Sustainability Report
2024

GHELLA

1894

GHELLA

1894

130TH
ANNIVERSARY

Italy, Brenner
Photo by Andrea Botto

Highlights 2024

39,04

tCO_{2eq} / revenue in millions of euros

scope 1 and 2 emissions (location-based)
-> -42% vs baseline 2021

94

GWh produced
by photovoltaic

33,89

tCO_{2eq} / revenue in millions of euros

scope 1 and 2 emissions (market-based)

3,24

LTIFR

LTIFR safety index -> -41% vs baseline 2021

0,97

Ml/ revenue in millions of euros

water withdrawals -> -35% vs baseline 2021

~ 1,3

billion euros

of economic value generated

93%

of recovered non-hazardous waste

94%

procurement costs to local suppliers

76%

of excavated material reused on-site or off-site

92%

of economic value distributed
to external stakeholders

Letter to stakeholders

Progress, sustainability and the creation of shared value: building a brighter tomorrow.

2024 marked a period of growth for Ghella. In a context of global uncertainty, ***we strengthened our position*** *in the construction sector, confirming our reputation as a reliable and trusted partner for major works and strategic projects. Our commitment to sustainability and innovation* ***allowed us to generate value to all our stakeholders*** *and contribute to a greener tomorrow.*

Sustainability is at the heart of our company's strategy. *We firmly believe that enduring success hinges on* ***protecting the environment*** *and the* ***welfare of the communities*** *in which we operate. Although the introduction of the Corporate Sustainability Reporting Directive has been postponed, we have already begun the process of aligning with its requirements. In an era characterised by significant geopolitical tensions that could divert attention from pressing environmental challenges, Ghella remains committed to pursuing a responsible path towards a better future.*

Our projects - ranging from ***sustainable mobility*** *to* ***photovoltaic plants*** *and including* ***strategic water infrastructure*** *- clearly demonstrate our efforts to support decarbonisation of the planet.*

In 2024, we generated a total economic value of ***€1.3 billion, which was distributed among our stakeholders***, *including employees, suppliers, public authorities and local communities. We strongly believe that a company's success should go hand in hand with development of the area where it operates.*

Recognising the environmental footprint of our activities, we are committed to minimising it. ***Our goal is to reduce greenhouse gas emissions by 25% by 2030***, *through a transition to renewable energy and the gradual adoption of biofuels at our sites.* ***We support the principles of the circular economy*** *by reusing most of the excavated soil and recovering almost all non-hazardous waste.*

The ***health*** *and* ***safety*** *of our personnel is of utmost importance. Through our renewed commitment to fostering a shared safety culture at construction sites, we achieved a* ***substantial reduction in accidents*** *in 2024.*

Our dedication to sustainability has further strengthened our relationships with financial institutions. We have obtained new ***sustainability-linked financing***, *marking a milestone in our journey towards responsible growth.*

Looking ahead, Ghella embraces ***the future with*** *pride and optimism, as we* ***commemorate our 130th anniversary***. *Our commitment to* ***innovation***, ***sustainability***, *and* ***development*** *remains unwavering, as we aim to generate shared value and shape a* ***better future for generations to come***.

I extend my heartfelt thanks to all those who have been part of this journey and ***reaffirm our promise to build together a more sustainable future***.

Enrico Ghella,
Chairman and Chief Executive Officer

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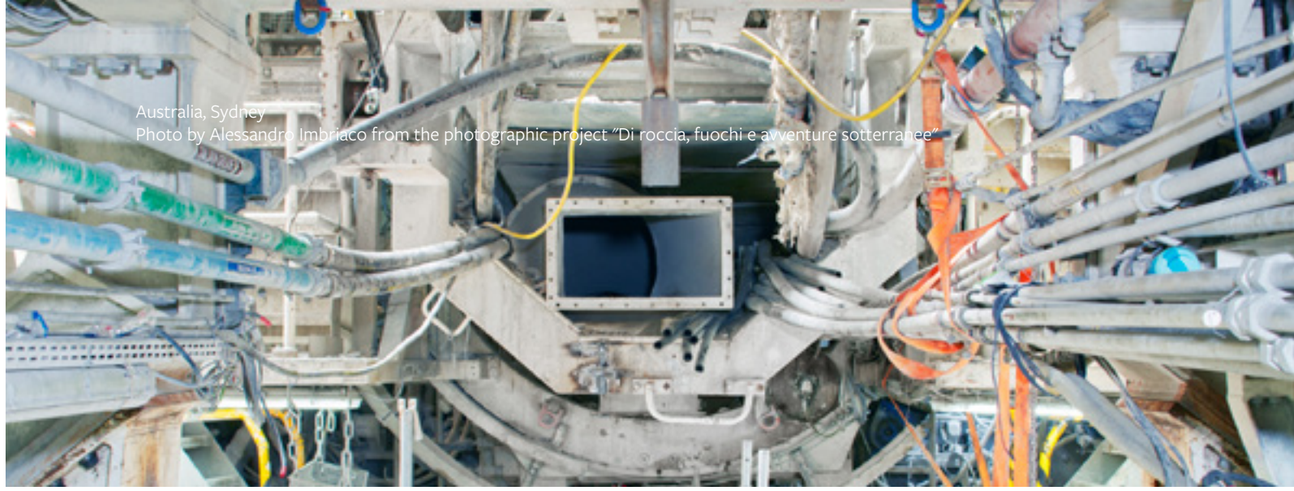
GHELLA

1894

New Zealand, Auckland
Photo by Giulia Parlato from the photographic project "Nuove avventure sotterranee"

Our company


Australia, Sydney
Photo by Alessandro Imbriaco from the photographic project "Di roccia, fuochi e avventure sotterranee"

	ONGOING PROJECTS*
Brenner, Turin, Trento, Turin - Lyon, Salerno - Reggio Calabria, Naples - Bari, Palermo - Catania, Campolattaro ITALY	12
Sydney, Brisbane, Melbourne AUSTRALIA	05
Sao Paolo BRAZIL	01
Toronto, Vancouver CANADA	02
Lyon - Turin FRANCE	01
Auckland NEW ZEALAND	01
Oslo NORWAY	01
Hanoi VIETNAM	01

With a **history spanning over 150 years** in tunnelling, we founded our company in 1894, embodying our enduring spirit of **exploration**. Today, we are proud to be recognised as a major **global force in the construction of large-scale public projects**.

With expertise in underground excavation, **spanning five generations**, we have completed over 190 tunnels, connecting more than 1,000 km of **metros**, **railways**, **motorways**, **and hydraulic works**.

Our commitment is rooted in a business model that prioritises creating a **better world for future generations**.

Our active presence in the **renewable energy** sector is marked by our successful execution of **strategic photovoltaic** and **hydropower projects** across Italy, Central America, and the Middle East. Our corporate philosophy focuses on the well-being of society.

We strive to enhance communication, foster freedom of movement, lessen environmental impact, and optimise the use of natural resources. We build to the highest standards of quality, innovation, and sustainability. To achieve these objectives, we utilise cutting-edge technologies and pioneering construction techniques, while continually investing in personnel development. Occupational safety and environmental preservation are paramount to us. We are dedicated to catalysing economic growth and nurturing social development in every region where we operate.

With a legacy dating back to 1867, we continuously evolve with a renewed spirit of discovery, **identifying new opportunities** and **driving progress**. We take pride in our diverse community of over **6,000 people**, **speaking 24 languages**, **residing in 15 countries**, and operating **across four continents**, primarily in Oceania, Europe, North and South America, and West Asia.

PRODUCTION *(km excavated as at 31/12/2024)*

304 ***km*** *with TBM*

262 ***km*** *with conventional method*

21 ***km*** *with pipe jacking*

ROADS AND MOTORWAYS*

16 Motorways

>300 Km of roads

RAILWAYS AND METROS*

41 Railways

18 Metros

WATER*

30 Hydraulic projects[1]

10 Hydroelectric installations

PHOTOVOLTAIC*

66,4 MW in operations

COUNTRIES

15

LANGUAGES

24

**Data as at 31 December 2024 (presented in schematic form)*

Photo from the Historical Archive

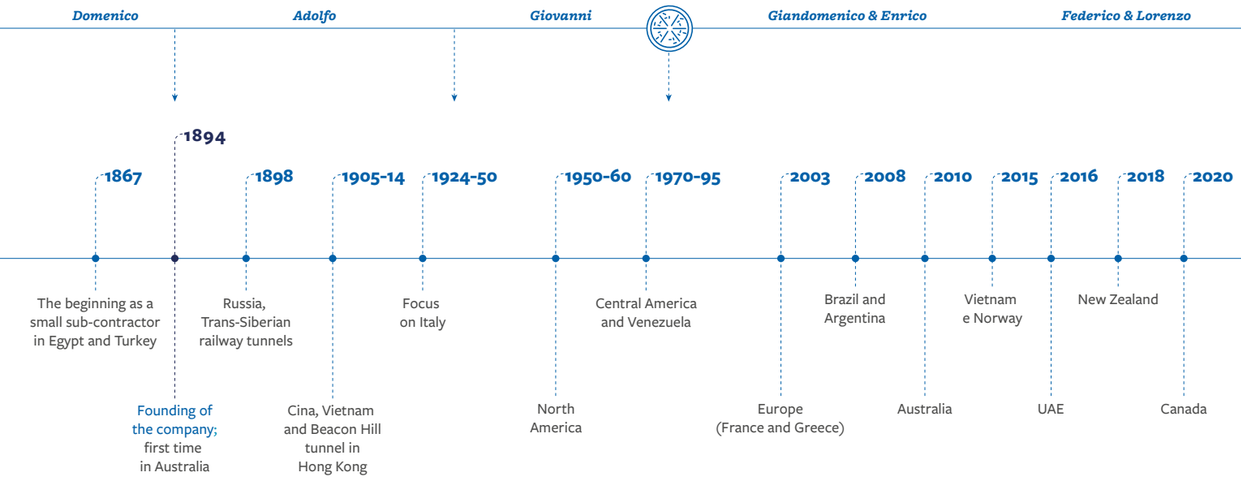


Photo from the Historical Archive

Since our founding 130 years ago, our company has witnessed and contributed to the unfolding of modern history through five generations. During this time, we have transmitted invaluable knowledge, technical expertise, and an enduring sprit of curiosity. Each generation has left a lasting legacy by overcoming formidable challenges.

Vision

LEAVE A BETTER WORLD FOR FUTURE GENERATION

Mission

BUILD EXCELLENCE IN A SUSTAINABLE AND INNOVATIVE WAY

Our sustainability journey begins with a **Vision** of the future which we aspire to create by sharing our business decisions: a **better world for generations to come**.

We recognise that achieving this vision can only be accomplished through the **collective efforts** of **various stakeholders**: governments, organisations, companies, and civil society. This is why our corporate **Mission** – to uphold our legacy as '**Builders** of **Excellence**' on a path of **innovation** and **sustainability**, along with a clear set of **values** to govern the behaviour of everyone within our organisation – is the central focus of all our daily operations.

The company's Vision and Mission are fundamentally linked to **Sustainability**, since we aim to **integrate** sustainability principles into all aspects of our business operations: from **selecting projects** through to the **methods** we **employ** when **executing** them, from **strategic** and **management processes** through to **on-site operational procedures**.

1894 - 2024

Ghella celebrates its 130th anniversary with a series of cultural events for the city of Rome

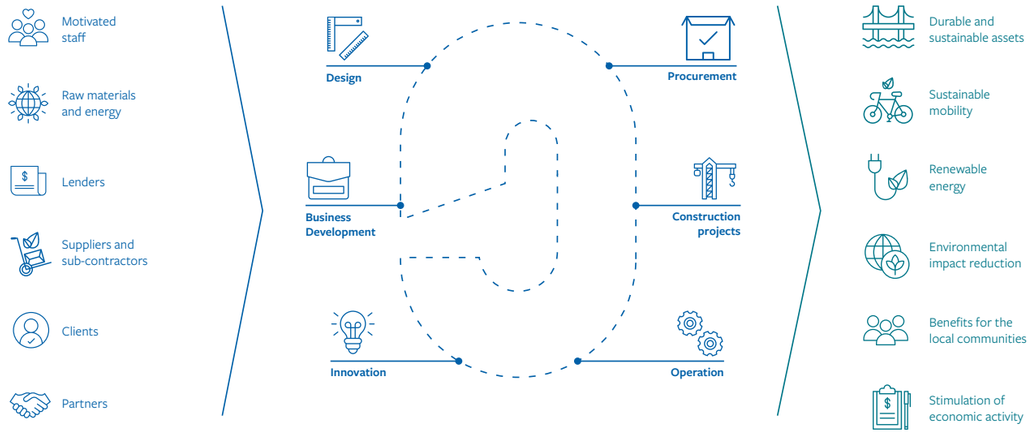
In 2024, Ghella celebrated a remarkable milestone: **130 years** since **Domenico Ghella laid the foundations** of what would become **a world-renowned company in the field of major public works**. Since then, and guided by the same pioneering spirit, we have **carried forward the values of excellence, innovation**, **responsibility** towards the future and **sustainable growth**, embraced across five generations. Staying true to our commitment to initiatives that generate a positive impact on communities and local areas, **we organised a range of cultural events in Rome, including two special projects: Nuove Avventure Sotterranee** and the **restoration** of the **Loggia dei Vini** with its associated art project **LAVINIA**.
Nuove Avventure Sotterranee, curated by Alessandro Dandini de Sylva, is the second chapter in a **series** of **photo campaigns** commissioned by Ghella between 2022 and 2023 at its construction sites in **Canada**, **Australia**, **Italy**, **Argentina**, and **New Zealand**. The project features the work of some of the most compelling creative voices in contemporary Italian photography: **Stefano Graziani**, **Rachele Maistrello**, **Domingo Milella**, **Luca Nostri**, and **Giulia Parlato**.
This project is presented in a **six-volume series published by Quodlibet**. The first five volumes chronicle five photographic surveys, while the sixth features a selection of images from the historical archive, **showcasing infrastructure projects completed between the late 1960s and early 2000s**. Each volume blends striking images of construction sites and cityscapes with fossil finds, excavating machinery, tropical forests, rock formations, on-site workers and nocturnal wildlife.
Building on Di roccia, fuochi e avventure sotterranee , which was both a book and an exhibition, Nuove Avventure Sotterranee was inaugurated in June 2024 at Spazio **Extra MAXXI – the National Museum of 21st Century Arts**. The exhibition features images by photographers who were invited to freely capture the creation of major infrastructure projects worldwide.
Our bond with and sense of responsibility towards the city of Rome continue with the **restoration of the Loggia dei Vini in Villa Borghese**, which was carried out with funding from a donation by **Ghella** and overseen by the **Capitoline Cultural Heritage Authority**, with work carried out by **R.O.M.A. Consorzio**. The first of three restoration phases, completed in 2024, concentrated on the internal vault, including the stucco cornices and the central fresco, which was painted by Archita Ricci and depicts The Banquet of the Gods, as well as the columns, which had been damaged by water infiltration, and the access staircases.
The next two phases are dedicated to the restoration of the plasterwork of the internal columns and the building's exterior, along with repair to the hemicycle and its terracotta flooring.
The **Loggia dei Vini**, an original and elegant oval-shaped structure adorned with decorations and frescoes, was **built between 1609 and 1618 on the orders of Cardinal Scipione Borghese**.
It was **used for gatherings** and **convivial summer festivities** and is part of a larger architectural complex that includes an underground grotto for wine storage **connected to the Casino Nobile of Villa Borghese via an underground passage**.
It had been closed to the public for some time, but following various restoration efforts throughout the twentieth century the **Loggia** has now been **brought back to life through the contemporary art project LAVINIA**, curated by **Salvatore Lacagnina**.
Named in honour of Lavinia Fontana, one of the first recognised female artists in the history of art, whose works have been part of the Borghese collection since the early seventeenth century, it **features the exhibition of site-specific works** by **artists Ross Birrell & David Harding**, **Monika Sosnowska**, **Enzo Cucchi**, **Gianni Politi**, **Piero Golia**, and **Virginia Overton**.
LAVINIA is an exciting new contemporary art programme created to interact with the Loggia's unique space and its restoration journey. Its aspiration is to quietly weave itself into the rhythms of everyday life, to speak directly to anyone wandering in the park, and intentionally avoids imposing any kind of sense of authority or auctoritas.

ROMA
Assessorato alla Cultura
Sovrintendenza Capitolina ai Beni Culturali

Creating shared value

As a contractor, our core responsibility is to uphold the **quality of construction** by leveraging **technical excellence** and **innovation** while **mitigating** the **environmental and social impacts** inherent in the construction phase. Our **efforts** are directed towards **creating value for the local areas and communities where our projects are located**.

At the heart of our operations is **our value chain**, forming part of a virtuous cycle where **essential resources** such as **personnel**, **raw materials**, and **supplies** contribute to the creation of **shared value**[2] for the **company** and for the **community**. The generation of **economic value** for the company serves as a catalyst for **social well-being** through the **construction of permanent infrastructure**, the promotion of **sustainable mobility**, and also the **personal development** of our employees and the **positive impacts** on the **social** and **environmental performance of our supply chain** we are able to generate indirectly. Community engagement initiatives, local workforce development, and the transfer of technological skills across different countries where we operate all contribute to leaving a lasting legacy that transcends the construction phase.



Stakeholder engagement and the materiality matrix

The material issues highlighted in our Sustainability Report, which are integral to our corporate strategy, have been identified through consultations with internal and external stakeholders, coupled with a rigorous analysis of materiality.

The **analysis was conducted** considering **GRI reporting standards**, as well as the **evolving external** and **internal context**. We moreover adhered to the principle of **dual materiality**, ensuring that both the **impact** dimension - that is, our effects on the external environment - and the **financial** dimension – that is, the economic impacts that sustainability aspects may have on the company - were thoroughly addressed.

01. → **Context analysis**

We **benchmarked** with peers, competitors and clients, analysing the reporting standards to plot changes in the reference market.

02. → **Identification of potentially relevant matters**

The analysis we performed was integrated with a review of internal policies and documents. A **list of potentially relevant and priority issues** for Ghella was then drawn up.

03. → **Engagement of stakeholders**

A **short questionnaire** was handed to a sample of external stakeholders and to all Ghella employees and managers. The questionnaire was sent out to about 600 stakeholders, and around 40% of them completed it.

04. **Prioritization of issues**

The responses received were analysed, and a weight was assigned to each category of stakeholder based on the relevance of the relationship and their knowledge of Ghella's business activity.

The outcome of this process (**materiality matrix**) is a list of **15 material issues arranged based on their impact**, as perceived by both internal and external stakeholders:

- Occupational Health and Safety
- Efficient waste management
- Ethical business conduct
- Pollution prevention and reduction
- Quality and innovation
- Employee welfare
- Enterprise risk management
- Integrating Sustainability into Corporate Governance
- Sourcing sustainable materials and eco-design
- Protection of human rights
- Efficient management of water resources
- Personnel development
- An active role in the development of industry policies and standards
- Climate change mitigation
- Equal opportunities

The **five topics of financial materiality** are as follows:

- Health and safety at work
- Efficient management of water resources
- Quality and innovation
- Personnel development
- Pollution prevention and reduction

Ghella's materiality matrix. The larger indicators highlight the top 5 topics with the most significant financial impact.

"Occupational health and safety" is paramount, as the most significant topic in terms of both impact and financial implications and so aligns closely with the ESG Strategy. Consequently, it remains a top priority across all aspects of the company's operations.

Our objectives

Ghella's **ESG strategy** translates the corporate mission into **three pillars**, each split up into thematic areas. Each area is linked to long-term quantitative objectives and targets.

PLANET

Climate Change
Target **2030**
-25% Scope 1 and 2 emissions*
Target **2050**
Carbon neutral

Circular Economy
Target **2025**
Maximise the use of recycled materials and the reuse of excavated earth

Environmental Protection
Target **2025**
Include measurable biodiversity impact indicators in construction decisions
Target **2030**
-15% water withdrawals**

PEOPLE

Occupational Health and Safety
Target **2030**
-30% LTIFR index
Target **2050**
Zero Harm in our workplaces

Employee well-being and development
Target **2030**
30% of management roles held by women

Monitor and improve perceived well-being and job satisfaction

Local communities
Target **2025**
Quantitative monitoring of impacts on local commmunities

BUSINESS CONDUCT

Ethics andTranparency
Target **2025**
Adopt external ethics and anti-corruption standards

Risk Management
Target **2025**
Identify, monitor and consolidate ESG risk factors within the ERM frameworks

** tCO_{2eq}/ Revenues in millions of euros; **Ml/Revenue in milllions of euros*

TRANSVERSE TOPIC: ***Sustainable Procurement***

ENABLING FACTORS:
SUSTAINABILITY CULTURE, GOVERNANCE AND INNOVATION

The **Sustainability Plan for 2023-2025** outlines the short- to medium-term measures to be implemented by the Corporate Functions and Company Units; these actions adhere to directives from Clients and Project Partners and are **aimed** at **achieving the long-term ESG objectives** and **targets** set out in the **ESG Strategy**.

The Plan also includes so-called **enabling factors**, which are elements of the Strategy not linked to the business objectives, but which are crucial for the Strategy's effectiveness. Enabling factors include:

- the **culture of sustainability**, i.e., the sensitivity, standards of conduct and technical training needed to translate objectives into projects;
- effective **governance**, structured and equipped to facilitate and drive change;
- **innovation**.

The Plan benefits from **established Sustainability Governance** which, by integrating synergies between the Corporate and regional entities, **guarantees greater effectiveness** in the **implementation** and **control** of **levers** and **actions**.

Measurable quantitative targets are another element of strength, since they give concrete form to the company's commitment to ecological transition, reinforcing corporate social responsibility and strengthening our role as a trusted partner of internal and external stakeholders.

By adopting a systematic approach, the Plan integrates sustainability goals into all business processes from the pre-qualification and tender phases onwards, enhancing the sense of shared responsibility and motivation among the functions and production units involved. External disclosure of this commitment serves as a formal declaration of commitment and strengthens our competitiveness in tenders.

External performance evaluation

For the sixth consecutive year, we have undergone assessment by **EcoVadis**, a sustainability rating platform utilised by 200 industries across 180 countries and comprising over 125,000 companies.

EcoVadis awards the Corporate Social Responsibility (CSR) medal by comparing a company's sustainability trajectory for the assessment year and contextualising it within the broader evolution of sustainability performance across all assessed companies and thus the external environment.

In 2024, we maintained the score from the previous year and achieved a **Gold** rating, placing us in the 97th percentile (top 3%) of the most competitive companies for sustainability among all assessed companies. The Ecovadis assessment process is guided by 21 CSR indicators, categorised into four core themes: environment, labour practices and human rights, ethics, and sustainable procurement. This methodology integrates various international CSR standards, such as the UN Global Compact, the Global Reporting Initiative (GRI), ISO 26000, International Labour Organisation (ILO) conventions, and the principles of CERES (Coalition for Environmentally Responsible Economies).

The EcoVadis rating serves as a covenant for monitoring Ghella's sustainability performance in green financing.

In 2024, we were recognised for the second time in the "**Sustainability Leaders**" ranking of **Il Sole 24 Ore** as one of Italy's top-performing companies in sustainability. The list consists of 200 large companies evaluated by a leading market research firm, based on over 40 performance indicators across three sustainability dimensions (environmental, social, economic).

Italy, Naples - Bari
Photo by Domingo Milella from the photographic project "Nuove avventure sotterranee"

Governance

Company Structure

Ghella S.p.A. is an unlisted joint-stock corporation with indirect ownership, where 70% of the shares are held by Ghella Group S.r.l. and 30% by Geo 2007 S.r.l.

*Drill Pac Srl has 100% controlling interestin Pacchiosi North America and 95% in Pacchiosi Drill USA(5% by Ghella Spa)

Whilst remaining a family business, Ghella's governance model has developed over time in line with its continuous expansion into new international markets. Ghella's company structure includes bodies such as the **Board of Directors** (**BoD**) and the **Board of Statutory Auditors**, both appointed by the Shareholders' Meeting, as well as the Auditor and the **Supervisory Board** pursuant to Legislative Decree 231/01, all appointed by the Board of Directors. Below is the composition of the three bodies:

BOARD OF DIRECTORS

Enrico Ghella	President and CEO
Federico Ghella	Vice-President
Lorenzo Ghella	Vice-President
Andrea Guerra	Board Member
Alberto Nigro	Board Member
Marco Tummarello	Board Member

BOARD OF STATUTORY AUDITORS

Riccardo Gabrielli	President
Francesco Farina	Statutory auditor
Alberto Santi	Statutory auditor

SUPERVISORY BOARD

Gianluca Tognozzi	External member - President
Federico Cantatrione	External member
Paola Scillamà Irti	External member

Ghella's **Board of Directors** comprises six directors, four of who are employed by the Ghella Group. The President and Chief Executive Officer holds the broadest powers for the ordinary and extraordinary administration of the company. In the absence or impediment of the President, the two Vice-Presidents are vested with the same powers. The Board Member and Director of Administration and Finance has the necessary powers in finance-related matters. The Board of Directors is responsible for establishing guidelines on ethics and transparency. **The Control, Risk and Sustainability Committee** is the body responsible for sustainability matters, and has the task of progressively embedding environmental, social, and governance (ESG) factors into business operations generating medium- to long-term value for shareholders and other stakeholders. Acting in an advisory capacity and making recommendations, the Committee supports the Board of Directors in assessing and deciding on matters related to internal control systems, risk management and sustainability initiatives. The Chairman is Mr. Federico Ghella and is supported in its functions by the External Relations, Communications & Sustainability, and Risk & Compliance departments.

The **Board of Directors** approves the Sustainability Plan, the materiality analysis and the annual Sustainability Report, based on the recommendations of the Control, Risk and Sustainability Committee. The internal control body, the **Board of Statutory Auditors**, monitors compliance with the principles of proper administration, as specified in Ghella's Articles of Association. It consists of three regular members and two alternate members, appointed and operating in accordance with the Civil Code.

In compliance with current legislation, auditing activities are carried out by an **Auditor** listed in the special register and appointed by the Board of Directors.

In accordance with the regulations outlined in Legislative Decree 231/01, Ghella's Board of Directors has established a collegiate **Supervisory Board**, comprising three externally appointed members. The Supervisory Board is allocated adequate funding to ensure it operates with the necessary autonomy and independence.

Responsible business conduct

We have adopted a **model of management and control principles**, **policies**, and **tools** to ensure the responsible governance of our activities. Business conduct serves as a fundamental aspect of our ESG Strategy, since we recognise that sustained value generation is achievable only through the consistency and integrity of our actions.

PLANET	PEOPLE	BUSINESS CONDUCT
Environmental Policy	Health and Safety Policy	Whistleblowing Policy
	Human Resources Management Policy	Social Responsibility Policy - SA8000
	Appropriate Workplace Behaviour Policy	Anti-Corruption Guidelines
	Equality Diversity and Inclusion Policy (EDI)	Anti-Bribery Policy
	Gender Equality Policy	Human Rights Guidelines

SUSTAINABLE PROCUREMENT

Sustainable Procurement Policy

SUSTAINABILITY, GOVERNANCE AND INNOVATION CULTURE

Code of Ethics

Quality Policy

Sustainability Policy

All employees of Ghella and its subsidiaries and affiliates are expected to uphold the values articulated in the **Code of Ethics**. Directors incorporate this obligation into the formulation of business objectives, and these same commitments are communicated to our third-party partners.

Argentina, Buenos Aires
Photo by Luca Nostri from the photographic project "Nuove avventure sotterranee"

Organisation and management model pursuant to legislative decree 231/01

Ghella has implemented an **Organisation**, **Management**, and **Control Model** to mitigate the risks of committing offences pursuant to Legislative Decree 231/01, which holds companies administratively liable for offences committed in their interest or to their advantage and imposes fines and disqualifications. These offences cover corruption, environmental and occupational safety violations, industry and trade infringements, anti-competitive practices, offences against the person (including human rights and labour practices), terrorism financing, and transnational crimes. In 2023, the Board of Directors adopted an updated version of the Model to align it with Legislative Decree 231/2001 and subsequent amendments and additions, in order to also address crimes against cultural heritage, the recycling of cultural heritage, and the destruction and looting of cultural and landscape heritage, which are all offences newly incorporated by the legislator in the list of predicate offences.

Risk management

In 2024, Ghella developed a project aimed at strengthening and evolving its Enterprise Risk Management (ERM) process, in accordance with the methodology outlined in the COSO ERM Framework. The objective was to promote a risk culture at all levels of the organisation focused on the identification, assessment, and management of risks that could hinder implementation of the company's strategy and the achievement of its objectives.

The Company's ERM framework integrates risk management processes into its business operations to support strategy delivery, improve performance tracking, and drive long-term value creation, through ongoing monitoring of key risks, including those linked to sustainability matters.
The ERM process, which is continuously evolving, is overseen by the Group Risk Officer, who reports to the Control, Risk and Sustainability Committee on the periodic assessment of key risks and corresponding corrective actions to be taken.

Management System

In consideration of our extensive presence across many culturally diverse countries, we have established an **Integrated Management System**: a multi-site structure to reflect Ghella's standardised organisational and operational approach, while also providing individual local units with the autonomy needed to adhere to local regulations and meet the requirements of their clients.

The system is certified according to international standards **ISO 9001, ISO 14001, ISO 45001, SA 8000, ISO 37001 and UNI PdR 125:2022**, which enable us to oversee and regulate processes within the strategies adopted for Quality, Occupational Health and Safety, Environment, Social Responsibility, Anti-Corruption and Gender Equality. We employ a risk-based approach to identify potential threats and opportunities that may impact the effective management of the organisation. Our primary objective is the ongoing enhancement of our processes and outcomes.

The system applies to all activities undertaken by Ghella at operational sites. For activities relating to work contracts where we operate in a Joint Venture, the management system is specifically designed using the management system of each partner as the starting point. In these cases, Ghella actively participates in designing the shared JV system to ensure that our own principles and regulations are fully integrated into it and upheld.

Anti-Corruption

At Ghella, we adhere to the highest standards of conduct, transparency, and ethics, in line with our Policy, which is guided by the principle of "**zero tolerance for corruption**". We have established a Code of Ethics, an Organisational Model pursuant to Legislative Decree 231/2001, anti-corruption guidelines, and procedures aimed at strengthening a culture of legality and implementing control measures to prevent any form of corrupt behaviour or actions contrary to prevailing national and international standards and laws.

Human rights

Dignity and **respect** for individuals are fundamental pillars of our corporate culture. The **Human Rights Guideline** serves as a tool for our internal and external stakeholders to identify and prevent potential violations of human and labour rights, in accordance with the highest international standards and conventions (such as the ILO Core Conventions).

In 2024, we achieved U**NI/PdR 125:2022** certification in our Italian operations. This certification evaluates how organisations manage gender equality and adds to our existing credentials, including the SA8000 Ethical Social Responsibility Certification and **ISO 30415 validation** on **Human Resource Management** – Diversity and Inclusion. Our **Australian subsidiaries** comply with local regulatory obligations by annually drafting and publishing a **Modern Slavery Statement**. These statements are accessible to the public on modernslaveryregister.gov.au. The legislation introducing this requirement outlines essential steps that companies must undertake to combat modern slavery and human trafficking.

Our **Norwegian subsidiary** also adheres to local regulatory requirements by annually drafting and publishing a **Statement of Transparency Act**. This statement is readily available on the company's website (https://www.ghella.com/en/branches/ghella-spa-nuf-succursale-norvegia). The legislation implementing this requirement aims to foster respect for human rights, promote decent and fair work, and enhance transparency in all activities related to goods and services production.

Whistleblowing

A **whistleblowing** system is in place to manage the process of submitting confidential reports via communication channels accessible to both employees and external stakeholders. These reports address potential violations or suspected breaches of the Code of Ethics, or of policies, company guidelines, offences under the 231 Model, or other irregularities in the application of internal procedures. A user-friendly computer portal is in operation, through which individuals can submit reports ensuring anonymity and confidentiality concerning the reporter's identity.

Greece, Athens, Metro Line 3
Photo by Marina Caneve

Projects

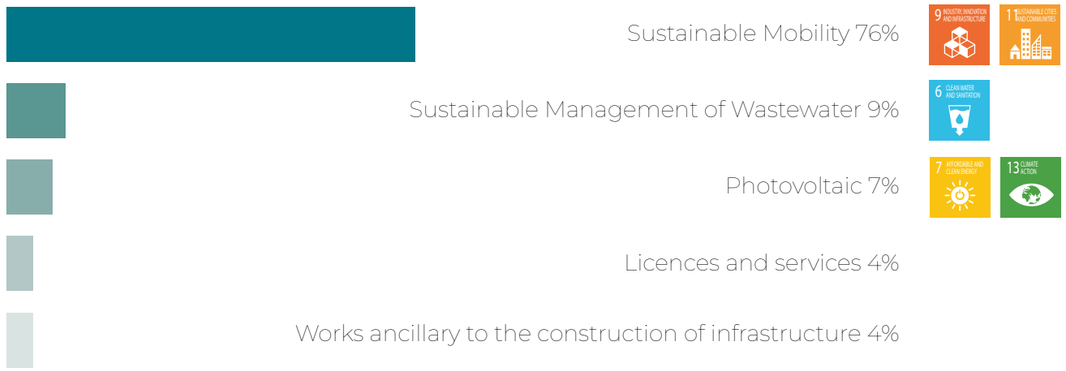
"We continue to invest in innovation, sustainability and growth to create value for all our stakeholders and contribute to a better future for generations to come."

Federico Ghella
Vice-president

New Zealand, Auckland
Central Interceptor

Our work plays a key role in the realisation of **major public infrastructure projects**, driving progress and infrastructure development within the countries where we operate. These contributions are crucial elements for the achievement of all 17 Sustainable Development Goals set forth in the UN's Agenda 2030.

Our involvement in infrastructure projects takes on even greater significance within the framework of our country's commitments to the European Union under the **Next Generation EU** initiative, which supports sustainable economic recovery post-pandemic and promotes ecological transition. In particular, four[3] of our Italian projects are partially or completely funded by the **National Recovery and Resilience Plan** (**PNRR**), with the "Trento Railway Bypass - Section 3A" and the "AV Battipaglia-Romagnano - Section 1" projects being funded entirely under the scheme. Our projects, primarily focused on railways, metro systems and hydraulic infrastructure, aim to leave a **lasting legacy** for the communities we serve, with the goal of making the transition to more sustainable lifestyles increasingly accessible and tangible. Specifically, an analysis of our 2024 project portfolio reveals that our activities fall into the following areas:



Portfolio of works by activity. Sustainable Mobility includes works related to railways and metro systems.

In 2024, we initiated a comprehensive review of our sustainability reporting procedures to ensure compliance with the recently introduced European Corporate Sustainability Reporting Directive (**CSRD**). This process, which is still being fine-tuned, includes an assessment of Ghella's economic activities to ascertain their categorisation as either 'eligible for' or 'aligned with' the European Taxonomy.

Sustainable mobility and water infrastructure

In addition to reducing the impacts of climate change globally, these projects produce numerous positive economic, environmental and social benefits at the local level:

→ **Railway projects** facilitate the transition from road to rail transport for both passengers and freight along strategically important national and international routes. This shift reduces air emissions and fuel consumption during transit, while also improving road safety standards.

→ The expansion of **metro systems and urban railway lines** improves public transport accessibility for a broader segment of the population. By connecting previously unserved areas and offering more comfortable, time-efficient commuting options, traffic congestion and emissions linked to car use in densely populated cities such as Sydney, Brisbane, Toronto, and Vancouver. This ultimately enhances the overall well-being of citizens.

→ Improvements to **water infrastructure** enable more efficient wastewater management – helping address climate change impacts, reduce hydrogeological instability risk and curbing pollution from sewage backflow. Additionally, these improvements will strengthen drinking water supply to meet the demands of urban growth.

In Australia and New Zealand, all our projects follow the Infrastructure Sustainability (IS) rating system, developed by the **Infrastructure Sustainability Council** (**ISC**). **This framework evaluates sustainability across the entire lifecycle of a project** - from planning and design to construction, and management. In a global context where sustainability assessments at every stage are increasingly critical, the expertise gained from these projects provides Ghella with a significant strategic advantage.

Lyon Turin High Speed Railway – Mont Cenis Base Tunnel

Lyon - Turin, ***France - Italy***

The Lyon-Turin link is a new freight and passenger railway line spanning 270 km, with 70% in France and 30% in Italy. It will form the central link of the Mediterranean Corridor, one of the 9 axes of the Trans-European transport network (TEN-T). The cross-border section, built by the bi-national promoter TELT, is the central part of the project, connecting 65 km between the two international stations to be built in Saint-Jean-de-Maurienne (France) and Susa (Italy), where the tracks will then connect to the existing lines. The main work of the cross-border section is the Mont Cenis base tunnel: two single-track tubes 57.5 km long, with 45 km in France and 12.5 km in Italy. When completed, the tunnel will contend the title of longest in the world alongside the Brenner Base Tunnel, also built by us. The tunnel will transform the current mountain railway, which passes through the historic Fréjus railway tunnel at 1,300m above sea level, into a flat railway route, improving the competitiveness and safety standards of rail transport and reducing its energy consumption.

CO5
Villarodin - Bourget / Modane, France

We are currently involved in the work on "Section 1" of the project: starting from Villarodin-Bourget / Modane and excavating for about 3.7 km, using conventional tunnelling, in the direction of Lyon and for about 18 km, using TBM, towards Turin. The segment in the direction of Turin has the highest rock overburdens, with depths exceeding two thousand metres.

CO3-4
Chiomonte / Susa, Italy

The contract covers the construction of the Lyon-Turin tunnel in the Susa Valley (Piedmont, Italy), starting from the newly operational construction site in the Maddalena di Chiomonte area and extending to the Susa entrance, with a total excavation length of 28.5 km. In addition to the two base tunnel tubes, further excavations are planned: the Maddalena 2 tunnel, from where the tunnel boring machines will start, the bypasses between the two tubes, the Clarea safety site and the artificial tunnel at the east entrance to Susa.

On December 18th 2023, the official start date of the Chiomonte construction site, Ghella, together with other partners, signed the "Integrity and Sustainability Pact" of the Lyon-Turin companies and the "Mission-S Charter", the safety programme for the worksite. These two contractual documents commit Tunnel Euralpin Lyon Turin 's (TELT) entire supply chain to adhere to the fundamental principles of sustainable development outlined by the UN Global Compact.

Specifically, TELT is committed to making Chiomonte a "zero-emission" construction site. To achieve this, on the one hand, it is implementing a strategy that includes minimising emissions using energy from renewable sources, low energy consumption technological systems, and the employment of low-emission vehicles, including electric ones. Additionally, TELT is committed to compensating residual emissions through actions resulting from certified projects.

PROJECT DETAILS

Start Date:
2021, Villarodin - Bourget / Modane
2023, Chiomonte / Susa

Category:
High Speed Railway

Client:
TELT

Type of Excavation:
TBM and Conventional Excavation

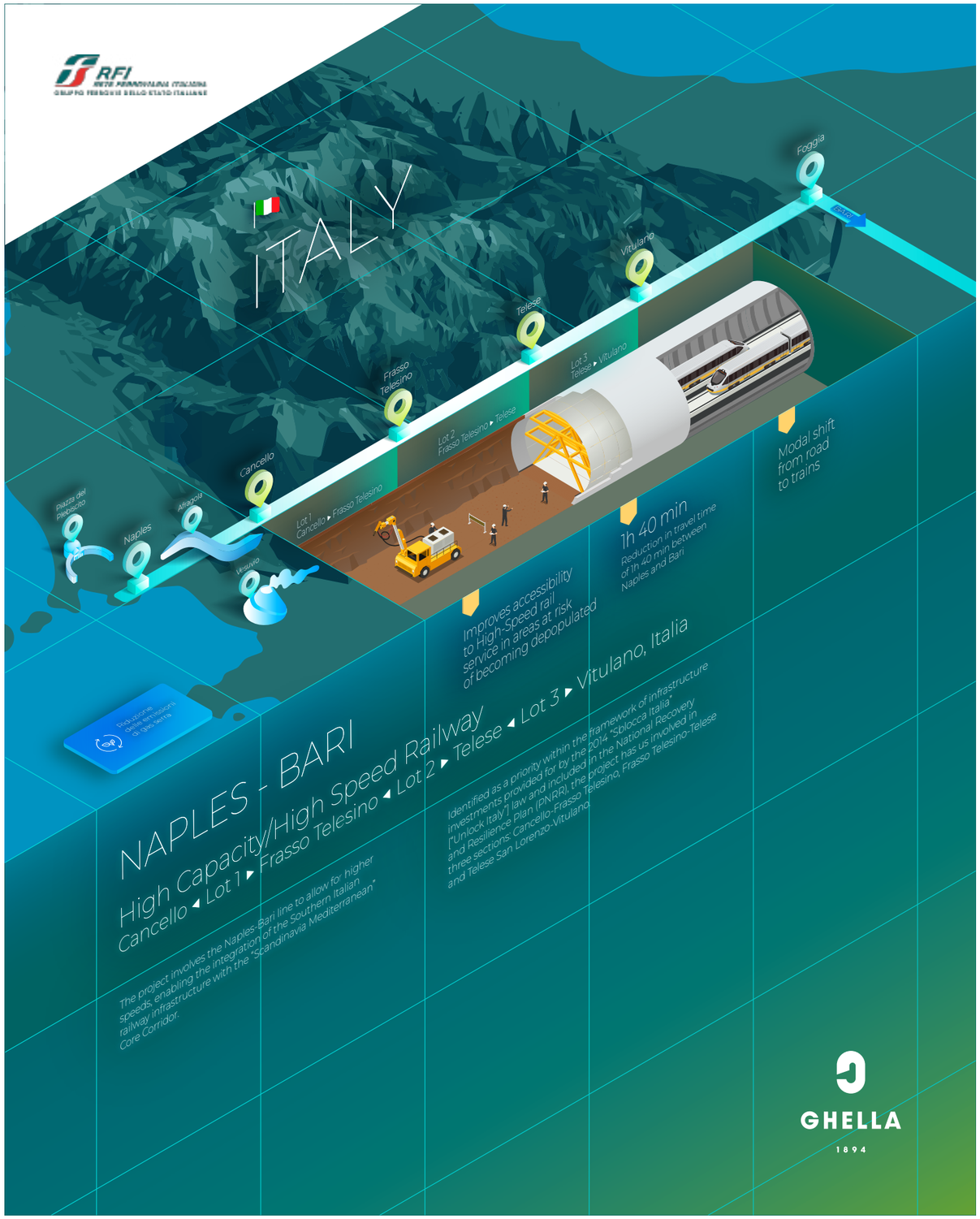
BENEFITS

1. Improved safety standards, cuts energy consumption and travel time compared to the existing railway link.

2. Removal of roughly 1 million heavy road vehicles annually from the road

3. Cuts greenhouse gases in an amount of approximately 1 million tonnes of CO_2 equivalent once it is in operation

Italy, Chiomonte
Turin - Lyon Base Tunnel Section 1



Brenner Base Tunnel, "H61 Mules 2-3" section

Mules, ***Italy***

The Brenner Base Tunnel will span approximately 55 km between the stations of Fortezza (Italy) and Innsbruck (Austria), connecting underground to the existing bypass railway and reaching a total lenght of 64km. Once completed, the Brenner Base Tunnel will be the longest underground rail link in the world. The project forms part of the Munich-Verona High Speed/High Capacity axis and the TEN-T trans-European transport network, dubbed "The European metro line," specifically within the Scandinavian-Mediterranean corridor. The "Mules 2-3" construction section is the largest in the entire project area and extends from the northern border of the other Italian section, called "Isarco Underpass", to the Italian-Austrian border. This section includes the construction of the two main line tunnels, an exploratory tunnel, cross passages and the emergency stop station (one of the three located along the entire route and the only one on Italian territory) with the related access tunnel.

PROJECT DETAILS

Start date:
2016

Category:
High Speed/High Capacity Railway

Client:
Galleria di Base del Brennero - Brenner Basistunnel BBT SE

Type of excavation:
TBM and conventional tunnelling

BENEFITS

1. Travel time reduced by 55 minutes for passengers and 1 hour 10 minutes for freight compared to the existing line.

2. Modal shift from road to rail for connections between Austria and Italy.

3. Reduction in CO_2 emissions.

Naples-Bari High Capacity/High Speed Railway

Cancello-Vitulano, ***Italy***

The project involves the Naples-Bari line to allow for higher speeds, enabling the integration of the Southern Italian railway infrastructure with the "Scandinavia-Mediterranean" Core Corridor. Identified as a priority within the framework of infrastructure investments provided for by the 2014 "Sblocca Italia" ["Unlock Italy"] law and included in the National Recovery and Resilience Plan (PNRR), the project has us involved in three sections: Cancello-Frasso Telesino, Frasso Telesino-Telese and Telese San Lorenzo-Vitulano. The main objective is to speed up the current link and improve service accessibility in the areas covered, benefiting both national long-distance services and regional and freight services. Our client, Rete Ferroviaria Italiana Spa (RFI) has, for the first time in Europe, obtained the U.S. Envision Platinum accreditation for the design of the Frasso Telesino-San Lorenzo section (which includes two of the sections awarded to Ghella). The Envision certification is a rating system for sustainable infrastructure which evaluates project performance in terms of improvements to community quality of life, stakeholder engagement, responsible use of natural resources, environmental and resident species protection, CO_2 emissions, and infrastructure durability.

PROJECT DETAILS

Start date:
2019, Cancello - Frasso Telesino
2021, Frasso Telesino - Telese
2022, Telese - Vitulano

Category:
High Speed Railway

Client:
RFI Rete Ferroviaria Italiana S.p.A.

Type of excavation:
Conventional tunnelling

BENEFITS

1. Reduction in travel time of 1h 40 min between Naples and Bari.

2. Modal shift from road to trains.

3. Reduction in greenhouse gas emissions.

4. Improves accessibility to High-Speed rail service in areas at risk of becoming depopulated.

Trento Railway Bypass (Section 3A)

Trento, ***Italy***

The Trento Railway Bypass is financed almost entirely by funds from the National Recovery and Resilience Plan (PNRR). From December 2021 to February 2022, the client RFI conducted a public debate process aimed at collecting comments and proposals from the local community to evaluate and improve the project. We are involved in the first phase of the project (Section 3A), which includes the construction of the railway bypass route, as a variant of the historic Verona - Brenner line in the section crossing the city. The bypass will separate freight traffic flows from passenger traffic, meaning that the urban area of Trento is bypassed. The new line will start at Roncafort, near the Trento interport, and connect to the existing line at Acquaviva after about 14km, with approximately 11 km running through the new natural double-bore "Trento Tunnel." This project is part of the larger effort to upgrade the Fortezza-Verona railway line, allowing access from the south to the new Brenner Base Tunnel under construction. The aim of upgrading the European TEN-T Scandinavian-Mediterranean Core Corridor, which is intended to improve the efficiency of international rail freight transport. The project is also part of a broader framework of interventions for the redevelopment of Trento and to foster the area's sustainable mobility.

PROJECT DETAILS

Start Date:
2023

Category:
High Speed Railway

Client.
RFI Rete Ferroviaria Italiana S.p.A.

Type of excavation:
TBM

BENEFITS

1. Modal shift from road to rail transport

2. Urban regeneration for the city of Trento

3. Contribution to the efficiency of international freight transport

4. Consistency with the "Do No Significant Harm" (DNSH) principle and with the pursuit of European Carbon Neutrality goals.

5. Enhancement of infrastructure connections to support commercial activities, offering opportunities for the logistics sector, combined transport, and the import/export market.

LT1A Battipaglia Romagnano

Battipaglia - Romagnano, ***Italy***

Fully funded by PNRR, the project includes the construction of a new high-speed railway line on the Salerno-Reggio Calabria route. This is a strategic route for passenger and freight transport in the connection between the north and south of Italy. Our operations will lead to improvements of the railway system that will enable a significant increase in passenger traffic, including better links to Sicily. Ghella will contribute to construction of the section between Battipaglia and Romagnano (Section 1A).

This section covers the design and construction of around 35 km of railway, with trains reaching speeds of up to 300 km/h. Approximately 18 km of the route will be underground, including 8 cut-and-cover tunnels, 11 natural tunnels, and 19 viaducts. Four TBMs will be used for excavation. A junction at Romagnano will connect the new line to the existing historic railway alignment.

PROJECT DETAILS

Start date:
2023

Category:
High Speed Railway

Client:
RFI Rete Ferroviaria Italiana Spa

Type of excavation:
Mainly TBM

BENEFITS

1. Infrastructural development and sustainable mobility in the South.

2. Travel time from Rome to Reggio Calabria will be reduced to four hours.

3. Increased freight traffic connection to the port of Gioia Tauro.

4. Reduction in greenhouse gas emissions.

Messina-Catania-Palermo Railway Route. New Palermo-Catania connection.

Fiumetorto - Nuova Enna, ***Italy***

The construction of the new Palermo, Catania, and Messina link is a strategic project for the infrastructural development of Sicily, falling under the larger PNRR infrastructure programme. It aims to upgrade and duplicate the railway line, providing higher train frequencies, increased operating speeds, and more efficient transportation of freight and passengers within the island. This project will reduce travel time between Palermo and Catania to about 2 hours, down from the current 3 hours, making rail transport more competitive. The Palermo-Catania-Messina Line is an essential section of the Scandinavian-Mediterranean Corridor No. 5 within the TEN-T Trans-European transport network, promoting interconnection with the rest of Italy and Europe. The upgrade works have been divided into five functional sections, all of which are currently in progress. Below are the sections in which Ghella is involved.

Section 1+2
Fiumetorto - Lercara

The scope of section 1+2 is to duplicate the Fiumetorto-Lercara Diramazione section, including the executive design and construction of 30 km of new railway line. In particular, the section includes the construction of a natural double-bore single-track underground tunnel of about 20 km, named 'Alia,' 2.2 km of rail and road viaducts, 7.3 km of connecting roads, and three stations. Among these, the Valle del Torto station will be built from scratch, while the other two, Cerda and Lercara, will be upgraded. The stations will be equipped with systems designed to ensure efficient water usage and the collection and reuse of rainwater.

Section 3
Lercara - Caltanissetta Xirbi

The scope of section 3 covers the executive design and construction of 47 km of new railway line, predominantly following a route that deviates from the historic line. This contract includes constructing about 22 km of tunnels (including interconnections), over 11 km of rail and road viaducts, 32 km of connecting roads, and the upgrade of Vallelunga station..

Section 4A
Caltanissetta Xirbi - Nuova Enna

The scope of section 4A includes the executive design and construction of 27 km of railway line from Caltanissetta Xirbi station (included) to Nuova Enna station (excluded), following a route that largely deviates from the existing line. This project also includes the construction of 20 km of tunnels and 3 km of viaducts.

PROJECT DETAILS

Start date:
2023

Category:
High Speed/High Capacity railway

Client:
RFI Rete Ferroviaria Italiana Spa e Italferr Spa Direzione Lavori

Type of excavation:
TBM

BENEFITS

1. Infrastructural development and sustainable mobility in the South of the country.

2. Reduction in train travel time of about 1 hour between Palermo and Catania.

3. Reduction in greenhouse gas emissions.

Sydney Metro - Western Sydney Airport

Sydney, ***Australia***

The new Sydney Metro – Western Sydney Airport rail project will be a catalyst for economic development in Western Sydney. It will connect the new Western Sydney International Airport with the rest of the city's public transit system and residential areas in the Western Parkland City with business hubs, including the new Aerotropolis.

It is estimated that construction of the metro line will generate 14,000 jobs - with a further 28,000 jobs to be created with the construction of the airport. The resulting development of Bradfield will in turn generate 200,000 skilled jobs in the aerospace and defence industries, and the manufacturing, cargo and logistics, tourism and research sectors. Ghella is involved in one of the three prime contracts - Station Boxes and Tunnelling Works (SBT). This project involves the excavation of five stations and the design and construction of two twin tunnels: the 4.3 kilometre northern tunnel from St Marys to Orchard Hills and the southern 5.5 kilometre tunnel between the Airport Business Park and Bradfield Stations.

Western Sydney Airport will be the first rail infrastructure project in Australian history to commit to "carbon neutral" certification for the construction and operation phases, under the Australian Government's Climate Active Carbon Neutral Service program. All Scope 1, 2 and 3 greenhouse gas emissions will be reduced and offset.

PROJECT DETAILS

Start Date:
2022

Category:
Metro

Client:
Sydney Metro

Type of excavation:
TBM

BENEFITS

1. Acts as a catalyst for economic development in Western Sydney.

2. Supports more than 14,000 jobs.

3. Peak of 12 trains per hour in both directions.

4. Reduces greenhouse gas emissions.

Cross River Rail – Tunnel, Stations and Development (TSD) Package

Brisbane, ***Australia***

Cross River Rail (CRR) will be an essential part of Brisbane's city transport system, which is approaching the limit of its capacity with just one rail crossing of the Brisbane River.
CRR will provide a second river crossing at the core of the rail network, enabling an increase in frequency of trains, reducing congestion and increasing network reliability. The project involves excavation of 5.9 kilometres of twin tunnels under the river and the Central Business District (CBD) and construction of four new underground stations. Once operational, CRR will transform travel across the whole of South East Queensland. Journeys will be quicker; there will be new stations in more convenient locations; there will be capacity to increase train services as our population grows and public transport will become a more viable option for the whole of the region, helping to ease congestion on the roads.

The project won the 2021 QMCA (Queensland Major Contractors Association) Innovation and Excellence Sustainability Award for its initiative in using recycled crushed glass as an alternative to aggregates and natural quarry products. In April 2022, the project won the Gold Quill Award of the International Association of Business Communicators (IABC) with the report "10,900 ways to build social license".

PROJECT DETAILS

Start Date:
2019

Category:
Urban railway

Client:
Cross River Rail Delivery Authority

Type of excavation:
TBM

BENEFITS

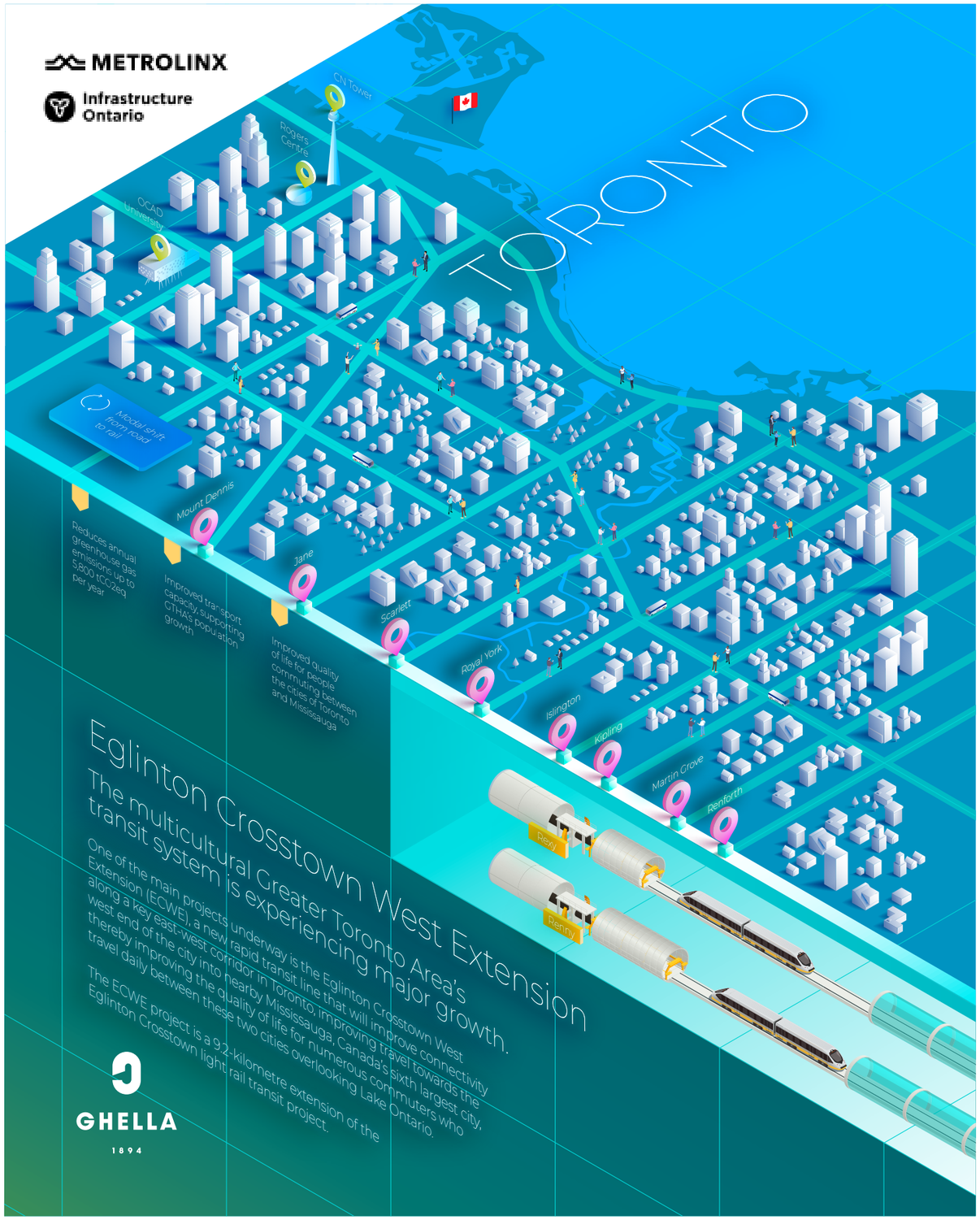
1. Improved transport capacity, supporting Queensland's population growth.

2. Rush hour periods will be 24% shorter.

3. Modal shift from road to rail.

4. Reduces greenhouse gas emissions.

Australia, Sydney
Western Sydney Airport



Suburban Rail Loop East - Package C

Melbourne, ***Australia***

Ghella has officially started the initial phase of excavations for the Suburban Rail Loop (SRL) East project in Melbourne, Australia, to construct a 16-kilometre section of the project's 26-kilometre twin tunnels, including tunnelling between Cheltenham and Glen Waverley, two new underground station boxes and construction works at the Train stabling facility in Heatherton. This milestone holds great significance for Ghella as it marks its inaugural venture into the state of Victoria, whilst also bringing a profound and positive impact to the residents of Melbourne by transforming and enhancing the city's public transportation grid. Without a doubt, SRL is more than a transport project - it will help reshape how Melbourne grows in the decades ahead, offering solutions to longstanding transportation challenges by seamlessly reducing travel times and congestion, connecting millions of Victorians to key employment, health and education destinations in the city's East and Southeast. Trains will be running by 2035 with an end-to-end trip taking as little as 22 minutes. Furthermore, the areas surrounding the new stations will evolve into vibrant, bustling and inclusive communities for people to live, work, study and play – offering a diverse mix of housing options, local services and jobs closer to where people want to live and all within a short distance from a train station.

PROJECT DETAILS

Start Date:
2023

Category:
Urban railway

Client:
Governament of Victoria

Type of excavation:
TBM

BENEFITS

1. Stimulus for residential and economic development in station vicinities.

2. Reduced travel times.

3. Reduction in traffic congestion.

4. Reduction in greenhouse gas emissions.

Eglinton Crosstown West Extension

Toronto, ***Canada***

The multicultural Greater Toronto Area's transit system is experiencing major growth. One of the main projects underway is the Eglinton Crosstown West Extension (ECWE), a new rapid transit line that will improve connectivity along a key east-west corridor in Toronto, improving travel towards the west end of the city into nearby Mississauga, Canada's sixth largest city, thereby improving the quality of life for numerous commuters who travel daily between these two cities overlooking Lake Ontario. The ECWE project is a 9.2-kilometre extension of the Eglinton Crosstown light rail transit project. The extension will run from the future Mount Dennis station to Renforth Drive. The system will have connections to several local and regional transit services, including Union Pearson Express and Kitchener GO train lines, GO bus routes, and local TTC and Mississauga MiWay bus services. Plans are also being explored to connect ECWE to Toronto Pearson International Airport. The project considers forecasted population growth in the Greater Toronto and Hamilton Area population from 7 million to more than 10 million by 2041. By the same year, the extension will see close to 70,000 daily rides and bring 37,500 more people within walking distance to transit.

PROJECT DETAILS

Start Date:
2021

Category:
Metro

Client:
METROLINX / INFRASTRUCTURE ONTARIO AND LANDS CORPORATION

Type of excavation:
TBM

BENEFITS

1. Modal shift from cars to trains.

2. Reduces annual greenhouse gas emissions up to 5,800 tCO_{2eq} per year.

3. Improved transport capacity, supporting GTHA's population growth.

4. Improved quality of life for people commuting between the cities of Toronto and Mississauga.

Broadway Subway Project, Millennium Line Extension

Vancouver, ***Canada***

The Broadway Subway Project is an extension to the existing Millennium Line that will connect VCC-Clark station with a new terminus at Arbutus Street, passing through six new stations and having a length of 5.7 km, with both underground and elevated route sections.

The Broadway Corridor is one of the most densely populated areas in British Columbia not yet served by a rapid transit system, yet at the same time experiencing strong population growth, with a 57% increase in population projected by 2040.

Once in operation, the Millennium Line extension will provide fast, frequent and convenient SkyTrain service to B.C.'s second largest jobs centre, world-class health services, an emerging innovation and research hub, and growing residential communities.

PROJECT DETAILS

Start Date:
2020

Category:
Metro

Client:
Province of British Columbia

Type of excavation:
TBM

BENEFITS

1. Have the capacity to move three times as many people as the current 99 B-Line.

2. Save the average transit commuter almost 30 minutes a day and relieving congestion along Broadway.

3. Reduce congestion and improve travel time for transit commuters.

4. Connect to bus, HandyDART, walking and cycling for a complete multi-modal experience.

5. Support the environment by reducing greenhouse gas emissions.

Sydney Metro West – Eastern Tunnelling Package

Sydney, ***Australia***

We are involved in the construction of the final section of the Sydney Metro West – Eastern Tunnelling Package (ETP). The ETP works include construction of tunnels under Sydney Harbour, between The Bays and the Sydney Central Business District (CBD), and the excavation of Pyrmont and Hunter Street stations. Sydney Metro West will double the rail capacity between Greater Parramatta and the CBD, with an estimated journey time of around 20 minutes between the two centres. With this project, we are once again excavating a railway crossing under Sydney Harbour, having completed the tunnel and station excavation works for the Sydney Metro City & Southwest project in 2022, where we built the first rail tunnels beneath Sydney Harbour, a testimony to the quality of our work.

PROJECT DETAILS

Start Date:
2022

Category:
Metro

Client:
Sydney Metro

Type of excavation:
TBM

BENEFITS

1. Over 10,000 direct jobs and 70,000 indirect jobs will be created.

2. Double rail capacity between Greater Parramatta and the CBD.

3. Reduces congestion

4. Reduces travel time.

5. Reduces greenhouse gas emissions.

São Paulo Metro – Line 2, Section 2

São Paulo, ***Brazil***

Ghella is involved in the design and construction of the extension of Green Line 2 of the São Paulo metro. The project entails the construction of a main double-track tunnel with a diameter of 11.4 meters and a length of approximately 6 km, two underground stations, and ancillary works. Once completed, Section 2 will connect the Municipality of São Paulo to the Municipality of Guarulhos, through multiple interconnections with urban rail and road lines, extending public transport service to additional districts and broader passenger base.

PROJECT DETAILS

Start Date:
2021

Category:
Metro

Client:
Companhia do Metropolitano de São Paulo

Type of excavation:
TBM

BENEFITS

1. Extends the public transport service to various city districts

2. Improved public transport capacity

3. Reduced congestion

4. Reduction in travel times

5. Reduction in greenhouse gas emissions

Sydney M6 Stage 1

Sydney, ***Australia***

The construction of Transport for NSW's M6 Stage 1 in Sydney plays a key role in the NSW Government's 40-year transport strategy, aimed at improving connectivity and the quality of the state's infrastructure network. We are involved in the construction of two 4 km road tunnels that will link the new M8 expressway at Arncliffe with President Avenue at Kogarah, as part of the CPB Contractors, Ghella and UGL joint venture. The South Sydney region will finally be connected to the city's growing expressway network, making travel easier, faster and safer. Directing traffic underground will allow vehicles to bypass 23 sets of traffic lights on the Princes Highway, thus cutting driving time and reducing traffic congestion. At the same time, the surface road section will be more usable by the local community, enhanced by the creation of a new 5 km pedestrian and cyclist pathway. This will increase the area's liveability and help make Sydney a more accessible city.

PROJECT DETAILS

Start Date:
2021

Category:
Highway tunnel

Client:
NSW Government

Tipologia di scavo:
Roadheader

BENEFITS

1. The number of trucks on surface roads will be reduced by more than 2,000 per day.

2. The project will reduce traffic on General Holmes Drive by 10,000 vehicles per day providing an opportunity to improve the foreshore amenity of Brighton Le Sands.

3. Improved travel times and reliability for road users travelling between Southern Sydney and strategic centres in Greater Sydney while supporting faster and more reliable journeys for local bus customers and road users in Southern Sydney.

4. Transformed parklands that connect with Country and enhance the natural environment for the community to live, play, and experience.

E6 Clean Water Tunnel

Oslo, ***Norway***

This project involves the construction of a new water supply system for the population of Oslo, which currently gets 90% of its drinking water from Maridalsvannet Lake. Currently, any disruption to the existing supply system could have serious consequences for the entire city. The project includes a feeder tunnel to bring water from Holsfjorden Lake, 19 km from the city boundary, a groundwater treatment plant at Huseby, and a tunnel to transfer of clean water across the city. In a joint venture with AF Gruppen, Ghella is responsible for the construction of the clean water distribution system. The network will connect to the already operational water treatment plant in Oset, reinforcing the connection between East and West Oslo. This will ensure that the city has major water reservoirs and a redundant water supply system, thus protecting the people of the Norwegian capital from the consequences of any malfunctions.

PROJECT DETAILS

Start Date:
2021

Category:
Water tunnel

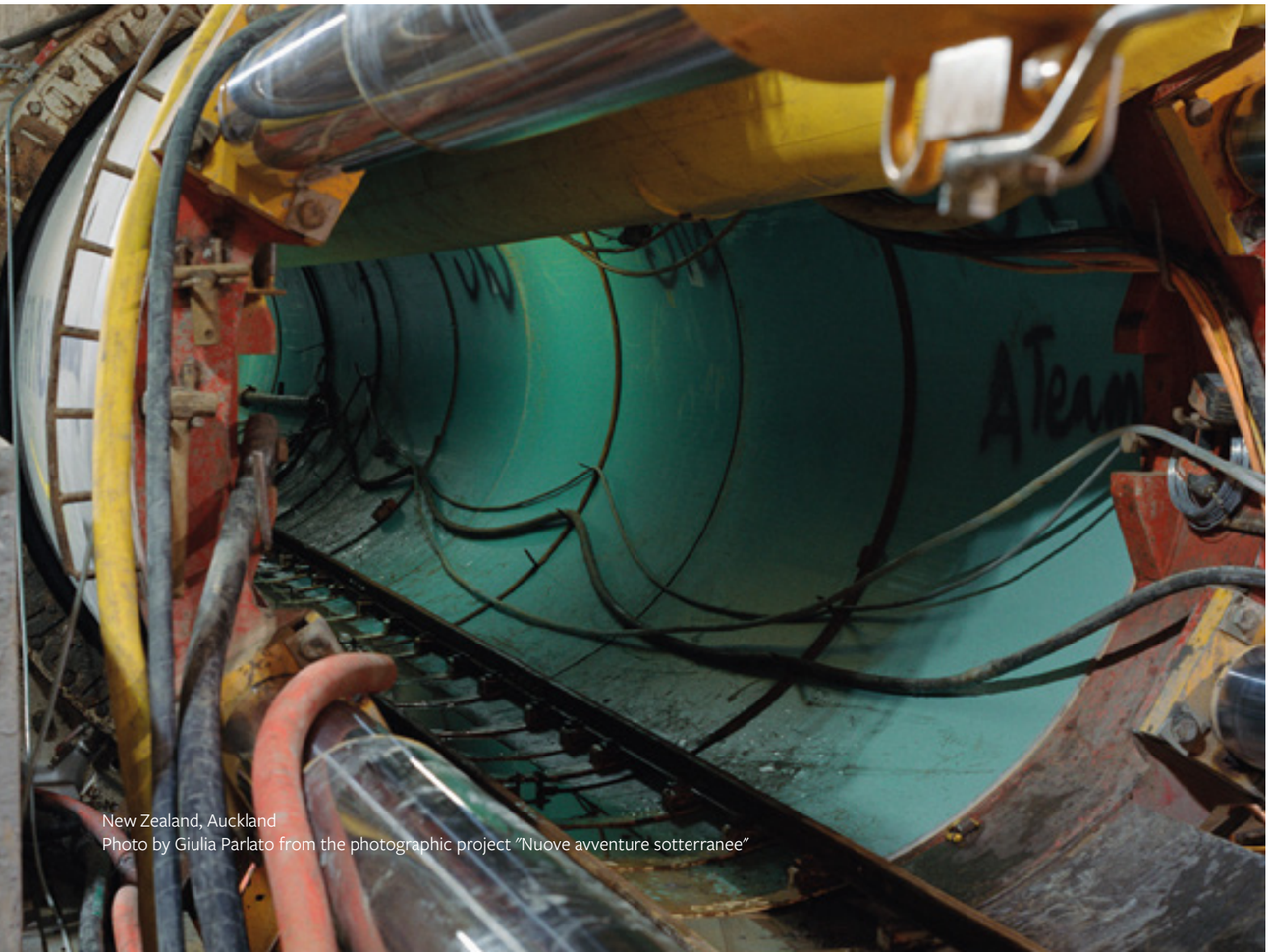
Client:
Municipality of Oslo

Type of excavation:
TBM and conventional tunnelling

BENEFITS

1. Ensures clean water supply for a rapidly growing population.

2. Reduces network losses and water wastage.



New Zealand, Auckland
Photo by Giulia Parlato from the photographic project "Nuove avventure sotterranee"

Turin Median Collector

Turin, ***Italy***

Nicknamed the *idropolitana*, the Collettore Mediano di Torino [Turin Median Collector] will become the new backbone of Turin's sewage network, running parallel to the existing one. It will extend 14 km under Turin at a depth of 20 metres, connecting the southern part near Moncalieri with the northwestern area, and directing water flow to the Castiglione Torinese sewage treatment plant. The project addresses climate change-related issues, such as the increased mixed flows the old collector can no longer manage. It will also enable extraordinary maintenance of the current network and play a key role in environmental depollution by transporting mixed and pure quality rainwater, often laden with pollutants, to SMAT's Water Reclamation Centre in Castiglione Torinese, thereby reducing wastewater pollutants and preventing reflux into the River Po. As part of the project, remediation work will tackle the presence of World War II ordnance and environmental upgrades will be made: for every shrub removed to facilitate work along the collector route, a new tree will be planted.

PROJECT DETAILS

Start date:
2023

Category:
Hydraulic Tunnel

Client:
Società Metropolitana Acque Torino (SMAT)

Type of excavation:
TBM, micro-tunnelling, and manual excavation with forward movement

BENEFITS

1. Increased capacity of the sewer network.

2. Adaptation to climate change.

3. Reduction of pollutant concentration in wastewater.

4. Reduction of wastewater runoff into the River Po.

Central Interceptor

Auckland, ***New Zealand***

Watercare's 16.2 km long wastewater tunnel will be the longest bored tunnel in New Zealand. In older parts of Auckland, there is a combined sewage/rainwater network. During heavy rain, the system becomes overwhelmed, and overflows occur into local streams and beaches. The Central Interceptor tunnel will capture the combined flows and convey them to Māngere Wastewater Treatment Plant for processing. The project will cut wet-weather overflows by about 80% and significantly improve local water quality. The tunnel will be 4.5 m in diameter and will start in Grey Lynn and run underneath the Manukau Harbour to central Auckland to depths of between 15m and 100m below the surface.

PROJECT DETAILS

Start Date:
2019

Category:
Water tunnel

Client:
Watercare Services Ltd

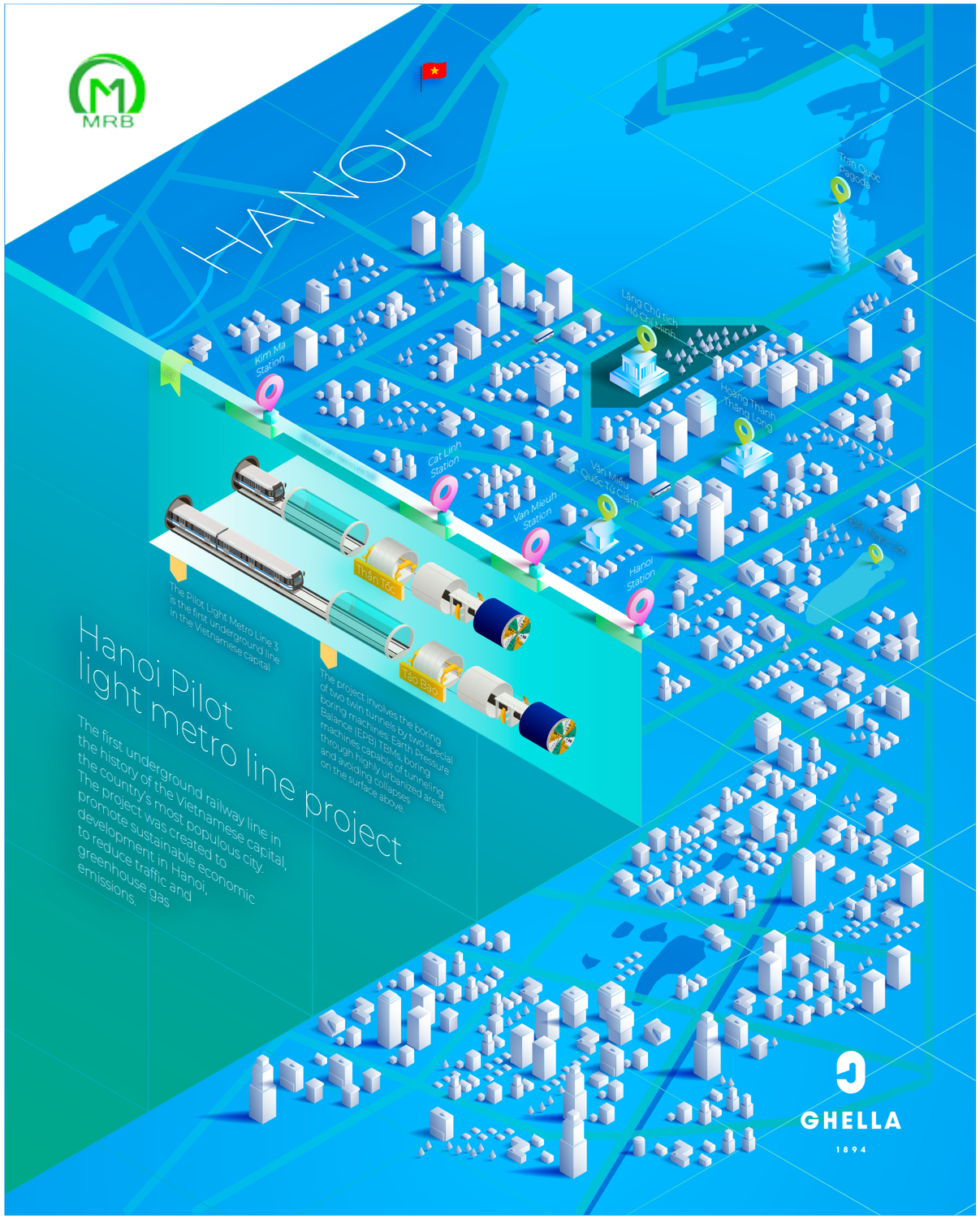
Type of excavation:
TBM

BENEFITS

1. Reduction of wastewater overflows into local streams and beaches.

2. Cleaner waterways and beaches.

3. Improved network capacity to serve the expanding city of Auckland for the next 100 years.



Hanoi Pilot Light Metro Line

Hanoi, ***Vietnam***

Hanoi Metro's Pilot Light Line 3 is part of a major project financed by the Asian Development Bank (ADB), aimed at fostering the country's economic growth and easing traffic congestion in the Vietnamese capital. The new integrated public transport system will comprise a dense network of metro lines, both above and below ground, extending approximately 400 km. This ambitious project is scheduled for completion by 2050.
The construction of the new metro system addresses the need to upgrade urban transport infrastructure in response to significant population growth in Hanoi, which has now exceeded 8 million inhabitants. Currently, around 90% of all journeys are made using private vehicles, with motorbikes making up the largest share.

The new metro system will have a capacity of 200,000 passengers per day. Line 3, known as the Văn Miêu Line (The Temple of Literature Line), is expected to be the most used, extending 12.5 km in total, with 8.5 km on elevated tracks and 4 km underground. Ghella is involved in the excavation of the underground section, which includes 2.6 km of twin tunnels bored in parallel using two EPB TBMs, along with the construction of four stations: Kim Ma, Cat Linh, Van Mieu, and Hanoi.

PROJECT DETAILS

Start date:
2017

Category:
Metro

Client:
Ha Noi Metropolitan Rail Transport Project Board (MRB)

Type of excavation:
TBM

BENEFITS

1. Significant reduction in greenhouse gas emissions.

2. Improved local air quality, with benefits for public health and community safety.

3. Sharing of technology and technical skills during construction, thanks to the involvement of a local workforce in the project team.

4. Reduced urban traffic congestion.

Campolattaro Dam - Sections 1-2

Campolattaro (BN), ***Italy***

Ghella is involved in two of the three sections covering design and construction works for the Campolattaro Dam, in the province of Benevento. This project is one of the seven national strategic interventions included in the PNRR and involves the construction of a major reservoir in Central Southern Italy. Originally designed in the 1960's by the Cassa del Mezzogiorno for irrigation purposes, the project was halted, leaving it incomplete and non – operational. Once completed, branch networks will extend from the reservoir to supply water resources to twenty municipalities in the Benevento area and to other aqueducts in Campania, aiming to ensure water autonomy for the region.
In particular, the first section includes the construction of a diversion tunnel approximately 7.5 km long, about 5 m in diameter, a drinking water plant with a maximum capacity of 3,000 l/s, and a 30,000 m³ storage tank, plus commissioning of both the drinking water plant and a hydroelectric plant.

The second section involves building a drinking water delivery line, a feeder branch, and related site works to upgrade the aqueducts in the Benevento area by laying about 110 km of pipelines with diameters ranging from 400 mm to 1,800 mm.

PROJECT DETAILS

Start date:
2023

Category:
Hydraulic tunnel

Client:
Campania Region

Type of excavation:
TBM

BENEFITS

1. Enhanced drinking water supply benefiting more than 2.5 million people.

2. Irrigation of approximately 15,000 hectares supporting agricultural production

Italy, Canosa Sannita
Canosa 1

Renewable energy

In addition to our significant presence in the public infrastructure sector, we are active in the **renewable energy** sector through the **development**, **construction**, and **operation** of **plants** generating power from renewable sources, with a **focus** on **photovoltaic** and **hydroelectric projects** in Italy, Central America, and the Middle East.

Since 2010, alongside our core business in tunnelling infrastructure projects, we have expanded into the **construction and operation of photovoltaic plants** in Italy through our subsidiary, **Gransolar Ghella** and **Ghella Green**. This business branch directly supports the objectives outlined in the National Ecological Transition Plan: to achieve a 72% share of electricity generated from renewable sources by 2030. Additionally, it indirectly promotes the expansion of production and employment opportunities within an increasingly significant **supply chain**.

To date, we have installed **39** photovoltaic plants across Abruzzo, Lazio, Molise, and Puglia, with a total capacity of **66.4 MW**.

Since operations began, total energy production up to 31 December 2024 has exceeded **1,180 GWh**, equivalent to a **greenhouse gas emissions saving** of over **590,000 tCO_{2eq}**. Specifically, in 2024 alone, we generated **93.68 GWh** of renewable energy, resulting in a greenhouse gas emissions saving of **46,840 tCO_{2eq}**. Our portfolio includes both privately funded projects and projects realised through **partnerships** with **Municipal Administrations**, such as those in Abruzzo and Lazio. This dual approach underscores our commitment to being a catalyst for **opportunities** in both the **social** and **environmental** domains within the communities where we operate.

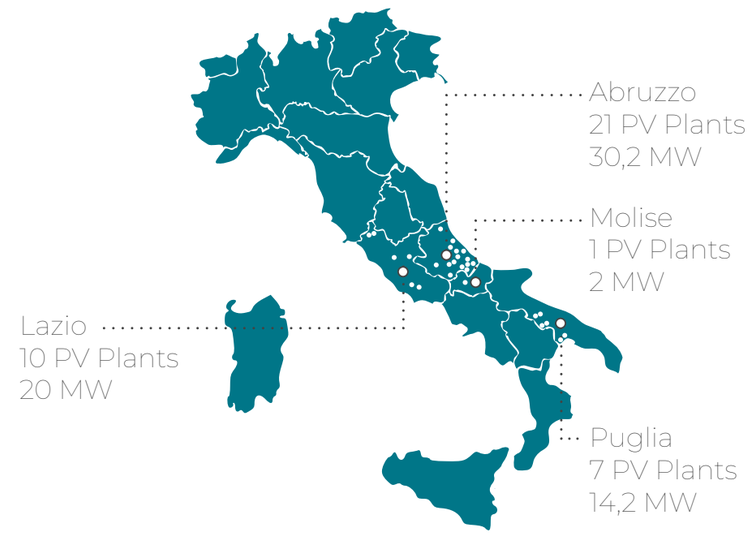
Since becoming operational, our facilities have generated substantial economic benefits for the municipalities involved, thereby creating **shared value** with the community through:

- Improvement of **citizen services**, such as school bus shuttles, reduced taxes, sports facilities for youth, and support for low-income families;
- Implementation of **measures to decrease electricity consumption** through LED lighting systems or small-scale photovoltaic installations for municipal utilities;
- Landscaping of **municipal green areas**.

In addition, our long-standing presence in the area has nurtured a relationship of trust and support with local governments which, in some cases, has led to our direct involvement in municipal **road maintenance** projects, contributions to social **events for youth**, and organising school **visits** to our facilities to raise **awareness** about renewable energy. Since the end of 2021, we have initiated a series of studies dedicated to the **revamping** and **repowering** of photovoltaic plants with module degradation exceeding the 2010 executive design forecasts, some of which are still within their life cycles. In **2024**, revamping activities involved the modules of the Ginosa (TA) and Castellaneta (TA) plants, as well as the modules and inverters at Moricone (RM), transitioning from fixed structures to single-axis tracking systems. Repowering activities focused on the Manduria plant, where an additional 3 MW section with a single-axis tracking system was connected to the grid. Additionally, in 2024, the final one of three 1 MW plants of Solar Lazio South in Pontinia (LT) was connected to the grid, while a new 1 MW plant was constructed at Moricone, with its connection completed in 2025; both use single-axis tracking systems.

To maximise **recovery** opportunities and promote a **circular economy**, we conducted a comprehensive inventory of recoverable materials and facilitated the exploitation of recyclable materials through dedicated collection processes. Additionally, we carried out a comprehensive study to assess the overall impact of revamping operations in terms of CO2 emissions, with the aim of minimising their environmental footprint.

Particularly relevant is the initiative **to donate** a portion of the **modules that are still operational** to the **municipalities** where the plants are situated. These modules will be employed to develop small-scale systems catering to municipal utilities, thus alleviating the financial repercussions associated with the substantial rise in energy costs seen in recent years. Notably, in 2023, approximately 420 kW of modules that are still operational were **repurposed** for use at the **sheds** at **base camps** on the Telese – Vitulano section of the Naples-Bari High-Speed Railway. In 2024, we renewed our agreement with the Municipality of Collelongo, resulting in extra funds for the local administration, dedicated to enhancing services that directly benefit the community.



Nwe Zealand, Auckland
Photo by Giulia Parlato from the photographic project "Nuove avventure sotterranee"

Profile

Andrea Mariotti

Corporate Operations
Norway

1) What is your professional background and what inspired you to join Ghella?

I joined Ghella after gaining 12 years of experience in construction sites, where I held a variety of roles ranging from project controller to assistant site manager, geological monitoring manager, and ultimately site manager.

During those early years, I was fortunate to work on highly stimulating and educational projects that offered diverse experiences, including the Giovanni XXIII tunnel in Rome, the new High-Speed Station and underground car park at Porta Lame in Bologna, and the railway bypass and underground Porta Susa station in Turin.

In 2014, Ghella approached me to take on a key role in its Italian construction projects. From our very first conversations, I was struck by the company's passion and vision, and I eagerly embraced the opportunity to become part of this remarkable "family."

2) Tell us about your role and the challenges it involves

Currently, I hold the position of Corporate Operations Norway and CEO of Ghella NUF Norway, acting as the liaison between the Rome headquarters and the operational team in Oslo. I oversee the progress of works in Norway from a technical, financial, and contractual perspective. I also coordinate the project team and manage relationships with our partners and clients. The toughest challenge? Integrating effectively and gaining recognition in a country with a culture quite different from ours, while showcasing our expertise and proving the potential of mechanized tunnelling compared to traditional drill-and-blast excavation, even in the tough, hard-rock conditions typical of Norway.

3) What does sustainability mean to you, and how do you think your work can contribute to it?

We live in a world whose natural resources have been stretched to the utmost by years of exploitation, so to me sustainability is about balancing the need to build vital new infrastructure with protecting our planet and leaving future generations in a better place than the one in which we live.

All this is of course a challenge – one that calls for dedication from each of us. Through my work, I have the chance to make a meaningful contribution to this shared responsibility.

4) What do you find most rewarding about your job?

The most exciting part of my job is seeing the projects I am involved in come to life.

Watching a project start from scratch and take shape, becoming a tangible achievement through team commitment, overcoming challenges and unexpected problems – is immensely rewarding. The success at the end is what makes all the hard work worthwhile.

LED lighting systems
Reduces energy consumption

Automatic control systems in construction plants
Reduces waste and wear through real-time monitoring

Electrical vehicles for transportation of muck, materials and/or personnel
Improves air quality in the tunnel; possibility of selecting electricity produced from renewable sources and reducing CO_2 emissions during logistics

Recovery of excavated materials on site and off site
Reduces the amount of material to be extracted from quarries and the amount of material to be disposed of

Steel fibres or hybrid fibres for segment reinforcement
Reduces the material CO_2 emissions

Concrete with reduced cement and cement-free mixes
Reduces CO_2 emissions of materials

Use of a refurbished machine
Reduces resource consumption and CO_2 emissions in comparison to producing a brand new machine

Electric machine
Possibility to select electricity produced from renewable sources and reduce CO_2 emissions during excavation

Software for operational parameters optimization
Reduces energy consumption and soil conditioning

TBM+
Towards a more sustainable excavation

Internal closed circuit with heat exchanger
Reduces water consumption during machine cooling

Bentonite recirculation to ensure stability at the excavation face with a Hydroshield TBM
Reduces resource consumption

Continuous mining system for ring assembly
Reduces operation time and resource consumption

Selection of biodegradable soil conditioners, machine oils and other lubricants
Minimizes soil pollution

People

"Our goal is to be a responsible neighbour by building strong relationships with our stakeholders while delivering a project with a lasting positive impact for everyone"

Karen Melville
Stakeholder and Communications Manager

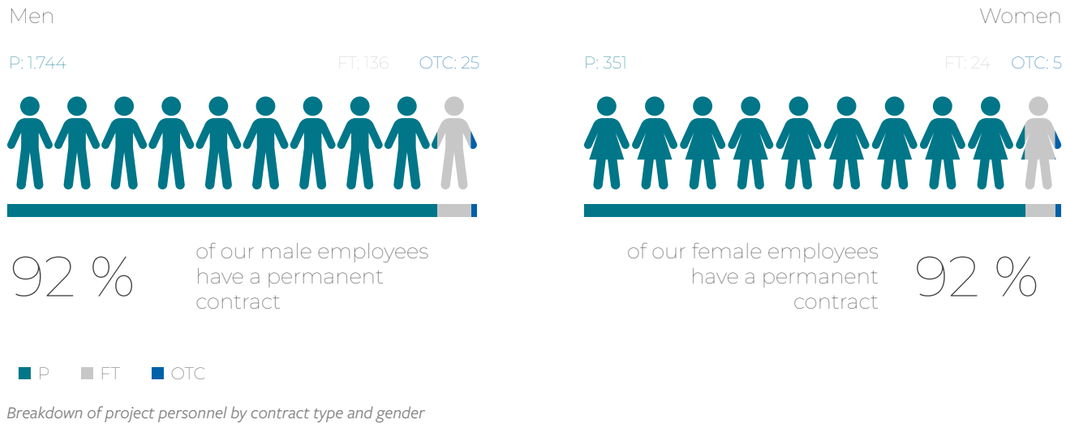
Central Interceptor, New Zealand

Valuing individuals lies at the heart of our ethos. Focus on people **is a cornerstone** of our ESG Strategy, and our 2023–2025 Sustainability Plan reinforces our core commitment to workplace health and safety, employee wellbeing and career growth, equal opportunities for advancement, and listening to and valuing local communities engaged in our projects.

We have set two main social targets for 2030: to reduce the Lost Time Injury Frequency Rate (LTIFR) by 30% compared to 2021, and to reach 30% female representation in management roles. The SA8000 and UNI/PdR 125:2022 certifications, along with the validation of our Management System in accordance with ISO 30415, demonstrate our concrete commitment to valuing people, protecting human capital, and promoting gender equality.

Our people

As stated in our Code of Ethics, **people are the core and driving force behind Ghella**. We believe that excellent work is achieved through a **blend of professionalism, passion, and sharing ideas and values**. This is why we foster a **workplace culture** that is **open**, **inclusive**, and grounded in trust, transparency, and teamwork. To support the company's strategic objectives, the Human Resources Department is responsible for workforce planning and overseeing recruitment and selection processes for both the headquarters and for key roles across production units and international offices. The department ensures consistent expertise and alignment across all functions. Meanwhile, the Human Resources offices dealing with work projects manage operational HR tasks during the construction phase, monitor progress, and provide regular updates to both clients and headquarters. Given the complexity of our sector and the highly specialised skills required, projects are commonly executed in joint ventures (JVs) or consortia, where each partner may hold a different share. Depending on the arrangement, JVs may recruit directly or rely on secondments from the participating companies. In some cases, a combination of both approaches is used.



Breakdown of project personnel by contract type and gender

Australia, Sydeny
Eastern Tunneling Package

Overall, within our reporting scope, we have a total workforce of 2,285[4] employees. Of these, **92%** (equivalent to 2,095 employees) hold **permanent contracts**. This proportion increases to 96% for employees of Ghella S.p.A. and its main subsidiaries and stands at 90% for those working within joint ventures. 7% of our workforce are on fixed-term contracts, while less than 1% are contingent workers, typically skilled staff hired for complex, short-term assignments. We support our people's professional and personal growth and promote knowledge sharing by encouraging transfers to new projects and sites.

An analysis of the data by gender shows that **92% of men** (1,905) and **92% of women** (380) hold **permanent roles**.

In addition, **85%** of those working on projects managed by joint ventures or consortia are locally hired, meaning they reside **permanently in the country where the project is located**. This figure is consistent with previous years and reflects our ongoing commitment to actively involve local communities.

*Direct employees → **574***
ITALY
P: 96,5% FT: 0,7% OTC: 2,8

*Direct employees → **118***
ASIA
P: 35,6% FT: 63,6% OTC: 0,8%

*Dipendenti diretti → **180***
CANADA
P: 99,4% FT: 0,6% OTC: 0%

*Direct employees → **143***
EUROPE
P: 92,0% FT: 5,7% OTC: 2,3%

*Direct employees → **788***
OCEANIA
P: 92,9% FT: 5,5% OTC: 1,6%

*Direct employees → **482***
SOUTH AMERICA
P: 100% FT: 0% OTC: 0%

Breakdown of project personnel by contract type and geographical area (please note that Europe excludes Italy)

P = Permanent, FT= Fixed Term, OTC = Other type of contract

Australia, Brisbane
Photo by Rachele Maistrello from the photographic project "Nuove avventure sotterranee"

On site school holiday camp at the ETP project office

People wellbeing is a priority for Ghella as we recognise the importance for everyone of achieving a good work-life balance, particularly parents of young children.

It was with this spirit that the Sydney Metro West – Eastern Tunnelling Package made the 2024 Spring school holidays a bit easier for parents working on the project. Filling the school holiday gap can be stressful for parents, expensive and can impact productivity. The awesome **educators** from **Skills and Thrills**, an organisation specialised in running **kids programs** nurturing their creative minds and growing bodies, hosted **holiday camps at the project office**.

Parents could drop off their kids in the morning and go about their day at their respective sites while their kids enjoyed a day full of activities. The feedback was extremely positive from both parents and kids as well as everyone in the office who had their spirits lifted by the happy children.

People-centered initiatives at the Broadway Subway Project

People are at the core of Ghella's ESG strategy—valued not only for their contribution to operational excellence, but as individuals whose wellbeing, development, and sense of belonging are essential to the success of every project.

Reflecting this commitment, the Broadway Subway Project, in Vancouver, Canada, has introduced several initiatives in 2024 aimed at supporting and recognizing its workforce. From March to May, the JV **hosted seven Construction Worker Appreciation lunches** across its construction sites as part of a province-wide initiative. Approximately **640 meals** were purchased from **local restaurants** near the project areas. These events served as an opportunity to thank site crews for their dedication while supporting small businesses in the surrounding community.

In October, the JV introduced a new initiative at the project's head office: an **office library** featuring a curated selection of 25 books on diversity, equity, inclusion, and soft skills such as empathy, negotiation, and conflict resolution. This resource supports staff development and helps cultivate a work culture that values continuous learning and promotes respectful, inclusive collaboration.

Together, these initiatives demonstrate the JV's ongoing commitment to fostering a people-first approach—on site and in the office—by investing in the wellbeing, growth, and recognition of its workforce.

Putting People First: Inclusion, Culture, and Education at the São Paulo Site

We place great importance on the wellbeing of our employees and their growth, both professionally and personally.

At our São Paulo construction site in Brazil, the Crasa Ghella Consbem Consortium has launched key projects that reflect a responsible and inclusive corporate vision.

One such initiative is the **Libera Library**, inspired by Article 27 of the Universal Declaration of Human Rights, which recognises everyone's right to participate in cultural life and access knowledge. The initiative offers books donated by the community and employees, encouraging reading and fostering cultural development for workers and the surrounding community alike. The project's social communications team actively engages with libraries and cultural centres to continually expand the donation network.

The Consortium also actively promotes the formal education of its collaborators. Two key initiatives embody this commitment: the PAI (Intensive Literacy Programme) and the new EJA (Youth and Adult Education), both inspired by Article 26 of the Declaration, which recognises the universal right to education. The PAI helps participants in rapidly developing basic reading and writing skills, while the EJA offers the opportunity to complete primary and secondary education for those who have had to interrupt their studies. Classes are held on-site in the administrative area, in a dedicated classroom, and include personalised support, innovative teaching methods, and continuous progress monitoring. The initiative has been well received by participants and has also been recognised and supported by SESI, a non-profit organisation dedicated to the right to education and training in Brazil, which has co-founded the project since October 2024.

Diversity and equal opportunities

We meticulously follow human resources management practices that embed diversity and equal opportunity principles into our Integrated Management System. This approach is put into practice through a set of targeted policies and procedures, including our Human Resources Management Policy, the Policy on Equality, Diversity and Inclusion (EDI), and the Procedure on Human Resources and Organisation.

We follow a transparent recruitment process that is strictly merit-based and relies exclusively on the skills and applications submitted, tracking all CVs reviewed throughout the process. Our teams include people of diverse nationalities, age groups and genders. Canada has the highest average proportion of female employees at 24%, while the figure rises to 39.1% at our Rome headquarters.

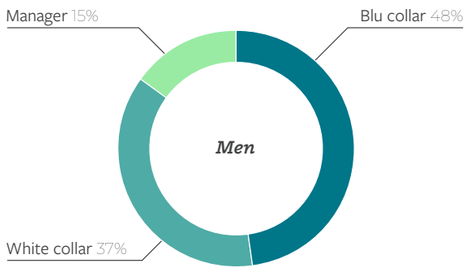
We condemn all forms of discrimination and promote a culture of respect for EDI principles, including through specific training. The 'Policy for Appropriate Behaviour in the Workplace' clearly defines inappropriate patterns of behaviour deemed inappropriate by the company and provides guidance on the reporting channels available to employees through the 'Whistleblowing Policy'. Our **ISO 30415** validation is a clear reflection of our commitment to embracing diversity and creating an inclusive environment. It stands as concrete proof that employee well-being lies at the heart of our organisational values In 2024, we proudly obtained **UNI/PdR 125:2022** gender equality certification in Italy, representing a meaningful milestone that reflects our commitment to an inclusive corporate culture.

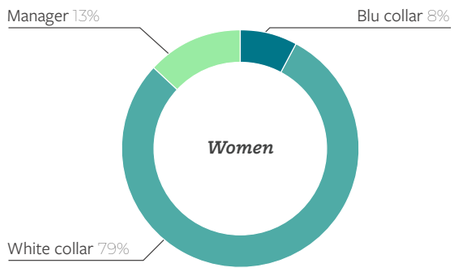
The following table shows the breakdown of employees by gender and by job category in 2024:

		2023		2024	
		Male	**Female**	**Male**	**Female**
Manager	n.	240	52	290	50
White collar	n.	484	235	700	299
Blu collar	n.	602	8	915	31
Total	**n.**	**1,326**	**295**	**1,905**	**380**
Manager	%	82.2%	17.8%	85%	15%
White collar	%	67.3%	32.7%	70%	30%
Blu collar	%	98.7%	1.3%	97%	3%

Two-year comparison (2023-2024) of gender representation across all job categories

In 2024, women hold 15% of managerial positions across the company, with particularly significant representation in Australia and Canada. At our headquarters in Rome, the proportion rises to 23.5%, reflecting growing gender diversity in leadership roles.



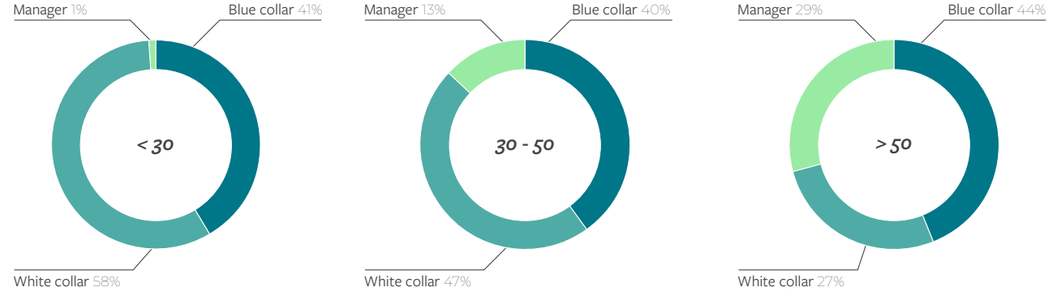


Breakdown of employees by job category in 2024 (as a percentage of each gender's total)

We recognise the value of all individuals and strive to build a workplace where youth is embraced as a vital asset, not a constraint. Special attention is given to the integration of young professionals into roles both at our headquarters and at project sites, thus strengthening our corporate cultural heritage and growth. In 2024, the proportion of employees under 30 rose to 17%, compared to 14% the previous year.

		2023			2024		
		<30	**30-50**	**>50**	**<30**	**30-50**	**>50**
Manager	n.	13	172	107	2	174	164
White collar	n.	162	450	107	229	622	148
Blu collar	n.	65	385	160	165	537	244
Totale	**n.**	**240**	**1,007**	**374**	**396**	**1,333**	**556**
Manager	%	4.5%	58.9%	36.6%	0.6%	51.2%	48.2%
White collar	%	22.5%	62.6%	14.9%	22.9%	62.3%	14.8%
Blu collar	%	10.7%	63.1%	26.2%	17.4%	56.8%	25.8%

Comparison of the number of employees by job category and age group in 2023 and 2024



Breakdown of project staff by professional category in each age group

Gender Equality – UNI/PdR 125 Certification in Italy

Despite the progress made towards more inclusive models at both national and international levels, gender inequality remains a significant challenge, both economically and socially. To address this issue, the United Nations' 2030 Agenda includes gender equality among the Sustainable Development Goals (SDGs).

At Ghella, we have always believed in the dignity of people, equality, and inclusion, and we actively work to counter all forms of discrimination. This commitment is a core part of how we operate and is reflected in key documents such as our Code of Ethics, Human Rights Guidelines, and Policies on Equality, Diversity and Inclusion. These principles also guide our decisions in terms of social responsibility, human resources management and workplace behaviour. As further confirmation of our commitment, in 2024 we obtained UNI/PdR 125:2022 certification for our operations in Italy—an additional step that demonstrates our ongoing focus on fostering a truly inclusive corporate culture.

The UNI/PdR 125:2022 certification aims to promote cultural and organizational change by actively engaging companies in initiatives designed to close the gender gap. The guidelines are structured around six strategic areas: corporate culture and strategy, governance, human resources management, pay equity and equal career opportunities, work-life balance, and the prevention of abuse and harassment.

These areas are fully integrated into our company Management System and translated into tangible, monitored, and continuously evaluated actions. In particular, we have adopted a **three-year Strategic Plan** that includes:

- The implementation of **concrete initiatives** to support work-life balance
- **training initiatives to raise awareness** among employees about **gender bias**
- **regular internal surveys to monitor employees' perceptions** and respond proactively to their real needs.

To ensure these objectives are met, we have established a **Gender Equality Steering Committee**, composed of senior management and experts in Human Resources and Management Systems. Additionally, we have introduced the role of **EDI Manager** (**Equality, Diversity & Inclusion**), an internal point of reference tasked with collecting proposals and encouraging participation at all levels of the organization.

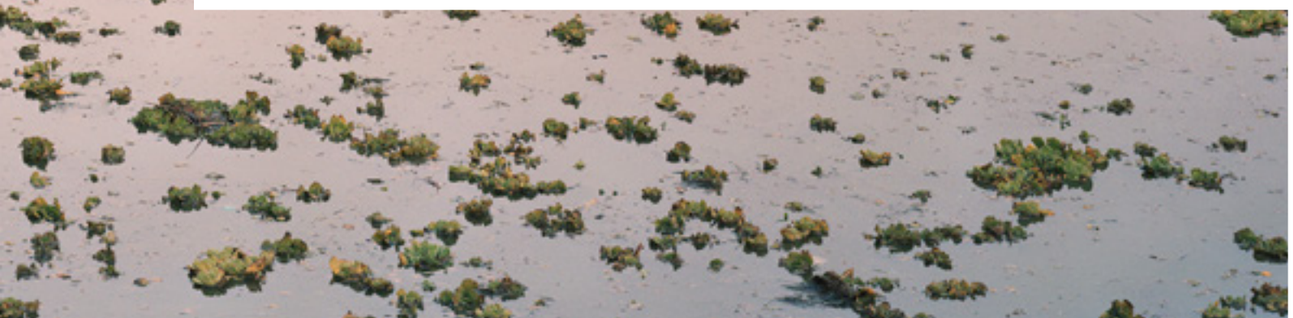
We believe that equality and inclusion are not only goals to be achieved, but values to be embodied daily in the choices, behaviours, and relationships that define our company's identity.

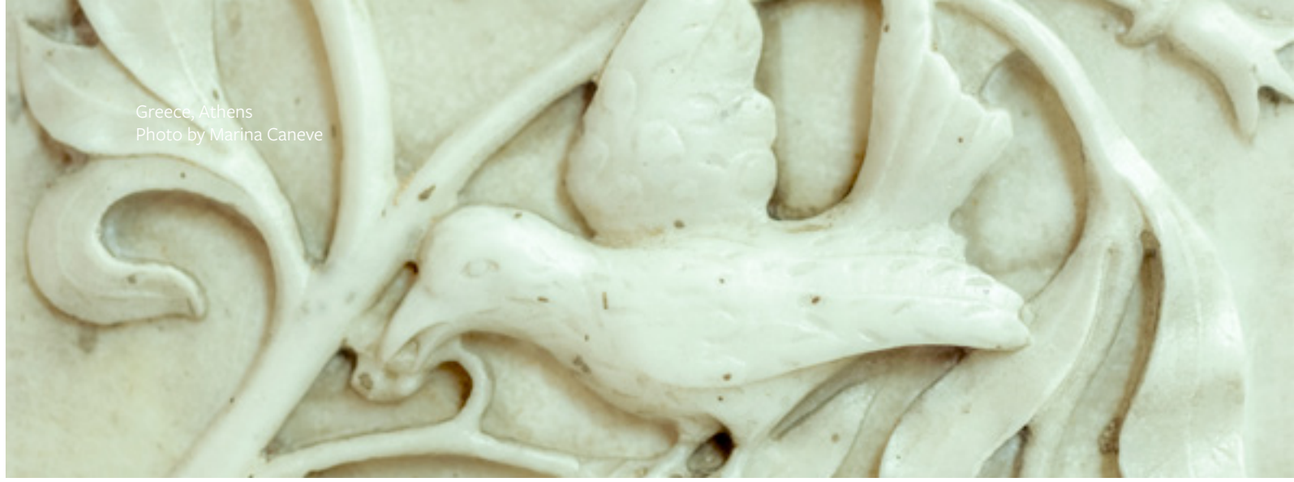
Girls in Infrastructure initiatives in Ghella Ltd and Central Interceptor

Only 34% of women make up the workforce in STEM subjects (science, technology, engineering and math) in New Zealand.

In 2024 our NZ subsidiary Ghella Limited was a proud sponsor of a Girls in Infrastructure event held in Auckland. This initiative aims to increase awareness and ignite interest about the diverse and rewarding career paths available in the infrastructure industry for girls in their last two years of school. The events offer them an opportunity to **experience a live construction site, operate heavy machinery and engage in meaningful conversations with women in the construction industry**.

We actively encourage women in construction also at the site level, with **Watercare's Central Interceptor** project hosting various Rangers groups (Girl Guides aged 12-17) as part of its 'See it to Be it' initiative. During their visit, led by our JV and Watercare's female engineers, managers and staff, girls gained valuable insights into the various roles involved in the project and discussed the significant role that STEM subjects play in the construction industry.





Greece, Athens
Photo by Marina Caneve

Development of human capital

Training starts with a careful evaluation of the learning requirements of all employees. Each individual is carefully supported in selecting the most effective approach, whether this involves practical on-the-job training, digital courses, or traditional classroom sessions. Training plans are developed by aligning the professional development needs identified and agreed with departmental managers with the organisation's goal of enhancing strategic skills.

We make use of interprofessional funds that enable us to consistently dedicate resources to training and development initiatives.

In 2024, within the reporting scope, **79,565 hours of training** were delivered.

Average number of training hours per gender recorded within the joint ventures are reported below[5]:

23 hours
average hours of training | 2023

31 hours
average hours of training | 2024

18 hours
average hours of training | 2023

20 hours
average hours of training | 2024

Comparison of average hours provided in 2023 and 2024 for female and male employees

Training in the group's subsidiaries was tailored to the needs identified and depends on how well-established the existing processes were. In 2024, **Ghella and its main subsidiaries delivered a total of 5,889 hours of training**, averaging around 8 hours per person.

We also delivered more than 11,000 hours of training to non-staff members, particularly focused on Health and Safety and technical refresher courses. In 2024, 62% of employees at Ghella, its subsidiaries, and the project sites included in the reporting scope took part in the **performance evaluation** process. This figure reflects the fast-paced environment of our industry, where the continuous onboarding of new employees throughout the year can temporarily reduce participation, as some employees have not yet acquired the necessary company experience for a meaningful assessment.

Since 2021, we have introduced the **Rookies programme to support the integration of young talent into the company**. Graduates and final-year students in Civil, Building or Management Engineering, as well as in Economics and Management, can access a personalised development path, supported by a mentor to ease their integration into the corporate environment. Participants also receive a benefits package, including accommodation, travel, and return trips home. As of 2023, the initiative has been extended to secondary school diploma holders as well.

Learning and Development at the Rome Head Office

At Ghella, we consider training to be a vital tool for empowering our people, fostering innovation, and strengthening our corporate culture. That is why we continually invest in skill development by listening to what those in our teams need and turning that into meaningful learning opportunities.

In 2024, the training programme at Ghella's Rome Head Office focused on key areas, including health and safety, continuous professional development and specialist skills. **Foreign languages**, especially **English** and **Spanish**, were the second most requested training subjects after safety, with courses delivered both in person and online through a globally accessible on-demand platform.

In collaboration with the IT department, we also launched the **"Cybrary" platform** to support IT training, enabling our team to obtain industry-recognised certifications in the digital sector.

One standout, well-attended initiative was a **refresher course for office-based engineers** with varying levels of experience. It was structured into four sessions covering changes in legislation and regulations, health risks in work done underground, and organisational aspects.

Another key focus was the **BIM** (**Building Information Modelling**) training programme, consisting of six targeted courses designed to prepare technical staff for roles such as BIM Specialist, Coordinator and Manager. The training supports compliance with the new rules requiring public sector tenders to use BIM on projects where the value of works was €100 million or more.

Health and Safety Training

Health and safety at work are a top priority at Ghella. In an industry like construction that involves high risks, prevention is key to protecting individuals, ensuring operational continuity, and contributing to genuine sustainable development.

In 2024, we delivered **43,931 hours of training across construction sites** included in the reporting scope. 77% of this focused on induction and health and safety topics. These figures highlight our firm commitment to cultivating a culture of prevention from the very first day and throughout every employee's career.

Compared with 2023, the average health and safety training hours per employee have increased overall and within each gender group. This encouraging trend reflects our dedication to providing the skills and awareness necessary for safe working practices that meet the highest industry standards and comply with our legal obligations.

Our strategy is built on **continuous, practical and participatory training** initiatives. We firmly believe that every individual can play an active role in preventing accidents and fostering a safer workplace culture. This is more than a responsibility; it is a conscious decision to promote collective wellbeing and excellence in all we do.

Preparing for the future. Internship and graduate programs in Central Interceptor

Investing in the next generation is at the heart of Ghella's vision for the future, and Watercare's Central Interceptor project internship and graduate programs are a key part of that legacy.

Since 2019, our GAJV team has welcomed **45 interns**, many of whom have gone on to build successful careers within the joint venture and the wider construction industry in New Zealand. The summer of 2024/25 was the third consecutive year of running the program, and we are extremely proud of the impact it has had. The interns gained hands-on experience, contributed to meaningful projects, and immersed themselves in the dynamic world of construction. Their hard work, enthusiasm, and fresh perspectives have been invaluable to the JV team.

The Central Interceptor's **Graduate program** is another example of preparing for the future. The 18-month-long in-house program follows industry standards catering for graduates from all disciplines as it provides a set of foundational skills essential to developing professionally and personally. The JV currently has **six graduates** in the program, four of whom came through the internship program. Course material is designed and delivered through internal people and training teams, and a mentor supports every graduate.

Vietnam, Hanoi
Photo by Francesco Neri from the photographic project "Di roccia, fuochi e avventure sotterranee"

Labour management and employee welfare

Compensation, defined in accordance with principles of fairness, is reflective of the expertise and professionalism of each employee.

Within an environment where the majority of specialised technical professionals in the market are male, we actively work towards ensuring equal pay for equivalent duties and job levels.

In Italy, all employees, whether on-site or at headquarters, are bound by the CCNL Edilizia e Industria [National Collective Labour Agreement]. Outside Italy, collective labour agreements apply to blue-collar workers, while other direct employees are subject to individual agreements in compliance with local regulations.

To protect employees, a **Social Performance Team** (**SPT**) has been set up in accordance with SA8000 certification requirements. Comprising both employee and management representatives, the team's role is to regularly assess SA8000-related risks and to monitor activities at the workplace.

To actively support the wellbeing of its people, **Ghella S.p.A**. has launched a **welfare** programme available to workers, apprentices, clerical staff and supervisors at its Italian offices and construction sites. The scheme offers a wide range of services designed to improve quality of life and help families with their finances, including school textbooks, language lessons, holiday deals, gym subscriptions, and psychological counselling through dedicated platforms. Moreover, any unused funds can be gifted to charitable organisations supported by Ghella, such as the **Community of Sant'Egidio**.

Sustainability culture

We believe that fostering a corporate culture grounded in sustainability principles is essential to implementing our ESG strategy. Sharing and understanding the same values is key to achieving common goals.

For this reason, we promote awareness campaigns both at our offices and construction sites addressing various topics from work life where **individual actions contribute**, such as embracing diversity, separating waste, and reducing energy and water consumption.

A course developed internally by Ghella S.p.A., in collaboration with a training provider, is available to all employees and covers core sustainability themes relevant to Ghella, including life cycle thinking, carbon footprint, employee wellbeing, and sustainable procurement. The course also helps in understanding how our work fits into broader changes in the outside world.

The Intranet, **Ghella app**, **LinkedIn** and **Instagram profiles**, and the **Ghella.com website** are instrumental tools in promoting our company's culture. They provide hubs for varied content including news on a range of subjects, a snapshot of our company history, our engagement in humanitarian and social causes, and sustainability activities both at headquarters and on-site. These tools, along with the **company's photo archive**, support connections between offices and construction sites by sparking interest through images and shared stories.

Health and safety

At Ghella, health and safety are top priorities. The safety of people lies at the heart of the quality of our work, and every day we strive to achieve a clear goal: **zero accidents**. **Ghella's Occupational Health and Safety Management System**, certified according to the international standard **ISO 45001:2018** and the **SA8000 Standard**, reflects our unwavering dedication to effectively managing these essential aspects, ones which have long been central to our operational philosophy. The nature of our activities exposes workers to potential risks that could have significant impacts on their health and safety. Consequently, our Management System includes protocols to identify hazards, assess risks, and determine appropriate prevention and protection measures. Leveraging the **know-how** gained over many years in the industry, we integrate **lessons learned** and promote **knowledge sharing** throughout the organisation.

To consistently improve our performance, we regularly review our progress, particularly during the annual Management System Review and through **Health and Safety Committees** such as the SA8000 Social Performance Team. We also carry out focused evaluations during internal audits, cross-functional meetings, and in specific situations requiring closer analysis.

During project delivery, we effectively manage Health and Safety risks by leveraging our expertise and experience, while actively engaging with stakeholders. Every day, our engineers are committed to developing innovative safety measures to maintain strict oversight of all operations.

The principle of a **hierarchy of controls** is implemented across all levels of our organisation from top management to frontline staff. Everyone has the right – and responsibility – to report risks or suggest improvements. This is why we have set up **dedicated communication channels**, as outlined in both our Whistleblowing Policy and our SA8000 Social Responsibility Policy. Training is a fundamental tool in promoting a **culture of health and safety**. Enhancing the skills of our workforce helps raise awareness and promote active participation in these areas. Our training programmes are designed to meet specific needs and goals, including induction sessions, on-the-job training, internships, e-learning modules, toolbox talks, and routine safety discussions such as daily or weekly meetings and Job Safety Analysis reviews. All these methodologies are adapted to the prevailing context and regulatory landscape.

Accident incidence rate

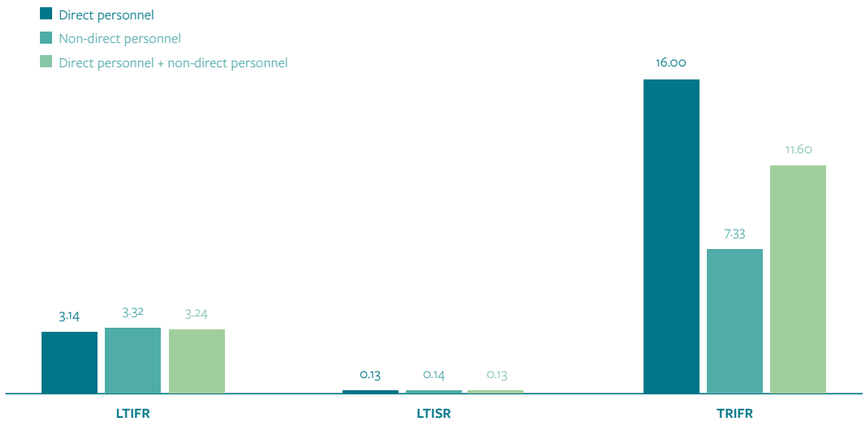
We consistently track accident incidents and conduct thorough analyses to identify root causes and develop effective improvement measures to prevent future hazardous events.

Ghella monitors the key accident indices throughout its entire operational scope, with particular focus on:

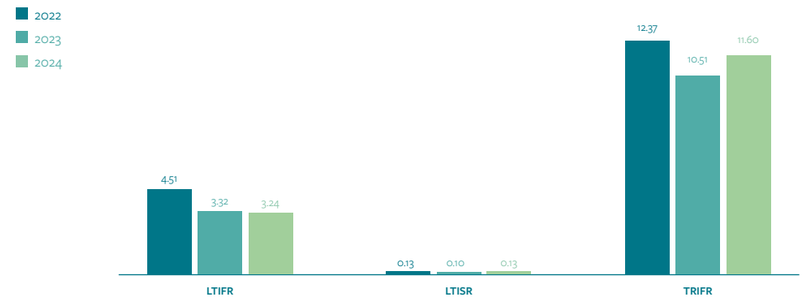
- **LTIFR**[6] (Lost Time Injury Frequency Rate): the rate of injuries resulting in absence from work;
- **LTISR**[7] (Lost Time Injury Severity Rate): the rate indicating the severity of work-related injuries;
- **TRIFR**[8] (Total Recordable Injury Frequency Rate): the rate of all recordable workplace injuries.

The **LTIFR** is the main indicator against which the company's performance targets are measured. In 2024, performance **improved** by **40.9%** compared to the baseline year of 2021, when the LTIFR stood at 5.48.

The trend of accident indices for the 2024 reporting period is shown below, along with a comparison to the previous two years.



Comparison of the 2024 injury rates for internal personnel, external personnel, and total internal and external personnel

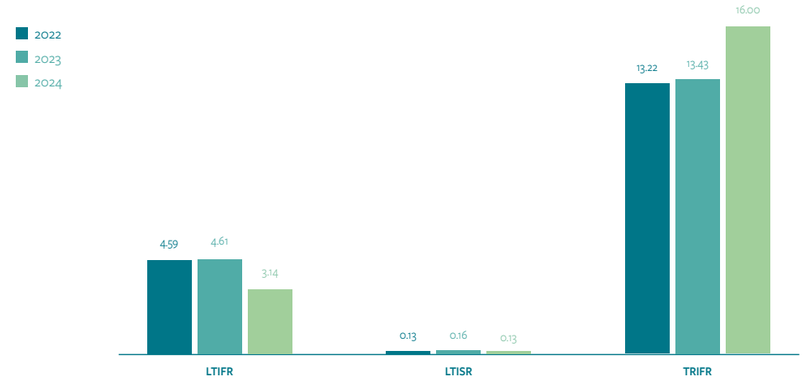


Trend of injury rates for the total of internal and external personnel in 2022, 2023 and 2024

The overall indices, which include both internal and external personnel, highlight:

- an improvement in the total LTIFR, decreasing from 3.32 to 3.24
- an increase in the total LTISR, rising from 0.10 to 0.13
- an increase in the total TRIFR, going from 10.51 to 11.60.

This increase is partly attributable to the recent change in calculation criteria, which from 2024 includes all injuries resulting in lost days, regardless of the length of absence. Prior to 2024, and in accordance with the Eurostat definition, TRIFR was calculated considering only LTIs with more than three lost days.The reduction in the frequency rate is the result of the prevention, protection, and improvement measures we have implemented. These include ongoing training, awareness activities to actively engage employees, incentive and recognition campaigns, and additional health checks aimed at preventing cardiovascular diseases.

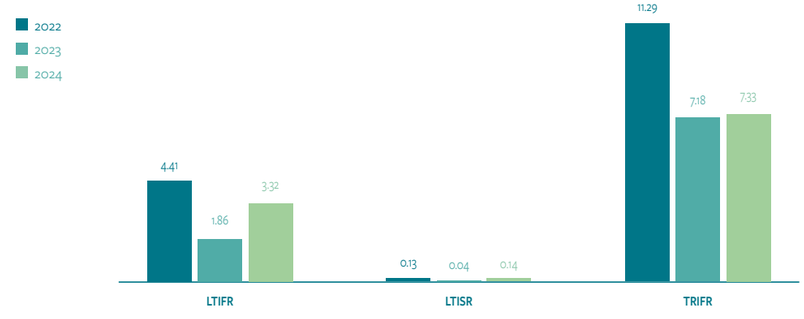


Comparison of injury rates for internal personnel in 2022, 2023 and 2024.

The 2024 injury indices for internal personnel, compared to 2023, highlight:

- an improvement in the LTIFR, which decreases from 4.61 to 3.14;
- a reduction in the LTISR, falling from 0.16 to 0.13;
- an increase in the TRIFR, rising from 13.43 to 16.

As mentioned earlier, the increase is also linked to the recent change in the calculation method, which from 2024 includes all injuries resulting in lost days, regardless of the length of absence.



Comparison of injury rates for external personnel in 2022, 2023, and 2024

For external personnel, the data show an increase in the indices compared to 2023:

- LTIFR rises from 1.86 to 3.32
- LTISR increases from 0.04 to 0.14
- TRIFR goes up from 7.18 to 7.33

By **monitoring proactive and predictive performance indicators** and analysing risk assessment results, we are able to conduct targeted inspections, concentrating on the most critical activities such as tunnel work, working at height, and electrical tasks.

2024	Hours worked	LTI[9]	MTC[10] + RWC[11]	Total recordable work-related injuries[12]	Injuries with serious consequences[13]	Rate of injuries with serious consequences[14]
Internal personnel	14,312,487	45	168	229	2	0.14
External personnel	14.739.916	49	56	108	1	0.07

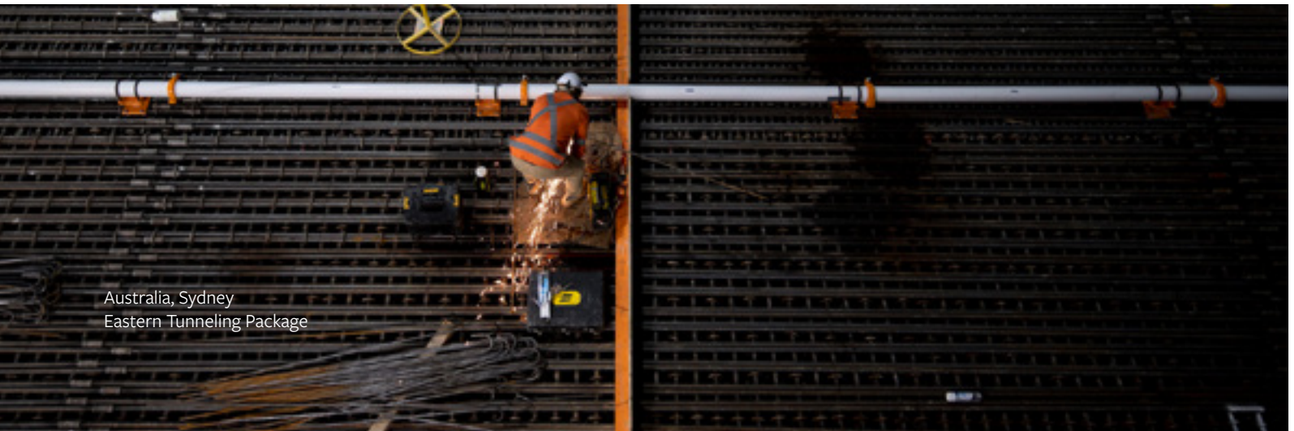
2023	Hours worked	LTI	MTC + RWC	Total recordable work-related injuries	Injuries with serious consequences	Rate of injuries with serious consequences
Internal personnel	12,803,577	59	113	172	0	0
External personnel	11,278,815	21	60	81	0	0

2022	Hours worked	LTI	MTC + RWC	Total recordable work-related injuries	Injuries with serious consequences	Rate of injuries with serious consequences
Internal personnel	9,154,794	42	79	121	1	0.11
External personnel	7,260,206	32	50	82	1	0.14

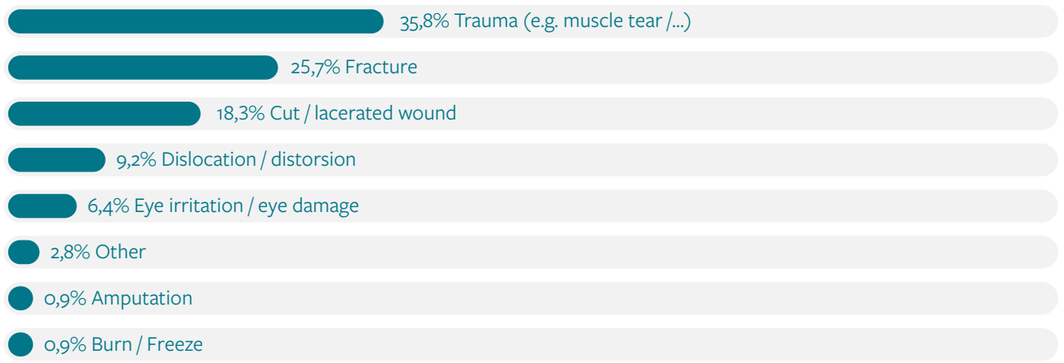
During the year, three serious accidents were recorded. Contributing factors included non-compliance with procedures, distraction on the part of the individuals involved, incorrect use of personal protective equipment and, in some instances, insufficiently developed training and supervision for new hires. The first case involved a non-direct employee who suffered a leg fracture. The second concerned a direct employee who sustained a foot fracture. The third incident, also involving a direct employee, resulted in an eye trauma.

In response to analysis of the root cause of the three accidents, a series of corrective measures were introduced. These included: launching updated training programmes to promote proper and consistent safety practices; reinforcing the onboarding process with greater emphasis on supervision and understanding of operational methods; enhancing construction site signage; and improving specific operational procedures. Excluding the three incidents mentioned above, an examination of the severity index and the nature of injuries among both internal and external personnel reveals that most were of a minor nature.

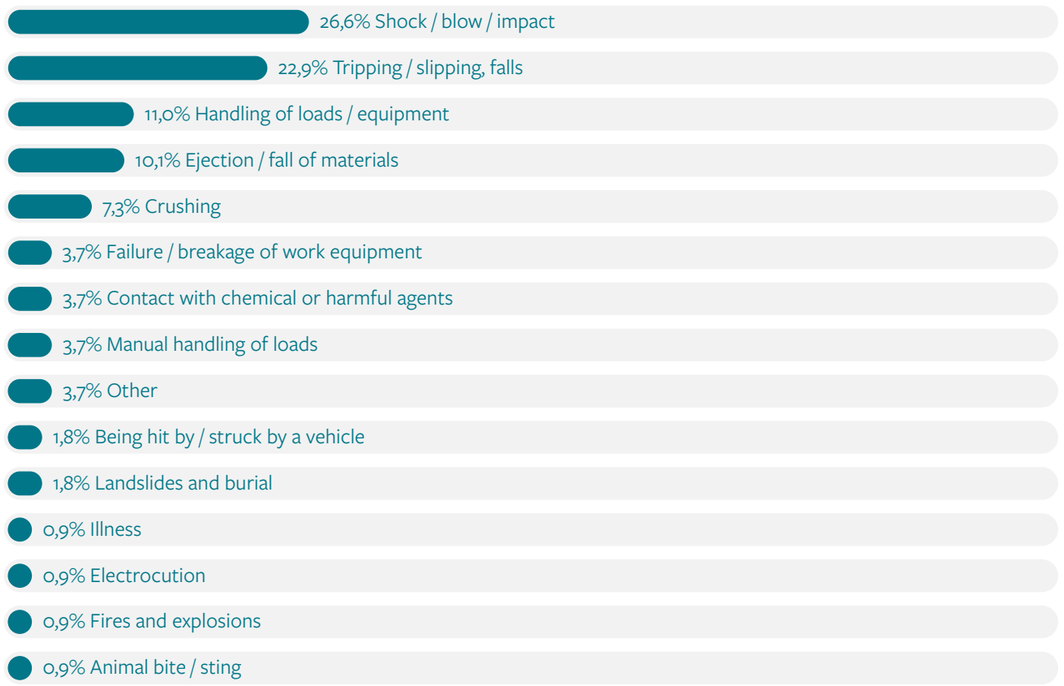
The following chart provides a detailed analysis of the injuries resulting from the accidents and the circumstances that caused them.



Australia, Sydney
Eastern Tunneling Package



Analysis of workplace injuries in 2024



Analysis of the causes that resulted in injuries in 2024

Based on the data from the previous graphs and the risk assessments carried out across various Production Units, it is evident that the main hazards linked to risk of serious injury are mostly physical and can be attributed to work organisation factors.

Overall, the incidents predominantly arise from collisions or impacts, trips, slips or falls, and manual handling of loads or equipment. The most common consequences include trauma, fractures and cuts.

As previously outlined, an in-depth analysis of accident causes has facilitated the identification of corrective action aimed at reducing the risk of recurrence, such as improving operational procedures, introducing new safety equipment, and implementing new educational and training programmes and targeted awareness campaigns.

Health & safety initiatives in Central Interceptor

Watercare's Central Interceptor project in Auckland, New Zealand, focusses heavily on safety with over 6-hundred workers on the project and extensive civil and tunnel works. 2024 saw several initiatives taking place:

- During World Safety Day our GAJV launched a **Hand and Eye Protection campaign** to remind workers of the importance of **proper eye and hand protection**. Eye catching posters were put up across the sites to remind workers how small safety measures, like wearing the right gloves, can reduce accidents and incidents on site.

- The **Heart Strong Initiative** was launched in 2024 to **extend the JV's normal annual medical checks** by focusing on cardiovascular risks which included diagnostic testing and personalised care plans. Annual medical tests identified several workers at risk of heart disease leading to this initiative to prevent heart disease and early detection. Several talks and workshops covered exercise, sleep, nutrition, stress and other risk factors. One of the JV's surveyors is a personal success story of this program – losing 20kg over two years and more importantly lowering his blood pressure from 160 (high) to 135 without the use of any medication. His high blood pressure was identified during his annual medical; the health and wellbeing team supported him, and he shared his story with colleagues at toolbox meetings across the project.

- During a toolbox attended by all the workers on the CI project, Patrizia Cassaniti shared the heartbreaking story of her young son's death in a workplace accident in Australia. The **Touched by Christopher Foundation** was established to **support families facing the tragic loss of a loved one at work**. The talk was a reminder of the importance of safety in the workplace.

- The **Annual Health & Safety Survey** was conducted to provide an **opportunity** for **feedback** and **input** from everyone working on the project while taking a moment to focus on safety.

- A **Subcontractors Forum** was introduced in 2024. This new initiative was an **opportunity** for the JV's **subcontractors** working across the 17 sites on various activities to get together for a refresher on our standards and expectations for Health and Safety. Attendance was compulsory to ensure all were aligned.

Safety Incentives for Workers at the Telese-San Lorenzo-Vitulano Site

The health and safety of workers are top priorities for Ghella and form a central part of our ESG strategy. This issue concerns our internal and external stakeholders more than any other, as identified in our materiality assessment.

We believe that targeted incentive measures can effectively complement the actions already underway, helping to raise safety standards on site and strengthen continuous awareness and training.

On 19 April 2024, at our Telese-San Lorenzo-Vitulano site on the Naples-Bari railway line, an agreement was reached between the Telese Scarl Consortium and workers' union representatives. The agreement introduces a **financial incentive scheme for the workers involved in tunnel excavation** managed directly by the Consortium, with the **goal of encouraging safe and responsible conduct**.

The scheme is divided into two parts:

- **Team Award**: given every quarter to the team that performs best in safety (up to €1,000 total). The prize is shared among team members, with an additional €100 bonus awarded to the team leader.

- **Individual Award**: awarded quarterly to individual workers who stand out for safe conduct (up to €200).

Assessments are carried out by the Safety Committee, which submits a quarterly report to the Site Management for approval.

New Zealand, Auckland
Central Interceptor

Local communities

Our involvement in public work projects generates **long-term benefits** by improving **services to citizens** and enhancing the **productivity** and **competitiveness** of **local areas**. Furthermore, these projects have positive **environmental** implications; for example, rail initiatives promote the transition from road to rail transport, thereby improving air quality, while water projects prevent wastewater spills into waterways or into the sea.

Our presence in the local area stimulates **economic benefits** through **job creation** at construction sites and across the entire supply chain, as evidenced by our dedication to hiring and involving local resources and businesses. Additionally, the global footprint of our company facilitates **knowledge sharing** between different regions worldwide, fostering the **professional development** of a highly skilled local workforce.

However, we acknowledge that the construction phase of our projects may cause **inconvenience** to communities near construction sites, including noise, vibration, and temporary closures of roads and public areas. For work in local areas, such as projects for underground metro lines, these inconveniences can be exacerbated by the extra **traffic** created by site vehicles and deliveries of supplies and by the transport of excavated material through urban streets. To address this, we actively **engage** with **local stakeholders** at our construction sites, from the initial construction stages, aiming to provide them with information, seek their input through consultation and mitigate negative impacts whenever possible and offer compensation where feasible.

Initiatives linked to **information** sharing includes:

- individual visits to residents (door knocking),
- on-site meet-and-greet event for JV companies ("Meet the Contractor"),
- initiatives to involve schools adjacent to our construction sites.

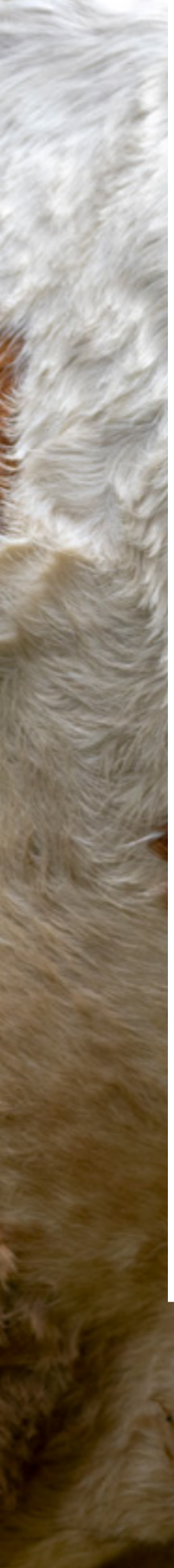
Our **mitigation** efforts include:

- installation of noise barriers (such as acoustic insulation cover for our belt conveyors),
- the creation of murals or other artistic works to make certain worksite areas more visually appealing.

Our **compensation** measures may include:

- mirect contributions, such as the installation of special openings to reduce noise or the creation of amenities including playgrounds or bike paths,
- indirect contributions, in the form of donations, fundraising campaigns or sponsorship of initiatives that benefit the entire community or vulnerable segments of the population,
- support for businesses adjacent to the construction site.

Some stakeholder engagement initiatives are directly managed by our clients, with the support of site personnel. This is the case for our **visitor centres** set up for schools or individuals, featuring informative displays explaining the various construction and excavation phases, which often arrange organised tours of the construction sites. Given the international scope of our operations, we pay a great deal of attention to **integrating** our expatriate personnel into local contexts: we both emphasise the distinctiveness of our corporate footprint and encourage mutual enrichment. In this same spirit, we **respect the rights and customs of the local populations** and make them the central focus of our efforts to incorporate our personnel into new settings.



Giving back to the community in Central Interceptor

We believe that being an active part of the local community is vital for our construction sites.

In 2024 Watercare's Central Interceptor project continued to support the social enterprise "**Make Give Live.**" The project purchases their beautiful **hand knitted beanies** for its workers and the 'give' portion includes beautiful, **knitted slippers** which are donated to schools near our sites. In 2024 the JV distributed **540 pairs** of slippers to local primary schools **to help keep students' feet warm in the classroom**. Slippers were also donated to the Auckland Women's Refuge organisation and special 'baby' beanies were created for the Central Interceptor babies to welcome them to the project family.

There are several other ways we can give back to our local communities, especially those affected by our construction activities. For instance, one of the schools on the Central Interceptor tunnel route, in Auckland, had a construction site inside the school grounds and tunnelling happening under their playground. Our GAJV worked closely with the school to try and mitigate the impact of the works on them. With the support of our client Watercare, the JV sponsored an "outdoor classroom" established with the help of **Oke Charity**, an organisation with a mission to cultivate a love for learning and healthy living in children. A special event was held where volunteers from Watercare and JV built raised garden beds, a greenhouse and a shed filled with tools, a compost facility and rainwater tank. The children helped to plant vegetables and fruit trees. The garden now provides an interactive learning space where children can connect with nature, develop life skills and build relationships with their peers.

Community initiatives on the ETP project

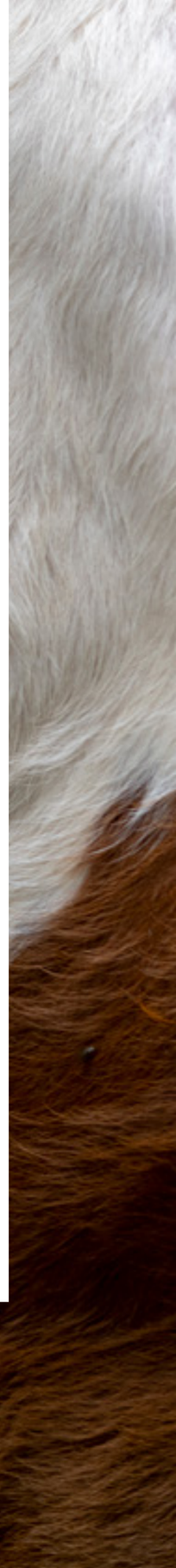
In 2024 our Sydney Metro West - Eastern Tunnelling Package (ETP) project delivered several community benefit initiatives:

- **Furniture was removed from the buildings that were being demolished for the ETP works at the Pyrmont and the Central Business District** (**CBD**) **sites**. **Mates on the Move**, a social enterprise providing life skills, education and work experience for people leaving prison in New South Wales, supported in donating the furniture to local charities.

- A **new delivery truck** has been provided for Pyrmont Cares, a local charity helping relieve poverty across greater Sydney by providing household goods, furniture and whitegoods to those in greatest need.

- **Mobile cooking equipment was provided to Together2** to support their work-readiness workshops, skills training and food relief programs. Together2 is an organisation driving wellbeing by supporting the local community with disability, aged-care and community services.

In December 2024, the JV team **donated toys**, **clothing** and **food** as part of the Yibirmarra Bush Christmas drive, an initiative aimed at supporting disadvantaged First Nations communities across New South Wales during the festive season.



WSA project leaving a positive impact – Fighting loneliness and isolation

As delivery of the Sydney Metro – Western Sydney Airport – Station, Boxes and Tunnelling (SBT) project in Western Sydney progresses, so too does the JV commitment to building a positive and lasting impact within the community.

In line with this, in 2024 the project team partnered with **Orange Sky's Liverpool outpost**. Orange Sky, a national non-profit, is focused on supporting everyday Australians and provides **free laundry and shower services to anyone in need** as well as a welcoming community space for those experiencing loneliness or isolation.

This local partnership has improved the hygiene, health, and quality of life for many people in Liverpool. To date, it has facilitated 130 loads of laundry, provided 30 safe hot showers, and enabled 140 hours of genuine conversation between volunteers and visitors.

Dawn, a regular user of Orange Sky's services, shared her experience: "When I first came across Orange Sky, I was intrigued by the bright van. I appreciated being able to get my laundry done, share a conversation, and connect with my neighbours. This service has truly benefited many."

Telese Scarl Consortium's commitment to the local community

For Ghella, sustainability also means caring for the future by investing in young people and offering new generations places, resources, and opportunities to develop and create a better tomorrow.

A clear example of this is the projects proposed and supported by the Telese Scarl Consortium working on the Telese-San Lorenzo-Vitulano section of the Naples-Bari railway line. **These initiatives promote youth employment and support local training centres**.

In 2024, we started collaborating with the **University of Salerno**, which included an internship program and an orientation session for students of the Faculty of Engineering. Some of these even received job offers and earned training credits. Meanwhile, students from **other universities in Campania** got a chance to visit our construction sites for hands-on learning. But we didn't stop there: through collaboration with Confindustria Benevento, **high school students** also got the opportunity to experience the professional world firsthand.

A total of **13 internships** were launched; 3 are still in progress, and 10 ended with job offers.

Community engagement and indigenous inclusion: building stronger connections along the Broadway Subway

From the outset, the Broadway Subway Project has placed strong emphasis on **meaningful engagement with local communities and inclusive collaboration with Indigenous Nations**. These efforts aim to not only inform and involve the public, but to foster trust, create opportunities, and honour the people whose lives and territories intersect with the project.

Throughout the tunnel boring phase—from October 2022 to April 2024—the project team led a proactive community engagement campaign, playfully named "**Not Boring**", to keep residents and businesses along the 5.7 km alignment informed and involved. Regular updates on construction progress, potential impacts, mitigation measures, and key milestones were shared through direct communications, helping to manage expectations and maintain transparency. This initiative formed part of a broader, high-touch engagement strategy, which resulted in over 7,000 stakeholder interactions in 2024 alone, and more than 20,000 since the beginning of the project.

At the same time, the Joint Venture recognizes that the Broadway Subway Project is being built on the ancestral territories of the Musqueam, Squamish, and Tsleil-Waututh Nations. In close partnership with these Indigenous communities, **the project team works to share knowledge, build relationships, and actively support participation in the skilled trades and other employment pathways**.

Engagement includes attending annual career and hiring fairs, speaking at Indigenous training programs, offering sponsorships for educational and cultural events, and recruiting through dedicated training partners like ACCESS—an organization supporting Indigenous people from outside the region now based in Vancouver.

Together, these initiatives reflect a holistic approach to community building: one that values **transparency**, **respects Indigenous culture**, and **creates lasting opportunities for local participation and benefit**.

Community engagement at Eglinton Crosstown West Extension (ECWE)

The communities around the infrastructure we contribute to create are the ultimate recipients of our work. Hence, their involvement is recognised by our clients and our construction JVs as a crucial element to measure success.

In 2024, the Communications and Public Engagement team of the WestEnd Connectors (WEC) JV, building the Eglinton Crosstown West Extension (ECWE) in Toronto, Canada, has engaged residents and stakeholders in many ways. During the year they have:

- Conducted 15 **community pop-up events**. These are mini events in areas closest to the construction sites. Typically, these pop-ups are in apartment buildings, community parks, major intersections, etc. The purpose is to update or inform the public on the latest construction happening in that area.

- **Canvassed** over 1400 **homes** and spoken with over 800 community members. WEC communications go door to door to drop off construction notices to residents. This also includes interactions and conversations with the public if they are seen outside of their homes.

- Hosted or participated in 2 **open houses** and **community meetings**. WEC invites everyone from the public to come to these events. They have posters, boards, visuals, and all kinds of information for the public to see. The project team comes out, as well as Metrolinx's. People can learn about tunnelling updates and more about the WEC project.

- Conducted quarterly **CLC** (**Community Liaison Meeting**). WEC Comms personally invite members of the public who have a good relationship with Metrolinx and WEC and are strong advocates for the project or community. These members can be from the City of Toronto, Councilors or Members of Parliament, residents, board members, property managers, business owners, etc. During the meetings, an exclusive presentation is shown to them, and the stakeholders can directly ask questions to the WEC or Metrolinx project teams.

- Distributed over 20,000 **community notices** to residents.

New Zealand, Auckland
Central Interceptor

Profile

Sue Perry

Head of HR
Ghella Ltd, New Zealand

1. What is your career path and what led you to Ghella?

My career in HR started many years ago, initially in the Royal New Zealand Air Force, followed by eight years working overseas in South-East Asia and the Middle East. My journey in the construction industry began around 13 years ago and I have worked for various large New Zealand and global construction companies since. When a former manager approached me about a role with Ghella, I jumped at the opportunity. Being able to start from scratch and shape the HR function for the future was an exciting challenge and one that I have found very rewarding.

2. Can you briefly describe your role?

I hold a dual role: HR Manager for Ghella Ltd, Ghella's subsidiary in New Zealand, and HR Manager for the Central Interceptor Project here in Auckland, where Ghella is the lead partner. At the project level, my focus is on people-centric, generalist HR activities including recruitment, on/offboarding, performance management, disciplinary matters, compliance and payroll for the project. For Ghella Ltd, my role is more strategic, and I deal with policies and procedures, talent acquisition and management, resource planning, engagement, retention, succession planning, establishing frameworks and setting the company up for the future.

3. Can you tell us about an HR initiative undertaken by your team in 2024 that you are particularly proud of?

I am particularly proud of our Ghella Graduate Programme. Our legacy of leaving a better world for future generations inspired us to develop future leaders for Ghella projects worldwide and the wider industry.

The Graduate Programme has now been up and running since May 2024. It is an 18-month professional development framework, aligned with the Engineering New Zealand's, Emerging Professional Development Programme. It caters for all graduates, from all disciplines, providing a set of foundational skills as they begin to develop professionally and personally. The module-based curriculum includes Safety, Ethics, Operational, Technical and Professional Acumen. A key focus area of the programme this year is Group Project assignments, where each Graduate pitched a concept for two categories: Legacy and Technology and Innovation.

The winners of both categories were sustainability focussed.

To date we have hired 45 Summer Interns into the project between 2019-2024 and have 6 Graduates (4 females and 2 males) participating in the Graduate Programme, across Civil, Electrical, Sustainability and Land Surveying disciplines. Four of these Graduates came through our internship talent pipeline.

4. What is the most stimulating aspect of your job?

Although finding the time can be challenging, I always feel motivated when I get the chance to be on site. As an HR professional, working in the construction industry is always exciting and never dull! Not many HR Managers get to complete an underground induction and walk around in a tunnel beneath the surface. Being part of a project that is going to help the community and make people's lives better is inspiring and fills me with great pride. This, along with helping to shape Ghella's HR function for the future here in New Zealand, is what keeps me going.

Value

"In a constantly changing environment, there is always room to learn something new and to keep improving"

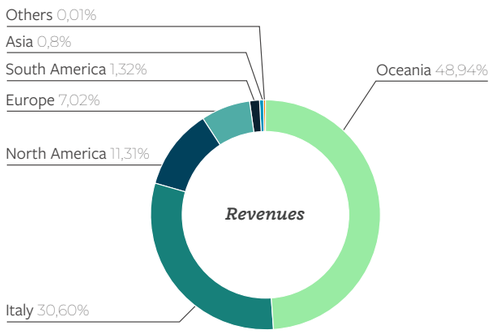
Michele Petris
Tunnel Construction Manager

Italy, Rome
Loggia dei Vini at Villa Borghese

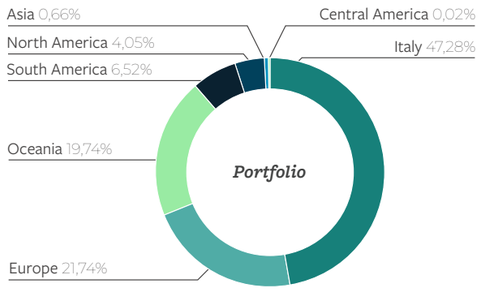
Key financial and economic results

(in thousands of euros)	2022	2023	2024
Revenues[15]	859,604	1,087,276	1,251,141
EBITDA – Gross Operating Margin	88,533	101,042	116,472
Economic Value			
Generated	910,335	1,185,449	1,354,406
Distributed	860,010	1,104,694	1,247,166
Retained	50,325	80,755	107,240

During 2024, we reaffirmed our reputation as a robust company and a reliable partner, earning the trust and confidence of our stakeholders. Our organisation's global footprint has grown even stronger compared to last year, with over 50% of our revenue and project portfolio originating from activities outside Italy.



Revenues by geographical area



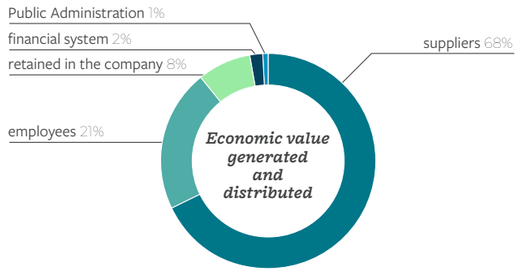
Job portfolio by geographical area

Economic value generated and distributed

The breakdown of economic value generated and distributed by Ghella was determined by reclassifying items within the Income Statement of the Consolidated Financial Statements as of 31 December 2024.

In 2024, **directly generated economic value totalled 1.3 billion euros**, and includes revenues and financial income. **68%** was allocated to **suppliers**, covering expenses such as services and raw materials. Following this, 21% is allocated to employees — representing a slight increase from the previous year — in the form of wages and benefits. **The financial system received 2%** of the economic value, which includes financial charges, foreign exchange losses and distributed dividends. Lastly, **the Public Administration receives 1%** of the economic value generated, in the form of income taxes, local taxes and fees.

8% of the total directly generated value was retained by the company.



Distribution of economic value generated

Our supply chain

In the construction sector, effective supply chain management is vital. Suppliers of works, goods, and services — hereafter referred to as "suppliers" — are **key stakeholders** for us, as their performance can significantly shape the **efficiency, quality, and sustainability of our operations and the projects we undertake**. Procurement management is a central element of our ESG strategy, cutting across various initiatives. This is evidenced by our engagement with suppliers and subcontractors to **develop environmentally sustainable ("green") solutions**, uphold workers' rights, and promote ethical and transparent business relationships. We aspire to **strengthen strategic partnerships with our suppliers for mutual benefit** by integrating ESG criteria into our **selection**, **monitoring**, and **continuous improvement processes**.

Our **Sustainable Procurement Policy** sets out the values and principles that underpin our management ethos.

We communicate our policies and guidelines to our suppliers, with the expectation that they operate in accordance with these standards, thereby ensuring a unified and consistent approach throughout the value chain.

Our SA8000 certification journey has further reinforced our synergy with suppliers, with a view to mutually fostering continuous improvements. We maintain the same rigorous standards of attention and due diligence in verifying compliance of each of our suppliers with the Standard.

Vendor qualification and monitoring

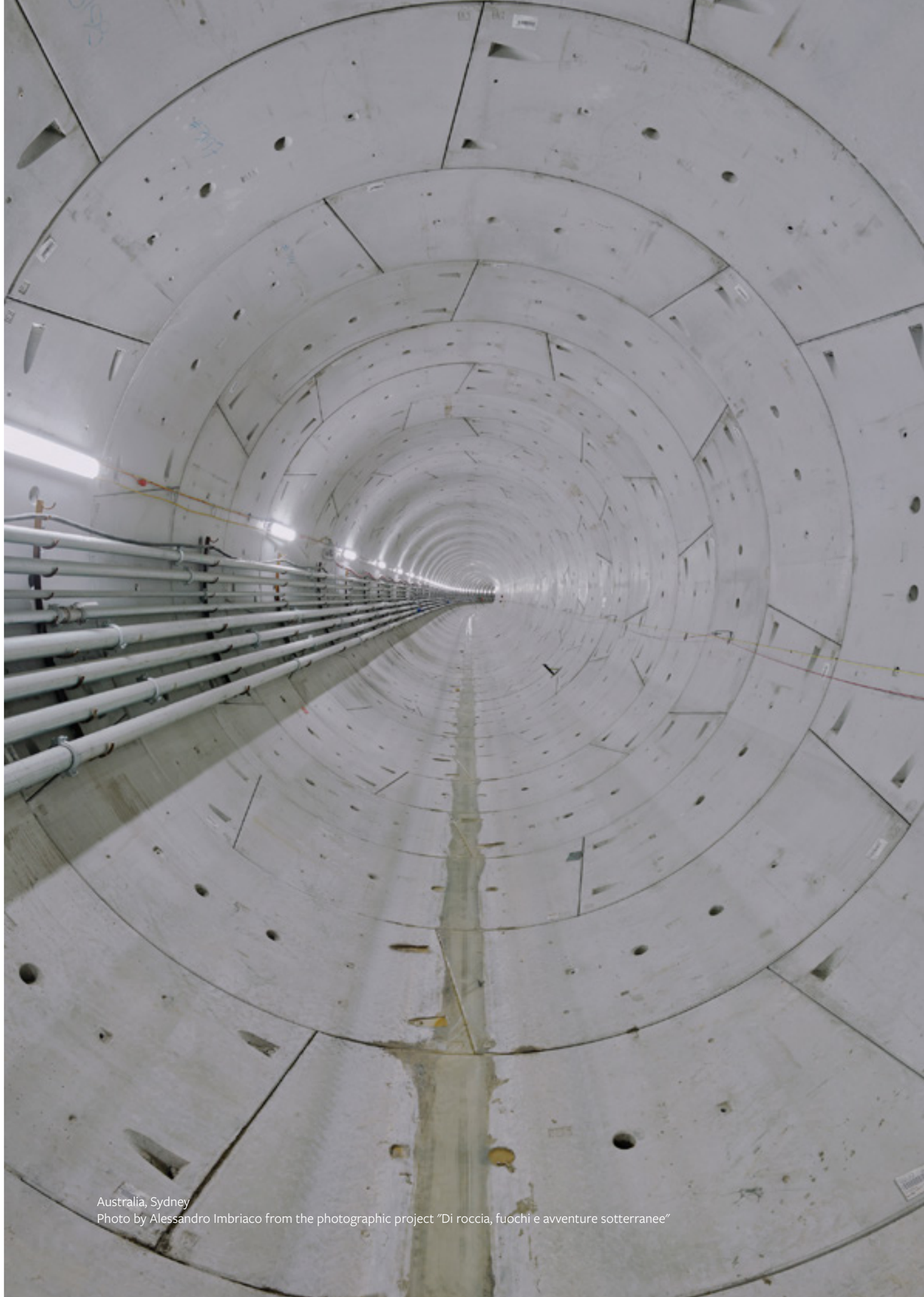
The qualification process for a new supplier, identified during the market survey ("scouting") phase, begins with a request to register on our **Ghella Vendor Platform**, where suppliers are required to complete a qualification questionnaire. Those who meet the criteria are added to our **Vendor List**. For contracts involving partner qualification systems, we ensure consistency between the adopted qualification criteria and those in our questionnaire.

During 2024, approximately **4,877** suppliers were engaged, with **95%** of them being local, meaning they operate within the same country as the order or company and are thus allocated **94%** of the total expenditure. **Opting for local suppliers helps reduce both economic and environmental costs associated with transporting goods, while also contributing to the growth of the local economy**. 880 suppliers were contracted for the first time during the reporting year. On average, approximately **42%** of all units included in the reporting scope were evaluated based on **environmental and social criteria**.

Maintaining good environmental performance alongside exemplary working conditions is not only a prerequisite for joining our supply chain but also a standard that must be upheld and enhanced throughout our partnership: we are committed to gradually integrating suppliers into our sustainability journey.

In 2024, **four** second-party **audits** were conducted on suppliers within the scope of SA8000, alongside audits carried out on the integrated Quality, Health and Safety, and Environmental management systems. The sample was selected based on the scores obtained during the initial qualification for environmental and social issues. The audits involved document analysis and site visits, during which we evaluated the work and practices of our suppliers, providing them with observations and suggestions for improvement. In several instances, the audit led to an increase in the scores obtained during the qualification phase.

If suppliers identified as non-compliant during audits fail to implement the required mitigation measures within the agreed timeframe, they are removed from our Vendor List in line with our internal procedures.



Australia, Sydney
Photo by Alessandro Imbriaco from the photographic project "Di roccia, fuochi e avventure sotterranee"

Innovation

The quest continues for **engineering solutions** that **facilitate safe work practices**, enable the proactive monitoring of technical decisions by anticipating potential issues, and promote the transfer of know-how.

Excellence in the execution of works is our hallmark and earns us recognition in the market for our specialised expertise. By continuously **exploring innovative solutions** in our work execution, we consistently **enhance quality standards**, thereby ensuring safer working conditions.

Most operational innovations originate within the construction sites, where new solutions are experimented with on a daily basis in order to carry out the works in the best possible way.

In 2024 our efforts were also focused on:

- applied research and the validation of new technologies, materials and concepts, as well as managing and drafting of patents;
- conceptualising and developing modifications to TBMs in collaboration with a leading manufacturer and reusing reclaimed materials and equipment wherever possible;
- developing innovative equipment tailored for construction sites with unique requirements.

Among the main i**nnovations we have developed** are:

- **TBM Operator Simulator**

A realistic simulator for training TBM operators, developed by Ghella using real excavation data. It replicates complex geological and operational conditions to improve the handling of critical situations and deepen understanding of tunnelling machinery.

- **Innovative TBM**

A new TBM entirely designed by Ghella's technical department, specifically engineered for challenging conditions. It features the flexibility to be quickly dismantled and reassembled for use in future projects.

- **SMUTI** (**Strength Monitoring Using Thermal Imaging**) **for shotcrete**

A technology based on a digital thermal camera to remotely assess the strength of freshly applied shotcrete. It enhances safety levels, reduces the need for lab tests and sampling, and enables mix optimisation, significantly cutting cement use and related emissions.

Furthermore, **innovative technological solutions** were implemented in the following areas:

- **Fibreglass-reinforced segments**

The application of composites with partial or complete substitution of traditional bar reinforcement with fibres not only diminishes the greenhouse gas emissions associated with the component but also streamlines segment production at the plant, leading to reduced time and costs. Throughout 2024, this technology was consistently employed at sites such as Western Sydney Airport, Broadway Subway, Eglinton Crosstown West Extension, and E6 in Oslo, and was newly implemented at the ETP site. By integrating steel fibres as a replacement for bar reinforcement, an average saving of approximately 1,400 tons of iron per 10 km of tunnel was achieved, resulting in a total saving of 1,800 tons of steel and 2,000 tons of CO2eq in 2024 alone.

- **Welded reinforcement segments**

When designing ashlar reinforcement cages, opting for structural welded cages instead of overlapping bars reduces the total kilograms of iron by approximately 10%, thereby reducing the carbon footprint. Furthermore, this solution minimises labour requirements, lowering risks associated with cutting, bending, and assembling cages. In 2024, we introduced welded cages for projects including the E6 Clean Water Tunnel in Oslo and the Broadway Subway Project in Vancouver.

- **Anchored gaskets without feet**

During the Oslo project, we successfully tested a new type of anchored gasket. Through experience gained in previous projects, we noted that the feet used to secure the gasket to the concrete could potentially weaken the ashlar, posing risks to the hydrostatic seal and the tunnel's overall durability if not correctly sized. To investigate and improve the interaction between the ashlar and the seal, we collaborated with two suppliers to conduct tests in STUVA's certified laboratory in Germany and at Tor Vergata University in Italy. This led to the adoption of a solution in the design of the E6 project, where the gasket is anchored to the concrete using a "fibred mat" as a replacement for conventional feet.

- **Segment design mixes**

Taking account of mechanical durability performance and increasingly stringent sustainability criteria for cementitious blends across various projects, we employ low-carbon emission blends. These blends are formulated by combining cement clinker with Supplementary Cementitious Materials (SCMs) sourced from other industrial processes. Compliance with sustainability requirements, where applicable, is certified through the issuance of Environmental Product Declarations (EPDs) covering either the entire ring (E6 project) or specific cementitious blends (ETP project in Australia).

- **Cement-free mixes**

Through a collaboration started in 2021 and continued through 2022 with GEEG (Geotechnical & Environmental Engineering Group), a spinoff of La Sapienza University of Rome, we studied an alternative cement-free mixture used for filling the annular space between tunnel excavation and the outer surface of precast segments. This collaboration resulted in the development of a mixture that replicates the mechanical properties of cementitious blends but is obtained using a by-product of the cast iron production process: blast furnace slag. The reduced emissions associated with producing the blend, attributed to the absence of cement, and the reuse of waste from another process exemplify a commendable application of circular economy principles. The new blend has been deployed in Norway and in Australia.

- **Extra-resistant cement-free mixes**

In a fresh collaboration with GEEG (Geotechnical & Environmental Engineering Group), a spinoff of La Sapienza University of Rome, we have developed — at the Client's request — a cement-free blend engineered to achieve a resistance of 10 MPa at 28 days, exceeding the conventional 2-3 MPa benchmark.

Australia, Brisbane
Cross River Rail

The TBM Operator Simulator

To **innovate in tunnelling**, the very core of our métier, means **continually refining the expertise, tools and methods behind each project**. Safer, smarter, more sustainable construction starts with better preparation.

This conviction led us to develop the **TBM Operator Simulator**: a cutting-edge system that gives users **virtual operation of any type of TBM under real-world geological and operational conditions drawn from Ghella's own sites**. The simulator can replicate the excavation of tunnels already completed, offering a powerful training tool for technicians, engineers and operators, particularly in preparing for critical scenarios.

This is not a mere training tool: it is a powerful learning platform designed to prepare operators for the most challenging conditions encountered on worksites worldwide. Fully developed in-house, the simulator features a **control panel identical to that of a real TBM, allowing users to virtually steer the machine** while adjusting excavation settings to match real-world complexity.

From configuring key machine parameters, tunnel alignments and expected geological conditions through to simulating fault zones, geologically complex sections, technical failures, or TBM breakdowns, this system provides hands-on experience in managing the unexpected.

Calibrated with **real data** from Ghella's sites, the simulator is designed to offer practical, hands-on training in TBM operation, especially **in handling emergencies**. Beyond training, an additional benefit of the simulator is the opportunity it offers to deepen understanding of the excavation process and the functioning of the TBM itself.

Looking ahead, Ghella plans to further enhance the simulator, potentially in partnership with universities or external organisations, by integrating additional excavation phases like segment installation and backfilling operations.

Innovative TBM traverse method reduces materials use on the ETP project

Our Sydney Metro West – Eastern Tunnelling Package (ETP) project recently had an innovative TBM traverse method verified by the **Infrastructure Sustainability Council**, in recognition of the reduction in materials use it led to. This traverse method uses a **combination of new and existing technologies in order to significantly reduce the time taken by the TBMs** to **traverse station caverns** and **reduce** the total **materials** required for traversing. The innovation is comprised of an integrated TBM thrust and support rail system, with integrated traverse bogies.

Typically, when a TBM is required to traverse a station cavern, a large amount of steel is used to support angled TBM wheels typically supported by the walls of the tunnel. However, JCG's innovative traverse bogies, which have been specifically designed, support the TBM with much **smaller quantities of steel**. This means that the extent of supports is significantly reduced, which **reduces both the duration of the works and materials required** for the traverse.

The second part of this innovation is the **TBM thrust system during station traverse**. Typical traverse systems require steel supports to be moved forward a significant number of times across the traverse.

The ETP thrust system does not require any steel supports to be handled during the traverse, **significantly reducing the time** taken to traverse. The thrust system is integrated with the TBM support system and has been engineered to significantly reduce bolted connections and bolted anchors typically used in a TBM traverse system. In addition, it has the added benefit that the system can be potentially reused in other stations or projects.

Donations, sponsorship and membership in associations

Recognising our social responsibility, we have implemented a **Sponsorship and Donation Plan** aimed at supporting initiatives aligned with our values.

We manifest our commitment through three **types of initiatives**:

DONATIONS OR CHARITABLE CONTRIBUTIONS

SOCIAL INVESTMENTS

SPONSORSHIP

Our initiatives are aimed at achieving two very specific goals: **delivering social support and fostering the creation of shared value**.

We have decided to focus on **five specific areas**, each contributing as a fundamental cornerstone for the development and enrichment of the communities in which we operate:

Italy, Rome
MAXXI exhibition " Guido Guidi: Col tempo, 1956 - 2024"

Within the **social domain**, we offer our support to organisations committed to humanitarian and solidarity initiatives, while also raising awareness among employees about causes championed by the Company. This includes donations to entities such as the **Community of Sant'Egidio, the Umberto Veronesi Foundation, and the Operation Smile Italia ETS**.

Within the **cultural domain**, we promote cultural excellence both at home and internationally, including donations to institutions such as the **Accademia di Santa Cecilia in Rome**.

In the **domain of art**, our journey with Ghella x Roma continues, reinforcing our ongoing dedication to the city through unique projects and initiatives that support and celebrate Rome's artistic and cultural treasures. It is our way of giving something back, restoring beauty to communities and their surroundings. **Nuove Avventure Sotterranee**, curated by Alessandro Dandini de Sylva, is the second chapter in a series of photographic explorations commissioned by Ghella across its global worksites, from **Canada** and **Australia** to **Italy**, **Argentina**, and **New Zealand**, between 2022 and 2023. The campaign featured some of the most exciting talents in contemporary Italian photography: **Stefano Graziani**, **Rachele Maistrello**, **Domingo Milella**, **Luca Nostri**, and **Giulia Parlato**. The result is a six-volume collection, published by Quodlibet, which then evolved into a full exhibition at Rome's MAXXI museum.
Ghella is proud to support the restoration of **La Loggia dei Vini** in Villa Borghese, reaffirming our commitment to preserving and enhancing the city's cultural and historical landmarks. The first of three restoration phases was completed in 2024, bringing back to life the interior vault, the central fresco, and the columns. The Loggia has since reopened with **LAVINIA**, a contemporary art program curated by Salvatore Lacagnina. The initiative explores the interplay between art, architecture, and historical memory, presenting site-specific works by renowned artists including **Ross Birrell & David Harding**, **Monika Sosnowska**, **Enzo Cucchi**, **Gianni Politi**, **Piero Golia**, and **Virginia Overton**.

In the **domain of education**, we invest in both undergraduate and postgraduate degree programmes, aiming to transmit our passion and expertise to future generations: for instance, we sponsor the Master's degree programme for Business Engineers by Direxta Formazione d'Impresa.

Our commitment to the **environment** extends to supporting initiatives that safeguard the places where we live and work, demonstrated by a longstanding partnership with FAI, the Fondo Ambiente Italiano, an organisation dedicated to safeguarding Italy's natural and artistic heritage.

We have been proud members of **AIS** (Sustainable Infrastructure Association). The association's primary objective is to raise awareness among economic, social, and political stakeholders of the importance of incorporating sustainability principles into the planning, design, construction, and management of infrastructure. We actively participate in drafting policy documents, engaging all stakeholders in the supply chain. Our contributions have been instrumental in shaping position papers such as **"No. 3 ESG and Infrastructure," "No. 4 The Contribution of Concrete to Infrastructure Sustainability", "No. 5 The Sustainable Construction Site", "No. 6 Stakeholder Engagement and Sustainable Infrastructure" and "No. 7 Life Cycle Assessment and the Value Chain of Sustainable Infrastructure"**. Our subsidiary Ghella Limited, based in New Zealand, is a member of **ISC** (Infrastructure Sustainability Council). This association manages the primary sustainability rating system for infrastructure projects in Australia and New Zealand.

In line with our sponsorship and donation policy, we **actively support associations** that align with our values and objectives.

We are longstanding members of **SIG** (Italian Tunnelling Society), an association dedicated to promoting, coordinating, and disseminating studies and research in the field of tunnel construction and large underground works for almost fifty years.

We are also members of **ANCE** (National Association of Building Constructors), in which our Vice-President **Federico Ghella** occupies the position of **Vice-President** and **Chairman** of the Works Abroad Committee. Furthermore, **Matteo d'Aloja**, Director of External Relations, Communications and Sustainability at Ghella, has recently been elected **Vice-President** of the **EIC** (European International Contractors). He has served on the Board of Directors since 2019, representing the ANCE federation.

We are active members of **Green Building Council Italia**, an organisation dedicated to the promotion of a sustainable building culture.

Guido Guidi. Col Tempo, 1956–2024, at MAXXI

As a proud supporter of the arts, Ghella sponsors the exhibition of Guido Guidi, Col Tempo, 1956–2024 at **MAXXI** – the National Museum of 21st Century Arts - a tribute to **one of the most significant creative voices in Italian photography**. Guidi, part of a generation that reshaped our view of the **modern landscape**, offers a uniquely contemplative look through the lens at the world around us. With **more than 400 works — many shown for the first time** — the exhibition reflects on the transformation of the surroundings and the passing of time, spanning nearly seven decades of artistic pursuit. Developed **in partnership with the Guido Guidi Archive**, the exhibition is **his most extensive to date**. It is the result of extensive research carried out with the artist in his studio and archive in Ronta di Cesena. Arranged chronologically, it explores Guidi's key photographic series: from his **early experimental works in the 60s and 70s**, to his **landscape commissions** and **personal explorations in the 80s and 90s**, and into his **recent projects of the 21st century**.

Created in partnership with major Italian and international institutions that have long supported Guidi's work, such as the ICCD and CCA, the exhibition explores his artistic research from a previously unseen perspective, through the lens of his **archive**: **a space that is at once a home, an artist's studio, a place of work and reflection, and a hub for emerging talent**.

A Tangible Commitment to Fighting Poverty in Italy: Our Support for the Comunità di Sant'Egidio

At Ghella, we continue our commitment to fighting poverty and social exclusion by supporting the Comunità di Sant'Egidio, a compassionate community that began in Rome in 1968 and is now active in more than 70 countries. Recognising the growing challenges many in Italy face today, we have chosen to offer the Community real and practical help through **two dedicated donations** aimed at tackling the poverty emergency in Italy.

The first donation was made possible through unused funds from our internal welfare platform, which were redirected to the Comunità di Sant'Egidio to help support those most in need. The need is urgent: according to 2023 ISTAT figures, **9.8% of Italy's population**, **some 5.7 million people**, **live in conditions of absolute poverty**, with the highest impact among children (1.3 million) and elderly people living alone. Our second donation was directed to the **Case dell'Amicizia**, support centres operating throughout Italy that offer immediate aid to vulnerable individuals and families in need. But these centres are more than just places to collect food packages or essential goods; they are welcoming spaces where people are truly supported and listened to. Volunteers work side by side with those in difficulty, helping them take concrete steps toward a better life. The centres also provide help with enrolling children in school, accessing medical care, finding employment, and securing social assistance. Special care is also offered to elderly individuals living in isolation, including support for navigating medical and bureaucratic processes.

We are proud to contribute to these initiatives and to support those who dedicate themselves each day to creating a more just and compassionate society.

Supporting Health and Wellbeing: Partnering with Fondazione Umberto Veronesi and Fondazione Operation Smile

We believe that building a better world begins with small but meaningful acts of care and responsibility. That is why, as a company, we are proud to support two remarkable organisations dedicated to making a difference: **Fondazione Umberto Veronesi** and **Fondazione Operation Smile**

Gold for Kids: Advancing Research in Paediatric Cancer

For many years, we've proudly supported Fondazione Umberto Veronesi, driven by shared values and a common goal: advancing science in health and medicine. One of the key initiatives we support is **Gold for Kids**, a project launched in 2014 to improve treatments for childhood and adolescent cancers, which are still the leading cause of death among children. In partnership with the Italian Association of Paediatric Haematology and Oncology (AIEOP) and its foundation (FIEOP), the project provides funding for life-saving treatment protocols for young cancer patients, raises public awareness and educational activities, and works to ensure that the needs of children and adolescents with cancer receive the attention they deserve.

Investing in medical and scientific research means offering young patients a second chance at life, because caring for children is, ultimately, caring for the future.

Operation Smile: Supporting Healthcare in Brazil

For the second year running, we are proud to support **Fondazione Operation Smile Italia ETS**, helping to increase the supply of essential medical, surgical, orthopaedic, and anaesthetic equipment to hospitals in Santarém and Porto Velho, Brazil. Operation Smile, founded in 1982, is a global non-profit organisation specialising in the treatment of cleft lip and palate. Through a global network of volunteer medical professionals and partnerships with local governments, it provides surgery and holistic care to the most vulnerable patients. In 2023, our support helped deliver 55 free surgical procedures as part of the Cariri programme, and provided access to multidisciplinary care for 98 patients. In 2024, our contribution has focused on **enhancing medical supplies in the hospitals of Santarém and Porto Velho**, with the goal of assisting around **200 patients** and enabling over **90 free surgical operations** between July 2023 and June 2024. Through these initiatives, we reaffirm our commitment to promoting health and wellbeing in local communities and offering many patients the chance of a better future.

Italia, Brennero
Photo by Andrea Botto from the photographic project "Di roccia, fuochi e avventure sotterranee"

Profile

Michela Corlatti

TBM Engineer
Brenner, Italy

1) What is your professional background and what inspired you to join Ghella?

I have been with Ghella for just over two years, and this is my very first work experience. I started out as an intern on the Brenner Base Tunnel site, where I was fortunately able to write my Master's thesis and explore the fascinating world of underground excavation. Now I am working as a TBM engineer, still on the same project, and we are all looking forward to a major milestone: the final breakthrough of TBM Flavia, which is nearing the end of its excavation.

2) Tell us about your role and the challenges it involves

The role of a TBM engineer is highly dynamic; every day is different, based on the challenges that arise. I am in charge of tracking the daily progress of the TBM and recording its key operational and consumption data. By comparing real-time results with forecasts and interpreting machine parameters, I can analyse the ground conditions we are excavating through and identify any critical issues and their root causes. The part I find most exciting is working directly on board the TBM, side by side with skilled operators and technicians. That's where the toughest challenges arise—and where you learn the most.

Communication is also essential. We work closely with the entire team and collaborate to find solutions to mechanical or geo-mechanical issues, while always ensuring safety standards are met.

3) What does sustainability mean to you, and how do you think your work can contribute to it?

Sustainability - whether environmental, social, or related to safety - is a core value that every company should actively uphold. In tunnelling, this means designing and building infrastructure that keeps environmental impact to a minimum, not just during construction, but across the entire lifecycle of the project. Another key aspect is the engagement of local communities: building responsibly involves providing clear, timely information to those affected by temporary disruptions, and highlighting the long-term benefits the infrastructure will bring once completed.

In the case of the Brenner Base Tunnel, the project will significantly reduce travel times for both goods and passengers, facilitating a shift from road to rail transport and thereby contributing to the reduction of greenhouse gas emissions.

4) What do you find most rewarding about your job?

What motivates me most is that no two days are the same; every project brings something new. It is an environment where I am always learning, always growing, both technically and personally. Another motivating factor is the teamwork: every day there's a strong sense of collaboration, and that creates an atmosphere of friendly competition that drives us to improve, challenge ourselves, support one another in doing our best, and strive for continuous improvement.

Environment

"Translating principles into lasting results demands a well-devised strategy, tangible actions, and meticulous monitoring of ESG performance"

Francesca Paracini
Climate Change & Sustainability Specialist

Protection of the environment is a priority for us and, as such, lies at the heart of our ESG strategy. The Company's "**Planet**" pillar defines our mission in the three thematic areas where we intend to focus our efforts: fighting **climate change**, promoting a **circular economy** and **environmental protection**.

We acknowledge that the role we play is sensitive, given the context of our operations and the nature of the projects we undertake. This is why we adhere to high sustainability standards in order to reduce as much as possible the **environmental footprint** of our activities.

Effective management of environmental issues is central to our operating procedures and is formalised via an **Integrated Management System**, whose environmental component is certified to the **ISO 14001:2015** international standard.

The system is based on a risk-based thinking approach that ensures all our projects are appraised as early as the planning phase. This involves analysing the **Significant Environmental Aspects** of all our projects, which means all elements of our activities are examined that interact with the environment and potentially impact it, both under normal operating conditions and in any emergency.

The significant environmental aspects we monitor in our projects are:

- production of emissions into the atmosphere / dust
- water management
- soil and subsoil management
- protection of biodiversity
- management of waste and hazardous substances
- production of noise and vibrations
- vehicular traffic generated
- management of historical, architectural and archaeological assets

New Zealand, Auckland
Photo by Giulia Parlato from the photographic project "Nuove avventure sotterranee"

In the 2023–2025 Sustainability Plan, quantitative targets at the corporate level are set for some of these:

- reducing[16] water withdrawals by 15%, expressed in / revenue in millions of euros;
- including measurable indicators of biodiversity impact in construction decisions by 2025;
- maximising reuse of excavation soil by 2025.

We also quantify and monitor the environmental aspects which, under normal operating conditions, generate indirect impacts on a global scale. In particular:

- consumption of natural resources and raw materials;
- consumption of energy;
- greenhouse gas emissions (Scope 1 and 2).

The quantitative targets included in the Sustainability Plan for these aspects are:

- maximising the use of recycled materials by 2025
- reducing[17] Scope 1 and 2 greenhouse gas emissions by 25% by 2030, expressed in tonnes of CO_2 equivalent / revenue in millions of euros
- achieving carbon neutrality by 2050

We have recently initiated a review of the ESG data collection processes across our Company Units. This will enable us to progressively align our sustainability reporting with the new ESRS (European Sustainability Reporting Standards) introduced by the updated European CSRD (Corporate Sustainability Reporting Directive). One of the most significant changes under the directive is the requirement to monitor and disclose Scope 3 greenhouse gas emissions, which are currently not included in our disclosures.

The significant environmental aspects of each project are managed and monitored according to methods outlined in an **Environmental Management Plan**, which, on a case-by-case basis, is integrated into a **Sustainability Management Plan**. In the Project Plans, the management of environmental issues is **planned** considering **local regulations**, **contractual obligations**, and the **objectives and targets** established by the Client and Partners. Our Policies and Corporate Sustainability Plan ensure that we meet the needs and expectations of all stakeholders in each project, adhere to consistent global sustainability **standards** in each country, and consistently improve our **environmental performance** over time.

During the **construction** phase, our teams perform operational control and continuous monitoring of significant environmental aspects. This process is complemented by specific staff training, periodic audits and inspections, addressing and resolving any non-compliant environmental issues and reporting periodically on project performance to both Clients and Head Office. At the corporate level, this flow of information enables us to monitor the organisation's environmental performance and to structure appropriate action plans in our efforts to achieve continuous improvement.

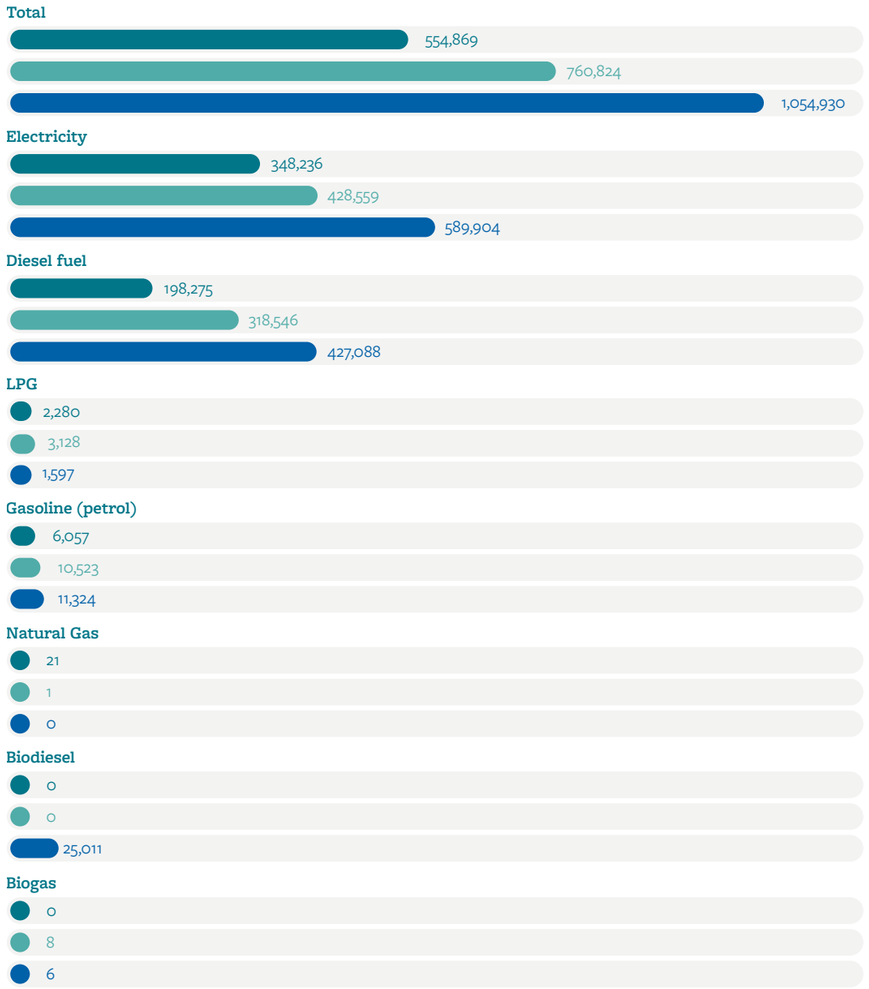
The following paragraphs describe the consolidated **results** of our Projects for **2024** and compare them with the reports from the previous two years. It should however be noted that comparisons may vary due to changes in operational scope over the reporting years, which is influenced by the number of active sites and the specific work phase they were going through during the reporting period.

Energy consumption and greenhouse gas emissions

In line with our ESG strategy, we are committed to reducing energy usage and minimising greenhouse gas emissions. We follow strategic approaches within our industry such as emissions quantification, electrification, improving plant efficiency, selecting low-carbon vehicles, procuring or generating renewable energy, and incorporating eco-design principles into our planning so as to minimise the volume and impact of construction materials.

Activities involved in the implementation of project work and the management of site operation areas entail the consumption of energy resources, which are attributable to both Joint Ventures and subcontractors working on site. We continuously monitor these energy consumption levels. In 2024, the total energy consumption at our construction sites reached **1,054,930 gigajoules** (**GJ**), representing a 39% increase compared to the 2023 figure.

Consumption	u.m.	2022	2023	2024
Biogas	Gj	0	8	6
Natural Gas	Gj	21	1	0
Gasoline (petrol)	Gj	6,057	10,523	11,324
LPG	Gj	2,280	3,187	1,597
Diesel fuel	Gj	198,275	318,546	427,088
Biodiesel fuel	Gj	-	-	25,011
Electricity	Gj	348,236	428,559	589,904
Total	**Gj**	**554,869**	**760,824**	**1,054,930**



Comparison of energy consumption in 2022, 2023 and 2024, with breakdown by source (GJ).

Absolute energy consumption levels vary in line with changes to the reporting scope, which depends on both the number of active construction sites and their phase of operation during the year. In particular, the 2024 reporting scope includes three more construction sites compared to 2023 (11 sites versus 8), and four more than in 2022. All of the projects, apart from Brenner and Hanoi Metro, are in the central phase of their life cycle. Since 2022, Brenner has started a major scale-down in works, resulting in reduced but still meaningful impacts. Meanwhile, construction on the Hanoi Metro only began in the latter half of 2024, resulting in limited reported consumption.

Energy demand increased by **39%** from 2023 to 2024, driven by a **38%** rise in electricity use and a **34%** rise in diesel consumption.

Electricity, accounting for **56%** of the total energy consumption, is the primary energy source. It is mainly used to power TBMs and site systems, particularly tunnel ventilation systems, as well as for auxiliary activities in offices and base camps. The Brenner site recorded the highest electricity consumption, followed by M6 and Western Sydney Airport.

It is worth noting that at the Telese and Western Sydney Airport sites part of the electricity demand (4% and 1% respectively) is met by on-site **self-generated renewable energy** from photovoltaic systems installed on base camp roofs. In contrast, energy requirements at the BTC, ETP, and M6 sites are covered using certified **renewable electricity purchased** under Guarantees of Origin (GOs), covering 100%, 25%, and 16% of their respective consumption.

Diesel fuel is the second most procured energy source, representing **40%** of the total energy consumption. It is used for operating construction equipment, generation sets, and the vehicle fleet. The site with the highest diesel consumption is M6, followed by Western Sydney Airport and Telese. A gradual shift from conventional mineral diesel to **biodiesel** is underway, with biodiesel accounting for **2%** of total consumption in 2024. The Broadway Subway and E6 projects make use of HVO (Hydrotreated Vegetable Oil) biodiesel, derived from vegetable oils, animal fats, and food waste, while biodiesel blends based on biomass are used in the ETP and São Paulo Metro projects.

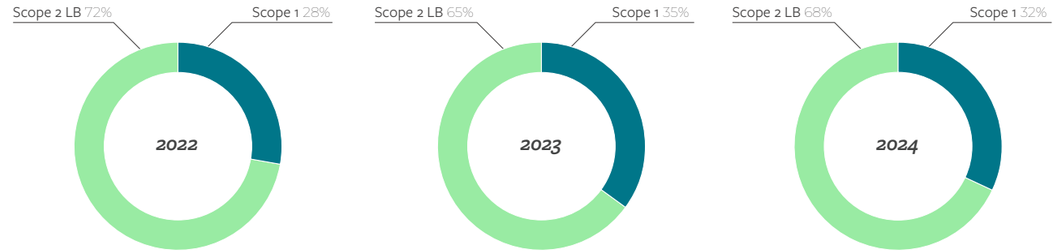
Petrol, which accounts for **1%**, is used to power vehicles and construction machinery.

Biogas, LPG, and natural gas account for less than **1%** of the 2024 energy demand.

In addition to energy consumption, we monitor associated **GHG emissions**, differentiating between those directly generated by on-site power generation activities through the combustion of diesel, LPG, and gasoline (**Scope 1 emissions**) and those linked to the purchase of electricity from the grid (**Scope 2 emissions**), which are generated upstream at power plants and for which we bear indirect responsibility. The methodology for calculating Scope 2 emissions is location-based, meaning the emission factors used depend closely on the energy mix of the countries where these consumptions occur.

During 2024, our emissions amounted to **102,915 tonnes of carbon dioxide equivalent** (**tCO_{2eq}**), marking a **43%** increase compared to 2023, consistent with the increase in total energy consumption. Below is the breakdown by Scope 1 and 2 over the last three reporting periods.

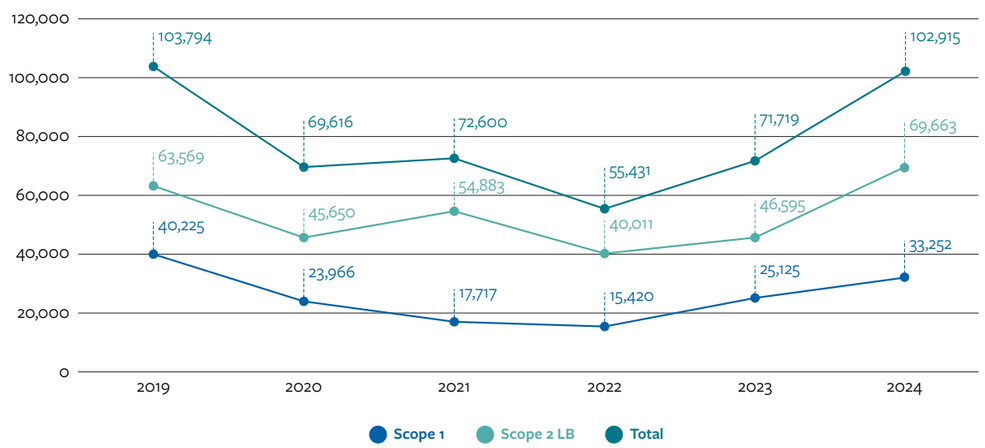
Emissions	u.m.	2022	2023	2024
Scope 1	tCO_{2eq}	15,420	25,125	33,252
Scope 2 *location based*	tCO_{2eq}	40,011	46,595	69,663
Total	**tCO_{2eq}**	**55,431**	**71,719**	**102,915**



Comparison between the distribution of Scope 1 and Scope 2 location-based (LB) greenhouse gas emissions in 2022, 2023 and 2024 (% of total).

Compared to the previous year, the analysis shows a slight increase in the percentage of Scope 2 emissions, which, as throughout the three-year period, continue to make up the largest share at 63%. The graph below illustrates the emissions trend over an extended period, from 2019, coinciding with Ghella's first Sustainability Report, to 2024.

While changes in the reporting scope have caused some fluctuations, the overall absolute emissions trend has been comparatively stable.



Trends in total location-based greenhouse gas emissions, Scope 1 and Scope 2, during 2019-2024 (tCO_{2eq})

To date, Scope 2 greenhouse gas emissions have been calculated using the location-based method, which relies on national average emission factors for the countries where the electricity is used. Presented below is a comparison based on the market-based method, which uses emission factors linked to specific energy contracts. This method allows for certified renewable electricity - supported by Guarantees of Origin - to be reported as zero emissions. In 2024, this approach was applied at the Brenner, ETP and M6 sites. For the remaining sites, where contract-specific data was unavailable, the residual mix emission factors for each respective country were used. These exclude Guarantees of Origin and thus result in less favourable emission values compared to the location-based approach.

Emissions	u.m.	2024
Scope 2 market-based	tCO_{2eq}	62,390
TOT (with Scope 2 market-based)	tCO_{2eq}	95,643

The reported data covers the entire site organisation. However, when using the financial control criterion - considering only GHG emissions attributable to Ghella[18] (calculated using the **location-based** method) and normalising emissions against corporate revenues within the reporting scope, the total value for 2024 amounts to **39.04**[19] **tCO_{2eq}**/ million euros of revenue.

This figure represents a **42%** reduction compared to the 2021 baseline, **in line** with our **decarbonisation target for 2030** included in the 2023-2025 Sustainability Plan. The GHG emissions intensity for 2024 calculated using the **market-based method** is lower, standing at **33.89 tCO_{2eq}**/ million euros of revenue.

Greenhouse gases	u.m.	2022	2023	2024	Var. 2024 – 2021	Target CO_2 in 2030
Location-based GHG emissions attributable to Ghella	tCO_{2eq}	20,395	24,379	31,698	-	-
Location-based emissions intensity	tCO_{2eq}/ million euros of revenue	35.17	36.76	39.04	-42%	-25% vs 2021
Market-based GHG emissions attributable to Ghella	tCO_{2eq}	-	-	27,511	-	-
Market-based emissions intensity	tCO_{2eq}/ million euros of revenue	-	-	33.89	-	-

Absolute greenhouse gas emissions and intensity of greenhouse gas emissions relative to revenue for 2022, 2023 and 2024

Below we highlight some examples of **energy-saving** and **emission quantification** and **reduction** initiatives[20] implemented up to 2024:

- use of electric trucks for moving excavated soil;
- use of electric construction machinery (such as loaders, dumpers, and electric trucks for transporting concrete segments and hydraulic pipes);
- installation of on-site photovoltaic systems for self-production of renewable energy;
- use of efficient machinery and ventilation systems in tunnels;
- use of an electric conveyor belt to move the excavated material out of the tunnel, instead of using a truck;
- installation of solar-powered light towers to replace diesel-powered hybrid light towers;
- use of electric locomotives in the tunnel instead of locomotives powered by the TBM's diesel generators;
- carrying out LCA (Life Cycle Assessment) studies and obtaining the EPDs (Environmental Product Declarations) for some construction materials;
- quantification during the tender phase of greenhouse gas emissions associated with procurement of the main construction materials and identification of lower-impact solutions;
- installation of LED lighting systems in the tunnels and in offices.

Sydney Metro WSA project first in Australia to use new electric crawler crane

One of the main strategies we pursue to reduce our emissions is electrification, the transition from fossil fuel-powered to electric machinery and vehicles in our construction sites. This choice not only significantly cuts atmospheric emissions and improves local air quality, but also allows us to lower scope 1&2 emissions overall, especially where electricity can be generated from renewable sources.

In 2024 Sydney Metro – Western Sydney Airport, Station Boxes and Tunnelling (SBT) project was the first in Australia to use a 250-tonne electric crawler crane. Unlike its diesel counterparts, the electric crane eliminates direct emissions and operates silently, significantly improving the project's environmental footprint and disturbance to residents.

Based at the Claremont Meadows shaft site, the crane has been used for a variety of heavy lifting tasks, including moving concrete segments and materials down to the tunnels.

Once charged, the electric crane operates for 8–10 hours, potentially saving 18,750 litres of diesel fuel annually and reducing carbon emissions by 50,000 $kgCO_{2eq}$.

The electric crane is being used as part of a trial and more units could be used in the future.

Use of HVO Diesel at the Broadway Subway Project construction site

In the construction industry, choosing more sustainable fuels—for both machinery and vehicles—is a strategic lever to reduce lifecycle emissions and meet environmental goals without compromising operational performance.

At the **Broadway Subway Project** site, in **2024** the Joint Venture replaced approximately **50% of its mineral diesel consumption with HVO** (Hydrotreated Vegetable Oil), resulting in a **reduction of 750 tonnes of CO_2** emissions. Thanks to a new agreement with the fuel supplier, the **JV aims to replace up to 92% of the diesel used** on the project with HVO **by 2025**, with an estimated additional reduction of **1,457 tonnes of CO_2eq**.

HVO diesel (Hydrotreated Vegetable Oil) is a second-generation biofuel produced through the hydrogenation of recycled vegetable oils and animal fats. This process creates a fuel with chemical properties similar to traditional diesel, but with significantly lower environmental impact:

- **Lower emissions**: Thanks to its sustainable production cycle, CO_2 emissions from HVO use can be reduced by up to 90%. HVO also helps lower emissions of fine particulate matter (PM10), nitrogen oxides (NOx), and unburned hydrocarbons—pollutants that directly affect air quality and human health.
- **Sustainable sources**: HVO is produced using recycled and sustainable feedstocks, such as used cooking oil and animal fats. Furthermore, nearly all the energy used in its production comes from renewable sources, contributing to a reduced environmental impact both in production and end use.

This transition to HVO reflects Broadway Subway Project's broader commitment to reducing its environmental footprint, in line with Ghella's long-standing dedication to sustainability and its ambition to support a lower-carbon future for the construction industry.

Renewable Energy Production on Site: The Photovoltaic System at Telese Construction Site

Producing renewable energy is a vital part of our ESG Strategy to help reduce carbon emissions.

At the Torrecuso base camp of the **Telese** construction site, a **solar power system** has been up and running since **March 2024**. Installed on the roofs of office buildings, accommodation, and recreational areas, it covers about **1,500 m² and has a peak power output of 303 kWp**.

The solar **panels were repurposed** from an upgrade at the Gransolar Ghella solar plants, where functioning units were **recovered and reused** at the Telese site instead of being discarded, showcasing a **practical application of circular economy principles**.

Between **March and December 2024**, the system produced **288,078 kWh of electricity**. Most of this (**220,757 kWh**) was **used onsite**, while the surplus was fed into the grid, **saving around 144 tonnes of CO_2 equivalent**.

Additionally, **two electric vehicle charging stations with a capacity of 7 kW** each **were installed at the base camp**, powered by the photovoltaic system and **made available for site personnel**. This enables electric vehicles to be charged using clean, sustainable energy.

Hybrid Concrete Pump in Central Interceptor – a first for Australasia

In 2024 Watercare's Central Interceptor project in Auckland, New Zealand, had the honour of being the first in Australasia to use a hybrid concrete pump. Contractor, Concrete Logistics, purchased the Putzmeister iONTRON —and offered to trial the pump at our Māngere Pump Station site to pour a concrete slab for a biofilter. This sustainability initiative decreased carbon emissions through decreased diesel use. For this pour alone, over 165 liters of diesel and an estimated 423kg of carbon emissions were avoided. This also means reduced air pollution and associated health risks from our operations. The hybrid pump is also significantly quieter, which is a great benefit for our neighbours and makes working on site more comfortable for our crew. In addition, pioneering initiatives like this one encourage better sustainability practices across the wider construction sector, as industry firsts become replicable best practices.

Safeguarding resources

We understand the importance of water resources and actively promote their efficient use, thus ensuring that the quality of both groundwater and surface water is safeguarded.

Water

Water withdrawals at our worksites, which are continuously monitored and aim to conserve resources, comply with local authorisations for groundwater extraction or for obtaining water from bodies of water or public conduits, in order to avoid disruption to the local water balance. **Water demand** is primarily attributable to cooling TBMs, dust suppression, segment manufacturing, and tunnel and base camp operations. In line with our ESG strategy, we are committed to reducing water withdrawals by tracking consumption, implementing recovery systems and promoting reuse initiatives.

Water-saving methods

- reuse of excavation water through recirculation in the tunnel following purification;
- use of non-potable underground water for construction activities through storage in site tanks fed by wells;
- closed-circuit recirculation lines for the TBM cooling water;
- water recovery systems installed at the segment production plant;
- collection and recovery of rainwater through catchment systems.

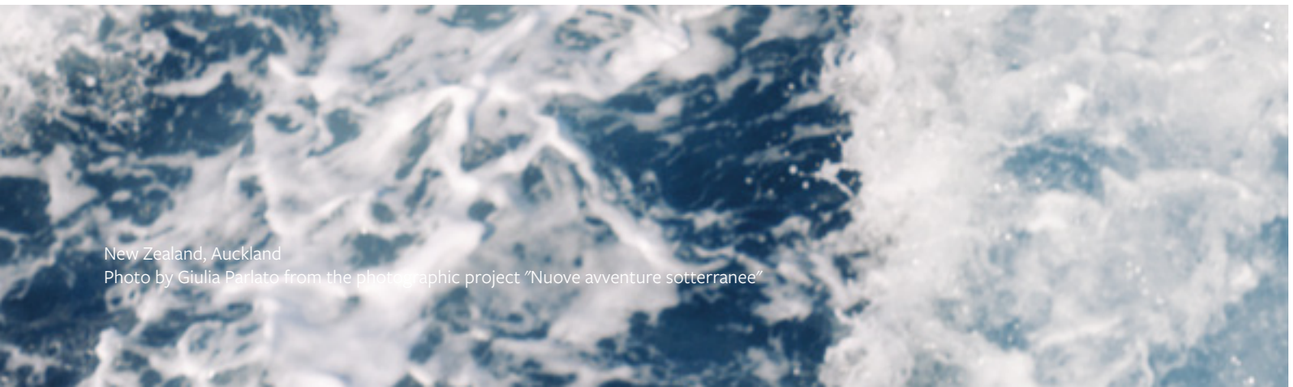
In 2024 we externally sourced **2,434 megalitres** (**Ml**) of water, an increase over 2023 of 50%. However, when normalised with respect to Ghella's share of revenues, the value for 2024 equates to **0.97 Ml** per million euros of revenues, representing a **35%** reduction from the 2021 baseline, which **aligns** with our **2030 water withdrawal target** as outlined in the 2023-2025 Sustainability Plan.

Water withdrawal intensity	u.m.	2022	2023	2024	Δ % 24/21	Target 2030
Water withdrawals / Revenues (Ghella's share)	Ml / million euros of revenue	1.25	0.96	0.97	-35%	-15% vs 2021

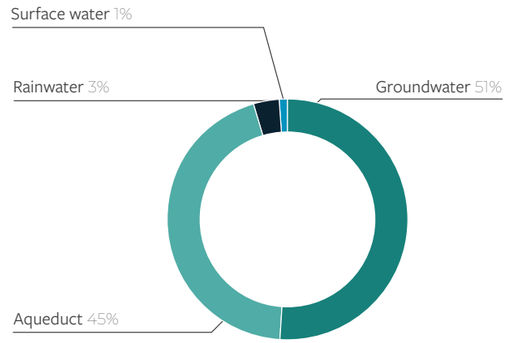
Below is the breakdown of supply sources in the last three reporting periods:

Water withdrawals	u.m.	2022	2023	2024
Surface water	Ml		85	102
- streams	Ml	21	6	31
- rainwater	Ml		79	71
Groundwater	Ml	1,083	809	1,226
Third-party water resources	Ml		729	1,106
- aqueducts	Ml	173	709	1,102
- wastewater from other organisations	Ml		19	4
Total	**Ml**	**1,278**	**1.623**	**2,434**

Comparison of water withdrawal sources in 2022, 2023 and 2024 (in Ml)



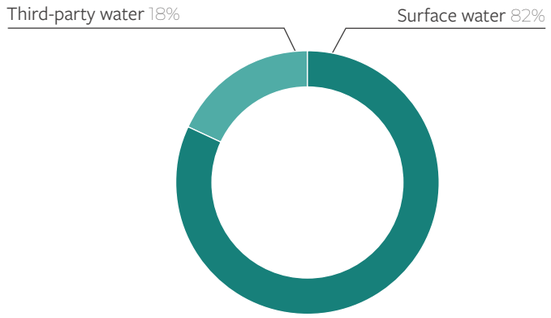
New Zealand, Auckland
Photo by Giulia Parlato from the photographic project "Nuove avventure sotterranee"



Breakdown of water withdrawals in 2024 (%)

In 2024, groundwater remained the main water source, accounting for 51% of total withdrawals, followed by mains water at 45%. The highest water usage was recorded at the Brenner site, which draws from significant underground reserves in the Upper Isarco Valley without impacting aquifer levels, and at the M6 site, which relies on mains supply. Rainwater collection is also reported at the Eglinton Crosstown West Extension and Telese sites.

Water discharges from our worksites consist of residual non-reused water from our processes, run-off water from site aprons, and wastewater from office accommodation and the base camp. The combined discharge volume in 2024 amounted to **3,488 Ml**, distributed as follows:



Distribution of water discharges in 2024
The total data excludes the Central Interceptor, M6, Western Sydney Airport, and ETP construction sites.

We are committed to protecting water quality by adhering to discharge conditions set out in permits issued by local authorities and carrying out a comprehensive monitoring programme, which includes regular sampling and analysis of treated wastewater. Nearly all discharges, around 82%, are released into surface waters, while 12% go into sewer systems. No discharges are made to groundwater or into the sea. Our priority is to prevent **potential accidental damage** to the water and soil sectors by selecting suitable products, adhering to operational instructions, and deploying containment and waterproofing measures. At our worksites, potential risks to these sectors arise from:

- pollution from suspended solids caused by excavation work, leaching from worksite surfaces, and washing vehicles;
- pollution caused by dispersion of cement components during concrete processing activities;
- pollution from hydrocarbons and oils caused by leaks from site vehicles and the handling of fuels and lubricants;
- accidental discharges of pollutants into surface waters or onto the ground.

Water efficiency measures on the ETP project

Responsible water use on our construction sites is a core part of our ESG strategy, with water reuse playing a key role among our sustainability initiatives. In 2024, our Sydney Metro West - Eastern Tunnelling Package project has found several ways to contribute to this effort:

- The project successfully reuses non-potable filtrate water generated from the slurry treatment plant (STP) for slurry treatment, reducing the project's reliance on potable water. Water extracted from spoil is recirculated in the TBM and also used at The Bays to wash truck wheels before they leave site.

- At Hunter Street, the hose water running down the truck access ramp for the wheel wash is collected at the bottom of the ramp and then recirculated to the top, acting as a closed-loop system. Water is replaced only during system cleanout (when sediment has accumulated to a point that replacement is required).

- At the precast yard, treated water from the water treatment plant (WTP) and rainwater are used for aggregate moisture control, equipment washdown and toilet flushing.

Biodiversity

As outlined in our ESG strategy, we are dedicated to safeguarding the local land and its biodiversity, preserving protected areas and endangered species and implementing appropriate technical and organisational measures to protect ecosystems.

Prior to construction, we conduct surveys to identify significant plant or animal species that may require the development of a specific management and monitoring plan.

Below are some other main activities focusing on biodiversity:

Measures for protection of flora

- we restrict the removal of native vegetation to the minimum required for construction activities, aiming to mitigate the impact on land use and reduce the risks of erosion and sedimentation issues;
- we map and mark the vegetation to be preserved;
- we guarantee restoration of the vegetation at the end of worksite activities.

Measures for protection of fauna

- prior to the removal of vegetation, we ensure that any animals discovered within the worksite boundaries are relocated to a suitable habitat nearby, characterised by similar vegetation but devoid of work-related hazards;
- in the event of injured animals being discovered during vegetation cutting operations, we arrange for their transportation to pre-identified veterinary centres for treatment.

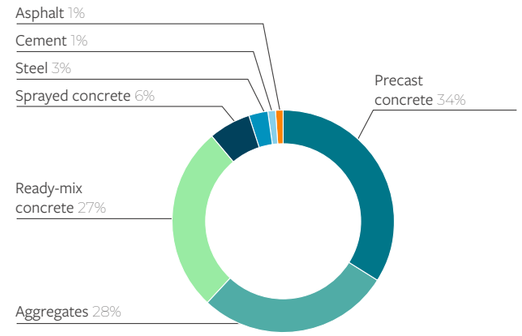
Materials

Due to the unique requirements of our activities, our construction sites have a significant demand for materials. In accordance with our ESG strategy, we pledge to promote the reuse of building materials and the acquisition of recycled materials with the aim of diminishing our impact on raw materials and reducing the environmental footprint associated with procuring goods, guided by the following principles:

Sustainable management of materials

- Reduce the consumption of materials and minimise waste;
- Consider their environmental footprint in the selection phase;
- Give preference to materials with the highest benefits for the circular economy;
- Encourage their reuse on site.

In 2024 we externally procured a quantity of building materials equal to 1,813,975 tonnes.



Externally procured materials in 2024 (%)

Nearly all externally purchased materials come from non-renewable sources. The materials that have the greatest impact on the depletion of resources, in descending order, are precast concrete (34%), aggregates (28%), and ready-mix concrete (27%).

At the Brenner site, the use of externally sourced aggregates is avoided by adopting a commendable approach where excavation soil and rock is reused and precast concrete and precast segments are manufactured on-site, leading to reduced resource depletion and minimising emissions linked to transportation, while also enhancing control over production expenses and efficiency.

Further positive steps taken in 2024 to reduce the demand for materials included:

- identifying solutions, in the design phase, to reduce the quantities of concrete;
- using metal fibre-reinforced segments as an alternative to traditional iron rebar reinforcement;
- using concrete with a high content of supplementary cementitious materials (SCM) aimed at reducing the cement content, such as fly ash, granulated blast slag and silica fumes;
- internally managing concrete production on-site and implementing systems for the recovery of concrete waste generated during production;
- reconditioning and reusing TBMs in different projects located in the same country;
- reusing the temporary accommodation of the base camps;
- maximising the reuse of excavated material from the site itself rather than procuring new inert materials from quarries;
- using recycled materials compatible with the inert material (such as crushed glass) to reduce the procurement of new inert materials from quarries;
- producing or requesting EPDs from suppliers for key construction materials to maintain awareness of their environmental and carbon footprint throughout their life cycle.

Treasures in the streams of the Central Interceptor project

Biodiversity remains a strong focus on our construction sites. In **2024 Watercare's Central Interceptor** project in New Zealand celebrated two **biodiversity wins with rehoming eels and relocating rare moss**. The fern-like **underwater moss**, Fissidens berteroi, is known to **exist in only three other places in New Zealand** and was discovered in a section of the Meola Stream next to the project's Rawalpindi Reserve construction site.

Fissidens berteroi is an **essential part of the eco-system, providing shelter, food source and filtration to an array of aquatic species**. **Partnering** with the Project Ecologist, **Ecology New Zealand**, our JV team set out to **relocate the moss upstream away from construction activity**, to protect it and allow it to continue to thrive. An old-fashioned human-chain was the safest and easiest way to relocate the moss by moving the rock melon sized rocks that it was growing on. The team also **rehomed more than 300 shortfin/longfin eels** found living near our construction sites. Some eels were found in a sediment retention pond at the Māngere Pump Station site and the others in both the Meola Stream and Oakley Creek near our Norgrove and Keith Hay Park sites. **Our JV team worked with the local Iwi (Māori tribe), Te Ahiwaru, and Ecology New Zealand to make sure the eels were handled properly and well cared for**. When the Central Interceptor Tunnel is in operation, the water quality for the moss and eels will be greatly improved as a result of wastewater overflows reduction, making this initiative even more significant for the core objective of the project.

They've 'goat' the job – Grazing goats at the ETP precast facility

A **herd of goats** were recruited for a special task at the **Eastern Creek Precast Facility for Sydney Metro West**. The 20 boer goats made themselves at home at the purpose-built facility in Western Sydney, **having been employed to graze away at the grass and vegetation surrounding the site**.

The goats helped minimise the environmental impacts of using herbicides, prevented weeds from flowering and eliminated noise and emissions associated with using machinery to manage the grass.

The herd was safely fenced in, with access to fresh water and shade 24 hours a day, and workers regularly checked on their welfare.

The goats were great company for the workers on site as they produced concrete segments for Sydney Metro West. The facility is made up of three sheds for the different tunnelling packages, each with its own production line, and the goats were around the Eastern Tunnelling Package (ETP) facility used by our JV.

Shotcrete from recycled aggregates at the E6 construction site in Oslo

At the **E6 Clean Water Tunnel project in Oslo, shotcrete**—a type of **concrete sprayed at high speed** onto surfaces to provide immediate structural support—is **produced using recycled aggregates such as sand, crushed stone, and gravel, rather than blasting new rock or consuming scarce natural resources**, turning waste into value.

The shotcrete is supplied by a mobile batching plant located just a few meters from the tunnel entrance at Stubberud. The plant receives from the environmental facility Nes Miljøpark previously contaminated excavated materials from various construction sites across Oslo. These aggregates are then processed, cleaned, and purified of all contaminants—including the smallest particles containing heavy metals and polycyclic aromatic hydrocarbons.

The impact is significant. To date, over 200,000 tons of contaminated materials have been treated and reused for the E6 project—materials that would otherwise occupy valuable landfill space. **Without this process, an equivalent amount of virgin rock would need to be blasted, placing further strain on Norway's already limited supply of natural materials**. This is a circular solution that benefits both the environment and the construction.

Additionally, having the production plant on-site greatly reduces transportation emissions and ensures that the aggregates are specifically tailored for tunnel applications.

Nes Miljøpark is one of only two facilities in Norway certified to produce aggregates for concrete and asphalt from previously contaminated materials. This certification guarantees quality, safety, and environmental compliance across the entire supply chain.

Climate Footprint Report for the Telese–San Lorenzo–Vitulano Project

Measuring and reducing greenhouse gas emissions is a key priority of our ESG Strategy, aligned with the environmental sustainability goals shared with our clients. Monitoring the project's climate footprint allows us to identify and implement concrete mitigation measures, encouraging informed decision-making throughout the entire materials supply chain.

In line with these priorities, the Telese Scarl Consortium, responsible for constructing the Telese–San Lorenzo–Vitulano section of the **Naples–Bari railway line**, prepares an annual Climate Footprint Report for our client, RFI. The report assesses greenhouse gas emissions associated with the production and transport of cement and reinforcing steel used in the project.

The analysis is **based on EPDs** (Environmental Product Declarations), which are verified documents provided by manufacturers that detail the environmental impact of a product throughout its lifecycle. Transport-related emissions are calculated using the EcoTransIT tool, in combination with precise tracking of supplies, distances travelled, and transport modes used.

In **2024, the procurement of steel and cement generated approximately 100,000 tonnes of CO_2eq**. However, by selecting qualified suppliers with verified environmental performance certifications and by opting for rail and/or maritime transport, an estimated **reduction of over 17,000 tonnes of CO_2eq was achieved compared to traditional production and transport methods**.

These results demonstrate how integrating environmental analysis tools, sustainable procurement criteria, and low-impact logistics can lead to tangible reductions in emissions. The approach adopted for the Telese–San Lorenzo–Vitulano project reinforces our contribution to the ecological transition in the infrastructure sector.

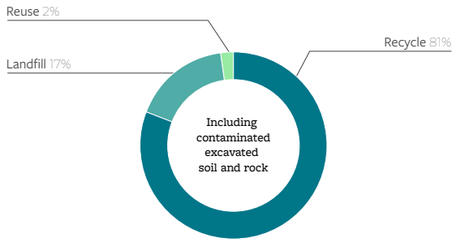
Waste and excavated material

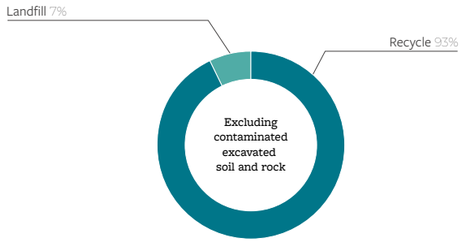
Waste

During 2024, a total of **168,711 tonnes of waste** were generated, with 137,486 tonnes classified as **non-hazardous waste** and 31,225 tonnes classified as **hazardous waste**. The data set includes earth and rock contaminated by substances or materials pre-existing in the terrain which, following excavation, are managed by the projects, classified appropriately and treated as waste to be disposed of in designated landfill sites. If this component is removed from the calculation, the **total waste** amounts to 127,073 tonnes, of which 120,161 tonnes are **non-hazardous** and 6,913 tonnes are **hazardous**.

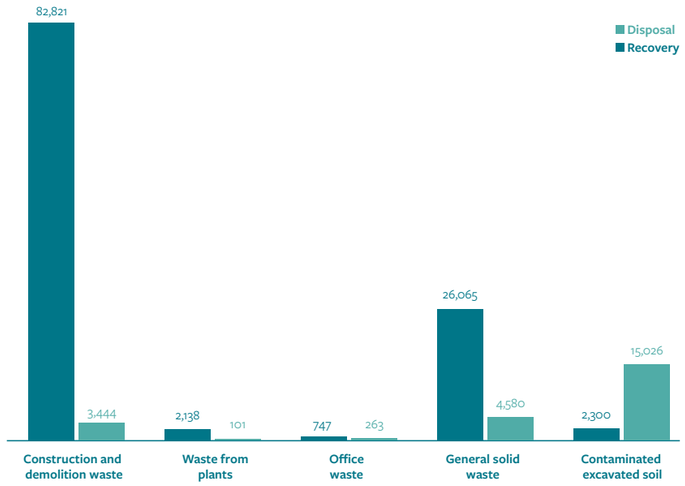
Of the **non-hazardous waste**, 83% was directed to recovery operations: specifically, 2% was reused and 81% recycled. This mainly includes construction and demolition waste generated on site (such as steel, concrete scraps, and demolition debris), which typically have high recovery rates. The category also covers general solid waste from site operations, base camps, and offices, such as glass, plastics, rubber, gravel, timber, cardboard, and food waste. 17% of the non-hazardous waste was disposed of in landfill. This consisted mainly of contaminated soil and rock from excavation works and certain solid waste that could not be reused or recycled. The ETP site recorded the highest volume of non-hazardous waste in 2024, achieving an impressive recovery rate of 99.6%.

If uncontaminated excavated soil and rock are excluded, the **recovery rate** for **non-hazardous waste** increases to **93%**.

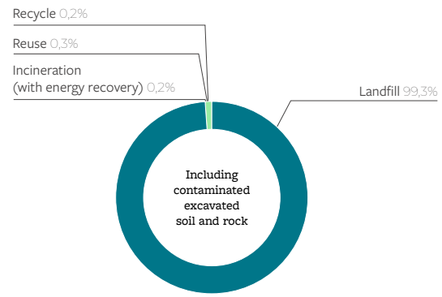


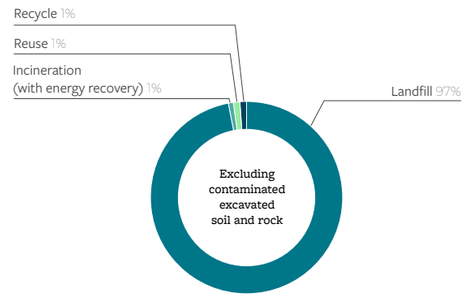


Non-hazardous waste management in 2024 (%)

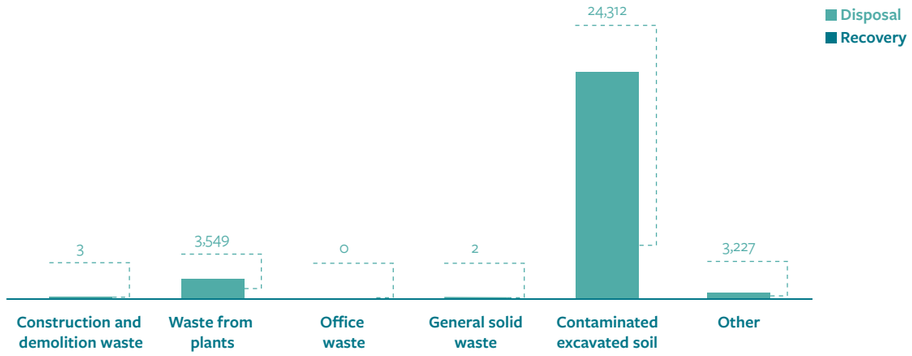


Breakdown of non-hazardous waste generated in 2024, by destination and type (t)





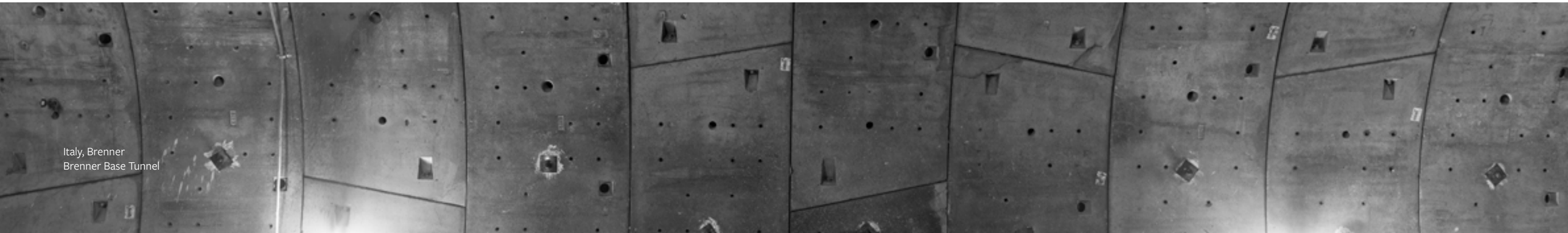
Hazardous waste management in 2024 (%)



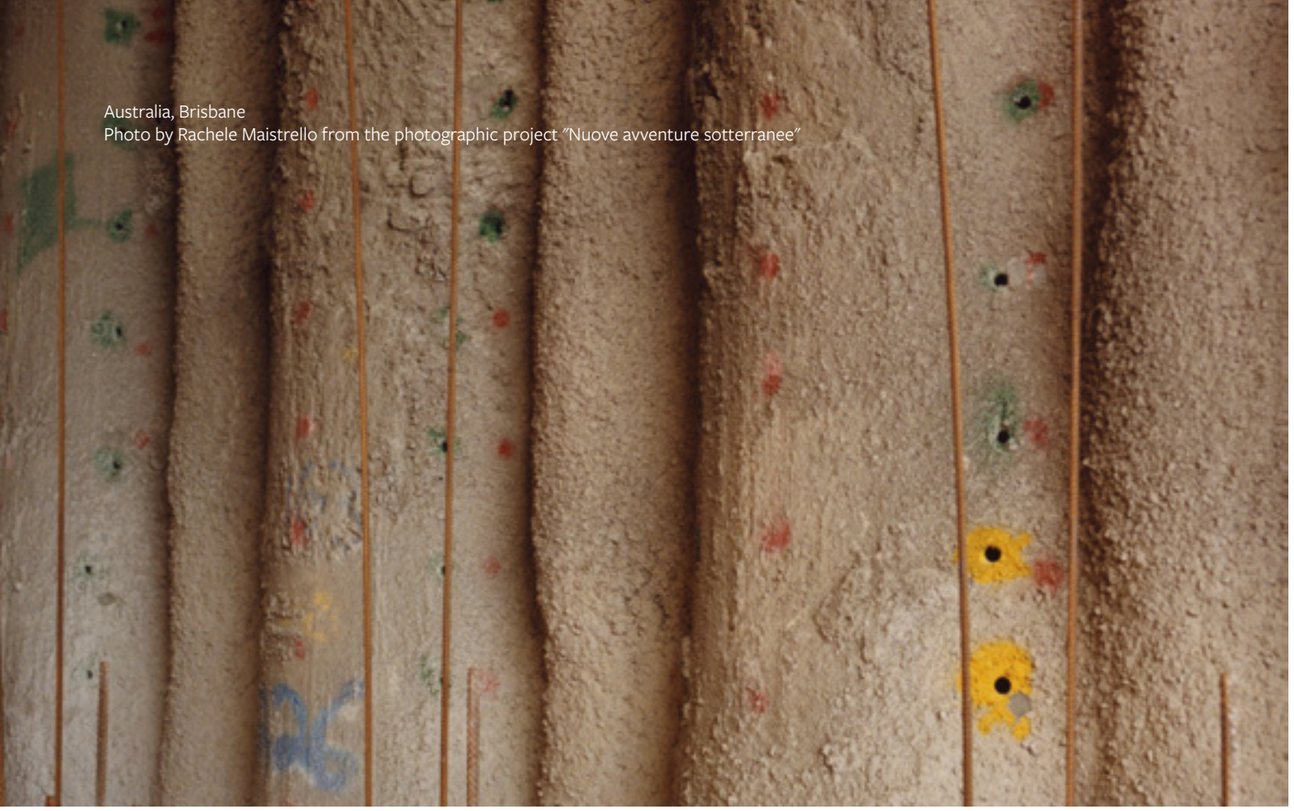
Breakdown of non-hazardous waste generated in 2024, by destination and type (t)

In 2024, more than 99% of **hazardous or contaminated waste** was sent for disposal. This figure includes pre-contaminated soils with hazardous substances and plant-derived waste. The E6 site was the largest contributor to hazardous waste during the year since excavation works were carried out in an area where the Alum Shale Formation was found - a geological layer rich in radium, common in southern Scandinavia. Due to its radioactive properties, this material is appropriately disposed of in authorised facilities[21].

Excluding uncontaminated excavated soils and rocks, the **hazardous waste disposal rate** decreases to 97%.



Italy, Brenner
Brenner Base Tunnel



Australia, Brisbane
Photo by Rachele Maistrello from the photographic project "Nuove avventure sotterranee"

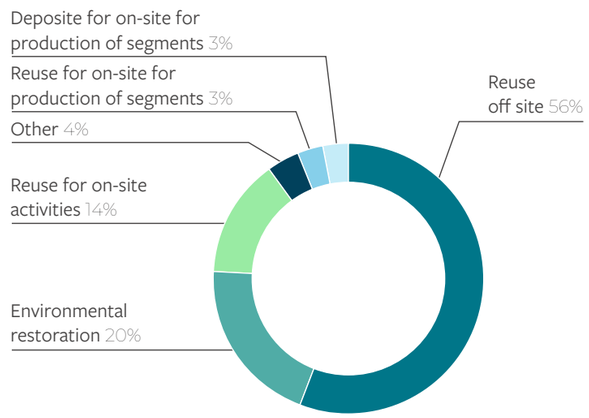
Excavated soil and rock

In line with our ESG strategy, we are dedicated to maximising the reuse of n**on-contaminated excavated material**, considering it as a by-product of excavation activities rather than waste; this approach is contingent upon analysing and verifying suitability in accordance with local legislation.

In 2024, **1,180,128 tonnes** of uncontaminated **excavated soil and rock was generated**.

Of the excavated material handled in 2024, the following is noted:

- **56%** was **reused off-site**. This is in response to our commitment to collaborate with other players in the construction sector towards achieving a circular economy.
- **20%** underwent **environmental restoration**, meaning it was delivered, upon completion of the works, to open-air storage sites identified by the client, where it will be reintegrated into the environment through replanting operations.
- **14%** was **reused on-site** for the construction of embankments, raised platforms, and access tracks.
- **6%** was reused as aggregate (or sent to deposit), for the construction of segments.



Non-contaminated excavated soil and rocks – 2024 management methods (%)

Hard hats recycling initiative in Central Interceptor

We are constantly looking for opportunities to improve our recycling rates and find innovative ways to achieve this objective. **As a project with about 600 employees**, our **Central Interceptor** construction sites collect a large number of hard hats having reached the end of their three-year use period or that have been damaged.

In 2024 Watercare CI team found a **new clever way to recycle these** through a remarkable organisation called **Critical, a Māori owned company dedicated to transforming plastic waste into a sustainable building material called 'Cleanstone.'** These innovative panels can be crafted into a variety of products, including tabletops, desktops, and shelves. **GAJV sent over 150 hard hats from the Central Interceptor project and sample panels were successfully produced**. Critical, is now well into the product development stage, exploring the possibilities of what the hard hat panels should be turned into.

The Cleanstone panels are durable, low-carbon, and endlessly recyclable. This initiative helps divert plastic waste from landfills and provides a solution to a key sustainability issue in the construction industry.

Sustainability Initiatives at the Brenner Construction Site

In line with our ESG Strategy, the **Brenner Joint Venture** has launched an action plan to reduce the environmental impact of construction activities. **The plan focuses on the efficient reuse of resources, material recovery and consumption reduction, thus exploiting every opportunity given to optimise**.

Several of these initiatives go beyond the construction site itself, thanks to collaboration with other sections, local authorities, and regional stakeholders. These synergies have enabled resource sharing, waste reduction, and a lower environmental footprint. This sustainability model demonstrates how working together can generate value even beyond the immediate scope of the work. Below are the main initiatives:

- ***Permanent conversion of the Hinterrigger Depot:*** with the support of both the Client and the local community, authorisation was obtained from APPA Bolzano (the Provincial Environmental Protection Agency) **to convert the provisional depot at Hinterrigger for earthworks and excavated material into a permanent facility**. The proposed change, currently awaiting approval from the Ministry of Environment and Energy Security (MASE), will avoid the demolition of the adjacent facility used for the production of reinforced concrete tunnel segments. **This same plant will instead be repurposed to produce precast segments for Section 1 (Fortezza–Ponte Gardena), eliminating the need to transport approximately 3,000,000 m³ of material**.

- ***Backfilling of underground chambers with excavated material*** with the Client's approval, the authorisation process has been finalised with the Ministry of Environment and Energy Security (MASE) for the reuse of excavated material originally designated for disposal. The initiative, now in progress, exemplifies circular economy principles: **it will prevent the disposal of approximately 160,000 m³ of material, enabling the reuse of secondary raw materials and significantly reducing environmental impact**.

- ***Reuse of treated water:*** **approximately 15% of the water used on site comes from treated water recovered through the on-site purification system**. This practice contributes significantly to reducing the consumption of primary water resources.

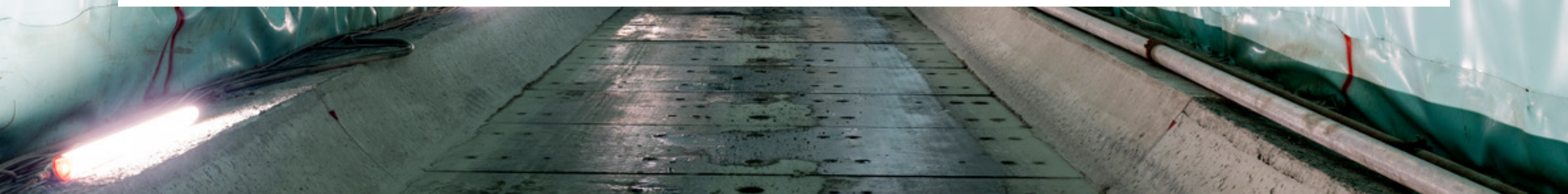
- ***Supply of treated water to the neighbouring site***: an agreement has been signed with contractor ICM for the supply of treated water recovered from the on-site purification plant. **The water will be used to feed the concrete production facility in the adjacent lot, enabling the recovery of approximately 25,000 m³ of water**.

- ***Use of recycled materials***: thanks to close collaboration with our suppliers, **95% of the steel used for concrete reinforcement in 2024 came from recycled sources**, demonstrating our commitment to sustainable construction.

- ***Reuse of the Mules motorway access point***: an agreement has been reached with the Client to keep the **motorway access at the Mules base camp operational**, even after completion of the works. Originally earmarked for removal, the access point will instead be repurposed to support emergency response needs for local communities in the mid-Isarco Valley.

- ***Environmental recovery of sludge from aggregate washing***: Authorisation has been granted for the **reuse of sludge generated from aggregate washing operations**, to be r**epurposed at the Hinterrigger depot as part of an environmental recovery initiative**.

- ***Use of renewable energy***: the **full electricity needs of our construction site are supplied by renewable energy**, demonstrating our commitment to a concrete, measurable, and transparent energy transition.



Rome head office

Headquarters initiatives implemented up to 2024

- we obtained **LEED** (**Leadership in Energy and Environmental Design**) gold certifiaction in Operation and Maintenance for the entire building;

- we replaced all lighting systems with **high-efficiency LED technology**, which reduced energy consumption while improving light quality throughout the premises;

- we installed **anti-solar films on all glazing** throughout the building, resulting in a **reduction of incoming solar heat by over 60%**. This initiative improves comfort levels, particularly in summer, and assists in reducing the workload of the cooling systems;

- we installed **solar panels on the roof**, enabling us to generate renewable energy and further reduce our environmental footprint;

- we introduced **water-saving devices and installed dedicated meters** for each type of water usage, allowing us to monitor consumption precisely;

- water saving was further enhanced by completely **upgrading toilet flushing systems and implementing a rainwater collection and reuse system**, used for irrigating the gardens. Both the **building's interiors and exteriors were painted with Airlite, an organic compound paint that purifies the air by capturing and breaking down pollutants**;

- we made **filtered water dispensers** available on all floors;

- the **coffee pods distributed** to employees are fully **compostable**.

Electricity from the grid
808,608 kWh (2022)
800,626 kWh (2023)
781,950 kWh (2024)

Renewable energy produced
33,633 kWh (2022)
28,365 kWh (2023)
32,166 kWh (2024)

Water consumed
2,652 m³ (2022)
2,900 m³ (2023)
3,363 m³ (2024)

Waste
1,582 t (2022)
1,737 t (2023)
2,523 t (2024)

Gas consumed
ND (2022)
ND (2023)
3.037 sm³ (2024)

Breakdown of waste generated at the Rome head office in 2024.
Organic waste **45**%
Paper **33**%
Non-recyclable **16**%
Plastic/Glass/Metal **6**%

Green Building Council Italia

Australia, photo by Marina Caneve
"A terra tra gli animali"

The photographic project is supported by the Directorate-General for the Contemporary Creativity of the Italian Ministry of Culture under the Italian Council program (2023).

The images highlight the analogy between human-made infrastructure and termite mounds found in nature.

Profile

Francesca Lavorgna

QHSE Manager Italia
Italy, Rome

1) What is your professional background and what inspired you to join Ghella?

I joined Ghella in June 2013, right at a time when the company was redefining its internal QHSE structure. Before that, I had already worked with the company as a consultant and had come to appreciate its values, vision, and work approach – principles that truly resonated with me. Becoming part of the team during such a significant phase of change was an exciting opportunity, as it allowed me to contribute actively to the reorganisation of the company's internal policies, something I approached with great enthusiasm and a deep sense of purpose, driven by a desire to help streamline processes and develop innovative working methods that make our workplaces safer, healthier, and more sustainable.

2) Tell us about your role and the challenges it involves

As QHSE Manager for Italy, I am working at a time of rapid growth for our operations across the country, supported in part by investments linked to the National Recovery and Resilience Plan (PNRR).

This environment offers me a great opportunity to leverage my experience, helping to drive complex projects forward with a clear focus on fostering a culture of safety, promoting wellbeing, minimising environmental impact on sites, streamlining processes, and sharing best practices.

My role is cross-functional and dynamic: I make sure all activities meet the highest standards, especially those set by international ISO regulations. I also work closely with project teams to embed these standards into daily, effective, and sustainable practices. There are numerous challenges, particularly in a rapidly changing national environment. I am nevertheless convinced that the real plus comes from working closely with people, listening to them, understanding their practical needs, finding solutions together, and leveraging the skills Ghella has gained in different contexts.

3) What does sustainability mean to you, and how do you think your work can contribute to it?

To me, sustainability means actively committing to the future by acknowledging our responsibilities towards people, the environment, and generations to come. It's about making informed, responsible, and transparent choices today. This is a subject close to my heart, one I began focusing on during my university studies and later deepened through a specialised master's degree.

Today, I contribute to defining strategies and working methods that translate sustainability into tangible actions, promoting an integrated vision where technical and infrastructural development goes hand in hand with respect for resources, the environment, and people.

4) What do you find most rewarding about your job?

Without question, interaction with people. I truly believe in dialogue, sharing, and listening; that is where the best ideas and solutions come from.

Working on management systems gives me a broad understanding of the organisation and allows me to meet and collaborate with people from many different areas. This constant exchange inspires me every day with fresh ideas to grow, improve, and innovate.
I take pride in knowing that my work contributes to creating a better and safer working environment, moving us forward on the journey towards sustainability. That's why I always try to keep a positive and open mindset, because I firmly believe in one of our mottos: "enthusiasm generates efficiency."

Appendix

Methodological note

Objectives

The Sustainability Report provides a platform to communicate our environmental, social, and economic impacts, along with the results of the activities carried out by Ghella and its production units, to all stakeholders. This forms an essential part of our continuous improvement process, as monitoring and measuring performance are crucial for planning and shaping a solid, competitive strategy and achieving concrete results.

Period and scope of reporting

Since the 2019 reporting cycle, we have prepared the Sustainability Report annually and on a voluntary basis, in accordance with the "Global Reporting Initiative Sustainability Reporting Standards" defined by the GRI - Global Reporting Initiative ("GRI Standards"). The data presented here relate to the period from 1 January 2024 to 31 December 2024 and, where relevant, are compared with the results of the previous two years.

The Consolidated Financial Statements include both the parent company Ghella S.p.A. and the companies it controls whether directly or indirectly. Specifically, this includes entities over which Ghella S.p.A. has control, either through majority ownership of voting rights at shareholders' meetings or by exerting a dominant influence that allows it to make key financial and management decisions for the entity, thereby obtaining the related benefits.

The Sustainability Report, on the other hand, includes the following entities. The information contained in the "Environmental Protection" section refers solely to the entities classified as projects.

Country	Entity	Company Unit	% Ownership	Type	Category
ITA	Ghella S.p.A.	-	-	Company	-
NOR	Ghella NUF	Ghella SpA NUF Succ Norvegia	-	Branch	-
Subsidiaries					
AUS	Ghella Pty Ltd	Ghella Pty Sydney	100.00%	Company	-
CAN	Ghella Canada Ltd	Ghella Canada Toronto	100.00%	Company	-
ITA	GransolarGhella S.r.l.	GransolarGhella	60.00%	Company	-
ITA	TunnelPro S.p.A.	TunnelPro	100.00%	Company	-
NZL	Ghella Abergeldie JV	Central Interceptor	70.00%	Project	Hydraulic Tunnel
NZL	Ghella Limited	Ghella Limited NZL	100.00%	Company	-

Associates (valued using the equity method)					
ITA	Brennero Tunnel Construction Scarl	BTC - Brennero Mules Lt 2-3	47.21%	Project	Railway AV/AC
Accordi congiunti consolidati proporzionalmente ex IFRS 11					
AUS	CGU JV (M6 stage 1)	M6 Stage 1 (Sydney)	22.50%	Project	Motorway Tunnel
AUS	CPB - Ghella JV WSA - Western Sydney Airport	Sydney Airport Metro	25.00%	Project	Metro line
AUS	ETP – Eastern Tunnel Package	Sydney Metro West ETP	20.00%	Project	Metro line
BR	Consórcio CR Almeida/ Ghella/ Consbem	Sao Paulo Subway Green Line 2	35.00%	Project	Metro line
CAN	Westend Connectors Construction General Partnership	Eglinton D&C	20.00%	Project	Metro line
CAN	Broadway Subway Constructors General Partnership	Broadway D&C	40.00%	Project	Metro line
ITA	Telese Scarl	Telese - NABA Telese-Vitulano	47.15%	Project	Railway AV
NOR	AF-Ghella JV	E6 Clean Water Tunnel	40.00%	Project	Hydraulic Tunnel
VN	Hyunday E&C – Ghella JV	Pilot Light Metro Hanoi Line 3	30.00%	Project	Metro line

Projects were selected based on parameters that reliably reflect their environmental, social and economic impact. The companies and branches were selected based on their significance, with the aim of progressively aligning them with the scope of the Consolidated Financial Statements. The data collected and reported refer to the projects as a whole. For the indicators "greenhouse gas emissions intensity" and "water withdrawals intensity", emissions were calculated based on Ghella's proportional share, taking into account its ownership percentage for projects under joint agreements and its associates, while applying 100% of the values to projects classified as controlled subsidiaries.

For the first time, in this reporting period, Scope 2 greenhouse gas emissions were reported using the market-based approach, based on emission factors provided through energy supplier contracts. This approach allows us to account for electricity from renewable sources certified by Guarantees of Origin, a practice adopted at several construction sites from 2024 onwards. Additionally, during this reporting period, a more accurate and integrated approach to social data collection was introduced, made possible by improvements in the Group's internal processes for data gathering and validation. To more accurately reflect the workforce and training, employees contracted by both companies and joint ventures were included. Since the Australian joint ventures are not legal entities, personnel from these JVs were excluded from the social indicator metrics. The same criterion was applied to personnel data from the previous reporting period to ensure consistent comparison of social indicators. Material issues were identified via the materiality analysis, last updated in 2022, and outlined in the "Company" Chapter. Preparation of the Sustainability Report is the responsibility of the Sustainability Department, with oversight from the ESG Committee, and final approval from the Board of Directors of Ghella S.p.A. KPMG S.p.A. conducted the limited assurance engagement in compliance with ISAE 3000 (Revised). For additional information regarding the audit's scope and the procedures used by the independent auditor, please refer to the 'Independent Auditors' Report'.

This report is available on the Ghella website, in the Sustainability section.

Data collection methodology

Since 2022, data collection has been streamlined via an IT platform available to all Company Units. The collected data is then analysed and processed by the respective Corporate Offices. A revision of the ESG data collection process, currently based on the GRI Standards and applied across our Company Units, has recently begun. This will enable us to progressively align our sustainability reporting with the new ESRS (European Sustainability Reporting Standards), as required by the new European CSRD (Corporate Sustainability Reporting Directive).

GRI Content Index

Ghella reports in accordance with the GRI Standards for the reporting period from 1 January 2024 to 31 December 2024, as revised in October 2021.

GRI Standards 2021	Description	Page	Notes
2-1	Company Information	8-9, 18-20, 143	The head office of Ghella S.p.A. is located at Via Pietro Borsieri, 2/A – 00195 Rome
2-2	Entities Included in the Sustainability Reporting	132-133	
2-3	Reporting Period, Frequency, and Contact Information	132	You can contact the Sustainability department by email at: sustainability@ghella.com.
2-4	Restatement of data	48	The data relating to workforce and training has been restated and differs from that published in the 2023 Sustainability Report, in order to ensure consistency and comparability with the current reporting year. This change is due to the adoption of a more accurate and consolidated method for collecting company data thanks to improvements in the Group's internal collection and validation processes.
2-5	External Assurance	140	
2-6	Business Activities, Value Chain, and other Business Relationships	8-9, 24-25, 14	
2-7	Direct Employees	48-50	Less than 1% of employees work part-time, consisting of 12 women and 3 men.
2-8	External employees	50	
2-9	Governance structure and composition	18-20	
2-10	Appointment and selection of the highest governing body	20	
2-11	Chairman of the highest governing body	20	
2-12	Role of the highest governing body in overseeing impact management	20	
2-13	Delegation of responsibilities for impact management	20	
2-14	Role of the highest governing body in sustainability reporting	20, 132	
2-15	Conflict of interest		The board members sign a declaration of liability and absence of conflicts of interest.
2-16	Reporting of critical issues		Reports are processed and verified by the relevant oversight body (OdV for Italy, General Counsel for international operations). Upon completing its activities, the minutes are distributed to the Board of Directors. No critical reports were recorded in 2024.
2-17	Knowledge sharing of the highest governing body	20, 65	Meetings of the Control, Risk, and Sustainability Committee, which includes members of the Board of Directors, also serve as opportunities to educate and raise awareness among those governing the organisation. The external certification body RINA S.p.A. conducts an annual third-party audit of the organisation to verify that the management system and the policies endorsed by the Chairman comply with the requirements of the ISO 9001, 14001 and 45001 standards.
2-18	Performance evaluation of the highest governing body		The Board of Directors is not subject to performance assessment.
2-19	Remuneration policies	65	
2-20	Procedure for determining remuneration		Given the nature of our organisation, this indicator is not applicable.
2-21	Total annual remuneration rate		5.96 in 2024, down 28% from 8.35 in 2023 (recalculated).
2-22	Declaration regarding sustainability strategy	5	
2-23	Commitments in policies	21	All our policies are signed by the Chairman and CEO, shared with employees as part of the induction process, and made available on the intranet and the website ghella.com. They are reviewed annually during the Management System Review to ensure that they align with the company's mission and vision.
2-24	Embedding commitments into policy frameworks	21	
2-25	Process for addressing negative impacts	21-23	
2-26	Mechanisms for seeking advice and reporting concerns	21-23	
2-27	Compliance with laws and regulations		In 2024, no significant cases of non-compliance with laws or regulations were recorded.
2-28	Membership in associations	95	
2-29	Approach to stakeholder engagement	14-15	
2-30	Collective bargaining agreements	65	
3-1	Process for identifying material issues	14-15	
3-2	List of material topics	15	

GRI Standards 2021	Description	Page	Notes
Integration of sustainability into corporate governance			
3-3	Management of material topics	20	
Management of material topics			
3-3	Management of material topics	20-22	
205-3	Confirmed incidents involving corruption and action taken		During 2024, no corruption cases were recorded, and no litigation was embarked on against Ghella or its representatives.
Business risk management			
3-3	Management of material topics	20-22	
Equal opportunities			
3-3	Management of material topics	22	
405-1	Diversity in governing bodies and among employees	20, 56-58	
Diversity and inclusion			
406-1	Incidents of discrimination and corrective measures taken		In 2024, no reports of discrimination based on diversity factors or violations of the rights of indigenous people were made through Ghella's Whistleblowing channel.
Employee well-being			
3-3	Management of material topics	65	
402-1	Minimum notice period for operational changes		The minimum notice period, as stipulated by collective contracts or local laws, varies from 1 to 5 weeks depending on the location.
Employee development			
3-3	Management of material topics	61	
404-1	Average annual training hours per employee	61	The average training hours by job category are 28 hours for managers, 10 hours for white collar employees and 32 hours for blue collar employees.
404-3	Percentage of employees receiving regular performance and professional development reviews	61	
Occupational health and safety			
3-3	Management of material topics	21-23	
403-1	Occupational health and safety management system	66	
403-2	Hazard identification, risk assessment and incident investigations	66-69	
403-3	Occupational health services	66	
403-4	Employee involvement, consultation, and communication on health and safety	66	
403-5	Employee training on occupational health and safety	61, 66	
403-6	Promotion of employee health	66	
403-7	Prevention and mitigation of occupational health and safety impacts in commercial relationships	66-69	
403-9	Work-related injuries	66-69	
Economic performance			
201-1	Economic value directly generated and distributed	84-85	
Supplier evaluation and engagement			
204-1	Supplier evaluation process	86	
Value creation for local communities			
308-1	New suppliers assessed using environmental criteria	86	
414-1	New suppliers assessed using social criteria	86	
Protection of human rights			
3-3	Management of material topics	20-22, 86	
408-1	Activities and suppliers exposed to a high risk of child labour incidents	86	Ghella SpA has 8 suppliers based in countries identified as high risk (Argentina, Vietnam, Venezuela, Dominican Republic, India, Malaysia).
Quality and innovation			
3-3	Management of material topics	20-22, 88-89	

GRI Standards 2021	Description	Page	Notes
Active role in the development of industry policies and standards			
3-3	Management of material topics	95	
Climate change mitigation			
3-3	Management of material topics	20-23, 102-106	
302-1	Energy consumption within the organisation	112-113	
305-1	Direct GHG emissions (Scope 1)	105-106	c) The greenhouse gases included are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), but the percentages of CH_4 and N_2O are negligible compared to CO_2. d) The reference year for the calculation is 2024. e) The source of the emission factors is DEFRA 2024 (UK Government GHG Conversion Factors for Company Reporting). f) For calculation of absolute GHG emissions, data related to joint ventures (JVs) is fully included without considering the percentage of equity interest. For the calculation of GHG emission intensity, equity share percentages are applied. g) Emissions classification refers to The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised edition), which defines Scope 1 as direct greenhouse gas emissions: direct emissions from sources owned or controlled by the organisation, resulting from combustion within plants, vehicles, boilers, etc. (e.g. consumption of diesel, petrol, LPG etc.).
305-2	Indirect GHG emissions from energy consumption (Scope 2)	105-106	b) Both the "Location-based" and "Market-based" approaches have been used to calculate CO_2 emissions. c) The greenhouse gases included are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), but the proportions of CH_4 and N_2O are negligible compared to CO_2. d) The reference year for the calculation is 2024. e) The source for the location-based emission factors is the document "Country-specific electric grid greenhouse gas emission factors – 2024" prepared by Carbon Footprint Ltd. For the market-based emission factors, the residual mixes used come from the following sources: AIB for construction sites in Europe; "Australian National Greenhouse Accounts Factors" for Australia; "Residual Mix calculation for three I-REC issuing countries (Brazil, Chile, China)" for Brazil; "Climatiq Data Explorer" for Canada; and "KPMG GHG Emissions Reporting Brief" for New Zealand.
Sustainable management of water resources			
3-3	Management of material topics	20-23, 112-113	
303-1	Managing water as a shared resource	112-113	
303-2	Managing impacts associated with water discharge	113	
303-3	Water withdrawal	112	
Pollution prevention and mitigation			
3-3	Management of material topics	20-23	
303-4	Water withdrawal	113	
Procurement of sustainable materials and eco-design			
3-3	Management of material topics	20-23, 115	
301-1	Materials used by weight or volume	115	
Efficient waste management			
3-3	Management of material topics	20-23, 122-123	
306-3	Waste produced	122-123	
306-4	Waste not intended for disposal	122-123	
306-5	Waste intended for disposal		Waste indicators are reported both gross and net of contaminated excavated soil and rock.
Protection of biodiversity and ecosystems			
304-2	Significant impacts of activities, products and services on biodiversity	20-23, 115	

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(This independent auditors' report has been translated into English solely for the convenience of international readers. Accordingly, only the original Italian version is authoritative.)

Independent auditors' report on the sustainability report

To the board of directors of
Ghella S.p.A.

We have been engaged to perform a limited assurance engagement on the 2024 sustainability report (the "sustainability report") of the Ghella Group (the "group").

Directors' responsibility for the sustainability report

The directors of Ghella S.p.A. (the "parent") are responsible for the preparation of a sustainability report in accordance with the "Global Reporting Initiative Sustainability Reporting Standards" issued by GRI - Global Reporting Initiative ("GRI Standards").

The directors are also responsible for such internal control as they determine is necessary to enable the preparation of a sustainability report that is free from material misstatement, whether due to fraud or error.

They are also responsible for defining the group's objectives regarding its sustainability performance and the identification of the stakeholders and the significant aspects to report.

Auditors' independence and quality management

We are independent in compliance with the independence and all other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (the IESBA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our company applies International Standard on Quality Management 1 (ISQM Italia 1) and, accordingly, maintains a system of quality management including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Auditors' responsibility

Our responsibility is to express a conclusion, based on the procedures performed, about the compliance of the sustainability report with the requirements of the GRI Standards. We carried out our work in accordance with the criteria established by "International Standard on Assurance Engagements 3000 (revised) - Assurance Engagements other than Audits or Reviews of Historical Financial Information"

("ISAE 3000 revised"), issued by the International Auditing and Assurance Standards Board (IAASB) applicable to limited assurance engagements. This standard requires that we plan and perform the engagement to obtain limited assurance about whether the sustainability report is free from material misstatement.

A limited assurance engagement is less in scope than a reasonable assurance engagement carried out in accordance with ISAE 3000 Revised, and consequently does not enable us to obtain assurance that we would become aware of all significant matters and events that might be identified in a reasonable assurance engagement.

The procedures we performed on the sustainability report are based on our professional judgement and include inquiries, primarily of the parent's personnel responsible for the preparation of the information presented in the sustainability report, documental analyses, recalculations and other evidence gathering procedures, as appropriate.

Specifically, we performed the following procedures:

1 analysing the reporting of material aspects process, specifically how the reference environment is analysed and understood, how the actual and potential impacts are identified, assessed and prioritised and how the process outcome is validated internally;

2 understanding the processes underlying the generation, recording and management of the significant qualitative and quantitative information disclosed in the sustainability report.

   Specifically, we held interviews and discussions with the management personnel of the parent. We also performed limited procedures on documentation of specific construction sites (BTC - Brennero Mules Lt 2-3, M6 Stage 1 (Sydney), Sydney Metro West ETP, E6 Clean Water Tunnel, Sao Paulo Subway Green Line 2, Telese - NABA Telese-Vitulano, Central Interceptor) to gather information on the processes and procedures used to gather, combine, process and transmit non-financial data and information to the office that prepares the sustainability report.

Furthermore, with respect to significant information, considering the group's business and characteristics:

- at group level:
  a) we held interviews and obtained supporting documentation to check the qualitative information presented in the sustainability report;
  b) we carried out analytical and limited procedures to check, on a sample basis, the correct aggregation of data in the quantitative information;
- we selected BTC - Brennero Mules Lt 2-3, M6 Stage 1 (Sydney), Sydney Metro West ETP, E6 Clean Water Tunnel, Sao Paulo Subway Green Line 2, Telese - NABA Telese-Vitulano and Central Interceptor, on the basis of their business, contribution to the key performance indicators at consolidated level, to obtain documentary evidence, on a sample basis, supporting the correct application of the procedures and methods used to calculate the indicators.

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31 December 2024

Conclusion

Based on the procedures performed, nothing has come to our attention that causes us to believe that the 2024 sustainability report of the Ghella Group has not been prepared, in all material respects, in accordance with the requirements of the GRI Standards.

Rome, 23 July 2025

KPMG S.p.A.

(signed on the original)

Marco Maffei
Director of Audit

Notes

1. Hydroelectric plants are included in the total of hydraulic works.

2. PORTER M. E., KRAMER M. R., Creating Shared Value, in "Harvard Business Review", January/February 2011, p.64-77

3. Trento railway bypass – Section 3A, AV Battipaglia-Romagnano - Section 1, AV Lercara-Caltanissetta Xirbi – Section 3, AV Caltanissetta Xirbi-Nuova Enna – Section 4.

4. Details of the 2024 reporting scope can be found in the methodological note.

5. Average indicators do not include Australian joint ventures where data is not available in the breakdown required by the standard..

6. The frequency rate (LTIFR) measures the average occurrence of work-related injuries resulting in absences of more than three days, as defined by Eurostat (ref: Eurostat – Non-fatal accident at work). It is calculated in accordance with UNI 7249, by dividing the number of injuries by the total hours worked and multiplying the result by 1,000,000.

7. The severity rate (LTISR) measures the average seriousness of injuries resulting in absences of more than three days, as defined by Eurostat. It is calculated in line with UNI 7249, dividing the total number of days lost by the total hours worked, and multiplying the result by 1,000.

8. The Total Recordable Injury Frequency Rate (TRIFR) accounts for all recordable incidents, including: Lost Time Injuries (LTI), Medical Treatment Cases (MTC), Restricted Work Cases (RWC), and fatalities. It is calculated by dividing the number of recordable incidents by the total hours worked, then multiplying the result by 1,000,000. For 2022 and 2023, TRIFR was calculated by including only LTIs involving more than three lost days, in line with the Eurostat definition. From 2024 onwards, to enhance data accuracy and representativeness, all LTIs have been included regardless of the length of absence.

9. Lost-Time Injury (LTI): Work-related injuries resulting in more than three days of absence, as defined by Eurostat.

10. Medical Treatment Case (MTC): Work-related injuries requiring only medical treatment without resulting in lost workdays.

11. Restricted Work Case (RWC): A work-related injury that did not result in absence but limited the employee's ability to perform their usual duties.

12. Total sum of LTIs (including injuries with prognoses under 3 days), MTCs, and RWCs.

13. A "serious injury" is defined as one from which the worker cannot recover, does not recover, or is not realistically expected to fully recover to their pre-incident state of health within six months.

14. The reported rate was calculated by dividing the number of serious injuries by the total hours worked, then multiplying by 1,000,000.

15. It does not include the item 'other operating income' reported in the Income Statement.

16. Compared with the 2021 baseline.

17. Compared with the 2021 baseline.

18. GHG emissions attributable to Ghella are calculated according to participation percentages when projects are either joint arrangements or associated companies and considering 100% of projects emissions when they are subsidiaries (see Methodological note).

19. The ratio between the emissions, calculated according to participation percentages in the JVs included in the reporting scope (26,685 tCO_2eq), and the corporate revenue, is 21.33 tCO_2eq/million euros revenue.

20. The list shows some examples of initiatives implemented at some of our worksites.

21. In the chart "Hazardous Waste Management in 2024 (%)", this is classified under the "Landfill" disposal category.

Greece, Athens
Photo by Marina Caneve from the photographic project "Di roccia, fuochi e avventure sotterranee"

Greece, Athens
Photo by Marina Caneve from the photographic project "Di roccia, fuochi e avventure sotterranee"

GHELLA

1894

130TH
ANNIVERSARY

Senza Cloro

Senza Acido

Carte di lunga durata

Carta da fonti gestite in maniera sostenibile


GHELLA
1894
130TH
ANNIVERSARY