

Soundscape in Action: Limerick Examples & Irish Context



*Simon Jennings
Environment & Climate Action*

Irish Policy Context

National Planning Framework Project 2040



Rialtas na hÉireann
Government of Ireland



National
Planning
Framework

Quiet Areas

The further enjoyment and protection of natural resources, such as our green spaces and sea frontage, through the preservation of low sound levels or a reduction in undesirably high noise levels, is particularly important for providing respite from high levels of urban noise. As part of noise action plans, an extra value placed on these areas, in terms of environmental quality and the consequential positive impact on quality of life and health, due to low environmental noise, can assist in achieving this.



9.4 Creating a Clean Environment for a Healthy Society

National Policy Objective 94

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 Strategic Noise Maps, Noise Action Plans and national planning guidance.

6.2 Healthy Communities

Decisions made regarding land use and the built environment, including transportation, affect these health risks in a variety of ways, for example through influencing noise, air and water quality, traffic safety, opportunities for physical activity and social interactions as well as access to workplace, education, healthcare and other facilities and services such as food and alcohol outlets.

National Policy Objective 36

Support the objectives of public health policy including the Healthy Ireland Framework and the National Physical Activity Plan, through integrating such policies, where appropriate and at the applicable scale, with planning policy.



Comhairle Cathrach
& Contae Luimnigh
Limerick City
& County Council

Limerick Development Plan – Adoption of ProPG



People want parks included in growing communities.

New research shows that 92% of people believe green spaces in towns and cities are important



Element 3 – External Amenity Area Noise Assessment

3(v) *Where, despite following a good acoustic design process, significant adverse noise impacts remain on any private external amenity space (e.g. garden or balcony) then that impact may be partially off-set if the residents are provided, through the design of the development or the planning process, with access to:*

- *a relatively quiet facade (containing openable windows to habitable rooms) or a relatively quiet externally ventilated space (i.e. an enclosed balcony) as part of their dwelling; and/or*
- *a relatively quiet alternative or additional external amenity space for sole use by a household, (e.g. a garden, roof garden or*

large open balcony in a different, protected, location); and/or

- *a relatively quiet, protected, nearby, external amenity space for sole use by a limited group of residents as part of the amenity of their dwellings; and/or*
- *a relatively quiet, protected, publicly accessible, external amenity space (e.g. a public park or a local green space designated because of its tranquillity) that is nearby (e.g. within a 5 minutes walking distance). The local planning authority could link such provision to the definition and management of Quiet Areas under the Environmental Noise Regulations.*

ISO 129123 Series Parts 1 to 3



ISO 12913-1:2014

Acoustics — Soundscape
Part 1: Definition and conceptual framework

Published (Edition 1, 2014)

This publication was last reviewed and confirmed in 2025. Therefore this version remains current.



ISO/TS 12913-2:2018

Acoustics — Soundscape
Part 2: Data collection and reporting requirements

Published (Edition 1, 2018)

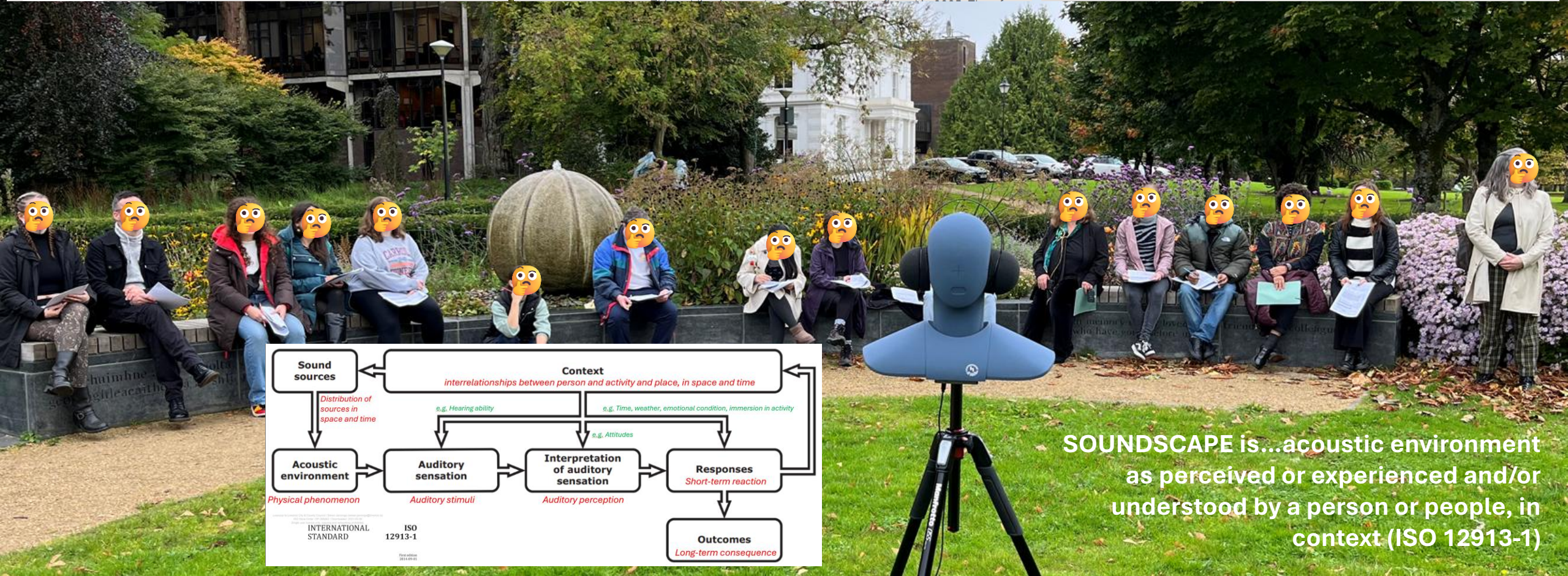
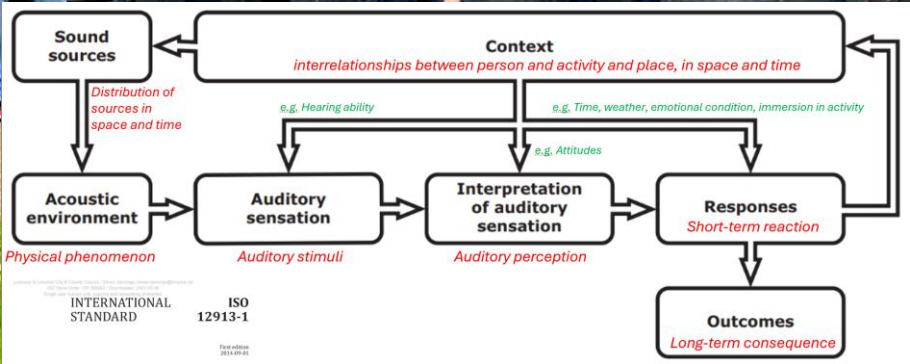


ISO/TS 12913-3:2025

Acoustics — Soundscape
Part 3: Data analysis

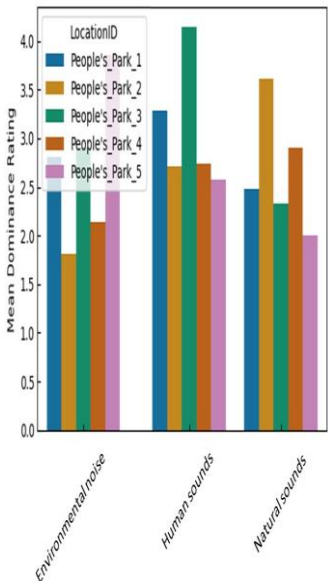
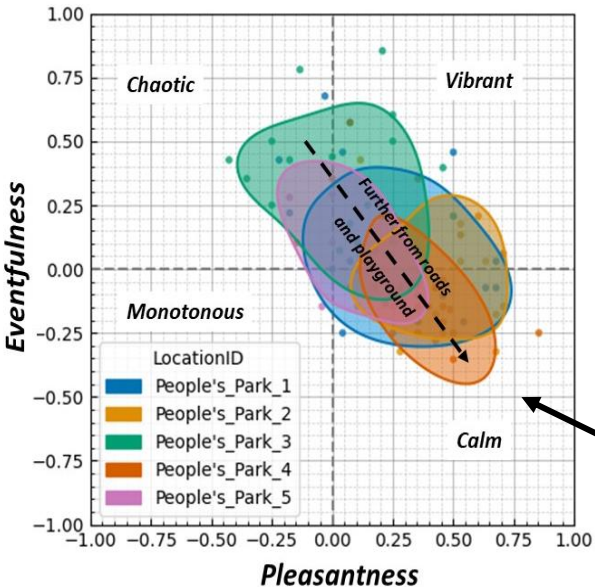
Published (Edition 2, 2025)

Starting with previous edition 2019



SOUNDSCAPE is...acoustic environment as perceived or experienced and/or understood by a person or people, in context (ISO 12913-1)

People's Park CQA Investigation - Series of Soundwalks / Binaural Analysis between 2023 and 2025



People's_Park_2

human_sounds

People's_Park_2

natural_sounds

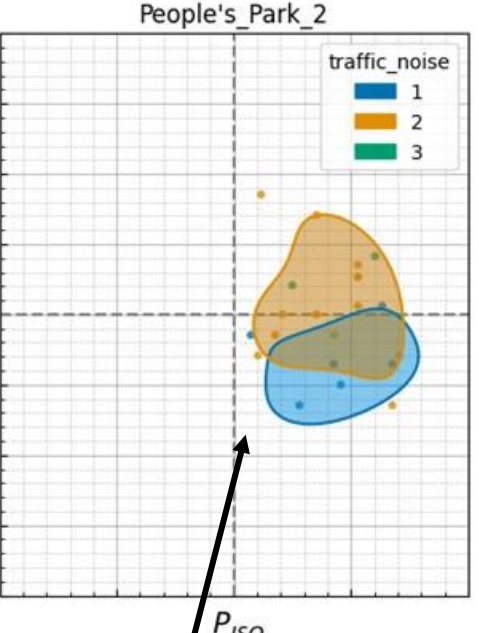
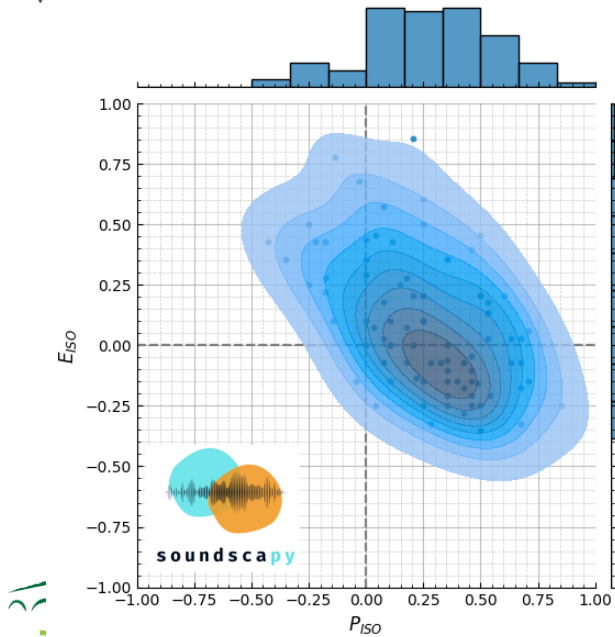
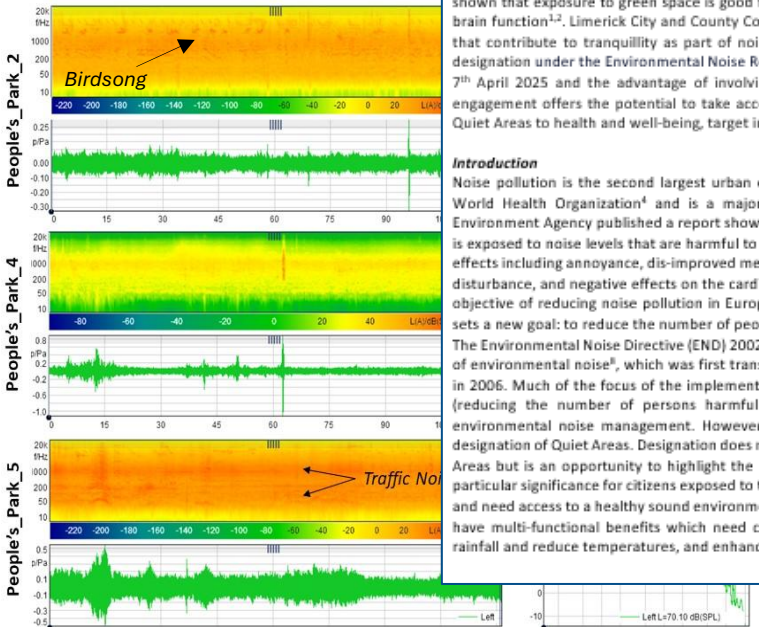
Quiet Area Investigation - A Soundscape Assessment of the People's Park, 7th April 2025
Limerick Lifelong Learning Festival
Simon Jennings, Environment and Climate Action Section, Limerick City and County Council
simon.jennings@limerick.ie

This report follows a soundwalk undertaken as part of the Limerick Lifelong Learning Festival (7th – 13th April 2025) held in partnership with St. Saviour's Adult Education Group.

Quote:
"The final question will be: is the soundscape of the world an indeterminate composition over which we have no control, or are we its composers and performers, responsible for giving it form and beauty?"
— R. Murray Schafer, The Soundscape: Our Sonic Environment and the Tuning of the World.

Abstract
The sound environment in many cities is not healthy for its citizens, mainly due to transportation noise. Green spaces and areas of public realm that the public use and congregate are potential quiet areas away from environmental noise. These quiet areas provide opportunities for physical activity, social connection and mental relief. Studies have shown that exposure to green space is good for our health and well-being and improves cognitive development and brain function^{1,2}. Limerick City and County Council is investigating the acoustic characteristics of public green spaces that contribute to tranquillity as part of noise action planning and the investigation of potential Quiet Areas, for designation under the Environmental Noise Regulations³. This report outlines an investigation of the People's Park on 7th April 2025 and the advantage of involving the public in the assessment of our acoustic environment. Public engagement offers the potential to take account of citizens perceptions and preferences, highlight the benefits of Quiet Areas to health and well-being, target improvements in green spaces (e.g. parks, greenways) and urban design.

Introduction
Noise pollution is the second largest urban environmental stress factor affecting people's health according to the World Health Organization⁴ and is a major environmental problem in cities around the world. The European Environment Agency published a report showing that 20% of Europe's population (approximately 113 million people) is exposed to noise levels that are harmful to their health⁵. Long-term exposure to noise produces a variety of health effects including annoyance, dis-improved mental health, hearing impairment, cognitive impairment in children, sleep disturbance, and negative effects on the cardiovascular and metabolic system. The 7th Environment Action Program's objective of reducing noise pollution in Europe by 2020 was not achieved⁶. The Zero Pollution Action Plan for 2030 sets a new goal: to reduce the number of people chronically disturbed by transport noise by 30% compared to 2017⁷. The Environmental Noise Directive (END) 2002/49/EC is the main European legislative framework for the management of environmental noise⁸, which was first transposed into Irish legislation under the Environmental Noise Regulations in 2006. Much of the focus of the implementation of the regulations by local authorities has focussed on mitigation (reducing the number of persons harmfully affected by environmental noise) which is a reactive response, environmental noise management. However, another key objective of the regulations (and as important) is the designation of Quiet Areas. Designation does not provide statutory protection to prevent environmental noise in Quiet Areas but is an opportunity to highlight the benefit of those spaces for citizens health and well-being. They are of particular significance for citizens exposed to the harmful effects of high levels of environmental noise where they live and need access to a healthy sound environment in close proximity (e.g. green areas such as parks). Green spaces also have multi-functional benefits which need consideration and are also important to improve air quality, intercept rainfall and reduce temperatures, and enhance the aesthetic appeal of cities⁹.



7 th April 2025					
Stop 1	Stop 2	Stop 3	Stop 4	Stop 5	
14:28	14:51	15:03	14:37	15:13	
53	53	59	49	58	
61	59	64	58	68	
8	6	5	9	10	
60	57	65	54	69	
46	48	50	42	53	
14	9	15	12	16	
0.293	0.273	0.329	0.227	0.237	
8.38	8.87	11.60	6.94	12.00	
Environmental noise		Human sounds	Natural sounds		
		2.81	3.29	2.48	
		1.81	2.71	3.62	
		2.90	4.14	2.33	
People's_Park_4		2.14	2.74	2.90	
People's_Park_5		3.86	2.57	2.00	

Fluctuation, vacil	0.0075	0.0094	0
--------------------	--------	--------	---

People's Park CQA Investigation - Estimation of Preferred Soundscape



People's Park Quiet Area Designation

DCEE Approval – 24th March 2026

Next steps –

Liaise with Forward Planning to develop an objective for the Quiet Area under the next Limerick Development Plan.

- Zoning
- Park management
- Land use management
- Support of complementary measures (e.g. Transport Management Strategy, Public Realm Strategy etc.)



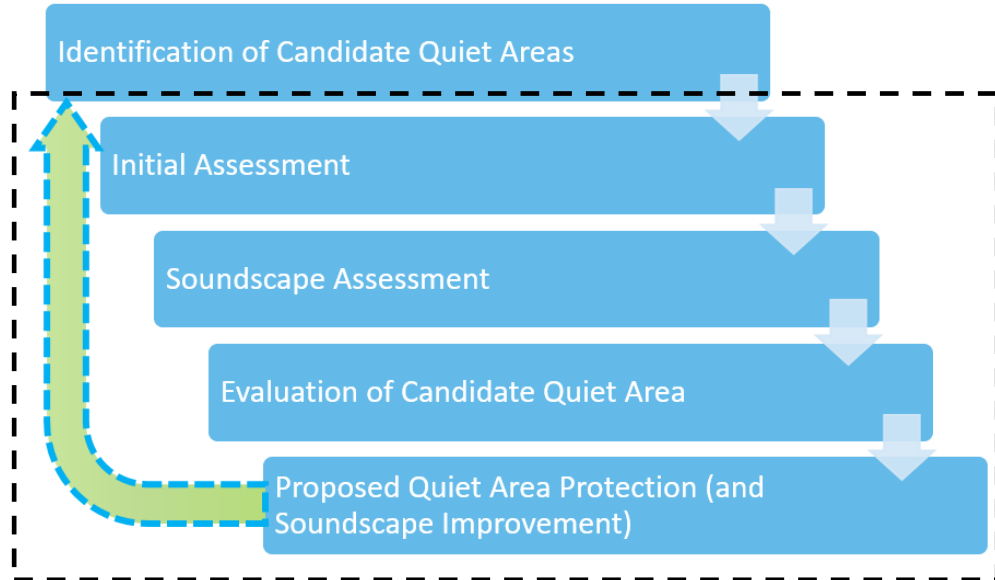
Limerick city park officially designated as 'quiet area'

By Adam Leahy - April 17, 2026

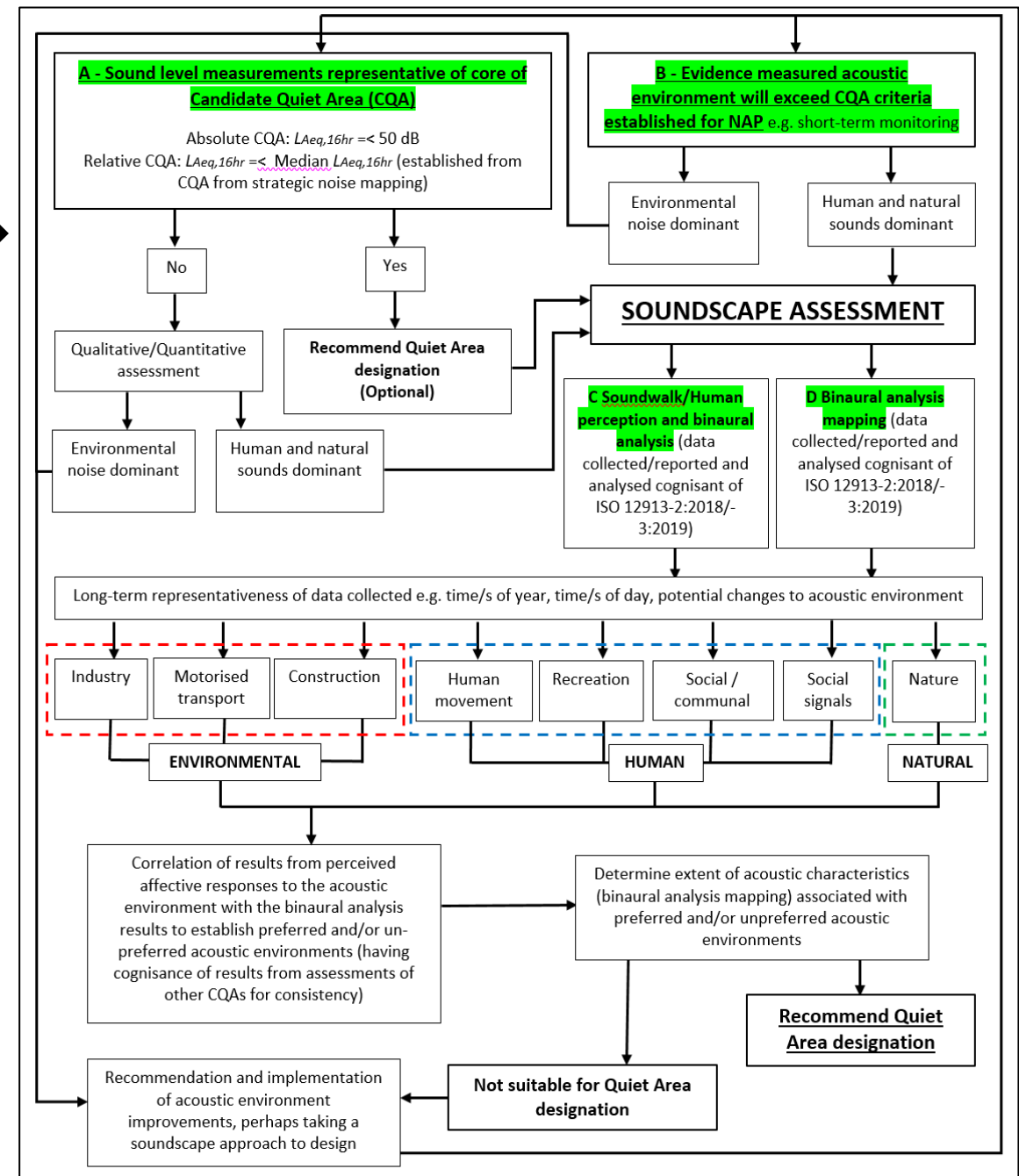


The People's Park in Limerick City Centre.

Framework for Assessment of CQAs

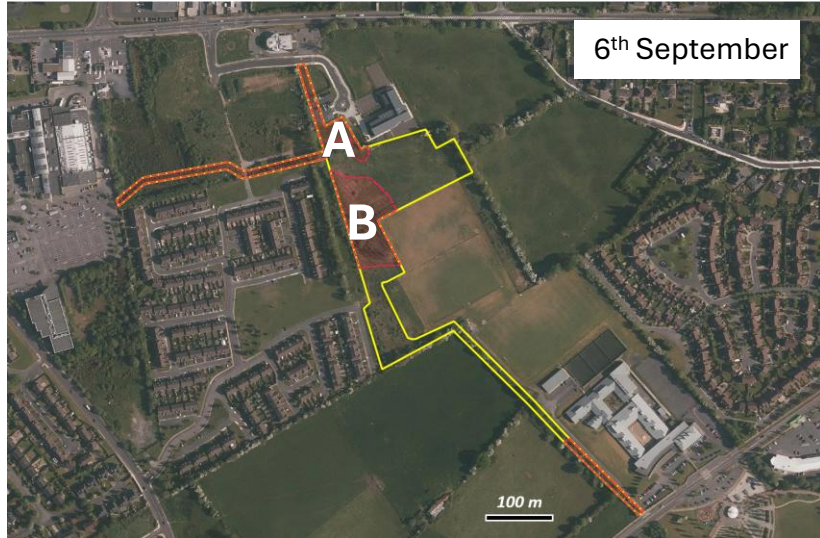
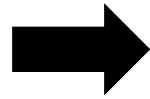
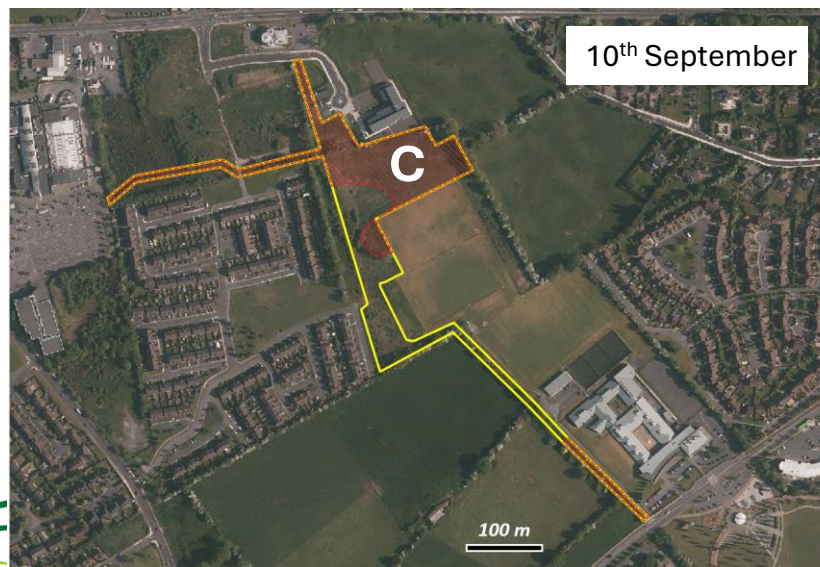
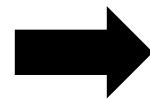
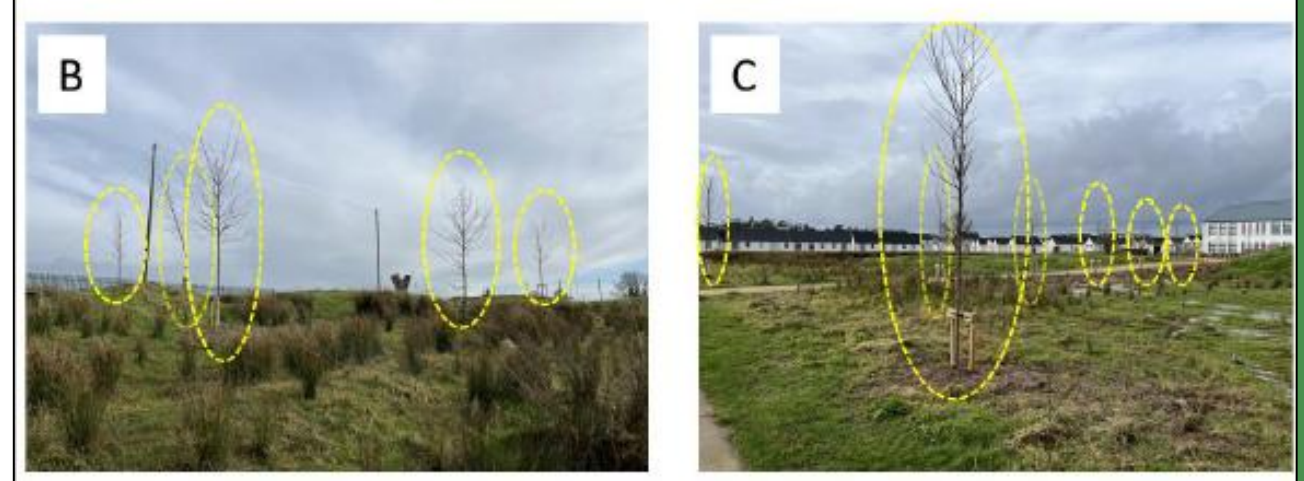


- Sound pressure levels of restorative spaces vs Sound quality deserves consideration
- Process of assessment developed by LCCC in partnership with NCL – uses soundscape approach cognisant of ISO/TS 12913 Parts 1-3
- Method applied to People’s Park and Castletroy Greenway CQAs
- Method applicable only to agglomerations due to definition of QAs in open country - ENR 2018 (DECC Circular)



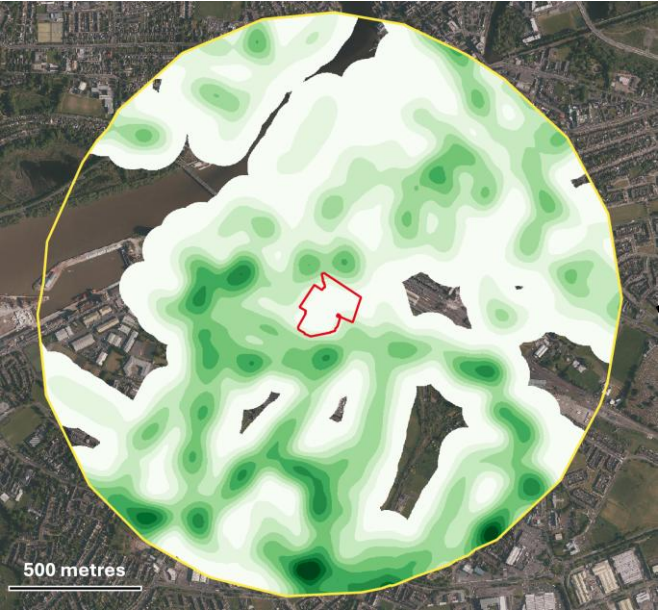
Acoustic Improvements - Castletroy Greenway CQA

Recommended area to improve sound environment (red hatched areas)

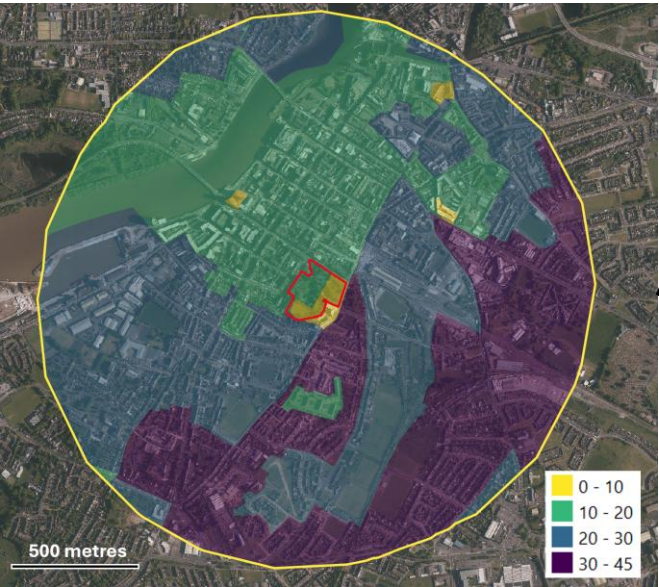


Social Equity - Quiet Area Investigations

Heatmap of dwellings exposed to >53 dB Lden



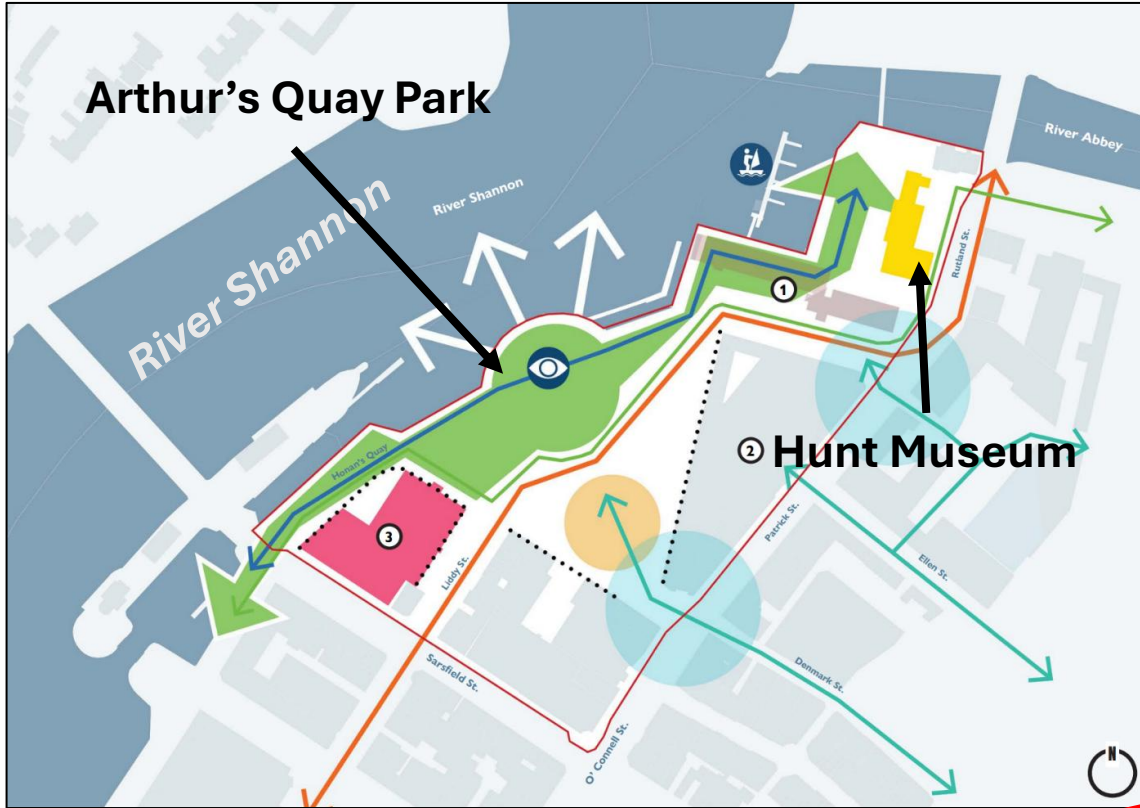
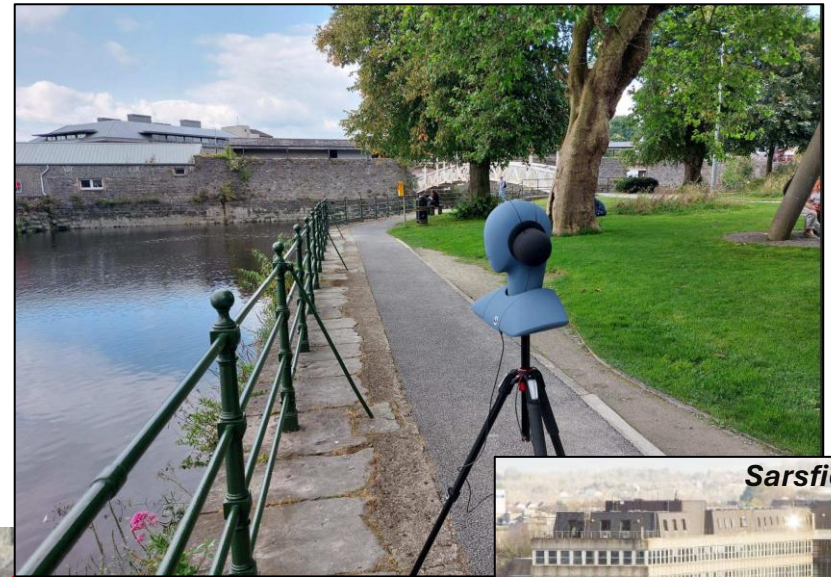
% Population with self-reported disability (CSO)



Heatmap of vulnerable population arguably with need for tranquil environment



Example Public Realm: Potential Options for Arthur's Quay Park



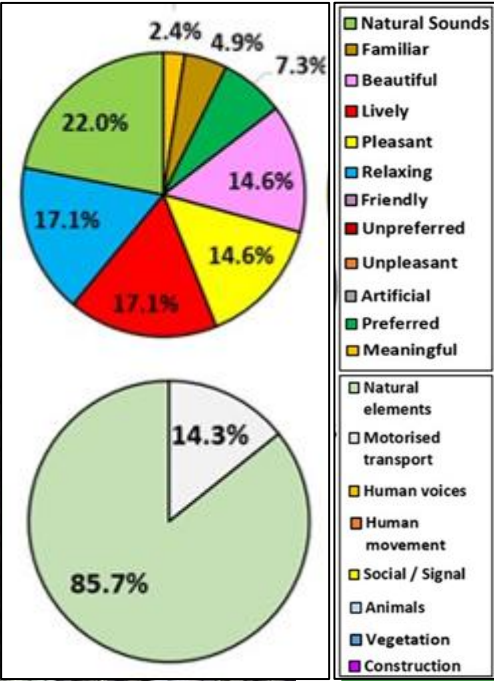
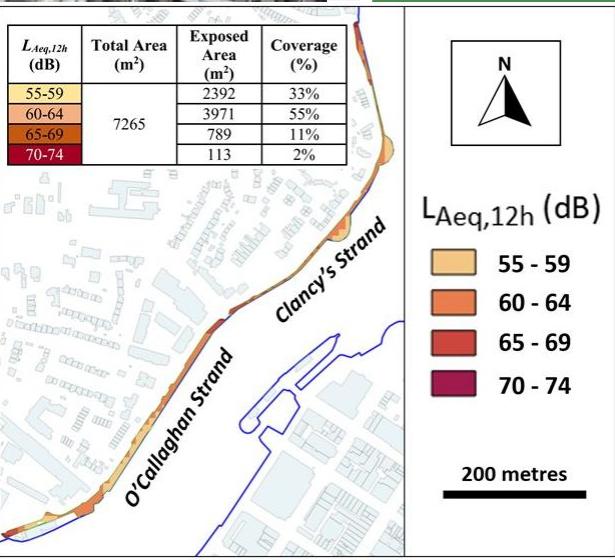
Acoustic Heritage - Curragower Falls

King John's Castle



(d)

Soundwalk results – Hush City (low tide)

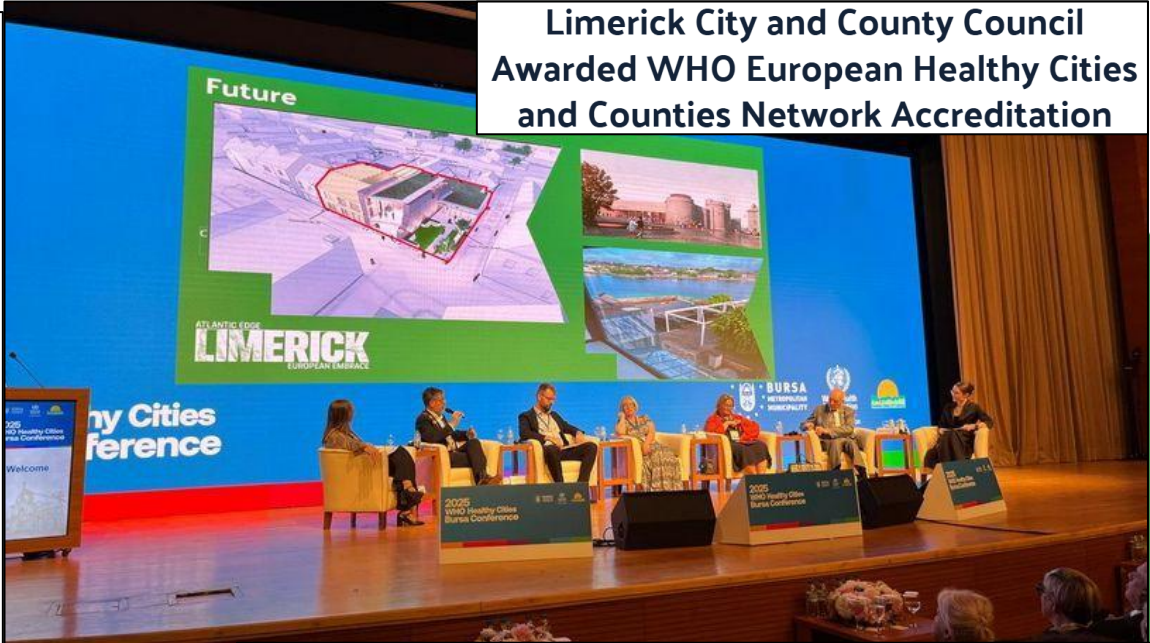
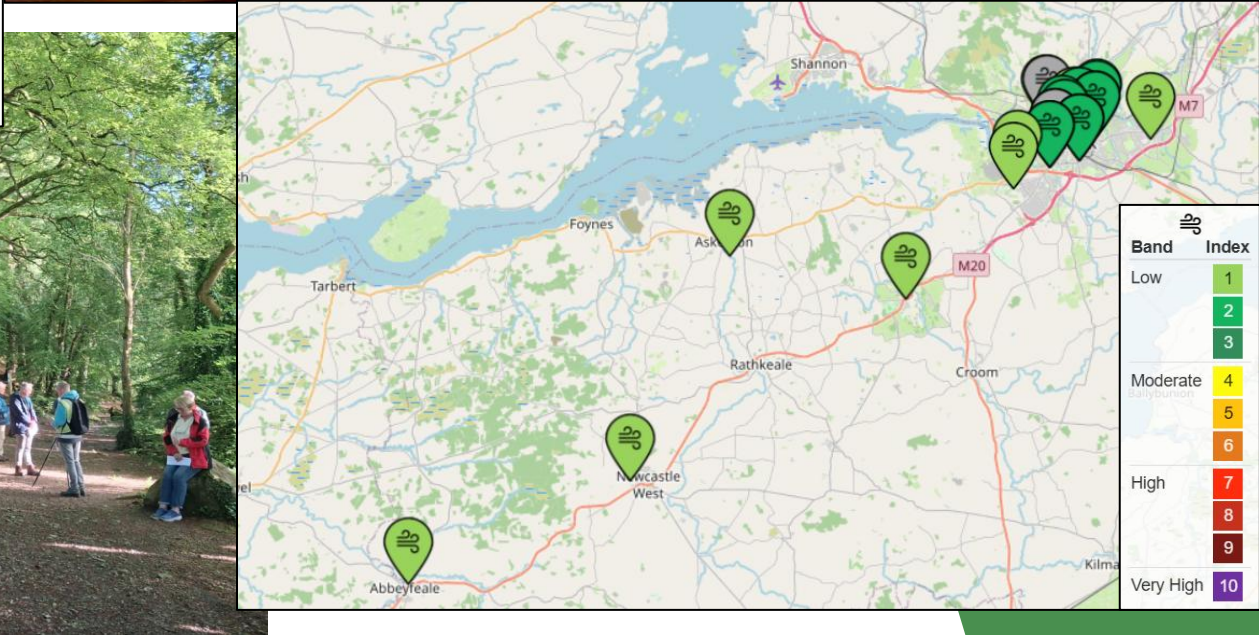


L _{Aeq,12h} (dB)	Total Area (m ²)	Exposed Area (m ²)	Coverage (%)
55-59	7265	2392	33%
60-64		3971	55%
65-69		789	11%
70-74		113	2%

Co-Benefits of Pleasant Environments

Soundscape combined with:

- Health & well-being
- Air quality
- Ecology



Vision for Limerick Noise Action Plans – Round 5

LCCC part of the Limerick Agglomeration, County Limerick

Well-being of Future Generations (Wales) Act 2015

PART 1 INTRODUCTION

PART 2 IMPROVING WELL-BEING

PART 3 THE FUTURE GENERATIONS COMMISSIONER FOR WALES

PART 4 PUBLIC SERVICES BOARDS

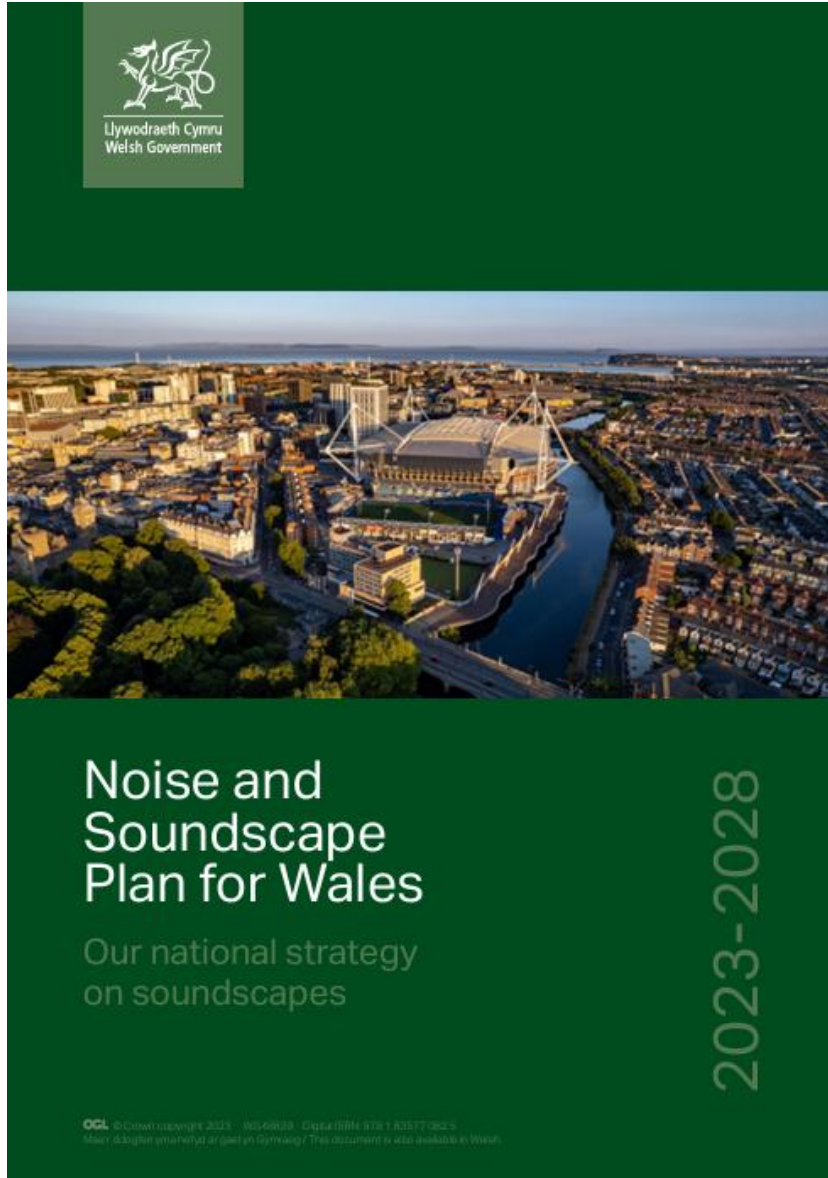
PART 5 FINAL PROVISIONS

Environment (Air Quality and Soundscapes) (Wales) Act 2024

PART 1 AIR QUALITY

PART 2 SOUNDSCAPES

PART 3 GENERAL



- Shifting noise policy beyond a simple reduction in decibels
- Ensure soundscape planning supports Local Authority policies encouraging modal shift, active travel and healthy lifestyles.
- Create a practical framework for applying ISO 12913 standards (Soundscape) for the provision of areas providing tranquility for citizens and visitors (public realm, green and blue infrastructure).
- Address any acoustic inequalities where adverse public health outcomes are linked spatially to areas of high environmental noise.
- Combine noise-reduction measures with soundscape enhancement actions where feasible
- **Acknowledgement of positive acoustic environments on health and well-being**

Recommendation

To think about.....



BEYOND NOISE
LEVELS



SOUND IN THE
BUILT-UP
ENVIRONMENT
FOR CITIZENS
HEALTH & WELL-
BEING



TRAINING



CHAMPIONING
THE
SOUNDSCAPE
APPROACH

Questions?



Thank You!

simon.jennings@limerick .ie