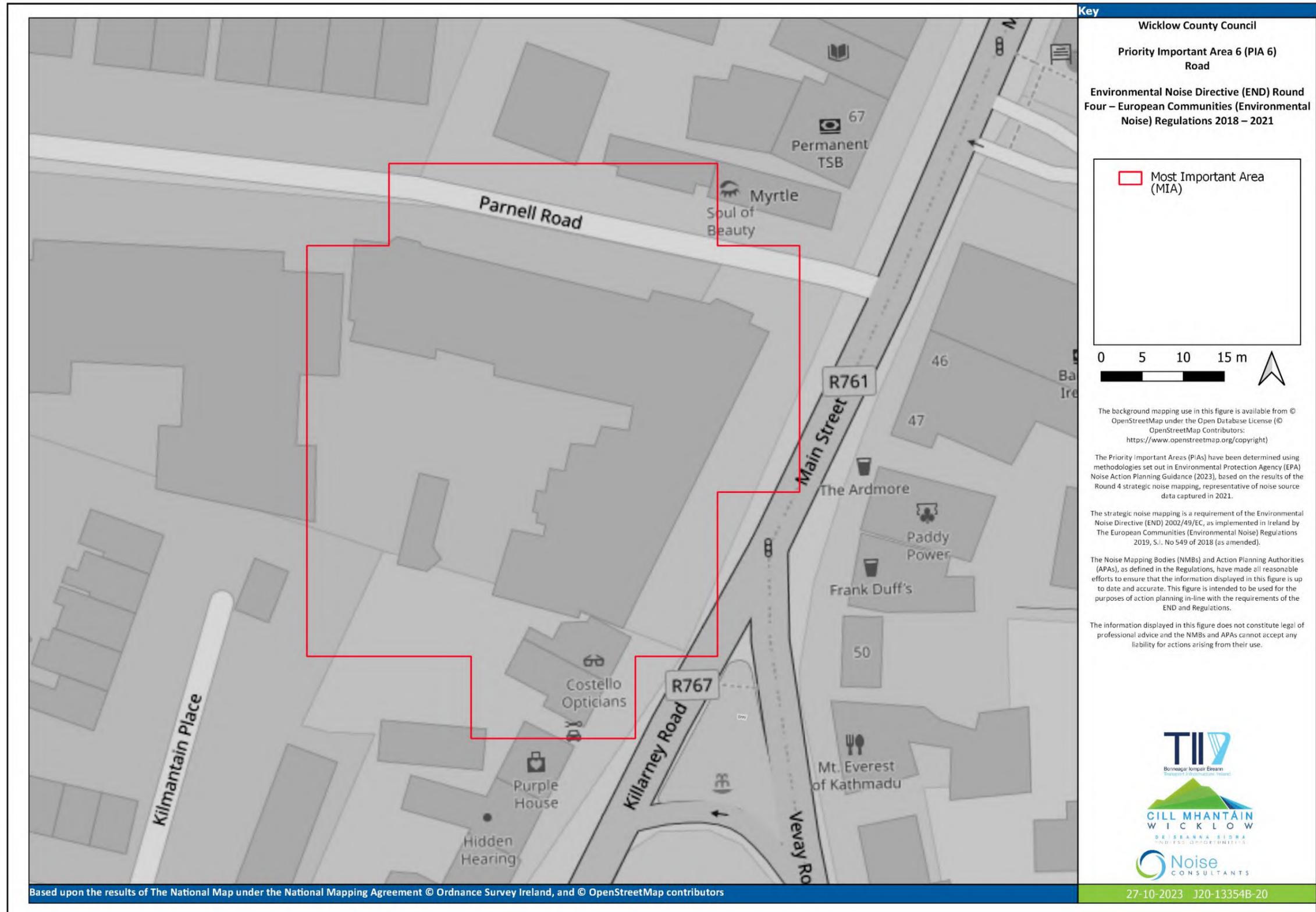


Figure 111: WCC: Priority Important Area 7 (PIA 7)

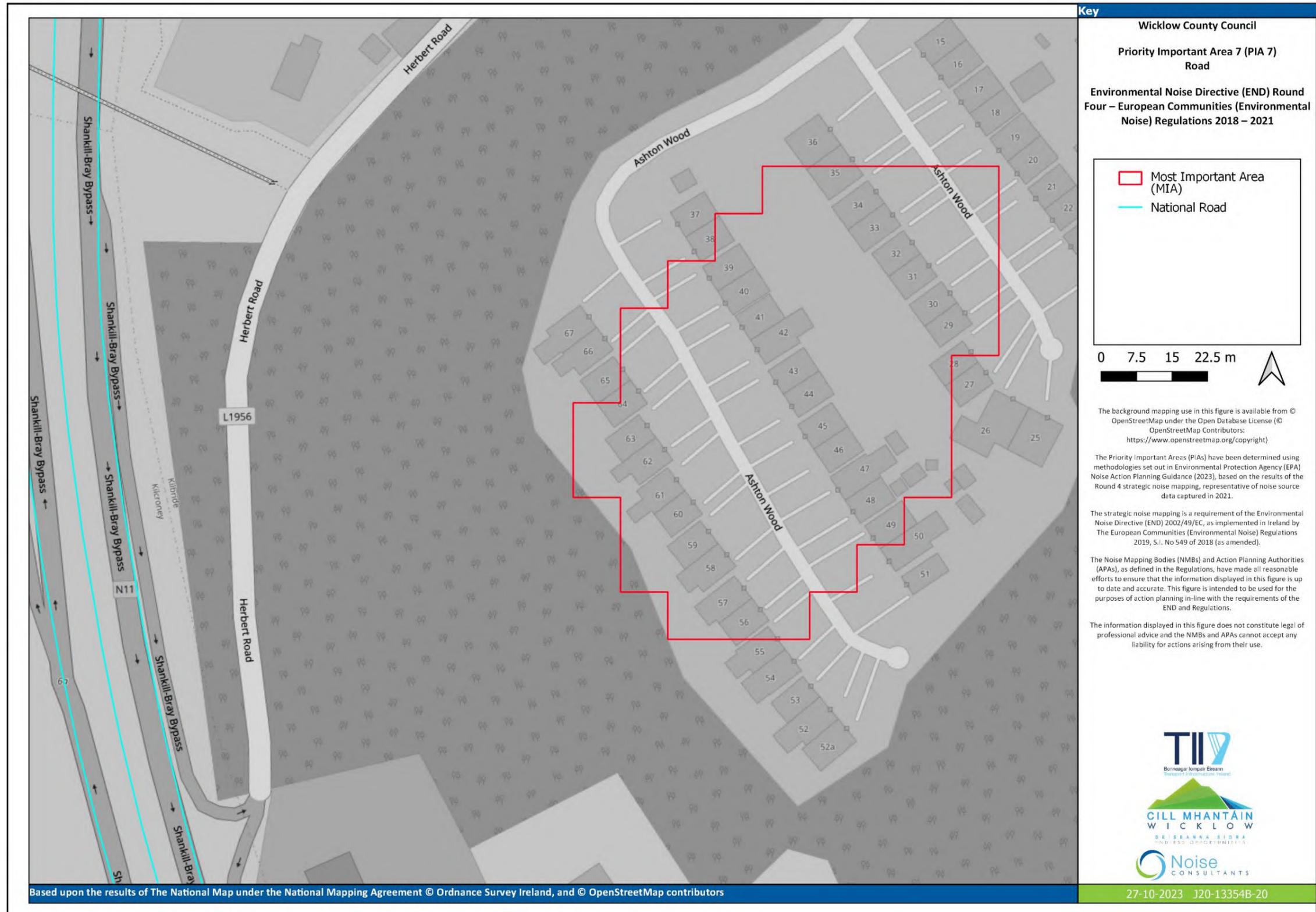
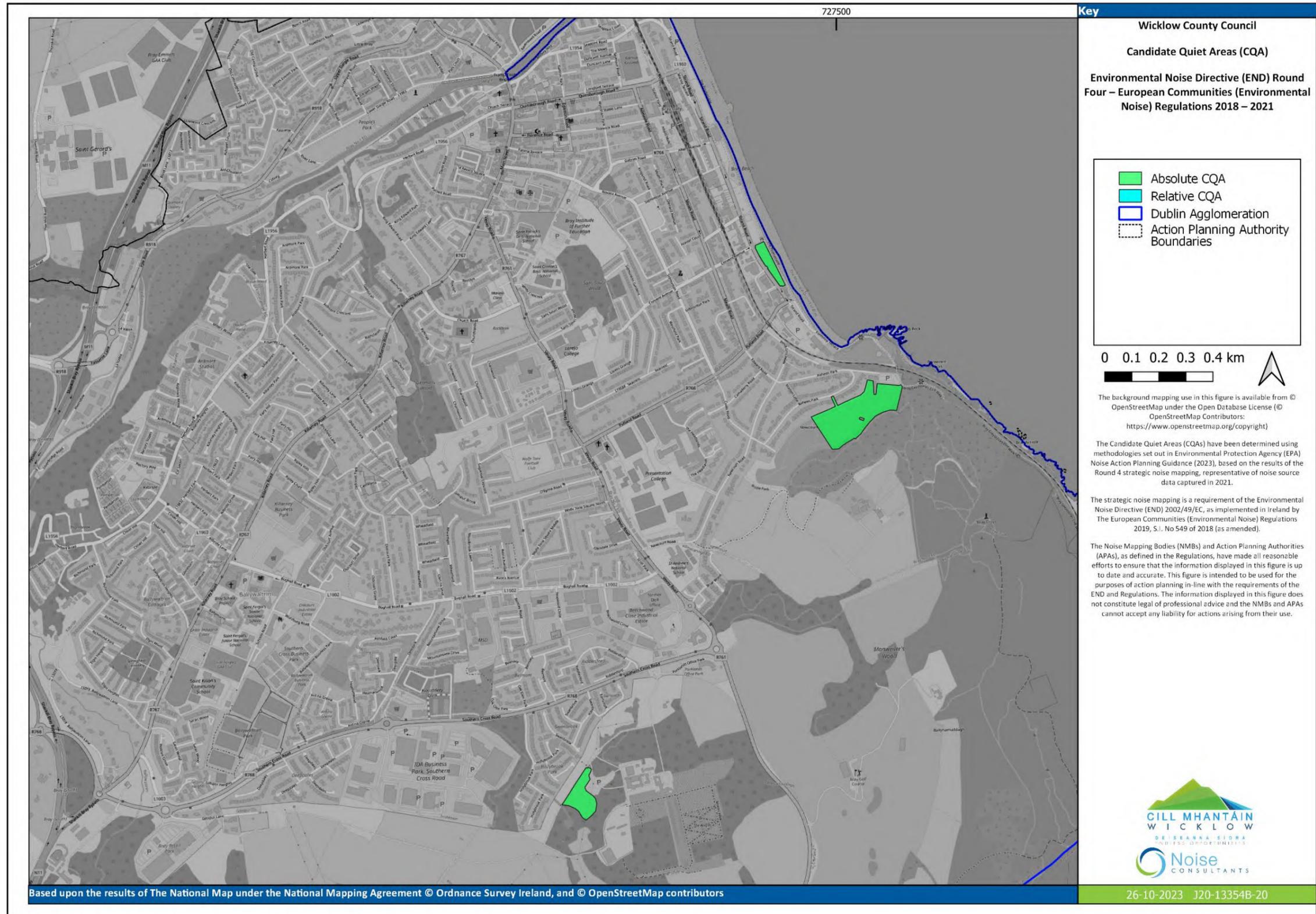


Figure 112: WCC: Candidate Quiet Areas (CQAs)



Appendix A: Glossary

A-weighting	A frequency weighting applied to measured or predicted sound levels in order to compensate for the non-linearity of human hearing.
Acoustic environment	Sound at the receiver from all sources of sound as modified by the environment, as defined in ISO 12913-1:2014.
CNOSSOS-EU: 2020	The common noise assessment method according to the END.
CRTN 1988	The noise calculation method Calculation of Road Traffic Noise 1988.
dB (decibel)	The unit of sound pressure level, calculated as a logarithm of the intensity of sound. 0 dB is the threshold of hearing, 120 dB is the threshold of pain. Under normal circumstances, a change in sound level of 3 dB is just perceptible. A change of 1 or 2 dB is detectable only under laboratory conditions. A change of 10 dB corresponds approximately to halving or doubling the loudness of sound.
Design Goal	A target limit for noise or vibration adopted during the early design stages of a project, not necessarily having a statutory basis but based on current best practice and the particular circumstances of a given scheme.
Do Minimum	Describes a scenario under which a road scheme that is under consideration does not proceed (sometimes referred to as "Do Nothing").
Do Something	Describes a scenario under which a road scheme that is under consideration proceeds.
EEA	European Environment Agency.
END	Environmental Noise Directive.
EPA	Environmental Protection Agency.
Free Field	Free field noise levels are measured or predicted such that there is no contribution made up of reflections from nearby building façades.
Leq,T	The equivalent continuous sound level - the sound level of a steady sound having the same energy as a fluctuating sound over a specified measuring period T.
Leq,16hr	The equivalent continuous sound level - the sound level of a steady sound having the same energy as a fluctuating sound over a specified measuring period of 16 hours.

Lden The day-evening-night composite noise indicator adopted by the EU for the purposes of assessing overall annoyance. Equation below.

$$L_{den} = 10 \lg \frac{1}{24} \left(12 * 10^{\frac{L_{day}}{10}} + 4 * 10^{\frac{L_{evening}+5}{10}} + 8 * 10^{\frac{L_{night}+10}{10}} \right)$$

Lday The A-weighted long term average sound level as defined in ISO1996-2: 2007, determined over the day periods over a long-term period (e.g. a year).

Levening The A-weighted long term average sound level as defined in ISO1996-2: 2007, determined over all the evening periods over a long-term period (e.g. a year).

Lnight The A-weighted long term average sound level as defined in ISO1996-2: 2007, determined over all the night periods over a long-term period (e.g. a year).

NAP Noise Action Plan.

NPO National Policy Objective in the National Development Plan.

NRA National Roads Authority.

NTA National Transport Authority.

Soundscape The acoustic environment as perceived or experienced and/or understood by a person or people, in context, as defined in ISO 12913-1:2014.

Soundwalk A walk with a focus on the listening environment.

TII Transport Infrastructure Ireland.

WebTAG Transport analysis guidance tool for the proposal of policies and interventions to ensure a consistent approach in transport appraisal