



Rialtas na hÉireann  
Government of Ireland



# Irish Sovereign Green Bond

Eligible Green Projects  
Impact Report 2022



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## Introduction and Summary

This is the fifth eligible green projects impact report issued in accordance with the Irish Sovereign Green Bonds (“ISGB”) Framework. It details the environmental impact measures connected to the 2022 Allocation Report.

ISGBs are designed to provide investors with the financial features of a standard Irish government bond combined with sovereign green bond market practices. ISGB proceeds are paid into the Central Fund as with standard government bonds. Amounts raised through the sale of ISGBs are allocated against Eligible Green Projects which generate a positive environmental benefit.

€1,979.1 million was allocated to Eligible Green Projects from 2022 (see Appendix 1), using proceeds generated in 2023.

In the 2022 Allocation Report, environmental impact indicators were included across the six categories eligible for allocation:

- Built Environment/Energy Efficiency
- Clean Transportation
- Climate Change Adaptation
- Environmentally Sustainable Management of Living Natural Resources and Land Use
- Renewable Energy
- Sustainable Water and Wastewater Management



Protected Junction Drummartin Road

Cover photo:  
Salmon Weir Pedestrian  
and Cycle Bridge, Galway

# Acknowledgements

This Report was produced with the co-operation of Government departments and other State bodies responsible for expenditure and subsidies which are allocated from the proceeds of ISGBs. The ISGB Working Group is grateful to the many colleagues who provided information and assistance.

Those Government departments and State bodies are as follows<sup>1</sup>:

- Department of Finance
- Department of Public Expenditure, NDP Delivery and Reform
- Department of Housing, Local Government and Heritage
- Department of Transport
- Department of Agriculture, Food and the Marine
- Department of the Environment, Climate and Communications
- Office of Public Works (OPW)
- National Treasury Management Agency (NTMA)

# Eligible Green Projects Impact Report Year End 2022

The purpose of impact reporting is to assist investors in ISGBs with a better understanding of the possible environmental impacts of the Eligible Green Projects. A number of key impact indicators are provided and, where possible, quantified. Eligible Green Projects received a 67% allocation against the associated expenditure. As impact indicators are only available at a programme level, a total green expenditure figure is given alongside the allocation figures, and the allocation percentage (67%) is also provided.

An important consideration in the estimation of impact indicators is the underlying assumptions. While technical experts aim to make sound and conservative assumptions that are reasonable based on the information available at the time, the actual environmental impact of the projects may diverge from the impacts as quantified in the tables<sup>2</sup>.

In some cases quantitative indicators were unavailable; therefore qualitative data has been included to demonstrate other valuable impacts. In addition, some programmes also provide social benefits as well as climate related benefits. This report focuses only on the environmental impacts.

## Compliance Review by Sustainalytics

Based on the limited assurance procedures conducted, nothing has come to Sustainalytics' attention that causes us to believe that, in all material respects, the Nominated Expenditures do not conform with the use of proceeds criteria and reporting commitments in the Framework. NTMA has disclosed to Sustainalytics that the proceeds from the 2024 ISGB were fully allocated as of August 2024.

The full compliance review is available on the National Treasury Management Agency's website at this link: <https://www.ntma.ie/uploads/publication-articles/Government-of-Ireland-Annual-Review-2024-Final.pdf>

<sup>1</sup> Government Departments and State bodies referenced in this report are as they were organised in May 2024 when this report was drafted.

<sup>2</sup> Harmonized Framework for Impact Reporting. The Green Bond Principles. ICMA. June 2019. <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2019/Handbook-Harmonized-Framework-for-Impact-Reporting-WEB-100619.pdf>

# Built Environment/Energy Efficiency

## Environmental Objectives: Climate Change Mitigation

Sustainable Development Goals



Project/ Programme/ Scheme	Green Expenditure (€ Million)	ISGB Proceeds Allocation including adjustments (€ Million)	Allocation Percentage from ISGB Proceeds	Impact Indicator		Other impact indicators and additional Information
Non-residential Energy Efficiency Programmes	43.7	29.4	67%	Annual energy savings (GigaWatt Hours)	151.0	<ul style="list-style-type: none"> <li>Domestic BERs published: 134,336</li> <li>Non-domestic BERs published: 4,342</li> <li>Display Energy Certificates (DEC) published: 584</li> <li>The Public Sector Pathfinder Retrofit Programme facilitated energy efficiency and retrofit works in over 100 buildings across the central government, health, local authority and education sectors, at a cost of over €35m in 2022.</li> </ul>
Sustainable Energy Authority of Ireland (SEAI) admin and general expenses	19.5	13.1	67%	Annual energy savings (GigaWatt Hours)	93.6	
				Annual Greenhouse gas emissions reduced/ avoided in kilotonnes of CO <sup>2</sup> equivalent	35.5	
				Number of homes renovated	27,200	
Limerick Regeneration Thermal Upgrade Programme	3.0	2.0	67%	Annual energy savings (GigaWatt Hours)	Unavailable, see additional information section	<p>Post-work BER certificates are required to be completed in respect of each Thermal Upgrade contract constituent property in order to verify the respective energy performance improvements within each property. The BER certificates have not as yet been attained in respect of all applicable properties.</p>
				Annual Greenhouse gas emissions reduced/ avoided in kilotonnes of CO <sup>2</sup> equivalent	Unavailable, see additional information section	
				Number of homes renovated	19	
Estate Regeneration / Social Housing Improvement	64.1	43.2	67%	Annual energy savings (GigaWatt Hours)	30.85	Please see table below for detailed information
				Annual Greenhouse gas emissions reduced/ avoided in kilotonnes of CO <sup>2</sup> equivalent	8.61	
				Number of homes renovated	2,283	
Total Allocated 2022 to Built Environment/ Energy Efficiency			87.8			

Figures may not total due to rounding

## Built Environment/Energy Efficiency

Scheme	2022 Energy Efficiency Programme	
	No. of units	
Phase 2 EERP (Shallow Retrofit)*	0	
B2 / Cost Optimal Equivalent EERP	1,948	
Midland Retrofit Programme	335	
<b>TOTAL</b>	<b>2,283</b>	

For 2022, the calculation above for the 2,283 properties completed under the enhanced Energy Efficiency Retrofit Programme (EERP) scheme and the Midland Retrofit Programme is based on data received from the local authority sector and confirmed through the SEAI in relation to the Department of Housing, Local Government and Heritage (DHLGH) funded newly enhanced energy efficiency programme to B2/Cost Optimal Equivalent.

\* Phase 2 EERP (Shallow Retrofit) was discontinued in 2021 with the Programme for Government commitment to retrofit 36,500 local authority homes to B2/Cost Optimal levels by 2030.

# Clean Transportation

Sustainable Development Goals



Environmental Objectives: Pollution Prevention and Control/Climate Change Mitigation

Project/ Programme/ Scheme	Green Expenditure (€ Million)	ISGB Proceeds Allocation including adjustments (€ Million)	Allocation Percentage from ISGB Proceeds	Impact Indicator	Other impact indicators and additional Information	
Carbon Reduction	80.8	54.5	67%	No. of new Grant-Aided Electric Vehicle Purchases	10,894	
				No. of grant-aided small public service vehicles (taxi/hackney/limousine)	636	
				No. of vehicles registered: Electric Vehicle Toll Incentive Scheme	35,000	
Low Emission Vehicle Incentivisation	18.8	12.7	67%	No. of grant-aided electric vehicle home charging points installed (including chargers in multi-unit developments from 2020)	16,299	
Public service provision payments	619.0	417.0	67%	Passenger Journeys (millions)	499.4	Please see table below for detailed information
Public Transport Investment	689.0	464.2	67%	No. of new buses and coaches delivered (All Low Floor)	120	Please see table below for detailed information
				% of new buses and coaches delivered that are ZEV	96.0	Please see table below for detailed information
				Annual operated vehicle kilometres (millions)	119	Please see table below for detailed information
				Annual operated vehicle seat kilometres (millions)	14,035.0	Please see table below for detailed information
Active Travel Infrastructure	309.1	208.3	67%	No. of kilometers Active Travel infrastructure delivered	189	
Greenways	42.8	28.9	67%	Additional km of Greenway Projects funded for feasibility/detailed design/ environmental Screening	770.0	
Total Allocated 2022 to Clean Transportation			1,185.5			

Figures may not total due to rounding

# Clean Transportation

## Public service provision payments and Sustainable transport investment programme details

Annual Public Service Provision Payment (PSPP) Passenger Journeys (Millions)	2022
PSPP Public Transport Passenger Numbers:	249.7
LUAS Passenger Numbers	38.7
Iarnród Éireann Passenger Numbers	35.8
Dublin Bus Passenger Numbers	121.0
Bus Éireann Passenger Numbers	35.7
Go Ahead Passenger Numbers	12.5
Others services	6.0

Annual PSPP Fleet & Tram Numbers	2022
PSPP Bus Fleet numbers - Dublin Bus/Go Ahead	1,215
PSPP Bus Fleet numbers - Bus Éireann	626
LUAS tram numbers	81

Additional Measures	2022
Segregated cycling infrastructure added (kms)	104
Length of new footpaths (kms)	188
No. of cycle parking stands provided in urban centres	8,137

Annual Operated Vehicle Kilometres* (Millions)	2022
LUAS	4.1
Iarnród Éireann	17.6
Dublin Bus	50.1
Bus Éireann	47.2

Annual Operated Vehicle Seat Kilometres** (Millions)	2022
LUAS	1,280.5
Iarnród Éireann	6,385.3
Dublin Bus	3,388.5
Bus Éireann	2,981.2

\* Operated vehicle kilometres refer to the actual amount of vehicle kilometres that a bus or rail company has operated in a given period, as opposed to 'scheduled vehicle kilometres' which would indicate the number of vehicle kilometres that they intended to operate as per their cumulative timetables.

\*\* Vehicle seat-kilometres is a unit of passenger transport capacity measuring the total number of seats available multiplied by the kilometres travelled.

Dublin Bus and Bus Éireann Emissions Metrics	2022
Passenger Journeys for Dublin Bus and Bus Éireann (millions)	156.7
CO <sub>2</sub> e (tns) - Dublin Bus network buses	65,760
CO <sub>2</sub> e (tns) - Bus Éireann network buses	49,058
CO <sub>2</sub> e (tns) - Bus Éireann and Dublin Bus	114,818
CO <sub>2</sub> e (grams) per passenger journey - Dublin Bus	543
CO <sub>2</sub> e (grams) per passenger journey - Bus Éireann	1,374

CO<sub>2</sub>e data based on all fuels consumed for traction.  
Bus Éireann emissions data refers the Bus Éireann Direct Award contract only.

# Climate Change Adaptation

Sustainable Development Goals



## Environmental Objectives: Climate Change Adaptation

Project/ Programme/ Scheme	Green Expenditure (€ Million)	ISGB Proceeds Allocation including adjustments (€ Million)	Allocation Percentage from ISGB Proceeds	Impact Indicator	
Flood Risk Management (OPW)	54.7	36.8	67%	No. of Properties Protected on completion	8,913
				Damages/Losses Avoided on completion (€ Million)	849
Climate Initiatives	9.8	6.6	67%	Number of reports published	5
Total Allocated 2022 to Climate Change Adaptation			43.4		

47% of the total capital expenditure of €54.7m on flood risk management in 2022 related to expenditure on the flood relief projects listed in the following table. These projects were at different stages of implementation during 2022 – either substantially complete, at construction or at design development. As primary indicators of the positive environmental impacts of those projects and of the benefit of the projects to the communities affected, the table gives information on the numbers of properties to be protected and the losses and damages avoided on completion of the projects.

**Floodinfo.ie**

Please see table below for detailed information

[Climate Conversation 2022 - Summary Report](#)  
[Climate Conversations 2022 - Stakeholder Engagement Report](#)  
[Report from National Youth Assembly on Climate 2022](#)  
[NDCA Monitoring and Evaluation Report 2022](#)

Figures may not total due to rounding

Project	Current Status	No of Properties Protected on Completion	Damage/Losses Avoided on Completion (€ Million)
Ashbourne	Substantially completed	49	5
Athlone FRS	Under construction	554	48
Bandon FRS	Substantially completed	392	33
Claregalway	Substantially completed	80	11
Clonakilty	Substantially completed	296	34
Douglas/Togher	Substantially completed	221	35
Dunkellin	Substantially completed	23	9
Ennis Lower	Substantially completed	1,274	153
Ennis South	Substantially completed	126	5
Enniscorthy	At scheme development	326	52
Kings Island (Limerick)	Detailed design	528	126
River Dodder (Dublin)	Tidal phase completed and Fluvial phase under construction	2,493	70
River Lee (Cork city)	At scheme development	2,100	185
Morell	Under construction	30	20
Skibbereen	Substantially completed	312	36
Templemore FRS	Under construction	109	27
<b>Total</b>		<b>8,913</b>	<b>849</b>

# Environmentally Sustainable Management of Living

Sustainable Development Goals



Environmental Objectives: Pollution Prevention and Control/Climate Change Mitigation/Natural Resource Conservation/Biodiversity

Project/ Programme/ Scheme	Green Expenditure (€ Million)	ISGB Proceeds Allocation including adjustments (€ Million)	Allocation Percentage from ISGB Proceeds	Impact Indicator		Other impact indicators and additional Information
				Impact Indicator	Value	
Forestry and bio-energy	74.1	49.9	67%	Afforestation (hectares of broadleaf planted)	959	<a href="#">Teagasc Forestry Statistics</a>
				Afforestation (hectares of conifers planted)	1,314	
Environmental Protection Agency Administrative expenses	41.6	28.0	67%	Number of reports published	28	<ul style="list-style-type: none"> <li>• Visits to drinking water sites: 104</li> <li>• Visits to Industrial, waste, dumping at sea and VOC facilities: 1,582</li> <li>• Radiation licences issued: 83</li> <li>• Prosecutions heard: 10</li> <li>• Number of environmental queries from the public: 2,047</li> </ul>
				Number of visits to Urban Waste Water Sites	214	
				Environmental licences issued (permits, authorisations and licences)	758	
International Climate Change Commitments	16.0	10.8	67%	Number of reports published	1	<a href="#">Ireland's Climate and Environmental Finance Report 2022</a>
Waste Management Programmes	21.3	14.4	67%	Number of landfill sites remediated	2	<ul style="list-style-type: none"> <li>• Landfill remediation funding drawn down in respect of 67 sites in 21 local authorities</li> <li>• 25 new sites were allocated funding in 2022</li> </ul>
				Number of Diesel laundering sites cleaned up	41	
Environmental and Climate Research	13.5	9.1	67%	Number of reports published	38	
National heritage (NPWS)	31.6	21.3	67%	Number of species held by the National Biodiversity Data Centre	17,400	<a href="#">4th National Biodiversity Action Plan</a>
				Number of NPWS farm plan schemes	214	
Peatlands restoration and management	4.1	2.8	67%	Land area conserved/restored (hectares)	2,740	Incentive payments covering an area of 10 Hectares under the Protected Raised Bog Restoration Incentive Scheme for designated raised bogs
Total Allocated 2022 to Environmentally Sustainable Management of Living Natural Resources and Land				136.3		

Figures may not total due to rounding



# Renewable Energy

Sustainable Development Goals



## Environmental Objectives: Climate Change Mitigation

Project/ Programme/ Scheme	Green Expenditure (€ Million)	ISGB Proceeds Allocation including adjustments (€ Million)	Allocation Percentage from ISGB Proceeds	Impact Indicator		Additional Information
Energy research programmes	9.5	6.4	67%	Number of companies (including public sector organisations) benefitting from SEAI Research & Innovation programmes as lead, partner or active collaborators	23	<a href="#">SEAI Annual Report 2022</a>
				Number of SEAI Research & Innovation awards benefitting research institutions	41	
<b>Total Allocated 2022 to Renewable Energy</b>			<b>6.4</b>			

Figures may not total due to rounding

# Sustainable Water and Wastewater Management

Sustainable Development Goals



Environmental Objectives: Climate Change Adaptation/Biodiversity/Natural Resource Conservation/Pollution Prevention and Control

Project/ Programme/ Scheme	Green Expenditure (€ Million)	ISGB Proceeds Allocation (€ Million)	Allocation Percentage from ISGB Proceeds	Impact Indicator		Other impact indicators and additional Information
Rural water programme	54.5	36.7	67%	Total no. of Private Wells (new and upgraded)	3,641	<ul style="list-style-type: none"> <li>No. of Operational Supports to Private Group Water Schemes: 564</li> <li>No. of Operational Supports to Public Group Water Schemes: 185</li> </ul>
				Total no. of Septic Tanks (upgraded)	211	
Capital Expenditure provided to Irish Water for domestic services	717.0	483.1	67%	Net public side water savings (millions of litres per day)	11	<ul style="list-style-type: none"> <li>626MLD (12 month rolling average at December 2022), 11MLD is the volume of Net leakage reduction from a level of 637MLD (Q4 2021) to 626MLD (Q4 2022).</li> </ul>
				New and upgraded water treatment plants	6	
				Length of water main laid-new and rehabilitated (km total)	315	
				New and upgraded wastewater treatment plants	9	
				Length of sewer laid-new and rehabilitated (km total)	102	
Total Allocated 2022 to Sustainable Water and Wastewater Management			519.8			

Figures may not total due to rounding

# Appendix 1: Allocation Table

## Eligible Green Categories

	Eligible Green Expenditure € '000s	ISGB Proceeds Allocation € '000s
<b>Built Environment/Energy Efficiency</b>		
Estate Regeneration / Social Housing Improvement	64,142.0	43,214.0
Non-Residential Energy Efficiency Programmes	43,676.0	29,425.6
SEAI Admin and General Expenses	19,509.0	13,143.7
Limerick Regeneration Thermal Upgrade Programme	3,012.7	2,029.8
<b>Category total</b>	<b>130,339.7</b>	<b>87,813.0</b>
<b>Clean Transportation</b>		
Public transport Investment	688,998.0	464,194.3
Public Service Provision Payments	618,987.0	417,026.2
Active Travel Infrastructure	309,110.0	208,254.7
Carbon Reduction	80,832.0	54,458.4
Greenways	42,848.0	28,867.7
Low Emission Vehicle incentivisation	18,800.0	12,666.0
<b>Category total</b>	<b>1,759,575.0</b>	<b>1,185,467.3</b>
<b>Climate Change Adaptation</b>		
Flood Risk Management (OPW)	54,670.0	36,832.5
Climate Initiatives	9,776.4	6,586.6
<b>Category total</b>	<b>64,446.4</b>	<b>43,419.1</b>

# Appendix 1: Allocation Table (continued)

## Eligible Green Categories

	Eligible Green Expenditure € '000s	ISGB Proceeds Allocation € '000s
<b>Environmentally Sustainable Management of Living Natural Resources and Land Use</b>		
Forestry and Bio-energy	74,086.0	49,913.5
Environmental Protection Agency - Administrative expenses	41,600.0	28,026.9
National Heritage (NPWS)	31,592.0	21,284.3
Waste Management Programmes	21,323.0	14,365.8
International Climate Change Commitments	16,045.0	10,809.9
Environmental and Climate Research	13,536.0	9,119.5
Peatlands Restoration and Management	4,094.0	2,758.2
<b>Category total</b>	<b>202,276.0</b>	<b>136,278.1</b>
<b>Renewable Energy</b>		
Energy Research Programmes	9,450.0	6,366.7
<b>Category total</b>	<b>9,450.0</b>	<b>6,366.7</b>
<b>Sustainable Water and Wastewater Management</b>		
Capital Expenditure provided to Irish Water for domestic services	717,000.0	483,059.9
Rural Water Programme	54,521.0	36,732.1
<b>Category total</b>	<b>771,521.0</b>	<b>519,792.0</b>
<b>Grand Totals</b>	<b>2,937,608.2</b>	<b>1,979,136.1</b>

Note: Sub-totals and totals in Table may not sum up as shown due to rounding.

# Glossary

<b>GWh</b>	GigaWatt hours
<b>GHG</b>	Greenhouse Gas
<b>ktCO<sub>2</sub>e</b>	Kilotonnes of carbon dioxide equivalent
<b>KM</b>	Kilometre
<b>VOC</b>	Volatile Organic Compounds
<b>EV</b>	Electric vehicle
<b>BEV</b>	Battery electric vehicle
<b>PHEV</b>	Plug-in hybrid electric vehicle
<b>LEV</b>	Low emission vehicle
<b>na</b>	Indicator is not applicable for Project/Programme/Scheme
<b>NPWS</b>	National Parks & Wildlife Service
<b>SEAI</b>	Sustainable Energy Authority of Ireland
<b>UWWTD</b>	Urban Waste Water Treatment Directive
<b>VRT</b>	Vehicle Registration Tax
<b>MLD</b>	Millions of litres per day



Active Travel Bridge, Athlone



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