



Carbon management plan

2024 - 2035

Solent is committed to environmental and social justice

As a foundation of the Solent University Strategy 2025, environmental sustainability plays an important part in developing our students as responsible, world-ready citizens. The global challenges we face today mean there has never been a more important time to take individual, institutional, and collective action.

As a signatory of Southampton City Council’s Green City Charter, our Carbon Management Plan aligns with the Council’s Green City Plan, ensuring that our environmental work supports the creation of a cleaner, greener, healthier, and more sustainable city.

We support the United Nations Sustainable Development Goals (UN SDGs) and through our institutional activities we will strive to progress against the targets and indicators underpinning those goals.

Delivering Solent’s commitments depends on an institution-wide approach to sustainability. Environmental sustainability is everyone’s responsibility and integral to the way the university operates. Our students, staff, and wider community all play a key part in effecting positive change through the actions they take.



James Knowles
Vice Chancellor



Solent's carbon vision

Increasing Solent's resilience to climate change, with the aim to achieve net zero carbon emissions in scopes 1 and 2 by the end of the 2035/36 academic year

Solent recognises its role in tackling climate change and is committed to establishing ambitious but achievable targets that align with the identified measures necessary to mitigate the most severe impacts of climate change.

As an educational institution, Solent acknowledges its significant role in not only increasing awareness amongst its staff and student population about the need to reduce carbon emissions, but also through leading by example.

By applying sustainable practices within its campuses, Solent aims to serve as a model to others and inspire them to take meaningful steps in combating climate change. The targets set out in this carbon management plan align with two significant goals that are widely recognised as both necessary and achievable.

These goals are achieving

Net Zero Carbon Emissions by 2050

as per the UK Climate Change Act, and the Southampton City Council net zero target of 2030.

Beyond net zero, Solent is working towards ensuring resilience of its assets and adapting to the challenges posed by climate change. To do so, Solent has conducted a climate risk assessment to understand potential vulnerabilities to climate change impacts, such as extreme weather events, sea level rise and temperature changes. This aligns with the UK government's national climate change adaptation programme.



Solent's vision

As part of a global community working to address climate challenges, Solent is fully committed to demonstrating its dedication through research, educational outreach, and management of its operations. Solent will actively work on reducing energy consumption, prioritising the utilisation of renewable energy, and exploring innovative approaches to minimise both direct and indirect carbon emissions. This will align Solent's ambitions to the actions needed to mitigate the risks of climate change.

Solent believes in demonstrating the value of climate solutions through effective reporting and aims to implement processes which improve understanding of the carbon impacts of its business decisions.

Following a comprehensive review of the University's carbon emissions, this carbon management plan aims to decrease carbon emissions in the areas of procurement, building fabric and facilities and promote changes in behaviour and culture through targeted projects.

Over the coming years, Solent will focus of reducing its carbon emissions footprint to the greatest extent possible.

Progress against agreed targets will be monitored, measured, and reported annually and be formally reviewed by the Solent Sustainability Group.

Solent will determine where offsetting measures are appropriate in aiding the reduction in carbon emissions and achieving net zero carbon emissions within the lifespan of the carbon management plan.



Solent's carbon baseline

Solent aims to reach net zero carbon emissions in scopes 1 and 2 by the end of the 2035/36 academic year

Solent is committed to refining its appreciation of its environment impact as an organisation and across its supply chains. Solent is working to improve its data management systems to better monitor, and subsequently, reduce its impact across the organisation's operations.

Solent has been assisted in establishing its baselines and awareness of its environmental impact by AtkinsRealis and continues to increase its understanding of the impact of its activities on the environment.

This plan replaces the initial carbon management plan 2005-2020.

Successes to date

The previous carbon management plan 2005-2020 set an ambitious target of reducing the University's CO2 emissions by 33%. This percentage fall used a baseline figure of 8,425 tCO2e for the academic year 2005/06 and set the objective of achieving an emissions reduction to a new baseline figure of 5,645 tCO2e by 2020.

The baseline used data submitted by Solent to the Higher Education Statistics Agency (HESA), which includes emissions from electricity, geothermal, gas, water, fleet transport and waste.



During the period 2005-2020, Solent made considerable efforts in consolidating its estate. Centring activities on the main East Park Terrace campus, managing programmes of refurbishment and repurposing projects to SKA sustainability good practice criteria, making energy saving improvements to its buildings, and optimising its building management system. Based on the same HESA emissions factors, Solent achieved a reduction of 5,340 tCO₂e by 2020/21, reducing the annual tCO₂e to 2,994.40 tCO₂e, a fall of 63% from the 2005/06 baseline figure.

As reported by the Times Higher Education, between 2015/16 and 2021/22 Solent achieved a reduction of 57% of its carbon emissions based on the HESA data, placing it 4th out of 119 participating institutions in the UK.

Solent continues to work towards achieving further reductions to its carbon footprint and the new carbon management plan incorporates targets for achieving net zero carbon emissions by 2035/36 for a wider set of carbon producing activities.

Alongside this, as a higher education organisation, Solent incorporates sustainability into its courses and research projects and embeds the United Nations Sustainable Development Goals (SDGs) into its institution-wide learning design framework. This ensures that sustainability is an integral element within the curricula of all its programmes and aligns its research priorities and activities to these goals. By doing so Solent aims not just to reduce its physical impact on the environment but actively seeks to contribute to preserving and enhancing the environment for future generations.

Not all Solent’s emissions are associated with its core processes. 11.6% of its emissions are from activities that are in its direct control, such as the efficiency of its buildings and energy usage (scopes 1 and 2).

The remaining 88.4% are associated with actions not wholly owned or controlled by the University. Solent recognises its responsibility for emissions generated as a result of its operations and while there are several sources of emissions outside its direct control, Solent acknowledges that it can still make an impact in these areas, such as sustainable travel, through promoting behavioural change.

Solent fully supports the need for action, continuing to operate with a “business as usual” approach in not an option.

Solent acknowledges the need to make significant progress quickly in order to achieve net zero carbon emissions in scopes 1 and 2 by the end of the 2035/36 academic year.

This will present a significant challenge. Solent must build momentum and identify opportunities that will enable continual delivery of its services and reduce its emissions.

From the baseline of academic year 2021/22, Solent aims to reach net zero carbon emissions in scopes 1 and 2 by the end of the 2035/36 academic year.

Solent University’s carbon emissions for the academic year 2021/22

In the academic year 21/22, Solent emitted 23,892 tonnes of carbon dioxide equivalent (tCO₂e) from the below sources.

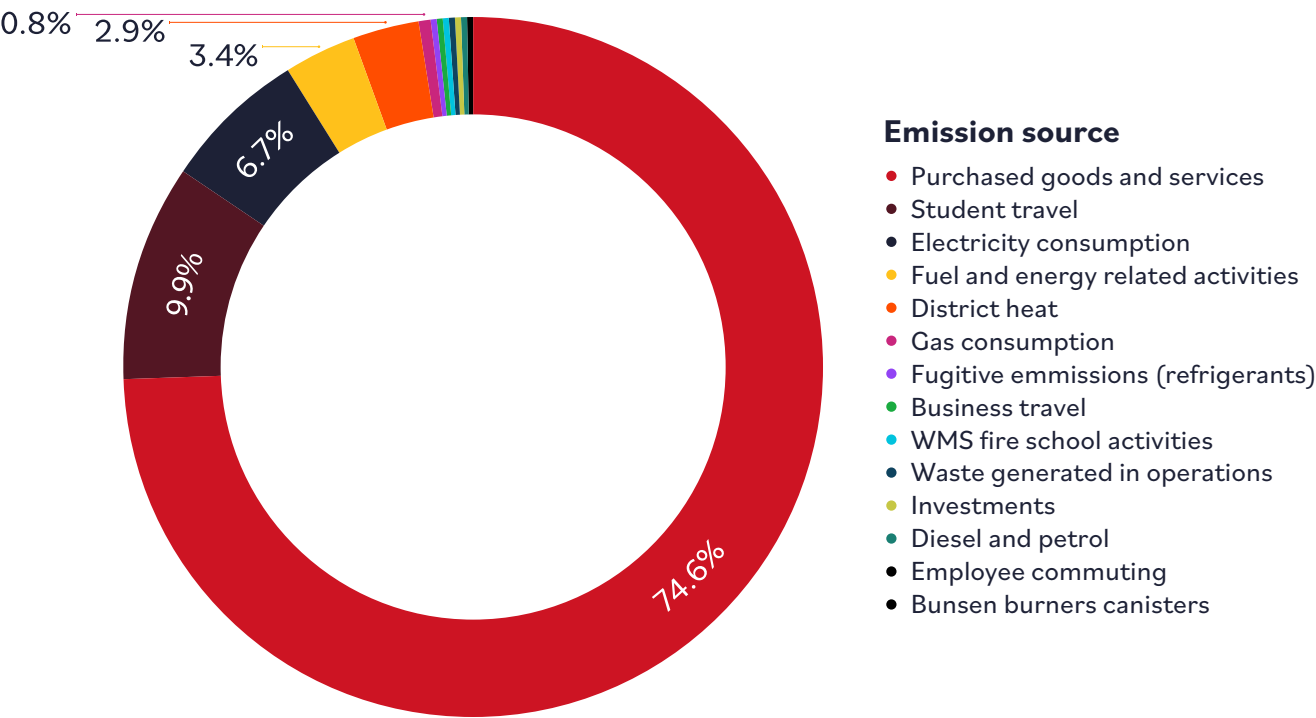


Figure 1 – 2021/22 carbon footprint

About Solent's Plan

Total reduction of carbon emissions in scopes 1 and 2 by 2035/36. Reducing emissions in scope 3 during and beyond the lifespan of the plan

The decarbonisation scenario and resulting pathway generated from this study demonstrates how “net zero”, with a total reduction of 91% of emissions across scopes 1-3 could be achieved.

Figure 2 illustrates the projected trajectory of for the University’s carbon emissions alongside key interventions up to 2035, categorised under organisational, services and estates levels.

The decarbonisation interventions are detailed in the following sections and summarised in appendix 1.

While scope 1 and 2 emissions are significant, it is the scope 3 emissions, the indirect emissions that occur through Solent’s value and supply chain, that are the most significant element of its overall emissions reduction strategy.

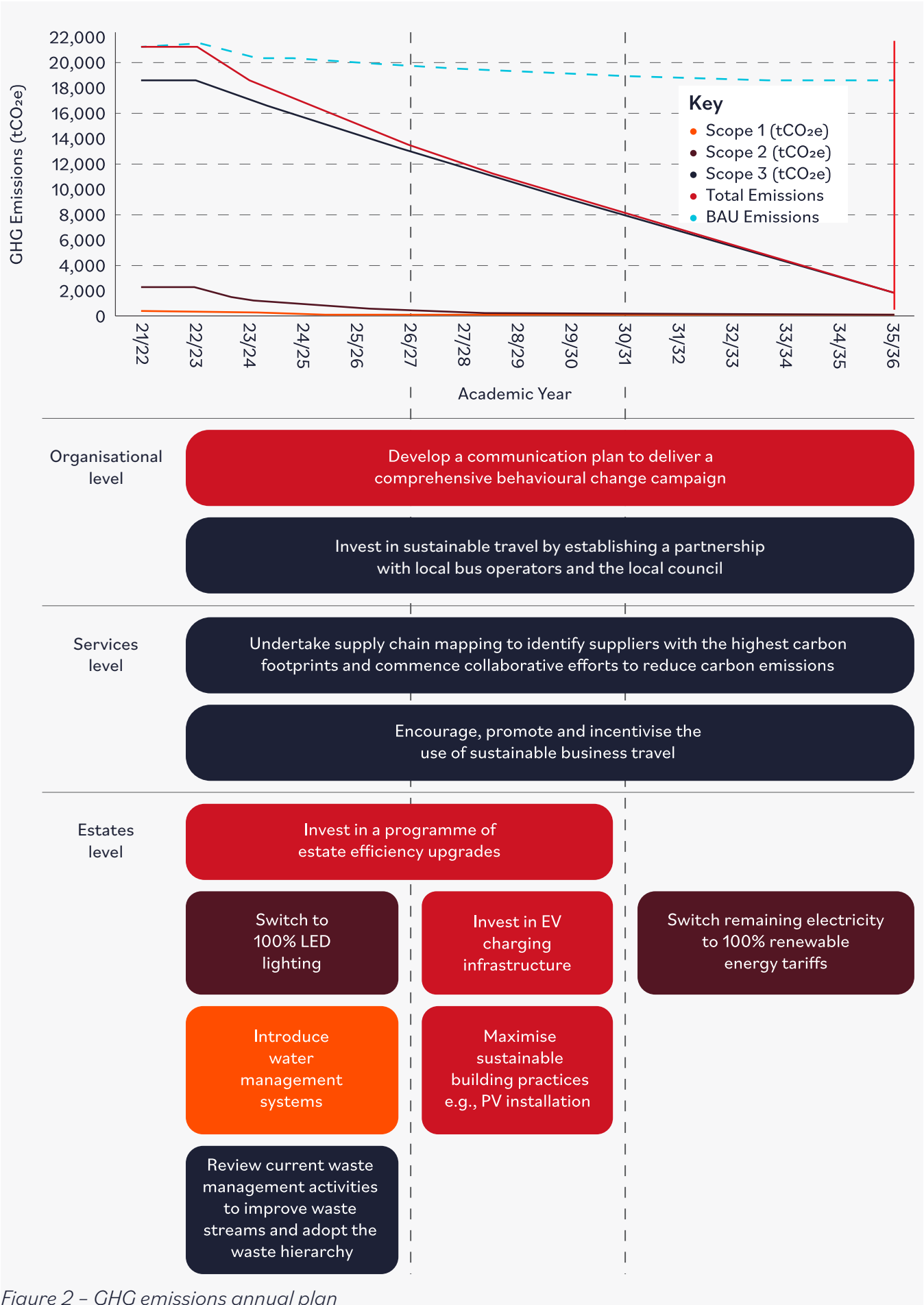


Figure 2 – GHG emissions annual plan

Behavioural change

Increasing awareness and understanding of Solent's staff and student's individual and collective impact on the environment

- Solent recognises the importance of a sustained cultural change in how its community thinks about the environment and sustainability, and the requirement to increase the importance of both in all its activities and decision-making processes.
- Solent commits to working with staff and students to raise awareness through targeted communications and will seek to change internal policy to place sustainability on an equal footing with other business priorities.
- Solent will actively encourage staff and students to reduce their energy and water consumption, reduce the amount of waste they produce and change their commuting habits to travel in more sustainable and active ways.
- Solent aims to provide Carbon Literacy Training to all staff and students as an optional course to increase understanding of the issues and the changes individuals can make that have a positive impact.



Solent's organisation

Embedding a culture of sustainability

Stakeholder engagement

Staff and student engagement

To ensure the successful decarbonisation of activities, Solent will develop appropriate change mechanisms to support behavioural change initiatives.

- Solent will conduct a full assessment of available decarbonisation interventions and identify those best enabled through behavioural change.
- Solent will identify sustainability champions across staff and students.
- Solent will develop a campaign strategy.
- Supply chain engagement

Supply Chain Engagement

To encourage supply chain emissions reductions, Solent will develop a detailed and effective stakeholder engagement process.

Solent's procurement team will:

- Establish a process for requesting information from suppliers about their own carbon reduction actions.
- Use this data to accurately calculate emissions from procurement activities.
- Develop a method for managing supplier data.



Data management & reporting

Data management is a critical part of the process towards net zero. Given the diverse data required for the quantification of Solent's carbon emissions, Solent will work to improve its data collection systems and incorporate any improvements within the existing data management systems. Solent will:

- Identify all data sources relevant to the carbon footprint and summarise data capture processes for each source.
- Identify opportunities for automation of data capture.
- Identify any synergies in data to enable a more streamlined process.
- Improve and align the format of any data capture templates, with a focus on ease of user-interface and enabling ease of repeatability, whilst noting any particular security requirements.
- Identify owners for all data capture systems, including a named data manager to ensure data is appropriately managed for reporting progress against the carbon management plan.
- Develop a procedure for GHG data management, ideally within existing environmental data procedures, aligned for example to ISO14001.
- Test the data capture process and set up an audit process to check the suitability of the procedure following the initial use phase (anticipated in 2024).
- Explore the environmental data management market.



Procurement

Supporting Solent's carbon management plan

Procurement services are committed to embedding sustain procurement into Solent's procurement processes and providing outcomes which support the University's carbon management plan.

At the heart of Solent's tender processes and the contracts procured, the procurement team have implemented sustainability criteria focused on:

- Carbon reduction
- Waste management
- Recycling 4 Rs (remove, reduce, reuse, recycle)
- Using local suppliers and SMEs
- Contract award based on aspects of the tender submission not just price
- Long-term contracts

Solent is a member of the Southern Universities Purchasing Consortia (SUPC) and collaborates with other public sector consortia to purchase goods and services.

Solent will work with procurement service colleagues in the consortia to develop frameworks to meet Solent's carbon management plan objectives and support sustainable procurement.



Academic and research activities

Conducting all research activities as sustainably as possible

- Solent aims to embed sustainability into its teaching in all courses, so that each student's learning journey – while at Solent and after leaving – maintains sustainability as a key consideration in their personal and professional lives in line with the UN's Sustainable Development Goals.
- Solent aims to conduct all research activities as sustainably as possible; impact assessments will be used to identify mitigation to reduce any negative impact of its actions, and researchers will be encouraged to capture how their research projects impact sustainability and the environment.
- This extends to the aim to seek funding only from sustainable sources, not companies invested in fossil fuels, or any other company engaged in unsustainable practices. This will ensure that the external partners Solent engages with for knowledge exchange or community engagement meet Solent's sustainability vision in line with the carbon management plan.



Sustainable travel

Supporting sustainable travel initiatives to mitigate carbon emissions from commuting and business travel

- Solent will actively promote the use of sustainable travel options through targeted communications and by supporting the Southampton City Council (SCC) local hire schemes for both e-scooters and cycles.
- Solent will continue to grow its relationship and engage with the SCC's My Journey Workplace Travel Network group and participate in their trial schemes aimed at changing behaviours.
- Solent will identify opportunities within its business travel policy where staff can be encouraged to change their travel plans to reduce or eliminate carbon emissions.
- Solent will identify methods which will work towards improving participation in travel surveys, which will increase data collection, improve analysis, and aid in identifying opportunities for change.



Buildings and facilities

Improving efficiencies in buildings and facilities management to minimise carbon emissions and promote sustainability

- Feasibility studies will be conducted to assess the investment required to improve the overall sustainability and energy efficiency of Solent's estate and support the journey to net zero.
- Solent will continue to reduce its dependency on fossil fuels by engaging suppliers offering power purchase agreement (PPAs) opportunities for the purchase of electricity from renewable sources. Solent will improve and extend the number of photovoltaics (PV) panels on the buildings across the main campus where appropriate.
- When refurbishing buildings Solent will aim to introduce carbon efficiencies and work towards BREEAM/SKA ratings for sustainable developments, with the aim to reduce waste, reuse materials wherever possible and future proof buildings against the effects of climate change
- Solent will continue to invest and develop the University's building management systems, increasing the number of meters on campus to improve the data captured from the use of electricity, gas and water to drive improvements, reduce use and waste.



Adapting to climate change

Solent assessed the key climate change risks facing each of the University’s buildings

The two risks scoring highest on the assessment were:

- The risk of higher temperatures and the resulting impact on staff and student health and wellbeing.
- The risk of operational impact due to increased surface water, river and coastal flooding.

Other identified risks included: wildfire, drought and the impact on water supply, soil moisture and subsequent subsidence, and disruption to the power supply through windstorms, extreme temperatures, and flooding.

To increase resilience to climate change hazards, Solent will:

- Collect further operational data such as energy use for each building to understand how each building performs under different weather and climate conditions.
- Conduct detailed building assessments to gain a deeper understanding of climate related risks to individual buildings.
- Review existing, planned and potential adaptation actions and develop a detailed adaptation action plan with clear roles and responsibilities, including monitoring and updating requirements.

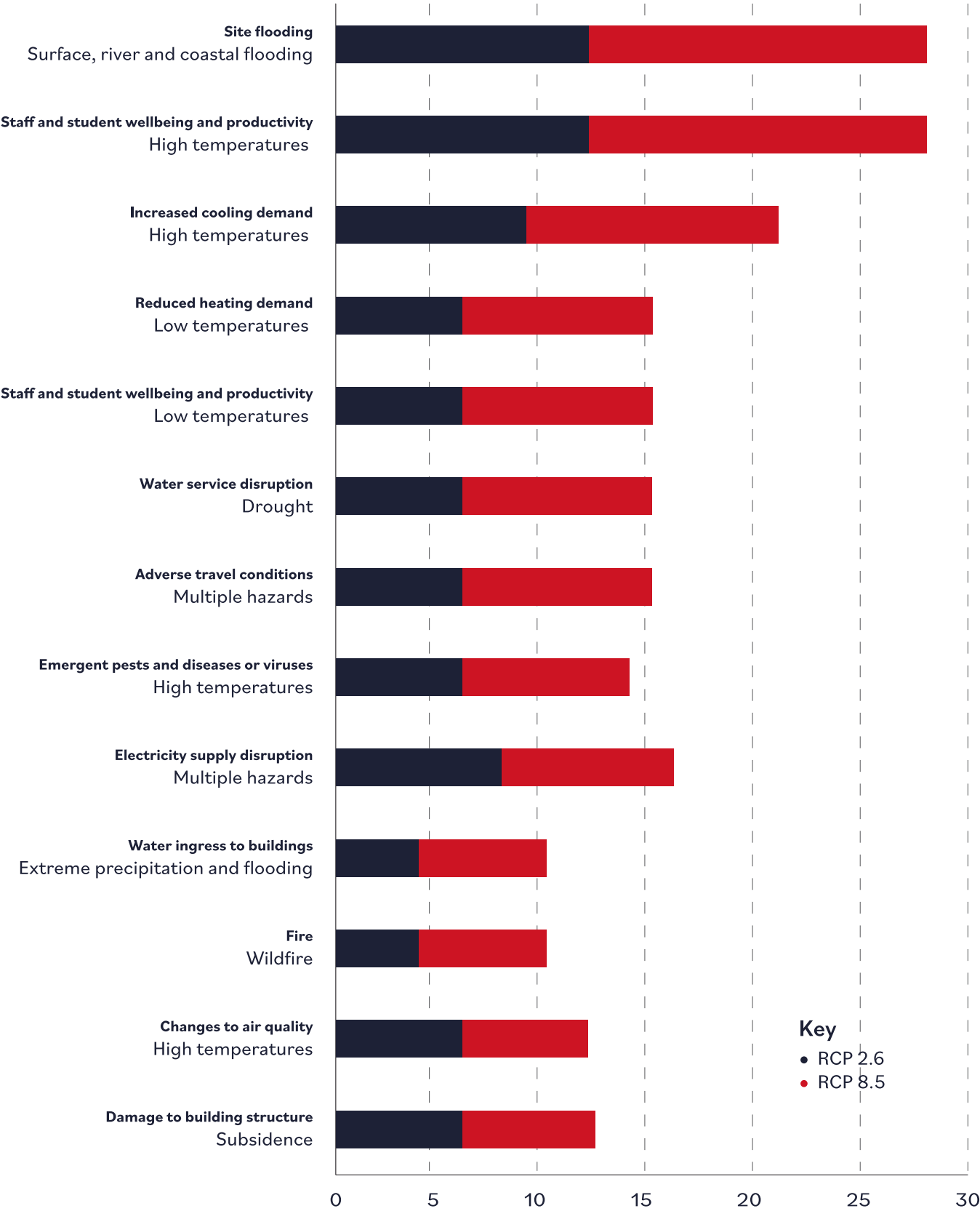


Figure 3 -Key climate risks for the University

Appendix 1

Reducing Solent University's operational carbon

Ref	Action	Cost /Time to implement	Time Period	Estimated GHG Saving	Senior responsible owner
OUR ORGANISATION					
1.1	Solent will produce a communication plan to deliver a comprehensive behavioural change campaign to inspire stakeholders such as students and staff to reduce their energy and electricity consumption for instance	Low cost (based on resources)/ Short term	First 5 years, ongoing after	Low to medium	Solent Sustainability Group and Individual Departments
1.2	Solent will undertake supply chain mapping to identify suppliers with the highest carbon footprints and commence collaborative efforts to reduce carbon emissions, if desirable.	Low cost (based on resources)/ Long term	By academic year 2035/2036	High	Procurement
STAFF & STUDENT TRAVEL					
1.3	Solent will invest in EV charging infrastructure to enable staff and students to charge vehicles on campus this will increase the uptake of low-carbon vehicles	Medium to cost/ Medium term	By the academic year 2029/2030	Medium	Estates and Facilities/ Procurement
1.4	Solent will invest in sustainable travel by establishing a partnership with local bus operators and the local council to further improve transport links to the university.	Low cost/ Medium term	By the academic year 2029/2030	Medium to high	Solent Sustainability Group
1.5	Solent will encourage, promote and incentivise the use of sustainable travel, such as switching domestic flights with national rail travel.	Low cost/ Medium Term	By the academic year 2029/2030	Medium to high	Procurement

Ref	Action	Cost /Time to implement	Time Period	Estimated GHG Saving	Senior responsible owner
OUR BUILDINGS					
1.6	Solent will switch to 100% LED lighting	Low cost /Short term	First 5 years	Medium to high	Estates and Facilities
1.7	Solent will incorporate estate efficiency upgrade programmes into estates maintenance. To include rationalisation of facilities and smart technologies to reduce demand	Medium to high cost / Medium to long term	By academic year 2029/2030	High	Estates and Facilities
1.8	All capital funded estate investment projects will incorporate and maximise sustainable building practices and reduce impact on the environment e.g., though maximization of PV installation and achievement of SKA/BREAM scoring	High cost/Long term	By academic year 2029/2030	High	Estates and Facilities
1.9	Solent will reduce dependency on fossil fuels, and switch to 100% renewable energy tariffs on any remaining electricity	Low cost/ Long Term	By academic year 2035/2036	High	Estates and Facilities
OUR WASTE					
1.10	We will review current waste management activities to improve waste streams and adopt the waste hierarchy, promoting the prevention of waste as the primary method of reducing emissions from waste as noted in Solent's environment policy	Low cost/ Medium term	First 5 years	Low	Procurement and Individual Departments
WATER					
1.11	Solent will increase water savings through the introduction of water management systems	Low cost/ Short term	By the academic year 2024/2025	Low	Estates and Facilities



Find out more

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