



Glenveagh

Home of the new.



Building for a Better Climate

NET ZERO TRANSITION PLAN 2023

WELCOME

We build for everyone

ABOUT GLENVEAGH

Supported by innovation and supply-chain integration, Glenveagh is committed to opening up access to sustainable high-quality homes to as many people as possible in flourishing communities across Ireland.

ABOUT THIS DOCUMENT*

This is our first Net Zero Transition Plan. The aim of this document is to provide our stakeholders with transparency around our ambitions and actions on our journey towards decarbonisation. This plan will evolve and be updated over time. Feedback is welcome. Please get in touch by emailing sustainability@glenveagh.ie.

*This plan was updated in January 2024 following the approval of our science-based targets by the Science Based Targets initiative (SBTi). The targets and the content remain the same but some small changes to the language in the target description were made following feedback from the SBTi.

Our Vision

At Glenveagh, our vision is that everyone should have the opportunity to access great-value, high-quality homes in flourishing communities across Ireland.

Our Mission

Our mission is to innovate how new homes are planned, designed, built and marketed in Ireland, and to make the journey for customers transparent, easy and joyful.

Our Culture

At Glenveagh, we foster a culture of fresh thinking, teamwork and trust to challenge the status quo in our industry. We believe that building homes and communities will positively impact Irish society. We want to forge a new path, relentlessly innovating every stage of the homebuilding process.



Our Values

Our company values of **Safety first**, **Innovative**, **Can-do**, **Collaborative** and **Customer-centred** inform everything we do and how we do it. These values are integral to building an inclusive Glenveagh that we are all proud to be part of.



SAFETY FIRST
Before everything else, safety comes first.



COLLABORATIVE
We believe in the power of teamwork to create new possibilities.



INNOVATIVE
Each day we work to bring new ideas home.



CUSTOMER-CENTERED
Customers are at the heart of every decision we make.



CAN-DO
With the right attitude we can achieve anything.

INTRODUCTION

Introducing our Net Zero Transition Plan



It is clear that urgent action on climate change is required. The UN has described the latest science from the Intergovernmental Panel on Climate Change (IPCC) – as “code red for humanity”. However, we know that if we all act now it is still possible to limit global temperature rise to 1.5°C. This involves making rapid and deep cuts to emissions.

At Glenveagh, we have placed sustainability, and climate change in particular, at the heart of our new Building Better strategy. This allows us to respond effectively to climate risks and opportunities through each of our five strategic priorities, ensuring action on climate change is at the heart of how we innovate, the places we create and the skills we nurture in our people.

This Net Zero Transition Plan supports our Building Better strategy and sets out both our near and long term approach to climate change, which includes demanding science-based targets that we must hold our business to achieving.

The journey towards net zero is complex and challenging. However, we have already made great progress in reducing the operational energy of our homes. We are confident that with the same determination we can achieve our ambitious targets.

This plan sets out the key actions as we see them now. We have already invested significant time in improving our baseline information and we will continue to strive for more robust data to help inform our decisions. We will explore new and innovative technologies to help us on our journey and foster a spirit of collaboration with industry partners, our suppliers and subcontractors and other stakeholders as necessary.

Stephen Garvey
Chief Executive Officer

SETTING THE SCENE

Global context

The IPCC has delivered its strongest warnings yet in its Sixth Assessment Report (2021) – “Unless there are immediate and deep emissions reductions across all sectors, limiting global warming to 1.5°C will be beyond reach”. Greenhouse gas emissions ('GHGs') are at the highest levels in human history over the last decade. It is clear that urgent action is needed.

The Paris Climate Agreement sets out the global pathway for this action. It is a legally binding international treaty on climate change adopted at COP 21 in Paris in December 2015. Its goal is to limit global warming to well below 2°C, preferably to 1.5°C, compared to pre-industrial levels. The Glasgow Climate Pact, agreed at COP 26 in Glasgow, aims to accelerate efforts by countries to align with the Paris Agreement goals.

Europe

The European Union ('EU') has been to the forefront of action on climate change particularly in recent years. The European Green Deal sets out its vision for a climate-neutral EU and this was written into law through the European Climate Law in 2021. This means achieving net zero GHGs for EU countries as a whole by 2050, while also setting out an intermediate target of reducing net GHGs by at least 55% by 2030, compared to 1990 levels. To support this, the EU published 'Fit for 55', an ambitious package of objectives and plans to be implemented by 2030.

What is net zero?

Achieving net zero means reducing GHGs emissions (Scopes 1, 2 and 3) to zero or to a residual level and neutralising any residual emissions through the permanent removal and storage of carbon from the atmosphere. Net zero is essentially about balancing the emissions put into the atmosphere and those taken out.

“

IRELAND IS ON A LEGALLY BINDING PATH TO NET ZERO EMISSIONS NO LATER THAN 2050.

”

Ireland

Ireland's Climate Action and Low Carbon Development (Amendment) Act 2021 was signed into law in July 2021. It places Ireland on a legally binding path to net zero emissions no later than 2050, and to a 51% reduction in emissions by the end of this decade, providing a framework for Ireland to meet its international and EU climate commitments. The latest iteration of the Climate Action Plan 2023 ('CAP23'), implements the carbon budgets and sectoral emissions ceilings and sets out a roadmap for action (including for the built environment).

Built environment

In Ireland, the construction and built environment sectors account for 37% of Ireland's carbon emissions. That breaks down into 23% from operational emissions i.e. heating, cooling and lighting buildings, with the remaining 14% from embodied carbon i.e. the manufacturing, transport and installation of building materials.



51%

Reduction in emissions by the end of this decade in Ireland.

OUR CLIMATE STORY

Colour Key

- Glenveagh climate actions
- Global, regional and national climate milestones

2023

- Building Better strategy published with sustainability embedded throughout.
- First sustainability-linked financing facility.
- Ireland's Climate Action Plan 2023 published.

2022

- Joined Irish Green Building Council (IGBC).
- Signed Low Carbon Pledge committing to setting science-based targets ('SBTs').
- Commenced Hydrotreated Vegetable Oil ('HVO') trials.
- CDP rating B.
- Ireland's first carbon budget programme approved.
- Ireland's Sectoral Emissions Ceilings agreed.

2021

- Sustainability governance structures set up.
- First climate target set.
- CDP rating A-.
- Electric vehicles ('EVs') introduced to fleet.
- Published full Scope 3 emissions.
- European Climate Law is adopted.
- Ireland's Climate Action and Low Carbon Development (Amendment) Act 2021 approved.

2020

- First sustainability report published.
- Reported Scope 1 and 2 emissions with external assurance.
- First CDP disclosure – B rating achieved.
- The European Green Deal was approved.

2019

- Sustainability approach agreed by Board.
- EU leaders agree to make the EU climate neutral by 2050.

2018

- Capital deployed in line with Group vision.
- UN IPCC releases its 1.5°C special report.

2017

- Company founded.
- Governance framework implemented.



OUR APPROACH

Embedding our **Net Zero** Transition Plan into our business strategy

In 2022, we began an extensive process to evolve the Glenveagh business strategy. We aimed to build on the successes of our existing strategic and sustainability priorities, positioning ourselves optimally to address the needs of stakeholders and to manage future opportunities and challenges. We have placed environmental and social issues at the heart of our business strategy and have integrated our sustainability and business priorities into one overarching strategy. Our Net Zero Transition Plan supports this with key actions embedded throughout our strategic priorities.

Net Zero Transition Plan

Strategic Priorities

How our approach to net zero is embedded



Placing the customer first

- High quality, energy efficient, homes.
- Educating customers on reducing their carbon emissions.



Valuing and developing our colleagues

- Developing sustainability and climate skills across the business.



Driving operational excellence

- Driving efficiency in resource use to reduce GHG emissions.
- Using renewable fuels where possible.

Creating sustainable and thriving places

- Building communities that support sustainability.
- Nature-based solutions to climate impacts/potential impacts.



Embracing innovation

- Driving innovation in design, materials used, offsite manufacturing etc. to reduce embodied carbon of our homes.

OUR EMISSIONS

Understanding our emissions

To set a science-based target, it is important that we have a thorough understanding of our base year emissions.

The base year we have chosen is 2021. We first disclosed our Scope 1 and 2 emissions in 2020 and in the following year we disclosed our Scope 3 emissions. We use the Greenhouse Gas Protocol operational control methodology to calculate our emissions. We have worked continuously over that time, and will continue to do so, to improve our methodology as well as the quality of the data to progress the accuracy and completeness of our emissions.

In 2021 our total emissions were 192,184 tCO₂e. Of these 2% were in Scopes 1 and 2, while the remaining 98% was in Scope 3.

More information on Glenveagh's baseline emissions including the methodology used, verification and standards can be found at <https://glenveagh.ie/corporate/sustainability>

192,184 tCO₂e

Total emissions in 2021

Scopes 1 and 2

Much of our Scope 1 emissions come from fossil fuels used on our sites to run generators, plant and machinery. The remainder is from our own fleet of vans and cars, while a small amount of natural gas is also used. Our Scope 2 emissions arise from electricity used in our offices, factories and sites.

Scope 3

In line with the Greenhouse Gas Protocol, a materiality assessment has been performed on known attributable emissions within the system boundary, ensuring that over 95% of the anticipated life cycle GHG value chain emissions were covered by the scope.

A large proportion (42%) of our Scope 3 emissions sit within the 'capital goods' category and represent the embodied carbon within the houses and apartments that we build i.e. the extraction and production of the materials with which we build. The transportation of these materials and the end of life treatment are also captured within Scope 3 although these represent a small percentage – three and two per cent respectively.

Another significant element of our Scope 3 emissions is the fuel used by our subcontractors on site (22%). This makes up almost all of the emissions from the purchased goods and services category.

The remaining significant element of our Scope 3 emissions is the occupant energy i.e. energy used over a 50 year period, by those that live in the houses and apartments that we build. This makes up 27% of the total emissions.

The remaining emissions comprise business travel, employee commuting, treatment of waste and losses relating to electricity and fuel consumption.



OUR EMISSIONS CONTINUED

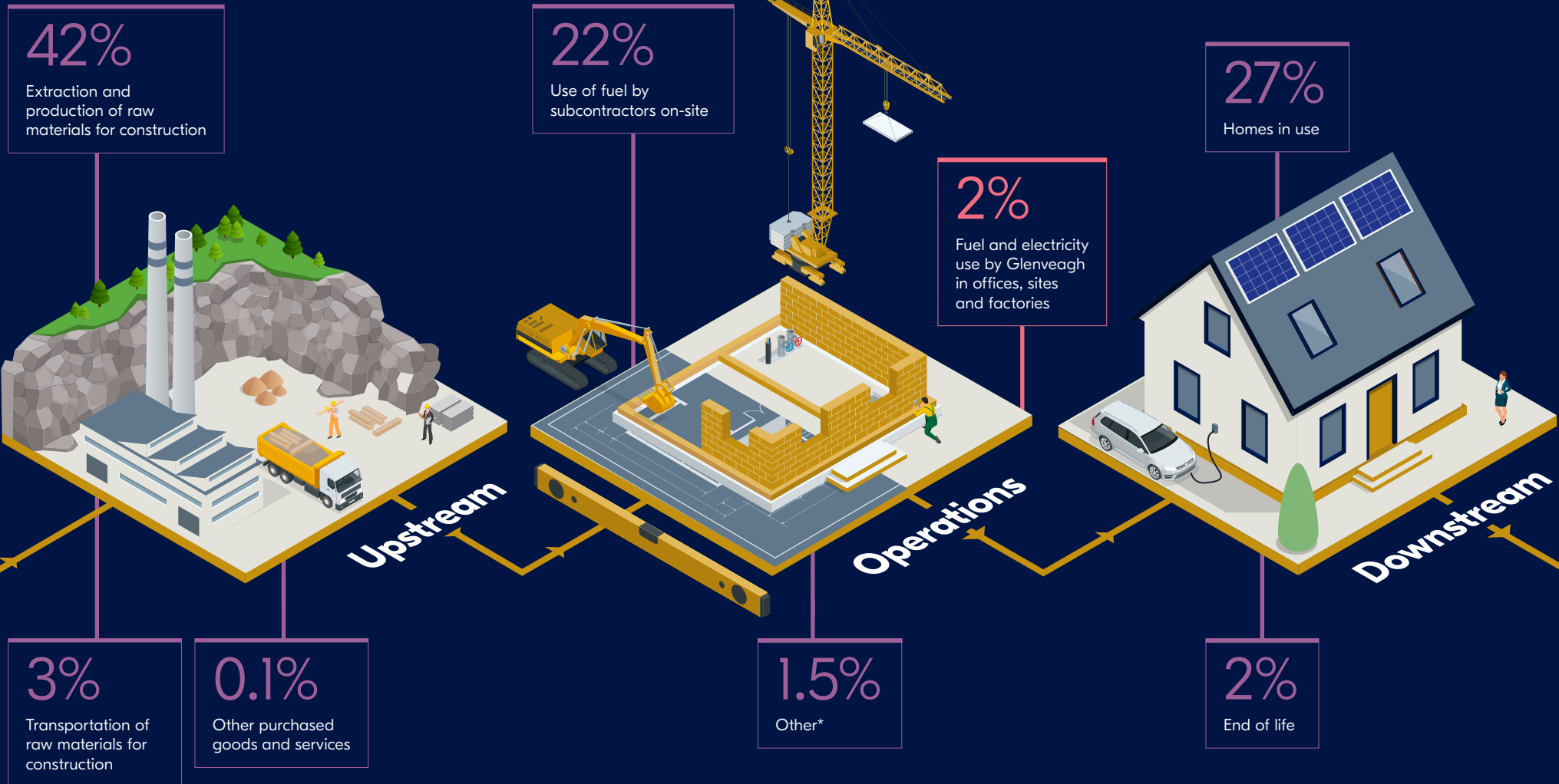
Our 2021 emissions

Colour Key

- Scopes 1 and 2
- Scope 3

*Includes losses relating to electricity and fuel consumption, business travel, employee commuting, assets and treatment of waste generated in operations.

See page 20 for a full breakdown of our GHG emissions.



OUR PLAN ON A PAGE

Now
→
 2050

Targets	Actions	Supported by
	Scopes 1 and 2	
<p>46.2% absolute reduction in Scopes 1 and 2 by 2031 from a 2021 base year.</p> <hr/> <p>Net Zero 90% absolute reduction in Scopes 1 and 2 by 2050 from a 2021 base year.</p>	<p>Transition sites to renewable fuel</p>	<p>Robust governance</p> <hr/> <p>Transparent reporting</p> <hr/>
	Scope 3	
<p>55.0% reduction in Scope 3 emissions intensity (tCO₂e/100sqm of completed floor area) by 2031 from a 2021 base year.</p> <hr/> <p>Net Zero 97% reduction in Scope 3 emissions intensity (tCO₂e/100sqm of completed floor area) by 2050 from a 2021 base year.</p>	<p>Supplier engagement</p> <p>Subcontractor engagement</p>	<p>Stakeholder engagement</p> <hr/> <p>Risk management</p>
<p>Aligned to a 1.5°C trajectory</p>		

OUR TARGETS



Science-based targets

We understand the importance of setting targets that are aligned with the latest climate science and that will ultimately put us on a pathway aligned with the goals of the Paris Climate Agreement. We have developed both near-term GHG emissions reduction targets and long-term net zero GHG emissions targets for Scopes 1, 2 and 3. Our targets have been approved by the Science Based Targets initiative (SBTi). Our overall Net Zero target states that "Glenveagh Properties plc commits to reach net-zero greenhouse gas emissions across the value chain by 2050 from a 2021 base year".

Near-term carbon target

46.2%

absolute reduction in Scopes 1 and 2 by 2031 from a 2021 base year.*

Long-term carbon targets

90%

absolute reduction in Scopes 1 and 2 by 2050 from a 2021 base year.

55.0%

reduction in Scope 3 emissions intensity (tCO₂e/100sqm of completed floor area) by 2031 from a 2021 base year.

97%

reduction in Scope 3 emissions intensity (tCO₂e/100sqm of completed floor area) by 2050 from a 2021 base year.

**The target boundary includes biogenic land related emissions and removals from bioenergy feedstocks.*

Business Ambition

Glenveagh has responded to the SBTi's urgent call for corporate climate action by committing to align with 1.5°C and net zero through the Business Ambition for 1.5°C campaign.



Low Carbon Pledge

In 2022 Glenveagh signed up to Business in the Community Ireland's ('BITCI') Low Carbon Pledge.

The pledge commits all signatory companies to setting science-based carbon emissions reduction targets by 2024.



OUR STRATEGY

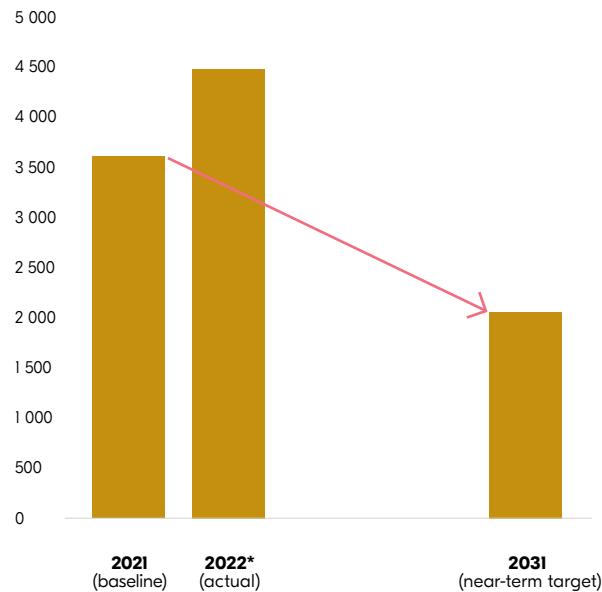
Actions to deliver targets

Scopes 1 and 2

Actions

- 01 Transition sites to renewable fuel
- 02 Transition fleet to EV
- 03 Renewable electricity
- 04 Electrification
- 05 Increase efficiency across sites, factories and offices

Scopes 1 and 2 near-term target (tCO₂e)



*Initial rise in emissions expected due to business growth.

Near-term carbon target

46.2%

absolute reduction in Scopes 1 and 2 by 2031 from a 2021 base year.

Long-term carbon target

90%

absolute reduction in Scopes 1 and 2 by 2050 from a 2021 base year.

OUR STRATEGY CONTINUED**Scopes 1 and 2 – Actions**

01

Transition sites to renewable fuel

Fossil fuels for power generators and plant on site is the biggest source of Scope 1 emissions and is the area where we have the opportunity to make the most impact. We endeavour to transition construction sites from generators to the electrical grid, where feasible as quickly as possible and we will continue to work with utility providers to do this. In 2022, we trialled Hydrotreated Vegetable Oil ('HVO') on two of our sites and will now roll this out across all of our sites replacing the need for diesel or gas oil. We see HVO primarily as a transition fuel and acknowledge the concerns that exist in relation to this. We will prepare a position paper to outline our approach to the use of HVO including our due diligence. In this context we will continue to research other options as they emerge, including hydrogen.

02

Transition fleet to EV

In 2021, we started to implement our strategy to move our fleet from diesel to EVs. As of February 2023, 18% of our fleet is electric. We will continue to add additional vehicles in line with lease renewals to achieve an electric fleet. EV charging infrastructure is available at our offices and has also been installed at relevant colleagues' homes. EV charging infrastructure across the country is facilitated using charge cards.



03

Renewable Electricity

We will assess the potential for the use of on-site renewables at our off-site manufacturing facilities in Dundalk, Carlow and Arklow.



04

Electrification

We have already commenced the electrification of machinery such as fork-lifts and pallet-lifting trucks in our manufacturing facilities. We will continue to do this where possible.

05

Increase efficiency across sites, factories and offices

In line with our ISO 14001 accredited Environmental Management System ('EMS'), we will continue to implement efficiencies across our sites, manufacturing facilities and offices to reduce the fuel and electricity required.

Outside of our emissions reductions strategies for Scope 2, we will also benefit from Ireland's Climate Action Plan which aims to see 70% renewables on the electricity grid by 2030. This will also benefit the occupants of our homes and our Scope 3 emissions.

OUR STRATEGY CONTINUED

Actions to deliver targets

Scope 3

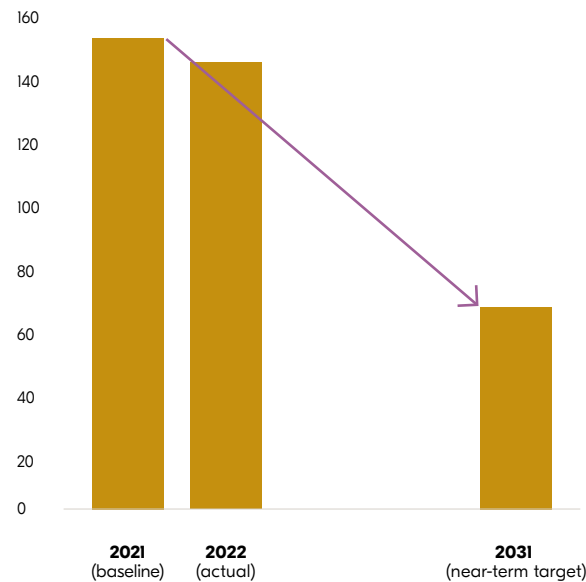
Actions

- 01 Supplier engagement
- 02 Subcontractor engagement
- 03 Innovation

Supporting actions

- 04 Raising awareness with customers and colleagues
- 05 Improving data quality and calculation methodology

Scope 3 near-term target (tCO₂e/100sqm of completed floor area)



Near-term carbon target

55.0%

reduction in Scope 3 emissions intensity (tCO₂e/100sqm of completed floor area) by 2031 from a 2021 base year.

Long-term carbon target

97%

reduction in for Scope 3 emissions intensity (tCO₂e/100sqm of completed floor area) by 2050 from a 2021 base year.

OUR STRATEGY CONTINUED

Scope 3 – Actions

01

Supplier engagement

A large proportion of our Scope 3 emissions come from the extraction, production and transport of construction materials that we use to build our homes i.e. embodied carbon. For this reason, we know it is critical that we engage with our suppliers to bring them on the net zero journey with us. We commenced high-level engagement with our suppliers in 2021 and 2022 through surveys and meetings specifically around sustainability. In 2023, Glenveagh will develop a formal engagement plan for our suppliers.

This will include the following:

- Understanding current plans, actions and targets;
- Influencing suppliers to take increased action;
- Collecting relevant information to enable Glenveagh to make informed procurement decisions; and
- Bringing suppliers on the journey with us through knowledge exchange, training, etc.

We have always had a strong partnership with small local suppliers and we are committed to supporting them on the decarbonisation journey so that everybody has the opportunity to thrive. Throughout 2023 and 2024 we will engage with 80% of materials suppliers by value with respect to net zero.

Links to upstream emissions



02

Subcontractor engagement

Our subcontractors use significant amounts of fuel in the form of diesel and gas oil to carry out their work for us on our sites. In line with our own move towards renewable forms of fuel, we will work with our subcontractors to support their transition to less carbon intensive fuels. We will also work in partnership with them to implement efficiencies across our sites in line with our EMS.

Links to operations emissions



03

Innovation

Innovation is one of Glenveagh's core values and it is also reflected in our mission which is "to innovate how new homes are planned, designed, built and marketed in Ireland, and to make the journey for customers transparent, easy and joyful". In 2022, we set up an innovation team to further embed this approach throughout the organisation. A key element of this work will be delivering innovative solutions around design, manufacturing and construction to reduce the embodied carbon of Glenveagh homes. A research project is currently underway to assess the embodied carbon implications for a variety of options for all aspects of our homes.

Links to upstream, operations and downstream emissions



OUR STRATEGY CONTINUED

Scope 3 – Supporting actions

04

Raising awareness with customers and colleagues

We are committed to raising awareness of sustainable options with both our customers and colleagues. We already engage with our customers through our digital homeowner guides which include information on using their heat-pump system optimally, information on purchasing energy efficient equipment, energy saving tips and sustainable travel options in their locality.

We will build on this and look for innovative ways to support our customers further on their own sustainability journey.

We will also engage with our colleagues to ensure everyone can play their part in Glenveagh's net zero journey whether on site, in our manufacturing facilities or in our offices. Specifically, we identify roles where there is a need to further embed sustainability, and our approach to net zero and we will put in place development plans to meet these needs.



05

Improving data quality and calculation methodology

We will continue to explore ways to improve the quality of the data that we use to calculate our Scope 3 emissions as well as keeping up to date with the most recent methodologies as they evolve in this fast-moving space. Having disclosed our Scope 3 'purchased goods and services' emissions for 2021 using the approved quantis factors, we were conscious that the confidence in this data was quite low, especially given the impact of inflation on the price of materials. We knew that the majority of these emissions arose through our subcontractor use of fuel. Therefore, throughout 2022, our commercial team, with their extensive knowledge, worked to calculate the typical fuel use associated with various on-site processes and applied this across our portfolio of sites. This gave us a much increased data confidence rating. In addition, we applied the more recent and comprehensive US Environmentally-Extended Input-Output ('EEIO') factors to the remaining 'purchased goods and services' categories which further increased the confidence levels.

We will also commence embodied carbon calculations on a project level, giving us a much clearer picture of the impact of different house and apartment types.



GOVERNANCE AND REPORTING

Governance

In line with our governance of the overall sustainability agenda, Glenveagh's Board has ultimate responsibility and oversight of the Net Zero Transition Plan.

It is supported in this by two Board committees namely the Environmental and Social Responsibility Committee ('ESR'), which is responsible for developing and monitoring our approach to sustainability (including climate change) and the Audit and Risk Committee ('ARC') which has responsibility with respect to climate risks and opportunities. The Executive Committee, led by the CEO, oversees sustainability at an executive level including the Net Zero Transition Plan. The Environmental Sustainability Working Group, comprising colleagues from across the Senior Leadership Team ('SLT'), is charged with ensuring its implementation. The sustainability team is responsible for day-to-day management of sustainability including the transition to net zero and supporting colleagues throughout the organisation to achieve our sustainability ambitions.



Reporting

Glenveagh is committed to transparently reporting our carbon emissions and our progress on the road to net zero.

We will continue to disclose our full GHG emissions through our annual report and these will be independently assured. We have also committed to reporting in line with TCFD and have been progressively improving our approach in this regard since we first reported in 2020.

We are actively preparing for the forthcoming European Sustainability Reporting Standards ('ESRS') under the EU's Corporate Sustainability Reporting Directive ('CSRD') which will see further requirements in the area of climate.

As part of our commitment to BITCI's Low Carbon Pledge we will report collectively through the annual Low Carbon Report.



Our annual report can be found [here](#).



We report annually to CDP and our submissions can be found [here](#).



Our carbon emissions methodology and our independent assurance can be found [here](#).



STAKEHOLDER ENGAGEMENT

We are conscious that to truly effect change we need to work collaboratively and bring others on the journey with us. We will use our influence within our industry, with broader business and academia, as well as with decision makers within government.

We already engage with several industry bodies and academic groups through memberships, working groups and committees. Shown opposite is a list of those most relevant to our transition to net zero. Participation in these allows us to keep up to date with evolving approaches and technologies, exchange knowledge with peers and use our influence as a leading business in Ireland to drive action. We will continue to review the organisations and groups with which we engage. We also engage with government on a variety of issues and through this plan, we will assess the areas where we can best advocate for change in support of our transition to net zero.

Irish Green Building Council Gold Member



A non-profit organisation with membership from across the value chain of the built environment with a common goal to accelerate the transformation of the built environment to one that is sustainable through leadership, research, education, and providing policy input to national and local government.

Business in the Community Ireland (BITCI) member



With over 110 of Ireland's leading organisations as members, Business in the Community Ireland is a movement inspiring and enabling business in Ireland to move towards a low carbon, socially inclusive, nature positive future where everyone thrives. The Low Carbon Pledge, of which Glenveagh is a signatory, is an initiative of BITCI's Leaders' Group on Sustainability.

Irish Institutional Property (IIP) ESG committee member



The mission of IIP is to promote the development of a sustainable world class real estate sector in Ireland which benefits members, the economy, communities and wider society. The purpose of the ESG committee is to provide a forum to facilitate the promotion and development of best practice ESG policies across member firms.

Build Digital Sustainability & Circularity Pillar Industry Advocate



The Build Digital Project aims to transform the Irish construction and built environment sectors by enabling all stakeholders, to develop, maintain, and continuously improve their capabilities as digitally enabled, standards-based, agile, collaborative, and sustainable participants in the delivery of Project Ireland 2040. This pillar will develop, pilot, and continuously improve a number of toolkits both for adaptation of their businesses directly and in support of their supply-chains. Industry members will play a critical role in ensuring the fitness-for-purpose of all developed tools.

Construct Innovate member



Construct Innovate, Ireland's construction technology centre, has a vision to make Ireland a global leader for sustainable construction and built environment technology. The centre is a partnership between Trinity College Dublin, University College Dublin, University College Cork, the Irish Green Building Council and the host institution, University of Galway.

Sustainable Futures Industry Partner



Sustainable Futures is focused on climate action, environmental sustainability, and achieving net zero in industry and enterprise. It aims to produce leaders who are equipped to lead the transition to a sustainable and net zero future. Funded by the Higher Education Authority's Human Capital Initiative, it is led by University College Cork in collaboration with Maynooth University, Atlantic Technological University and multiple industry partners.

CLIMATE-RELATED RISKS AND OPPORTUNITIES

Glenveagh's risk management framework is supplemented by a specific process to identify and assess climate-related risks and opportunities, which includes viewing risk over a longer timeframe than normal.

This Net Zero Transition Plan seeks to address these risks and opportunities and this plan will continue to evolve as new information becomes available. Scenario analysis will be carried out in 2023 to provide further understanding of our climate risks. Climate change has been identified as a principal risk for the Group indicating its priority within our overall strategy.

Process to identify climate-related risks and opportunities

Desk-based research including reviews of relevant climate change literature on impacts and risks, peer reviews and forthcoming regulatory requirements.

A long list of potential climate risks and opportunities were developed, reviewed and consolidated further.

Risks were individually scored using our standard risk scoring approach i.e. assessing impact and likelihood and the effectiveness of controls in place to come up with a residual score.

The risks and opportunities presented (in the appendix) are the output of this exercise and represent the highest ranked for transition and physical risks as well as opportunities.



Appendix



APPENDIX

Our emissions data

This data supports the Scope 1, 2 and 3 emissions data outlined on page 8.

Indicator	Measure	Unit	2022	2021	2020	
Climate – carbon emissions	100sqm of units completed	100sqm	1,563	1,255	875	
	Scope 1 – combustion of fuel	tCO ₂ e	3,567	3,048	2,700	
	Scope 2 – location based	tCO ₂ e	813	518	519	
	Scope 2 – market based	tCO ₂ e	227	189	247	
	Total Scopes 1 and 2 – location based	tCO ₂ e	4,380	3,566	3,219	
	Total Scopes 1 and 2 – market based	tCO ₂ e	3,794	3,237	2,947	
	Scopes 1 and 2 per 100sqm of completed units – location based	tCO ₂ e/100sqm	2.8	2.8	3.7	
	Scopes 1 and 2 per 100sqm of completed units – market based	tCO ₂ e/100sqm	2.4	2.6	3.4	
	Total Scope 3 GHG emissions	tCO ₂ e	223,332	188,618	128,645	
	Total Scopes 1, 2 and 3 – location based	tCO ₂ e	227,712	192,184	131,864	
	Total Scopes 1, 2 and 3 – market based	tCO ₂ e	227,126	191,854	131,592	
	Emissions per 100sqm completed homes – Scopes 1, 2 and 3 – location based	tCO ₂ e/100sqm	145.7	153.1	150.7	
	Emissions per 100sqm completed homes – Scopes 1, 2 and 3 – market based	tCO ₂ e/100sqm	145.3	152.8	150.4	
	Scope 3 emissions categories					
	Waste	tCO ₂ e	195	120	78	
	Business travel	tCO ₂ e	44	18	17	
Other fuel and energy	tCO ₂ e	1,119	894	1,077		
Upstream transportation and distribution	tCO ₂ e	7,143	6,442	4,715		
Employee commute	tCO ₂ e	1,093	908	879		
Capital goods – construction materials	tCO ₂ e	102,083	80,526	52,309		
Capital goods – assets	tCO ₂ e	678	769	176		
Purchased goods and services	tCO ₂ e	55,642	42,372	25,880		
Occupant energy use (over 50 yrs) – regulated	tCO ₂ e	17,637	24,855	22,539		
Occupant energy use (over 50 yrs) – unregulated	tCO ₂ e	30,888	26,770	17,639		
Occupant emissions – refrigerants	tCO ₂ e	1,388	1,085	508		
End-of-life treatment of product	tCO ₂ e	5,423	3,857	2,828		
Climate – energy efficiency	Fuel and electricity consumption from sites and offices	mWh	16,707	13,779	13,580	
	Operation energy intensity	mWh/100sqm	11	11	16	



Read more about our environmental performance on page 43-44 of the 2022 Annual Report.

APPENDIX CONTINUED

OUR RISKS AND OPPORTUNITIES

Risk/Opportunity	Risk Description	Potential Impact	Our Response
HIGHEST RATED TRANSITION RISKS			
SUPPLIERS PACE OF CHANGE AND NET ZERO ALIGNMENT Time frame: Medium-long term Materiality: High Risk type: Reputational, Technology, Market	Key suppliers of high carbon impact materials and works on-site don't move at a rate that is fast enough for us to align with our planned net zero journey with little or no alternative available.	Increased costs resulting from preferred suppliers' inability to scale or transition to meet our sustainability needs cost effectively.	<ul style="list-style-type: none"> – Supplier engagement programme – see. pg. 14. – Vertical integration of supply-chain and development of key manufacturing capabilities.
CARBON PRICING Time frame: Medium-term Materiality: High Risk type: Policy and Legal, Technology, Market, Reputation	Failure to move away from carbon intensive products/services at a fast enough pace while carbon taxes continue to rise.	Increased costs due to carbon taxes. Impairment in carrying value of carbon intensive assets (e.g. plant and machinery).	<ul style="list-style-type: none"> – Actions as outlined in this strategy to reduce our carbon emissions – see pgs. 11-15.
OFF-SITE MANUFACTURING AND MODERN METHODS OF CONSTRUCTION (MMC) Time frame: Medium-term Materiality: High Risk type: Technology	Failure to fully/quickly take advantage of off-site manufacturing and MMC to address net zero challenges.	Increased construction costs resulting from the continued reliance on skilled labour, time spent on-site and the absence of efficiency benefits from standardisation in build methodology.	<ul style="list-style-type: none"> – Innovation department established. – Vertical integration of supply-chain and development of key manufacturing capabilities.
DEVELOPMENT OF LOW CARBON TECHNOLOGY Time frame: Medium-long term Materiality: High Risk type: Technology, Market, Reputation	Lack of pace in the market developing adequate/appropriate low carbon technology combined with spike in the shift to low carbon technology or products leads to lack of supply, price rises and ultimately an inability to meet certain commitments and obligations.	Increased construction costs due to the lack of appropriate low carbon materials.	<ul style="list-style-type: none"> – Supplier engagement programme see pg. 14. – Sustainability and innovation teams established which will monitor developments in this area. – Vertical integration of supply-chain allows for greater control. – Our commitment to net zero provides a clear signal to the market.

APPENDIX CONTINUED

Risk/Opportunity	Risk Description	Potential Impact	Our Response
HIGHEST-RATED OPPORTUNITIES			
IMPACTS ON SUPPLY-CHAINS Time frame: Medium-term Materiality: High Risk type: Market	Supply-chain is impacted by disruption due to frequent severe weather events causing delays to deliveries and subsequent delays to our schedules. Suppliers themselves are restricted or impacted by transition risks affecting availability, cost of goods and services to us.	Increased construction costs resulting from disrupted construction programmes and availability of goods and services.	<ul style="list-style-type: none"> – Vertical integration of supply-chain and development of key manufacturing capabilities.
SEVERE WEATHER EVENTS Time frame: Short-term Materiality: Low Risk type: Acute physical	More frequent storms, extreme rainfall, flooding and other severe weather events result in sites being closed for longer periods of time at greater frequency, as well as potentially unsafe conditions for people on construction sites during extreme weather events e.g. storms and heatwave conditions.	Increased construction costs due to prolonged construction programmes resulting from severe weather related delays.	<ul style="list-style-type: none"> – Greater reliance on off-site construction will reduce the exposure to this risk. – Health and Safety systems and procedures are in place. Weather warnings are issued and safety procedures activated accordingly to severity of weather.
HIGHEST-RATED PHYSICAL RISKS			
A STANDARD SETTER IN THE INDUSTRY Time frame: Medium-term Materiality: Medium Opportunity type: Product	Become a standard setter in the industry driving suppliers and partners to come on the journey with us as their partner of choice, helping suppliers to become more competitive.	Decreased construction costs resulting from better bargaining position.	<ul style="list-style-type: none"> – Supplier engagement programme – see. Pg. 14 – Vertical integration of supply-chain and development of key manufacturing capabilities.
ALIGNMENT WITH GREEN MORTGAGES Time frame: Short-term Materiality: Medium Opportunity type: Product	Align product with consumer green finance opportunities to make Glenveagh the product of choice in the market.	<p>Increased revenue.</p> <p>Decrease in the cost or increase in the availability of capital.</p>	<ul style="list-style-type: none"> – 55% of Glenveagh homes have an A1 rating (see annual report for more detail). – Education campaign with customers regarding supports available including green finance opportunities.
SUSTAINABILITY FINANCING Time frame: Short-term Materiality: Medium Opportunity type: Markets	Avail of green financing options due to performance against targets.	Decrease in the cost or increase in the availability of capital.	<ul style="list-style-type: none"> – First sustainability-linked financing facility in 2023.





NET ZERO TRANSITION PLAN 2023