



BARRATT
DEVELOPMENTS PLC

Climate-related risks and opportunities analysis

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The effects of climate change encompass physical risks from new weather patterns, and transition risks associated with moving towards a low-carbon economy. The uncertain outcome of climate change and impact on our Company hinges on global temperature limitations and specific regulatory responses in regions where we operate, and for our supply chain. Opportunities arise as industry leaders drive sustainable development.

Given the profound impact climate change could have on our operations, and on our external stakeholders such as suppliers and customers, we have tested the resilience of the business in the face of various climate scenarios.



Climate scenario analysis

Climate scenario analysis

The potential climate outcomes considered this year when reviewing climate risks and opportunities ranged from a sustainable transition scenario that limits global warming to 1.5°C, to an adaptation scenario where emissions continue on the current pathway, which leads to around 4°C warming, such that they cover both high physical and high transition risks.

Qualitative assessments for each of these climate scenarios are outlined below. Together with the quantitative analyses summarised on the next two pages, these narratives provide a holistic view on the potential impacts to Barratt in each of these climate outcomes.

1.5°C

Sustainable transition

Orderly transition to a low-carbon economy, aligning with regulatory efforts to limit global temperature rise to the Paris Agreement goal of 1.5°C by 2100.

2.0°C

Disorderly transition

Minimal additional regulation until 2030, after which stringent policies are hastily implemented to limit warming to 2°C by 2100.

4.0°C

Adaptation













Global policy shifts away from prevention towards adapting to a new climate, leading to a global temperature rise of 4°C by 2100.



The eHome2, built with the Energy House 2.0, which can simulate temperatures ranging between -20°C to +40°C, and wind, rain, snow, and solar radiation.

Climate scenario analysis continued

Climate scenario analysis continued

Sustainable transition	Disorderly transition	Adaptation	Sustainable transition	Disorderly transition	Adaptation
Velocity of regulatory environment			Supply chain engagement with climate		
Significant  <p>Increasingly stringent building regulations go beyond the Future Home Standard, placing greater emphasis on reducing embodied carbon and resource intensity within the home. Additionally, local planning authorities increasingly require developments to exceed building regulations, placing greater emphasis on sustainable communities.</p>	Delayed then significant  <p>The Future Homes Standard is introduced as planned, but building and planning regulations steeply increase sustainability requirements from 2030.</p>	Low  <p>While regulations such as the Future Homes Standard still come in as planned, the demand for sustainable developments from planning authorities eases and carbon pricing reduces.</p>	Proactive  <p>The transition to net zero is supported by supply chains, who offer innovative low carbon solutions, encouraged by high carbon prices associated with carbon intensive materials/ processes. Technological progress is fast, though may require additional upskilling for employees and subcontractors.</p>	Reactive  <p>To discourage the use of high carbon materials, significant increases in carbon prices are implemented from 2030 onwards. Similarly, the increased demand for sustainable materials and technologies also drives step increases in costs from 2030.</p>	Inactive  <p>Supply chain action to reduce emissions is minimal, with limited innovation in low carbon alternatives to existing materials. Global supply chains are also susceptible to severe weather resulting in risk of delays, as well as indirectly driving up prices as demand for raw materials increases from less affected areas.</p>
Customer engagement with climate action			Physical impact		
Proactive  <p>There is increased customer demand for green homes, which is supported by the availability of green mortgage products, enabling customers to benefit from the improved affordability of energy efficient new homes.</p>	Reactive  <p>Until 2030, customer demand and the availability of green finance for low carbon homes remains at current levels, but these also increase sharply from 2030 onwards.</p>	Inactive  <p>Consumers typically continue to lead energy intensive lifestyles with little demand for resource efficiency measures in new homes.</p>	Proactive  <p>The impact of physical risks such as overheating and flooding continue at manageable levels, with existing/planned regulation and planning requirements sufficient to manage these impacts.</p>	Reactive  <p>The impact of physical risks such as overheating and flooding continue at manageable levels, with existing/planned regulation and planning requirements sufficient to manage these impacts.</p>	Inactive  <p>Increased frequency of severe weather leads to increased disruption on site, giving rise to risk of damage as well as delays. Increased risks of flooding and water scarcity drive up demand for land in relatively less affected areas of the UK, raising land prices in these areas. Additional cooling solutions are required in homes at risk of overheating in the worst affected areas.</p>

Climate scenario analysis continued

Modelling methodology

In our FY23 Annual Report and Accounts we presented the outcomes results of our detailed climate scenario analysis. This assessment involved evaluating a sample of sites from our land bank to identify vulnerabilities and risks inherent in our business model, including our capacity to transfer industry-wide development costs to land vendors.

The Group's extended forecasts (as considered in its viability review and impairment assessments) are based on the International Energy Agency's 'Stated Policies' model, whereby global climate commitments are met in full and on time, leading to a global temperature rise of 2.7°C by 2100, giving rise to both physical and transition risks. For the UK, this includes the Ten Point Plan, the 2020 Energy White Paper¹ and achievement of the 2021 net zero transition targets. This forms the basis of our financial planning.

In FY23, we assessed climate-related risks by analysing a sample of our existing land bank and supply chain sites. We utilised local climate data, obtained at a resolution of 90m², based on the latest IPCC CMIP6 global climate models. This enabled us to project potential impacts under each of our time horizons and climate scenarios, considering indicators such as cold, flood, heat, precipitation, and wind. Additionally, in FY24, we refined our financial assessment of carbon pricing to reflect decarbonisation pathways planned by our supply chain.

The projections obtained were utilised to evaluate the potential unmitigated impact on our divisions and supply chain under each climate scenario. We considered the specific vulnerabilities and risks associated with our business model, including the capacity to pass on industry-wide development costs to land vendors. As such, we assumed that the land price paid for a site could be reduced up to the extent it remained above the price that a landowner could achieve for an alternative use, assumed to be the land cost per acre for industrial use, as estimated by the Valuation Office Agency.

This comprehensive assessment provided us with valuable insights into the potential risks and impacts that our divisions and supply chain may face due to climate change. By integrating this information into our strategic decision-making processes, we are better positioned to address climate-related risks and identify opportunities for sustainable development.

The unmitigated financial impacts under each of climate scenarios are summarised in the risk and opportunities table on the next page. To ensure a comprehensive understanding of climate-related risks and opportunities, this quantitative analysis should be considered alongside the qualitative assessments of each climate scenario outlined on the previous page.

¹ www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution.



Electric vehicle charging point at Kingsbrook.

Climate-related risks and opportunities

Transition risks

Gross risk score

Low

High

Transition risks	Key assumptions	Gross risk score				Estimated maximum unmitigated financial impact	Our response
		Scenario	2025	2030	2050		
Housing regulations Changes to house specifications due to Government legislation designed to reduce home emissions, for example the Future Homes Standard, including varying standards across the UK.	<ul style="list-style-type: none"> Average uplifts to meet the Future Homes Standard and zero carbon homes based on internal Barratt calculations (based on current cost of technologies, such as air source heat pumps and mechanical ventilation systems). Costs of air source heat pumps fall by 20% by 2030 and 40% by 2040 due to economies of scale and increased competition. 	Sustainable transition				Increased build cost of sales by up to:	£155m per annum
		Disorderly transition					£160m per annum
		Adaptation					£65m per annum
Carbon pricing Increasing materials and subcontractor costs due to Government legislation to reduce emissions, and subsequent increased demand for low-carbon materials, for example carbon taxation on suppliers	<ul style="list-style-type: none"> Carbon prices rise to \$250/tCO₂ by 2050, in line with the IEA Net Zero Emissions scenario. Average supply chain emission reductions of 90% by 2050. 100% of diesel usage by groundworkers substituted with low -carbon alternatives by 2040. 	Sustainable transition				Increased build cost of sales by up to:	£70m per annum
		Disorderly transition					£100m per annum
		Adaptation					£5m per annum
New technologies Implementation of new technologies in homes and construction, requiring high capital investment and upskilling of labour	<ul style="list-style-type: none"> Additional costs associated with technologies, such as underfloor heating and infrared heating panels, which are demanded by more sustainability-informed customers. 	Sustainable transition				Increased build cost of sales by up to:	£25m per annum
		Disorderly transition					£30m per annum
		Adaptation					£1m per annum

Climate-related risks and opportunities continued

Transition risks continued

Gross risk score



Transition risks	Key assumptions	Gross risk score				Estimated maximum unmitigated financial impact	Our response
		Scenario	2025	2030	2050		
Planning requirements Increasing planning or site infrastructure requirements from government and local authorities result in reduced viability of land in certain regions	<ul style="list-style-type: none"> The percentage of total Barratt developments subject to increased sustainability requirements increases from 0% in 2020 by up to 30% by 2050. Estimated cost per site to meet increased sustainability requirements based on design and installation of a previous Community Heat Hub and mains. 	Sustainable transition				Increased build cost of sales by up to: £60m per annum	We strategically address planning requirements through collaboration with landowners and expert research. Our Land and Development Leadership Group evaluates land acquisitions for compliance and sustainability, integrating green spaces and renewable energy opportunities.
		Disorderly transition					
		Adaptation				Increased build cost of sales by less than £1m per annum	A sustainability toolkit supports our Land and Planning teams with detailed information on standards, zero carbon homes, biodiversity, and socio-economic outcomes.
Water scarcity Increased water scarcity in areas of proposed developments leading to additional planning requirements to ensure a consistent water supply for new homes	<ul style="list-style-type: none"> Local authorities take a greater focus on water neutrality, affecting the ability to gain planning permission. Installation of rainwater harvesting systems on new developments. 	Sustainable transition				Increased build cost of sales by up to: £5m per annum	We design homes to use 105 litres per person per day, 16% lower than regulatory requirements, reducing water withdrawals. Our Group Head of Infrastructure and Utilities chairs the HBF Water Matters Group, collaborating to solve water issues affecting housing schemes.
		Disorderly transition					
		Adaptation				Increased build cost of sales by less than £1m per annum	

Climate-related risks and opportunities continued

Physical risks

Gross risk score

Low

High

Physical risks	Key assumptions	Gross risk score				Estimated maximum unmitigated financial impact	Our response
		Scenario	2025	2030	2050		
Overheating in homes Changes to house specifications required to mitigate long-term shift in climate patterns, such as prolonged increased temperatures in summer	<ul style="list-style-type: none"> London and East regions particularly susceptible to overheating in the medium to long term. Additional mitigation measures, such as extractor fans or air conditioning units, may be required in worst-affected areas to address safety concerns about overheating. 	Sustainable transition				Increased build cost of sales by less than: £1m per annum	We hold forums with consultants, industry experts, academics, and key suppliers to develop innovative overheating solutions for volume housing. We also conduct research on overheating and indoor air quality with Birmingham City University and other housebuilders, and sponsor two PhD students to study overheating mitigation to inform future designs.
		Disorderly transition					
		Adaptation				Increased build cost of sales by up to £10m per annum	
Flood mitigation New site infrastructure required to mitigate extreme weather events, for example, flood barriers and balancing ponds	<ul style="list-style-type: none"> Based on localised climate projections, estimated the additional number of sites in our existing land bank that might require additional flood defence infrastructure. Identified two sites and applied an estimated cost, based on flood defence infrastructure spend on a similar site. Assessment covered fluvial and coastal flooding, but excluded impacts from standing water flooding due to a lack of available data. 	Sustainable transition				Increased build cost of sales by less than: £1m per annum	We proactively mitigate flood risk through horizon scanning, stakeholder engagement and expert research. Our Land and Development Leadership Group reviews all land purchases for flood risk, and our developments typically exceed the requirement to withstand a one in 100-year storm plus 30%.
		Disorderly transition					
		Adaptation				Increased build cost of sales by up to £5m per annum	We are conducting a value chain water risk assessment so we can improve our understanding of water risk hotspots, including flooding, across our materials suppliers and across our developments, which will inform our future water resilience strategy.

Climate-related risks and opportunities continued

Physical risks continued

Gross risk score



Physical risks	Key assumptions	Gross risk score				Estimated maximum unmitigated financial impact	Our response
		Scenario	2025	2030	2050		
Weather disruption Disruption to build activity due to increased frequency of severe weather (heat, cold or precipitation) or damage to construction sites from extreme weather events	<ul style="list-style-type: none"> Based on localised climate projections, estimated potential disruption to construction activity as a result of severe weather. Consecutive days lost could lead to disruption, increased overhead costs and delays to sales. 	Sustainable transition				£2m per annum	Our robust construction processes and crisis management protocols help mitigate delays caused by extreme weather. We design schemes with flood protection and sustainable urban drainage systems. Divisional SHE Managers ensure health and safety in adverse weather, with energy-efficient site cabins and adjustable build schedules. Timber frame construction methods minimise on-site build time, enhancing resilience to weather-related delays.
		Disorderly transition				Increased build cost of sales and decreased revenues by up to: £2m per annum	
		Adaptation				£5m per annum	
Supply availability Reduced supply availability (such as timber) due to long-term shift in climate patterns and extreme weather events (such as wildfires or flooding) where we source supply	<ul style="list-style-type: none"> Supply availability assessment based on timber suppliers primarily in Sweden, Finland and Germany. Using localised climate projections, considered supply chain shocks as result of increased likelihood of forest wildfire. Analysed short-term price impacts of sourcing elsewhere due to disrupted supply, and sustained price rises in the medium- to long-term. 	Sustainable transition				£5m per annum	Our Timber Sourcing Policy ensures all purchased timber meets FSC/PEFC standards, with annual surveys confirming compliance. Group agreements enforce adherence to our Sustainable Procurement and Timber Sourcing Policies. We engage suppliers via our Timber Sourcing Policy and the Supply Chain Sustainability School, providing resources on sustainable timber sourcing. Our supplier maturity matrix assesses performance and identifies collaboration opportunities, with many suppliers meeting targets by July 2024.
		Disorderly transition				Increased build cost of sales and decreased revenues by up to: £5m per annum	
		Adaptation				£5m per annum	

Climate-related risks and opportunities continued

Opportunities

Gross opportunity score

Low

High

Opportunities	Key assumptions	Gross opportunity score				Estimated maximum unmitigated financial impact	Our response
		Scenario	2025	2030	2050		
Demand for and affordability of green homes Eligibility for green mortgages and cost savings from energy efficiency allow for a premium charge on new homes	<ul style="list-style-type: none"> House buyers will be able to borrow more and buy a larger home on a green mortgage due to increased affordability of energy-efficient homes. Based on existing green mortgage offers, an average private buyer could borrow between 5% and 10% more on a new build Barratt home, compared to an older property (built before 2020). 	Sustainable transition				Increased revenues by up to: £320m per annum	Our customer research shows rising interest in sustainable, energy-efficient homes, with more lenders offering green mortgages. We've collaborated with lenders to launch green mortgage products, potentially increasing lending by up to 10% for our energy-efficient homes.
		Disorderly transition					
		Adaptation				Increased revenues by less than £1m per annum	Through the Future Homes Hub, we educate valuers on assessing sustainable features, enhancing home affordability and accessibility in line with consumer demand for eco-friendly living.
Green developments Increased land buying and local partnership opportunities through strong low-carbon credentials and offer of low-carbon developments, for instance, partnering with councils to deliver low-carbon homes	<ul style="list-style-type: none"> Based on the UK Government's Ten Point Plan for a Green Industrial Revolution (dated November 2020), up to 25% of land will need to be made available for low-carbon and climate-resilient homes by 2050. Access to some land may be restricted to developers offering low-carbon credentials like our own, resulting in lower competition and discounted rates on these developments. 	Sustainable transition				Decreased land cost of sales by up to: £65m per annum	Our divisional land teams ensure compliance with planning regulations and achieve local consents through technical and planning expertise. We use tools like the Land Bidding Toolkit to highlight our sustainability credentials in land bids.
		Disorderly transition					
		Adaptation				Decreased land cost of sales by less than £1m per annum	As a leading sustainable housebuilder, we build strong relationships with landowners, showcasing our innovation and performance through benchmarks such as NextGeneration, and dedicated publications such as land planning brochures.

Climate-related risks and opportunities continued

Opportunities continued

Gross opportunity score



Opportunities	Key assumptions	Gross opportunity score				Estimated maximum unmitigated financial impact	Our response
		Scenario	2025	2030	2050		
Cost of capital Our sustainability performance opens green financing opportunities, providing access to lower interest rates	<ul style="list-style-type: none"> The potential to reduce finance costs if we switch borrowings to a green finance equivalent. 	Sustainable transition				£1m per annum	Within our Building Sustainably Framework, we commit to exploring new green finance products. In FY23, we linked our Revolving Credit Facility (RCF) to sustainability performance via a Sustainability-Linked Loan mechanism.
		Disorderly transition				Decreased finance costs by less than: £1m per annum	
		Adaptation				£1m per annum	
Sustainable practices Adopting low-emission materials and processes, ahead of regulation, provides a cost advantage and improves reputation	<ul style="list-style-type: none"> Using low-carbon materials in build process may provide cost savings through avoided carbon taxations within the supply chain. Average embodied carbon savings multiplied by the projected carbon prices (as per IEA's dataset) to determine cost savings associated with switching to a lower carbon material. 	Sustainable transition				Decreased build cost of sales by up to: £5m per annum	Our strategy emphasises investing in innovative products, techniques, and customer insights, aiming for zero-carbon homes by 2030. We conduct market research, product testing, and collaborate with universities, using prototype test houses like eHome2. Our Group Design and Technical teams drive incremental carbon reductions with milestones and transitional plans for existing sites.
		Disorderly transition				£10m per annum	
		Adaptation				Decreased build cost of sales by less than £1m per annum	

Impact

Land viability

The variance maps below illustrate our assumed ability to pass climate-related costs onto land vendors through land prices in the long term.

Through planned actions with our supply chain partners to reduce value chain emissions and proactive responses to maximise opportunities (see page 10), we mitigate transition risks, such as carbon pricing, and capitalise on opportunities in the medium to long term under both 'Sustainable transition' and 'Disorderly transition' scenarios. These measures suggest that land viability would remain largely unaffected. However, in the short term, greater exposure to transition risks, particularly under a 'disorderly transition', and limited ability to pass costs onto land vendors, may lead to a greater short-term impact.

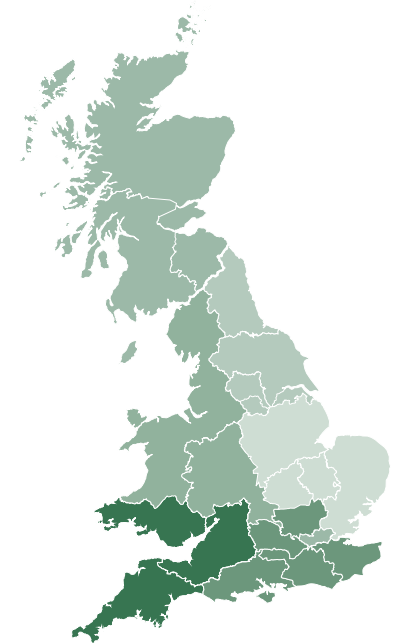
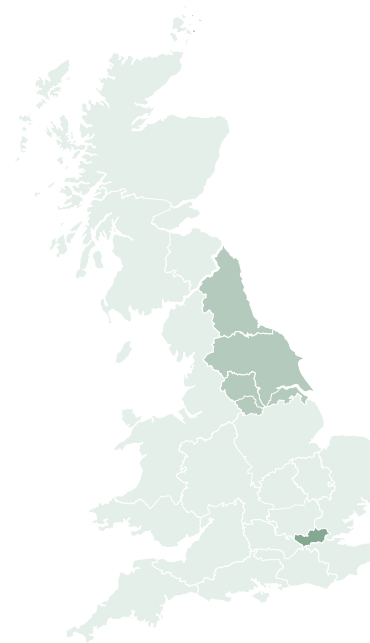
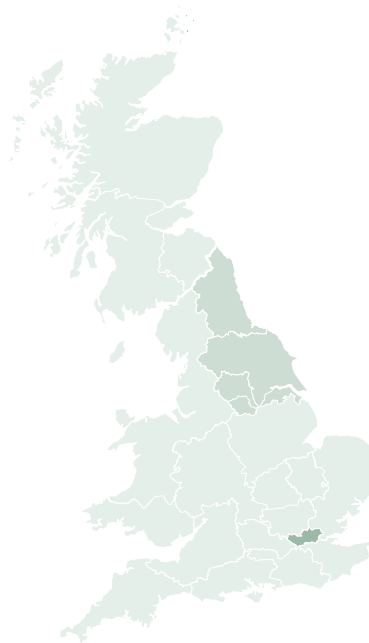
In the 'Adaptation' scenario, limited exposure to transition risk and the proactive steps we are taking today to mitigate against physical risks arising in the future, indicate margin impacts will be limited to up to 2% in the long term.

Note that this assessment does not account for any mitigating actions taken or consider the impact of any government investment in specific regions.

1.5°C
Sustainable
transition

2.0°C
Disorderly
transition

4.0°C
Adaptation



Extent of the margin impact in 2050



0%

2%

Impact continued

Strategic impact

Our analysis affirms that our business model remains profitable under all climate scenarios and timeframes, even without additional mitigating actions and despite associated costs.

A **sustainable transition**, despite its costs, offers opportunities. A **disorderly transition**, though disruptive, would still see us maintain profitability. The **adaptation** scenario has the least financial impact, which is manageable thanks to proactive measures we've already implemented, such as design changes and flood risk assessments. To thrive in all three climate scenarios, we have highlighted key areas to progress:

- Reducing embodied carbon in our supply chain.
- Updating designs to meet stringent regulations.
- Leveraging our sustainability expertise to provide energy-efficient, affordable homes and promote green mortgages.

More information

More information on how we manage climate-related risks and opportunities and how we are responding to our scenario analysis findings can be found in our FY24 Annual Report and Accounts, using the QR codes below:



Our governance over sustainability-related risks and opportunities, including climate change



How we are integrating climate change into our overall risk management



The metrics and targets we are monitoring to minimise our exposure to climate-related risks and maximise the opportunities



Our transition plan to net zero across our value chain by 2040

