# KAJIMA CORPORATION ENVIRONMENTAL DATA

# 2024

### **Environmental Policy**

Kajima, as the company "Building for the Next 100 Years," pursues a unique long-term environmental vision, doing its part in the broader social efforts to preserve the environment and ensure economic sustainability.

#### 1

We work to reduce the environmental impact of our business and take into consideration the entire lifecycle of the structures we construct. We thereby seek to help build societies which use materials responsibly, have a low carbon footprint, and harmonize with nature.

### 2

#### As a standard for achieving these goals, Kajima:

- Creates innovative technologies that help safeguard the environment and use resources sustainably;
  - Engages in construction management processes to prevent environmental damage caused by hazardous materials used in construction projects; and
    - Cooperates with the public, including by proactively disclosing information.



#### Kajima Environmental Vision

#### Background of Kajima Environmental Vision

Kajima assess environmental risks and opportunities in the construction business as follows.

Carbon Neutral Society	<ul> <li>To achieve the 2050 carbon neutrality goal, both adopting renewable energy and making society more energy efficient are urgent tasks.</li> <li>High expectation is observed to construction industry like initiatives to zero energy building (ZEB) since it is a high-priority measures from the standpoint that energy efficiency of buildings is in particular cost and reduction effectiveness together with adaptable easily.</li> <li>Resource usage has been largely utilized as well as CO<sub>2</sub> emissions related to the production, processing and transportation of materials.</li> </ul>
Recycling Resources Society	<ul> <li>There is a room for more efficient resource utilization since construction industry has a large amount of resource and waste consumption.</li> <li>Potential to take advantage of recycled materials (including derived from other industries),therefore, an important role in resource recycling.</li> <li>By leveraging the long-life of the building, the large role in the creation of stock society.</li> </ul>
Natural Symbiosis Society	<ul> <li>In the construction business, a role in modifying the direct natural environment through construction projects which has been involved in the local eco-system, as well as the potential of biodiversity restoration in the urban redevelopment.</li> <li>Since the urban concentration of the population progresses, the growing importance of biodiversity restoration in the city.</li> <li>Through wood procurement and resource procurement, biodiversity can be addressed in logged spots.</li> </ul>

#### Kajima Environmental Vision 2050plus

The previous environmental vision, established in 2013, was the Kajima Environmental Vision: Triple Zero 2050. It set out carbon neutrality, resource recycling and harmoniously co-existing with nature as the key aspects of a sustainable society and set three goals for Kajima to achieve by 2050: Zero Carbon, Zero Waste, and Zero Impact. This was our vision for the future, and the entire company has been working to achieve these goals.

Recently, however, we have updated the environmental vision, titling it the Kajima Environmental Vision 2050plus. With a new appreciation that the three initiative areas of carbon neutrality, circular economy, and nature positivity are interconnected, involving both synergistic effects and trade-offs, we have reset the Group's goals and action plans.

Knowing that we cannot fully implement the necessary initiatives alone, we have added the word "plus" to the name of the new environmental vision. This signifies our intention to work together with customers and society, and to remain persistent, so that the vision goals can be achieved by 2050. Based on the new vision, Kajima will continue to promote initiatives to help build a sustainable world where economic activity is balanced with environmental conservation.



#### **KPIs and Targets for 2050**

	Carbon Neutrality	Circular Economy	Nature Positivity
FY2050 targets	Achieve carbon neutrality Reduce the Kajima Group's greenhouse gas emissions (Scopes 1, 2, and 3) to net zero	Build a circular economy (Recycling rate of 100%) Update infrastructure using sustainable resources to create high-quality assets	Promote nature positivity Promote nature positivity throughout the supply chain and help build a society where ecosystem services can be enjoyed in a sustainable way
FY2030 targets	Emissions (compared to FY2021) Scopes 1 & 2 : -42% Scope 3 : -25% • 100% green electricity use • 65% biofuel adoption rate <sup>2</sup> • 40% usage rate for low carbon concrete <sup>2</sup> • 20% usage rate for steel framework produced by electric furnaces <sup>2</sup> • 100% ZEB achievement <sup>2</sup>	<ul> <li>60% recycled material usage rate for main materials<sup>1</sup></li> <li>99% recycling rate<sup>1</sup></li> <li>Full-scale adoption of wooden/wood-based buildings</li> <li>Social adoption of waste recycling technology<sup>1</sup></li> </ul>	Cumulative total of nature-based solutions (NbS) to be provided to customers and society (environmental certification, etc.): 100 <sup>1</sup> Expansion of nature positive initiatives on Kajima-owned land <sup>1</sup>
FY2026 targets	<ul> <li>Emissions (compared to FY2021) Scopes 1 &amp; 2 : -23% Scope 3 : -10%</li> <li>Adoption of green electricity</li> <li>Use of biofuels<sup>2</sup></li> <li>Use of low carbon concrete<sup>2</sup></li> <li>Use of steel framework produced by electric furnaces<sup>2</sup></li> <li>40% energy saving rate using ZEB<sup>2</sup></li> </ul>	<ul> <li>40% recycled material usage rate for main materials<sup>1</sup></li> <li>97% recycling rate<sup>1</sup></li> <li>Expansion of wooden/wood-based buildings</li> <li>Development of waste recycling technology<sup>1</sup></li> </ul>	<ul> <li>Number of NbS to be provided to customers and society (environmental certification, etc.): 10 / year<sup>1</sup></li> <li>Nature positive initiatives starting on Kajima- owned land<sup>1</sup></li> </ul>

1. Targets for businesses by Kajima (non-consolidated) and its domestic group companies

2. Targets for Kajima non-consolidated business

### Environmental Targets (FY2021-2023) and FY2023 Actual Figures

		Three-Year (FY2021–2023)Targets	FY2023 Results	
	Construction	<ul> <li>Reduce CO₂ emissions per unit of sales by 26% compared to FY2013→7% compared to FY2021</li> </ul>	Reduced by 0.2% compared to FY2021	
Carbon Neutrality	Design	<ul> <li>Deepen ZEB technologies that contribute to the decarbonization of customer companies. Strengthen promotion of the use of labeling systems such as ZEB and Building-Housing Energy-efficiency Labeling System (BELS)</li> <li>Deepen energy management technologies</li> </ul>	<ul> <li>Scope 3 (Downstream)</li> <li>Pushed the use of ZEB/ZEH labeling systems: 52% of new construction JOB Acquired ZEB/ZEH certification: 7 projects</li> <li>Non-residential energy conservation performance: BEI load average 0.64 (36% reduction)</li> <li>Deployment of renewable energy: 15 projects</li> <li>Scope 3 (Upstream)</li> <li>Application of environmentally friendly concrete: 17% of new construction JOB</li> <li>Application of electric furnace steel to major structural members: 50% of new construction JOB</li> </ul>	
/cle irces	Construction	<ul> <li>Less than 3% final waste disposal including sludge</li> </ul>	<ul> <li>3.0% final waste disposal including sludge</li> </ul>	
Recj	Design • Implement green procurement		<ul> <li>Implement green procurement: Average of 5.6 items proposed</li> </ul>	
ously Co- ith Nature	Design	<ul> <li>Implement outstanding biodiversity projects</li> </ul>	Selected six outstanding biodiversity projects     (building construction: 11, civil engineering: 1, frontier: 2)	
Harmonic Existing w	Construction	<ul> <li>Reduce the impact of construction on the natural environment (particularly through management of hazardous materials and polluted water)</li> </ul>	<ul> <li>No significant legal violations or environmental impacts</li> </ul>	
ative Areas	Research and Development	<ul> <li>We will work in close cooperation with the entire company to continue our activities with the following target in order to contribute to Triple Zero 2050:</li> <li>Deployment of more than six specific results of basic research and development over three years</li> </ul>	<ul> <li>Environment-related research and development activities</li> <li>Number of environmentally friendly technology developments (environmentally designated themes): 17 implemented</li> <li>Number of patents: 20</li> <li>Number of papers: 40</li> <li>Number of actual applications: 34</li> <li>Publicity for environment-related research results</li> <li>PR within and outside the company: 77</li> </ul>	
Common Foundation Initia	Engineering	<ul> <li>Respond to changes in social conditions and customer requirements</li> <li>Promote the prevention of environmental accidents involving various chemical substances</li> </ul>	<ul> <li>Confirmed Triple Zero (ZERO-CARBON, ZERO-WASTE) support for each project.</li> <li>Verified each project's compliance with various chemical substances</li> <li>Utilizing wastewater treatment technology to help increase orders</li> </ul>	
	Environmental Engineering	<ul> <li>Promote environmental management in concert with Group companies</li> <li>Make technical innovations and create projects based on Triple Zero 2050</li> </ul>	<ul> <li>Examined new goals/roadmap for decarbonization/ resource recycling/nature revitalization and formulated the Kajima Environmental Vision 2050plus</li> <li>Obtained SBT by setting a target value for the entire Kajima Group's decarbonization in FY2030</li> <li>Currently promoting projects in various fields including renewable energy, resource recycling, environmental infrastructure, and natural revitalization</li> </ul>	

### Material Flow

#### Construction Sites

IN	IPUT	
<ul> <li>Energy</li> </ul>		
Electricity	<b>7,616</b> ×10⁴kWh ✓	
Green electricity	<b>85</b> ×10⁴kWh	
Diesel oil	65,086 kl 🗸	
GTL	107 kl 🖌	
B100	<b>25</b> kl 🖌	
B5	<b>419</b> kl 🖌	
RD	<b>0.1</b> kł 🖌	C
Kerosene	<b>278</b> kl 🖌	
Gasoline	511 kł 🖌	
Heavy oil	<b>497</b> kl 🖌	
Gas	<b>8.1</b> ×10 <sup>4</sup> m <sup>3</sup>	
• Water*1		
Tap Water	<b>129</b> ×10 <sup>4</sup> m <sup>3</sup>	
<ul> <li>Construction materials</li> </ul>	<b>1,099</b> ×10 <sup>4</sup> m <sup>3</sup>	

#### OUTPUT

CO <sub>2</sub> emissions	<b>20.9</b> ×10 <sup>4</sup> t 🖌
Wastewater	<b>115.6</b> ×10 <sup>4</sup> m <sup>3</sup>
<ul> <li>Construction surplus soil</li> </ul>	<b>97.5</b> ×10 <sup>4</sup> m <sup>3</sup>
<ul> <li>Hazardous materials collected</li> </ul>	
Materials containing asbestos	<b>2,374</b> t 🗸
CFCs and halon	<b>1.0</b> t 🗸
Fluorescent tubes	<b>47.8</b> t 🗸
Construction waste	<b>180.5</b> ×10⁴t ✓
<ul> <li>Final disposal volume</li> </ul>	<b>5.4</b> ×10⁴t ✓

n° 🔽	Basic unit*2	13.9 t-CO <sub>2</sub> /10 <sup>2</sup> million
n³ 🗸	Reduction rate	0.2 %
	*2 Unit denominator is cor (undisclosed)	istruction volume (/billion yen)

Total emissions

Changes in CO<sub>2</sub> emissions attributable to construction

20.9 ×10<sup>4</sup>t-CO<sub>2</sub>

Volume of construction waste						
	auno					
Volume	<b>180.5</b> ×10 <sup>4</sup> t	<				
Volume (excluding sludge)	<b>117.8</b> ×10⁴t	<				
Final disposal volume	<b>5.4</b> ×10⁴t	<				
Final disposal volume (excluding sludge)	<b>4.3</b> ×10⁴t	<				
Final disposal rate	3.0 %	<				
Final disposal rate (excluding sludge)	3.7 %	<				

#### Office, real estate (common areas)

INPUT			OUTPUT		
<ul> <li>Energy</li> </ul>					
Electricity	<b>4,155</b> ×10⁴kWh ✓		CO <sub>2</sub> emissions	<b>1.8</b> ×10 <sup>4</sup> t	
Green electricity	<b>858</b> ×10⁴kWh				
Diesel oil	<b>7</b> Kl 🗸				
Kerosene	<b>11</b> kl 🗸				
Heavy oil	16 kl 🗸	0	Wastewater*1	<b>19.2</b> ×10 <sup>4</sup> m <sup>3</sup>	
Gasoline	<b>0.07</b> kl 🖌				
Gas	<b>170</b> ×10 <sup>4</sup> m <sup>3</sup>				
Heating, Steam, Cooling 14,065 GJ 🗸					
• Water*1			Volume of waste <sup>*1</sup>	<b>1,680</b> t 🗸	
Tap Water	<b>19.2</b> ×10 <sup>4</sup> m <sup>3</sup>				

\*1 The figures are offices of Kajima corporation and overseas offices only.

#### Scope: Kajima Corporation only

+ Construction sites: all domestic and overseas sites (excluding domestic affiliate companies and overseas subsidiaries)

• Office, real estate (common areas): offices of Kajima corporation and overseas offices (excluding domestic affiliate companies and overseas subsidiaries)

#### Regarding third party verification

•Environmental performance data for FY2023, including greenhouse gas emissions (Scope 1, 2, 3), energy use, tap water use, hazardous materials, and waste emissions were verified by Japan Quality Assurance Organization (JQA). Items indicated with 🗹 were verified by the third party. (Verification document attached to the end page)

## **Zero Carbon**

### Kajima (non-consolitated)

CO <sub>2</sub> emissions (construction sites, office sector) (FY)						
		2021	2022	2023		
Emissions	×10 <sup>4</sup> t-CO <sub>2</sub>	19.1	23.4	22.7		
Basic unit*	t-CO <sub>2</sub> /¥10 <sup>2</sup> million	15.3	16.4	14.6		
Reduction rate	%	(base year)	+6.7	+4.5		

\* The basic unit is sales (per 100 million yen)

CO <sub>2</sub> emissions from construction sites (FY)						
		2021(base year)	2022	2023		
Emissions	×10 <sup>4</sup> t-CO <sub>2</sub>	17.7	22.6	20.9 🗸		
Basic unit*	t-CO <sub>2</sub> /¥10 <sup>2</sup> million	14.0	16.0	13.9 🗸		
Reduction rate	%	36.4	+14.9	0.2 🗸		

\* The emissions calculation method was changed in FY2020 from making estimates based on sample data to obtaining the actual data from all construction sites \* Basic unit is sales of construction work (per 100 million)

					·	
Energy Consumption						
		2019	2020	2021	2022	2023
Total amount of energy consumption	×10 <sup>4</sup> kWh	109.1	77.9	86.6	108.2	105.7 🗸
Fossil fuels consumption	×10 <sup>4</sup> kWh	68.0	49.9	60.0	76.1	72.7 🗸
Construction sites	×10 <sup>4</sup> kWh	67.8	49.7	59.7	75.2	70.7 🗸
Offices	×10 <sup>4</sup> kWh	0.2	0.2	0.2	0.2	1.9 🗸
Diesel oil substitute consumption (B100, B5, GTL, RD)	×10 <sup>4</sup> kWh				0.6	0.6 🗸
Construction sites	×10 <sup>4</sup> kWh				0.6	0.6 🗸
Offices	×10 <sup>4</sup> kWh				0	0 🗸
Purchased electricity	×10 <sup>4</sup> kWh	14.6	9.9	9.4	11.4	11.8 🗸
Construction sites	×10 <sup>4</sup> kWh	12.1	7.3	6.6	8.7	7.6 🗸
Offices	×10 <sup>4</sup> kWh	2.5	2.6	2.8	2.7	4.1 🗸
Steam/Heating/Cooling consumption (only office)	×10 <sup>4</sup> kWh	0.6	0.6	0.6	0.5	0.5 🗸

\* The total amount of energy consumption is different from the simple total value of each energy consumption, since it sums up the value obtained by converting the purchased electric energy into the primary energy.

CO <sub>2</sub> emissions reductions associated with energy-efficient design of buildings (FY)							
		2019	2020	2021	2022	2023	
CO <sub>2</sub> emissions reductions associated with energy-efficient design of buildings	×10 <sup>4</sup> t-C0 <sub>2</sub>	97.5	63.4	61.6	126.6	126.7	

\* The amount of reduction (per year) resulting from energy conservation design of in-house designed buildings completed in the relevant fiscal year multiplied by the building's life cycle (60 years).

## **Zero Carbon**

Scope Type CO <sub>2</sub> emissions				(FY)
Kajima (non-consolitated)		<b>2021</b> * <sup>1</sup>	2022*1	2023
Scope-1	×104t-CO2	14.9	18.9	17.9 🗸
Scope-2	×10 <sup>4</sup> t-CO <sub>2</sub>	4.2	4.6	4.8 🗸
Scope-3	×10 <sup>4</sup> t-CO <sub>2</sub>	879.8	1,209.4	1,143.7 🗸
Category1*1 (purchased goods and services)	×104t-CO2	405.6	570.2	500.8 🗸
Category 2 (Capital goods)	×10 <sup>4</sup> t-CO <sub>2</sub>	8.7	9.9	8.4 🗸
Category 3 (Fuel- and energy-related activities)	×10 <sup>4</sup> t-CO <sub>2</sub>	2.8	3.5	3.3 🗸
Category 4 (Upstream transportation and distribution)	×104t-CO2	39.5	57.1	50.2 🗸
Category 5 (Waste generated in operations)	×10 <sup>4</sup> t-CO <sub>2</sub>	1.0	1.1	1.1 🗸
Category 6 (Business travel)	×104t-CO2	0.1	0.1	0.1 🗸
Category 7 (Employee commuting)	×104t-CO2	0.6	0.5	0.6 🗸
Category 8 (Upstream leased assets)	×104t-CO2	0.0	0.0	0.0 🗸
Category 9 (Downstream transportation and distribution)	×104t-CO2	0.0	0.0	0.0 🗸
Category 10 (Processing of sold products)	×104t-CO2	0.0	0.0	0.0 🗸
Category 11*2 (Use of sold products)	×104t-CO2	409.7	546.6	543.1 🗸
Category 12 (End-of-life treatment of sold products)	×104t-CO2	9.6	15.6	13.2 🗸
Category 13 (Downstream leased assets)	×104t-CO2	2.2	4.8	1.9 🗸
Category 14 (Franchises)	×104t-C02	0.0	0.0	0.0 🗸
Category 15*2 (Investments)	×104t-C02	0.0	0.0	21.0 🗸
Scope-1,2,3 total	×104t-CO2	898.9	1,232.8	1,166.4 🗸

\*1 In line with the acquisition of SBT certification in August 2023, the calculation method for Scope 3 Category 11 has been changed. As a result, the values for fiscal 2021 and 2022 have also been changed.

Category 11: C0<sub>2</sub> emissions during the operational phase of the life cycle (set to 60 years) of buildings completed in the relevant fiscal year are accounted for.
 2 Category 15: From fiscal 2023, C0<sub>2</sub> emissions from consolidated and non-consolidated subsidiaries and affiliates are included.

### **Zero Carbon**

#### **Consolitated Kajima Group**

Scope Type CO₂ emissions (FY)										
Consolitated Kajima Group			2021* <sup>1</sup>	2022*1	2023					
Scope-1	×104t-CO2		24.5	29.1	27.1					
Scope-2	×104t-CO2		12.9	13.8	14.3					
Scope-3	×104t-CO2		1,345.3	2,030.0	1,936.0					
Category*1 (purchased goods and services)	×104t-CO2		615.3	921.6	828.4					
Category 2 (Capital goods)	×104t-CO2		19.8	29.3	16.2					
Category 3 (Fuel- and energy-related activities)	×104t-CO2		6.0	6.5	5.9					
Category 4 (Upstream transportation and distribution)	×104t-CO2		57.8	89.7	81.1					
Category 5 (Waste generated in operations)	×104t-CO2		2.7	5.2	6.1					
Category 6 (Business travel)	×104t-CO2		0.3	0.3	0.3					
Category 7 (Employee commuting)	×104t-CO2		1.4	1.3	1.4					
Category 8 (Upstream leased assets)	×104t-CO2		0.0	0.0	0.0					
Category 9 (Downstream transportation and distribution)	×104t-CO2		1.3	0.6	0.4					
Category 10 (Processing of sold products)	×104t-CO2		0.0	0.0	0.0					
Category11*2 (use of sold products)	×104t-CO2		615.7	935.3	944.7					
Category 12 (End-of-life treatment of sold products)	×104t-CO2		13.2	26.0	22.5					
Category 13 (Downstream leased assets)	×104t-CO2		8.7	10.6	8.0					
Category 14 (Franchises)	×104t-CO2		0.0	0.0	0.0					
Category 15*2 (Investments)	×104t-CO2		3.0	3.7	21.0					
Scope-1,2,3 total	×104t-C02		1,382.7	2,072.9	1,977.3					

\*1 In line with the acquisition of SBT certification in August 2023, the calculation method for Scope 3 Category 11 has been changed. As a result, the values for fiscal 2021 and 2022 have also been changed.

- Scope 1: Not including diesel oil used by companies helping with overseas group companies on construction projects.

-Category 1: Including diesel oil used by companies helping with overseas group companies on construction projects.

Category 11: C02 emissions during the operational phase of the life cycle (set to 60 years) of buildings completed in the relevant fiscal year are accounted for.
 \*2 Category 15: From fiscal 2023, C02 emissions from consolidated and non-consolidated subsidiaries and affiliates are included. The totals for Scope 3 and each category do not match due to rounding.

Kajima Group CO <sub>2</sub> Emissions										
		Scope 1	Scope 2	Scope 1,2						
Kajima (non-consolidated)	×104t-C02	17.9	4.8	22.7						
Domestic Group companies	×104t-C02	7.9	2.2	10.1						
Overseas Group companies	×104t-C02	1.3	7.3	8.6						
Consolidated Kajima Group	×104t-CO2	27.1	14.3	41.4						

## **Zero Waste**

Overseas construction sites are excluded from the calculation because standards and treatment methods for waste are greatly different from country to country.

Usage of materia	age of materials											
N	laterial		2019	2020	2021	2022	2023					
Steel	Total usage	t			867,860	943,593	1,109,909					
Cement, concrete	Total usage	t	1,558,339	1,569,311	4,338,657	8,021,759	4,838,117					
Aggregate	Total usage	t	691,046	361,439	1,663,110	1,860,099	2,894,952					
Asphalt	Total usage	t	26,378	20,039	3,040	417,130	673,122					
Others	Total usage	t			1,200,113	2,111,643	1,478,622					
Total	Total usage	t	2,275,763	1,950,789	8,072,781	13,354,224	10,994,722					

\* Until FY2020, only main construction materials were aggregated; since FY2021, all construction materials have been aggregated.

#### Volume of construction waste and final disposal volume

		(11)				
		2019	2020	2021	2022	2023
Volume	×10 <sup>4</sup> t	145.5	159.2	228.6	188.2	180.5 🗸
Volume (excluding sludge)	×10 <sup>4</sup> t	88.4	102.1	151.5	120.8	117.8 🗸
Final disposal Volume	×10 <sup>4</sup> t	5.7	4.0	5.4	5.1	5.4 🗸
Final disposal Volume(excluding sludge)	×10 <sup>4</sup> t	2.9	3.3	3.7	4.3	4.3 🗸
Final disposal rate	%	3.9	2.5	2.4	2.7	3.0 🗸
Final disposal rate (excluding sludge)	%	3.3	3.2	2.4	3.6	3.7 🗸

\* The total disposal volume from construction sites and offices was 56.142t.

Emissions	bv wa	aste	category	(F	-Y2023)
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Construction waste	Volume	Percentage of waste volume
Concrete remnants	689,571t 🗸	38% 🗹
Asphalt Concrete remnants	116,501t 🗹	6% 🗹
Wood scrap	42,114t 🗸	2% 🗸
Construction sludge	627,766t 🗹	35% 🗹
Mixed waste	46,006t 🗹	3% 🗸
Waste plastic	9,832t 🗸	1% 🗹
Others	273,617t 🗸	15% 🗹
Total	1,805,406t 🗸	100% 🗹

Volume of offices waste									
		2019	2020	2021	2022	2023			
Waste	t	2,096.5	1,670.0	2,129.0	1650.8	1,680.4 🗸			

Amount of tap water consumption (FY)										
		2019	2020	2021	2022	2023				
Construction sites	×104m3	60.9	87.0	91.8	122.7	129.4 🗸				
Offices	×104m3	15.0	15.0	16.2	17.0	19.2 🗸				
Total	×104m3	75.9	102.0	108.1	139.7	148.6 🗸				

Amount of wastewater discharge									
			2020	2021	2022	2023			
Construction sites	×104m3		112.3	98.3	92.4	115.6 🗸			
Offices	×104m3		15.0	16.2	17.0	19.2 🗸			
Total	×104m3		127.3	114.5	109.4	134.8 🗸			

Note: At construction sites, more sewage is drained than tap water is used because rain and spring water are treated as sewage.

### **Zero Waste**

Waste	e treatment by ca	teg	lory								(FY)	
C	Construction waste		Concrete remnants			Asphalt Concrete remnants				Wood scrap		
			2021	2022	2023	2021	2022	2023	2021	2022	2023	
ing ry	Recycled volume	t	853,921	704,839	687,837 🗸	253,363	99,040	115,814 🔽	61,198	37,808	40,553 🗸	
cess itego	Reduction volume	t	18	20	331 🗸	33	4	40 🗸	686	411	785 🗸	
Pro Ca	Final Disposal volume	t	1,199	5,154	1,388 🗸	2,140	252	646 🗸	709	462	601 🗸	
Total volume t			855,138	710,012	689,556 🗸	255,535	99,296	116,501 🔽	62,593	38,681	41,938 🗸	
C	Construction waste		Construction sludge			Waste plastic*			Mixed waste			
			2021	2022	2023	2021	2022	2023	2021	2022	2023	
ing ry	Recycled volume	t	507,470	490,432	474,117 🗸	5,615	5,608	5,823 🗸	20,077	22,698	36,207 🗸	
cess itego	Reduction volume	t	47,787	34,920	40,771 🗸	805	823	874 🗸	2,643	1,880	1,584 🗸	
Pro Ca	Final disposal volume	t	17,581	8,143	11,455 🗸	2,403	2,386	3,135 🗸	7,915	11,235	8,216 🗸	
	Total volume	t	572,838	533,496	526,343 🗸	8,823	8,817	9,832 🗸	30,635	35,813	46,006 🗸	

\* Only plastics separated as waste are counted. This volume does not include plastics found in mixed waste.

#### Recycle rate by waste category

Recyc	Recycle rate by waste category										
(	Construction waste		Concrete remnants			Asphalt Concrete remnants				Wood scrap	
			2021	2022	2023	2021	2022	2023	2021	2022	2023
ing ry	Recycled rate	%	99.9	99.3	99.8 🗸	99.1	99.7	99.4 🗸	98.1	98.0	96.7 🗸
cess itego	Reduction rate	%	0.0	0.0	0.0 🗸	0.0	0.0	0.0 🗸	0.9	1.0	1.9 🗸
Pro Ca	Final disposal rate	%	0.0	0.7	0.2 🗸	0.8	0.3	0.6 🗸	1.0	1.1	1.4 🗸
Total %			100	100	100 🗸	100	100	100 🗸	100	100	100 🗸
(	Construction waste		Construction sludge			Waste plastic*			Mixed waste		
			2021	2022	2023	2021	2022	2023	2021	2022	2023
ing ry	Recycled rate	%	69.4	74.3	77.8 🗸	63.6	63.6	59.2 🗸	65.5	63.4	78.7 🗸
cess itego	Reduction rate	%	28.3	24.5	20.4 🗸	9.0	9.3	8.9 🗸	9.0	5.2	3.4 🗸
Pro Ca	Final disposal rate	%	2.3	1.2	1.8 🗸	27.2	27.1	31.9 🗸	25.8	31.4	17.9 🗸
	Total	%	100	100	100 🗸	100	100	100 🗸	100	100	100 🗸

#### Plastic reduction

The Plastic Resource Recycling Promotion Act came into effect in April 2022. At Kajima, as a mass producer that generates industrial plastic product waste, we are working to reduce and recycle such waste. Specifically, we are making efforts to continuously collect and recycle used products such as helmets, work clothes, and badges as well as to increase construction sites' recycle rates by promoting waste separation.

#### Consolitated Kajima Group

#### Volume of construction waste (excluding sludge)

	Material		2023
Total valuma	Non-consolitated	t	1,179,321
Total volume	Consolitated	t	1,547,173
Pagualad valuma	Non-consolitated	t	1,135,445
necycleu voluille	Consolitated	t	1,483,987
Final Disposal	Non-consolitated	t	43,876
volume	Consolitated	t	63,186
Dooyoling roto	Non-consolitated	%	96.2
necycling rate	Consolitated	%	95.9

## **Zero Impact**

### Management of hazardous substances

Recover amount of CFCs &	halons				(FY)
	2019	2020	2021	2022	2023
Recover amount 1	0.2	3.9	1.9	3.2	0.9 🗸
Recover amount of used flo	rescent lamp				(FY)
	2019	2020	2021	2022	2023
Recover amount t	43.3	49.2	66.4	49.1	47.8 🗸
Disposal volume of PCB inc	lude equipment				(EY)
	2019	2020	2021	2022	2023
Disposal volume	105 (unit)	0	0	0	204.4 (kg) 🗸
Disposal volume of hazardo	ous materials (disclo	osed from FY2017)			
	2019	2020	2021	2022	2023
CFCs/ halon, fluorescent lamps (mercury), asbestos and other hazardous materials	216,398	104,127	62,867	141,402	107,022 🗸
Recover amount of material	s containing asbes	tos			
	2010	2020	2021	2022	(FY)
Recover amount 1	6,197	14,251	8,916	5,627	2,374 🗸
Number of soil contamination	on surveys				
	2019	2020	2021	2022	2023
Number of surveys as a designated institution	9	9	25	15	15
Number of law investigation included in above number	4	4	8	9	11
Air pollutant emissions					
	2019	2020	2021	2022	(FY) 2023

		2019	2020	2021	2022	2023
NOX	t	1,120	821	987	1,252	1,196 🗸
SOX	t	167	122	147	186	178 🗸

### Harmoniously Co-Existing with Nature

j biodiversity projects (F12023)			
Project name	Area	Project name	
Rapidus Corporation's plan to build a new factory, IIM-1	Building construction	Hilton Okinawa Miyako Island Resort	
TOYOTA ARENA TOKYO	Building construction	KX-FOREST KARUIZAWA ResortHouse Kajima Karuizawa Izuminosato	
(Tentative) New Technical Center Construction in Kashiwanoha Campus City	Building construction	And 2 others	
Komazawa Comorevi Project	Civil	Construction of the new Katsurazawa Dam embankment (verification of universality and sustainability of the ecological conservation function of eco-stacks in cold regions)	
(Provisional Name) SHIBURA INSTITUTE OF TECHNOLOGY Omiya	Engineering		
Campus New Building Development Project		Coral Reef Restoration Project InCORE™ Launches in the	
Ing Inction MITSUI LINK-Lab Shinkiba 3 New Construction		Philippines Awarded by Asian Development Bank's international call for proposal	
(Tentative) ETPJ New Construction	Frontier	Kajima Hikageyama, Bonari Forest registered on Nationally Certified Sustainably Managed Natural Sites	
-	Project name Project name Rapidus Corporation's plan to build a new factory, IIM-1 TOYOTA ARENA TOKYO (Tentative) New Technical Center Construction in Kashiwanoha Campus City Komazawa Comorevi Project (Provisional Name) SHIBURA INSTITUTE OF TECHNOLOGY Omiya Campus New Building Development Project MITSUI LINK-Lab Shinkiba 3 New Construction (Tentative) ETPJ New Construction	Projects (I 12020)         Project name         Rapidus Corporation's plan to build a new factory, IIM-1       Building construction         TOYOTA ARENA TOKYO       Building construction         (Tentative) New Technical Center Construction in Kashiwanoha Campus City       Building construction         Komazawa Comorevi Project       Civil Engineering         (Provisional Name) SHIBURA INSTITUTE OF TECHNOLOGY Omiya Campus New Building Development Project       Frontier*         MITSUI LINK-Lab Shinkiba 3 New Construction       Frontier	

 $^{\ast} \textsc{Outstanding}$  initiatives other than projects constructed by Kajima

### 2023 Environmental accounting report

#### 1. Overview

Kajima limits environmental accounting to construction waste for the following reasons.

- Construction waste is managed by manifest system, together with high accuracy of numerical value (product category of emissions and disposal amount).
- Construction waste revealed to be the largest cost factor, which accounts for half of the total environmental cost based on the survey results of environmental accounting.
- Waste disposal is evaluated from both aspects of cost and environmental impact, and use it as an incentive for zero emissions.

2. Result on major construction	n major construction waste				
Construction waste	Volume of waste (152.1×104t)	Processing cost (144× ¥10 <sup>2</sup> million)	CO2 emissions (0.2×104t)		
Construction sludge	627,766t	7,882 × ¥10 <sup>2</sup> million	83t		
Concrete remnants	689,571t	2,942 × ¥10 <sup>2</sup> million	746t		
Asphalt concrete remnants	116,501t	514 × ¥10 <sup>2</sup> million	129t		
Mixed waste (organic)	42,868t	1,859 × ¥10 <sup>2</sup> million	90t		
Mixed waste (inorganic)	2,599t	98 × ¥10 <sup>2</sup> million	7t		
Wood scrap	42,114t	1,112 × ¥10 <sup>2</sup> million	446t		
Total	1,521,418t	14,406 × ¥10 <sup>2</sup> million	1,501t		
reference: All construction waste	1,805,406t	-	11,416t		
Percentages of major wastes	84%	-	13%		

Characteristics of the construction industry include the following.

• Wood scrap & mixed waste have large impact on treatment costs compared to emissions.

• Concrete remnants & asphalt concrete remnants are easily recycled, and, the impact on CO<sub>2</sub> emissions and the cost are small compared to the emissions.

#### 3.Evaluation

- CO<sub>2</sub> emission of 0.2x10<sup>4</sup>t caused by waste disposal in general is equivalent to over 0.7% of 20.9x10<sup>4</sup> tons, the CO<sub>2</sub> emissions from the construction work. (FY2022:0.6%)
- Waste disposal cost accounts for 1.0% of value of construction work. (FY2022:0.9%)

#### 4. R&D investment on addressing environmental issues

• R&D investment for addressing environmental issues in fiscal 2023 amounted to 9,400 million yen.

#### Calculation method

[Quantity]

• All quantity data of waste manifests are aggregated at Kajima's environmental information system.

[Cost]

• The processing unit price of each project was aggregated and set the average unit cost for each branch by-item.

[CO<sub>2</sub> emission]

- As for managed waste disposal sites, CO<sub>2</sub> emissions are estimated based on the existing survey literatures.
- The boundary is set to intermediary processing facilities and disposal sites which are first delivered from construction sites. Subsequent facilities are excluded.
- Project sites outside of Japan are excluded since applicable standards and treatment methods of construction waste vary widely from country to country.

### **Environmental Management System**



Kajima operates environmental management systems (EMS) that are ISO 14001 compliant. The Environment Committee (a special-purpose committee under the Sustainability Committee) implements initiatives in five sectors: civil engineering. building construction, environmental engineering, engineering, and research and development. Four subcommittees address environmental management, construction environments, plastics, and biodiversity as cross-sector issues, and working groups are also organized for matters such as addressing requirements under the Act on Rationalizing Energy Use.

Kajima surveys the energy usage of domestic and overseas Group companies and holds discussions regarding reduction measures with those companies that have the highest emissions.

### **Environmental Management** System Certification





### **Independent Verification Report**

### ADL

No.1811004913

**Independent Verification Report** 

#### To: Kajima Corporation

1. Objective and Scope Japan Quality Assume Organization (hereafter "JQA") was engaged by Kajima Corpornion (hereafter "the Company") to provide an independent verification on "Kajima Corporation - Calculation Results for FY2023" environmental performance data, revised July 10 2024 (hereafter "the Report)". The content of our verification was to express our conclusion, based on our verification procedures, on whether the statement of numerification was to express our conclusion, based on verification procedures, on whether the statement of numerification was to express our conclusion, based on verification procedures, on whether the statement of numerification was to express our conclusion, based on vasiewater discharge, waste volume, final disposal in volume, final disposal in and construction Waster recycling rate (hereafter "waste volume"), disposal and transfer volume of the 18 hzardnoss substances susceitated with construction work, disposal volume of PCB include equipment (hereafter" hazardnoss substances volume"), and Nok and SSO envirositions in the Report was corneedly measured and calculated, in accordance with the "Kajima Corponion - Calculation rule for environmental performance data due 2024" (hereafter" hazardnoss substances volume"), and Nok and SSO environmental performance data due 2024" (hereafter" the Rule"). The purpose of the verification is to evaluate the Report objectively and to enhance the credibility of the Report. to enhance the credibility of the Report. \*The fiscal year 2023 of the Company ended on March 31, 2024.

"The fiscal year 2023 of the Company ended on March 31, 2024.
De Conducts Verformed
Alexandread ender ender the second of the second ender with "SO 14064-3" for GHG emissions for Scope 1, 2 and 3 and energy consumption, and with "SAE3000" for tap water consumption, waterwater dischange, water volume, hazardous substances volume, and NOx and SOx emissions, respectively. The scope of this verification assignment overse mergy derived CO<sub>2</sub> emissions from Scope 1, 2 and 3 (adegover) 2.2.3.8, 57, 820, 111, 121, 314 and 150 as GHG emissions; prepercived of the total emissions, consumption, mount of dischange and anount of volume in the Report. The organizational boundaries of this verification vest conducted to a limited Ved of assume and quantitative metriality was set a 2 percent each of the total emissions, consumption, amount of dischange and anount of volume in the Report. The organizational boundaries of this verification vest conducted to a limited Ved of assume and quantitative metriality was set a 2 percent each of the total emissions, consumption, amount of dischange and anount of volume in the Report. The organizational boundaries of this verification vest construction is seand of viel empiriceng its vortenas evolutions. A domestic leased properties of the Company.
Our verification procedures included:
Our verification procedures included:
Ourschendeng activity amount dia of two offices and two lanced properties on the basis of sampting, to evaluate accursely of actualited results for GHG emissions (Scope 1 and 2) and energy consumption.
Ourschendeng activity amount due for offices to the basis of sampting, to evaluate accursely of actualited results for GHG emissions; calculation substances volume; and sales volume.
Assessment to check the proprise open aboundaries, calculation substance accursely of alculated results for typ water consumption, substances volume, NOx and SOx emissions; and monitoring and calculation system and its con

3. Conclusion Based on the procedures described above, nothing has come to our attention that caused us to believe that the statement of the information regarding the Company's PY/2023 GHG emissions (Score 1, 2 and 3); energy consumption; tap water consumption water outputs, have a state outputs, have a state output and the statement of the information regarding the Company's PY/2023 GHG emissions (Score 1, 2 and 3); energy consumption; tap water consumption; concret, or has not been prepared in accordance with the Rule. In addition, the main scope of this verification assignment and calculation results are shown in Table 1.

\*Please refer to the previous page.

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#### No.1811004913

4. Consideration The Company was responsible for preparing the Report, and JQA's responsibility was to conduct verification of GHG emissions (Scope 1, 2 and 3); energy consumption; tap water consumption; wastewater discharge; waste disposal volume, hazardous substances volume; and NOx and SOx emissions in the Report only. There is no conflict of interest between the Company and JOA.



Sumio Asada, Board Director For and on behalf of Japan Quality Assurance Organization 1-25, Kandasudacho, Chiyoda-ku, Tokyo, Japan July 25, 2024

\*Please refer to the previous page and the annex in the next page.

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#### ADL

#### No.1811004913

### Independent Verification Report ANNEX

#### To: Kajima Corporation

GHG emission	ons		
Scope 1			178,97
Scope2		1 C	48,05
Scope3		1 Г	11,436,56
	category1		5,007,83
	category2	1 E	83,67
	category3	- E	33,35
	category4		501,54
	category5		11,41
	category6	1 .co [	1,06
Saama 2	category7		5,93
Breakdown	category8		
Dicakooni	category9		
	category10	JL	
	category11		5,430,62
	category12		131,92
	category13	JL	19,33
	category14	l L	
	category15		209,85
Energy			
Total amount	of energy consumption	MWh	1,057,06
Water			
Tap water con	nsumption	m <sup>2</sup>	1.485.82
Wastewater of	lischarge	m <sup>3</sup>	1,347,64
Waste			
Volume of co	onstruction waste(including sludge)	t	1,805,40
Final disposa	l volume of construction waste(including sludge)	t	54,46
Final disposal rate of construction waste(including studge)		%	3.
Construction Waste recycling rate		%	96
Volume of office waste		t	1,68
Hazardous su	bstances		
18 Hazardou	s substances volume	t	107,02
NOx emissio	ns	1	1,19
SOx emissions			

\*Please refer to the previous page

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