

Marsden Park Data Centre

Greenhouse Gas Mitigation Plan

Climate Change Report for
State Significant Development Application (SSDA)

Prepared for: CDC Data Centres

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For and on behalf of

Stantec Australia Pty Ltd

Acknowledgment of Country

In the spirit of reconciliation, Stantec acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respect to their Elders past and present, and extend that respect to all Aboriginal and Torres Strait Islander peoples.

Disclaimer

This report has been developed based on the Development level of information provided to Stantec. Stantec has taken every effort to ensure the information presented in this report is an accurate reflection of the development but cannot guarantee the final performance of the building. The content of the development, including systems, materiality and finishes is subject to final architectural and client approval and subject to change.

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1. Introduction

1.1 Project Details

This Greenhouse Gas (GHG) Mitigation Plan Report has been prepared by Stantec at the request of CDC Data Centres for the proposed data centre campus located at 105-113 Hollinsworth Road, Marsden Park, 2765 NSW.

The purpose of this Greenhouse Gas (GHG) Mitigation Plan is to support a project's State Significant Development Application SSD-70889211 (SSDA) submitted to the Department of Planning, Housing and Infrastructure. Information contained within this report has been prepared in direct response to the Site-specific Planning Secretary's Environmental Assessment Requirements (SEARS) for Marsden Park Data Centre in accordance with the NSW Environment Protection Authority's (EPA) *Climate change requirements for large emitters*. Based on its planned operational throughout and design, this project is likely to emit above the NGER Act facility threshold of 25,000 tonnes of CO₂-e scope 1 and 2 GHG emissions in any financial year during its operational life and will be regarded as a large emission project.

The GHG Mitigation plan is aligned with the EPA's *Greenhouse Gas Assessment Guide for Large Emitters* and the format of this report is based on the assessment report outline within Appendix C of the Guide.

1.1.1 Project Details

The project details are summarised in the table below:

Project Details name	Description
Project name	Marsden Park Data Centre
Address	105 -113 Hollinsworth Rd, Marsden Park NSW 2765
Proponent name	Canberra Data Centres (CDC)
No of buildings	6 buildings
IT capacity	1x 79MW building and 5x 84MW buildings

1.1.2 Project Life

The life span in years for each building element is summarised in the table below:

Building element	Life span in years
Building façade and structure lifespan	50
Chiller lifespan	25
Pump lifespan	10
Fan wall lifespan	20
Site Power and Electrical lifespan	30
Transformer lifespan	25
Battery/UPS lifespan	13

1.1.3 Project Stages

The data centre campus consisting of six buildings, is proposed to be delivered in stages between 2026 and 2033. The project delivery stages are summarised in the table below:



Building	Practical completion	1 st year of operation
Building 1	2026	2027
Building 4	2027	2028
Building 2	2028	2029
Building 5	2029	2030
Building 3	2031	2032
Building 6	2033	2034

This report assumes Building 1 will finish construction in 2026 and will operate from 2027 to 2076. Building 6 will be completed by 2033 and will operate from 2034 to 2083.

1.1.4 Description of Proposed Development

The development proposed comprises of 6 new data centres each containing 12 'data halls' and a front-of-house office area for on-site users. Each data centre is coupled with a bank of 40 standby generators to ensure uninterrupted operation of the facility. The site neighbours other light industrial or commercial zones to the East and West with residential streets to the South. The total IT capacity for the development is 499MW. (1x 79MW building and 5x 84MW buildings)

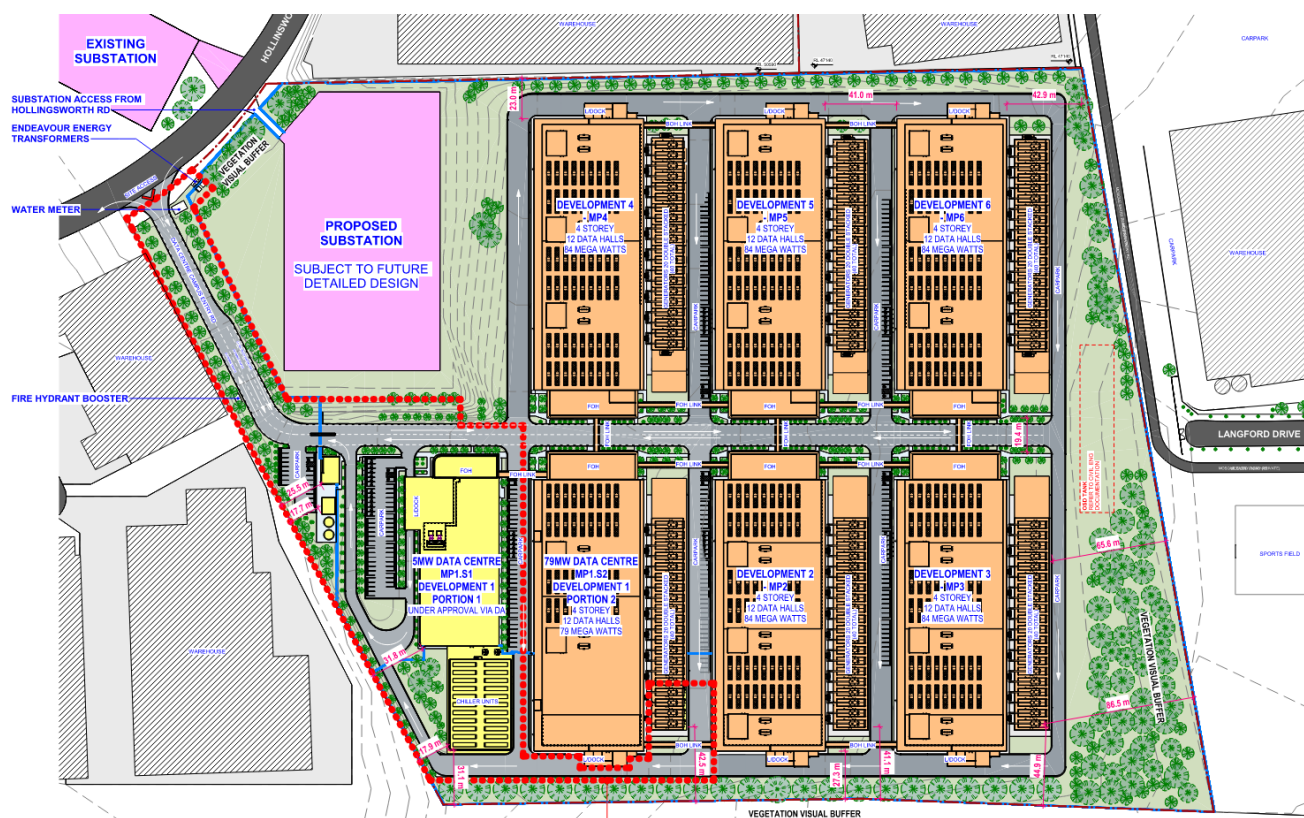


Figure 1: Campus site plan - Source: EJE Architecture (Dated 09 September 2024)

1.1.5 Site Context

The site is within the Blacktown local government area (LGA). The proposed development is located in a logical and highly accessible location along the Hollingsworth Road corridor which provides the site with direct access to Marsden Park town centre. The proposal is consistent with the vision set out for the Marsden Park Industrial Precinct and the North West Growth Area.





Figure 2: Aerial map of the site and surrounding context - Source: Urbis (2023)

1.1.6 Project Operation

CDC has operational and financial control over its data centre facilities including air-conditioning and lighting, but not over the customer IT equipment. CDC's customers are responsible for their own IT equipment as listed below, and this is stated in customer agreements:

- Provision of equipment
- Operational maintenance and safety policies relating to equipment
- Insurance of equipment

1.1.7 "Large Emitter" Trigger

The proposed data centre buildings are high-energy consumers, primarily sourcing power from the NSW electricity grid. It is anticipated that during the initial financial years of the buildings' operation, the scope 1 and 2 emissions (measured in CO₂-e) will likely exceed **25,000 tonnes** of CO₂-e emissions. While it is expected that these emissions will be reduced as the NSW power grid progressively decarbonises, the initial emission levels trigger the project to be classified as a "Large Emitter". This classification mandates the development to align with the EPA *Greenhouse Gas Assessment Guide for Large Emitters* including assessments and approvals under the Environmental Planning and Assessment Act 1979.

It is intended to mitigate electricity emissions through the purchase of electricity that is 100% backed by renewable electricity sources. This approach is aligned with CDC's net zero carbon by 2030 for scope 1, 2, customer ICT, waste and business travel.



1.2 Project Context

This report responds to the legislative context related to climate change in New South Wales (NSW). These legislative measures demonstrate NSW's commitment to combatting climate change, fostering resilience, and achieving a sustainable future.

The Climate Change (Net Zero Future) Act 2023:

This Act enshrines whole-of-government climate action in NSW to achieve net zero emissions by 2050.

Key provisions include:

- Guiding principles for addressing climate change, considering impacts, opportunities, and the need for action.
- Emissions reduction targets for NSW:
 - 50% reduction from 2005 levels by 2030.
 - 70% reduction from 2005 levels by 2035.
 - Net zero emissions by 2050.
- Objective to enhance NSW's resilience to a changing climate.
- Establishment of an independent Net Zero Commission to monitor progress and provide expert advice.

Net Zero Plan Stage 1: 2020–2030:

- This plan serves as the foundation for NSW's climate action.
- It outlines strategies to protect the future by growing the economy, creating jobs, and reducing emissions over the next decade.

Protection of the Environment Administration Act 1991:

- This Act provides a framework for environmental protection and administration in NSW.

Protection of the Environment Operations Act 1997:

- This Act regulates environmental pollution, waste management, and other related matters.

National Greenhouse and Energy Reporting (NGER):

- The NGER scheme is a national framework in Australia that requires certain entities to report their greenhouse gas emissions, energy production, and energy consumption.
- Key aspects include:
 - Scope: It covers large corporations, facilities, and activities that meet specific thresholds.
 - Reporting: Entities report their emissions data annually, including direct emissions (Scope 1), indirect emissions from purchased electricity (Scope 2), and other relevant data.
 - Verification: Independent verification of reported data ensures accuracy and compliance.
 - Public Disclosure: Emissions data is publicly accessible through the Clean Energy Regulator's NGER database.

Safeguard Mechanism:



- The Safeguard Mechanism aims to limit emissions from large facilities that emit more than 100,000 tonnes of CO₂-equivalent per year.
 - Key features:
 - Baseline: Each facility has a baseline emissions level (based on historical data).
 - Emissions Intensity: Facilities must keep emissions below their baseline intensity.
 - Offsets: If emissions exceed the baseline, facilities can offset by purchasing Australian Carbon Credit Units (ACCUs).
- Compliance: Regular reporting and compliance monitoring are essential.

1.3 Purpose of GHG Mitigation Plan

The purpose of this GHG Assessment and Mitigation Plan is to support a project's State Significant Development Application SSD-70889211 (SSDA) submitted to the Department of Planning, Housing and Infrastructure. This report directly responds to Secretary's Environmental Assessment Requirements (SEARs) for a new development of Marsden Park Data Centre by providing an assessment of the proposed development's GHG emissions.

1.3.1 Key Mitigation Measures

CDC will implement a robust mitigation strategy centred on the purchase of electricity that is 100% backed by renewable electricity sources. CDC currently purchases and surrenders Large-scale Generation Certificates (LGCs) to achieve a zero-emission factor for electricity used in data centre operations including facility and customer IT electricity. By acquiring LGCs, which represent renewable energy generation, and surrendering them, CDC effectively offsets the emissions from its electricity consumption. This approach ensures that the emissions associated with the electricity use are neutralised, aligning with CDC's commitment to target net zero carbon for scope 1, 2 and customer IT load, waste and business travel by 2030. From 2031 onwards, CDC understands that LGCs may no longer be available as the scheme will be retired, therefore, for clarity, CDC will continue to purchase and surrender renewable energy certificates under a scheme which will replace LGCs. At the time of publication of this report, it is likely that Renewable Electricity Guarantee of Origins (REGO) certificates will replace LGCs. Given this, it is likely that the REGOs will be purchased and retired to continue to achieve zero-emission factor for electricity used within the premises.

CDC's commitment to net zero and carbon emissions mitigation is publicly available in their Sustainability Report. A copy of this is available in Appendix D.

Table 1: Key GHG emissions mitigation measures

Impact Category	Key Emission Sources	Mitigation Strategy
Scope 1 – Direct emissions	• Diesel oil from emergency (back up) generator annual testing • Refrigerants leakage from air-conditioning systems	• CDC will seek to optimise generator efficiency through regular maintenance and adoption of advanced emission control technologies as these develop. In alignment with the net zero carbon by 2030 target, CDC will calculate emissions and purchase high quality carbon offsets to become net zero carbon for scope 1 emissions.



Impact Category	Key Emission Sources	Mitigation Strategy
Scope 2 – Indirect emissions	- Operational energy to run the data center facility - Operational energy to run customer IT	Purchase of electricity that is 100% backed by renewable electricity sources i.e. purchase and retirement of renewable energy certificates such as LGCs.
Scope 3 - Life cycle and supply chain emissions	- Equipment replacement - Upfront carbon emissions from concrete and steel during Product stage A1 - A3	- CDC partners with major manufacturers and suppliers. CDC prefers suppliers who share its sustainability values, are local or have set their own targets to reduce greenhouse gas (GHG) emissions. - Where feasible CDC intends to explore and integrate equipment options with long life spans (durability), Environmental Product Declarations, sustainable certification or reduced carbon footprints, especially for equipment such as UPS and chillers which have higher upfront embodied carbon emissions. - CDC will investigate and where feasible seek to use reduced carbon construction materials such as concrete, steel and blockwork, which have higher upfront carbon emissions.

1.4 Guiding Principles

This section documents how all relevant guiding principles in section 8 of the Climate Change (Net Zero Future) Act 2023 have been addressed.

Climate Change (Net Zero Future) Act 2023	Response location
Section 8 Guiding principles	
(1) For this Act, the guiding principles are the principles set out in this section.	Section 4 within this report
(2) There is a critical need to act to address climate change, which is a serious threat to the social, economic and environmental wellbeing of New South Wales.	Section 5.4 within this report, ESD Report and Mitigation Plan report
(3) Action to address climate change should be taken as early as possible to minimise the cost and adverse impacts of climate change.	ESD Report and Mitigation Plan report
(4) Action to address climate change should be taken in a way that— (a) is fiscally responsible, and (b) promotes sustainable economic growth, and (c) considers the economic risks of delaying action to address climate change, and (d) considers the impact on rural, regional, and remote communities in New South Wales.	Section 5.4 within this report, ESD Report and Mitigation Plan report
(5) Action to address climate change should be consistent with the right to a clean, healthy and sustainable environment.	ESD Report
(6) Action to address climate change should be consistent with the principles of ecologically sustainable development described in the Protection of the Environment Administration Act 1991, section 6(2).	ESD Report



(7) Action to address climate change should involve appropriate consultation with affected persons, communities and stakeholders.	ESD Report
(8) Action to address climate change should take into account the following— (a) the knowledge and perspectives of Aboriginal communities, (b) the best available science, (c) the knowledge of rural, regional and remote communities in New South Wales, (d) the need to support local communities, including Aboriginal communities, who may be affected by the action, including by— (i) considering the impact on local employment and industries, and (ii) diversifying local economies, and (iii) encouraging local procurement, and (iv) optimising job creation and employment transition opportunities, and (v) considering the impact on the amenity of local communities, (e) the need for education and skills diversification, (f) the need to ensure essential utilities and infrastructure are provided, including energy, water, telecommunications and transport, (g) the impact of the action on consumer costs in New South Wales, including energy costs, (h) the need to reduce the risk climate change poses to human health, (i) equity and social justice impacts on socially disadvantaged groups and economically vulnerable regions, (j) the need to reduce the risk climate change poses to the survival of all species.	ESD Report
(9) Action to address climate change should take into account the impact on animals.	Environmental Impact assessment
(10) The Government of New South Wales is responsible for— (a) urgently developing and implementing strategies, policies and programs to address climate change, and (b) ensuring the Government of New South Wales pursues best practice in addressing climate change.	N/A

2. GHG Emissions Estimate

This section details the GHG emissions estimate methodology and results for proposed project. The whole data centre campus including carparks, external civil work, data centre and associated building services and office buildings is included in the assessment.

2.1 Assessment Boundary

The GHG assessment boundary accounts for the Scope 1, 2 and 3 GHG emissions (calculated in t CO₂-e) throughout the project's whole life cycle from raw material extraction to demolition including 4 stages: Product, Construction, Maintain and Use and End of Life (A1-C4) as depicted in the figure below:

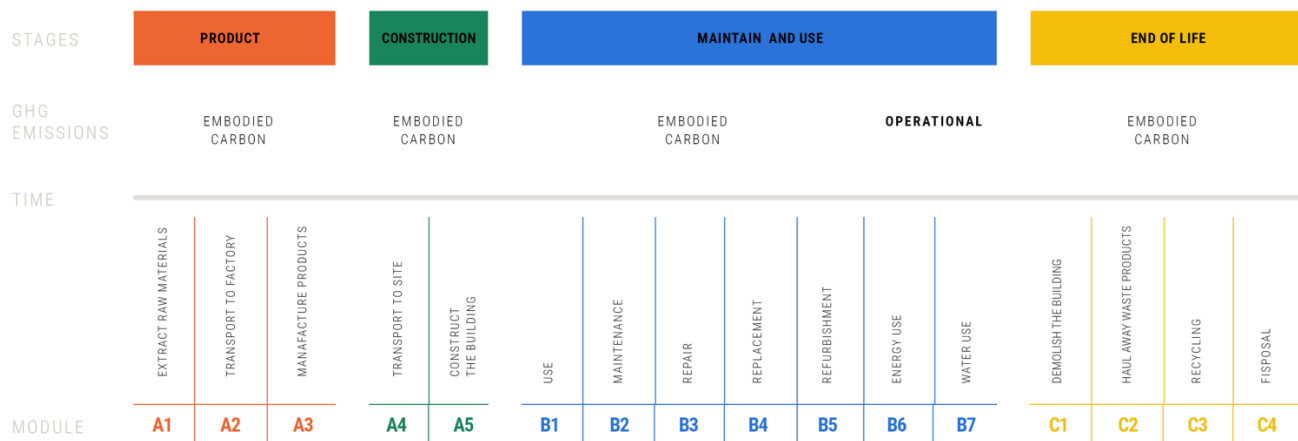


Figure 3: Project assessed activities throughout its life cycle

2.2 Emissions Scenarios

Marsden Park Data Centre is a new development project. A 'proposed only' scenario for the new development has been developed to undertake the GHG assessment. In addition to the proposed scenario, a benchmark scenario and a mitigation scenario has been modelled to be able to compare and estimate emission projections. All scenarios are based on the planned operational throughput of the project. The three scenarios are described below:

- **The proposed scenario** assumes the implementation of all planned sustainability strategies as outlined in the project design with an estimated average annualised site PUE 1.3 for the data centre.
- **The benchmark scenario** has been modelled to compare the proposed development against a market average level data centre. This scenario assumes an average annualised site PUE of 1.61 for the data centre.
- **The proposed mitigation scenario** has been modelled to evaluate project emissions goals with the application of all mitigation measures. It assumes the use of renewable energy sources for all electricity consumption within the precinct (inclusive of IT customer loads) through the purchase of LGCs as the key mitigation measure by CDC before 2030. From 2031 and onwards, CDC will purchase and surrender REGO certificates or other applicable renewable energy certificate -as the succeeding offering after LGCs has not been confirmed at the time of this report's publication- to continue to achieve a zero-emission factor for electricity used within the premises. This scenario also assumes zero Scope 1 and 2 emissions from 2031 onwards reflecting CDC's commitment to net zero carbon (scope 1 and 2) as part of its Science Based Targets. Refer to CDC Sustainability Report 2024 in Appendix D for CDC's commitment to purchase electricity that is 100% backed by renewable sources from 2031 and onwards.

The comparison between the three scenarios is depicted within **Section 6** of this report.



2.3 Emissions Intensity

This report addresses the scope 1 and scope 2 GHG emissions as defined under the NGER Act and scope 3 GHG emissions as defined within Australia's National Greenhouse Accounts (DCCEEW, 2023) for facility reporting purposes.

Scope 1 and 2 emissions factors are based on Australia's Emissions Projections 2023 (November 2023) by DCCEEW under the Protection of the Environment Operations Act 1997 (POEO Act). The table below summarises the reference to all scope 1 and 2 emissions factors:

Emissions scope	Source	Reference location in DCCEEW Report	Item	Emissions factors
Scope 1	Diesel for Generator	Table 7 Fuel	Diesel oil	70.2 (kg CO ₂ -e/GJ)
	Refrigerant for Chiller	Table 9 Refrigerant Leakage Rates	2.5%	NA
	Refrigerant for Chiller	Table 10 Refrigerant Global Warming Potentials	R134A (HFC-134A)	1,300 GWP (AR5)
Scope 2	Electricity grid	Table 45 Scope 2 Emissions Factors	NSW/ACT	0.52 tonnes CO ₂ -e per MWh in 2025
	Electricity grid	Table 45 Scope 2 Emissions Factors	NSW/ACT	0.03 tonnes CO ₂ -e per MWh in 2035

Scope 3 emissions factors are based on Australian National Life Cycle Inventory Database (AusLCI) in 2022, which is the most recent database applicable to Australian construction market. This database is listed within the approved GHG Protocol list of available third-party databases to help users collect data for scope 3 GHG inventories.

The figure to illustrate the scope 1, 2 and 3 emissions sources within the boundary of a typical data centre:

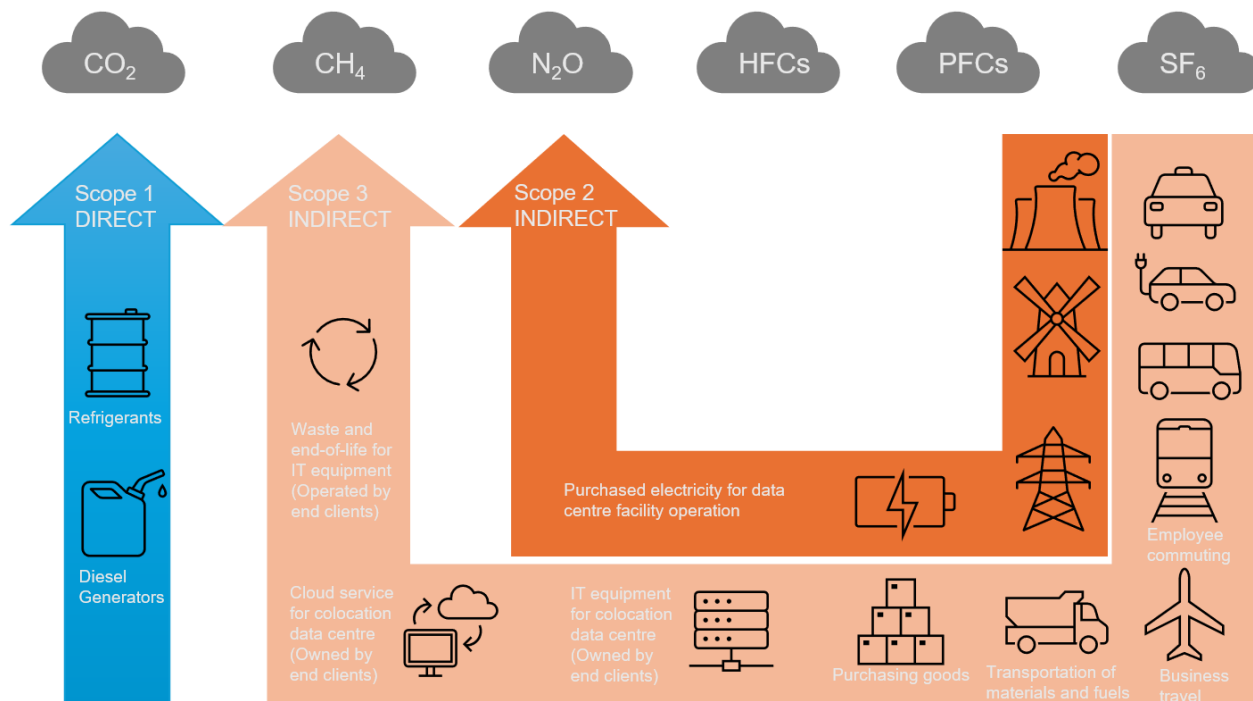


Figure 4: Scope 1, 2 and 3 emissions sources within the boundary of a typical data centre

2.3.1 Scope 1 Emissions

Scope 1 emissions are released to the atmosphere as a direct result of an activity, or series of activities at a facility level. Scope 1 emissions are sometimes referred to as direct emissions.

Scope 1 emissions considered for this assessment are included the below:

Production	Production rate	Units	Source	Sector	Sub sector
R134A (HFC-134A)	3000	kg	Refrigerant	Fugitive emissions	Oil
Diesel oil	544.32	kL	Generators	Electricity generation	Other

The main scope 1 direct emissions are from the annual testing of diesel oil generators and leakage of the refrigerant R134A from the chillers.

The emissions factor of the diesel oil is 70.2 kg CO₂-e/GJ based on Australia's Emissions Projections 2023 (November 2023) by DCCEEW. The detailed information to transparently demonstrate that the annual quantities used are reflective of the proposed number of generators (240), their fuel consumption and the proposed testing regime are summarised in the table below:

Generator	Number of Generators	Fuel Consumption Per Generator (L/hr)	Total Test (minutes per year)	Total Annual Fuel Consumption (kL/yr)
MP1 3000kW/3750kVA	40	777.47	175	90.72
MP Campus Total Max	240	777.47	175	544.32

The refrigerant leakage rate is assumed as 2.5% annually according to Australia's Emissions Projections 2023 (November 2023) by DCCEEW. The detailed assumptions of refrigerant leakage estimation are shown in the table below:

Chiller	Number of Chillers	Annual Refrigerant Leakage Rate (%)	Refrigerant Per Chiller kg	Total Refrigerant Leakage kg
MP1 1429kW Chillers	40	2.5	500	500
MP Campus Total Max	240	2.5	500	3000

2.3.2 Scope 2 Emissions

Scope 2 emissions are released to the atmosphere as a direct result of one or more activities that generate electricity, heating, cooling, or steam that is consumed by the facility but that do not form part of the facility. Scope 2 emissions are sometimes referred to as indirect emissions arising from the indirect consumption of an energy commodity. Scope 2 emissions considered for this assessment are included as below:

Production	Production rate	Units	Source	Sector	Sub sector
Facility Electricity	1,268,534,212	kWh	Grid	Stationary energy	Buildings
IT Electricity	4,415,040,000	kWh	Grid	Stationary energy	Buildings

2.3.3 Scope 3 Emissions

Scope 3 emissions are indirect emissions other than scope 2 emissions that are generated in the wider economy. They occur due to the activities of a facility, but from sources not owned or controlled by that facility's business. Some examples are extraction and production of purchased materials, transportation of purchased fuels, use of sold products and services. Scope 3 emissions considered for this assessment are included the below:

Module	Category	Sub category
A1 - A3	Product Stage	
A4	Transport of Equipment and Materials	



A5	Construction	
B2 - B3	Maintenance and Repair	
B4	Replacement	
B6	Integrated Operational Energy	Electricity distribution
B7	Operational Water Use	Water supply and removal
C1	Deconstruction / Demolition	
C2	Transport of Waste Offsite	
C3	Waste Processing	
C4	Disposal	

2.3.4 Uncertainties in Emissions Estimations

Key uncertainties in estimating the emissions are detailed below.

- **Technological Advancements:** The pace of technological innovation can be unpredictable. The uncertainties of emerging technologies associated with the timing and feasibility are summarised in table below:

Technology	Uncertainties	Impacts
Cooling	PUE	New cooling technologies such as liquid cooling are emerging that may significantly improve PUE and reduce GHG scope 2 emissions during the later stages of project development.
IT equipment	Efficiency	Rapid advancements in technology can make it challenging to keep up with the latest energy-efficient solutions. Newer, more efficient technologies may become available soon and will reduce scope 2 emissions significantly.
Generators	Efficiency and emission	Generator technologies are constantly improving with better fuel efficiency and potential to be able to use lower carbon fuels in the future. This could reduce scope 1 emission significantly.
Chillers	Refrigerant	Research on low GWP refrigerants meanwhile offering optimal efficiency is undergoing worldwide. The policy regulating refrigerants is also updating frequently. The real GWP will be lower if new refrigerant become market available which will reduce scope 1 emissions.

- **Decarbonisation of the Electricity Grid:** The assumption that the scope 2 emissions will be reduced primarily due to decarbonisation of the State electricity grid, may not eventuate in-line with the proposed trajectory. Changes in government and policies, or delays in grid transition projects could alter the expected grid emission factor.
- **Uncertainty in Electricity Grid:** The assumption that the scope 2 emissions will be reduced primarily due to decarbonisation of the State electricity grid, may not be always true. The availability and reliability of renewable energy sources can fluctuate due to extreme weather conditions.
- **Uncertainty in Equipment Replacement:** The assumed equipment lifespan is based on the common practice in the data centre industry. However, depending on the usage of the equipment, the actual lifespan of the equipment could be shorter or longer than estimated. This will impact scope 3 emissions significantly.
- **Operational Efficiency:** The actual operational efficiency of data centres can vary due to factors like equipment performance, maintenance practices, and load variability. This can impact the effectiveness of mitigation strategies.



2.3.5 Scope 1 and 2 Emission Estimates

Scope 1 and 2 emission estimates have been assessed for Marsden Park Data Centre campus based on the planned operational throughput of the project. The assessment estimated the development's projected annual GHG emissions over the predicted lifecycle of the asset.

The proposed scenario assumes the implementation of all planned sustainability strategies as outlined in the project design with an estimated average annualised site PUE 1.3 for the data centre and a maximum IT capacity of 499MW.

The table below outlines the Scope 1 and 2 emissions based on planned operational throughput and as designed.

Table 2: Scope 1 and 2 Emissions - Operational throughput (t CO2-e)

Year	Scope 1 Emissions (t CO2-e)	Scope 2 Emissions (t CO2-e)	Total Annual Scope 1 and 2 Emissions (t CO2-e)
2026	-	-	-
2027	19	20,649	20,668
2028	209	218,199	218,409
2029	402	403,877	404,278
2030	543	384,279	384,822
2031	686	281,220	281,906
2032	830	185,434	186,264
2033	973	72,492	73,465
2034	1,104	123,335	124,438
2035	1,135	126,895	128,030
2036	1,514	169,193	170,707
2037	1,514	169,193	170,707
2038	1,514	169,193	170,707
2039	1,514	169,193	170,707
2040	1,514	112,795	114,309
2041	1,514	112,795	114,309
2042	1,514	112,795	114,309
2043	1,514	112,795	114,309
2044	1,514	112,795	114,309
2045	1,514	56,398	57,912
2046	1,514	56,398	57,912
2047	1,514	56,398	57,912
2048	1,514	56,398	57,912
2049	1,514	56,398	57,912
2050	1,514	-	1,514
2051	1,514	-	1,514
2052	1,514	-	1,514
2053	1,514	-	1,514
2054	1,514	-	1,514
2055	1,514	-	1,514
2056	1,514	-	1,514
2057	1,514	-	1,514
2058	1,514	-	1,514
2059	1,514	-	1,514
2060	1,514	-	1,514
2061	1,514	-	1,514
2062	1,514	-	1,514
2063	1,514	-	1,514
2064	1,514	-	1,514
2065	1,514	-	1,514
2066	1,514	-	1,514
2067	1,514	-	1,514
2068	1,514	-	1,514
2069	1,514	-	1,514
2070	1,514	-	1,514
2071	1,514	-	1,514



Year	Scope 1 Emissions (t CO ₂ -e)	Scope 2 Emissions (t CO ₂ -e)	Total Annual Scope 1 and 2 Emissions (t CO ₂ -e)
2072	1,514	-	1,514
2073	1,514	-	1,514
2074	1,514	-	1,514
2075	1,514	-	1,514
2076	1,514	-	1,514
2077	1,514	-	1,514
2078	1,514	-	1,514
2079	1,514	-	1,514
2080	1,514	-	1,514
2081	1,514	-	1,514
2082	1,514	-	1,514
2083	1,514	-	1,514
Totals per Scope (t CO₂-e)	78,571	3,339,119	3,417,690

The table below presents the Scope 1 and 2 emissions based on the facility's maximum capacity throughput as designed. This scenario assumes that each building operates at full capacity from the first year of operation, as per the EPA guidelines. However, it is important to note that this is not a realistic scenario for the development. The assessment provides an estimate of the development's projected annual GHG emissions over the predicted lifecycle of the asset.

The proposed scenario assumes the implementation of all planned sustainability strategies as outlined in the project design with an estimated average annualised site PUE 1.3 for the data centre and a maximum IT capacity of 499MW.

Table 3: Scope 1 and 2 Emissions - Maximum throughput (t CO₂-e)

Year	Scope 1 Emissions (t CO ₂ -e)	Scope 2 Emissions (t CO ₂ -e)	Total Annual Scope 1 and 2 Emissions (t CO ₂ -e)
2026	-	-	-
2027	252	274,706	274,958
2028	505	530,467	530,972
2029	757	767,283	768,039
2030	1,009	719,919	720,929
2031	1,009	416,795	417,805
2032	1,262	284,179	285,440
2033	1,262	94,726	95,988
2034	1,514	170,507	172,021
2035	1,514	170,507	172,021
2036	1,514	170,507	172,021
2037	1,514	170,507	172,021
2038	1,514	170,507	172,021
2039	1,514	170,507	172,021
2040	1,514	113,671	115,185
2041	1,514	113,671	115,185
2042	1,514	113,671	115,185
2043	1,514	113,671	115,185
2044	1,514	113,671	115,185
2045	1,514	56,836	58,350
2046	1,514	56,836	58,350
2047	1,514	56,836	58,350
2048	1,514	56,836	58,350
2049	1,514	56,836	58,350
2050	1,514	-	1,514
2051	1,514	-	1,514
2052	1,514	-	1,514
2053	1,514	-	1,514
2054	1,514	-	1,514
2055	1,514	-	1,514
2056	1,514	-	1,514

Year	Scope 1 Emissions (t CO2-e)	Scope 2 Emissions (t CO2-e)	Total Annual Scope 1 and 2 Emissions (t CO2-e)
2057	1,514	-	1,514
2058	1,514	-	1,514
2059	1,514	-	1,514
2060	1,514	-	1,514
2061	1,514	-	1,514
2062	1,514	-	1,514
2063	1,514	-	1,514
2064	1,514	-	1,514
2065	1,514	-	1,514
2066	1,514	-	1,514
2067	1,514	-	1,514
2068	1,514	-	1,514
2069	1,514	-	1,514
2070	1,514	-	1,514
2071	1,514	-	1,514
2072	1,514	-	1,514
2073	1,514	-	1,514
2074	1,514	-	1,514
2075	1,514	-	1,514
2076	1,514	-	1,514
2077	1,514	-	1,514
2078	1,514	-	1,514
2079	1,514	-	1,514
2080	1,514	-	1,514
2081	1,514	-	1,514
2082	1,514	-	1,514
2083	1,514	-	1,514
Totals per Scope (t CO2-e)	81,754	4,963,655	5,045,408

2.3.6 Scope 1, 2, and 3 Emission Estimates

The table below outlines the Scope 1, 2 and 3 emissions based on planned operational throughput and as designed over the predicted lifecycle of the asset.

The total GHG emissions due to electricity use within the premises based on the planned operational throughput and the maximum throughput are summarised in Appendix D.

All other indirect emissions (Scope 3) are summarised in Appendix C of GHG report.

Table 4: Scope 1, 2 and 3 GHG emissions estimate throughput the project lifecycle - Planned operational throughput

Year	Scope 1 Emissions (t CO2-e)	Scope 2 Emissions (t CO2-e)	Scope 3 Emissions (t CO2-e)	Total Scope 1,2 and 3 Emissions (t CO2-e)
2024	-	-	-	-
2025	-	-	-	-
2026	-	-	41,688	41,688
2027	19	20,649	43,134	63,802
2028	209	218,199	52,171	270,580
2029	402	403,877	60,551	464,830
2030	543	384,279	18,486	403,308
2031	686	281,220	55,788	337,694
2032	830	185,434	10,995	197,259
2033	973	72,492	48,439	121,904
2034	1,104	123,335	9,654	134,092
2035	1,135	126,895	10,869	138,899
2036	1,514	169,193	12,444	183,151
2037	1,514	169,193	12,412	183,120



Year	Scope 1 Emissions (t CO2-e)	Scope 2 Emissions (t CO2-e)	Scope 3 Emissions (t CO2-e)	Total Scope 1,2 and 3 Emissions (t CO2-e)
2038	1,514	169,193	12,296	183,003
2039	1,514	169,193	17,120	187,827
2040	1,514	112,795	15,859	130,169
2041	1,514	112,795	15,185	129,495
2042	1,514	112,795	15,231	129,541
2043	1,514	112,795	8,414	122,723
2044	1,514	112,795	12,761	127,070
2045	1,514	56,398	4,655	62,567
2046	1,514	56,398	16,833	74,745
2047	1,514	56,398	11,081	68,992
2048	1,514	56,398	10,873	68,785
2049	1,514	56,398	10,241	68,153
2050	1,514	-	850	2,364
2051	1,514	-	29,630	31,144
2052	1,514	-	28,421	29,935
2053	1,514	-	35,749	37,263
2054	1,514	-	28,714	30,228
2055	1,514	-	7,166	8,680
2056	1,514	-	28,390	29,903
2057	1,514	-	12,397	13,911
2058	1,514	-	28,390	29,903
2059	1,514	-	12,471	13,985
2060	1,514	-	923	2,437
2061	1,514	-	11,175	12,689
2062	1,514	-	5,342	6,856
2063	1,514	-	11,090	12,604
2064	1,514	-	5,562	7,076
2065	1,514	-	7,142	8,656
2066	1,514	-	18,943	20,457
2067	1,514	-	14,236	15,750
2068	1,514	-	18,804	20,318
2069	1,514	-	8,127	9,641
2070	1,514	-	6,910	8,424
2071	1,514	-	13,206	14,720
2072	1,514	-	11,900	13,414
2073	1,514	-	13,029	14,543
2074	1,514	-	5,845	7,359
2075	1,514	-	856	2,370
2076	1,514	-	14,896	16,410
2077	1,514	-	9,657	11,171
2078	1,514	-	14,598	16,112
2079	1,514	-	9,452	10,966
2080	1,514	-	259	1,773
2081	1,514	-	9,350	10,864
2082	1,514	-	102	1,616
2083	1,514	-	9,154	10,668
Total Emissions per Scope (t CO2-e)	78,571	3,339,119	959,915	4,377,605

The graphs below illustrate the projected Scope 1, 2, and 3 emissions throughout the lifetime of the project.

- Scope 2 emissions are the highest throughout the project lifecycle, indicating significant IT electricity emissions.
- Scope 2 emissions are substantial in the early to mid-lifecycle but cease after 2049 as the grid decarbonises and emission factors neutralise.



- Scope 1 emissions are relatively lower but consistent from 2036 onwards. Since these emissions come from fossil fuels, the emission projections cannot reduce further.

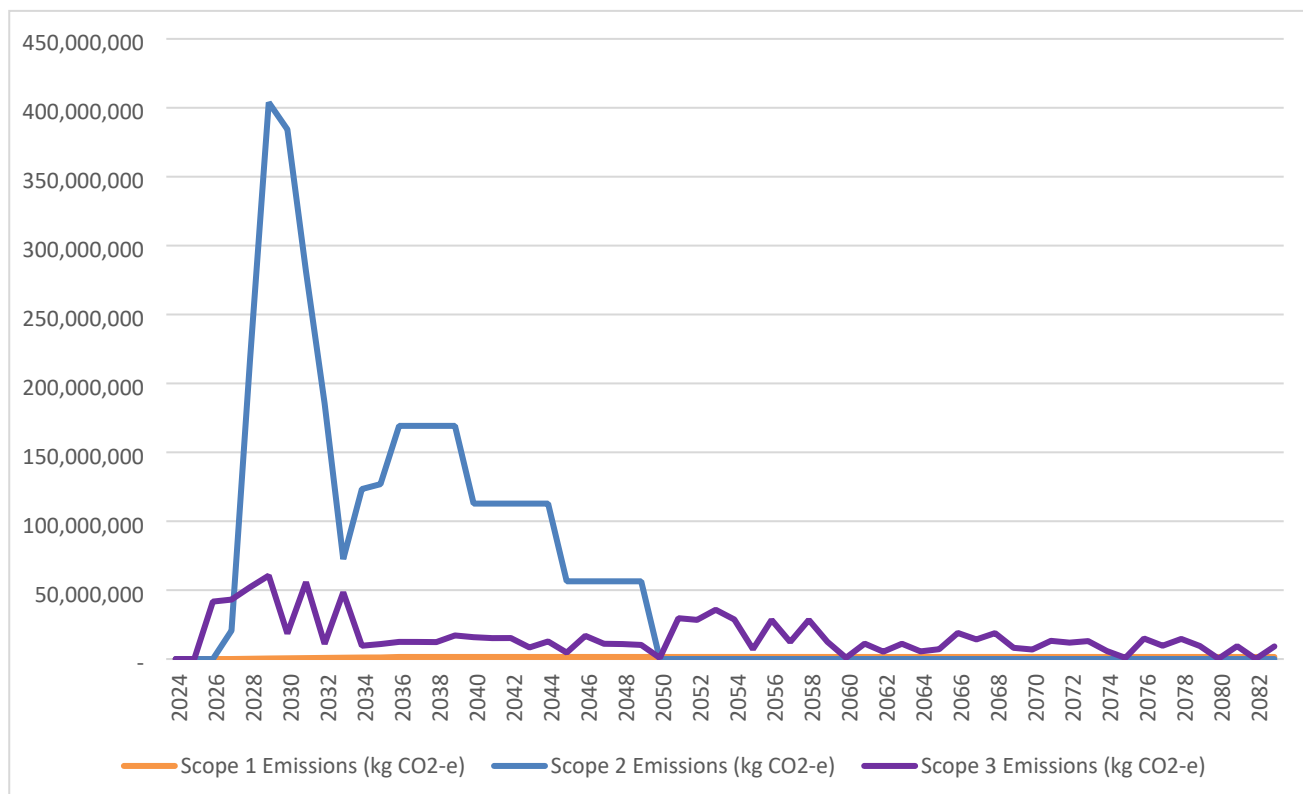


Figure 5: Annual Scope 1, 2 and 3 GHG emissions tCO₂-e over the lifetime of the project

The Graph below provides a breakup of Scope 3 emissions over the lifetime of the development. Replacement activities is the largest contributor to Scope 3 emissions followed by product stage.

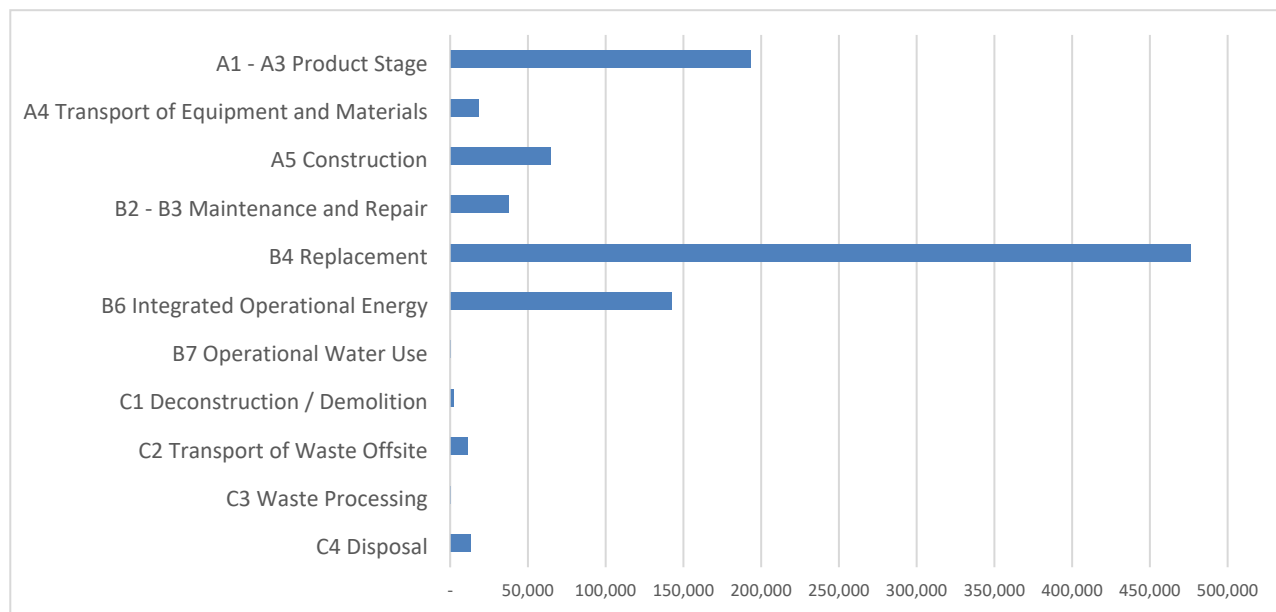


Figure 6: Total Scope 3 Emissions per Module (t CO₂-e)

2.4 Emissions Trajectory

The assessment estimated the development's projected annual GHG emissions over the predicted lifecycle of the asset. A 'proposed only' scenario for the new development has been developed to undertake the GHG assessment. In addition to the proposed scenario, a benchmark scenario and a mitigation scenario has been modelled to be able to compare and estimate emission projections. All scenarios are based on the planned operational throughput of the project. The three scenarios are described below:

- **The proposed scenario** assumes the implementation of all planned sustainability strategies as outlined in the project design with an estimated average annualised site PUE 1.3 for the data centre.
- **The benchmark scenario** has been modelled to compare the proposed development against a market average level data centre. This scenario assumes an average annualised site PUE of 1.61 for the data centre.
- **The proposed mitigation scenario** has been modelled to evaluate project emissions goals with the application of all mitigation measures. It assumes the use of renewable energy sources for all electricity consumption within the precinct (inclusive of IT customer loads) through the purchase of LGCs as key mitigation measure by CDC. This scenario also assumes zero Scope 1 and 2 emissions from 2031 onwards reflecting CDC's commitment to net zero carbon (scope 1 and 2) as part of its Science based targets.

The graph below summarises and compares the annual GHG emissions for the life span of the project in 3 different cases:

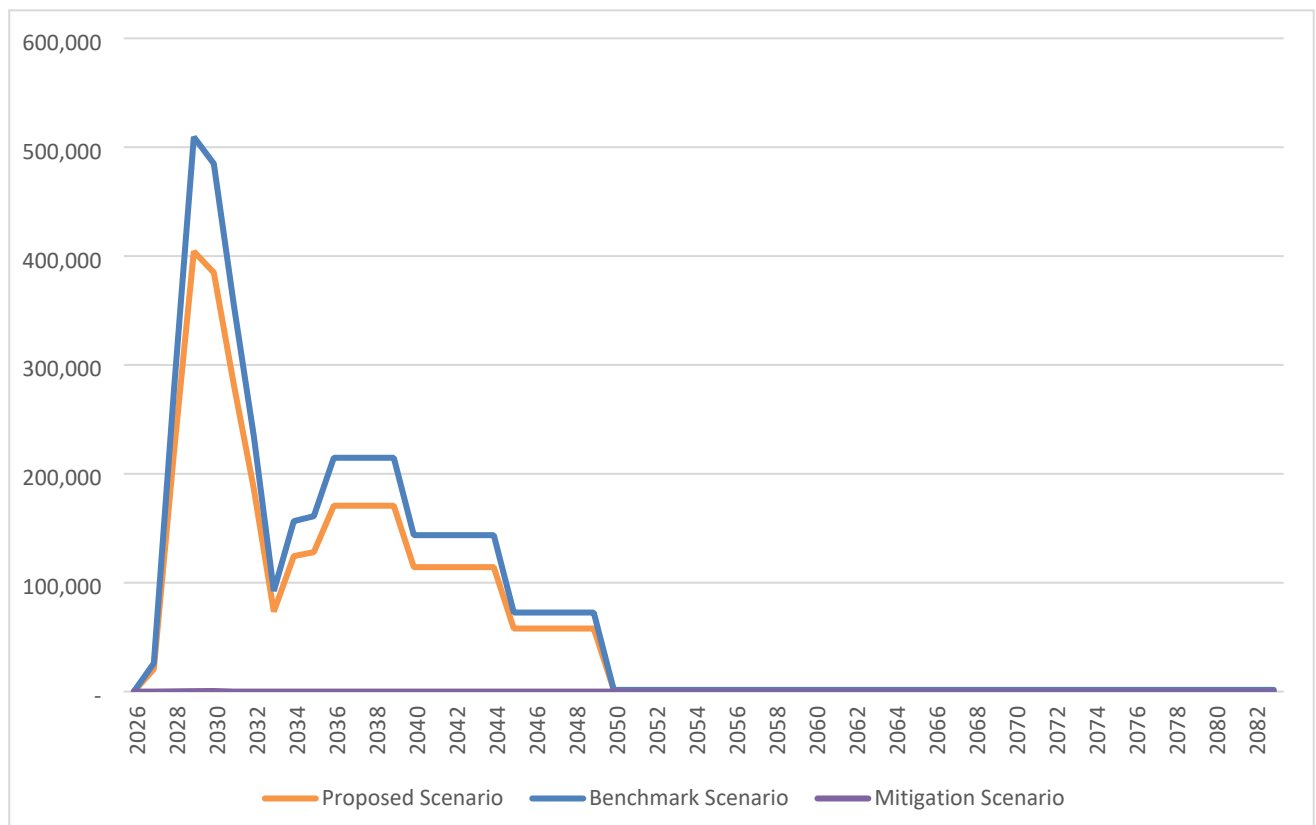


Figure 7: Scope 1 and 2 Emissions projections over the lifetime of the project for each scenario (t CO2-e)

The table below summarises and compares the annual GHG emissions for the life span of the project in the 3 different cases:



	Scope 1 Emissions (t CO ₂ -e)	Scope 2 Emissions (t CO ₂ -e)	Total Annual Scope 1 and 2 Emissions (t CO ₂ -e)	Improvement compared to Benchmark
Benchmark Scenario	75,543	4,208,533	4,284,076	
Proposed Scenario	78,571	3,339,119	3,417,690	20%
Mitigation Scenario	1,173	-	1,173	Nearly 100%

2.5 Comparison with NSW Emissions

According to the State and territory greenhouse gas inventories, NSW total greenhouse gas emissions for the year 2022 (2021-2022 financial year) amounted to 111,000,000 tonnes of CO₂-e. These emissions have decreased by 32% compared to 2006 levels (2005-2006 financial year, 164.35Mt CO₂-e), primarily due to reductions in emissions from stationary energy (mainly electricity) and agriculture.

The GHG emission prediction in section 5.6 demonstrates the peak year emission will happen at year 2029 (financial year 2028-2029). The estimate total GHG Scope 1, 2 and 3 emissions for the year 2029 are outlined below:

Year	Throughput	Scope 1 Emissions (t CO ₂ -e)	Scope 2 Emissions (t CO ₂ -e)	Scope 3 Emissions (t CO ₂ -e)	Total Scope 1, 2 and 3 Emissions (t CO ₂ -e)
2029	Operational	402	403,877	60,551	464,830
	Maximum	757	767,283	60,551	828,591
2030	Operational	543	384,279	18,486	403,308
	Maximum	1,009	719,919	18,486	739,415

Scopes 2 and 3 emissions from grid electricity consumption are the main driver of GHG emissions for the facility.

The table below compares the estimated GHG emissions of the project to the NSW State emissions figures assuming that no renewable electricity is purchased. The operational throughput data is based on the planned operation for the facility and the maximum throughput data assumes worst case scenario if the data centre campus is running at 100% utilisation.

Table 5: Predicted Peak Annual Emissions and Project GHG emissions as a % of NSW state emissions

	2022	2029	2030
NSW State Emissions	111,000,000	84,710,000	80,950,000
Project GHG Emissions		464,830	403,308
Operational throughput		0.55%	0.50%
Project GHG Emissions		828,591	739,415
Maximum throughput		0.98%	0.91%

The proposed development is estimated to contribute a maximum 0.55% compared to the 2029 State and territory greenhouse gas inventories and 0.50% to the predicted NSW State emissions in year 2030. NSW State emissions are based on NSW EPA report in 2022: By 2030, NSW State emissions are projected to be 47–52% lower than 2005 levels with current policies implemented.

However, due to mitigation strategies anticipated for Marsden Park data centre, the actual contribution is expected to be lower. Predicted GHG emissions will decrease annually in alignment with grid electricity decarbonisation and CDC's emissions reduction targets. By approximately 2030, the proposed development is anticipated to have minimal GHG impact.



3. Safeguard Mechanism Obligations

The Safeguard Mechanism aims to limit emissions from large facilities that emit more than 100,000 tonnes of CO₂-equivalent per year.

Key features:

- **Baseline:** Each facility has a baseline emissions level (based on historical data). The facility and baseline emissions are detailed below. Refer to Appendix A, Appendix B, and Appendix D for details.
- **Emissions Intensity:** Facilities must keep emissions below their baseline intensity. The facility will adopt energy efficiencies to reduce emissions below a baseline intensity. Refer to Appendix A, Appendix B, and Appendix D for details.
- **Offsets:** If emissions exceed the baseline, facilities can offset by purchasing Australian Carbon Credit Units (ACCUs). The facility will purchase and surrender renewable energy certificates for scope 2 emissions and will offset scope 1 emissions through the purchase of carbon credits
- **Compliance:** Regular reporting and compliance monitoring are essential.

The assessment estimated the development's projected annual GHG emissions over the predicted lifecycle of the asset. A 'proposed only' scenario for the new development has been developed to undertake the GHG assessment. In addition to the proposed scenario, a benchmark scenario and a mitigation scenario has been modelled to be able to compare and estimate emission projections. All scenarios are based on the planned operational throughput of the project. The three scenarios are described below:

- **The proposed scenario** assumes the implementation of all planned sustainability strategies as outlined in the project design with an estimated average annualised site PUE 1.3 for the data centre.
- **The baseline/benchmark scenario** has been modelled to compare the proposed development against a market average level data centre. This scenario assumes an average annualised site PUE of 1.61 for the data centre.
- **The proposed mitigation scenario** has been modelled to evaluate project emissions goals with the application of all mitigation measures. It assumes the use of renewable energy sources for all electricity consumption within the precinct (inclusive of IT customer loads) through the purchase of LGCs as key mitigation measure by CDC. This scenario also assumes zero Scope 1 and 2 emissions from 2031 onwards reflecting CDC's commitment to net zero carbon (scope 1 and 2) as part of its Science based targets.

The graph below summarises and compares the annual GHG emissions for the life span of the project in 3 different cases:



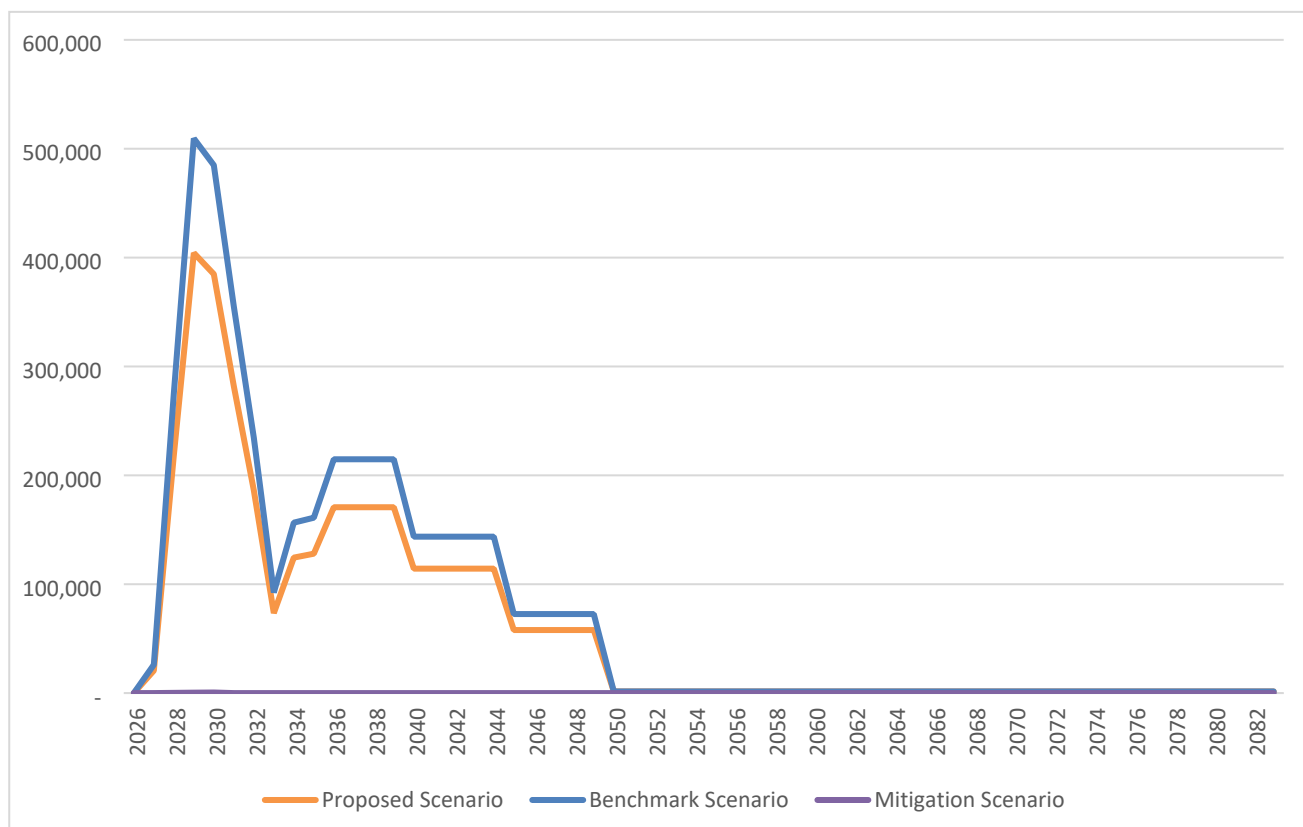


Figure 8: Scope 1 and 2 Emissions projections over the lifetime of the project for each scenario (t CO2-e)

The table below summarises and compares the annual GHG emissions for the life span of the project in the 3 different cases:

	Scope 1 Emissions (t CO2-e)	Scope 2 Emissions (t CO2-e)	Total Annual Scope 1 and 2 Emissions (t CO2-e)	Improvement compared to Benchmark
Benchmark Scenario	75,543	4,208,533	4,284,076	
Proposed Scenario	78,571	3,339,119	3,417,690	20%
Mitigation Scenario	1,173	-	1,173	Nearly 100%

4. Electricity Firming Infrastructure Obligations

This GHG assessment report section is not applicable to this project because the project is not electricity firming infrastructure.

5. Measures to Avoid and Reduce GHG Emissions

The mitigation strategy follows the hierarchy pyramid depicted in the figure below. Best practice energy conservation dictates that in the first instance demand is reduced. This has a much greater benefit to the overall long-term sustainability of the site compared to reliance on grid renewable energy or carbon offsets. As such, the focus will be on the elements that provide the greatest impact and return on investment.

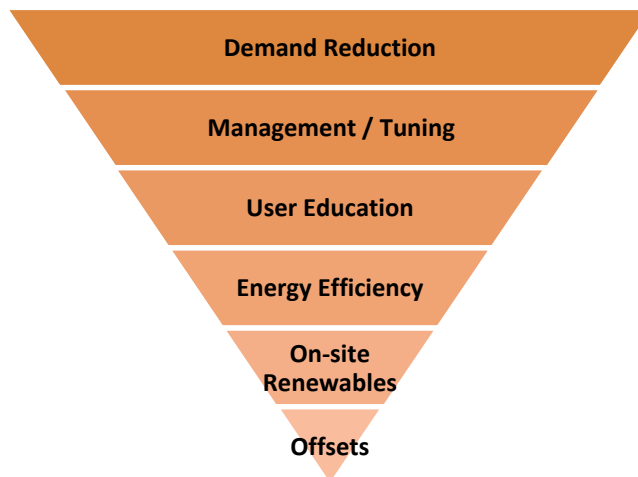


Figure 9: Energy efficiency strategy hierarchy

CDC has a strong focus in sustainability as demonstrated by its target for net zero carbon by 2030 for scope 1,2, customer IT electricity, waste and business travel emissions.

A variety of greenhouse gas emission reduction and energy efficiency measures are applicable to the proposed development and form part of the initial design and operation plan. The final strategy will account for aspects such as sustainability, operational feasibility, architectural intent and site-specific appropriateness.

CDC intends to implement a robust mitigation strategy centred on the purchase of electricity that is 100% backed by renewable electricity sources to achieve a zero-emission factor for electricity used in the data centre operations including facility and customer's IT electricity. CDC currently acquires LGCs, which represent renewable energy generation, and surrenders them to offset its electricity carbon emissions.

The mitigation measures to address key emissions sources are outlined below:

Emission Sources	Hierarchy	Mitigation Strategy	Feasibility and Effectiveness
Operational energy	Demand reduction	Design to a PUE of 1.3	Marsden Park Data Centre is designed to a Power Usage Effectiveness (PUE) of 1.3. This reflects a 19% improvement over the market average PUE of 1.61.
Operational energy	Management	Metering and Monitoring	Metering shall be designed to meet metering guidelines as outlined under the current National Measurement Regulations. A detailed monitoring system should be installed to help with early identification of excessive energy use and points of potential failure. Hydraulic plant and equipment shall also be monitored for faults or failures. The automatic monitoring system must be capable of:



Emission Sources	Hierarchy	Mitigation Strategy	Feasibility and Effectiveness
			- Collecting data from all meters - Alert to any fault or failures of primary building systems
Operational Water use	Demand reduction and Energy efficiency	Design and implementation of closed-loop cooling system Selection of highly efficient water fixtures Rainwater harvesting and reuse	Cooling system is designed to avoid water consumption for primary cooling. By implementing low-flow water fixtures, the consumption associated with amenities can be reduced. This includes taps, wash basins, WCs, Urinals, showers and supplementary water uses One 22.5kL concrete Rainwater tank will be installed per building. Reuse will be used for the toilet flushing, urinal flushing, washdown and irrigation.
Operational energy to run data center facility and customers IT equipment loads	Energy efficiency and substitution	Design of efficient services, and provision of efficient lighting, appliances and equipment Purchase of electricity that is 100% backed by renewable electricity sources	The design will be optimised for maximum efficiency of building services. Electricity purchased will be 100% backed by renewable electricity sources. CDC currently purchases and surrenders LGCs to mitigate carbon emissions from electricity.
Equipment replacement	Demand reduction and management	CDC partners with major manufacturers and suppliers. CDC prefers suppliers who share its sustainability values, are local or have set their own targets to reduce greenhouse gas (GHG) emissions. Where feasible CDC intends to explore and integrate equipment options with long life spans (durability), Environmental Product Declarations, sustainable certification or reduced carbon footprints, especially for equipment such as UPS and chillers which have higher upfront embodied carbon emissions.	By collaborating with these forward-thinking suppliers, CDC seeks to align with the highest standards of sustainability and mitigate carbon emissions and environmental impact in the supply chain. Focus for low carbon equipment will be on systems which have the highest GHG emissions.

Emission Sources	Hierarchy	Mitigation Strategy	Feasibility and Effectiveness
Product stage upfront carbon emissions	Demand reduction	CDC will investigate and where feasible seek to use reduced carbon construction materials such as concrete, steel and blockwork, which have higher upfront carbon emissions than other building materials.	Emissions from steel and concrete may be mitigated through the procurement of reduced carbon alternatives
Diesel oil from emergency (back up) generator annual testing	Management and offset	CDC will seek to optimize generator efficiency through regular maintenance and adoption of advanced emission control technologies as these develop. In alignment with the net zero carbon by 2030 target, CDC intends to calculate emissions and purchase high quality carbon offsets to become net zero carbon for scope 1 emissions. Generators will be able to accept alternative, lower carbon fuels, such as synthetic, e-fuels, or biodiesel.	Regular maintenance and advanced technologies are feasible and effective in reducing emissions. Carbon offsets provide a reliable method to neutralize remaining emissions. Traditional diesel fuel has been used in this GHG assessment as alternative fuels are not yet reliable enough to be used in backup generators for a datacentre.

5.1.1 Uncertainties

Mitigating GHG emissions in data centers involves several uncertainties due to the complexity and variability of the factors involved. The mitigation actions selected are considered to have low uncertainties associated with their implementation as they are technologically and commercially feasible at the time of writing this report. Here are some key uncertainties that may change these conditions in the future:

- **Technological Advancements:** The pace of technological innovation can be unpredictable. The uncertainties of emerging technologies associated with the timing and feasibility are summarised in table below:

Technology	Uncertainties	Impacts
Cooling	PUE	New cooling technologies such as liquid cooling are emerging that may significantly improve PUE and reduce GHG scope 2 emissions during the later stage of project development.
Generator	Efficiency and emission	Generator technologies are constantly improving with better fuel efficiency and potential to be able to use lower carbon fuels in the future. This could reduce scope 1 emission significantly.

- **Regulatory Changes:** Government policies and regulations regarding emissions and energy use can change, impacting the feasibility and requirements of mitigation measures. The form of purchasing renewable energy may change in the future. It may not be through the purchase of renewable energy certificates at some point during the lifespan of this project.

- **Economic Factors:** The cost of implementing and maintaining mitigation measures can be uncertain. Economic conditions, such as fluctuations in raw material costs, labour costs, tariffs and energy prices, can affect the financial viability of these measures.

5.1.2 Avoidance Options

The demand for datacentres is growing exponentially. Considered options -within CDC's sphere of influence- to avoid GHG emissions associated with the Marsden Park Data Centre:

- **IT Equipment Emissions:** IT equipment requires energy to power it. As CDC's clients are responsible for their IT equipment, and the costs of the energy to power it, there is a clear incentive for CDC's clients to select energy-efficient IT equipment. By incentivising energy efficient equipment through this commercial arrangement, CDC is encouraging a form of emissions avoidance.
- **Generator Emissions:** Generator power as a backup energy source is critical to energy stability of the data centre despite there will be large emissions during timely testing as per relevant standards' requirements. Batteries could be considered an alternative option which do not produce greenhouse gas emissions in operation, however they do not offer the same level of energy security as generators. While generators can be run for an effectively indefinite period, batteries have a fixed supply of power. The size of a battery bank to provide the necessary emergency back-up power for the Marsden Park Data Centre is prohibitively large and costly.

5.1.3 Mitigation Measures Not Adopted

Industry best-practice mitigation measures will be implemented on this project. Additional mitigation measures which were explored but were not deemed feasible included:

- **Biodiesel Backup Generator Fuel:** Biodiesel is not yet able to be reliably used for back up generators. Biodiesel is more susceptible to aging due to microorganisms in the fuel. This is referred to as the "diesel plague", where a bio-sludge forms in the fuel that can cause equipment malfunction and damage. Since fuel is often stored for long periods in these emergency power systems, there is a significant risk that the generators may not operate when required. Other alternative fuels are still under consideration for future adoption, such as the synthetic EN 15940 and e-fuels. Currently, prohibitively costly accompanying measures such as additives, a tank maintenance system or engine flushing, is required for the adoption of alternative fuels.
- **Onsite Photovoltaic System:** Space is limited on the roof area which is mostly occupied by the large number of chillers. Placing a photovoltaic (PV) array on top of chillers is not feasible from a maintenance perspective, and may reduce cooling efficiency, thus increase GHG emissions. Secondly, power system failure is as a major risk for data centres, a simple power system is essential to reducing the risk of power failure. A PV system increases the risk of system faults through cell degradation, earthing, or poor wiring connections between arrays.
- **Onsite Wind Power Generation:** The site is located close to a residential area. Wind turbines are more sensitive to location than solar PV, and require long and costly community consultation. Given the site does not have sufficient area for a wind farm, this is not considered a viable option. Additionally, as with the challenges mention in consideration of the onsite PV system, a simple power system is essential to reducing the risk of power failure.
- **Geothermal Energy Storage:** This form of energy storage is not appropriate for datacentres, which are constantly rejecting heat year-round. Constantly rejecting heat into the ground will result in a build-up of heat in the ground which can cause the soil to dry-out and the efficiency of heat rejection to drop. Geothermal energy storage is best applied to projects where the ground has an opportunity to rest and recover on a daily or annual basis. Where the build up of heat is expected to be reversed during nighttime or winter due to a demand for heating.
- **Roof Insulation for the Data Centre Hall:** As data centres have very high internal heat loads, the ambient environment is often cooler than the data hall needs to be. Insulation to the roof of the data hall acts to trap the heat within the hall, increasing the energy consumption of the air-conditioning systems. Over the course of a year, insulation to be roof of a data centre hall in Marsden Park is unlikely to make much, if any, improvement to the operational energy consumption. Adding insulation would also be an increase in the embodied GHG emissions.



6. GHG Emission Goals

6.1 GHG Emissions Reduction Goals

Emission reduction goals are ambitious yet achievable, focusing on both immediate and long-term actions:

- **Short-term Goals:** The project aims to achieve significant reduction of emissions by designing to a PUE target of 1.3 and implementing energy efficiency initiatives throughout the project design. This goals and sustainable design features have been included within the proposed scenario and demonstrate a 20% improvement when compared to the benchmark scenario designed to a market average PUE of 1.61.
- **Long-term Goals:** By 2030, CDC aims to achieve a significant reduction of Scope 1 and Scope 2 emissions through the implementation of energy efficiency measures, increased use of renewable energy through purchase and surrendering of LGCs and offset of remaining carbon through purchase and surrendering ACCUs.

6.1.1 Scope 1 and 2 Emission Goals

The below table outlines the projected annual Scope 1 and 2 GHG emissions goals for Marsden Park data centre project over the predicted life of the asset using the predicted emission factors assuming the following mitigation strategies will be implemented:

- Scope 2 emission factor of zero through purchase of electricity that is 100% backed by renewable electricity sources
- CDC net zero carbon by 2030 target for Scope 1 and 2 (noting that this target also includes customer IT electricity, waste and business travel emissions)

Table 6: Projected Scope 1 and 2 Emissions inclusive of mitigation strategies (t CO₂-e)

Year	Scope 1 Emissions (t CO ₂ -e)	Scope 2 Emissions (t CO ₂ -e)	Total Annual Scope 1 and 2 Emissions (t CO ₂ -e)
2026	-	-	-
2027	19	-	19
2028	209	-	209
2029	402	-	402
2030	543	-	543
2031	-	-	-
2032	-	-	-
2033	-	-	-
2034	-	-	-
2035	-	-	-
2036	-	-	-
2037	-	-	-
2038	-	-	-
2039	-	-	-
2040	-	-	-
2041	-	-	-
2042	-	-	-
2043	-	-	-
2044	-	-	-
2045	-	-	-
2046	-	-	-
2047	-	-	-
2048	-	-	-
2049	-	-	-
2050	-	-	-
2051	-	-	-
2052	-	-	-
2053	-	-	-



Year	Scope 1 Emissions (t CO2-e)	Scope 2 Emissions (t CO2-e)	Total Annual Scope 1 and 2 Emissions (t CO2-e)
2054	-	-	-
2055	-	-	-
2056	-	-	-
2057	-	-	-
2058	-	-	-
2059	-	-	-
2060	-	-	-
2061	-	-	-
2062	-	-	-
2063	-	-	-
2064	-	-	-
2065	-	-	-
2066	-	-	-
2067	-	-	-
2068	-	-	-
2069	-	-	-
2070	-	-	-
2071	-	-	-
2072	-	-	-
2073	-	-	-
2074	-	-	-
2075	-	-	-
2076	-	-	-
2077	-	-	-
2078	-	-	-
2079	-	-	-
2080	-	-	-
2081	-	-	-
2082	-	-	-
2083	-	-	-
Totals per Scope (t CO2-e)	1,173	-	1,173

7. Strategies to Offset Emissions

7.1 Offset Strategies

Strategies proposed to offset the project's scope 1 and scope 2 emissions are described below:

Scope 1 Emissions Offset

The main components of scope 1 emissions for Marsden Park Data Centre are from combustion of diesel fuel for emergency (backup) generators. Other scope 1 emissions are from cooling equipment refrigerant leakages.

Scope 1 emissions will be offset through the purchase of Australian Carbon Credit Units (ACCUs). Each ACCU represents one tonne of carbon dioxide equivalent (t CO₂-e) that has been avoided or removed from the atmosphere. The key steps in this process include:

- Identification of Emissions: Accurately measure and report all Scope 1 emissions from our operations.
- Purchase of ACCUs: Acquire ACCUs from accredited projects that have been verified by the Clean Energy Regulator. These projects may include reforestation, soil carbon sequestration, and methane capture initiatives.
- Surrender of ACCUs: Surrender the purchased ACCUs to the Clean Energy Regulator to offset our Scope 1 emissions, ensuring that our net emissions are effectively reduced to zero.

The projected timing of ACCU offsets to be acquired and retired is shown in the table below. ACCUs from NSW-based projects will be prioritised as per the NSW EPA's Guide for Large Emitters requirements.

Table 7: ACCU offsets to be acquired throughout the project lifecycle - Planned operational throughput

Year	ACCU Units
2024	-
2025	-
2026	-
2027	-
2028	-
2029	-
2030	-
2031	686
2032	830
2033	973
2034	1,104
2035	1,135
2036	1,514
2037	1,514
2038	1,514
2039	1,514
2040	1,514
2041	1,514
2042	1,514
2043	1,514
2044	1,514
2045	1,514
2046	1,514
2047	1,514
2048	1,514
2049	1,514
2050	1,514
2051	1,514
2052	1,514
2053	1,514



Year	ACCU Units
2054	1,514
2055	1,514
2056	1,514
2057	1,514
2058	1,514
2059	1,514
2060	1,514
2061	1,514
2062	1,514
2063	1,514
2064	1,514
2065	1,514
2066	1,514
2067	1,514
2068	1,514
2069	1,514
2070	1,514
2071	1,514
2072	1,514
2073	1,514
2074	1,514
2075	1,514
2076	1,514
2077	1,514
2078	1,514
2079	1,514
2080	1,514
2081	1,514
2082	1,514
2083	1,514
Total ACCU Unit	78,571

Scope 2 Emissions Offset

The main component of scope 2 emissions for Marsden Park Data Centre is from consumption of electricity from the local power grid that feeds into the facility and IT for overhead consumption. Scope 2 emissions include the customer IT electricity.

Scope 2 emissions will be addressed by purchasing and surrendering Large-scale Generation Certificates (LGCs) before 2030. LGCs are created under the Renewable Energy Target (RET) scheme and represent one megawatt-hour (MWh) of renewable electricity generated. The key steps in this process include:

- **Assessment of Electricity Consumption:** Calculate the total electricity consumption and associated Scope 2 emissions.
- **Acquisition of LGCs:** Purchase LGCs from renewable energy projects such as wind, solar, and hydroelectric power plants. These certificates verify that the electricity we consume is matched by an equivalent amount of renewable energy generation.
- **Surrender of LGCs:** Surrender the LGCs to the Clean Energy Regulator, thereby offsetting our Scope 2 emissions and contributing to the overall reduction of greenhouse gas emissions in the energy sector.

From 2031 and onwards, CDC will purchase and surrender REGO certificates or other applicable renewable energy certificates, when these are confirmed by the Australian Government, to continue to achieve a zero-emission factor for electricity used within the premises. Renewable energy certificates to replace LGCs have not been publicly released at the time of this report's publication, however it is likely that they will be REGOs.

Commitment

Refer to Appendix D CDC Sustainability Report 2024 for CDC's public commitment a net zero strategy.



8. Monitoring, Reporting and Plan Review

8.1 Monitoring and Reporting

8.1.1 NGER reporting obligations

CDC Group Holdings Pty Ltd is the controlling corporation for the development. As such CDC is responsible for Scope 1 and 2 emissions for facility reporting purposes under the NGER Act.

There are two types of thresholds that determine if a corporation has an obligation under NGER Act:

- Facility threshold: 25,000 tonnes or more of carbon dioxide equivalence (CO₂-e) (scope 1 and scope 2 emissions)
- Corporate group threshold: 50,000 tonnes or more of CO₂-e (scope 1 and scope 2* emissions) – not relevant to this report

The Marsden Park Data Centre development has been identified as a large emitter because it will exceed the 25,000 tCO₂e per year threshold. Once built and in operation, the project will trigger facility thresholds under the NGER Act.

CDC shall undertake a GHG emissions review each year and report to comply with the relevant reporting requirements, such as those under the National Greenhouse and Energy Reporting (NGER) scheme. The reporting strategy and whether this information is public or remains confidential will be determined by CDC during the first reporting cycle.

- **Format:** Reports must be submitted online using the Emissions and Energy Reporting System (EERS), accessed via the Clean Energy Regulator's Client Portal.
- **Frequency:** Reporting is required annually. The reporting period aligns with the Australian financial year (1 July to 30 June), and reports must be submitted by 31 October each year.
- **Form:** The report must include detailed information on:
 - Greenhouse gas emissions (Scope 1 and Scope 2).
 - Energy production.
 - Energy consumption.

Energy Metering is a key strategy to support energy management and identify opportunities for additional energy savings by tracking building-level and system level energy use. To enable this, the development shall:

- Install advance energy metering for all building energy sources and for any individual energy and end uses that represent 10% or more of the total annual consumption of the building
- IT energy consumption, as measured from an uninterruptible power supply (UPS) output meter, should be metered separately from non-IT equipment, such as HVAC, plug loads, and lighting. If the UPS system supports non-IT loads that amount to more than 10% of its load, such as lighting or cooling, this non-IT load should also be sub metered.
- Meters must be permanently installed, record consumption and demand data at intervals of one hour or less, and transmit data to a remote location.
- The data collection system must use a building automation system or the like, must be remotely accessible and must be able to store data for at least 36 months
- All meters must be capable of reporting hourly, daily, monthly and annual energy use.



9. References

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- NSW EPA. (2021). Retrieved from <https://www.soe.epa.nsw.gov.au/index.php/key-findings>
- NSW Environment Protection Authority. (2024). (rep.). NSW EPA Guide for Large Emitters. Retrieved June 2024, from <https://hdp-au-prod-app-nswepa-yoursay-files.s3.ap-southeast-2.amazonaws.com/1017/1626/5068/24pp4492-nsw-epa-guide-for-large-emitters-consultation-draft.pdf>.
- NSW Environment Protection Authority. (2024). (rep.). EPA climate change assessment requirements for large emitters . Retrieved June 2024, from <https://hdp-au-prod-app-nswepa-yoursay-files.s3.ap-southeast-2.amazonaws.com/3317/1590/9116/24p4514-epa-climate-change-assessment-requirements-consultation-draft.pdf>.

Appendix A – **Proposed Scenario:** Scope 1 and 2 Activity Data Operational Throughput



Considerations	2024	2025	2026	2027	2028	2029	2030
No. of buildings in operation	0	0	0	1	2	3	4
No of buildings completed (cumulative)	0	0	1	2	3	4	4
Projected Emission Factor NSW electricity grid (DCCEEW, 2023)	0.59	0.52	0.39	0.29	0.28	0.27	0.19

Scope 1 and 2 Emissions Activity data - Operational throughput														
Production	Production rate	Units	Source	Sector	Sub sector	Scope	Units	2024	2025	2026	2027	2028	2029	2030
R134A (HFC-134A)	3000	kg	Refrigerant	Fugitive emissions	Oil	1	kg CO2-e	-	-	-	492	5,389	10,344	13,986
Diesel oil	544.32	kL	Generators	Electricity generation	Other	1	kg CO2-e	-	-	-	18,622	203,804	391,203	528,944
Facility Electricity	1,268,534,212	kWh	Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	4,644,513	49,078,801	90,842,557	86,434,464
IT Electricity	4,415,040,000	kWh	Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	16,004,520	169,120,560	313,034,220	297,844,380
Total annual Scope 1 and Scope 2 Emissions								-	-	-	20,668,147	218,408,553	404,278,324	384,821,774

Considerations	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
No. of buildings in operation	4	5	5	6	6	6	6	6	6	6
No of buildings completed (cumulative)	5	5	6	6	6	6	6	6	6	6
Projected Emission Factor NSW electricity grid (DCCEEW, 2023)	0.11	0.06	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.02

Throughput														
Source	Sector	Sub sector	Scope	Units	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Refrigerant	Fugitive emissions	Oil	1	kg CO2-e	17,679	21,372	25,065	28,429	29,250	39,000	39,000	39,000	39,000	39,000
Generators	Electricity generation	Other	1	kg CO2-e	668,607	808,269	947,932	1,075,180	1,106,216	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955
Grid	Stationary energy	Buildings	2	kg CO2-e	63,253,844	41,709,100	16,305,368	27,741,242	28,542,020	38,056,026	38,056,026	38,056,026	38,056,026	25,370,684
Grid	Stationary energy	Buildings	2	kg CO2-e	217,966,320	143,725,320	56,186,640	95,593,500	98,352,900	131,137,200	131,137,200	131,137,200	131,137,200	87,424,800
Total annual Scope 1 and Scope 2 Emissions					281,906,450	186,264,061	73,465,004	124,438,351	128,030,386	170,707,181	170,707,181	170,707,181	170,707,181	114,309,439

Considerations	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
No. of buildings in operation	6	6	6	6	6	6	6	6	6	6
No of buildings completed (cumulative)	6	6	6	6	6	6	6	6	6	6
Projected Emission Factor NSW electricity grid (DCCEEW, 2023)	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0

Throughput														
Source	Sector	Sub sector	Scope	Units	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Refrigerant	Fugitive emissions	Oil	1	kg CO2-e	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000
Generators	Electricity generation	Other	1	kg CO2-e	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955
Grid	Stationary energy	Buildings	2	kg CO2-e	25,370,684	25,370,684	25,370,684	25,370,684	12,685,342	12,685,342	12,685,342	12,685,342	12,685,342	-
Grid	Stationary energy	Buildings	2	kg CO2-e	87,424,800	87,424,800	87,424,800	87,424,800	43,712,400	43,712,400	43,712,400	43,712,400	43,712,400	-
Total annual Scope 1 and Scope 2 Emissions					114,309,439	114,309,439	114,309,439	114,309,439	57,911,697	57,911,697	57,911,697	57,911,697	57,911,697	1,513,955

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Considerations	2081	2082	2083
No. of buildings in operation	6	6	6
No of buildings completed (cumulative)	6	6	6
Projected Emission Factor NSW electricity grid (DCCEEW, 2023)	0	0	0

Throughput								Totals (kg CO2-e)	Totals (t CO2-e)
Source	Sector	Sub sector	Scope	Units	2081	2082	2083		
Refrigerant	Fugitive emissions	Oil	1	kg CO2-e	39,000	39,000	39,000	2,024,006	2,024
Generators	Electricity generation	Other	1	kg CO2-e	1,474,955	1,474,955	1,474,955	76,546,607	76,547
Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	751,056,145	751,056
Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	751,056,145	751,056
Total annual Scope 1 and Scope 2 Emissions					1,513,955	1,513,955	1,513,955	1,580,682,902	1,580,683

Appendix B – **Benchmark Scenario:** Scope 1 and 2 Activity Data Operational Throughput



No. of buildings in operation	0	0	0	1	2	3	4
No of buildings completed (cumulative)	0	0	1	2	3	4	4
Projected Emission Factor for NSW electricity grid (DCCEEW, 2023)	0.59	0.52	0.39	0.29	0.28	0.27	0.19

Benchmark Scenario - PUE 1.61 - Scope 1 and 2 Emissions Activity data - Operational throughput														
Production	Production rate	Units	Source	Sector	Sub sector	Scope	Units	2024	2025	2026	2027	2028	2029	2030
R134A (HFC-134A)	3000	kg	Refrigerant	Fugitive emissions	Oil	1	kg CO2-e	-	-	-	492	5,389	10,344	13,986
Diesel oil	544.32	kL	Generators	Electricity generation	Other	1	kg CO2-e	-	-	-	18,622	203,804	391,203	528,944
Facility Electricity	2,670,512,897	kWh	Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	9,777,609	103,320,485	191,241,369	181,961,470
IT Electricity	4,415,040,000	kWh	Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	16,164,886	170,815,155	316,170,835	300,828,793
Benchmark Scenario - PUE 1.61 - Total Annual Scope 1 and Scope 2 Emissions								-	-	-	25,961,609	274,344,832	507,813,751	483,333,193

No. of buildings in operation	4	5	5	6	6	6	6	6	6	6
No of buildings completed (cumulative)	5	5	6	6	6	6	6	6	6	6
Projected Emission Factor for NSW electricity grid (DCCEEW, 2023)	0.11	0.06	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.02

Benchmark Scenario - PUE 1.61 - Scope 1 and 2 Emissions Activity data - Operatic														
Source	Sector	Sub sector	Scope	Units	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Refrigerant	Fugitive emissions	Oil	1	kg CO2-e	17,679	21,372	25,065	28,429	29,250	39,000	39,000	39,000	39,000	39,000
Generators	Electricity generation	Other	1	kg CO2-e	668,607	808,269	947,932	1,075,180	1,106,216	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955
Grid	Stationary energy	Buildings	2	kg CO2-e	133,161,727	87,805,822	34,325,991	58,400,745	60,086,540	80,115,387	80,115,387	80,115,387	80,115,387	53,410,258
Grid	Stationary energy	Buildings	2	kg CO2-e	220,150,351	145,165,453	56,749,632	96,551,351	99,338,400	132,451,200	132,451,200	132,451,200	132,451,200	88,300,800
Benchmark Scenario - PUE 1.61 - Total Annual Scope 1 and Scope 2 Emissions					353,998,364	233,800,916	92,048,620	156,055,705	160,560,406	214,080,542	214,080,542	214,080,542	214,080,542	143,225,013

No. of buildings in operation	6	6	6	6	6	6	6	6	6	6
No of buildings completed (cumulative)	6	6	6	6	6	6	6	6	6	6
Projected Emission Factor for NSW electricity grid (DCCEEW, 2023)	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0

Benchmark Scenario - PUE 1.61 - Scope 1 and 2 Emissions Activity data - Operational														
Source	Sector	Sub sector	Scope	Units	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Refrigerant	Fugitive emissions	Oil	1	kg CO2-e	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000
Generators	Electricity generation	Other	1	kg CO2-e	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955	1,474,955
Grid	Stationary energy	Buildings	2	kg CO2-e	53,410,258	53,410,258	53,410,258	53,410,258	26,705,129	26,705,129	26,705,129	26,705,129	26,705,129	-
Grid	Stationary energy	Buildings	2	kg CO2-e	88,300,800	88,300,800	88,300,800	88,300,800	44,150,400	44,150,400	44,150,400	44,150,400	44,150,400	-
Benchmark Scenario - PUE 1.61 - Total Annual Scope 1 and Scope 2 Emissions					143,225,013	143,225,013	143,225,013	143,225,013	72,369,484	72,369,484	72,369,484	72,369,484	72,369,484	1,513,955

No. of buildings in operation	6	6	6		
No of buildings completed (cumulative)	6	6	6		
Projected Emission Factor for NSW electricity grid (DCCEEW, 2023)	0	0	0		

Benchmark Scenario - PUE 1.61 - Scope 1 and 2 Emissions Activity data - Operatic								Totals (kg CO2-e)	Totals (t CO2-e)
Source	Sector	Sub sector	Scope	Units	2081	2082	2083		
Refrigerant	Fugitive emissions	Oil	1	kg CO2-e	39,000	39,000	39,000	2,024,006	2,024.01
Generators	Electricity generation	Other	1	kg CO2-e	1,474,955	1,474,955	1,474,955	76,546,607	76,546.61
Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	1,581,120,242	1,581,120.24
Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	2,613,995,657	2,613,995.66
Benchmark Scenario - PUE 1.61 - Total Annual Scope 1 and Scope 2 Emissions					1,513,955	1,513,955	1,513,955	4,273,686,512	4,273,686.51

Appendix C – **Mitigation Scenario:** Scope 1 and 2 Activity Data Operational Throughput



No. of buildings in operation	0	0	0	1	2	3	4
No of buildings completed (cumulative)	0	0	1	2	3	4	4
Projected Emission Factor for NSW electricity grid (DCCEEW, 2023)	0.59	0.52	0.39	0.29	0.28	0.27	0.19
Projected Emission Factor with purchase of LGCs	0	0	0	0	0	0	0
Projected Emission Factor CDC Net Zero goal for scope 1 and 2 by 2023	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Mitigation Scenario: Scope 1 and 2 Emissions Activity data - Operational throughput														
Production	Production rate	Units	Source	Sector	Sub sector	Scope	Units	2024	2025	2026	2027	2028	2029	2030
R134A (HFC-134A)	3000	kg	Refrigerant	Fugitive emissions	Oil	1	kg CO2-e	-	-	-	492	5,389	10,344	13,986
Diesel oil	544.32	kL	Generators	Electricity generation	Other	1	kg CO2-e	-	-	-	-	203,804	391,203	528,944
Facility Electricity	1,268,534,212	kWh	Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	-	-	-	-
IT Electricity	4,415,040,000	kWh	Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	-	-	-	-
Mitigation Scenario: Total Annual Scope 1 and Scope 2 Emissions								-	-	-	492	209,193	401,547	542,930

No. of buildings in operation	4	5	5	6	6	6	6	6	6	6
No of buildings completed (cumulative)	5	5	6	6	6	6	6	6	6	6
Projected Emission Factor for NSW electricity grid (DCCEEW, 2023)	0.11	0.06	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.02
Projected Emission Factor with purchase of LGCs	0	0	0	0	0	0	0	0	0	0
Projected Emission Factor CDC Net Zero goal for scope 1 and 2 by 2023	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Mitigation Scenario: Scope 1 and 2 Emissions Activity data - Operational through														
Source	Sector	Sub sector	Scope	Units	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Refrigerant	Fugitive emissions	Oil	1	kg CO2-e	17,679	21,372	25,065	28,429	29,250	39,000	39,000	39,000	39,000	39,000
Generators	Electricity generation	Other	1	kg CO2-e	-	-	-	-	-	-	-	-	-	-
Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	-	-	-	-	-	-	-
Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	-	-	-	-	-	-	-
Mitigation Scenario: Total Annual Scope 1 and Scope 2 Emissions					17,679	21,372	25,065	28,429	29,250	39,000	39,000	39,000	39,000	39,000

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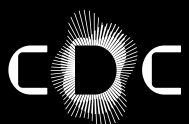
No. of buildings in operation	6	6	6		
No of buildings completed (cumulative)	6	6	6		
Projected Emission Factor for NSW electricity grid (DCCEEW, 2023)	0	0	0		
Projected Emission Factor with purchase of LGCs	0	0	0		
Projected Emission Factor CDC Net Zero goal for scope 1 and 2 by 2023	0.0%	0.0%	0.0%		

Mitigation Scenario: Scope 1 and 2 Emissions Activity data - Operational through								Totals (kg CO2-e)	Totals (t CO2-e)
Source	Sector	Sub sector	Scope	Units	2081	2082	2083		
Refrigerant	Fugitive emissions	Oil	1	kg CO2-e	39,000	39,000	39,000	2,024,006	2,024.01
Generators	Electricity generation	Other	1	kg CO2-e	-	-	-	1,123,951	1,123.95
Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	-	-
Grid	Stationary energy	Buildings	2	kg CO2-e	-	-	-	-	-
Mitigation Scenario: Total Annual Scope 1 and Scope 2 Emissions					39,000	39,000	39,000	3,147,957	3,147.96

Appendix D – CDC Sustainability Report 2024



Sustainability Report 2024



Stable planet. Thriving people. Trusted company.

CDC embraces an unwavering commitment to excellence and fostering a culture of inclusivity, diversity and sustainability.

Our efforts span from pioneering world-class designs and providing renewable electricity¹ to implementing strategies that minimise construction and operational waste across all facilities.

CDC's innovative approach to business drives initiatives that deliver impactful solutions to pressing environmental challenges.



CDC's First Nations recognition

Dungala Dreaming is inspired by a traditional Yorta Yorta creation story. Baimi the Creator Spirit called out to Gane, the great Rainbow Snake who was asleep beneath the earth. Gane awoke and set off across Country, pushing the earth into deep crevices, hills and valleys as colours from his great body spread throughout the land covering trees, plants and all creatures. Baimi called out in a loud voice and thunder cracked as lightning flashed across the sky and rain fell. The rain filled the deep crevices and the river Dungala was formed.

CDC proudly acknowledges the traditional owners of the land on which we work and live and pays respects to elders' past, present and emerging. We are committed to fostering and supporting relationships with these communities.

We recognise and value the continuing rich cultures and the contribution of Aboriginal and Torres Strait Islander peoples in Australia.



Original Artwork "Dungala Dreaming" by Siena Tieri c.2023.



Te Haumanu Toi, experts in Māori art, crafted this carving, to embody both tradition and modernity. The artwork represents data's invisible yet vital role, blending ancient Māori wisdom with contemporary progress. The design incorporates significant Māori symbols, such as the deity Tane-nui-a-Rangi, representing knowledge and protection, and the Korowai, denoting status and unity. These elements honour cultural heritage while signifying CDC's role as a guardian of information in the digital age.

At CDC, we recognise and value the Māori as the Tangata Whenua of Aotearoa New Zealand.

Original Artwork "Tāne-nui-a-Rangi - The holder of knowledge" by Wyvern Rosieur, Uenuku Hawira, Maryanne Rosieur, Rerekapua Rosieur, Hokimai-anahera Rosieur c.2024.

Statement of qualification

Transparent and accurate reporting is important to CDC. As a non-listed company, we are not required to publicly report, so the disclosures in this report are voluntary and are for general information purposes only.

We have sought to provide accurate information, but we do not represent that the information in this report is free from errors, omissions or is suitable for your intended use. We caution reliance being placed on these representations which may be subject to risks, uncertainties, changing methodologies and/or assumptions.

In general, calculations and estimations in this report are based on established methodologies such as standards, protocols and guidelines. There may be some exceptions and these are explained in the notes. Some estimation methodologies rely on assumptions and when this is the case we use the best information available at the time to provide an estimate that is as accurate as possible.

This report provides general information that is intended to inform CDC's stakeholders, customers and interested parties of CDC's sustainability and ESG approach and progress. Please do not base any legal, investment or other decisions solely on the information in this report. The standards, vision statement and targets described in this report are not guarantees or promises. Various factors may cause material deviations from these standards and goals such as market conditions, regulatory changes and unexpected events.

We have intentionally aimed to avoid making forward-looking statements in this report, preferring to let our actions speak more loudly than words and inviting readers of this report to follow our progress in our annual Sustainability Reports. Where future statements are made you should be cautious and not rely solely on these statements, as they are based on our current expectations and understandings. These statements and opinions may involve assumptions, forecasts and projections about present and future strategies and the ecosystem (economy, technology, supply chain, climate, political) in which we may operate in the future, which are inherently uncertain and subject to change outside of CDC's control. There are limitations to available data inputs and information which may also be subject to change. We base our forward statements and opinions on reasonable information available to us at the date of publication.

We do not:

- represent that our statements and opinions will not change or will remain correct after publishing this report, or
- promise to revise or update those statements and opinions if events or circumstances change or unanticipated events happen after publishing this report.

CDC does not represent, guarantee or provide assurance that actual outcomes or performance will not materially differ from the statements in this report. We do not accept any liability whatsoever for any loss arising directly or indirectly from any use of the information contained in this report.

An ESG strategy
for today and
tomorrow

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Introduction

Welcome from CEO



CDC's inaugural Sustainability Report marks an important milestone in our history as a mission-critical data centre provider.

I founded the organisation in Canberra in 2007, during the Millennium Drought, with a vision to provide purpose-built data and digital infrastructure for the most important entities that underpin Australia's security, social and economic wellbeing. Faced with ongoing water scarcity and wary of compounding this environmental strain, I adopted a 'clean and green' ethos from day one, which included world-leading water conservation practices as a core part of the early vision for the company.

The trust of our customers in the years since has enabled our organisation to work hard to grow from a small data centre provider with an ambitious mission, to become a critical infrastructure provider for organisations across Australia and New Zealand, committed to deliberate and thoughtful approaches to identifying, tackling and reporting on a wide range of ESG themes.

This journey fills us with great pride and inspires us for the future.

We know that as our business has grown, so have the expectations of our stakeholders. We also know that in the broader community, the debate continues on a wide range of policy options and approaches and public discourse is not settled on a single path for Australia's energy transition.

CDC plays a critical role in supporting operations, systems and services required for national progress. Our large-scale and highly secure infrastructure supports customers across industries which keep the world and our society functioning and thriving, accelerating economic growth and enabling scientific research and innovation.

In that regard, our business is at the centre of 21st century industry and innovation, powering and enabling critical services, from aviation and banking to

social welfare, communications and emergency forecasting, which help futureproof Australia's and New Zealand's continued progress.

CDC is a security-focused organisation with its facilities achieving some of the highest protective security standards. We know our customers can trust their data is secure with CDC, now and in the future.

Data centres aggregate the energy demand required to power customer critical systems. They do so while being optimised for power efficiency, thus contributing to grid power savings when compared to on-premises energy consumption. At the same time, the data centres help provide stability in the grid due to their constant load.

As technology continues to evolve and underpin more of everyday life, the demand for data centre services is expected to increase in the decades to come. As such, we are very mindful of our role as an individual organisation and as a leader in the digital infrastructure sector as we embark on the journey ahead.

This Sustainability Report outlines our three ESG pillars: Stable planet, Thriving people and Trusted company – and explains the action we are taking across each one to make a difference.

It is not only a story of a job well done. It is the start of an ongoing evolution. We will celebrate our successes and progress while remaining ambitious and realistic about the work still ahead.

I look forward to continuing to update you on our progress in the years to come.

Regards,



Greg Boorer
Chief Executive Officer

Welcome from Board Chair



It is exciting to see the progression of CDC's ESG journey through clear documentation of its sustainable action, innovative solutions and transparent reporting.

This report highlights the company's achievements, cementing CDC's standing as a progressive organisation committed to driving positive change across the sector and the communities in which it operates.

In particular, the board welcomes the following milestones:

- Launching our 2030 ESG Strategy, which sets our targets for net zero carbon by 2030 for Scope 1, 2 and defined Scope 3²
- Installing ~90 kW of solar panels at our Eastern Creek campus
- Producing our first Indigenous Participation Plan³
- The certification of Toitū enviromark diamond for our New Zealand Data Centres⁴

This report offers information for our investors, customers and the communities in which we operate on how we are actively managing the threats and opportunities inherent to ESG issues. Strengthening resilience to climate and social-related risk is imperative for our industry and this report represents the significant work we are undertaking to safeguard our financial future against these risks.

Transparency and responsibility are long-standing pillars of the organisation and the publication of our ESG targets and goals demonstrates CDC's ongoing commitment to accountability.

Explaining our approach to ESG matters encourages all stakeholders to understand the business's position and how we aim to improve in certain areas. We hope that this will ultimately enable CDC to attract long-term capital from like-minded investors who are aligned with the national interest and care about sustainability the way we do.

This enables us to move from strength to strength and steadily grow our portfolio with those who align with our values over the coming years.

On behalf of the board, I sincerely congratulate the team at CDC, its external partners and their suppliers for their important role in driving a positive change across the industry. The incredible dedication, hard work and effort are truly appreciated.

The board is excited to continue to support the CDC team to provide industry leadership and deliver on their commitments, targets and Sustainability Reporting.

Regards,



Brett Chenoweth
Board Chair

Note: All references on this page are detailed in the Notes section at the end of the report.

Executive summary

“A 2024 Reputation Pulse Check revealed that CDC has a very strong reputation with stakeholders and is considered a leader in data security, operational success and commercial growth.”

CDC's inaugural Sustainability Report highlights CDC's commitment to sustainability, community development and operational excellence, setting a strong foundation for future growth and leadership in the industry.

This report covers 1 April 2023 to 31 March 2024 and includes both historical and up-to-date data points to provide context to our progress. CDC drew from the United Nations Sustainable Development Goals and the Global Reporting Initiative Standards to guide our approach to performance analysis and measurement.

CDC's ESG strategy focuses on three pillars: Stable planet, Thriving people and Trusted company.

The Stable planet pillar encompasses CDC's environmental efforts, focusing on operational carbon and energy use, water and waste management. Thriving people explains how CDC is developing individual and community prosperity, while Trusted company captures CDC's core mission of providing secure and trusted operations.



ESG highlights FY24



Stable planet

Renewable energy:

100% renewable electricity offered to Australian customers⁵.

Environmental certifications:

Achieved "Toitū net carbonzero"⁶ and "Toitū enviromark diamond"⁷ certifications in New Zealand.

Water efficiency:

Achieved a Water Usage Effectiveness (WUE) of 0.01⁸.

Waste management:

Diverted over 90% of operational waste from landfill at NSW campuses⁹.



Thriving people

Mental health program:

Introduced to support employee wellbeing.

CDC Academy:

Launched as a dedicated training hub for employees.

Indigenous plan:

Developed to increase Aboriginal and Torres Strait Islander employment.

Women Rising:

Empowered women's careers through a four-month training and mentoring initiative.

Reservist leave:

Employees took 15 days of ADF leave.

Job creation:

Added 80 new roles across Australia and New Zealand.



Trusted company

Customer satisfaction:

Achieved a Net Promoter Score (NPS) of over 82¹⁰.

CSIRO partnership:

Selected to host the supercomputer Virga.

Data security and privacy:

Achieved ISO 27001 certification, ensuring the highest standards in information security and data privacy.

Note: All references on this page are detailed in the [Notes section](#) at the end of the report.

CDC’s facilities have achieved and maintain the highest level of security accreditations¹¹ under the Australian and New Zealand governments’ hosting frameworks and security requirements.

About CDC

“In an ever-evolving world where data shapes the way we live, CDC is committed to safeguarding national progress.”

CDC is **the** critical infrastructure for critical infrastructure. It houses the data that keeps countries running and industries innovating. We provide security for social and economic wellbeing. Our work has never been more crucial as we help society achieve the one thing that it thrives on: progress.

And at CDC, we secure this progress.
Our efforts are deliberate. We do not wait to see how our peers address an industry challenge; we actively seek solutions and implement them within our business.

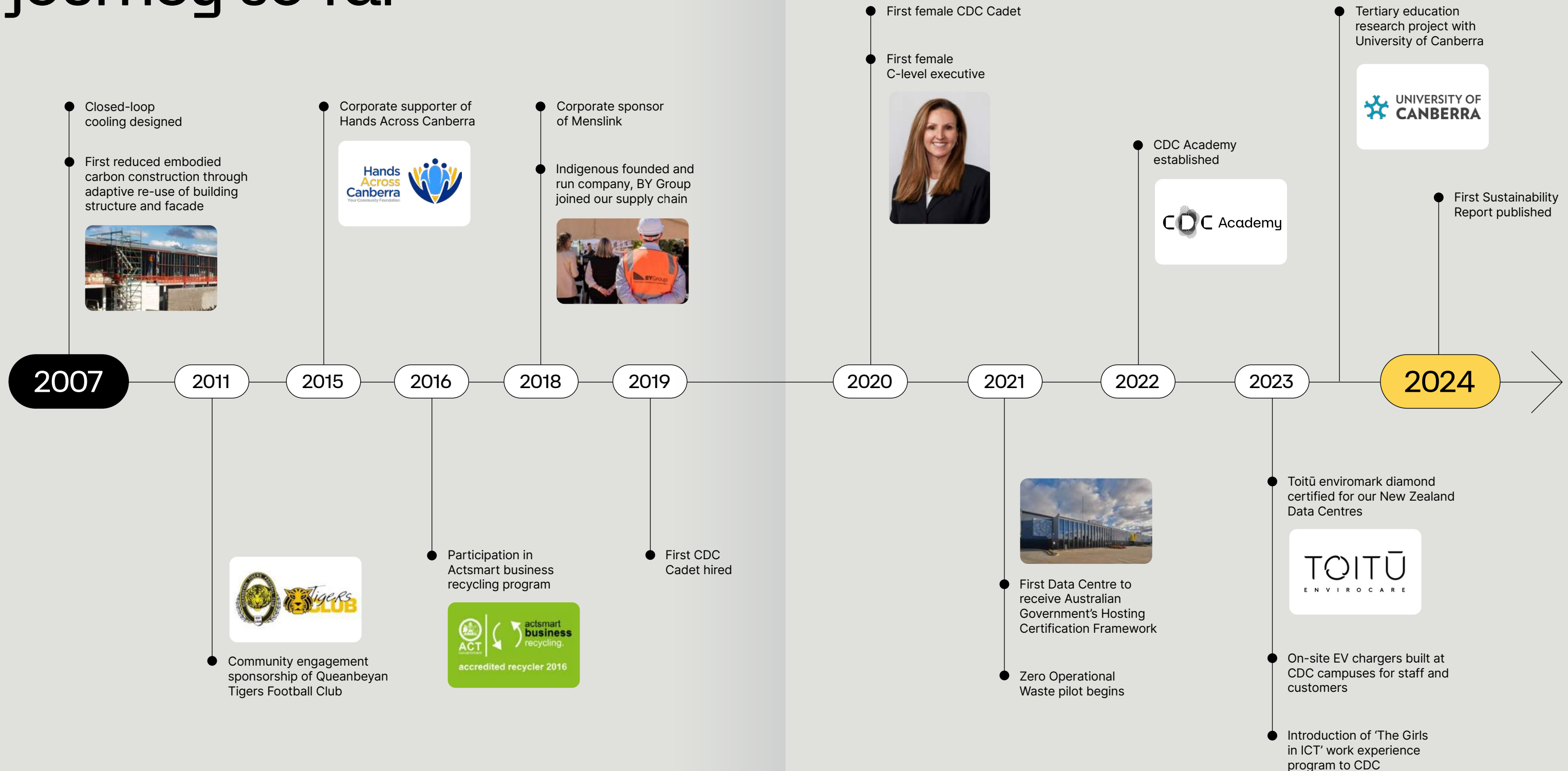
This approach has seen sustainability considerations included in our decision-making since our inception in 2007. This is why, despite this being our first Sustainability Report, we can confidently and proudly say that sustainability has been a focus of CDC since its beginning.

Through a tenacious, meticulous and committed approach, CDC founder and CEO Greg Boorer transformed the company from a forward-thinking start-up to the pre-eminent owner-operator and developer of highly secure, sovereign, connected, large-scale data centres in Australia and New Zealand.

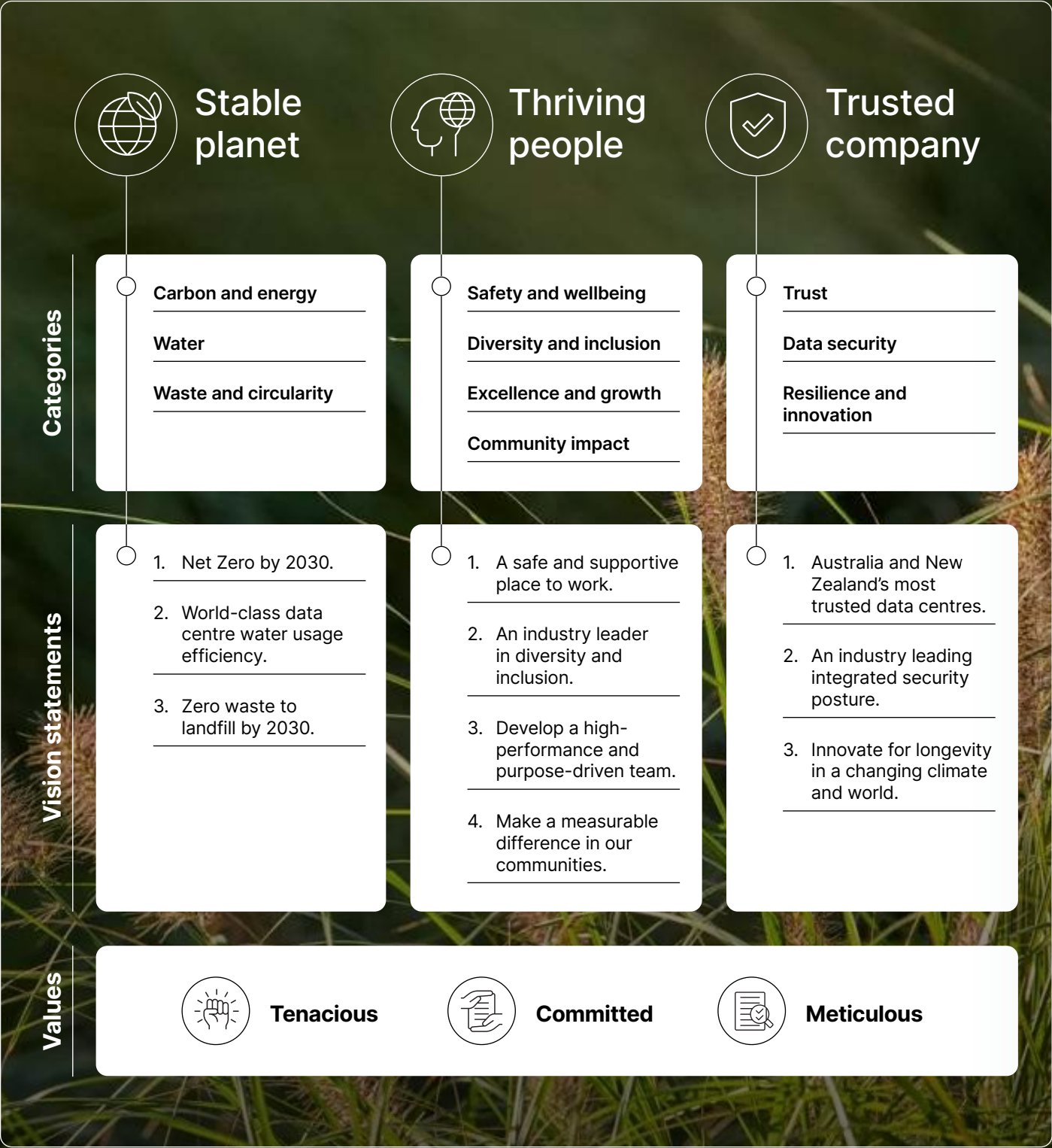


Note: All references on this page are detailed in the [Notes section](#) at the end of the report.

CDC's ESG journey so far



CDC's ESG pillars



Business at a glance

Data centres

21147

totaloperationalunder construction

Locations

Canberra
Sydney
Melbourne
Auckland

Campuses

Hume One
Hume Two
Fyshwick
Beard
Eastern Creek

Brooklyn
Silverdale
Hobsonville
Marsden Park

Capacity (MW)

22963023881606

totaloperating capacityunder construction capacityfuture build capacity

Sectors

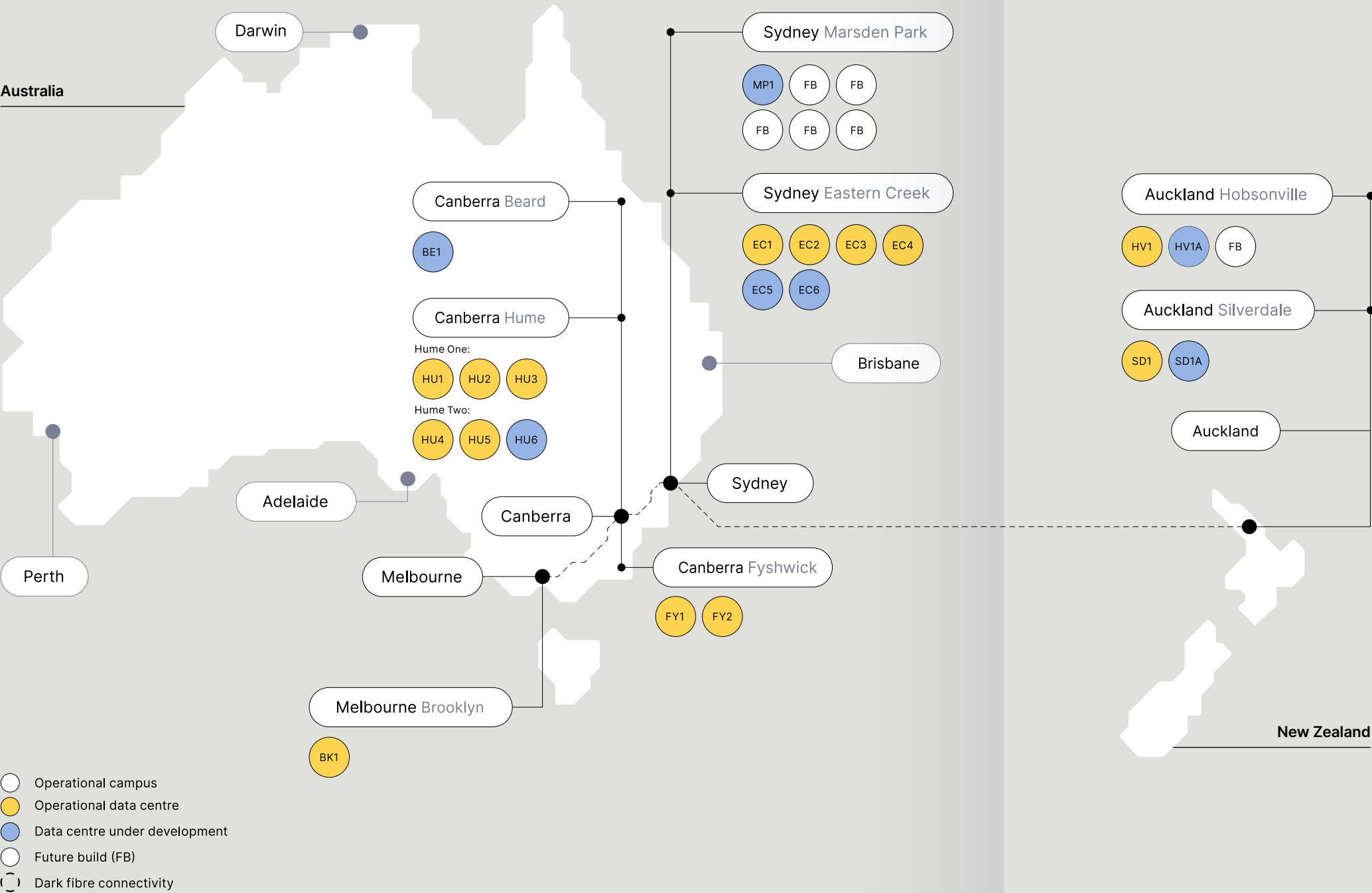
National critical infrastructure
Government
Research and education
Technology
Hyperscale

Staff as at October 2024

~350

Our footprint

Since 2007, CDC has championed sustainability, integrating environmental and social responsibility into our data centres across Australia and Aotearoa New Zealand.



Our operating environment

CDC's growth and continued evolution is taking place against the backdrop of the following global megatrends and issues:

 AI multi-modal race	 Geopolitical polarisation and conflicts within and between nation states
 Climate change	 Digitisation, data regulation, cyber security and AI
 Increased pressure on global supply chains	 Increased demand for energy and resources

About this report

This report formally covers the financial reporting period from 1 April 2023 to 31 March 2024 (FY24). It also includes data points that are historical and up-to-date at the time of publishing, to further contextualise our continuous sustainability progress. It outlines the ESG activities and initiatives completed during this financial year and analyses the performance metrics relevant to stakeholders and investors. The United Nations Sustainable Development Goals (SDGs) and the Global Reporting Initiative (GRI) Standards have helped to guide the analysis and measurement of CDC's ESG performance.

We recommend reading the 2024 Sustainability Report in conjunction with our ESG Statement of Commitment, annual Modern Slavery Statement, public NGRS data and Workplace Gender Equality Agency report. Together these documents provide a comprehensive overview of CDC's sustainability approach.

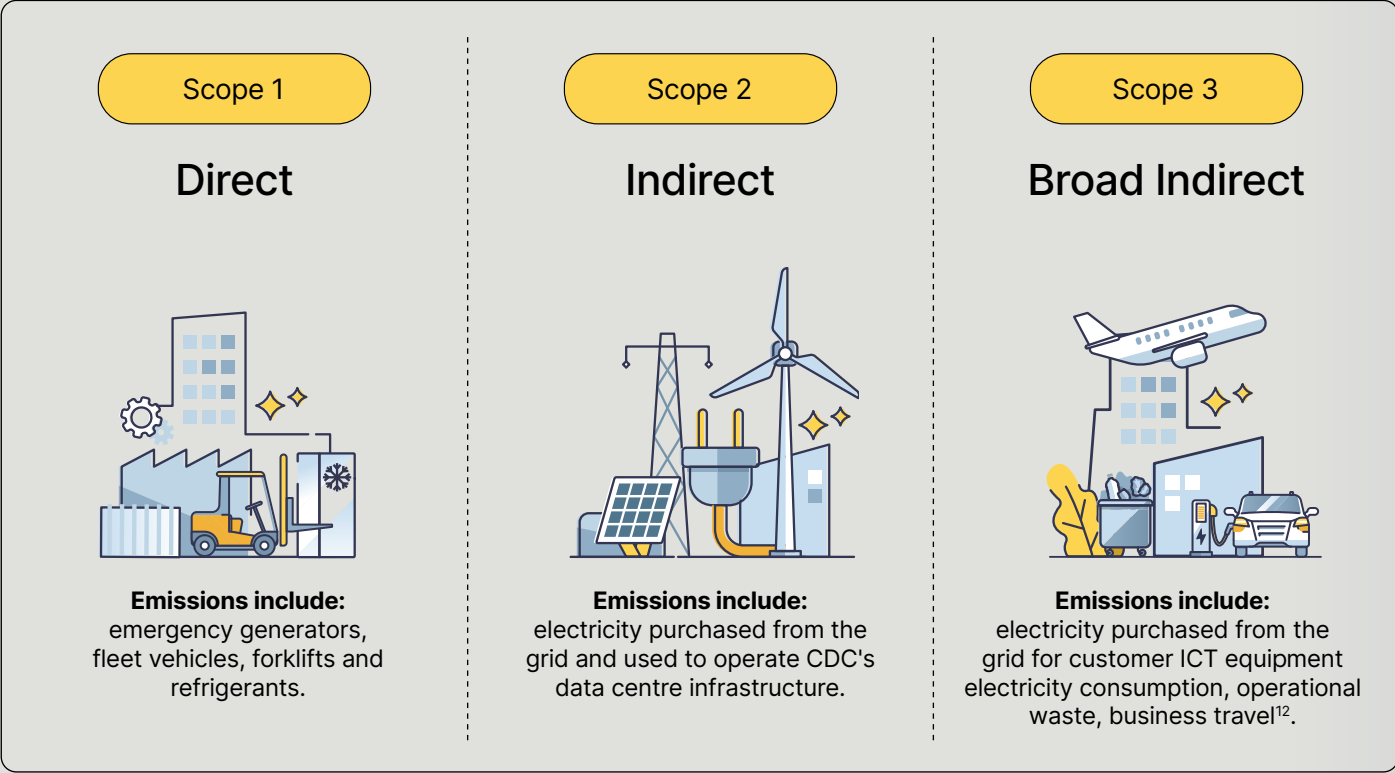
Scope and boundaries

This report applies to the entire CDC entity, including Australia and New Zealand businesses. A range of standards, methodologies, assumptions and limitations have been used in reporting the performance data included in this document.

Greenhouse Gas Protocol (GHG Protocol)

Scope 1, 2 and 3 emissions refer to different categories of greenhouse gas (GHG) emissions, which are defined under the Greenhouse Gas Protocol, which companies and organisations need to manage. CDC reports Scope 1 and 2 emissions in this report and intends to include defined Scope 3 emissions in the future.

Overview of CDC's scopes of emissions



Note: All references on this page are detailed in the Notes section at the end of the report.



Assurance

KPMG have provided limited assurance over selected sustainability metrics presented in this Sustainability Report, covering Total Scope 1 GHG Emissions, Total Scope 2 GHG Emissions (location-based method) and Total Scope 2 GHG Emissions (market-based method). KPMG's limited Assurance Report¹³ is presented on page 44 (or Appendix 2F) of this Sustainability Report.

Alignment with global standards

CDC has sought to broadly align its approach to sustainability with the following global standards in preparing this report.

United Nations Sustainable Development Goals (SDGs)

The United Nations Sustainable Development Goals have guided CDC's Sustainability Reporting. The goals provide a blueprint for peace and prosperity for all people and the planet, now and in the future.

The Sustainable Development Goals are an urgent call to action for all countries to take part in a global partnership aimed at ending poverty and other deprivations while developing strategies that improve health and education, reduce inequality and spur economic growth – all while tackling climate change and working to preserve the environment.

Global Reporting Initiative (GRI)

The Global Reporting Initiative has influenced this report and its approach to transparency. It has served as an important benchmark when assessing organisational accountability with respect to CDC's impact on the economy, environment and people.

Feedback

We value your feedback on our Sustainability Report. Visit cdc.com/contact or scan the QR code to access our feedback submission page.



Note: All references on this page are detailed in the Notes section at the end of the report.

Governance

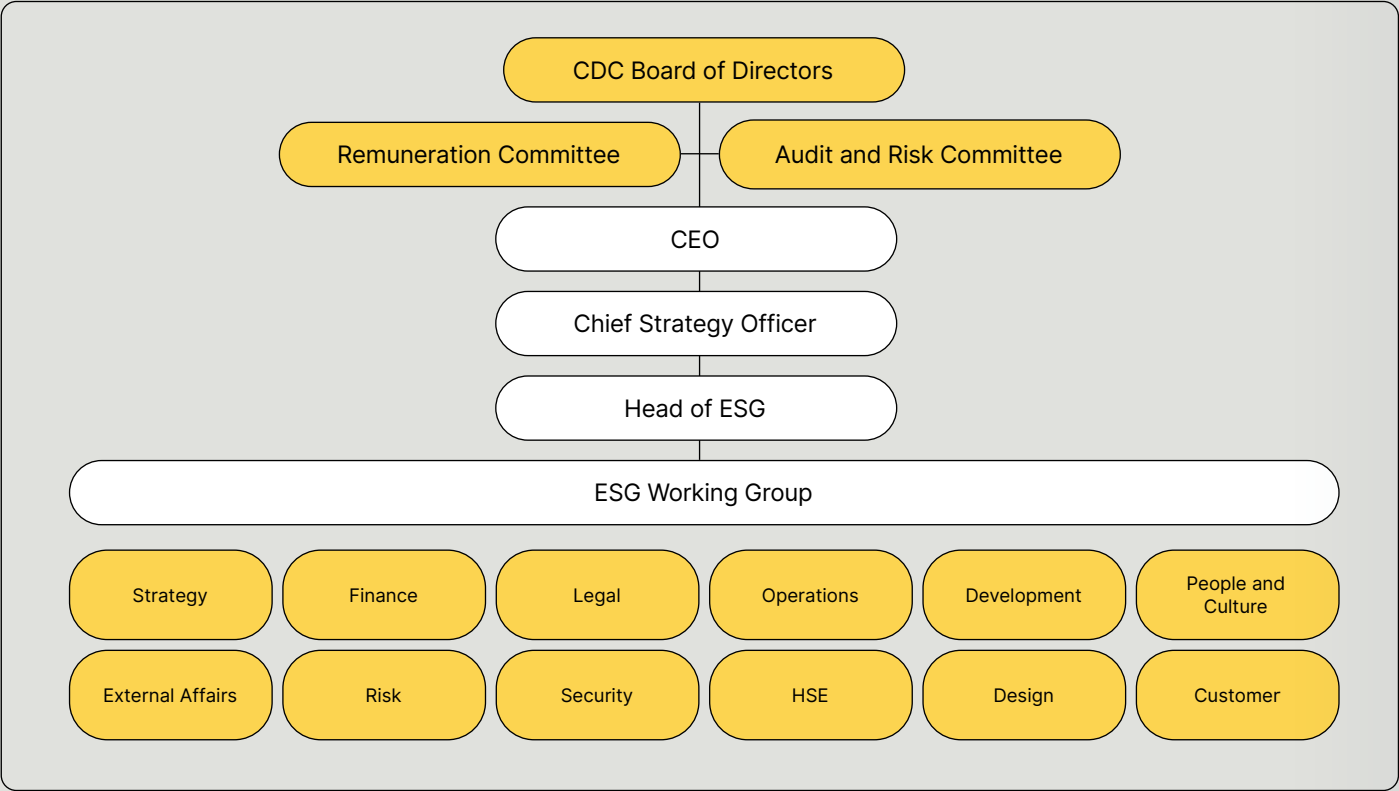


CDC’s governance framework is essential for the long-term performance and sustainability of our company. Governance practices provide the structure through which our strategy and business objectives are set, our performance is monitored and the risks we face are managed.

CDC’s Board of Directors has overall responsibility for sustainability governance. The board approves CDC’s ESG Strategy, ESG Statement of Commitment, implementation plan and public disclosures. The Remuneration Committee and Audit and Risk Committee support the board to fulfill its duties.

The Chief Strategy Officer reports to the CEO and the board on implementation and progress of the ESG Strategy. CDC’s Head of ESG leads the ESG Working Group to deliver on the CDC’s ESG targets by implementing initiatives and integrating sustainability throughout business processes.

ESG Governance



Key governance documents

CDC uses a well-established framework of sustainability-related policies and practices covering:

Environment and Social	Governance
Diversity, Equity and Inclusion Statement	Annual Modern Slavery Statement
Equal Opportunity and Anti-Discrimination Policy	Code of Conduct
ESG Statement of Commitment	Conflicts of Interest Procedure
ESG Strategy	Fraud and Corruption Control Plan
Grievance Handling Policy	IT and Systems Policy
HSE Policy	Information Security Policy
Parental Leave Policy	Media Relations Policy
	Privacy Policy
	Protective Security Policy
	Social Media Policy
	Supplier Code of Conduct
	Whistleblower Policy

CDC promotes a fair and responsible culture through its Code of Conduct, CDC policies, mandatory training and awareness sessions. Our behaviours, Code of Conduct, supporting CDC policies and standards guide our people and partners to uphold our expectation to act fairly, ethically and in accordance with the law.



Materiality assessment

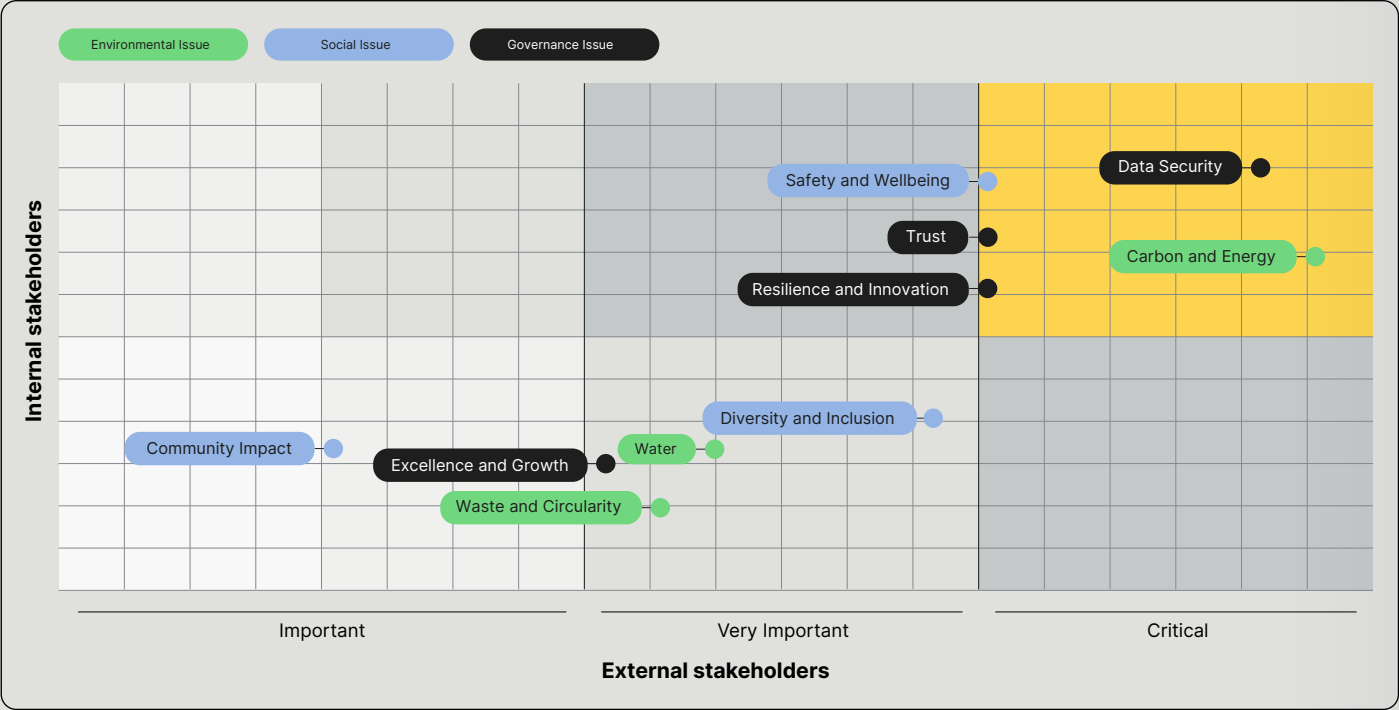
Sustainability has been a constant consideration for CDC, but in recent years, there has been an effort to accelerate and formalise its approach.

One of the first steps was developing a materiality assessment in 2021 to understand the impacts of business activities on the environment, society and the economy, hear about stakeholders priorities and concerns and inform decision-making and prioritisation in relation to sustainability challenges.

An external advisor undertook desktop research, benchmarking, stakeholder interviews and workshops to inform the materiality assessment and validate the findings. The information was then used to inform CDC's ESG approach.

The information was collected from both internal and external stakeholders through a range of interviews. Almost 100 respondents were asked how important it is for CDC to play a role in helping improve a variety of ESG issues, revealing the following results:

How important it is for CDC to play a role in helping to improve (impact/influence) each issue?



The materiality assessment was instrumental to establishing CDC's ESG pillars:

Stable planet	Thriving people	Trusted company
Carbon and energy	Safety and wellbeing	Trust and transparency
Water	Diversity and inclusion	Data security
Waste and circularity	Engagement and growth	Resilience and adaption
	Community impacts	

Since the materiality assessment was completed in 2021, stakeholder research has been conducted to assess CDC's performance in these areas.

Stakeholder engagement

CDC undertakes a wide variety of stakeholder engagement activities throughout the year. This report focuses on CDC's engagement approach for matters relevant to sustainability.

Sustainability and reputation research

Key details from the 2024 Reputation Pulse Check, conducted as a follow up to the 2021 materiality assessment, are outlined in this section. The report contains feedback from interviews with CDC's stakeholders, including investors and customers, conducted between 11 June – 2 July 2024.

CDC has a very strong reputation among the stakeholders who participated in the study. All stakeholders rated its reputation as a 7 or more out of 10 and two-thirds rated it a 9 or 10. Half felt that CDC's reputation has improved over the last 12 months and the vast majority felt CDC is a leader among its peers.

Key strengths

CDC was considered a leader on data security, operational success and commercial growth, evidenced by its growing list of high-profile, hyperscale

and government clients. Its stakeholders commended CDC's strong corporate focus on having exceptional security measures and customer service. While this focus may increase CDC's cost base, it was justified that customers are still receiving value for their money.

Future roadmap

Stakeholders had very little feedback for CDC on how it could improve its reputation from an operational perspective and many described it as a 'leader' amongst its peers in terms of operations and customer service. However, many felt CDC could advance its ESG and sustainability offerings by better communicating its progress and goals.

This demand for greater transparency and detailed information on CDC's ESG initiatives - including how it is achieving its goals and the progress it is making- was a major sentiment influencing the development of this report. While some noted that a lack of transparency may be a result of privacy or security restrictions, they encouraged CDC to take pride in their achievements and adopt a more transparent approach – something we are actively trying to embrace through the publication of this report.



Our engagement approach

		
Who we engage	How we engage	Focus areas
Government	Forums	Promoting the role of data centres as key national infrastructure
Customers	Submissions	Enabling a digital nation
Community	Briefings	Contributing to the advancement of energy, infrastructure, AI and cyber industries
Board and Investors	Public events	Progress against ESG targets
Employees	Customer success team	Maintaining the highest levels of health, safety and environment; security and sustainability
Supply chain stakeholders	Community and stakeholder research surveys	Strengthening customer experience and community satisfaction
Industry	Sport and community sponsorships	Fostering a culture of 'giving back' and supporting communities to thrive
Lenders/Financers	Volunteer leave for employees	Creating a safe work environment
	Ongoing training	Advancing diversity and inclusion across our business
	Industry group board membership (AIIA)	
	Ideas exchange through Australian American Leaders Dialogue (AALD) and Young Australian American Leaders Dialogue (YALD)	



Stable planet



Categories

- Carbon and energy
- Water
- Waste and circularity

Vision statements

- Net Zero by 2030.
- World-class data centre water usage efficiency.
- Zero waste to landfill by 2030.

Reducing our environmental impacts and improving sustainability practices is a major focus for our team. This extends from our efficient designs and the provision of 100% renewable electricity¹⁴, to using reduced embodied carbon and certified sustainable materials in construction and seeking to minimise operational waste across campuses.

We are proud of our industry-leading water conservation practices, particularly our closed-loop chilled water system design. The technology requires almost no operational water consumption for primary cooling from our cooling systems, possibly making CDC one of the most water efficient data centre operators¹⁵ in Australia and New Zealand.

Looking to work harder and build on this achievement, we have set the ambitious target of net zero carbon by 2030 for Scope 1, 2 and defined Scope 3¹⁶.

CDC's approach to net zero is to focus on material emissions through energy efficiency improvements, the provision of renewable electricity¹⁷ and on-site solar generation. We are addressing embodied carbon in our new data centres through the specification of sustainable certified,

recycled content and reduced carbon materials¹⁸. We intend to develop a detailed climate transition plan to align with ASSB standards and to address fossil fuels and refrigerants, although these represent a small component of CDC's emissions.

Our New Zealand data centres have been Toitū net carbonzero certified since 2022, whilst in Australia, we have offered our customers 100% renewable electricity¹⁹ from 1 January 2024.

CDC seeks to undertake best practice for operational waste management to lead us towards achieving our zero waste to landfill by 2030 target²⁰. This includes on-site weighing of waste and multiple waste streams to optimise recycling including paper and cardboard, organic waste, co-mingled recycling, metals, timber, batteries and e-waste.

When we consider the 'Stable planet' pillar, our focus is not just to meet expectations but to exceed them. We are seeking to drive innovation and set a benchmark for our industry colleagues to follow, as the sector shifts towards a lower carbon future.

Note: All references on this page are detailed in the [Notes section](#) at the end of the report.

FY24 performance

Stable planet

Carbon and energy

Water

Waste and circularity

Targets

1. Net Zero by 2030.

2. World-class data centre water usage efficiency.

3. Zero waste to landfill by 2030.

How we seek to achieve our targets

1. CDC's operations team focuses on energy efficiency improvements as the first step in carbon reduction. We intend to account for any remaining unavoidable emissions using 100% renewable electricity²¹ and high-quality carbon credits (offsets). Facilities in New Zealand have been Toitū net carbonzero certified since their opening in November 2022 and Australian operations aim to be net zero carbon for Scope 1, 2 and defined Scope 3 by 2030. In Australia, CDC provides 100% renewable electricity²² to match customer equipment and data centre electricity use through the surrender of an equivalent amount of renewable energy certificates (LGCs).

2. CDC is possibly one of the most water efficient data centre operators in Australia and New Zealand with an average Water Usage Effectiveness of 0.01. CDC's closed-loop chilled water system consumes almost no water in operation for primary cooling with the organisation using minimal water for operations.

3. CDC specifies sustainable, certified, low-carbon content products and repurposes waste to reduce landfill. It is also establishing systems to change the 'buy, use, throw away' economic model and facilitate reduced waste.

4. CDC seeks to undertake best practice for operational waste management to reduce landfill, which includes on-site weighing of waste and multiple waste streams (paper/cardboard, organic waste, co-mingled recycling, metals, timber, batteries and e-waste) to optimise recycling.

5. CDC's approach is guided by our [ESG Statement of Commitment](#) and ESG strategy.

Progress

CDC's achievements for the financial year ending in March 2024 included establishing systems and procedures to improve operational waste quality data, resource management, setting targets (waste) and baselines (water and carbon) as well as procuring 100% renewable electricity²³ to match customer and data centre electricity consumption through surrendering renewable energy certificates (LGCs). New Zealand achieved "Toitū environmark diamond" certification for its environmental management systems and Toitū net carbon zero certification for its carbon emissions.

We installed a ~90kW solar generation system and added more EV chargers to our carpark at NSW campus.

Related UN SDGs to Vision statements

6 CLEAN WATER AND SANITATION

7 AFFORDABLE AND CLEAN ENERGY

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

Note: All references on this page are detailed in the [Notes section](#) at the end of the report.

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CDC

Case study 1.



A leader in water efficiency

Context

Data centre facilities historically have used significant volumes of water to operate, consuming water to transfer heat away from servers to maintain optimal IT performance and prevent critical equipment failure. Whether through cooling towers or chiller systems, this generates huge amounts of water waste through evaporation. Determining a way to reduce this waste is a particularly pertinent challenge in countries like Australia, where severe droughts can significantly limit water resources.

Approach

CDC sought to address this issue at its inception, fostering an innovative approach in its initial facility design plans back in 2007. By successfully implementing an advanced 'closed-loop' cooling system design, CDC has managed to eliminate the

water waste caused by evaporation in traditional cooling methods. CDC has taken a deliberate approach to design and implement an industry-leading closed-loop cooling system, which eliminates the consumption of water for cooling across all its facilities. Reducing water consumption enables this vital resource to instead be used by the communities CDC operates in.

Outcome

This innovation is considered a genuine game changer, CDC's closed-loop cooling systems are designed to save up to 5 billion litres of water each year. This is equivalent to about 2,000 Olympic sized swimming pools of water savings, per year²⁴. As a result, CDC's facilities are considered some of the most water efficient data centres in Australia and New Zealand, with its approach firmly positioning the business as an industry leader as an industry leader in water usage.



Note: All references on this page are detailed in the [Notes section](#) at the end of the report.

Progress. Secured.

29

Case study 2.



Innovative approaches to construction that deliver meaningful impacts



Context

The construction of large-scale, highly secure data centres presents numerous sustainability impacts. They rely upon large quantities of cement, the key ingredient in concrete. According to the [World Economic Forum](#) the manufacture of cement is responsible for around 8% of total global CO2 emissions. Furthermore, traditionally the building industry produces significant waste – in New Zealand, waste generated from construction and demolition contributes to almost half of the country’s annual landfill waste²⁵.

A critical aspect of CDC’s sustainability approach is to consider and manage potential environmental impacts at the beginning of the project. As such, CDC sought to address these issues in its initial designs when developing its data centre in Hobsonville, New Zealand.

Approach

CDC partnered with digital-first contractor, Built, to deliver its Hobsonville facility. Following a thorough assessment, the best opportunity to decarbonise the project was by procuring lower carbon concrete mixes, prompting Built to request concrete mix data from its subcontractors. This information enabled Built to engage a concrete supplier that offered 20% less

embodied carbon in its product when compared to a typical mix.

To reduce the amount of construction waste sent to landfill by the project, Built implemented monthly reporting and tracking of waste produced to identify inefficiencies in its construction output. Additionally, Built hired an offsite subcontractor to sort through waste and recycle materials where possible, to increase diversion of construction waste from landfill.

Outcome

These two sustainability initiatives are estimated by Built to have resulted in the following approximate outcomes:

- 30% reduction in cement used
- 263 tonnes reduction in CO2 emissions associated with the construction of the data centre – roughly equivalent to the annual emissions of 57 cars
- 194 tonnes or 90% of construction waste diverted from landfill

CDC’s Hobsonville data centre has been operational since 2022, with the construction process of its extension delivering reduced embodied carbon and construction waste in New Zealand.

Source: Built, data from June 2024

Note: All references on this page are detailed in the [Notes section](#) at the end of the report.



Thriving people



Categories

- Safety and wellbeing
- Diversity and inclusion
- Excellence and growth
- Community impact

Vision statements

1. A safe and supportive place to work.
2. An industry leader in diversity and inclusion.
3. Develop a high-performance and purpose-driven team.
4. Make a measurable difference in our communities.

Our people

Our people are foundational to our ability to develop and maintain the critical infrastructure that comprises CDC’s operations.

Creating a safe place for our employees to thrive is achieved through our commitment to continual improvement in the areas of health and safety–evidenced by our ISO45001 certification²⁶–as well as our significant efforts to foster a culture of diversity and inclusivity. We take action to increase the number of women and gender diverse people across the business²⁷, including launching the Women Rising Program and Girls in ICT work experience Program. At CDC, we also incorporate gender pay gap analysis in the annual remuneration review process to work towards closing these gaps.

To help our people grow and excel in their careers we have established the CDC Academy. The CDC Academy is CDC’s proprietary designed, dedicated learning hub for educating and training our people with the skills, knowledge and competencies required to deliver excellence and perform to the highest standards. We are currently extending this across new domains and are on track to establish it as the sole training hub for the entire business from 2025 onwards.

Our communities

CDC is a proud supporter of a wide range of community organisations, including social charities and sporting associations. We are passionate about creating positive benefit in the communities in which we operate and encourage our staff to do the same using their annual days of volunteering leave. CDC seeks to make a measurable difference in our communities by achieving the targets with respect to volunteering hours and charity support set out in the following section of this report.

CDC has longstanding relationships with Aboriginal and Torres Strait Islander Peoples organisations in Australia and Māori organisations in New Zealand. We have developed an Indigenous Participation Plan with a vision to provide employment opportunities for Aboriginal and Torres Strait Islander people and through employment foster the growth and development of people belonging to these cultural groups within our business. This plan is in alignment with the Australian Commonwealth Government Indigenous Procurement Policy.

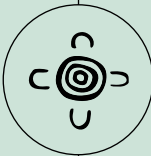
Note: All references on this page are detailed in the [Notes section](#) at the end of the report.

FY24 performance				
Thriving people	Safety and wellbeing	Diversity and inclusion	Excellence and growth	Community impact
	1. A safe and supportive place to work.	2. An industry leader in diversity and inclusion.	3. Develop a high-performance and purpose-driven team.	4. Make a measurable difference in our communities.
Targets	1. Continue to achieve ISO 45001 (safety) certification at all data centres annually. 2. Continue to develop and implement a mental wellness program, training CDC employees and incorporating a variety of external mental health resources. 3. Increase the number of women and gender diverse people across the business from 2024 levels. 4. Develop a framework to embed the principles and purpose of a First Nations Reconciliation in Australia and Māori Reconciliation in New Zealand. 5. Achieve 100% of CDC employees utilising the CDC Academy annually from 2025. 6. Establish local support causes in new markets within the first year of being operational. 7. Increase volunteering hours and support of causes annually.			
How we seek to achieve our targets	1. CDC maintains ISO45001 (safety) certification to support its commitment to health, safety and wellbeing. It also follows a robust framework based on CDC's HSE Policy and the ISO45001 standards, seeking to meet the highest safety standards and continually improve its approach. CDC leadership regularly reviews health and safety for improvement. 2. CDC fosters a culturally diverse work environment with equality and fairness analysed by industry metrics, like the Workplace Gender Equality criteria. Its policies include gender-neutral parental leave and it is commencing an Indigenous Participation Plan to increase employment opportunities. We have created programs to help women in construction and STEM. 3. A culture of purpose and high-performance is fostered through varied training methods and personalised business development plans. 4. CDC supports a range of community groups, charities and sporting organisations that make a difference in its communities. It also provides volunteer leave, for employees to invest this in their chosen community.			
Progress	CDC's social achievements for the financial year ending in 2024 included maintaining its safety certification, improving its systems and procedures for training and workplace diversity, and implementing policies and programs for social equity and community support. CDC maintained its ISO 45001 (safety) certification at all data centres. A wellbeing program was established, the Indigenous Participation Plan was developed, CDC staff received training through CDC Academy, over 14 local charity causes were supported and initiatives were undertaken in each locality.			
Related UN SDGs to Vision statements	3GOOD HEALTH AND WELL-BEING 4QUALITY EDUCATION 5GENDER EQUALITY 8DECENT WORK AND ECONOMIC GROWTH 10REDUCED INEQUALITIES 11SUSTAINABLE CITIES AND COMMUNITIES			

Case study 3.
CDC Academy Context The data centre industry is still in its early stages across Australia and New Zealand, with a relatively small workforce servicing the region. As a result, CDC quickly discovered that there is no existing 'off the shelf' training package to provide to staff. To maintain its vision of being Australia and New Zealand's most secure and trusted data centre operator, CDC understood it needed to develop its own training capability to develop the highest level of proficiency in its employees. Approach CDC established our CDC Academy in 2022 - a purpose built and designed, dedicated learning hub for educating and training staff. The curriculum covers four broad areas of development: - Personal - Professional - Leadership - Compliance training This holistic program lays the foundation for the training of technical and professional skills while focusing on overall development and wellbeing. The modules are structured to link back to CDC's Outcome The CDC Academy has had great participation, with 284 staff undertaking at least one of its programs in the reporting period. Encouraged by this uptake, CDC is creating developmental programs for job roles across CDC, so staff can actively manage and progress their own career development. This program highlights clear promotional paths and give employees the knowledge they need to make informed decisions regarding their career direction. The enthusiasm shown by staff to learn from the Academy is helping CDC work towards its vision of having Australia's most skilled and competent data centre team. We are aiming to establish the Academy as the business' sole training hub from 2025 onwards.



Case study 4.



CDC Indigenous participation



CDC has been working in partnership with BY Group since 2018, with the First Nations founded organisation providing support on a range of CDC's major infrastructure projects.

BY Group was founded in 2014 by three Bundjalung men with a vision to provide sustainable employment and foster economic independence for Indigenous workers in the building sector.

The business has grown to more than 40 staff working across Australia and New Zealand and credits CDC's support in the company's expansion.

The partnership between both organisations has gone from strength to strength, with CDC investing significantly in this relationship.

One of BY Group's eight original fulltime employees, James Woods, has been seconded to CDC since September 2023²⁸. In addition to his work within the Development Pre-Construction team, James mentors other Indigenous professionals.

"Working at CDC allows me to represent Australia's shared Aboriginal History all the while being at the forefront of securing Australia's future - something I can take great pride in," he said.



Note: All references on this page are detailed in the [Notes section](#) at the end of the report.



Trusted company



Categories

- Trust
- Data security
- Resilience and innovation

Vision statements

1. Australia and New Zealand's most trusted data centres.
2. An industry leading integrated security posture.
3. Innovate for longevity in a changing climate and world.

CDC provides the critical digital data infrastructure that underpins national security, social and economic wellbeing.

Our focus on governance, data sovereignty, resilience and availability makes CDC a sensible choice for our customers who cannot – and will not – compromise on data security. Given the ever-evolving security threat environment, the organisation's unique ability to deliver this service ultimately comes down to one element - trust.

CDC's offering is grounded on being a trusted company by customers. Achieving and maintaining this trust relies on a robust approach across stakeholder engagement, governance, ethics and conduct, human rights, risk management, security, compliance, disclosures and a range of other factors.

CDC's approach includes four areas of business:

- Governance
- Strategy
- Risk management
- Metrics and targets

CDC's Board of Directors oversees the ESG Strategy and the Audit and Risk Committee is accountable for assurance and disclosures. The Chief Strategy Officer provides leadership to the Head of ESG, who works closely with the ESG working group to ensure that sustainability is integrated throughout the business and programs and initiatives work towards meeting CDC's ESG targets.

CDC incorporates climate risk mitigation into site selection, design and operation of our data centres. Sites undergo detailed due diligence processes, intentionally selecting sites that seek to avoid flood and bushfire risk.

Data centres are designed to handle extremes in weather, including high precipitation, drought and high temperatures. Resilience design features include double skinned roof, large gutters, outflows and rainwater tanks, impermeable facades and closed-loop chilled water system. The ability to withstand increased temperatures is designed into CDC's infrastructure and accommodated across equipment lifecycle periods.

CDC's operational risk management systems consider climate-related physical and transition risks.

In addition, CDC takes a holistic view of risk management that includes security risk considerations associated with physical and climate risks. CDC's data centres are meticulously designed for physical security and have achieved international standards and government security accreditations.

Our certifications across Australia and New Zealand

CDC maintains compliance with several governance and risk management certifications in addition to its security certifications. These include ISO 9001 Quality Management Systems, ISO 14001 Environmental Management, ISO45001

Occupational Health and Safety Management.

CDC demonstrates we are prepared for the future by continuing to invest and build for what lies ahead. Whether it is enabling AI, quantum, high-performance or supercomputing infrastructure, CDC's repeated investments represent the 'futureproofing' of the business and enables us to face the security challenges of tomorrow.



ISO 9001 is a globally recognised standard for quality management, demonstrating excellence in performance improvement, meeting customer expectations and quality management.



ISO 14001 is a globally recognised standard for environmental management systems. Certification demonstrates proactive measures to minimise environmental footprint, complying with legal requirements and achieve environmental objectives.



ISO/IEC 27001 is the world's best known standard for information security management systems (ISMS). Certification demonstrates effective systems and best practice processes are in place to manage information security risks to the business and its customers.



ISO 45001 is an international standard demonstrates our commitment to safety including leadership commitment, worker participation, hazard identification and risk assessment, legal and regulatory compliance, emergency planning, incident investigations and continual improvement.



Certification Pending 2025



Certification Pending 2025



Certification Pending 2025



CDC is subject to annual:

- SOC 1 Type 2
- SOC 2 Type 2 reports.

When commissioning of new data centres falls outside of the SOC reporting cadence, the new data centres are subject to initial:

- SOC 1 Type 1
- SOC 2 Type 1 reports.



CDC does not directly manage or access customer information, nor payment information. Notwithstanding this, CDC are PCI-DSS certified, demonstrating our risk management and security manage compliance with the standard.



CDC is certified at commissioning under the ANSI TIA-942 certification program at 'Rated-4: Fault Tolerant Site Infrastructure' demonstrating the highest standards in site selection, infrastructure, architectural, electrical, mechanical, safety and security.



CDC New Zealand data centres have achieved the Toitū net carbonzero and enviromark diamond. Demonstrating excellence in carbon footprint and emissions management.



CDC maintains 'Certified Strategic Facilities' status under the Australian Department of Home Affairs Hosting Certification Framework.



CDC is a member of the Australian Defence Industry Security Program (DISP) with data centres accredited by the Defence Security and Vetting Service (DSandVS) to Zone 4.



CDC Australian data centres are constructed and certified under the Security Construction Equipment Committee's (SCEC) consultant scheme to the physical and technical requirements for Zone 4 in accordance with the ASIO Technical Design Note 1-15.



CDC is a New Zealand Defence Industry Security Programme member and is accredited to contract to the New Zealand Defence Force.



CDC New Zealand data centres are constructed and certified to Zone 4 physical and technical security requirements in accordance with the NZSIS Technical Note.



Certification Pending 2025

FY24 performance

Trusted company

Trust

1. Australia and New Zealand's most trusted data centres.

Data security

2. An industry leading integrated security posture.

Resilience and innovation

3. Innovate for longevity in a changing climate and world.

Targets

- Be recommended as a sustainable leader in data centres as demonstrated by NPS survey results.
- Maintain completion of governance and ethical framework training by employees.
- Maintain governance and risk management certifications.
- Meet and exceed legislated security requirements for both cyber and protective security.
- Develop a framework for climate-related financial disclosures. Drive industry innovation to embrace new technology.

How we seek to achieve our targets

- CDC can maintain its position as a highly trusted data centre through its capabilities in providing reliable and secure service to clients. It regularly seeks to improve its service.
- Systems and infrastructure design in CDC exceed the legislated security requirements for critical infrastructure entities.
- CDC remains ambitious in its goals to solve problems, develop leaders and ability innovate.

Progress

CDC's achievements for the financial year ending in 2024 include maintaining the governance, risk management and security certifications previously listed in this section, improving systems and procedures for trust, governance, security and resilience.

It increased sustainability engagement with stakeholders, strengthened its supply chain security program and expanded its approach to support new technologies.

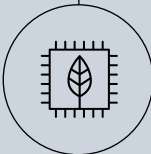
CDC's customers gave feedback via a Qualitrics Net Promoter Score (NPS) survey in September and October 2023, resulting in a NPS score of >82, with 93% of the respondents saying that sustainability is a priority. Employees completed governance and ethical training and preparation for the climate related financial disclosures framework commenced.

CDC supported CSIRO to install their high-performance supercomputer, Virga in its data centre, considered by CSIRO as the first deployment of its kind in Australia.

Related UN SDGs to Vision statements



Case study 5.



Trusted to shape the future of technology sustainably

Context

The current AI revolution will test the environmental practices of data centre providers. AI is power hungry - the IT equipment powering it requires more energy to run and more energy to cool down, as the complex algorithms inherent to AI equations requires substantially more computing power than standard search engine queries.

CSIRO has reported that 68% of businesses in Australia implemented AI-related technology in some capacity during the last 12 months. As more and more organisations start to incorporate future technologies across their processes and products, their computing power needs will increase and so too will their energy usage.

CDC's facilities are designed to meet the cooling and architecture demands of AI technology whilst still aligning to our sustainability targets. Our core design principles established in 2007 can handle the cooling requirements of AI without large-scale changes. This is a key distinction from some other data centre operators, who will generate additional embodied carbon emissions by retrofitting their facilities to be AI capable.

Approach

This is in large part due to CDC's closed-loop system that easily allows for liquid cooling of IT equipment, something that is required on a significant scale when powering large AI deployments.

This AI-forward approach to design and water use efficiency means our customers can trust that scaling up their use of AI with CDC can occur in alignment with sustainability goals on water efficiency.

Outcome

CSIRO has chosen CDC as the home for their high-performance supercomputer, Virga. This system is built on state-of-the-art Dell PowerEdge XE9640 servers and is the first deployment of its kind in Australia, designed to optimise AI workflows while maintaining power efficiency through direct liquid cooling.

CDC's AI-ready position is indicative of our preparedness for handling new and emerging technologies, solidifying ourselves as a company that is trusted to be well-equipped for the tech challenges of tomorrow.

"CSIRO introduced the first general purpose GPU cluster back in 2009. Since then we have worked with CDC to plan for where we saw this technology heading for the coming decade, and the sort of data hall we'd need to run it. Virga is our fourth generation GPU cluster, and it is already delivering benefits to our science, and will continue to for many years."

- Angus Macoustra, Chief Technology Officer, CSIRO

Case study 6.



Keeping our customers secure

Context

Data centres store valuable information at their facilities, hosting workloads relating to national defence, banking activity, health records and other sensitive areas. This can attract the attention of cyber criminals and other malicious operators.

The escalating global threat environment, marked by a rise in sophisticated cyber-attacks targeting governments and critical infrastructure, underscores the urgent need for reliable and secure data centres to protect the confidentiality, integrity and availability of customer information.

Whilst acknowledging the reality that it is not possible to guarantee against a cyber incident, one of CDC's most valuable strengths is developing and implementing security measures to provide customers with confidence that their sensitive information is safe.

Approach

CDC's data centres are meticulously engineered with multiple levels of redundancy to offer reliable service for our customers.

This confidence in our services is supported by a range of security measures, including:

- Layered security controls, creating defence in depth in our physical, technical and network security controls
- Principle of least privilege (PoLP) where personnel are afforded access to both premises and systems based on the exact requirements for their role, no more and no less.

- Promoting effective security culture and leveraging the capabilities of all personnel to contribute towards high-security outcomes.
- Enhanced resilience, allowing CDC to effectively respond to incidents and changes in the operating environment.

Outcome

CDC's facilities have achieved the highest security accreditations under the Australian and New Zealand governments' hosting frameworks and security requirements²⁹.

We have achieved SOC2 Type 2 certification, PCI DSS certification and ISO27001 certification. Additionally, we have been granted membership of the Defence Industry Security Program in both Australia and New Zealand, reflecting our trust within these government networks.

CDC's security controls are subject to a rigorous assurance program, leveraging a network of external experts in physical, cyber and technical security ensuring CDC's security controls remain appropriate to deter, delay, detect and respond to contemporary security threats.

All CDC's Australian facilities have been assessed and certified as a Certified Strategic Facility under the Australian Department of Home Affairs' Hosting Certification Framework. Similar certifications are currently under assessment at our New Zealand sites under the newly created Public Cloud Data Centre Certification Program.

Our robust security arrangements underscore our commitment to meeting our customers' mission-critical needs.

Note: All references on this page are detailed in the [Notes section](#) at the end of the report.

Metrics and performance

For further details on metrics, definitions, scope boundaries and calculation methodologies, see Appendix 1.

Category	Unit	FY24
Water		
Reportable Water Usage Effectiveness (WUE)	WUE	0.01
Energy		
Reportable Power Usage Effectiveness (PUE)	PUE	1.38
Carbon		
Total Scope 1 emissions	tCO2e	929
Total carbon offsets acquired under Toitū net carbonzero	tCO2e	217
Total Scope 2 emissions (location-based)	tCO2e	78601
Total Scope 2 emissions (market-based)	tCO2e	28919
Waste		
Operational waste to landfill	tonnes	25
Diversion from landfill for NSW Campus	%	91
Employee information		
Headcount permanent	FTE	280
Headcount fixed term contract	FTE	4
Employees by gender		
Female	FTE	74
Male	FTE	210
Return rate for employees after parental leave		
Females	FTE	100%
Males	FTE	100%
New jobs created	#	80
Training		
Employees who received professional training or development	%	100
Health, safety and wellbeing		
Total number of fatalities	#	0
Community Impact		
Number of causes or organisations supported	#	14
Cyber security and Data protection		
Completion of Security Awareness Training	%	100
Security breaches	#	0
Security certifications		
ISO/IEC 27001		
SOC 1 Type 1 and 2 reports, and SOC 2 Type 1 and 2 reports.		
PCI-DSS		
ANSI TIA-942 certification 'Rated-4': Fault Tolerant Site Infrastructure.		
'Certified Strategic Facilities' status under the Australian Department of Home Affairs Hosting Certification Framework.		
Australian Defence Industry Security Program (DISP) accredited by the Defence Security and Vetting Service (DSandVS) to Zone 4.		
Security Construction Equipment Committee's (SCEC) consultant scheme to the physical and technical requirements for Zone 4 in accordance with the ASIO Technical Design Note 1-15.		
CDC is a New Zealand Defence Industry Security Programme member and is accredited to contract to the New Zealand Defence Force.		
Certified to Zone 4 physical and technical security requirements in accordance with the New Zealand Security Intelligence Service (NZSIS) Technical Note.		
Customers		
Customer sustainability priority	%	93
Customer Net Promoter Score	NPS	>82
Ethics and integrity		
Confirmed incidents of corruption	#	0
Infrastructure ESG certifications		
Toitū enviromark diamond		
Toitū net carbonzero		

Appendices

Appendix 1 - Metrics and performance details

PUE and WUE

Power Usage Effectiveness (PUE) and Water Usage Effectiveness (WUE) are calculated as per the defined standards outlined in ISO/IEC 30134-2:2016 and ISO/IEC 30134-9:2022 across all Australian and New Zealand operational sites with 50%+ utilisation, representing the ratio of total data centre facility energy consumption (kWh) and total water consumption (L), to the IT equipment energy consumption (kWh). As third-party comparable data centres may use or evaporate water for the purpose of infrastructure cooling, PUE and WUE should always be considered together to determine the overall operational efficiency of the facility.

Carbon

For NGER reporting of greenhouse gas emissions, CDC reports Scope 1 and 2 greenhouse gas emissions in accordance with the National Greenhouse and Energy Reporting (NGER) scheme for its Australian data centres.

According to the facility and operational control definitions within the National Greenhouse and Energy Reporting Act (legislation.gov.au), CDC reports its customer ICT equipment electricity consumption in NGER Scope 2. For investor reporting of greenhouse gas emissions (this report), CDC reports Scope 1 and 2 emissions in accordance with the Greenhouse Gas Protocol Corporate Standard.

Chapter 3 of Greenhouse Gas Protocol Corporate Standard allows equity, financial and operational control and describes a nuanced (consolidation) approach to data centres, differentiating between customer IT electricity and overhead electricity to run the data centre infrastructure.

Whilst CDC maintains operational and financial control over its data centre facilities, it does not have operational or financial control of customer ICT equipment. Specifically, CDC has determined it does not have the authority to introduce and implement operating policies relevant to the customer ICT equipment.

Therefore, in alignment with Greenhouse Gas Protocol customer ICT equipment electricity consumption is classified as Scope 3 category 13 - downstream leased assets.

Methodologies used in this reporting period may be amended in future to continually improve accuracy, transparency and avoid double counting.

Total Scope 1 emissions

Scope 1 liquid fuel emissions are calculated in accordance with the NGER Measurement Determination in Australia and in accordance with the New Zealand Ministry for the Environment “Measuring Emissions: a guide for organisations (2023)” in New Zealand. Scope 1 refrigerant emissions are calculated in accordance with Greenhouse Gas Protocol Corporate Standard for Australia and New Zealand. For completeness, Scope 1 emission sources include:

- Diesel fleet cars
- Petrol fleet cars
- Forklifts
- On site Diesel Generators
- Refrigerants used in cooling equipment

CDC does not have medium voltage equipment containing SF6 at any of its data centres.

Total carbon offsets acquired for Toitū net carbonzero

Carbon credit offsets (217 tCO2e) purchased and administered through “Toitū net carbonzero” certification for New Zealand operations.

Total Scope 2 emissions (location-based)

Location-based emissions from grid electricity consumption, have been calculated with no consideration for LGCs or RECs. Calculation methodologies and carbon emission factors (CEF's) have been used in accordance with Australian and New Zealand government requirements (Australia's National Greenhouse and Energy Reporting Scheme and New Zealand Ministry for the Environment "Measuring Emissions: A guide for organisations (2023)").

Total scope 2 emissions (market-based)

Market-based emissions from grid electricity consumption, have been calculated by considering mandatory and voluntary LGCs and RECs, including RECs reported by customers or jurisdictions (for example New Zealand and Australia's Capital Territory), with the residual multiplied by the Residual Mix Factor (RMF). Surrender of LGCs occurs once per year in February (not aligning to CDC's financial year), so a component of FY2024 LGCs may be surrendered in 2025.

Diversion from landfill for NSW campus

Confirmed by True Waste certification for 12-month period ending April 24.

New jobs created

The creation of new roles that did not exist before, representing growth of employment opportunities within CDC. This figure specifically excludes recruitment for back-filling of existing roles.

Completion of security awareness training

Employees as of 31 March of the reporting year who have received and acknowledged annual security awareness training within the required deadlines.

Security breaches

Breaches that affected the confidentiality, integrity and availability of customers data.

Security certifications

HCF 'Certified Strategic Facility' certification status achieved at all Australian Data Centres.

CDC has achieved SOC1 Type 1 and 2 and SOC2 Type 1 and 2 re-certification and aim to achieve PCI DSS re-certification and ISO27001:2022 re-certification by the end of 2024.

Customer Net Promoter Score

Net Promoter Score (NPS) is a common metric used in customer experience programs. An NPS score measures customer loyalty by assessing their likelihood of recommending a given business.

NPS score is measured with a single-question survey and reported with a number ranging from -100 to +100, where a higher score is desirable. The NPS score is automatically calculated by Qualtrics based on customers responses to the single-question survey ("How likely are you to recommend CDC to a friend or colleague?").

Appendix 2 Statement details

2A – 100% renewable electricity offering

The term "renewable electricity" when used in this report means that CDC offers customers in Australia to match 100% of the volume of electricity associated with customer equipment and data centre usage by purchasing and retiring an equivalent volume of LGCs sourced from renewable energy projects to bring the carbon factor of the consumed electricity to zero. The LGCs are generated by 100% renewable electricity sources. CDC's purchasing of 100% renewable electricity is the key action aimed at meeting our (defined) net zero carbon by 2030 target by addressing the most material component of Scope 1 and 2 emissions. CDC wrote to its Australian customers offering them the option from 1 January 2024, of using 100% renewable electricity across its Australian campuses by surrendering an equivalent amount of Large Scale Generation Certificates (LGCs).

Where CDC is responsible for the purchase and surrender of voluntary LGCs on behalf of customers in Australia, it does so as a pass-through cost to the customer, without charging fees for this service. Customers may advise CDC if they surrender their own LGCs or Renewable Energy Certificates (RECs).

2B – CDC purchases sustainable, certified low-carbon content products

"CDC specifies the use of sustainable, certified, low-carbon content products in its data centres."

These certifications and low-carbon attributes are backed up by Environmental Product Declarations or product data sheets and include features such as:

- Carbon neutral products
- Reduced carbon products
- Recycled content used in manufacture
- GreenTag certification Forest Stewardship Council (FSC) certification
- Declare certification
- Red List Free certification

2C – Zero waste to landfill by 2030 target

The zero waste to landfill by 2030 target applies to operational waste and is defined by the achievement of zero waste certification, such as True Waste at CDC's campuses. Certification requires a minimum of 90% recycling rate to be achieved, along with processes to encourage a circular economy.

2D – Case study in water efficiency

"CDC's closed-loop cooling systems are designed to save up to 5 billion litres of water per annum. This is equivalent to about 2,000 Olympic sized swimming pools of water savings, per year."

This statement is based on 2021 study of data centre water consumption and average Olympic swimming pool volume of 2.5 million litres, noting that data centre water consumption may differ depending on efficiencies of scale and operating temperatures.

2E – Diversity and inclusion initiatives

The following initiatives contribute to create a more inclusive and equitable workplace, supporting the achievement of our gender diversity goals.

Recruitment Practices

- Using neutral language and prominently featuring our commitment to diversity in employee benefit statements and job advertisements. This approach seeks to attract a diverse pool of candidates.
- Seeking to engage with underrepresented groups by partnering with organisations and networks, for example women's professional networks.
- Providing Bias/Unconscious Bias Training for hiring managers and training on inclusive interviewing techniques, such as focusing on objective skills and behaviours rather than subjective judgments.
- Regularly revisiting and refining recruitment practices, checking for inclusivity and effectiveness to facilitate continuous improvement.

Apprenticeship and Graduate Programs

- CDC is developing an apprenticeship/graduate/internship program with a vision to cultivate talent from diverse backgrounds and provide ongoing opportunities for career advancement.

Collect and Analyse Data

- Regularly monitoring recruitment metrics to analyse the gender diversity of the applicant pool and recent hires to identify trends, gaps and areas for improvement.
- Seeking feedback from candidates, (hired – formally via the onboarding process and not hired – informally via conversations with recruiters) on their experience throughout the recruitment process to identify perceived barriers or biases.
- Conducting regular exit interviews to gain valuable insights to refine our practices.



Independent Limited Assurance Report to the Directors of CDC Data Centres Pty Ltd

Conclusion

Based on the evidence we obtained from the procedures performed, we are not aware of any material misstatements in the Selected Sustainability Metrics, which has been prepared by CDC Data Centres Pty Ltd in accordance with the criteria for the year ended 31 March 2024.

Information Subject to Assurance

The Selected Sustainability Metrics subject to this limited assurance engagement for year ended 31 March 2024, for CDC Data Centres Pty Ltd (ABN 59 125 710 394) (“CDC Data Centres”) are shown in the table below and represent the Information Subject to Assurance. The Selected Sustainability Metrics are presented in CDC Data Centres’ 2024 Sustainability Report (2024 SR).

The Selected Sustainability Metrics comprises the following:

Selected Sustainability Metrics	Units	FY24
Scope 1 GHG emissions	tonnes CO ₂ e	929
Scope 2 GHG emissions (location based)	tonnes CO ₂ e	78,601
Scope 2 GHG emissions (market based)	tonnes CO ₂ e	28,919

Criteria Used as the Basis of Reporting

The criteria used to calculate the Selected Sustainability Metrics includes the World Resources Institute / World Business Council for Sustainable Development Greenhouse Gas Protocol (GHG Protocol) as outlined in Appendix A: Methodology of the 2024 SR (together, the Criteria).

Basis for Conclusion

We conducted our work in accordance with Australian Standard on Assurance Engagements ASAE 3000 (Standard). In accordance with the Standard we have:

- used our professional judgement to plan and perform the engagement to obtain limited assurance that we are not aware of any material misstatements in the Selected Sustainability Metrics, whether due to fraud or error;
- considered relevant internal controls when designing our assurance procedures, however we do not express a conclusion on their effectiveness; and

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- ensured that the engagement team possess the appropriate knowledge, skills and professional competencies.

Summary of Procedures Performed

Our limited assurance conclusion is based on the evidence obtained from performing the following procedures:

- Enquiries with relevant CDC Data Centres personnel to understand the internal controls, governance structure and reporting process of the Selected Sustainability Metrics;
- Reviews of relevant documentation including basis of preparation and supporting process documents;
- Sample testing the Selected Sustainability Metrics to underlying evidence and recalculating mathematical accuracy of the calculations on a sample basis;
- Undertake analytical procedures over the Selected Sustainability Metrics;
- Site visits to selected CDC Data Centres locations
- Perform walkthroughs of the Selected Sustainability Metrics to source documentation;
- Evaluate the appropriateness of the criteria with respect to the Selected Sustainability Metrics; and
- Reviewed the 2024 Sustainability Report (2024 SR) in its entirety to ensure it is consistent with our overall knowledge of assurance engagement.

How the Standard Defines Limited Assurance and Material Misstatement

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Misstatements, including omissions, are considered material if, individually or in the aggregate, they could reasonably be expected to influence relevant decisions of the Directors of CDC Data Centres.

Use of this Assurance Report

This report has been prepared for the Directors of CDC Data Centres for the purpose of providing an assurance conclusion on the Selected Sustainability Metrics and may not be suitable for another purpose. We disclaim any assumption of responsibility for any reliance on this report, to any person other than the Directors of CDC Data Centres, or for any other purpose than that for which it was prepared.



Management’s responsibility

Management are responsible for:

- determining that the criteria is appropriate to meet their needs;
- preparing and presenting the Selected Sustainability Metrics to assurance in accordance with the criteria; and
- establishing internal controls that enable the preparation and presentation of the Selected Sustainability Metrics that is free from material misstatement, whether due to fraud or error.

KPMG

KPMG

Our Responsibility

Our responsibility is to perform a limited assurance engagement in relation to the Selected Sustainability Metrics for the year ended 31 March 2024, and to issue an assurance report that includes our conclusion.

Our Independence and Quality Management

We have complied with our independence and other relevant ethical requirements of the *Code of Ethics for Professional Accountants (including Independence Standards)* issued by the Australian Professional and Ethical Standards Board, and complied with the applicable requirements of Australian Standard on Quality Management 1 to design, implement and operate a system of quality management

Julia Bilyanska

Julia Bilyanska

Partner

Melbourne

5 December 2024

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Notes

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1. CDC offers customers in Australia to match 100% of the volume of electricity associated with customer equipment and data centre usage by purchasing and retiring an equivalent volume of LGCs sourced from renewable energy projects. For further information, see [Appendix 2A](#).

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2. Net zero carbon by 2030 for Scope 1, 2 and defined 3 (customer electricity, waste and business travel) is a market-based target which includes all Greenhouse Gases and is intended as the measured performance state at 2030. This market-based target accounts for Renewable Energy Certificates. From 1 Jan 2024 CDC is providing electricity that is 100% backed by renewable sources, which accounts for Scope 2 and customer electricity Scope 3. By 2030, CDC intends to achieve net zero carbon for the remaining Scope 1 and defined Scope 3 emissions by purchasing carbon credits.
3. The Indigenous Participation Plan is an internal framework to facilitate employment opportunities for Aboriginal and Torres Strait Islander Peoples.
4. [Toitū enviromark diamond certification](#) | [Toitū Envirocare](#). Toitū enviromark diamond certified means that the organisation has a robust Environmental Management System in place to prevent and reduce environmental impacts, which has been assessed and verified by the Toitū enviromark programme against a standard higher than the requirements of ISO 14001.

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5. CDC offers customers in Australia to match 100% of the volume of electricity associated with customer equipment and data centre usage by purchasing and retiring an equivalent volume of LGCs sourced from renewable energy projects. For further information, see [Appendix 2A](#).
6. [Carbon Management](#) | [Toitū Envirocare](#). Toitū net carbonzero certified means that emissions have been measured to ISO 14064-1 and Toitū requirements, managed and reduced against Toitū requirements and independent auditing and any unavoidable emissions offset following Toitū requirements.
7. [Toitū enviromark diamond certification](#) | [Toitū Envirocare](#). Toitū enviromark diamond certified means that the organisation has a robust Environmental Management System in place to prevent and reduce environmental impacts, which has been assessed and verified by the Toitū enviromark programme against a standard higher than the requirements of ISO 14001.
8. For further information, see [Appendix 1 – Metrics and performance details: PUE and WUE](#).
9. CDC’s Eastern Creek Campus in New South Wales is a TRUE (Total Resource Use and Efficiency) zero waste certified facility, which achieved at least a 90% waste diversion from landfill for the 12 month period ending April 2024.
10. For further information, see [Appendix 1 – Metrics and performance details: Customer Net Promoter Score](#).

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11. For further information on the security certifications, see [Metrics and performance table](#) and [Appendix 1](#).

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12. For further information, see [Appendix 1 – Metrics and performance details: Carbon](#).

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13. For the KPMG limited Assurance Report, see [Appendix 2F](#).

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14. CDC offers customers in Australia to match 100% of the volume of electricity associated with customer equipment and data centre usage by purchasing and retiring an equivalent volume of LGCs sourced from renewable energy projects. For further information, see [Appendix 2A](#).
15. We compare CDCs WUE measurement to published WUEs for comparable data centres to establish CDC as one of the most water efficient data centre operators in Australia and New Zealand.
16. Net zero carbon by 2030 for Scope 1, 2 and defined 3 (customer electricity, waste and business travel) is a market-based target which includes all Greenhouse Gases and is intended as the measured performance state at 2030. This market-based target accounts for Renewable Energy Certificates. From 1 Jan 2024 CDC is providing electricity that is 100% backed by renewable sources, which accounts for Scope 2 and customer electricity Scope 3. By 2030, CDC intends to achieve net zero carbon emissions for the remaining Scope 1 and defined Scope 3 emissions by purchasing carbon credits.
17. For further information, see [Appendix 2A](#).
18. For further information, see [Appendix 2C](#).
19. For further information, see [Appendix 2A](#).
20. For further information, see [Appendix 2D](#).

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21. For further information, see [Appendix 2A](#).
22. For further information, see [Appendix 2A](#).
23. For further information, see [Appendix 2A](#).

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24. For further information, see [Appendix 2D](#).

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25. As identified by the New Zealand Infrastructure Commission and the New Zealand Government, as part of the [New Zealand Infrastructure Strategy](#).

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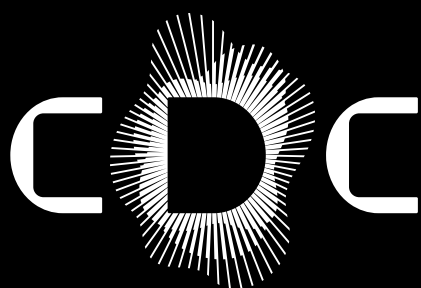
26. SO 45001:2018 Occupational health and safety management systems.
27. For further information, see [Appendix 2E](#).

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28. The secondment occurred during the reporting period.

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29. See [Metrics and performance table](#) for the complete list of security accreditations achieved by CDC.



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