Belfast
A World Health Organization
Healthy City

BELFAST

Has COVID-19 changed our city?

Profiling Health, Wellbeing & Prosperity

Acknowledgements

Belfast Healthy Cities would like to acknowledge and sincerely thank Erica Ison, for her commitment and diligence as author of the six chapters in this publication, ***BELFAST: Profiling, Health, Well-being and Prosperity: Has Covid -19 changed our city?***

We would also like to wholeheartedly thank Dr Karen Casson, Vice Chair of Belfast Healthy Cities Board of Directors for her meticulous review of the data and her valuable comments on the Chapters.

Steering Group Members

Joan Devlin, Chief Executive Officer, Belfast Healthy Cities, Chair
Erica Ison, Specialist Practitioner in Population and Public Health
Dr Karen Casson, Vice Chair, Belfast Healthy Cites
Caroline Scott, Office Manager, Belfast Healthy Cities, Administrative support

Publications

There are six publications, referred to as chapters, in ***BELFAST Profiling Health, Wellbeing & Prosperity: Has Covid-19 changed our city?***

They are based on the 6P framework of Belfast being a member of Phase VII (2019 – 2025) of the World Health Organization European Healthy Cities Network:

Previous Publications

There are six publications, referred to as chapters, in ***BELFAST Profiling Health, Wellbeing & Prosperity,*** and a summary document.

They are based on the 6P framework of Belfast being a member of Phase VII (2019 – 2025) of the World Health Organization European Healthy Cities Network:

Foreword

The Belfast Healthy Cities City Health Profile is an important document that will help set out the challenges and opportunities for us all to improve the Health and Wellbeing of the city into the future going forward.

As we emerge from the COVID-19 pandemic, and we continue to see pressures on the cost of living, the city is clearly in a very different place now and we must take the opportunity to reflect both on the impact of the pandemic and refocus our thoughts as we move forward. This profile, and the key learning within, will help us do that.

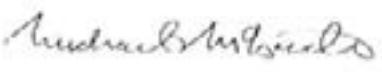
Has COVID-19 changed our city? Undoubtedly the answer is yes. The wider health and social care system had to adapt to meet the challenge of COVID-19. Prior to the pandemic, our health and social care system was already facing huge strategic challenges in the form of an ageing population, increasing demand, long and growing waiting lists, workforce pressures and the emergence of new and more expensive treatments. All of these pressures were exacerbated by the pandemic. The Department of Health and the wider service also need to plan for potential further outbreaks of the virus and use the learning from the pandemic to assist this planning.

To support the overall work on recovery, we need to understand what has, and has not, worked in terms in addressing the impact of the pandemic around the world. While no one nation or region will map precisely to our situation, there will be a strong evidence base to draw from.

It is apparent across many areas that there are opportunities to use the new ways of working and opportunities from the current crisis and not simply to return to the way things were done previously. This continues to be a feature of the future thinking on recovery.

I see continued collaboration as key going forward, we can all learn so much from each other, as is evidenced in the Chapters. I whole-heartedly support cross-departmental and cross-agency liaison. This is at the heart of Making Life Better, the Executive's framework for improving health and addressing health inequalities. We all have so much to contribute towards the health of our population and we can do this better together.

I am delighted to be working closely with Belfast Healthy Cities and I commend the organisation on this very important piece of work.



Prof Sir Michael McBride
Chief Medical Officer

Preface

This chapter examines how the COVID-19 pandemic affected a range of health and wellbeing indicators for Belfast. Based on the availability of data, key indicators were selected from an earlier report produced in 2022 'BELFAST Profiling Health, Wellbeing & Prosperity: the data behind the city and the people to describe the changes that occurred across the city between March 2020 and May 2022. The data have been collected from various sources and are presented here in an accessible, concise and integrated format.

As a member of the World Health Organization (WHO), European Healthy Cities Network the city of Belfast works directly with WHO Europe and other cities within the network on the social, economic and environmental determinants of health. Climate change is already having a profound impact on health due to extreme weather events, such as heatwaves, storms and floods and the disruption of food systems as well as the increasing risk posed by the rising incidence of zoonoses and food-, water- and vector-borne diseases, and mental health issues.

These health shocks and stresses are disproportionately felt by those groups already experiencing health inequalities. Cities are major contributors to climate change, consuming 78% of the world's energy and producing more than 60% of greenhouse gas emissions.

Reducing emissions of greenhouse gases in Belfast through better transport, food and energy-use choices as well as investments in energy efficiency, urban greening and other resilience measures can, therefore, make a significant contribution to improved health and wellbeing from reduced flooding and the urban heat island effect, improved biodiversity and the associated mental and physical health benefits as well as reduced fuel poverty and reduced air pollution.

The City Health Profile shows a decrease in carbon emissions across the city during the first 9 months of the COVID-19 pandemic covering the most intense periods of lockdown with a corresponding rise in in domestic electricity consumption, air quality and the amount of household waste produced and sent to landfill. These indicators have since risen and declined respectively again after the pandemic but interestingly not to pre-pandemic levels.

The profile reinforces key strands of the refreshed Belfast Agenda which target restoring, protecting and more sustainably managing our urban ecosystem as well as improving the energy efficiency of our buildings and moving to a more sustainable circular economy that minimises waste.

I very much welcome this timely document and would urge decision makers to make good use of the health and wellbeing data to develop policies, plans and programmes that address health inequalities as part of regional and local efforts to tackle climate change.

Debbie Caldwell
Climate Change Commissioner

Table of Sources

COVID-19 Planet Chapter Indicators showing the administrative and other geographies at which data were available

Indicator	LGD	LGD Deprived	HSCT	HSCT Deprived	Northern Ireland	Assembly area	DEA	Other
Carbon emissions								
Total carbon emissions								
Total carbon emissions within the scope of influence of local authorities								
Total transport carbon emissions								
Transport carbon emissions within the scope of influence of local authorities								
Domestic carbon emissions within the scope of influence of local authorities								
Total carbon emissions per capita								
Total carbon emissions per capita within the scope of influence of local authorities								
Domestic electricity consumption								
Median per meter								
Mean per meter								
Household waste								
Household waste per capita								
Household waste sent for preparing for reuse, dry recycling and composting								
Household waste sent to landfill								

Indicator	LGD	LGD Deprived	HSCT	HSCT Deprived	Northern Ireland	Assembly area	DEA	Other
Air quality								
Automatic Urban and Rural Network (AURN), UK								
Nitrogen dioxide, NO_2								2 monitoring sites in Belfast
Particulate matter, $PM_{2.5}$								1 monitoring site in Belfast
Local Air Quality Management (LAQM)								
Carbon monoxide, CO								1 monitoring site in Belfast
Benzene								1 monitoring site in Belfast
Metallic and other polluting elements								1 monitoring site in Belfast
Ozone, O_3								1 monitoring site in Belfast
Particulate matter, PM_{10}								2 monitoring sites in Belfast
Particulate matter, $PM_{2.5}$								1 monitoring site in Belfast
Nitrogen dioxide, NO_2								5 monitoring sites in Belfast
LAQM – Air Quality Management Areas (AQMAs)								
Noise complaints								
Number of noise complaints								
Number of notices served								
Rate of notices served								

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SECTION 1

Total Carbon Emissions

DATA SOURCE

Information is from GOV.UK, National statistics, UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (updated 6 July 2023).[1]

NB: Since the publication of "Planet: Profiling Health, Wellbeing and Prosperity", the data-holder has revised the UK local authority and regional greenhouse gas emissions national statistics, therefore, the 2019 dataset presented in that document are different from the 2019 data presented here.

YEARS FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

Calendar years 2020, and 2021

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None reported.

PROFILE FINDINGS

In 2020, covering the first 9 months of the COVID-19 pandemic, in Belfast LGD, the total carbon emissions were 1,325.7 $ktCO_2e$.

In 2021, the first calendar year of the COVID-19 pandemic, in Belfast LGD, the total carbon emissions were 1,425.3 $ktCO_2e$.

1. UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021 - GOV.UK (www.gov.uk) (Last accessed 7 September 2023)

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, in Belfast LGD, total carbon emissions decreased by 96.2 $ktCO_2e$, from 1,521.5 to 1,425.3 $ktCO_2e$.

See pages 18-22, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.

KEY COMPARISONS

Comparison with Northern Ireland

In 2020, covering the first 9 months of the COVID-19 pandemic, Belfast LGD:

- **Comprised 10.73% of Northern Ireland's total carbon emissions**
- **Had the third highest percentage share of Northern Ireland's total carbon emissions**

In 2021, covering the first calendar year of the COVID-19 pandemic, Belfast LGD:

- **Comprised 10.97% of Northern Ireland's total carbon emissions**
- **Had the third highest percentage share of Northern' Ireland's total carbon emissions**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, total carbon emissions decreased overall:

- **In Belfast LGD by 96.2 $ktCO_2e$, from 1,521.5 to 1,425.3 ktCO2e (a percentage decrease of 6.32%)**
- **In Northern Ireland by 390.7 $ktCO_2e$, from 13,383.1 to 12,992.4 ktCO2e (a percentage decrease of 2.92%)**

Comparison with other LGDs

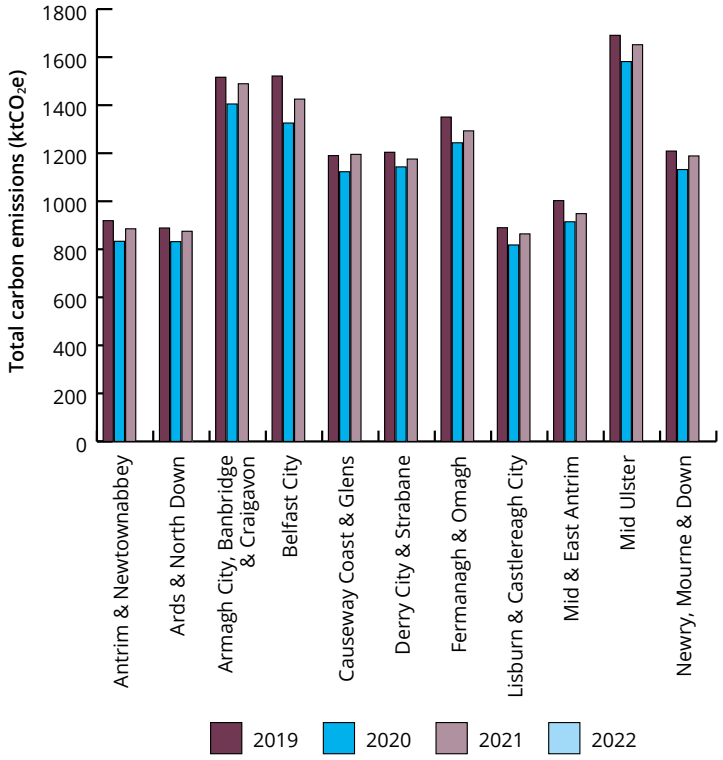
When compared with other LGDs, Belfast LGD had:

- **The second highest total carbon emissions in 2019, before the COVID-19 pandemic**
- **The third highest total carbon emissions in 2020, covering the first 9 months of the pandemic**
- **The third highest total carbon emissions in 2021, covering the first calendar year of the pandemic**

Between 2019 and 2021, covering the first year and 9 months of the COVID-19 pandemic, total carbon emissions:

- **Increased overall in one LGD**
- **Decreased overall in 10 LGDs, including Belfast LGD (see COVID-19 Planet Figure 1)**

COVID-19 PLANET FIGURE 1:
Total carbon emissions ($ktCO_2e$) by LGD, 2019, 2020, and 2021



Lorem ipsum

Source: GOV.UK, National statistics: UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (Updated 6 July 2023), Table 1.2

OBSERVATIONS ON THE DATA

Comparison with Northern Ireland

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, Belfast LGD's percentage share of Northern Ireland's total carbon emissions decreased by 0.40 percentage points, from 11.37% to 10.97% (a percentage decrease of 3.52%).

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, there was a greater percentage decrease in total carbon emissions in Belfast LGD when compared with Northern Ireland, resulting in a more positive outcome for Belfast LGD.

Comparison with other LGDs

In comparison with other LGDs, the total carbon emissions in Belfast LGD were:

- **The second highest in 2019, before the COVID-19 pandemic**
- **The third highest in 2020, 9 months into the pandemic, and in 2021, the first calendar year of the pandemic**

Consequently, there was a change in the relative position of Belfast LGD among LGDs, as it dropped one place from second to third highest.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, of the 10 LGDs in which there was an overall decrease in total carbon emissions:

- **Belfast LGD the highest percentage decrease at 6.32%**
- **Ards & North Down LGD had the smallest percentage decrease at 1.53%**
- **The median percentage decrease was 2.62%**

It is noticeable that in the 10 LGDs, including Belfast LGD, in which there was an overall decrease in total carbon emissions that the decrease occurred between 2019 and 2020, the early phases of the COVID-19 pandemic, whereas between 2020 and 2021 there was an increase in total carbon emissions, but not to pre-pandemic levels. This pattern in total carbon emissions was also seen in Northern Ireland.

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, total carbon emissions:

- **Increased overall in one LGD**
- **Decreased overall in 10 LGDs, including Belfast LGD**
- **Decreased overall in Northern Ireland**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic:

- **Total carbon emissions decreased in both Belfast LGD and Northern Ireland, however, the percentage decrease was greater in Belfast LGD**
- **The decrease in total carbon emissions in Belfast LGD accounted for almost one-quarter (24.62%) of the overall decrease seen in Northern Ireland during this time-period**

Among LGDs, Belfast LGD had the third highest total carbon emissions during the first year and 9 months of the COVID-19 pandemic. Given the size of population and area covered by Belfast LGD, it is not surprising that Belfast LGD's total carbon emissions are relatively high, however, it is also important to consider total carbon emissions per capita (see pages 2-5), an indicator that shows the amount of carbon emissions per person, which can be seen as providing a fairer comparison with other LGDs.

In Belfast LGD, the first year and 9 months of the COVID-19 pandemic has been associated with an overall decrease in total carbon emissions, which may reflect the periods of lockdown when industrial, commercial, and social activities were restricted.

SECTION 2

Total Carbon Emissions within the Scope of Influence of Local Authorities

DATA SOURCE

Information is from GOV.UK, National statistics, UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (Updated 6 July 2023).[2]

NB: Since the publication of "Planet: Profiling Health, Wellbeing and Prosperity", the data-holder has revised the UK local authority and regional greenhouse gas emissions national statistics, therefore, the 2019 dataset presented in that document are different from the 2019 data presented here.

YEARS FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

Calendar years 2020, and 2021

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None reported.

2. UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021 - GOV.UK (www.gov.uk) The Northern Ireland datapoints are as provided by the data-holder (Last accessed 14 September 2023)

PROFILE FINDINGS

In 2020, covering the first 9 months of the COVID-19 pandemic, in Belfast LGD, the total carbon emissions within the scope of influence of local authorities was 1,199.6 $ktCO_2e$.

In 2021, covering the first calendar year of the COVID-19 pandemic, in Belfast LGD, the total carbon emissions within the scope of influence of local authorities was 1,296.7 $ktCO_2e$.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, in Belfast LGD, the total carbon emissions within the scope of influence of local authorities decreased overall by 89.0 $ktCO_2e$, from 1,385.7 to 1,296.7 $ktCO_2e$.

See pages 23-25, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.

KEY COMPARISONS

Comparison with Northern Ireland

In 2020, covering the first 9 months of the COVID-19 pandemic, Belfast LGD:

- **Comprised 12.52% of Northern Ireland's total carbon emissions within the scope of influence of local authorities**
- **Had the second highest percentage share of Northern Ireland's total carbon emissions within the scope of influence of local authorities**

In 2021, covering the first calendar year of the COVID-19 pandemic, Belfast LGD:

- **Comprised 12.45% of Northern Ireland's total carbon emissions within the scope of influence of local authorities**
- **Had the second highest percentage share of Northern Ireland's total carbon emissions within the scope of influence of local authorities**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, the total carbon emissions within the scope of influence of local authorities decreased overall:

- **In Belfast LGD by 89.0 $ktCO_2e$, from 1,385.7 to 1,296.7 $ktCO_2e$ (a percentage decrease of 6.42%)**

- **In Northern Ireland by 189.8 $ktCO_2e$, from 10,603.3 to 10,413.5 $ktCO_2e$ (a percentage decrease of 1.79%)**

Comparison with other LGDs

When compared with other LGDs, Belfast LGD had:

- **The highest total carbon emissions within the scope of influence of local authorities in 2019, before the COVID-19 pandemic**

- **The second highest total carbon emissions within the scope of influence of local authorities in 2020, covering the first 9 months of the pandemic, and 2021, covering the first calendar year of the pandemic**

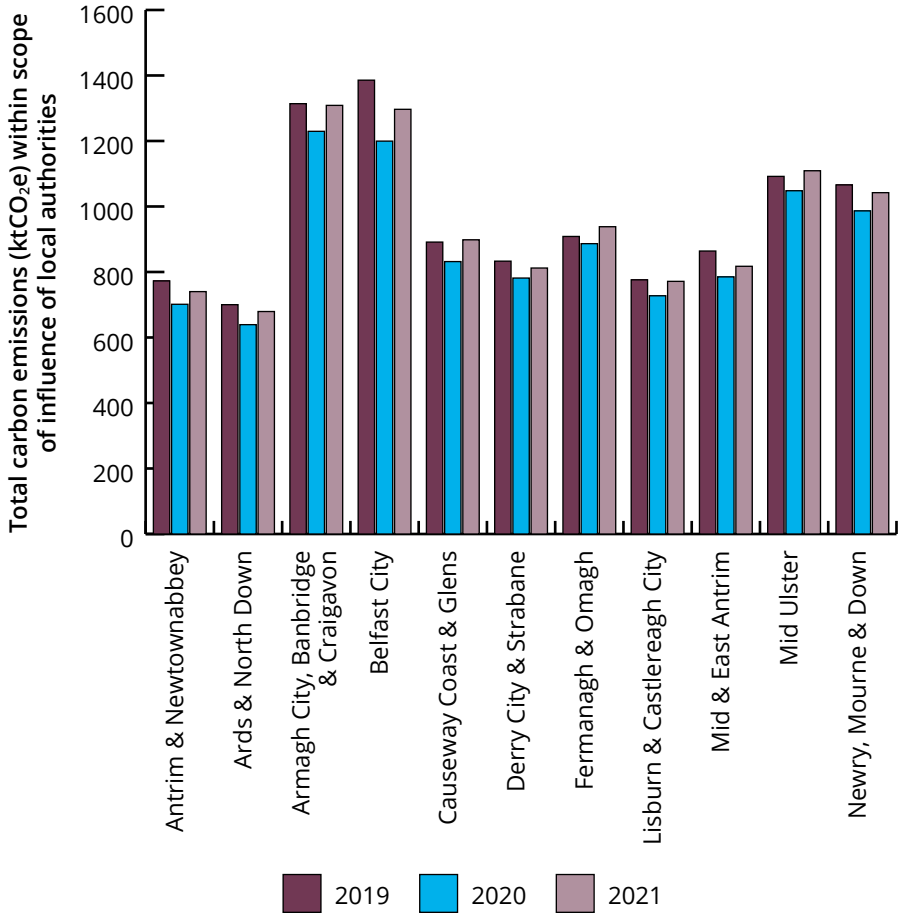
Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, the total carbon emissions within the scope of influence of local authorities:

- **Increased overall in 3 LGDs**

- **Decreased overall in 8 LGDs, including Belfast LGD (see COVID-19 Planet Figure 2)**

COVID-19 PLANET FIGURE 2:

Total carbon emissions ($ktCO_2e$) within the scope of influence of local authorities by LGD, 2019, 2020, and 2021



Source: GOV.UK, National statistics: UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (Updated 6 July 2023), Table 2.1

OBSERVATIONS ON THE DATA

Comparison with Northern Ireland

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, Belfast LGD's percentage share of Northern Ireland's total carbon emissions within the scope of influence of local authorities decreased by 0.62 percentage points, from 13.07% to 12.45% (a percentage decrease of 4.74%).

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, there was a greater percentage decrease in total carbon emissions within the scope of influence of local authorities in Belfast LGD when compared with Northern Ireland, resulting in a more positive outcome for Belfast LGD.

Comparison with other LGDs

In comparison with other LGDs, the total carbon emissions within the scope of influence of local authorities in Belfast LGD was:

- **The highest in 2019, before the COVID-19 pandemic**
- **The second highest in 2020, covering the first 9 months of the pandemic**
- **The second highest in 2021, covering the first calendar year of the pandemic**

Consequently, there was a change in the relative position of Belfast LGD among LGDs, as it dropped one place from the highest to the second highest.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the COVID-19 pandemic, of the 8 LGDs in which there was an overall decrease in the total carbon emissions within the scope of influence of local authorities:

- **Belfast LGD had the greatest percentage decrease at 6.42%**
- **Armagh City, Banbridge, and Craigavon LGD had the smallest percentage decrease at 0.38%**

The median percentage increase was 2.75%.

It is noticeable that in the 8 LGDs, including Belfast LGD, in which there was an overall decrease in total carbon emissions within the scope of influence of local authorities that the decrease occurred between 2019 and 2020, the early phase of the COVID-19 pandemic, whereas between 2020 and 2021 there was an increase in total carbon emissions within the scope of influence of local authorities, but not to pre-pandemic levels. This pattern in total carbon emissions within the scope of influence of local authorities was also seen in Northern Ireland.

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, the total carbon emissions within the scope of influence of local authorities:

- **Increased overall in 3 LGDs**
- **Decreased overall in 8 LGDs, including Belfast LGD**
- **Decreased overall in Northern Ireland**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic:

- **The total carbon emissions within the scope of influence of local authorities decreased in both Belfast LGD and Northern Ireland, although the percentage decrease was greater in Belfast LGD**
- **The decrease in total carbon emissions within the scope of influence of local authorities in Belfast LGD accounted for almost half (46.89%) of the overall decrease seen in Northern Ireland during this time-period**

Among LGDs, Belfast LGD had the second highest total carbon emissions within the scope of influence of local authorities during the first year and 9 months of the COVID-19 pandemic. Given the size of population and area covered by Belfast LGD, it is not surprising that Belfast LGD's total carbon emissions within the scope of influence of local authorities were relatively high, however, it is also important to consider total carbon emissions per capita within the scope of influence of local authorities (see pages 9-11), an indicator that shows the amount of carbon emissions per person within the scope of influence of local authorities, which can be seen as providing a fairer comparison with other LGDs.

In Belfast LGD, the first year and 9 months of the COVID-19 pandemic has been associated with an overall decrease in the total carbon emissions within the scope of influence of local authorities, which may reflect the periods of lockdown when commercial, and social activities were restricted

SECTION 3

Total Transport Carbon Emissions

DATA SOURCE

Information is from GOV.UK, National statistics, UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (Updated 6 July 2023).[3]

NB: Since the publication of "Planet: Profiling Health, Wellbeing and Prosperity", the data-holder has revised the UK local authority and regional greenhouse gas emissions national statistics, therefore, the 2019 dataset presented in that document are different from the 2019 data presented here.

YEARS FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

Calendar years 2020, and 2021

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None reported.

3. UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021 - GOV.UK (www.gov.uk) The Northern Ireland datapoints are as provided by the data-holder (Last accessed 14 September 2023)

PROFILE FINDINGS

In 2020, covering the first 9 months of the COVID-19 pandemic, in Belfast LGD, total transport carbon emissions were 259.0 $ktCO_2e$.

In 2021, covering the first calendar year of the COVID-19 pandemic, in Belfast LGD, total transport carbon emissions were 289.6 $ktCO_2e$.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, in Belfast LGD, total transport carbon emissions decreased by 38.1 ktCO2e, from 327.7 to 289.6 $ktCO_2e$.

See pages 33-35, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.

KEY COMPARISONS

Comparison with Northern Ireland

In 2020, covering the first 9 months of the COVID-19 pandemic, Belfast LGD:

- **Comprised 7.75% of Northern Ireland's total transport carbon emissions**
- **Had the fourth lowest percentage share of Northern Ireland's total transport carbon emissions**

In 2021, covering the first calendar of the COVID-19 pandemic, Belfast LGD:

- **Comprised 7.83% of Northern Ireland's total transport carbon emissions**
- **Had the fifth lowest percentage share of Northern Ireland's total transport carbon emissions**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, total transport carbon emissions decreased:

- **In Belfast LGD by 38.1 $ktCO_2e$, from 327.7 to 289.6 $ktCO_2e$ (a percentage decrease of 11.63%)**
- **In Northern Ireland by 150.0 $ktCO_2e$, from 3,848.5 to 3,698.5 $ktCO_2e$ (a percentage decrease of 3.90%)**

Comparison with other LGDs

When compared with other LGDs, Belfast LGD had:

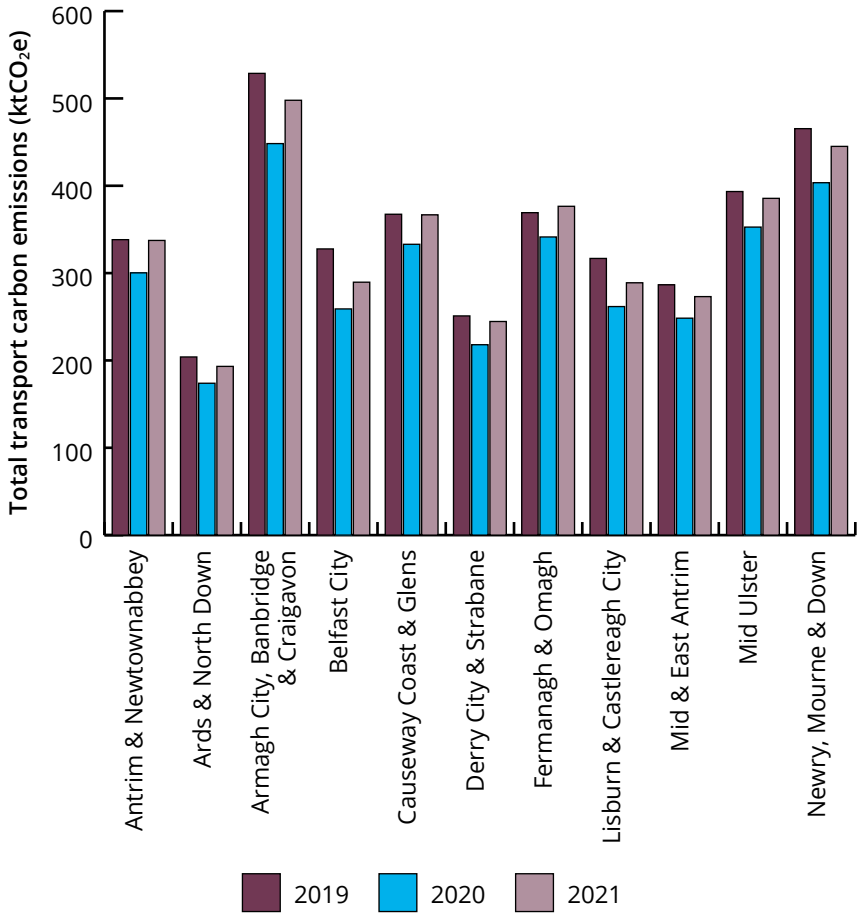
- **In 2019, before the COVID-19 pandemic, the fifth lowest total transport carbon emissions**
- **In 2020, covering 9 months of the pandemic, the fourth lowest total transport carbon emissions**
- **In 2021, covering the first calendar year of the pandemic, the fifth lowest total transport carbon emissions**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, total transport carbon emissions:

- **Decreased overall in 10 LGDs, including Belfast LGD**
- **Increased overall in one LGD (see COVID-19 Planet Figure 3)**

COVID-19 PLANET FIGURE 3:

Total transport carbon emissions ($ktCO_2e$) by LGD, 2019, 2020, and 2021



Source: GOV.UK, National statistics: UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (Updated 6 July 2023), Table 1.2

OBSERVATIONS ON THE DATA

Comparison with Northern Ireland

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, Belfast LGD's percentage share of Northern Ireland's total transport carbon emissions decreased by 0.69 percentage points, from 8.52% to 7.83% (a percentage decrease of 8.10%).

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, there was a greater percentage decrease in total transport carbon emissions in Belfast LGD when compared with Northern Ireland, with a more favourable outcome for Belfast LGD.

Comparison with other LGDs

In comparison with other LGDs, total transport carbon emissions in Belfast LGD were:

- **The fifth lowest in 2019, before the COVID-19 pandemic**
- **The fourth lowest in 2020, covering the first 9 months of the pandemic**
- **The fifth lowest in 2021, covering the first calendar year of the pandemic**

Consequently, there was no overall change in the relative position of Belfast LGD among LGDs, because although it dropped one place between 2019 and 2020, it regained that place between 2020 and 2021.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, of the 10 LGDs in which there was a decrease in total transport carbon emissions:

- **Belfast LGD the greatest percentage decrease at 11.63%**
- **Causeway Coast & Glens LGD had the smallest percentage decrease at 0.19%**

The median percentage decrease was 4.54%.

It is noticeable that in the 10 LGDs in which there was an overall decrease in total transport carbon emissions, including Belfast LGD, that the decrease occurred between 2019 and 2020, the early phase of the COVID-19 pandemic, whereas between 2020 and 2021 there was an increase in total transport carbon emissions, but not to pre-pandemic levels. This pattern in total transport carbon emissions was also seen in Northern Ireland.

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, total transport carbon emissions:

- **Decreased overall in 10 LGDs, including Belfast LGD**
- **Decreased overall in Northern Ireland**
- **Increased in one LGD**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic:

- **Total transport carbon emissions decreased in both Belfast LGD and Northern Ireland, however, the percentage decrease was greater in Belfast LGD, resulting in a more favourable outcome for Belfast LGD**

- **The decrease in transport carbon emissions in Belfast LGD accounted for one-quarter (25.40%) of the overall decrease seen in Northern Ireland during this time-period**

In 2021, Belfast LGD had the fifth lowest total transport carbon emissions among LGDs.

In Belfast LGD, the first year and 9 months of the COVID-19 pandemic has been associated with a decrease in total transport carbon emissions, which may reflect reduced use of all transport sectors (commercial, industrial, and domestic uses) during periods of lockdown.

SECTION 4

Transport Carbon Emissions within the Scope of Influence of Local Authorities

DATA SOURCE

Information is from GOV.UK, National statistics, UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (Updated 6 July 2023).[4]

NB: Since the publication of "Planet: Profiling Health, Wellbeing and Prosperity", the data-holder has revised the UK local authority and regional greenhouse gas emissions national statistics, therefore, the 2019 dataset presented in that document are different from the 2019 data presented here.

YEARS FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

Calendar years 2020, and 2021

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None reported.

4. UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021 - GOV.UK (www.gov.uk) (Last accessed 7 September 2023)

PROFILE FINDINGS

In 2020, covering the first 9 months of the COVID-19 pandemic, in Belfast LGD, transport carbon emissions within the scope of influence of local authorities were 212.3 $ktCO_2e$.

In 2021, covering the first calendar year of the COVID-19 pandemic, in Belfast LGD, transport carbon emissions within the scope of influence of local authorities were 240.0 $ktCO_2e$.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, in Belfast LGD, transport carbon emissions within the scope of influence of local authorities decreased by 29.2 $ktCO_2e$, from 269.2 to 240.0 $ktCO_2e$.

See pages 36-42, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.

KEY COMPARISONS

Comparison with Northern Ireland

In 2020, covering the first 9 months of the COVID-19 pandemic, Belfast LGD:

- **Comprised 6.94% of Northern Ireland's transport carbon emissions within the scope of influence of local authorities**
- **Had the fourth lowest percentage share of Northern Ireland's transport carbon emissions within the scope of influence of local authorities**

In 2021, covering the first calendar year of the COVID-19 pandemic, Belfast LGD:

- **Comprised 7.08% of Northern Ireland's transport carbon emissions within the scope of influence of local authorities**
- **Had the fourth lowest percentage share of Northern Ireland's transport carbon emissions within the scope of influence of local authorities**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, transport carbon emissions within the scope of influence of local authorities decreased:

- **In Belfast LGD by 29.2 $ktCO_2e$, from 269.2 to 240.0 $ktCO_2e$ (a percentage decrease of 10.85%)**

- **In Northern Ireland by 106.2 $ktCO_2e$, from 3,495.9 to 3,389.7 $ktCO_2e$ (a percentage decrease of 3.04%)**

Comparison with other LGDs

When compared with other LGDs, Belfast LGD had:

- **In 2019, before the COVID-19 pandemic, the median transport carbon emissions within the scope of influence of local authorities**

- **In 2020, covering the first 9 months of the pandemic, the fourth lowest transport carbon emissions within the scope of influence of local authorities**

- **In 2021, covering the first calendar year of the pandemic, the fourth lowest transport carbon emissions within the scope of influence of local authorities**

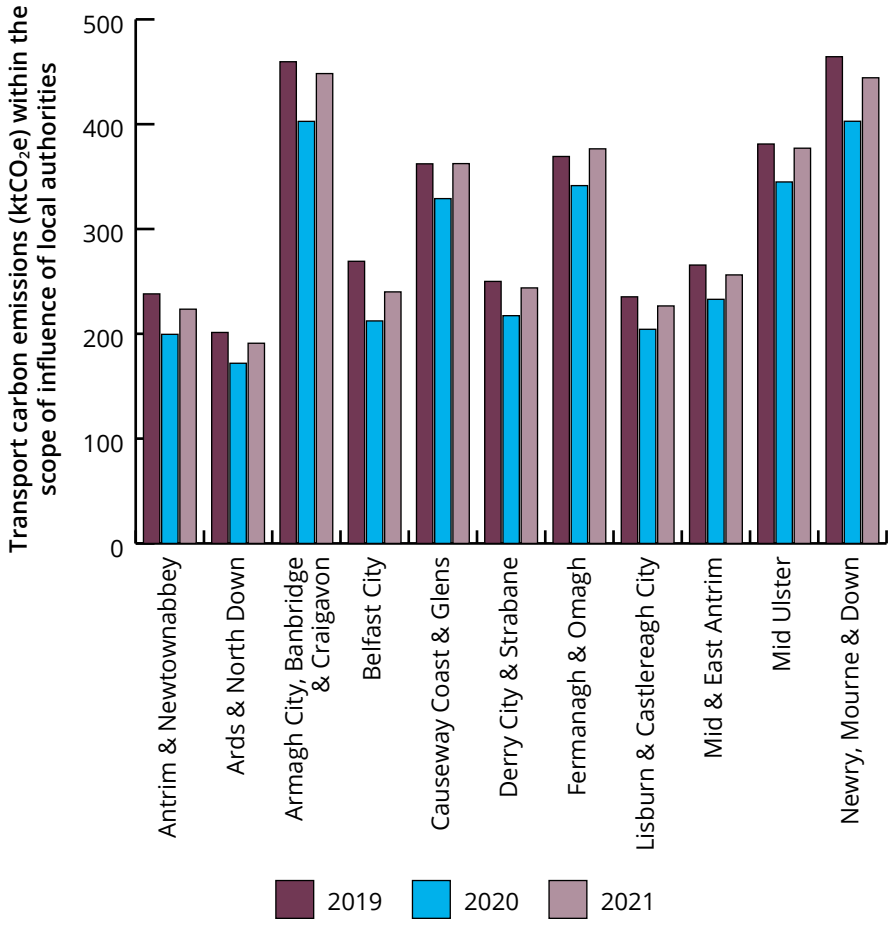
Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, transport carbon emissions within the scope of influence of local authorities:

- **Decreased overall in 9 LGDs, including Belfast LGD**

- **Increased overall in 2 LGDs (see COVID-19 Planet Figure 4)**

COVID-19 PLANET FIGURE 4:

Transport carbon emissions ($ktCO_2e$) within the scope of influence of local authorities by LGD, 2019, 2020, and 2021



Source: GOV.UK, National statistics: UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (Updated 6 July 2023), Table 2.1

OBSERVATIONS ON THE DATA

Comparison with Northern Ireland

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, Belfast LGD's percentage share of Northern Ireland's transport carbon emissions within the scope of influence of local authorities decreased by 0.62 percentage points, from 7.70% to 7.08% (a percentage decrease of 8.05%).

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, there was a percentage decrease in transport carbon emissions within the scope of influence of local authorities in both Belfast LGD and Northern Ireland, but the percentage decrease was greater in Belfast LGD when compared with Northern Ireland, with a more favourable outcome for Belfast LGD.

Comparison with other LGDs

In comparison with other LGDs, transport carbon emissions within the scope of influence of local authorities in Belfast LGD were:

- **The median in 2019, before the COVID-29 pandemic**
- **The fourth lowest in 2020, covering the first 9 months of the pandemic**
- **The fourth lowest in 2021, covering the first calendar year of the pandemic**

Consequently, there was a change in the relative position of Belfast LGD among LGDs from the median to becoming the fourth lowest, which is a more favourable outcome.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, of the 9 LGDs in which there was a decrease in transport carbon emissions within the scope of influence of local authorities:

- **Belfast LGD the greatest percentage decrease at 10.85%**
- **Mid Ulster LGD had the smallest percentage decrease at 1.05%**
- **Lisburn & Castlereagh LGD had the median percentage decrease at 3.70%**

It is noticeable that in the 9 LGDs in which there was an overall decrease in transport carbon emissions within the scope of influence of local authorities, including Belfast LGD, that the decrease occurred between 2019 and 2020, the early phase of the COVID-19 pandemic, whereas between 2020 and 2021 there was an increase in transport carbon emissions within the scope of influence of local authorities, but not to pre-pandemic levels. This pattern in transport carbon emissions within the scope of influence of local authorities was also seen in Northern Ireland.

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, transport carbon emissions within the scope of influence of local authorities:

- **Decreased overall in 9 LGDs, including Belfast LGD**
- **Decreased overall in Northern Ireland**
- **Increased overall in 2 LGDs**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic:

- **Transport carbon emissions within the scope of influence of local authorities decreased in both Belfast LGD and Northern Ireland, but the percentage decrease was greater in Belfast LGD, resulting in a more favourable outcome for Belfast LGD**
- **The decrease in transport carbon emissions within the scope of influence of local authorities in Belfast LGD accounted for more than one-quarter (27.50%) of the overall decrease seen in Northern Ireland during this time-period**

Among LGDs, Belfast LGD had the median transport carbon emissions within the scope of influence of local authorities before the COVID-19 pandemic, and the fourth lowest during the first year and 9 months into the pandemic.

In Belfast LGD, the first year and 9 months of the COVID-19 pandemic has been associated with a decrease in transport carbon emissions within the scope of influence of local authorities which may reflect not only reduced use of all transport during lockdown but also a greater use of public transport in Belfast when compared with other LGDs (see Place Chapter pages 00-00).

SECTION 5

Domestic Carbon Emissions within the Scope of Influence of Local Authorities

DATA SOURCE

Information is from GOV.UK, National statistics, UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (Updated 6 July 2023).[5]

NB: Since the publication of "Planet: Profiling Health, Wellbeing and Prosperity", the data-holder has revised the UK local authority and regional greenhouse gas emissions national statistics, therefore, the 2019 dataset presented in that document are different from the 2019 data presented here.

YEARS FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

Calendar years 2020, and 2021

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None reported.

5. UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021 - GOV.UK (www.gov.uk) (Last accessed 7 September 2023)

PROFILE FINDINGS

In 2020, covering the first 9 months of the COVID-19 pandemic, in Belfast LGD, the domestic carbon emissions within the scope of influence of local authorities was 559.2 $ktCO_2e$.

In 2021, covering the first calendar year of the COVID-19 pandemic, in Belfast LGD, the domestic carbon emissions within the scope of influence of local authorities was 577.5 $ktCO_2e$.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, in Belfast LGD, the domestic carbon emissions within the scope of influence of local authorities decreased by 16.6 $ktCO_2e$, from 594.1 to 577.5 $ktCO_2e$.

See pages 26-32, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.

KEY COMPARISONS

Comparison with Northern Ireland

In 2020, covering the first 9 months of the COVID-19 pandemic, Belfast LGD:

- **Comprised 15.65% of Northern Ireland's domestic carbon emissions within the scope of influence of local authorities**
- **Had the highest percentage share of Northern Ireland's domestic carbon emissions within the scope of influence of local authorities**

In 2021, covering the first calendar year of the COVID-19 pandemic, Belfast LGD:

- **Comprised 15.67% of Northern Ireland's domestic carbon emissions within the scope of influence of local authorities**
- **Had the highest percentage share of Northern Ireland's domestic carbon emissions within the scope of influence of local authorities**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, the domestic carbon emissions within the scope of influence of local authorities decreased:

- **In Belfast LGD by 16.6 $ktCO_2e$, from 594.1 to 577.5 $ktCO_2e$ (a percentage decrease of 2.79%)**
- **In Northern Ireland by 12.9 $ktCO_2e$, from 3,697.9 to 3,685.0 $ktCO_2e$ (a percentage decrease of 0.35%)**

Comparison with other LGDs

When compared with other LGDs, Belfast LGD had the highest domestic carbon emissions within the scope of influence of local authorities in:

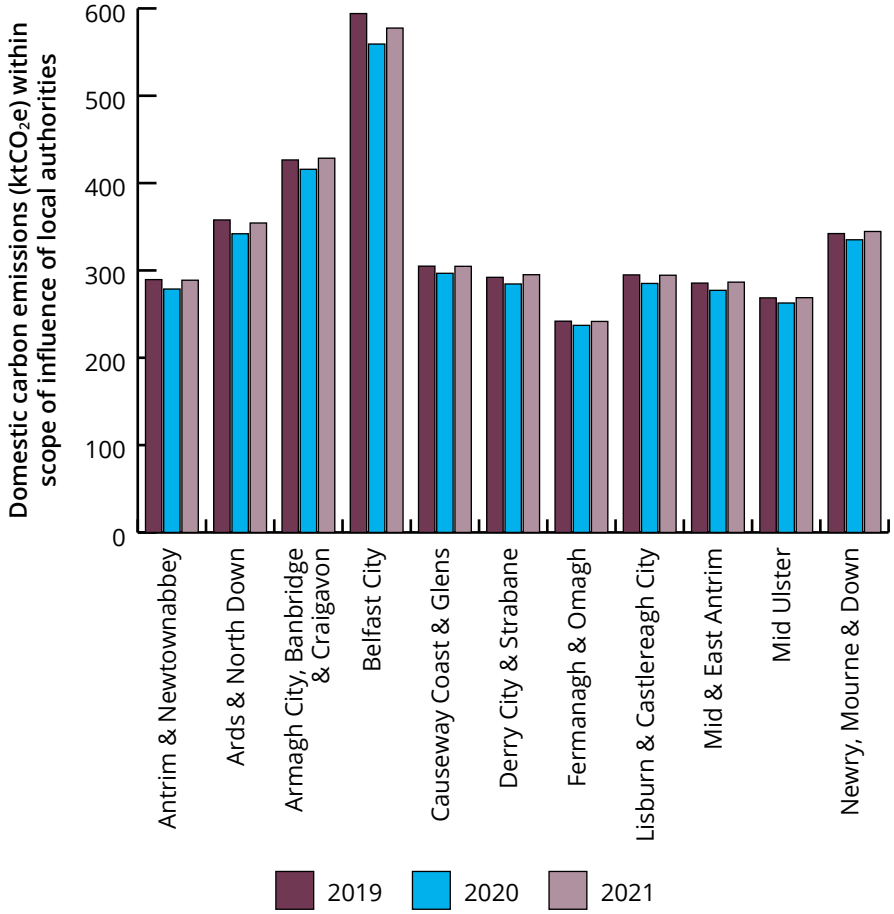
- **2019, before the COVID-19 pandemic**
- **2020, covering the first 9 months of the pandemic**
- **2021, covering the first calendar year of the pandemic**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, the domestic carbon emissions within the scope of influence of local authorities:

- **Decreased overall in 6 LGDs, including Belfast LGD**
- **Increased overall in 5 LGDs (see COVID-19 Planet Figure 5)**

COVID-19 PLANET FIGURE 5:

Domestic carbon emissions ($ktCO_2e$) within the scope of influence of local authorities by LGD, 2019, 2020, and 2021



Source: GOV.UK, National statistics: UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (Updated 6 July 2023), Table 2.1

OBSERVATIONS ON THE DATA

Comparison with Northern Ireland

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, Belfast LGD's percentage share of Northern Ireland's domestic carbon emissions within the scope of influence of local authorities decreased by 0.40 percentage points, from 16.07% to 15.67% (a percentage decrease of 2.49%).

Between 2019 and 2020, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, there was a percentage decrease in domestic carbon emissions within the scope of influence of local authorities in both Belfast LGD and Northern Ireland, but the percentage decrease was greater in Belfast LGD with a more favourable outcome for Belfast.

Comparison with other LGDs

In comparison with other LGDs, the domestic carbon emissions within the scope of influence of local authorities in Belfast LGD was the highest both before and during the first year and 9 months of the COVID-19 pandemic, consequently, there was no change in the relative position of Belfast LGD among LGDs.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, of the 6 LGDs in which there was a decrease in the domestic carbon emissions within the scope of influence of local authorities:

- **Belfast LGD had the greatest percentage decrease at 2.79%**
- **Causeway Coast & Glens LGD had the smallest percentage decrease at 0.07%**

The median percentage increase was 0.19%.

It is noticeable that in the 6 LGDs in which there was an overall decrease in domestic carbon emissions within the scope of influence of local authorities, including Belfast LGD, that the decrease occurred between 2019 and 2020, the early phase of the COVID-19 pandemic, whereas between 2020 and 2021 there was an increase in domestic carbon emissions within the scope of influence of local authorities, and in 4 of the LGDs this increase brought domestic carbon very close to pre-pandemic levels (within 1 $ktCO_2e$). This pattern of a decrease followed by an increase in domestic carbon emissions within the scope of influence of local authorities was also seen in Northern Ireland.

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, the domestic carbon emissions within the scope of influence of local authorities:

- **Decreased overall in 6 LGDs, including Belfast LGD**
- **Decreased overall in Northern Ireland**
- **Increased in 5 LGDs**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the COVID-19 pandemic:

- **Domestic carbon emissions within the scope of influence of local authorities decreased in both Belfast LGD and Northern Ireland, however, the percentage decrease was greater in Belfast LGD, with a more favourable outcome for Belfast LGD**

- **The decrease in domestic carbon emissions within the scope of influence of local authorities in Belfast LGD was greater than (128.68%) the overall decrease in Northern Ireland during this time-period**

Among LGDs, Belfast LGD had the highest domestic carbon emissions within the scope of influence of local authorities both before and during the first year and 9 months of the COVID-19 pandemic. This finding is not surprising given the number of domestic buildings in Belfast LGD; refer to pages 2-5 for the indicator on carbon emissions per capita for a rate-based indicator that provides a fairer comparison with other LGDs.

In Belfast LGD, the early phase of the COVID-19 pandemic has been associated with an overall slight decrease in the domestic carbon emissions within the scope of influence of local authorities.

SECTION 6

Total Carbon Emissions per Capita

DATA SOURCE

Information is from GOV.UK, National statistics, UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (Updated 6 July 2023).[6]

NB: Since the publication of "Planet: Profiling Health, Wellbeing and Prosperity", the data-holder has revised the UK local authority and regional greenhouse gas emissions national statistics, therefore, the 2019 dataset presented in that document are different from the 2019 data presented here.

YEARS FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

Calendar years 2020, and 2021

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None reported.

6. UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021 - GOV.UK (www.gov.uk) (Last accessed 7 September 2023)

PROFILE FINDINGS

In 2020, covering the first 9 months of the COVID-19 pandemic, in Belfast LGD, total carbon emissions per capita were 3.9 tCO_2e.

In 2021, covering the first calendar year of the COVID-19 pandemic, in Belfast LGD, total carbon emissions per capita were 4.1 tCO_2e.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, in Belfast LGD, carbon emissions per capita decreased by 0.3 tCO2e, from 4.4 to 4.1 tCO_2e.

See pages 43-45, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.

KEY COMPARISONS

Comparison with Northern Ireland

When compared with Northern Ireland, total carbon emissions per capita were lower in Belfast LGD:

- **In 2019, before the COVID-19 pandemic, by 2.7 tCO_2e per capita, 4.4 compared with 7.1 tCO_2e**
- **In 2020, covering the first 9 months of the pandemic, by 2.6 tCO_2e per capita, 3.9 compared with 4.1 tCO_2e**
- **In 2021, the first calendar year of the pandemic, by 2.7 tCO_2e per capita, 4.1 compared with 6.8 tCO_2e**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, carbon emissions per capita within the scope of influence of local authorities decreased overall in:

- **Belfast LGD by 0.3 tCO_2e, from 4.4 to 4.1 tCO_2e (a percentage decrease of 6.82%)**
- **Northern Ireland by 0.3 tCO_2e, from 7.1 to 6.8 tCO_2e (a percentage decrease of 4.23%; see COVID-19 Planet Figure 6)**

Comparison with other LGDs

When compared with other LGDs, Belfast LGD had the lowest total carbon emissions per capita:

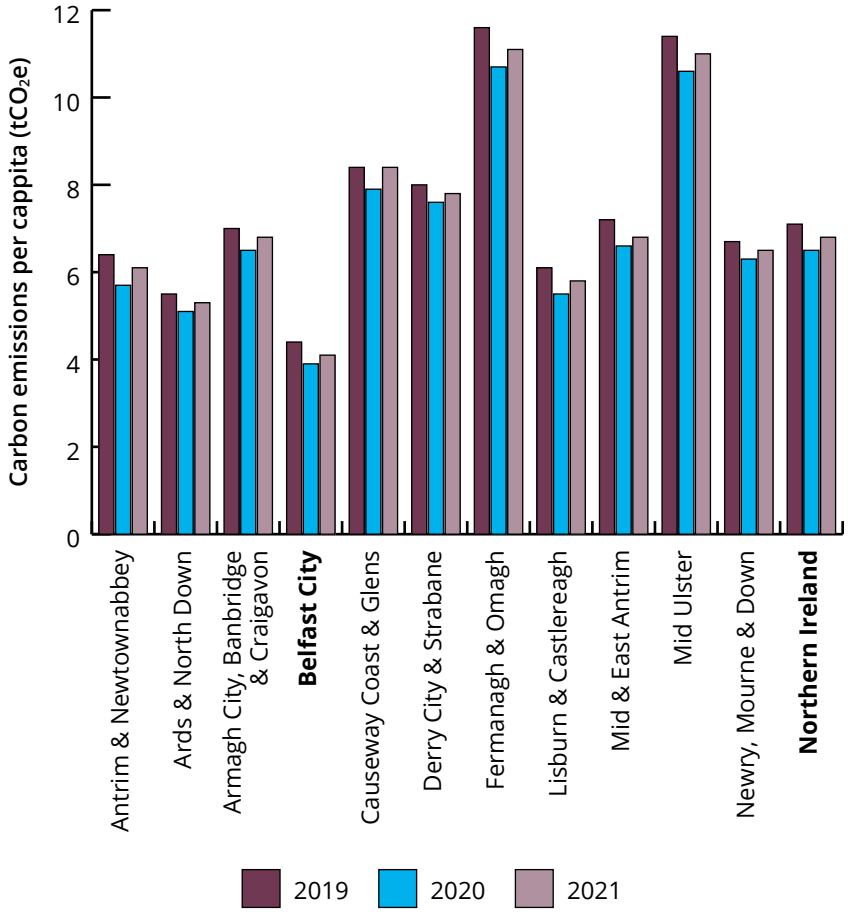
- **In 2019, before the COVID-19 pandemic,**
- **In 2020, covering the first 9 months of the pandemic**
- **In 2021, covering the first calendar year of the pandemic**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, total carbon emissions per capita:

- **Decreased overall in 10 LGDs, including Belfast LGD**
- **Remained the same overall in one LGD (see COVID-19 Planet Figure 6)**

COVID-19 PLANET FIGURE 6:

Total carbon emissions per capita (tCO_2e) by LGD and Northern Ireland, 2019, 2020, and 2021



Source: GOV.UK, National statistics: UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (Updated 6 July 2023), Table 1.2

OBSERVATIONS ON THE DATA

Comparison with Northern Ireland

In comparison with Northern Ireland, total carbon emissions per capita were consistently lower in Belfast LGD both before and during the first year and 9 months of the COVID-19 pandemic.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, there was an overall decrease in total carbon emissions per capita in both Belfast LGD and Northern Ireland, but there was a greater percentage decrease in Belfast LGD and the gap between the two widened with a favourable outcome for Belfast LGD.

Comparison with other LGDs

In comparison with other LGDs, total carbon emissions per capita in Belfast LGD were the lowest both before and during the first year and 9 months of the COVID-19 pandemic, from 2019 to 2021. Consequently, there was no change in the relative position of Belfast LGD among LGDs

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, of the 10 LGDs in which there was an overall decrease in total carbon emissions per capita:

- **Belfast LGD had the greatest percentage decrease at 6.82%**
- **Derry City & Strabane LGD had the smallest percentage decrease at 2.50%**

The median percentage decrease was 2.26%.

It is noticeable that in the 10 LGDs, including Belfast LGD, in which there was an overall decrease in total carbon emissions capita that the decrease occurred between 2019 and 2020, the early phases of the COVID-19 pandemic, whereas between 2020 and 2021 there was an increase in total carbon emissions per capita, but not to pre-pandemic levels. This pattern in total carbon emissions per capita was also seen in Northern Ireland.

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, total carbon emissions per capita:

- **Decreased overall in 10 LGDs, including Belfast LGD**
- **Decreased overall in Northern Ireland**
- **Remained the same overall in one LGD**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, total carbon emissions per capita decreased in both Belfast LGD and Northern Ireland, but the percentage decrease was greater in Belfast LGD.

In 2021, in Belfast LGD, total carbon emissions per capita were three-fifths (60.29%) of those in Northern Ireland.

Between 2019 and 2021, before and during the first year and 9 months of the COVID-19 pandemic, among LGDs, Belfast LGD had:

- **The lowest total carbon emissions per capita**
- **The greatest percentage decrease in total carbon emissions per capita**

In Belfast LGD, the first year and 9 months of the COVID-19 pandemic has been associated with an overall decrease in total carbon emissions per capita, which may reflect the periods of lockdown when industrial, commercial, and social activities were restricted.

SECTION 7

Carbon Emissions per Capita within the Scope of Influence of Local Authorities

DATA SOURCE

Information is from GOV.UK, National statistics, UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (Updated 6 July 2023).[7]

NB: Since the publication of "Planet: Profiling Health, Wellbeing and Prosperity", the data-holder has revised the UK local authority and regional greenhouse gas emissions national statistics, therefore, the 2019 dataset presented in that document are different from the 2019 data presented here.

YEARS OF DATA AVAILABLE WITHIN COVID-19 TIMEFRAME

Calendar years 2020, and 2021

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None reported.

7. UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021 - GOV.UK (www.gov.uk) (Last accessed 7 September 2023)

PROFILE FINDINGS

In 2020, covering the first 9 months of the COVID-19 pandemic, in Belfast LGD, carbon emissions per capita within the scope of influence of local authorities were 3.5 tCO_2e.

In 2021, covering the first calendar year of the COVID-19 pandemic, in Belfast LGD, carbon emissions per capita within the scope of local authorities were 3.8 tCO_2e.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, in Belfast LGD, carbon emissions per capita within the scope of influence of local authorities decreased by 0.2 tCO_2e, from 4.0 to 3.8 tCO_2e.

See pages 46-48, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.

KEY COMPARISONS

Comparison with Northern Ireland

When compared with Northern Ireland, carbon emissions per capita within the scope of influence of local authorities were lower in Belfast LGD:

- **In 2019, before the COVID-19 pandemic, by 1.6 tCO_2e per capita, 4.0 compared with 5.6 tCO_2e**
- **in 2020, covering the first 9 months of the COVID-19 pandemic, by 1.7 tCO_2e per capita, 3.5 compared with 5.2 tCO_2e**
- **In 2021, covering the first calendar year of the pandemic, by 1.7 tCO_2e per capita, 3.8 compared with 5.5 tCO_2e**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, carbon emissions per capita within the scope of influence of local authorities decreased:

- **In Belfast LGD, by 0.2 tCO_2e, from 4.0 to 3.8 tCO_2e (a percentage decrease of 5.00%)**
- **In Northern Ireland, by 0.1 tCO_2e, from 5.6 to 5.5 tCO_2e (a percentage decrease of 1.79%; see COVID-19 Planet Figure 7)**

Comparison with other LGDs

When compared with other LGDs, Belfast LGD had the lowest carbon emissions per capita within the scope of influence of local authorities:

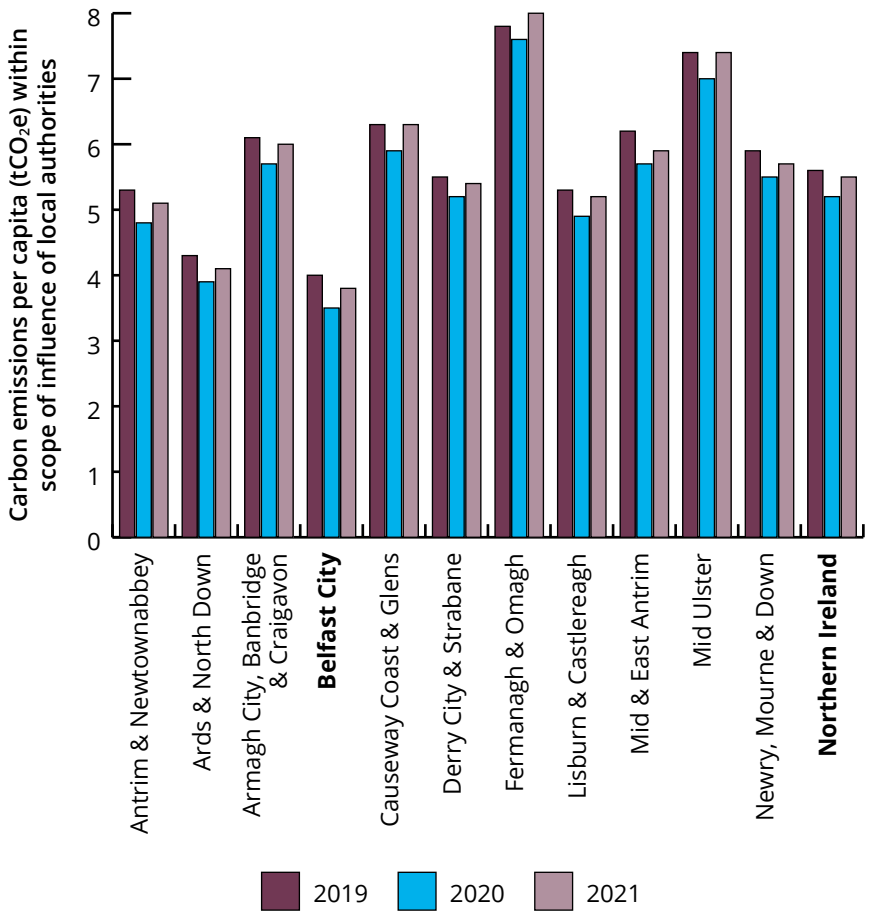
- **In 2019, before the COVID-19 pandemic**
- **In 2020, covering the first 9 months of the pandemic**
- **In 2021, covering the first calendar year**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, carbon emissions per capita within the scope of influence of local authorities:

- **Decreased in 8 LGDs, including Belfast LGD**
- **Remained the same overall in 2 LGDs**
- **Increased overall in one LGD (see COVID-19 Planet Figure 7)**

COVID-19 PLANET FIGURE 7:

Carbon emissions per capita (tCO_2e) within the scope of influence of local authorities by LGD and Northern Ireland, 2019, 2020, and 2021



Source: GOV.UK, National statistics: UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2021, Documents, 2005 to 2021 UK local and regional greenhouse gas emissions – data tables (Excel) (Updated 6 July 2023), Table 2.1

OBSERVATIONS ON THE DATA

Comparison with Northern Ireland

In comparison with Northern Ireland, total carbon emissions per capita within the scope of influence of local authorities were consistently lower in Belfast LGD both before and during the first year and 9 months of the COVID-19 pandemic.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, there was an overall decrease in carbon emissions per capita within the scope of influence of local authorities in both Belfast LGD and Northern Ireland, however, the percentage decrease was greater in Belfast, and the gap between the two widened with a favourable outcome for Belfast LGD.

Comparison with other LGDs

In comparison with other LGDs, total carbon emissions per capita within the scope of influence of local authorities in Belfast LGD were the lowest both before and during the first year and 9 months of the COVID-19 pandemic, from 2019 to 2021. Consequently, there was no change in the relative position of Belfast LGD among LGDs

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, of the 8 LGDs in which there was an overall decrease in carbon emissions per capita within the scope of influence of local authorities:

- **Belfast LGD the greatest percentage decrease at 5.00%**
- **Armagh City, Banbridge & Craigavon LGD had the smallest percentage decrease at 1.64%**

The median percentage decrease was 4.21%.

It is noticeable that in 7 of the 8 LGDs in which there was an overall decrease in carbon emissions per capita within the scope of influence of local authorities, including Belfast LGD, that the decrease occurred between 2019 and 2020, the early phases of the COVID-19 pandemic, whereas between 2020 and 2021 there was an increase in carbon emissions per capita within the scope of influence of local authorities, but not to pre-pandemic levels. This pattern in carbon emissions per capita within the scope of influence of local authorities was also seen in Northern Ireland.

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, carbon emissions per capita within the scope of influence of local authorities:

- **Decreased overall in 8 LGDs, including Belfast LGD**
- **Decreased overall in Northern Ireland**
- **Remained the same overall in two LGDs**
- **Increased overall in one LGD**

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, carbon emissions per capita within the scope of influence of local authorities decreased in Belfast LGD and Northern Ireland, but the percentage decrease was greater in Belfast LGD resulting in a favourable outcome for Belfast.

In 2021, in Belfast LGD, carbon emissions per capita within the scope of influence of local authorities were just over two-thirds (69.09%) of those in Northern Ireland.

Between 2019 and 2021, from before the COVID-19 pandemic and covering the first year and 9 months of the pandemic, among LGDs, Belfast LGD had:

- **The lowest carbon emissions per capita within the scope of influence of local authorities**
- **The greatest percentage decrease in carbon emissions per capita within the scope of influence of local authorities**

In Belfast LGD, the first year and 9 months of the COVID-19 pandemic has been associated with an overall decrease in carbon emissions per capita within the scope of influence of local authorities, which may reflect the periods of lockdown when people were restricted in their movements and opportunities to congregate.

SECTION 8

Domestic Electricity Consumption

8.1 Median Domestic Electricity Consumption

8.2 Mean Domestic Electricity Consumption

DATA SOURCE

Information is from GOV.UK Official Statistics, Sub-national electricity consumption statistics in Northern Ireland, Documents, Northern Ireland sub-national electricity consumption 2009-2021.[8]

YEARS FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

Financial years 2020/21, and 2021/22

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None reported.

8. Sub-national electricity consumption statistics in Northern Ireland - GOV.UK (www.gov.uk) (Last accessed 30 May 2023)

Median[9] domestic electricity consumption

In Belfast LGD, median domestic electricity consumption:

- **In 2020/21, the first full year of the COVID-19 pandemic, was 2,649 kWh per meter**
- **In 2021/22, the second full year of the pandemic, was 2,480 kWh per meter (see COVID-19 Planet Figure 8)**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, in Belfast LGD, median domestic electricity consumption decreased by 27 kWh per meter, from 2,507 to 2,480 kWh per meter (see COVID-19 Planet Figure 8).

Mean[10] domestic electricity consumption

In Belfast LGD, mean domestic electricity consumption:

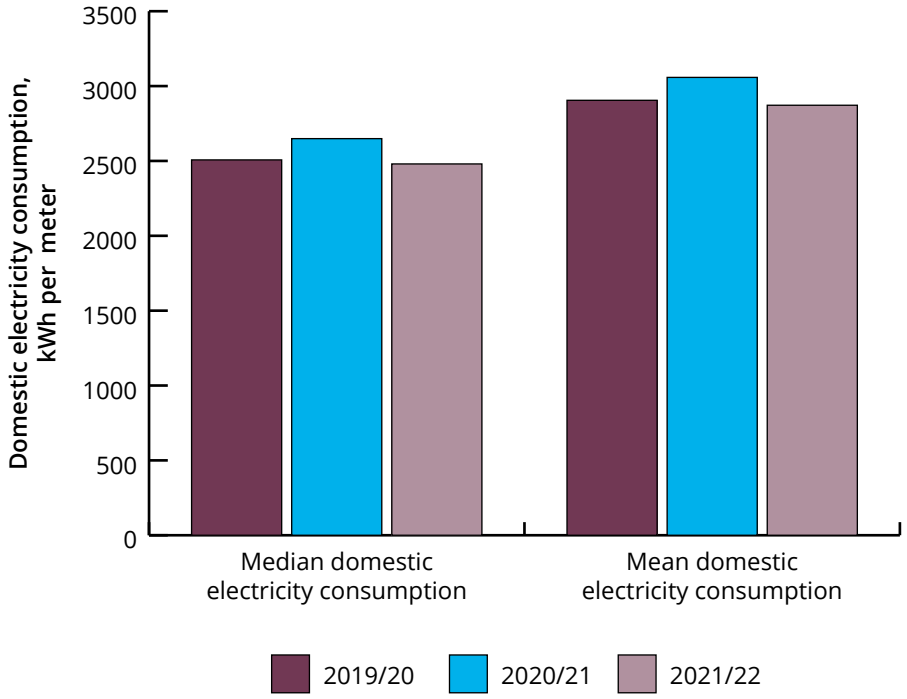
- **In 2020/21, the first full year of the COVID-19 pandemic, was 3,058 kWh per meter**
- **In 2021/22, the second full year of the pandemic, was 2,872 kWh per meter (see COVID-19 Planet Figure 8)**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, in Belfast LGD, mean domestic electricity consumption decreased by 33 kWh per meter, from 2,905 to 2,872 kWh per meter (see COVID-19 Planet Figure 8).

9. The middle value of a dataset
10. The average value of a dataset

COVID-19 PLANET FIGURE 8:

Median and mean domestic electricity consumption (kWh per meter) in Belfast LGD, 2019/20, 2020/21, and 2021/22



Source: GOV.UK: Sub-national electricity consumption statistics in Northern Ireland, Documents, Northern Ireland sub-national electricity consumption 2009-2021, Tabs 2019, 2020 and 2021

See pages 79-82, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.

KEY COMPARISONS

Comparison with Northern Ireland

Median domestic electricity consumption

When compared with Northern Ireland, median domestic electricity consumption per meter was lower in Belfast LGD:

- **In 2019/20, before the COVID-19 pandemic**
- **In 2020/21, the first full year of the pandemic**
- **1n 2021/22, the second full year of the pandemic**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, median domestic electricity consumption decreased overall:

- **In Belfast LGD, by 27 kWh per meter, from 2,507 to 2,480 kWh per meter (a percentage decrease of 1.08%)**
- **In Northern Ireland, by 34 kWh per meter, from 2,966 to 2,932 kWh per meter (a percentage decrease of 1.15%; see COVID-19 Planet Figure 9)**

Mean domestic electricity consumption

When compared with Northern Ireland, mean domestic electricity consumption per meter was lower in Belfast LGD:

- **In 2019/20, before the COVID-19 pandemic**
- **In 2020/21, the first full year of the pandemic**
- **1n 2021/22, the second full year of the pandemic**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, mean domestic electricity consumption decreased overall:

- **In Belfast LGD, by 33 kWh per meter, from 2,905 to 2,872 kWh per meter (a percentage decrease of 1.14%)**
- **In Northern Ireland, by 5 kWh per meter, from 3,470 to 3,465 kWh per meter (a percentage decrease of 0.14%; see COVID-19 Planet Figure 10)**

Comparison with other LGDs

Median domestic electricity consumption

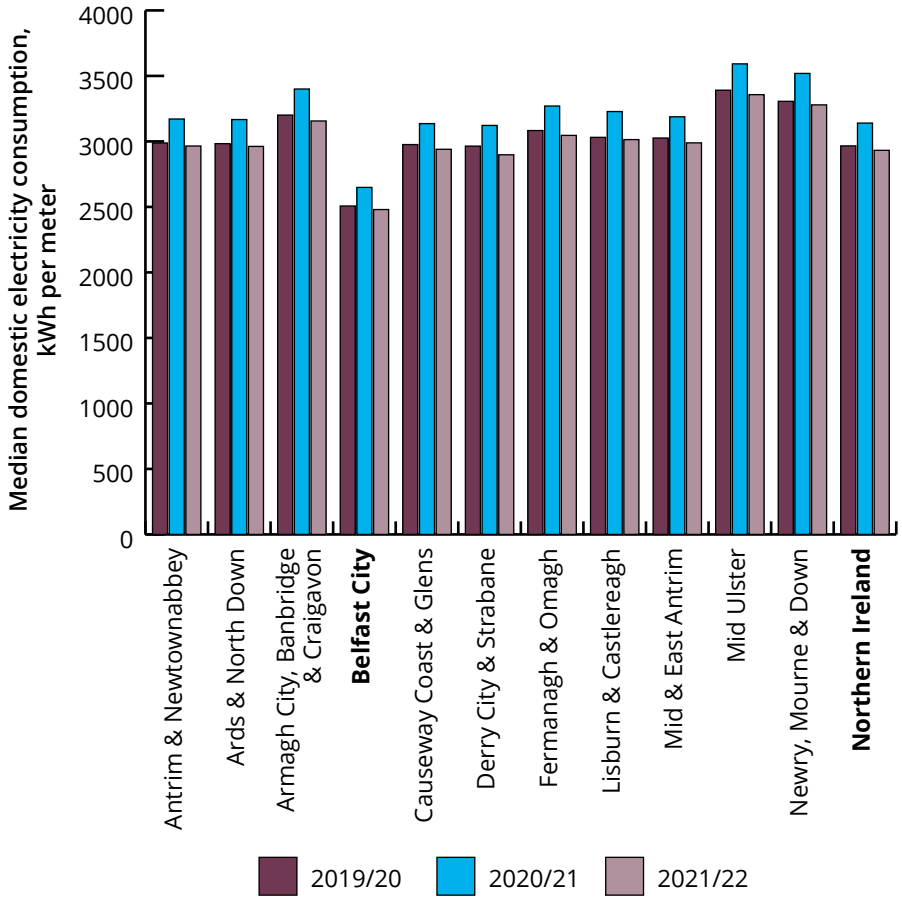
When compared with other LGDs, Belfast LGD had: the lowest median domestic electricity consumption per meter in:

- **2019/20, before the COVID-19 pandemic**
- **2020/21, the first full year of the pandemic**
- **2021/22, the second full year of the pandemic**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, median domestic electricity consumption per meter decreased overall in all LGDs, including Belfast LGD (see COVID-19 Planet Figure 9).

COVID-19 PLANET FIGURE 9:

Median domestic electricity consumption (kWh per meter) by LGD and Northern Ireland, 2019/20, 2020/21, and 2021/22



Source: GOV.UK: Sub-national electricity consumption statistics in Northern Ireland, Documents, Northern Ireland sub-national electricity consumption 2009-2021, Tabs 2019, 2020 and 2021

Mean domestic electricity consumption

When compared with other LGDs, Belfast LGD had the lowest mean domestic electricity consumption per meter in:

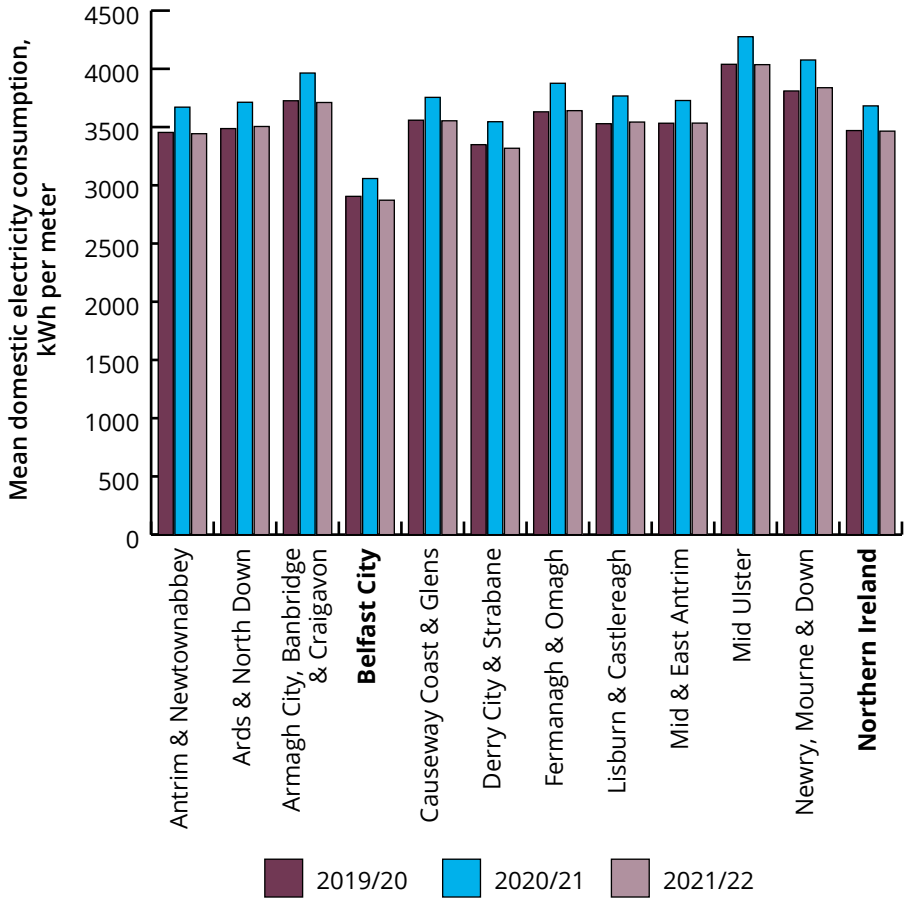
- **2019/20, before the COVID-19 pandemic**
- **2020/21, the first full year of the pandemic**
- **2021/22, the second full year of the pandemic**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, mean domestic electricity consumption per meter:

- **Decreased overall in 6 LGDs, including Belfast LGD**
- **Increased overall in 5 LGDs (see COVID-19 Planet Figure 10)**

COVID-19 PLANET FIGURE 10:

Mean domestic electricity consumption (kWh per meter) by LGD and Northern Ireland, 2019/20, 2020/21, and 2021/22



Source: GOV.UK: Sub-national electricity consumption statistics in Northern Ireland, Documents, Northern Ireland sub-national electricity consumption 2009-2021, Tabs 2019, 2020 and 2021

OBSERVATIONS ON THE DATA

Comparison with Northern Ireland

Median domestic electricity consumption
In comparison with Northern Ireland, Belfast LGD had lower median domestic electricity consumption per meter, both before and during the first two full years of the COVID-19 pandemic.

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, there was an overall decrease in median domestic electricity consumption per meter in both Belfast LGD and Northern Ireland, although the percentage decrease in Northern Ireland was very slightly greater in Northern Ireland and the gap between the two narrowed very slightly.

Mean domestic electricity consumption
In comparison with Northern Ireland, Belfast LGD had lower mean domestic electricity consumption per meter, both before and during the first two full years of the COVID-19 pandemic.

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, there was an overall decrease in mean domestic electricity consumption per meter in both Belfast LGD and Northern Ireland, although the percentage decrease in Belfast LGD was slightly greater than that in Northern Ireland and the gap between the two widened slightly.

Comparison with other LGDs

Median domestic electricity consumption
In comparison with other LGDs, median domestic electricity consumption per meter in Belfast LGD was lowest both before the COVID-19 pandemic and during the first two full years of the pandemic, consequently, there was no change in the relative position of Belfast LGD among LGDs.

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic:

- **Belfast LGD had the median percentage decrease in median domestic electricity consumption per meter at 1.08%**
- **Derry City & Strabane LGD had the greatest percentage decrease at 2.23%**
- **Lisburn & Castlereagh LGD had the smallest percentage decrease at 0.56%**

During this timeframe, it is noticeable that all LGDs, including Belfast LGD, had an increase in median domestic electricity consumption per meter between 2019/20 and 2020/21, followed by a decrease between 2020/21 and 2021/22, although the decrease was of a greater magnitude than the preceding increase in all LGDs, resulting in a slight overall decrease in all LGDs, including Belfast LGD.

Mean domestic electricity consumption

In comparison with other LGDs, mean domestic electricity consumption per meter in Belfast LGD was lowest both before the COVID-19 pandemic and during the first two full years of the pandemic, consequently, there was no change in the relative position of Belfast LGD among LGDs.

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, of the 6 LGDs that had an overall decrease in mean domestic electricity consumption per meter:

- **Belfast LGD had the greatest percentage decrease at 1.14%**
- **Mid Ulster LGD had the smallest percentage decrease at 0.07%**

The median percentage decrease was 0.36%.

During this timeframe, it is noticeable that all LGDs, including Belfast LGD, had an increase in mean domestic electricity consumption per meter between 2019/20 and 2020/21, followed by a decrease between 2020/21 and 2021/22; for 6 LGDs, including Belfast LGD, this decrease was of a greater magnitude than the preceding increase, resulting in a slight overall decrease for these LGDs, including Belfast LGD.

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

Median domestic electricity consumption

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, median domestic electricity consumption per meter:

- **Decreased in all LGDs, including Belfast LGD**
- **Decreased in Northern Ireland**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, median domestic electricity consumption decreased slightly in both Belfast LGD and Northern Ireland, with only a very slight difference in percentage decrease between the two.

Among LGDs, Belfast LGD had the lowest median domestic electricity consumption both before and during the first two full years of the COVID-19 pandemic.

In Belfast LGD, the COVID-19 pandemic has been associated with an overall slight decrease in median domestic electricity consumption; the initial increase between 2019/20 and 2020/21, may reflect the periods of lockdown when people were restricted in their movements and mainly confined to the domestic setting.

Mean domestic electricity consumption

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and during the first two full years of the pandemic, mean domestic electricity consumption per meter:

- **Decreased in 6 LGDs, including Belfast LGD**
- **Decreased in Northern Ireland**
- **Increased in 5 LGDs**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, mean domestic electricity consumption decreased slightly in both Belfast LGD and Northern Ireland, with only a slight difference in percentage decrease between the two.

Among LGDs, Belfast LGD had the lowest mean domestic electricity consumption both before and during the first two full years of the COVID-19 pandemic.

In Belfast LGD, the COVID-19 pandemic has been associated with a slight decrease overall in mean domestic electricity consumption; the initial increase between 2019/20 and 2020/21, may reflect the periods of lockdown when people were restricted in their movements and mainly confined to the domestic setting.

SECTION 9

Household Waste per Capita

DATA SOURCE

Information is from the Department of Agriculture, Environment and Rural Affairs, Northern Ireland local authority collected municipal waste management statistics: 2021/22, NI LAC municipal waste management statistics 2021/22 annual report; 2020/21, NI LAC municipal waste management statistics 2020/21 annual report; 2019/20: NI LAC municipal waste management statistics 2019/20 annual report.[11]

YEARS FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

Financial years 2020/21 and 2021/22

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None reported.

PROFILE FINDINGS

In Belfast LGD, household waste per capita:

- **In 2020/21, the first full year of the COVID-19 pandemic, was 442 kg**
- **In 2021/22, the second full year of the COVID-19 pandemic, was 429 kg**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, in Belfast LGD, household waste per capita increased overall by 10 kg, from 419 to 429 kg.

See pages 118-120, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.

11. Northern Ireland local authority collected municipal waste management statistics | Department of Agriculture, Environment and Rural Affairs (daera-ni.gov.uk) (Last accessed 23 May 2023)

Comparison with Northern Ireland

When compared with Northern Ireland, household waste per capita in Belfast LGD was lower:

- **In 2020/21, the first full year of the COVID-19 pandemic, by 46 kg, 442 compared with 488 kg**
- **In 2021/22, the second full year of the pandemic, by 50 kg, 429 compared with 479 kg**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, household waste per capita increased overall:

- **In Belfast LGD, by 10 kg, from 419 to 429 kg (a percentage increase of 2.39%)**
- **In Northern Ireland, by 14 kg, from 465 to 479 kg (a percentage increase of 3.01%; see COVID-19 Planet Figure 11)**

Comparison with other LGDs

When compared with other LGDs, Belfast LGD had the second lowest household waste per capita:

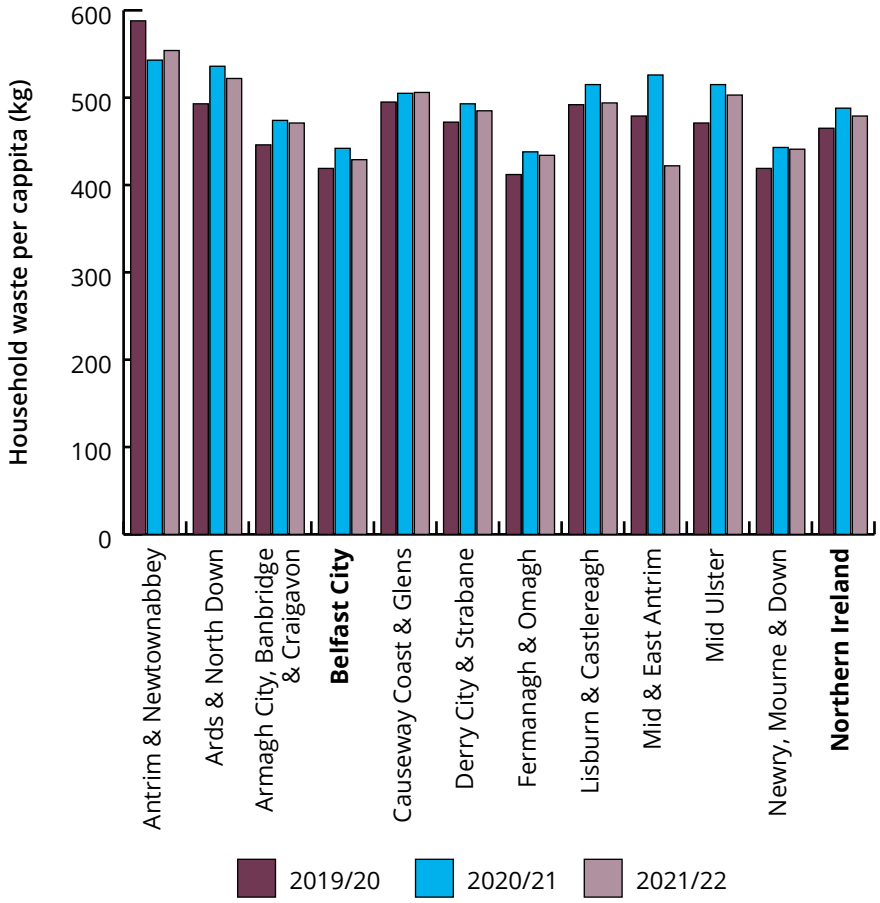
- **In 2019/20, before the COVID-19 pandemic, together with Newry, Mourne & Down LGD**
- **In 2020/21, the first full year of the pandemic**
- **In 2021/22, the second full year of the pandemic**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, household waste per capita:

- **Increased overall in 9 LGDs, including Belfast LGD**
- **Decreased overall in 2 LGDs (see COVID-19 Planet Figure 11)**

COVID-19 PLANET FIGURE 11:

Household waste per capita (kg) by LGD and Northern Ireland, 2019/20, 2020/21 and 2021/22



Source: Source: DAERA: Northern Ireland local authority collected municipal waste management statistics: 2021/22, NI LAC municipal waste management statistics 2021/22 annual report; 2020/21, NI LAC municipal waste management statistics 2020/21 annual report; 2019/20: NI LAC municipal waste management statistics 2019/20 annual report – Table 18 in each Excel spreadsheet

OBSERVATIONS ON THE DATA

Comparison with Northern Ireland

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, household waste per capita increased in both Belfast LGD and Northern Ireland, but the percentage increase was slightly greater in Northern Ireland, and the gap between the two widened with a slightly less negative outcome for Belfast LGD.

Comparison with other LGDs

In comparison with other LGDs, household waste per capita in Belfast LGD was second lowest in 2019/20, 2020/21, and 2021/22, before and during the first two full years of the COVID-19 pandemic, consequently, there was no change in the relative position of Belfast LGD among LGDs, except that in 2019/20 Belfast LGD's household waste per capita was equal second lowest with Newry, Mourne & Down LGD.

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, of the 9 LGDs in which there was an overall increase in household waste per capita:

- **Belfast LGD had the third lowest percentage increase at 2.39%**
- **Mid Ulster LGD had the greatest percentage increase at 6.79%**
- **Lisburn & Castlereagh LGD had the smallest percentage increase at 0.41%**
- **Newry, Mourne & Down LGD had the median percentage increase at 5.25%**

For 8 of the 9 LGDs in which there was an overall increase in household waste per capita, including Belfast LGD, it is noticeable that there was a relatively large increase between 2019/20 and 2020/21, the first full year of the COVID-19 pandemic, when there were greater lockdown restrictions and more periods of confinement to the domestic setting, followed by a decrease between 2020/21 and 2021/22, the second full year of the pandemic, when there were fewer restrictions and confinements to the domestic setting, although the decreases in household waste per capita did not reach pre-pandemic levels. It is possible that household waste per capita did not increase to pre-pandemic levels in 2021/22 because at least some civic amenity centres remained closed even though other restrictions had been lifted.

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, household waste per capita:

- **Increased overall in 9 LGDs, including Belfast LGD**
- **Increased overall in Northern Ireland**
- **Decreased overall in 2 LGDs**

From 2019/20 to 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, household waste per capita was lower in Belfast LGD than in Northern Ireland. Between 2019/20 and 2021/22, although household waste per capita increased overall in both Belfast LGD and Northern Ireland, there was a slightly greater percentage increase in Northern Ireland.

Among LGDs, Belfast LGD had the second lowest household waste per capita both before and during the first two full years of the COVID-19 pandemic.

In Belfast LGD, the COVID-19 pandemic has been associated with an increase in household waste per capita, which may reflect the periods of lockdown when people were restricted in their movements and mainly confined to the domestic setting.

SECTION 10

Household Waste Sent for Preparing for Reuse, Dry Recycling and Composting

DATA SOURCE

Information is from the Department of Agriculture, Environment and Rural Affairs, Northern Ireland local authority collected municipal waste management statistics: 2021/22, NI LAC municipal waste management statistics 2021/22 annual report; 2020/21, NI LAC municipal waste management statistics 2020/21 annual report; 2019/20: NI LAC municipal waste management statistics 2019/20 annual report.[12]

YEARS FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

Financial years 2020/21 and 2021/22

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None reported.

12. Northern Ireland local authority collected municipal waste management statistics | Department of Agriculture, Environment and Rural Affairs (daera-ni.gov.uk) (Last accessed 23 May 2023)

PROFILE FINDINGS

In Belfast LGD, the percentage of household waste sent for preparing for reuse, dry recycling, and composting:

- **In 2020/21, the first full year of the COVID-19 pandemic, was 43.0%**
- **In 2021/22, the second full year of the pandemic, was 41.0%**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, in Belfast LGD, the percentage of household waste sent for preparing for reuse, dry recycling, and composting decreased by 4.4 percentage points, from 45.4% to 41.0%.

See pages 121-124, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.

KEY COMPARISONS

Comparison with Northern Ireland

When compared with Northern Ireland, the percentage of household waste sent for preparing for reuse, dry recycling, and composting in Belfast LGD was lower:

- **In 2020/21, the first full year of the COVID-19 pandemic, by 7.9 percentage points, 43.0% compared with 50.9%**
- **In 2021/22, the second full year of the COVID-19 pandemic, by 9.1 percentage points, 41.0% compared with 50.1%**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the percentage of household waste sent for preparing for reuse, dry recycling, and composting decreased overall:

- **In Belfast LGD, by 4.4 percentage points, from 45.4% to 41.0% (a percentage decrease of 9.69%)**
- **In Northern Ireland, by 1.8 percentage points, from 51.9% to 50.1% (a percentage decrease of 3.47%; see COVID-Planet 19 Figure 12)**

Comparison with other LGDs

When compared with other LGDs, Belfast LGD had:

- **In 2019/20, before the COVID-19 pandemic, the second lowest percentage of household waste sent for preparing for reuse, dry recycling, and composting**

- **In 2020/21 and in 2021/22, the first two full years of the pandemic, the lowest percentage of household waste sent for preparing for reuse, dry recycling, and composting**

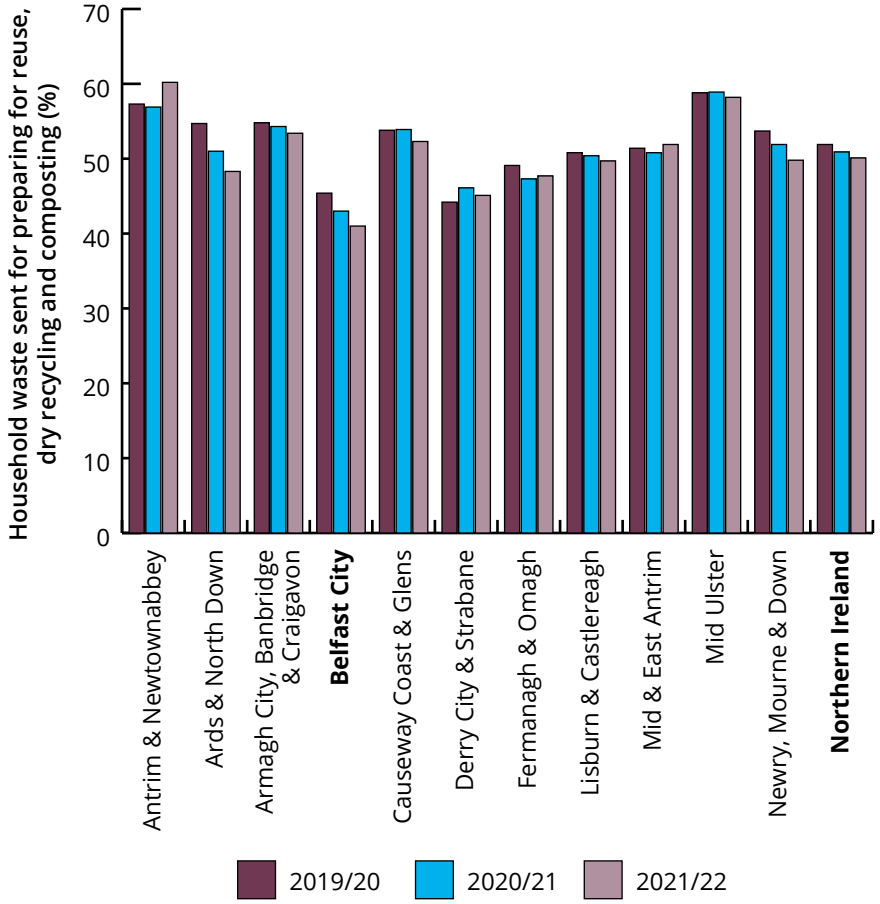
Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the percentage of household waste sent for preparing for reuse, dry recycling, and composting:

- **Increased overall in 3 LGDs**

- **Decreased overall in 8 LGDs, including Belfast LGD (see COVID-19 Planet Figure 12)**

COVID-19 PLANET FIGURE 12:

Percentage (%) of household waste sent for preparing for reuse, dry recycling, and composting by LGD and Northern Ireland, 2019/20, 2020/21 and 2021/22



Source: DAERA: Northern Ireland local authority collected municipal waste management statistics: 2021/22, NI LAC municipal waste management statistics 2021/22 annual report; 2020/21, NI LAC municipal waste management statistics 2020/21 annual report; 2019/20: NI LAC municipal waste management statistics 2019/20 annual report – Table 17 in each Excel spreadsheet

OBSERVATIONS ON THE DATA

Comparison with Northern Ireland

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the percentage of household waste sent for preparing for reuse, dry recycling, and composting decreased in both Belfast LGD and Northern Ireland, but the percentage decrease was greater in Belfast LGD, and the gap between the two widened with a more negative outcome for Belfast LGD.

Comparison with other LGDs

In comparison with other LGDs, the percentage of household waste sent for preparing for reuse, dry recycling, and composting in Belfast LGD was second lowest before the COVID-19 pandemic in 2019/20, but lowest in 2020/21, and 2021/22 during the first two full years of the pandemic; consequently, there was a change in the relative position of Belfast LGD among LGDs, in that it dropped from second lowest in 2019/20 to lowest in 2020/21 and 2021/22 during the pandemic.

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, of the 8 LGDs in which there was an overall decrease in the percentage of household waste sent for preparing for reuse, dry recycling, and composting:

- **Belfast LGD had the second highest percentage decrease at 9.69%**
- **Ards & North Down LGD had the greatest percentage decrease at 11.70%**
- **Mid Ulster LGD had the smallest percentage decrease at 1.02%**

The median percentage decrease was 2.82%.

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the percentage of household waste sent for preparing for reuse, dry recycling, and composting:

- **Decreased in 8 LGDs, including Belfast LGD**
- **Decreased in Northern Ireland**
- **Increased in 3 LGDs**

From 2019/20 to 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the percentage of household waste sent for preparing for reuse, dry recycling, and composting was lower in Belfast LGD than in Northern Ireland.

In 2021/22, only two-fifths of Belfast LGD's household waste was sent for preparing for reuse, dry recycling, and composting, whereas half of the household waste in Northern Ireland was sent for preparing for reuse, dry recycling, and composting.

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, although the percentage of household waste sent for preparing for reuse, dry recycling, and composting decreased in both Belfast LGD and Northern Ireland, there was a greater percentage decrease in Belfast LGD, with a more negative outcome for Belfast LGD.

Among LGDs, Belfast LGD had the second lowest percentage of household waste per capita before the COVID-19 pandemic, but the lowest percentage during the first two full years of the COVID-19 pandemic.

In 2021/22, three-fifths of Antrim & Newtownabbey LGD's and almost three-fifths of Mid Ulster LGD's household waste was sent for preparing for reuse, dry recycling, and composting, compared with two-fifths in Belfast LGD.

In Belfast LGD, the COVID-19 pandemic has been associated with a decrease in the percentage of household waste sent for preparing for reuse, dry recycling, and composting.

SECTION 11

Household Waste Sent to Landfill

DATA SOURCE

Information is from the Department of Agriculture, Environment and Rural Affairs, Northern Ireland local authority collected municipal waste management statistics: 2021/22, NI LAC municipal waste management statistics 2021/22 annual report; 2020/21, NI LAC municipal waste management statistics 2020/21 annual report; 2019/20: NI LAC municipal waste management statistics 2019/20 annual report.[13]

YEARS FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

Financial years 2020/21 and 2021/22

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None reported.

PROFILE FINDINGS

In Belfast LGD, the percentage of household waste sent to landfill:

- **In 2020/21, the first full year of the COVID-19 pandemic, was 26.7%**
- **In 2021/22, the second full year of the COVID-19 pandemic, was 32.4%**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, in Belfast LGD, the percentage of household waste sent to landfill increased by 4.9 percentage points, from 27.5% to 32.4%.

See pages 125-128, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.

13. Northern Ireland local authority collected municipal waste management statistics | Department of Agriculture, Environment and Rural Affairs (daera-ni.gov.uk) (Last accessed 23 May 2023)

KEY COMPARISONS

Comparison with Northern Ireland

When compared with Northern Ireland, the percentage of household waste sent to landfill in Belfast LGD was higher:

- **In 2020/21, the first full year of the COVID-19 pandemic, by 4.3 percentage points, 26.7% compared with 22.4%**
- **In 2021/22, the second full year of the COVID-19 pandemic, by 7.7 percentage points, 32.4% compared with 24.7%**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the percentage of household waste sent to landfill increased overall:

- **In Belfast LGD, by 4.9 percentage points, from 27.5% to 32.4% (a percentage increase of 17.82%)**
- **In Northern Ireland, by 1.0 percentage point, from 23.7% to 24.7% (a percentage increase of 4.22%; see COVID-19 Planet Figure 13)**

Comparison with other LGDs

When compared with other LGDs, Belfast LGD had:

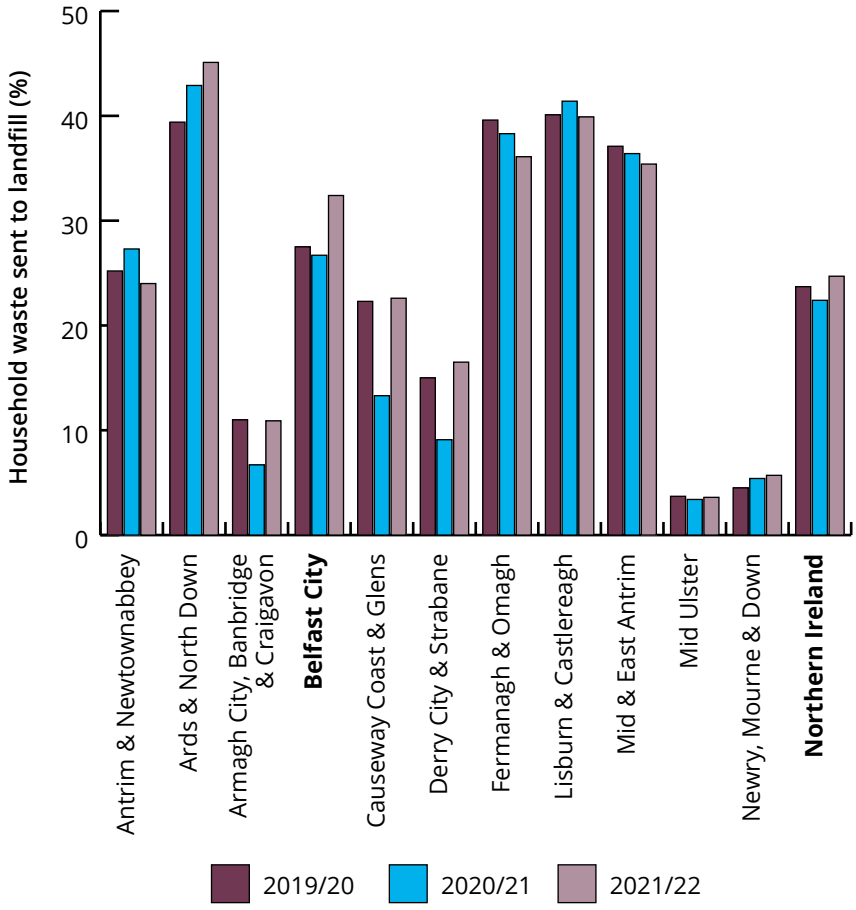
- **In 2019/20, before the COVID-19 pandemic, the fifth highest percentage of household waste sent to landfill**
- **In 2020/21, the first full year of the pandemic, the median percentage**
- **In 2021/22, the second full year of the pandemic, the fifth highest percentage**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the percentage of household waste sent to landfill:

- **Increased overall in 5 LGDs, including Belfast LGD**
- **Decreased overall in 6 LGDs (see COVID-19 Planet Figure 13)**

COVID-19 PLANET FIGURE 13:

Percentage (%) of household waste sent to landfill by LGD and Northern Ireland, 2019/20, 2020/21 and 2021/22



Source: DAERA: Northern Ireland local authority collected municipal waste management statistics: 2021/22, NI LAC municipal waste management statistics 2021/22 annual report; 2020/21, NI LAC municipal waste management statistics 2020/21 annual report; 2019/20: NI LAC municipal waste management statistics 2019/20 annual report – Table 17 in each Excel spreadsheet

OBSERVATIONS ON THE DATA

Comparison with Northern Ireland

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the percentage of household waste sent to landfill increased in both Belfast LGD and Northern Ireland, but the percentage increase was greater in Belfast LGD, and the gap between the two widened with a more negative outcome for Belfast LGD.

Comparison with other LGDs

In comparison with other LGDs, the percentage of household waste sent to landfill in Belfast LGD was fifth highest before the COVID-19 pandemic in 2019/20, but the median in 2020/21, and the fifth highest in 2021/22, covering the first two full years of the pandemic; consequently, there was no overall change in the relative position of Belfast LGD among LGDs.

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, of the 5 LGDs in which there was an increase in the percentage of household waste sent to landfill:

- **Belfast LGD had the second highest percentage increase at 17.82%**
- **Newry, Mourne & Down LGD had the greatest percentage increase at 26.67%**
- **Causeway Coast & Glens LGD had the smallest percentage increase at 1.35%**
- **Ards & North Down LGD had the median percentage increase at 14.47%**

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the percentage of household waste sent to landfill:

- **Increased in 5 LGDs, including Belfast LGD**
- **Increased in Northern Ireland**
- **Decreased in 6 LGDs**

From 2019/20 to 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the percentage of household waste sent to landfill was higher in Belfast LGD than in Northern Ireland.

In 2021/22, one-third of Belfast LGD's household waste was sent to landfill, whereas one-quarter of household waste in Northern Ireland was sent to landfill.

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, although the percentage of household waste sent to landfill increased in both Belfast LGD and Northern Ireland, there was a greater percentage increase in Belfast LGD, resulting in a more negative outcome for Belfast LGD.

Among LGDs, Belfast LGD had the fifth highest percentage of household waste sent to landfill before the COVID-19 pandemic and in 2021/22, the second full year of the pandemic, but the median percentage during the first full year of the pandemic in 2020/21.

In 2021/22, one-tenth or less of household waste in Mid Ulster, Newry, Mourne & Down and Armagh City, Banbridge & Craigavon LGDs was sent to landfill compared with one-third in Belfast LGD.

In Belfast LGD, the COVID-19 pandemic has been associated with an increase in the percentage of household waste sent to landfill, which could in part reflect the introduction into the waste stream of disposable protective equipment (masks and gloves) and COVID-19 testing equipment during the pandemic, combined with a relatively higher proportion of people in Belfast living in deprived areas with a greater vulnerability to the impacts of the COVID-19 pandemic.

SECTION 12

Air Quality: UK's Automatic Urban and Rural Network (AURN)

12.1 Nitrogen Dioxide, NO_2

12.2 Particulate Matter, $PM_{2.5}$

DATA SOURCE

Data for the AURN sites in Belfast were extracted from DEFRA UK Air, Air Information Resource, Annual and Exceedance Statistics – a tool that allows the user to select the monitoring network, pollutant, metric, sites, and time-period, and it returns the chosen statistics.[14]

YEARS FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

Calendar years 2020, 2021, and 2022

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None reported.

14. Annual and Exceedance Statistics - Defra, UK (Last accessed 30 May 2023)

UK AIR QUALITY STRATEGY AND NORTHERN IRELAND AIR QUALITY STANDARDS

The Environment Act 1995 requires the Government to produce a national Air Quality Strategy (AQS) for the UK setting out air quality standards, objectives, and measures for improving ambient air quality. The last comprehensive review of the Strategy was published in 2007, with a review yielding some minor changes published in 2011. The strategy sets out the UK's air quality objectives and recognises that action at national, regional, and local level may be needed, depending on the scale and nature of the air quality problem.

In Northern Ireland, concentrations of key pollutants in outdoor air are regulated by the Air Quality Standards (Northern Ireland) 2010, which seek to control human exposure to pollutants in outdoor air to protect human health and the environment by requiring concentrations to be within specified limit values. In the event of exceedances, the Regulations require the publication of Air Quality Plans setting out "appropriate measures" that will ensure that the exceedance period is kept "as short as possible". The Regulations set legally binding limits for concentrations in outdoor air of major air pollutants that affect public health, including nitrogen oxides, and particulate matter (as PM_{10} and $PM_{2.5}$). The Air Quality Standards Regulations set 'limit values', 'target values' and 'long-term objectives' for ambient concentrations of these pollutants that affect public health.[15]

PROFILE FINDINGS

In Belfast LGD, there are UK AURN monitoring sites for:

- **Nitrogen dioxide (NO_2) at Belfast Centre and Belfast Stockman's Lane**
- **Particulate matter, $PM_{2.5}$ at Belfast Centre**

In the AQS for England, Scotland, Wales and Northern Ireland, the objective for the annual mean concentration of:

- **nitrogen dioxide is 40 µg/m^3**
- **$PM_{2.5}$ is 25 µg/m^3** [16]

15. UK Air Quality Policy Context - Defra, UK (Last accessed 22 June 2023)
16. Air Quality Strategy Vol 1 (publishing.service.gov.uk) (Last accessed 2 July 2022)

Nitrogen dioxide (NO2)

Belfast Centre, AURN – Urban background monitoring site
At Belfast Centre, the annual mean concentration for nitrogen dioxide:

- **In 2020, covering the first 9 months of the COVID-19 pandemic, was 18 µg/m³, which was 22 µg/m³ below the limit value of 40 µg/m³ for the annual mean**

- **In both 2021 and 2022, covering from 10 months to the second year and 9 months of the pandemic, was 21 µg/m³, which was 19 µg/m³ below the limit value of 40 µg/m³ for the annual mean (see COVID-19 Planet Table 1)**

Between 2019 and 2022, from before the COVID-19 pandemic and covering the first two years and 9 months of the pandemic, at Belfast Centre:

- **The annual mean concentration for nitrogen dioxide decreased by 3 µg/m³, from 24 to 21 µg/m³ (a percentage decrease of 12.50%)**

- **The annual minimum decreased by 1 µg/m³, from 2 to 1 µg/m³ (a percentage decrease of 50.00%)**

- **The annual maximum decreased by 11 µg/m³, from 141 to 130 µg/m³ (a percentage decrease of 7.80%; see COVID-19 Planet Table 1)**

COVID-19 PLANET TABLE 1:
Annual mean, minimum, and maximum concentrations for nitrogen dioxide at Belfast Centre, 2019, 2020, 2021, and 2022

Nitrogen dioxide	2019	2020	2021	2022
Annual mean (µg/m³)	24	18	21	21
Annual minimum (µg/m³)	2	1	1	1
Annual maximum (µg/m³)	141	125	109	130

Source: Data extracted from Annual and Exceedance Statistics, UK AIR, Air Information Resource

Between 2019 and 2022, from before the COVID-19 pandemic and covering the first two years and 9 months of the pandemic, at Belfast Centre, there were no exceedances of the annual mean concentration for nitrogen dioxide with respect to the Air Quality Strategy Objective for 2005.

Belfast Stockman's Lane, AURN – Roadside monitoring site

At Belfast Stockman's Lane, the annual mean concentration for nitrogen dioxide:

- **In 2020, covering the first 9 months of the COVID-19 pandemic, was 33 µg/m³, which was 7 µg/m³ below the limit value of 40 µg/m³ for the annual mean**

- **In both 2021 and 2022, from the first 10 months to the second year and 9 months of the pandemic, was 36 µg/m³ which was 4 µg/m³ below the limit value of 40 µg/m³ for the annual mean (see COVID-19 Planet Table 2)**

Between 2019 and 2022, from before the COVID-19 pandemic and covering the first two years and 9 months of the pandemic, at Belfast Stockman's Lane:

- **The annual mean concentration for nitrogen dioxide decreased by 9 µg/m3, from 45 to 36 µg/m³ (a percentage decrease of 20.00%)**

- **The annual minimum decreased by 1 µg/m³, from 1 to 0 µg/m3 (a percentage decrease of 100.00%)**

- **The annual maximum decreased by 54 µg/m³, from 187 to 133 µg/m³ (a percentage decrease of 28.88%; see COVID-19 Planet Table 2)**

COVID-19 PLANET TABLE 2:

Annual mean, minimum, and maximum concentrations for nitrogen dioxide at Belfast Stockman's Lane, 2019, 2020, 2021, and 2022

Nitrogen dioxide	2019	2020	2021	2022
Annual mean (µg/m³)	45	33	36	36
Annual minimum (µg/m³)	1	0	0	0
Annual maximum (µg/m³)	187	141	143	133

Source: Data extracted from Annual and Exceedance Statistics, UK AIR, Air Information Resource

Between 2019 and 2022, from before the COVID-19 pandemic and covering the first two years and 9 months of the pandemic, at Belfast Stockman's Lane, there was one exceedance the Air Quality Strategy Objective for 2005 in 2019, before the COVID-19 pandemic, but no exceedances during the first two years and 9 months of the pandemic.

Particulate matter (PM2.5)

Belfast Centre, AURN – Urban background monitoring site
At Belfast Centre, the annual mean concentration for $PM_{2.5}$:

- **In both 2020 and 2021, covering the first one year and 9 months of the COVID-19 pandemic, was 7 µg/m³ which was 18 µg/m³ below the limit value of 25 µg/m³ for the annual mean**
- **In 2022 was 8 µg/m³ which was 17 µg/m³ below the limit value of 25 µg/m3 for the annual mean (see COVID-19 Planet Table 3)**

Between 2019 and 2022, from before the COVID-19 pandemic and covering the first two years and 9 months of the pandemic, at Belfast Centre:

- **The annual mean concentration for $PM_{2.5}$ decreased by 3 µg/m³, from 11 to 8 µg/m³ (a percentage decrease of 27.27%)**
- **The annual minimum increased by 1 µg/m³, from -1 to 0 µg/m³ (a percentage increase of 100.00%)**
- **The annual maximum increased by 16 µg/m³, from 74 to 90 µg/m³ (a percentage increase of 21.62%; see COVID-19 Planet Table 3)**

COVID-19 PLANET TABLE 3:
Annual mean, minimum, and maximum concentrations for $PM_{2.5}$ at Belfast Centre, 2019, 2020, 2021, and 2022

PM2.5	2019	2020	2021	2022
Annual mean (µg/m³)	11	7	7	8
Annual minimum (µg/m³)	-1	0	0	0
Annual maximum (µg/m³)	74	108	66	90

Source: Data extracted from Annual and Exceedance Statistics, UK AIR, Air Information Resource

Between 2019 and 2022, from before the COVID-19 pandemic and covering the first two years and 9 months of the pandemic, at Belfast Centre, there were no exceedances of the annual mean concentration for $PM_{2.5}$ with respect to the Air Quality Strategy Objective for 2020.

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

During the first two years and 9 months of the COVID-19 pandemic, as part of the UK's AURN:

- **Belfast's urban background monitoring site for nitrogen dioxide at Belfast Centre and Belfast's roadside monitoring site for nitrogen dioxide at Belfast Stockman's Lane were below the limit value for the annual mean concentration**

- **Belfast's urban background monitoring site for $PM_{2.5}$ at Belfast Centre was below the limit value for the annual mean concentration**

Between 2019 and 2022, from before the COVID-19 pandemic and covering the first two years and 9 months of the pandemic:

- **At Belfast Centre, the annual mean concentrations for background nitrogen dioxide and $PM_{2.5}$ decreased overall, remaining well below the limit levels (40 µg/m³ and 25 µg/m³, respectively)**

- **At Belfast Stockman's Lane, the annual mean concentration for roadside nitrogen dioxide decreased overall to below the limit value of 40 µg/m³, having been above the limit value before the pandemic in 2019**

During the first two years and 9 months of the COVID-19 pandemic, there were no exceedances of limit values for either nitrogen dioxide or $PM_{2.5}$ at Belfast Centre, or for nitrogen dioxide at Belfast Stockman's Lane.

As part of the UK's AURN, the COVID-19 pandemic has been associated with a decrease in the annual mean roadside concentrations of:

- **Nitrogen dioxide at Belfast's two monitoring sites for nitrogen dioxide – Belfast Centre and Belfast Stockman's Land**

- **$PM_{2.5}$ at Belfast's only site for monitoring $PM_{2.5}$ – Belfast Centre**

These overall decreases in the annual mean concentration of nitrogen dioxide and of $PM_{2.5}$ probably reflect the decrease in road transport that occurred with the restrictions on movement during periods of lockdown; however, following an initial decrease between 2019 and 2020 (which covers the most intensive periods of lockdown), there has been a slight increase in annual mean concentrations for nitrogen dioxide between 2020 and 2021 at Belfast Centre and Belfast Stockman's Lane, and for $PM_{2.5}$, between 2021 and 2022 at Belfast Centre, although none of these increases have reached the pre-pandemic concentrations of these two air pollutants.

SECTION 13

Air Quality: Local Air Quality Management (LAQM)

13.1 Carbon Monoxide, CO
13.2 Benzene
13.3 Metallic and Other Polluting Elements
13.4 Ozone, O_3
13.5 Particulate Matter, PM_{10}
13.6 Particulate Matter, $PM_{2.5}$
13.7 Nitrogen Dioxide, NO_2

DATA SOURCE

Information is from DAERA, Northern Ireland Air, Air Quality in Northern Ireland, Reports, Air Quality in NI, Air Pollution in Northern Ireland – 2021, Air Pollution in Northern Ireland – 2020, and Air Pollution in Northern Ireland – 2019.[17]

YEARS FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

Calendar years 2020, 2021, and 2022

17. Reports - Northern Ireland Air (airqualityni.co.uk) (Last accessed 30 May 2023)

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None; however, there is a report entitled 'Effects of Covid-19 Restrictions on Air Quality in Northern Ireland', which investigates the effect of the first period of COVID-19 lockdown measures (in 2020) on air quality in Northern Ireland.[18] Effects of the lockdown on road traffic and other sources of pollution were investigated. Measured concentrations of a range of air pollutants have been compared with levels modelled for 2020 if lockdown had not occurred.

UK AIR QUALITY STRATEGY AND NORTHERN IRELAND AIR QUALITY STANDARDS

The Environment Act 1995 requires the Government to produce a national Air Quality Strategy (AQS) for the UK setting out air quality standards, objectives, and measures for improving ambient air quality. The last comprehensive review of the Strategy was published in 2007, with a review yielding some minor changes published in 2011. The strategy sets out the UK's air quality objectives and recognises that action at national, regional, and local level may be needed, depending on the scale and nature of the air quality problem.

In Northern Ireland, concentrations of key pollutants in outdoor air are regulated by the Air Quality Standards (Northern Ireland) 2010, which seek to control human exposure to pollutants in outdoor air to protect human health and the environment by requiring concentrations to be within specified limit values. In the event of exceedances, the Regulations require the publication of Air Quality Plans setting out "appropriate measures" that will ensure that the exceedance period is kept "as short as possible". The Regulations set:

- **Legally binding limits for concentrations in outdoor air of major air pollutants that impact public health: sulphur dioxide, nitrogen oxides, particulate matter (as PM_{10} and $PM_{2.5}$), lead, benzene, carbon monoxide and ozone**

- **Targets for levels in outdoor air for four elements: cadmium, arsenic, nickel, and mercury, together with polycyclic aromatic hydrocarbons (PAH)**

These Air Quality Standards Regulations set 'limit values', 'target values' and 'long-term objectives' for ambient concentrations of the pollutants listed above.[19]

18. Reports - Northern Ireland Air (airqualityni.co.uk) (Last accessed 31 May 2023)
19. UK Air Quality Policy Context - Defra, UK (Last accessed 22 June 2023)

PROFILE FINDINGS

In Belfast LGD, there are local air quality management monitoring sites for:

- **Carbon monoxide (CO)**
- **Benzene**
- **Metallic and other polluting elements**
- **Ozone (O_3)**
- **Particulate matter, PM_{10} and $PM_{2.5}$**
- **Nitrogen dioxide (NO_2)[20]**

Carbon monoxide

Carbon monoxide is monitored at only one site in Northern Ireland, at Belfast Centre. Carbon monoxide concentrations met the Regulations limit value and did not exceed the AQS objective in:

- **2020, covering the first 9 months of the COVID-19 pandemic**
- **2021, covering 10 months to one year and 9 months of the pandemic**

Benzene

Benzene is monitored at only one site in Northern Ireland, at Belfast Centre. Benzene concentrations met the annual mean limit value and did not exceed the AQS objective (for the running annual mean) for this pollutant in:

- **2020, covering the first 9 months of the COVID-19 pandemic**
- **2021, covering 10 months to one year and 9 months of the pandemic**

20. Polycyclic aromatic hydrocarbons (PAHs) were not monitored in Belfast

Metallic and other polluting elements

Metallic and other polluting elements are monitored at only one site in Northern Ireland, at Belfast Centre (which is part of the Heavy Metals Network). In 2020 and 2021, during the first year and 9 months of the COVID-19 pandemic, concentrations of:

- **Lead were within the annual mean limit value and AQS objective for this pollutant**
- **Arsenic, cadmium, and nickel were within the annual mean target values for these pollutants**

Ozone (O_3)

Ozone is monitored at three sites in Northern Ireland, one of which is at Belfast Centre. In 2020 and 2021, during the first year and 9 months of the COVID-19 pandemic, ozone concentrations at all the sites met the target value for human health and the AQS objective for this pollutant.

Particulate matter (PM_{10})

PM_{10} is monitored at several sites in Northern Ireland, two of which are in Belfast at Belfast Centre and Belfast Stockman's Lane:

- **In 2020, covering the first 9 months of the COVID-19 pandemic, of the 11 sites monitoring PM10 concentrations, all sites, including Belfast Centre and Belfast Stockman's Lane, met the annual mean limit value and AQS objective of 40 µg/m³, and did not exceed the daily mean limit value and AQS objective of 50 µg/m³ on more than the maximum permitted 35 days**
- **In 2021, covering from 10 months to one year and 9 months of the pandemic, of the 12 sites monitoring PM10 concentrations, all sites, including Belfast Centre and Belfast Stockman's Lane, met the annual mean limit value and AQS objective of 40 µg/m³, and did not exceed the daily mean limit value and AQS objective of 50 µg/m³ on more than the maximum permitted 35 days**

In 2021, however, three of the 12 sites, including the site at Belfast Stockman's Lane, exceeded the newly introduced WHO guideline[21] for annual mean concentrations of PM10 (15 µg/m³). Although these guidelines are not legally binding, they are valuable for providing guidance for future UK legislation.[22]

21. WHO global air quality guidelines: particulate matter ($PM_{2.5}$ and PM_{10}), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide (Last accessed 30 May 2023)
22. 63513bf999bbe-Air_Pollution_in_Northern_Ireland_2021_Issue2-screen-optimised.pdf (airqualityni.co.uk) (Last accessed 30 May 2023)

Particulate matter ($PM_{2.5}$)

$PM_{2.5}$ is monitored at several sites in Northern Ireland, one of which is in Belfast at Belfast Centre:

- **In 2020, covering the first 9 months of the COVID-19 pandemic, of the three sites monitoring $PM_{2.5}$ concentrations, all sites, including Belfast Centre, were below the Regulations Stage 1 limit value of 25 µg/m³ , and the Regulations Stage 2 limit value of 20 µg/m³**

- **In 2021, covering from 10 months to one year and 9 months of the pandemic, of the five sites monitoring $PM_{2.5}$ concentrations, all sites, including Belfast Centre, were below the Regulations Stage 2 limit value of 20 µg/m³**

In 2021, however, four of the five sites, including the site at Belfast Centre, exceeded the newly introduced WHO guideline[23] for annual mean concentrations of $PM_{2.5}$ (5 µg/m³). Although these guidelines are not legally binding, they are valuable for providing guidance for future UK legislation.[24]

Nitrogen dioxide

Nitrogen dioxide is monitored at 16 sites in Northern Ireland, five of which are in Belfast:

- **Belfast Ormeau Road**
- **Belfast Centre**
- **Belfast Newtownards Road**
- **Belfast Westlink Roden Street**
- **Belfast Stockman's Lane**

In 2020 and 2021, during the first year and 9 months of the COVID-19 pandemic, nitrogen dioxide concentrations at all sites met the AQS objective for annual mean concentrations of this pollutant compared with 2019 when four of the sites, including Belfast Stockman's Lane, exceeded the annual mean AQS objective (40 µg/m³).

23. WHO global air quality guidelines: particulate matter ($PM_{2.5}$ and PM_{10}), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide (Last accessed 30 May 2023)
24. 63513bf999bbe-Air_Pollution_in_Northern_Ireland_2021_Issue2-screen-optimised.pdf (airqualityni.co.uk) (Last accessed 30 May 2023)

In 2021, however, 15 of the 16 sites, including all five sites in Belfast, exceeded the newly introduced WHO guideline[25] for annual mean concentrations of nitrogen dioxide (10 µg/m^3). Although these guidelines are not legally binding, they are valuable for providing guidance for future UK legislation.[26]

See pages 148-152, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.

KEY COMPARISONS

Comparison with other monitoring sites in Northern Ireland[27]

Ozone (O_3)

In 2020 and 2021, covering the first one year and 9 months of the COVID-19 pandemic, of the 3 sites at which concentrations of ozone were monitored, one of which was in Belfast:

- **The highest values were recorded at Lough Navar**
- **The lowest values were recorded at Belfast Centre**
- **The median values were recorded at Derry Rosemount**

Particulate matter (PM_{10})

In 2020, covering the first 9 months of the COVID-19 pandemic, of the 11 sites at which annual mean concentrations of PM_{10} were monitored, two of which were in Belfast:

- **Relatively higher similar values were recorded at 3 sites, including Belfast Stockman's Lane**
- **The sixth highest values were recorded at the Belfast Centre and North Down Holywood A2 sites**
- **The lowest value was recorded at Lough Navar**

In addition, Belfast Centre and Belfast Stockman's Lane were two of the six sites at which there were exceedances of the daily mean objective for PM_{10}.

25. WHO global air quality guidelines: particulate matter ($PM_{2.5}$ and PM_{10}), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide (Last accessed 30 May 2023)
26. 63513bf999bbe-Air_Pollution_in_Northern_Ireland_2021_Issue2-screen-optimised.pdf (airqualityni.co.uk) (Last accessed 30 May 2023)
27. Where more than one site is involved and at least one of the sites is in Belfast

In 2021, covering from 10 months to one year and 9 months of the COVID-19 pandemic, of the 12 sites at which annual mean concentrations of PM_{10} were monitored, two of which were in Belfast:

- **The highest value was recorded at Belfast Stockman's Lane**
- **The fifth highest value was recorded at Belfast Centre**
- **The lowest value was recorded at Lough Navar**

In addition, Belfast Stockman's Lane was one of four sites at which there were exceedances of the daily mean objective for PM_{10}.

Particulate matter ($PM_{2.5}$)

In 2020, covering the first 9 months of the COVID-19 pandemic, of the three sites at which annual mean concentrations of $PM_{2.5}$ were monitored, one of which was in Belfast:

- **Relatively higher similar values were recorded at Belfast Centre and Derry Rosemount**
- **The lowest value was recorded at Lough Navar**

In 2021, covering from 10 months to one year and 9 months of the COVID-19 pandemic, of the five sites at which annual mean concentrations of $PM_{2.5}$ were monitored, one of which was in Belfast:

- **Relatively higher similar values were recorded at four of the sites, including Belfast Centre**
- **The lowest value was recorded at Lough Navar**

Nitrogen dioxide (NO_2)

In 2020, covering the first 9 months of the COVID-19 pandemic, of the of the 16 sites at which annual mean concentrations of NO_2 were monitored, five of which were in Belfast:

- **The highest value was recorded at Downpatrick Roadside**
- **Belfast Stockman's Lane had the second highest value**
- **Belfast Westlink Roden Street had the sixth highest value**
- **Belfast Newtownards Road had the seventh lowest value**
- **Belfast Centre[28] had the sixth lowest value**
- **Belfast Ormeau Road had the fourth lowest value**
- **The lowest value was recorded at Derry Rosemount**

In 2021, covering from 10 months to one year and 9 months of the COVID-19 pandemic, of the of the 16 sites at which annual mean concentrations of NO_2 were monitored, five of which were in Belfast:

- **The highest values were recorded at Downpatrick Roadside and Newry Canal Street**
- **Belfast Stockman's Lane had the third highest value**
- **Belfast Westlink Roden Street had the sixth highest value**
- **Belfast Centre had the seventh lowest value**
- **Belfast Newtownards Road had the sixth lowest value**
- **Belfast Ormeau Road had the fourth lowest value**
- **The lowest value was recorded at Derry Rosemount**

28. For 2020, there was less than 75% data capture at the Belfast Centre site. When data capture falls below this threshold, the means are "annualised"

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

In 2020 and 2021, during the first year and 9 months of the COVID-19 pandemic, local air quality management information showed that concentrations of all the air pollutants monitored at one or more sites in Belfast met target values and annual mean AQS objectives, although there were exceedances of the daily mean objective for PM_{10} at Belfast Centre in 2020 and at Belfast Stockman's Lane in both 2020 and 2021.

In 2021, however, the WHO updated its guidance on air quality levels for six pollutants for which there has been an advance in the evidence base for the health effects of exposure to those pollutants; the advance in knowledge about the health effects of PM_{10} and $PM_{2.5}$ is of particular note.[29] In 2021, the pollutants that exceeded these new WHO guideline values at sites in Belfast were:

- **PM_{10} at Belfast Stockman's Lane**
- **$PM_{2.5}$ at Belfast Centre**
- **Nitrogen dioxide at Belfast Centre, Belfast Ormeau Road, Belfast Newtownards Road, Belfast Westlink Roden Street, and Belfast Stockman's Lane**

29. The WHO highlights that $PM_{2.5}$ and PM_{10} can penetrate deep into the lungs, and $PM_{2.5}$ can also enter the bloodstream, primarily affecting the cardiovascular and respiratory systems, but also affecting other organs

SECTION 14

Air Quality: Local Air Quality Management (LAQM) – Air Quality Management Areas (AQMAs)

DATA SOURCE

Information is from DAERA, Northern Ireland Air, Reports, Air Quality in NI, Air Pollution in Northern Ireland – 2021 and Air Pollution in Northern Ireland – 2019.[30]

TIMEPOINT FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

August 2022

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

None reported.

30. https://www.airqualityni.co.uk/report (Last accessed 22 June 2023)

UK AIR QUALITY STRATEGY (AQS) AND NORTHERN IRELAND AIR QUALITY STANDARDS

Belfast City Council has declared several AQMAs across the city for a combination of exceedances of the nitrogen dioxide annual and hourly mean AQS objectives.[31]

PROFILE FINDINGS

At August 2022, two years and 5 months from the start of the COVID-19 pandemic, in Belfast LGD, there were 4 AQMAs, comprising 21.05% of Northern Ireland's total number of AQMAs.

Between 2019 and August 2022, from before the COVID-19 pandemic to two years and 5 months into the pandemic, in Belfast LGD:

- **The number of AQMAs remained the same at 4**
- **The location of each AQMA remained the same**
- **The pollutants measured at each AQMA remained the same**

See pages *161-163, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.*

KEY COMPARISONS

Comparison with Northern Ireland

At August 2022, two years and 5 months from the start of the COVID-19 pandemic, there were 19 AQMAs in Northern Ireland.

Between 2019 and August 2022, from before the COVID-19 pandemic to two years and 5 months into the pandemic, the number of AQMAs in Northern Ireland remained the same at 19.

31. 63ecace64c709-BCC_Air_Quality_Progress_Report_2022 .pdf (airqualityni.co.uk) (Last accessed 22 June 2023)

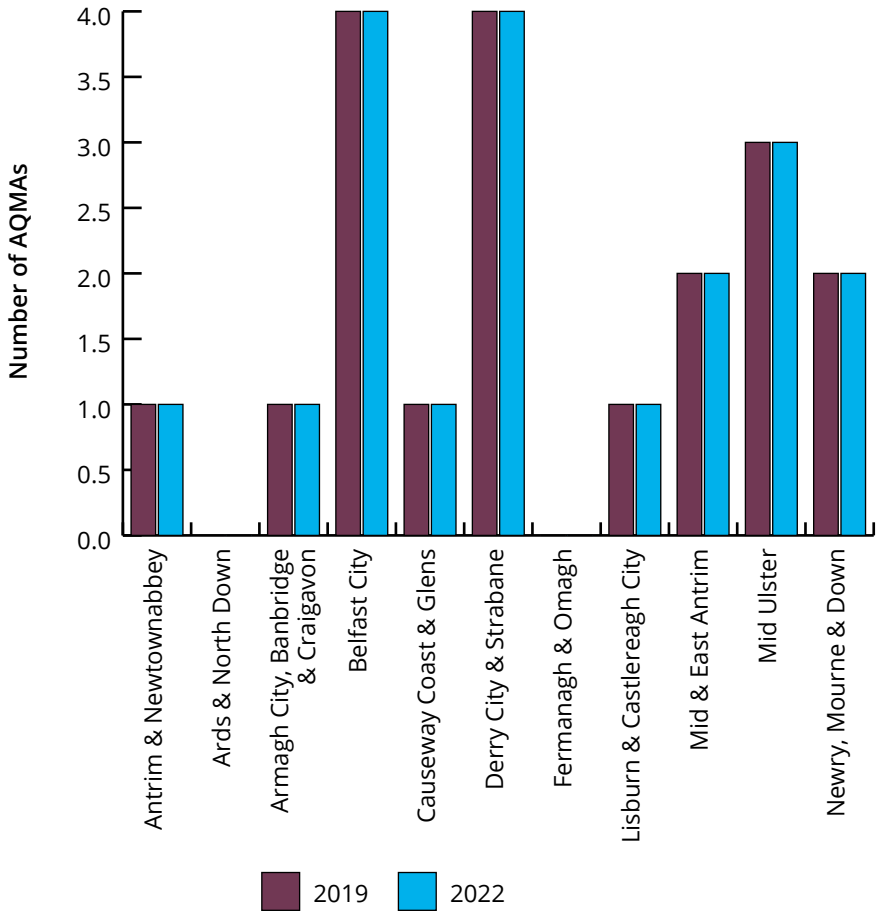
Comparison with other LGDs

When compared with the 9 LGDs in which there were AQMAs, Belfast LGD had the equal highest number of AQMAs, and the equal highest percentage share of Northern Ireland's total, together with Derry City & Strabane LGD:

- **In 2019, before the COVID-19 pandemic**
- **At August 2022, two years and 5 months from the start of the COVID-19 pandemic (see COVID-19 Planet Figure 14)**

Between 2019 and August 2022, from before the COVID-19 pandemic to two years and 5 months into the pandemic, the number of AQMAs remained the same in all LGDs, including Belfast LGD (see COVID-19 Planet Figure 14)

COVID-19 PLANET FIGURE 14:
Number of AQMAs by LGD, 2019, and 2022, at August 2022



Source: DEFRA: 2019 data: Air Pollution in Northern Ireland 2019, Table 3.1, page 9; 2022 data: Air Pollution in Northern Ireland 2022, Table 3.2

OBSERVATIONS ON THE DATA

Comparison with Northern Ireland

Between 2019 and August 2022, from before the COVID-19 pandemic and covering two years and 5 months of the pandemic, the number of Northern Ireland's AQMAs did not change, nor did Belfast LGD's percentage share of Northern Ireland's AQMAs.

Comparison with other LGDs

For all LGDs in Northern Ireland, including Belfast LGD, there have been no changes in the number of AQMAs between 2019, before the COVID-19 pandemic, and August 2022, two years and 5 months into the pandemic. Of the 9 LGDs that have AQMAs, the relative position of Belfast LGD, with the equal highest number of AQMAs and the equal highest percentage share of Northern Ireland's total number, together with Derry City & Strabane LGD, has not changed.

POTENTIAL IMPACT OF THE COVID-19 PANDEMIC

At August 2022, two years and 5 months into the COVID-19 pandemic, over 2 out of every 10 AQMAs in Northern Ireland were in Belfast LGD, as in Derry City & Strabane LGD, compared with between 1 and 2 out of every 10 in Mid Ulster LGD, 1 out of every 10 in Mid Ulster and Newry, Mourne & Down LGDs, and less than 1 out of every 10 (1 in every 20) in Antrim & Newtownabbey, Armagh City, Banbridge & Craigavon, Causeway Coast & Glens, and Lisburn & Castlereagh LGDs.

In Belfast LGD, the COVID-19 pandemic has not been associated with any change in the number of AQMAs, their location, or the pollutants measured within each AQMA.

A review by Belfast City Council of the monitoring data for the city's AQMAs, and for the city generally, however, indicates that ambient nitrogen dioxide concentrations across Belfast have improved over recent years, notwithstanding the impact of the COVID-19 pandemic on transport and other emissions. Belfast City Council considers there may be an opportunity to revoke the AQMA along the Ormeau Road and Upper Newtownards Road, where monitoring data show sustained improved annual mean nitrogen dioxide concentrations, with levels consistently below the annual mean objective since 2014. Aware that in 2020 and 2021 ambient air pollution levels were affected by the COVID-19 pandemic restrictions, Belfast City Council will review ambient air pollution levels throughout 2022 (in the absence of COVID-19 restrictions) to determine whether recent improvements are sustained throughout the ongoing recovery from the pandemic or if air pollution levels will revert to their pre-pandemic levels, including any implications for Belfast's AQMAs. The decision to revoke any of Belfast's AQMAs will be based on robust monitoring evidence and detailed atmospheric dispersion modelling and be in accordance with the government's LAQM technical guidance.[32]

32. 63ecace64c709-BCC_Air_Quality_Progress_Report_2022 .pdf (airqualityni.co.uk) (Last accessed 22 June 2023)

SECTION 15

Noise Complaints

15.1 Number of Noise Complaints
15.2 Number of Notices Served
15.3 Rate of Notices Served

DATA SOURCE

Information is from the Department of Agriculture, Environment, and Rural Affairs, Noise, Noise complaints report, Noise complaint statistics for Northern Ireland 2021 to 2022, Noise complaint statistics for Northern Ireland 2020 to 2021, and Noise complaint statistics for Northern Ireland 2019 to 2020.[33]

YEARS FOR WHICH DATA ARE AVAILABLE WITHIN COVID-19 TIMEFRAME

Financial years 2020/21 and 2021/22

REPORTED IMPACT OF THE COVID-19 PANDEMIC ON DATA COLLECTION

Statistics for 2020 to 2021

In the Noise complaint statistics for Northern Ireland 2020 to 2021, it states:

> ***"This report analyses noise complaints received by all 11 councils between 1 April 2020 and 31 March 2021 and covers the period of the first UK lockdown brought in as a result of the COVID-19 pandemic. … the impact of the COVID-19 restrictions on the reporting of this year's statistics should be borne in mind. … It also provides an insight into the impact of COVID-19 lockdowns and restrictions on noise complaints, which were in place throughout different periods of the 2020/21 reporting year."*** [34]

33. Noise | Department of Agriculture, Environment and Rural Affairs (daera-ni.gov.uk) (Last accessed 23 May 2023)
34. DAERA Noise Complaint Statistics for NI 2020 - 21 (daera-ni.gov.uk) (Last accessed 25 June 2023)

Statistics for 2021 to 2022

In the Noise complaint statistics for Northern Ireland 2021 to 2022, it states:

> ***"This report analyses noise complaints received by all 11 councils between 1 April 2021 and 31 March 2022 and covers the latter stages of the COVID-19 pandemic, where lockdown restrictions in Northern Ireland began easing from April 2021. ....the continued impact of the COVID-19 pandemic on the reporting of this year's statistics should be borne in mind. ....It also provides an insight into the continued impact of COVID-19 pandemic on the reporting of noise complaints, as many restrictions only began to ease from April 2021."*** [35]

PROFILE FINDINGS

Noise complaints

In Belfast LGD, the number of noise complaints:

- **In 2020/21, the first full year of the COVID-19 pandemic, was 4,569**
- **In 2021/22, the second full year of the COVID-19 pandemic, was 6,955**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, in Belfast LGD, the number of noise complaints increased by 725, from 6,230 to 6,955.

Notices served

In Belfast LGD, the number of notices served for noise complaints:

- **In 2020/21, the first full year of the COVID-19 pandemic, was 189**
- **In 2021/22, the second full year of the COVID-19 pandemic, was 310**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, in Belfast LGD, the number of notices served for noise complaints decreased by 233, from 543 to 310.

35. DAERA Noise Complaint Statistics for NI 2021 - 22 (daera-ni.gov.uk) (Last accessed 25 June 2023)

Rate of notices served

In Belfast LGD, the rate of notices served:

- **In 2020/21, the first full year of the COVID-19 pandemic, was 4.14 per 1,000 noise complaints**
- **In 2021/22, the second full year of the COVID-19 pandemic, was 4.46 pr 1,000 noise complaints**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, in Belfast LGD, the rate of notices served decreased by 4.26 per 1,000 noise complaints, from 8.72 to 4.46 per 1,000 noise complaints.

See *pages 164-173, in the Planet Chapter for further detail of the findings before the COVID-19 pandemic.*

KEY COMPARISONS

Comparison with Northern Ireland

Noise complaints
In Belfast LGD, the number of noise complaints in:

- **2019/20, before the COVID-19 pandemic, comprised 54.86% of Northern Ireland's total**
- **2020/21, the first full year of the pandemic, comprised 43.54% of Northern Ireland's total**
- **2021/22, the second full year of the pandemic, comprised 52.45% of Northern Ireland's total**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the number of noise complaints increased overall:

- **In Belfast LGD, by 725, from 6,230 to 6,955 (a percentage increase of 11.64%)**
- **In Northern Ireland, by 1,905, from 11,356 to 13,261 (a percentage increase of 16.78%)**

Notices served

In Belfast LGD, the number of notices served for noise complaints in:

- **2019/20, before the COVID-19 pandemic, comprised 95.26% of Northern Ireland's total**
- **2020/21, the first full year of the pandemic, comprised 90.00% of Northern Ireland's total**
- **2021/22, the second full year of the pandemic comprised 90.12% of Northern Ireland's total**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the number of notices served for noise complaints decreased overall:

- **In Belfast LGD, by 233, from 543 to 310 (a percentage decrease of 42.91%)**
- **In Northern Ireland, by 226, from 570 to 344 (a percentage decrease of 39.65%)**

Rate of notices served

When compared with Northern Ireland, the rate of notices served was higher in Belfast LGD in:

- **2019/20, before the COVID-19 pandemic, by 3.70 notices served per 1,000 population, 8.72 compared with 5.02 notices served per 1,000 population**
- **2020/21, the first full year of the pandemic, by 2.14 notices served per 1,000 population, 4.14 compared with 2.00 notices served per 1,000 population,**
- **2021/22, the second full year of the pandemic, by 1.87 notices served per 1,000 population, 4.46 compared with 2.59 notices served per 1,000 population**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the rate of notices served per 1,000 noise complaints decreased overall:

- **In Belfast LGD, by 4.26 notices served per 1,000 population, from 8.72 to 4.46 notices served per 1,000 population, (a percentage decrease of 48.85%)**
- **In Northern Ireland, by 2.43 notices served per 1,000 population, from 5.02 to 2.59 notices served per 1,000 population, (a percentage decrease of 48.41%)**

Comparison with other LGDs

Noise complaints
When compared with other LGDs, Belfast LGD had the highest number of noise complaints and highest percentage share of Northern Ireland's total:

- **In 2019/20, before the COVID-19 pandemic**
- **In 2020/21, the first full year of the pandemic**
- **In 2021/22, the second full year of the pandemic (see COVID-19 Planet Figure 15)**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the number of noise complaints:

- **Increased overall in 9 LGDs, including Belfast LGD**
- **Decreased overall in 2 LGDs (see COVID-19 Planet Figure 15)**

Notices served
When compared with other LGDs, Belfast LGD had the highest number of notices served for noise complaints and highest percentage share of Northern Ireland's total of notices served:

- **In 2019/20, before the COVID-19 pandemic**
- **In 2020/21, the first full year of the pandemic**
- **In 2021/22, the second full year of the pandemic (see COVID-19 Table 4)**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the number of notices served for noise complaints:

- **Increased overall in 4 LGDs**
- **Decreased overall in 5 LGDs, including Belfast LGD**
- **Remained the same overall in 2 LGDs (see COVID-19 Table 4)**

Rate of notices served

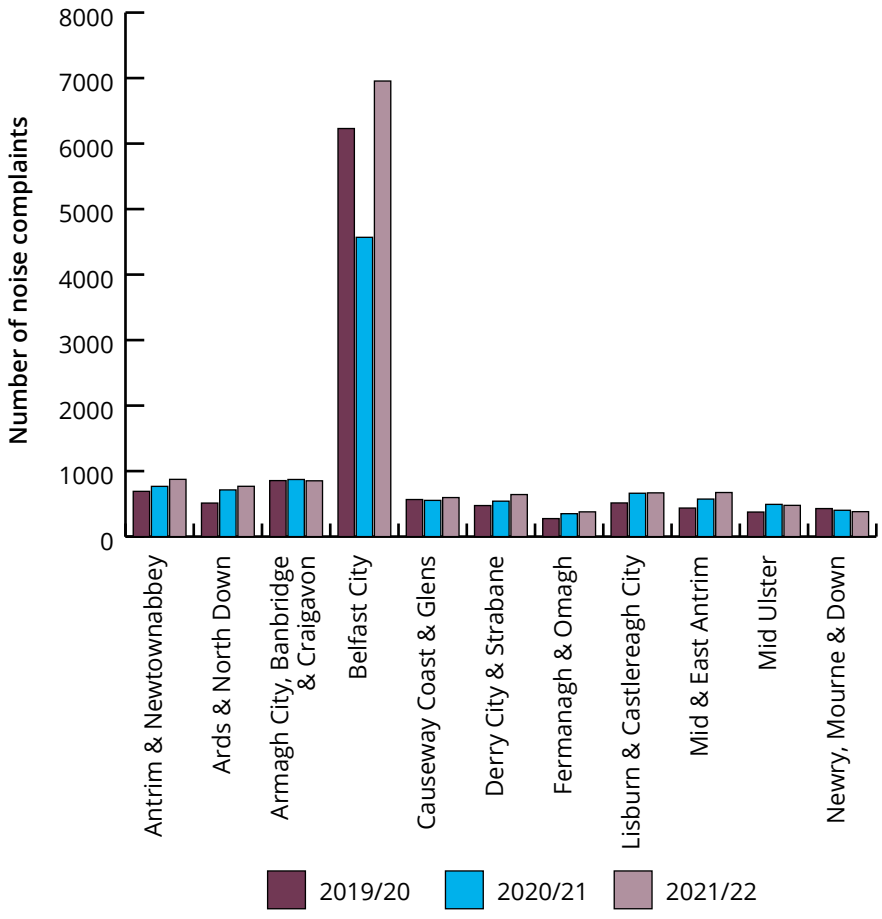
When compared with other LGDs, Belfast LGD had the highest rate of notices served:

- **In 2019/20, before the COVID-19 pandemic**
- **In 2020/21, the first full year of the pandemic**
- **In 2021/22, the second full year of the pandemic (see COVID-19 Planet Figure 16)**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the rate of notices served:

- **Increased overall in 5 LGDs**
- **Decreased overall in 6 LGDs, including Belfast LGD (see COVID-19 Planet Figure 16)**

COVID-19 PLANET FIGURE 15:
Number of noise complaints by LGD, 2019/20, 2020/21, and 2021/22



Source: DAERA: Noise, Noise complaints report, Noise complaint statistics for Northern Ireland 2021 to 2022, Noise complaint statistics for Northern Ireland 2020 to 2021, and Noise complaint statistics for Northern Ireland 2019 to 2020, Table 1 in each report

COVID-19 PLANET TABLE 4:

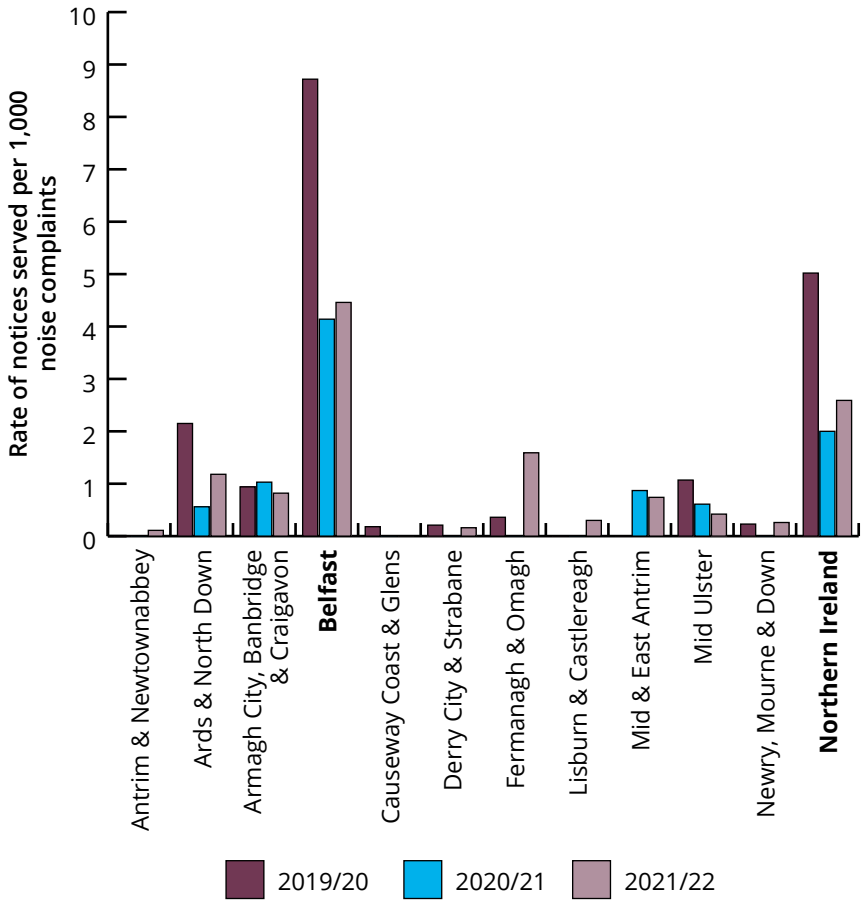
Number of notices served for noise complaints by LGD and Northern Ireland, 2019/20, 2020/21, and 2021/22

LGD	2019/20	2020/21	2021/22
Antrim & Newtownabbey	0	0	1
Ards & North Down	11	4	9
Armagh City, Banbridge & Craigavon	8	9	7
Belfast	543	189	310
Causeway Coast & Glens	1	0	0
Derry City & Strabane	1	0	1
Fermanagh & Omagh	1	0	6
Lisburn & Castlereagh	0	0	2
Mid & East Antrim	0	5	5
Mid Ulster	4	3	2
Newry, Mourne & Down	1	0	1
Northern Ireland	570	210	344

Source: DAERA: Noise, Noise complaints report, Noise complaint statistics for Northern Ireland 2021 to 2022, Noise complaint statistics for Northern Ireland 2020 to 2021, and Noise complaint statistics for Northern Ireland 2019 to 2020, Table 2 in each report

COVID-19 PLANET FIGURE 16:

Rate of notices served per 1,000 noise complaints by LGD and Northern Ireland, 2019/20, 2020/21, and 2021/22



Source: DAERA: Noise, Noise complaints report, Noise complaint statistics for Northern Ireland 2021 to 2022, Noise complaint statistics for Northern Ireland 2020 to 2021, and Noise complaint statistics for Northern Ireland 2019 to 2020, Table 2 in each report

OBSERVATIONS ON THE DATA

Comparison with Northern Ireland

Noise complaints
Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the number of noise complaints increased overall in both Belfast LGD and Northern Ireland, but the percentage increase was greater in Northern Ireland, with a less negative outcome for Belfast LGD.

Notices served
Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the number of notices served for noise complaints decreased overall in both Belfast LGD and Northern Ireland, but the percentage decrease was greater in Belfast LGD.

Rate of notices served
In comparison with Northern Ireland, the rate of notices served per 1,000 noise complaints was higher in Belfast LGD both before and during the first two full years of the COVID-19 pandemic.

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the rate of notices served per 1,000 noise complaints decreased overall in both Belfast LGD and Northern Ireland, but the percentage decrease was slightly greater in Belfast LGD and the gap between the two narrowed slightly.

Comparison with other LGDs

Noise complaints
In comparison with other LGDs, the number of noise complaints in Belfast LGD was highest both before and during the first full two years of the COVID-19 pandemic, consequently, there was no change in the relative position of Belfast LGD among LGDs.

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, of the 9 LGDs in which there was an increase in the number of noise complaints:

- **Belfast LGD had the second lowest percentage increase at 11.64%**
- **Mid & East Antrim LGD had the greatest percentage increase at 54.36%**
- **Causeway Coast & Glens LGD had the smallest percentage increase at 5.30%**
- **Lisburn & Castlereagh LGD had the median percentage increase at 29.96%**

Notices served

In comparison with other LGDs, the number of notices served for noise complaints in Belfast LGD was highest both before the COVID-19 pandemic and during the first full two years of the pandemic, consequently, there was no change in the relative position of Belfast LGD among LGDs.

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, of the 5 LGDs in which there was a decrease in the number of notices served for noise complaints:

- **Belfast LGD had the median percentage decrease at 42.91%**
- **Causeway Coast & Glens LGD had the greatest percentage decrease at 100.00% (although this was from a relatively very low baseline compared with Belfast LGD)**
- **Armagh City, Banbridge & Craigavon LGD had the smallest percentage decrease at 12.50%**

Rate of notices served

In comparison with other LGDs, the rate of notices per 1,00 noise complaints served in Belfast LGD was highest both before and during the first full two years of the COVID-19 pandemic, consequently, there was no change in the relative position of Belfast LGD among LGDs.

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, of the 6 LGDs in which there was a decrease in the rate of notices served per 1,000 noise complaints:

- **Belfast LGD had the third highest percentage decrease at 48.85%**
- **Causeway Coast & Glens LGD had the greatest percentage decrease at 100.00% (although this was from a relatively very low baseline compared with Belfast LGD)**
- **Armagh City, Banbridge & Craigavon LGD had the smallest percentage decrease at 12.77%**

The median percentage decrease was 46.99%.

Noise complaints

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the number of noise complaints:

- **Increased in 9 LGDs, including Belfast LGD**
- **Increased in Northern Ireland**
- **Decreased in 2 LGDs**

From 2019/20 to 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, Belfast LGD's percentage share of Northern Ireland's total number of noise complaints decreased by 2.41 percentage points from 54.86% in 2019/20 to 52.45% in 2021/22 (a percentage decrease of 4.39%).

In 2021/22, over half of Northern Ireland's total of noise complaints were in Belfast LGD.

Between 2019/20 and 2021/22, although the number of noise complaints increased in both Belfast LGD and Northern Ireland, there was a greater percentage increase in Northern Ireland, resulting in a less negative outcome for Belfast LGD.

Among LGDs, Belfast LGD had the highest number of noise complaints before and during the first two full years of the COVID-19 pandemic.

In 2021/22, each of the following LGDs had around 3% of Northern Ireland's total noise complaints – Fermanagh & Omagh (2.85%), Mid Ulster (3.60%), and Newry, Mourne & Down (2.87%) – whereas Belfast LGD had over 50% of Northern Ireland's total.

In Belfast LGD, the COVID-19 pandemic has been associated with an overall increase in the number of noise complaints, although there was a noticeable decrease in noise complaints between 2019/20 and 2020/21, covering the first year of the pandemic, which may reflect a reduction in the noise levels in Belfast due to periods of lockdown with a reduction in business, leisure, entertainment, and hospitality industry activities together with a decrease in transport use.

Notices served

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the number of notices served for noise complaints:

- **Increased in 4 LGDs**
- **Decreased in 5 LGDs, including Belfast LGD**
- **Decreased in Northern Ireland**
- **Remained the same in 2 LGDs**

From 2019/20 to 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, Belfast LGD's percentage share of Northern Ireland's total of notices served for noise complaints decreased by 5.14 percentage points from 95.26% in 2019/20 to 90.12% in 2021/22 (a percentage decrease of 5.40%).

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, although the number of notices served for noise complaints decreased in both Belfast LGD and Northern Ireland, there was a greater percentage decrease in Belfast LGD.

Among LGDs, Belfast LGD had much the highest number of notices served for noise complaints before and during the first two full years of the COVID-19 pandemic.

In 2021/22, 9 out of every 10 of Northern Ireland's notices served for noise complaints were in Belfast LGD, compared with much less than 1 out of every 10 in all other LGDs.

In Belfast LGD, the COVID-19 pandemic has been associated with an overall decrease in the number of notices served for noise complaints, although there was a noticeable decrease in notices served between 2019/20 and 2020/21, covering the first year of the pandemic, which may reflect a reduction in the noise levels in Belfast due to periods of lockdown with a reduction in business, leisure, entertainment, and hospitality industry activities together with a decrease in transport use.

Rate of notices served

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, the rate of notices served per 1,000 noise complaints:

- **Increased in 5 LGDs**
- **Decreased in 6 LGDs, including Belfast LGD**
- **Decreased in Northern Ireland**

Between 2019/20 and 2021/22, from before the COVID-19 pandemic and covering the first two full years of the pandemic, although the rate of notices served per 1,000 noise complaints decreased in both Belfast LGD and Northern Ireland, there was a greater percentage decrease in Belfast LGD.

Among LGDs, Belfast LGD had much the highest rate of notices served per 1,000 noise complaints both before and during the first two full years of the COVID-19 pandemic.

In Belfast LGD, the COVID-19 pandemic has been associated with an overall decrease in the rate of notices served per 1,000 noise complaints, although the greater part of this decrease in the rate of notices served occurred between 2019/20 and 2020/21, covering the first year of the pandemic, which may reflect a reduction in the noise levels in Belfast due to periods of lockdown with a reduction in business, leisure, entertainment, and hospitality industry activities together with a decrease in transport use.

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