



EXPERIENCE **BRAND** SUCCESS

Greenhouse Gas Emissions Report 2023





This report describes the
Greenhouse Gas Emissions
at PRL and defines the
Greenhouse Gas Inventory

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Introduction

1.1 DESCRIPTION OF BUSINESS AND ACTIVITIES

PRL is a family-owned Irish business providing warehouse, distribution and sales solutions that ensure that the right product is at the right place and the right time to drive customer brand performance. The name PRL stands for Partnership, Reliability and Leadership, which is testament to over 88 years of experience as a market leader with a proven ability to deliver complex solutions to world-class pharmaceutical and food brands. The parent company, PRL Holdings ULC, is composed of a number of entities, including PRL Logistics ULC, PRL Sales ULC, PRL Freight ROI ULC and Custodian. The number of employees is about 850.



2.1 Purpose

This report describes the Greenhouse Gas Emissions at PRL and defines the Greenhouse Gas Inventory as per ISO14064-1:2018 standard.



PRL Greenhouse Gas Emissions

2.2 Scope

The Greenhouse Gas Emissions Inventory is for the year 2022. The Greenhouse Gas inventory covers Scope 1 and Scope 2 emissions for all entities falling under PRL Holdings ULC. It also covers some downstream Scope 3 emissions for PRL Sales ULC.

2.3 Exclusions

All sources of direct Scope 1 and indirect Scope 2 emissions in our Republic of Ireland sites were evaluated. Emissions which are less than 1% of the overall GHG emissions for PRL Holdings ULC are considered insignificant and are excluded from the GHG inventory. Of the indirect Scope 3 downstream transportation emissions, only emissions for merchandising activities of PRL Sales ULC are included in this inventory report.

2.4 Definitions

CO ₂	Carbon Dioxide
Downstream Emissions	Scope 3 emissions from vehicles not owned by PRL, e.g. during merchandising (stacking supermarket shelves)
EF	Emission Factor
GHG	Greenhouse Gas
ISO14064:1-2018	ISO standard for reporting the GHG inventory
Kg	Kilogram
kWh	Kilo Watt hour
L	Litre(s)
LPG	Liquified Petroleum Gas
MTCE	Metric tons of carbon dioxide equivalent
SBTi	Science Based Targets initiative
Scope 1	Direct emissions
Scope 2	Indirect emissions
Scope 3	Other indirect emissions, such as outsourced distribution
SDG	Sustainable Development Goal

2.5 Revision History

Rev00 First GHG inventory report for PRL Holdings ULC.

2.6 Data

2.6.1 Selection of the base year

The base year for the GHG emissions verification for ISO 14064:1-2018 is 2021 as the year for which data is readily available, consistent and verifiable. The first audit took place in 2023.

2.6.2 Emissions

2.6.2.1 Direct Scope 1 GHG emissions

2.6.2.1.1 Fuel emissions

This is the biggest contributor to GHG emissions for PRL, accounting for circa 89% of the total GHG emissions. PRL has a fleet in excess of 200 owned vehicles, including temperature-controlled distribution, and which runs mostly on Diesel EN590. PRL-owned fleet includes Euro VI artic and rigid trucks, rigid vans and small vans, cars and from 2021 electric vehicles. PRL has three diesel tanks on its sites from which the fleet refuels. Fuel used for shunting trucks on site, and gas oil for running fridge units and testing of generators, are included with the fuel emissions. A small part of the fleet runs on unleaded fuel.



Fuel Emissions



2.6.2.1.2 Refrigerant Gas Emissions

Refrigerant gases are used to maintain control of cooling in freezers in two of the PRL sites. Refrigerant gas leakages in 2022 contributed to about 2% of the GHG emissions.

2.6.2.1.3 Natural Gas Emissions

Natural gas is used as a source of heating in four of the PRL sites. One of these sites, uses natural gas to maintain temperature control in one part of the warehouse. Natural gas usage in 2022 contributed to about 2% of the GHG emissions for PRL Holdings ULC.

2.6.2.1.4 Insignificant Scope 1 Emissions

Sources of emissions which were deemed to be insignificant were minor use of Liquefied Petroleum Gas (LPG) in LPG-fuelled forklift trucks and which have been discontinued; and the use of carbon dioxide fire extinguishers during on-site fire warden training.

2.6.2.2 Indirect Scope 2 GHG emissions

2.6.2.2.1 Electricity emissions

The majority of PRL sites are supplied with 100% Green energy from renewable sources and hence CO₂ emissions are zero. A few sites and buildings are supplied with energy of which 41.1% or 65.3% is renewable and the Scope 2 emissions refer to these. It was not possible to switch to 100% Green energy for these sites due to supply issues in 2022. Compared to scope 1 emissions, scope 2 emissions accounted for 4% of the total GHG inventory emissions in 2022.

2022 PRL Electricity Mix

Purchased Renewable	88%
Purchased Non-renewable	12%

Annual Total Electricity Consumption (MWh)

2021	6,348
2022	6,503



2.6.2.3 Indirect Scope 3 GHG emissions

2.6.2.3.1 Downstream Scope 3 Emissions

For this report, Scope 3 emissions for merchandising activities by PRL Sales ULC are being considered. PRL employees deliver a merchandising service for several customers through Ireland. PRL Sales ULC pays for the mileage or fuel costs incurred by the merchandisers, who use their own private vehicles for such an activity. Merchandising accounted for 4% of the total GHG emission for PRL Holdings ULC.

2.6.2.3.2 Insignificant Scope 3 Emissions

Emissions from water consumption, water treatment, use of materials such as paper and waste treatment are considered insignificant.

2.6.2.3.3 Scope 3 Exclusions

This report excludes upstream Scope 3 emissions (for all of PRL Holdings ULC), employee transportation to and from work (for all of PRL Holdings ULC), and contracted road, sea and air distribution for PRL Freight ROI ULC and PRL Logistics ULC due to data not being readily available.

2.6.3 Data Collection

All Scope 1 and Scope 2 data is derived from invoices. Scope 3 data is a mixture of spend-based and distance-based. The data inputting process is validated internally. A third-party auditor has been commissioned to audit the GHG inventory as per the requirements of ISO 14064-1:2018.

2.6.4 Quantification methodologies

The GHG emissions were derived by applying the relevant factors to consumption values.

- $\text{GHG emissions} = \text{activity data} \times \text{emission conversion factor}$

(Greenhouse gas reporting: conversion factors 2022 GOV.UK) (www.gov.uk).

More information on quantification methodologies and emission factors can be made available on request.

2.6.4.1 Direct Scope 1 Transportation emissions

For transportation emissions from the PRL-owned fleet, the following formula is used:

- $\text{Emissions (MTCE)} = (\text{Fuel Consumption (Litres)} \times \text{EF (kg CO}_2\text{)}) / 1000$

2.6.4.2 Direct Scope 1 Refrigerant Gas Emissions

For refrigerant gas emissions, the following formula is used:

- Emissions (MTCE) = (Refrigerant Gas Leaks (kg) x EF (GWP))/1000

2.6.4.3 Direct Scope 1 Natural Gas emissions

For natural gas emissions, the following formula is used:

- Emissions (MTCE) = (Natural Gas Consumption (kWh) x EF (kg CO₂/kWh))/1000

2.6.4.4 Indirect Scope 2 Electricity Emissions

Most of our sites are supplied with 100% Green energy with zero CO₂ emissions. For the few sites with non-Green energy, the following formula is used, as indicated on the respective energy bill:

- Emissions (MTCE) = (Electricity Consumption (kWh) x EF (kg CO₂/kWh)) /1000

2.6.4.5 Indirect Scope 3 Downstream Transport Emissions

For Scope 3 Downstream Transport emissions for PRL Sales ULC, the following formulas are used:

Data from expenses based on mileage

01 $\text{Mileage (km)} = \text{Expense (€)} / \text{€ / km expense rate}$

02 $\text{Diesel consumption}^m \text{ (Litres)} = (\text{Mileage (km)} / 100) * \text{L} / 100\text{km}$

Data from expenses based on fuel bill

03 $\text{Diesel consumption}^b \text{ (Litres)} = \text{Expense (€)} / \text{€ / L}$

04 $\text{Diesel consumption (Litres) for both steps 2 and 3 added}$

05 $\text{Emissions (MTCE)} = (\text{Diesel Consumption}^{m+b} \text{ (Litres)} \times \text{EF (kg CO}_2\text{/L)}) / 1000$

This model is based on a number of assumptions.

2.6.5 Assessing and reducing uncertainty

All Scope 1 and Scope 2 data is derived from invoices. Some energy bills indicate that an estimate is being provided, which is based on previous and expected consumption values. Where values appear abnormal, a verification check is done with the user and with the provider.

Emission factors for natural gas and non-renewable electricity are provided by the service provider and make reference to providers' latest available and verified emission factors, which would usually be from the previous year. The reference source for all factors used is indicated as per section 1.6.3.

In some cases, PRL Sales ULC engages the distribution services of PRL Logistics ULC as a downstream user, and so Scope 1 emissions for PRL Logistics ULC would have a small portion of Scope 3 emissions from PRL Sales. To simplify matters, these Scope 3 emissions are being included with the Scope 1 emissions.

Downstream Scope 3 emissions data is spend-based and distance-based. Conversion factors are variable as the price of fuel changes on a weekly basis and as car performance changes between car model, type of driving (eco driving vs harsh braking, and driving on the motorway vs on the cities). Uncertainty is assessed qualitatively.

	UNCERTAINTY ON RAW DATA	UNCERTAINTY ON EMISSION FACTORS
Scope 1 Emissions		
Fuel Emissions	A	A
Refrigerant Gas Emissions	B	A
Natural Gas Emissions	B	B
Scope 2 Emissions		
Electricity	B	B
Scope 3 Emissions		
Merchandising	C	D

Uncertainty levels: A: very low, B: low, C: low-medium, D: medium

2.6.6 GREENHOUSE GAS INVENTORY

2.6.6.1 Reporting year GHG inventory

GENERAL INFORMATION

Organisational boundaries	PRL Logistics ULC, PRL Sales, ULC, Custodian and PRL Freight Ireland ULC
Reporting boundaries	Direct Scope 1: PRL Logistics ULC, PRL Sales ULC, PRL Freight ROI ULC, Custodian Indirect Scope 2: PRL Logistics ULC, PRL Sales ULC, PRL Freight ROI ULC, Custodian Indirect Scope 3: PRL Sales (merchandising activity)
Description	Warehousing, Distribution, Sales, International Freight and Marketing Solutions
Reference period	01/01/2022-31/12/2022
Base year	2021
Date of issue and revision number	February 2023, Rev 00 PRLGHG2023_00
Prepared by	Denise Bartolo, Head of QSHE, PRL Logistics ULC
Approved by	Violet Devereux, Managing Director, PRL Logistics ULC Michael Finlay, Managing Director, PRL Sales ULC

Period: 01.01.2022 - 31.12.2022

MTCE

% OF TOTAL EMISSIONS

Direct Scope 1 Emissions

Fuel Emissions	4,773	88
Refrigerant Gas Emissions	111	2
Natural Gas Emissions	86	2

Indirect Scope 2 Emissions

Electricity	231	4
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Indirect Scope 3 Emissions

Merchandising	235	4
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Total Scope 1, 2 and 3 emissions

	5,436	100
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Remarks

The GHG report has been prepared in accordance with ISO 14064-1:2018. The same has been audited by a third party body against respective requirements

2.6.6.2 Base year GHG inventory

Base year period: 01.01.2021 - 31.12.2021	MTCE	% OF TOTAL EMISSIONS
Direct Scope 1 Emissions		
Fuel Emissions	4,748	89
Refrigerant Gas Emissions	64	1
Natural Gas Emissions	97	2
Indirect Scope 2 Emissions		
Electricity	193	4
Indirect Scope 3 Emissions		
Merchandising	206	4
Total Scope 1, 2 and 3 emissions	5,308	100





Reducing Greenhouse Gas Emissions

3.1.1 PRL Policies and Objectives

PRL's policies for reductions in greenhouse gas emissions are:

- PRL 2021-2023 Corporate Strategy
- PRLHRPOL10 Corporate Social Responsibility Policy
- PRLPOL12 Environmental Policy
- PRLPOL 13 Environmental Care Policy
- PRLPOL34 Sustainability Policy

PRL has an Environmental Program detailing specific actions to reach objectives on reducing GHG emissions including a detailed carbon management plan for reducing GHG emissions of our fleet, improving energy efficiencies for our equipment, reducing energy consumption and sourcing 100% Green energy for our warehouses, carbon balancing through reforestation, and supporting the United Nations Sustainable Development Goals.

PRL has a target to reduce the combined absolute scope 1, 2 and 3 emissions by 10% by end of 2026 from the 2021 baseline. This will be achieved by carbon reduction projects along with carbon credit offsetting.

PRL has a target to reduce the scope 2 emissions by 12% by end of 2026 from the 2021 baseline by sourcing the supply of 100% Green energy across all PRL sites and with electricity-reducing initiatives including LED lighting upgrades across 80% of PRL's facilities by 2028.

In the spirit of 'The Race to Net Zero by 2050' PRL will engage with industry stakeholders to encourage development of new technologies for making cleaner alternative-fuel trucks commercially viable in Ireland.

3.1.2 Actions to reduce Greenhouse Gas Emissions

By far, PRL's highest GHG emissions come from PRL-owned vehicles. Transport GHG emissions are harder to reduce compared to reducing building emissions. Over the past few years, PRL has evaluated a number of greener options for its trucks however the infrastructure available in Ireland is underwhelmingly poor compared to facilities in mainland Europe. PRL has taken the approach to reduce emissions under its control, in a sustainably meaningful way.

As part of our sustainability actions towards SDG 11 Sustainable Cities and Communities, PRL has been investing annually in brand new additions to the PRL truck fleet, which is more fuel efficient and emits less GHG emissions. PRL has a dedicated Fleet Manager overseeing the performance and maintenance of the whole truck fleet to ensure the fleet



stays in optimal condition.

Of these brand-new additions, PRL has included new refrigeration trucks for temperature-controlled distribution. These refrigeration trucks are equipped with a dual fuel refrigeration system with a more efficient and robust cooling mechanism to improve performance in terms of energy consumption and GHG emissions. Some of the trucks also have their cooling settings changed manually between seasons to ensure optimum cooling performance, and at the same time reducing the unnecessary extra consumption of fuel when weather permits.

By 2022, the Distribution team had analysed 100% of all network routes for optimal efficiency and optimal use of double-deck trailers. This was part of a Smart Working project under the PRL 2021-2023 Corporate Strategy. All PRL-owned trucks are linked to a software which analyses how fuel is used for each truck and by each driver, giving data on idling, harsh braking, overspeeding and overrevving.

PRL is currently evaluating an ecodriving plan for its truck drivers. PRL successfully secured its first TruckSafe certification in June 2022 and is currently working towards the TruckSafe Gold+Green standard. TruckSafe is a local standard by the Freight Transport Association Ireland, covering sustainable operations for a truck fleet. During 2022 PRL had drafted its first GHG inventory for the baseline year of 2021, with the aim of verifying the emissions as per ISO14064-1:2018 by a third-party certification body in the first quarter of 2023. PRL is actively evaluating a proposal to endorse the Science Based Targets initiative (SBTi) in the near future, with meaningful ways to get achieve the Net Zero challenge by 2050.

Apart from the trucks, the PRL-owned fleet also has vans. The PRL field-based sales team have efficient journey plans and call files to reduce the impact of the business on the environment using software technology to map efficient journeys. PRL Sales ULC has also invested in electric vehicles in 2021 and 2022, which has helped to reduce the GHG emissions compared to GHG emissions from diesel fuel.

Although Scope 3 emissions for employee transport to and from work has been excluded from the 2022 GHG inventory, a number of measures have been put in place to encourage a reduction in such emissions. PRL has a cycle to work scheme, not only for health benefits but also to encourage employees to reduce the GHG emissions. The PRL Central Office gym is equipped with changing facilities to accommodate cycling to work.

In 2022, our three largest warehousing sites had chargers installed for employees to use for their electric bikes and scooters, supplementing the provision of bike racks. Where the site's electricity supply is 100% Green, this truly gives zero GHG emissions to the electrically charged vehicles, bikes and scooters.

Also in 2022, two sites had facilities for employees to charge their electric vehicles. The PRL Central Office has eight electric vehicle charging points for employees to use for their private car and for business, as well as for visitors.

In the PRL Sustainability Policy, under SDG 7 Affordable and Clean Energy, PRL has committed to sourcing green and sustainable energy for all sites throughout the Republic of Ireland. Currently there is a gap of 12% to source 100% Green energy in all the PRL sites, as described in section 2.6.2.2.1. If we reduce or close this gap, our total Scope 2 emissions would be insignificant. The use of Green energy is further reiterated in the PRL Sustainability Policy under SDG 12 Responsible Production and Consumption, where an annual procurement review of the energy and gas is carried out. Even though the GHG emissions of our electricity consumption is low compared to our fleet emissions, there is nonetheless much ongoing effort to reduce the overall carbon footprint from such a consumption. Between 2022 and 2023, PRL upgraded its fluorescent lighting in its two largest warehouses to LED lighting which reduced electricity consumption by a staggering 24%. PRL has three warehouses with chill and frozen capabilities and all three are supplied with 100% Green energy. Whilst PRL understands that the GHG emissions in this case would be zero, it has invested in upgrades of its chillers in the Aerodrome site and freezers in the Kilkenny site to reduce the electricity consumption and carbon footprint of the sites. The freezers upgraded in the Kilkenny site in November 2022 require less than half the amount of electricity required previously. Especially for those few sites which are not yet on 100% Green energy, we have a number of other ways to help reduce GHG emissions such as with daylight sensors, occupancy sensors/absence/detectors, sleep mode settings for IT equipment not in use and automated thermostatic heating controls for water and room temperature control.

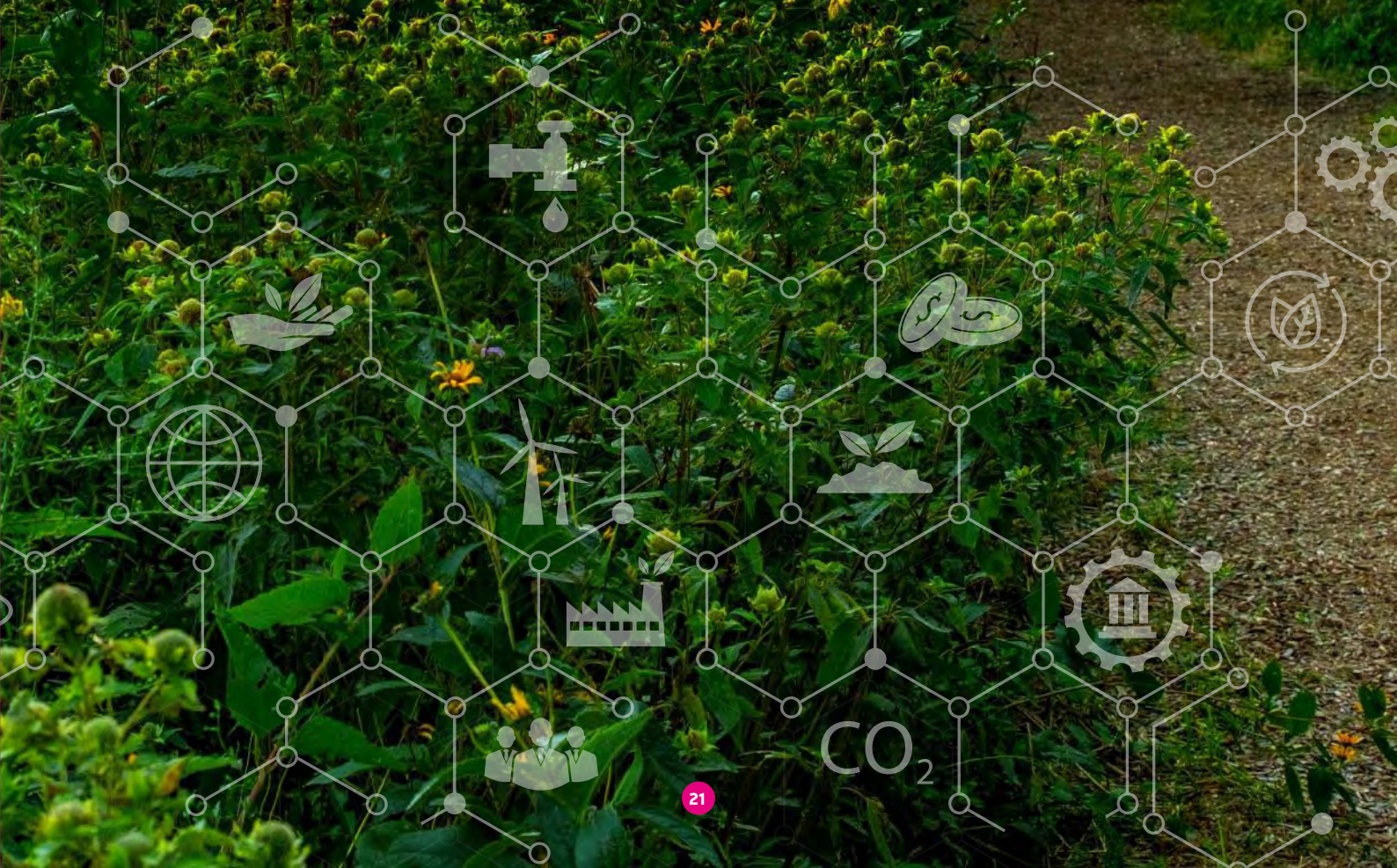
Each site is audited annually by the PRL QSHE team for its performance in energy consumption and related environmental impacts. Environmental meetings are held with each site's operations manager to review the energy consumption patterns. Employees are also trained to do their part towards protecting the environment in their induction training. PRL also holds ISO14001 certification in Environmental Management Systems. Custodian's members of staff have received training in reducing GHG emissions. These actions also fall under the PRL Sustainability Policy for SDG 13 Climate Action.



Custodian offers its clients the option of buying carbon-balanced paper. A paper product becomes carbon-balanced when the emissions associated with its production are balanced (offset) by the global conservation charity World Land Trust, which has purchased and protected 880,000 acres of threatened habitat globally for its Carbon Balancing Initiative. Custodian issues its clients with a report to advise them of the amount of carbon-balanced paper they have consumed and the equivalent amount of GHGs saved with this purchase. In 2021, Custodian's clients who opted for the use of carbon-balanced paper, contributed to an offset of 285.6 MTCE.



Reference Documents



Commission for Regulation of Utilities Fuel Mix Disclosure and CO2 Emissions 2021
(CRU2022967, issues in October 2022): [Fuel-Mix-Disclosure-and-CO2-Emissions-2021.pdf](#)
(divio-media.com)

Global Warming Potentials (IPCC Fourth Assessment Report) | UNFCCC:
<https://unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/frequently-asked-questions/global-warming-potentials-ipcc-fourth-assessment-report>

Greenhouse gas reporting: conversion factors 2022 - GOV.UK (www.gov.uk)

Greenhouse gas reporting: conversion factors 2021 - GOV.UK (www.gov.uk)

ISO14064:1 – 2018. Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.

PRL 2021-2023 Corporate Strategy

PRL Environmental Program

PRLHRPOL10 Corporate Social Responsibility Policy

PRLPOL12 Environmental Policy

PRLPOL 13 Environmental Care Policy

PRLPOL34 Sustainability Policy



A low-angle photograph looking up at a dense canopy of green trees. Sunlight filters through the leaves, creating a dappled light effect. The branches of the trees are visible against the bright sky.

Each site is audited
annually...for its
performance in energy
consumption and related
environmental impacts.



www.prl.ie/sustainability/

