

AHMM CARBON EMISSIONS

Annual Report 2023

ALLFORD
HALL
MONAGHAN
MORRIS

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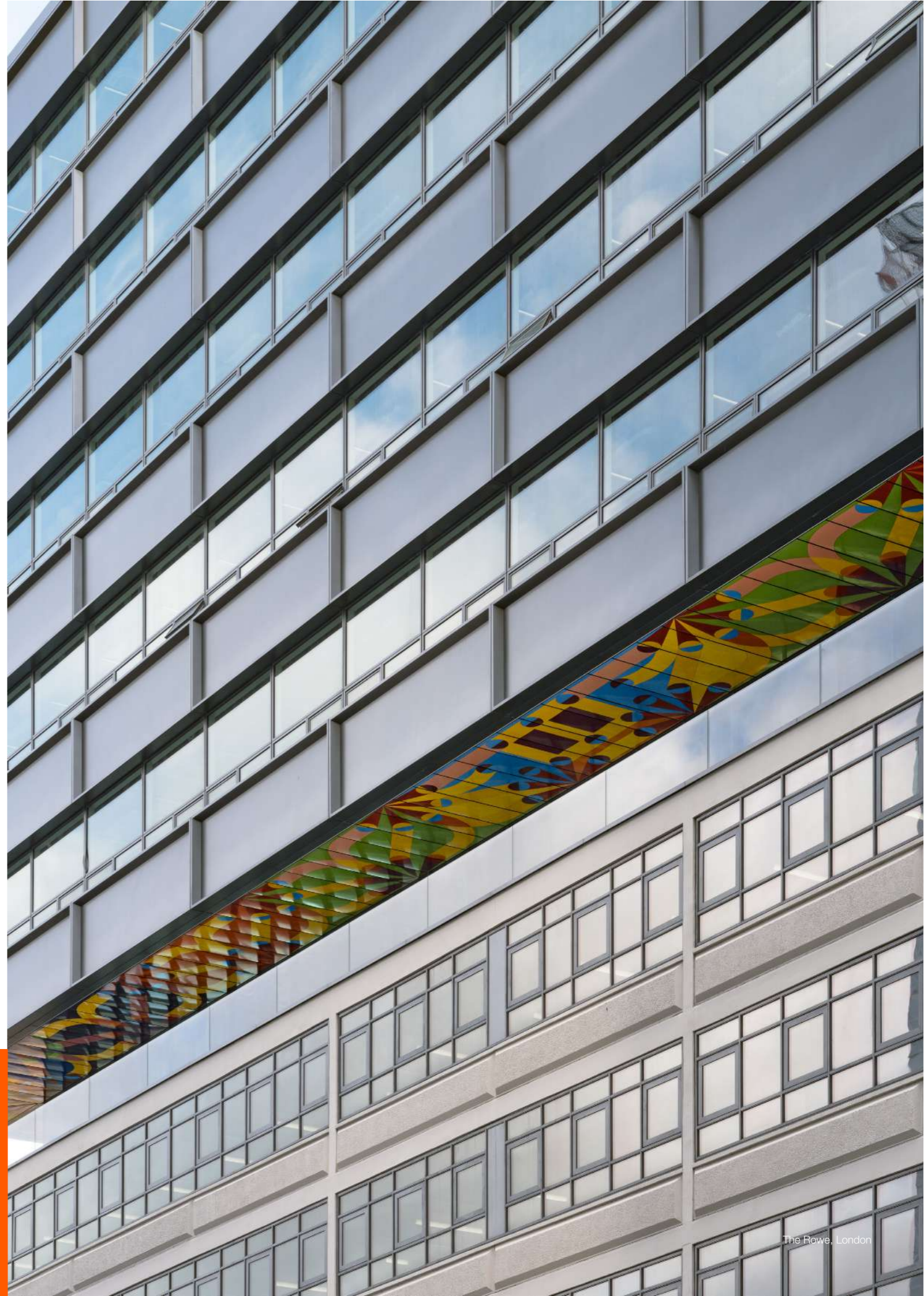
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Sep 2024

The Rowe, London





ARTHUR STANLEY HOUSE

AHMM has set carbon reduction targets for our operational emissions, aligned with limiting global warming to 1.5°C. The practice committed to a Science Based Target in 2021 and our reduction plan¹ was verified by the Science Based Targets Institute (SBTi)² in 2022.

This target means that AHMM's carbon reduction pathway is aligned with agreed requirements to keep global temperatures below a 1.5°C mean rise. We have also committed to the United Nations Framework Convention of Climate Control (UNFCCC) Race to Zero campaign³.

While we had previously undertaken carbon assessments, the long-term impact of the Covid-19 pandemic on global business

operations meant 2022 was the first year we were able to collect data in a consistent manner to give a representative baseline. This is therefore our SBTi starting point.

Alongside our business operations, we have also set a goal for the upfront embodied carbon emissions of our architectural projects. We have aligned a reduction trajectory for this which is aligned meeting the 2030 targets set by LETI⁴.

AHMM is a global practice. We have offices in the UK, USA, Spain and Australia, each of which have different carbon profiles that we interrogate to identify reduction opportunities, but they are administered centrally from our London HQ.

Our operational emissions are therefore reported in terms of our business units which span our various locations.

Aligning our emissions report with our business units synchronises our operational expenditure budgets with greenhouse gas production. This puts the ownership and responsibility for carbon with those departmental leaders who authorise financial spend.

We believe this creates an awareness of the impacts of our business and will accelerate our carbon reduction.

Our targets have been determined after analysing AHMM's footprint and outlining all practical emissions reduction actions across business units.

FIGURE 1
AHMM's operations

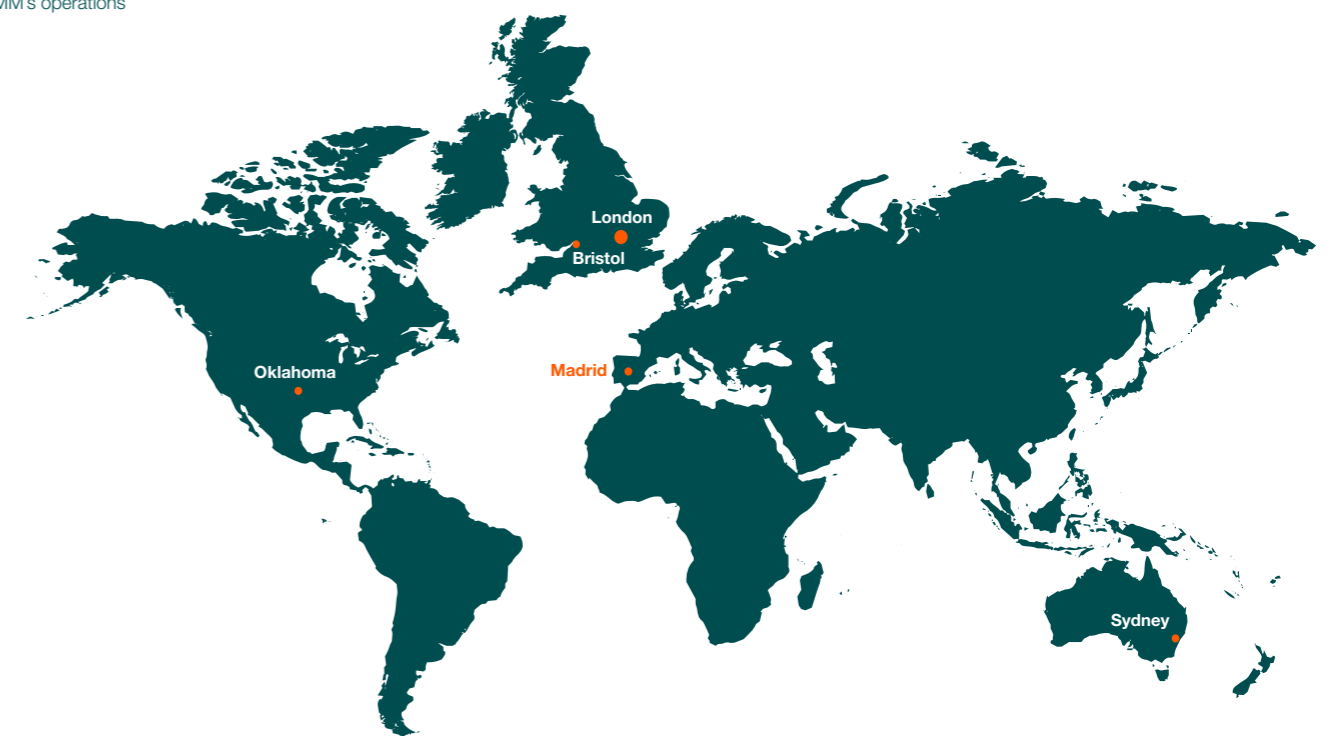


Figure 2 shows AHMM's carbon emissions in 2022 and 2023, including operational emissions across our offices (orange), and the upfront embodied emissions associated with projects that achieved practical completion in each year (blue).

To ensure operational emissions are not overshadowed and made insignificant by being analysed together with project emissions, the two are discussed separately within this report.

This approach helps us to gain a better understanding of operational and project emissions individually, and enables us to focus on the most significant contributors to each.

While in absolute terms there is a 27% increase in our carbon emissions from 2022 to 2023, this is largely due to an increase in the number and scale of building projects completed.

This report will further explore how these figures relate to our reduction targets, which we remain on track to meet, as shown in Figure 3.

FIGURE 2
Overview of AHMM's total carbon emissions for 2022 and 2023 (tCO₂e)

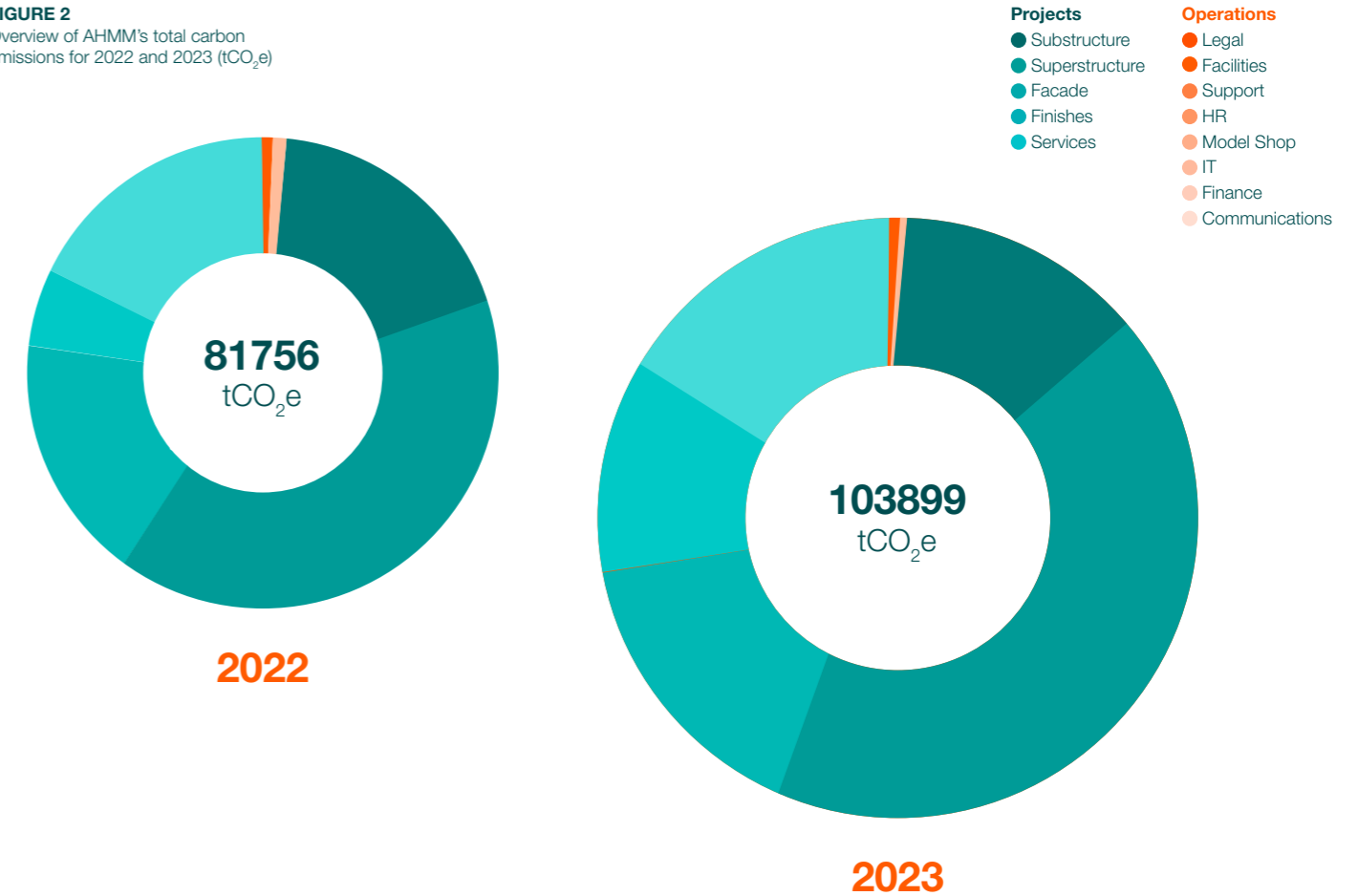
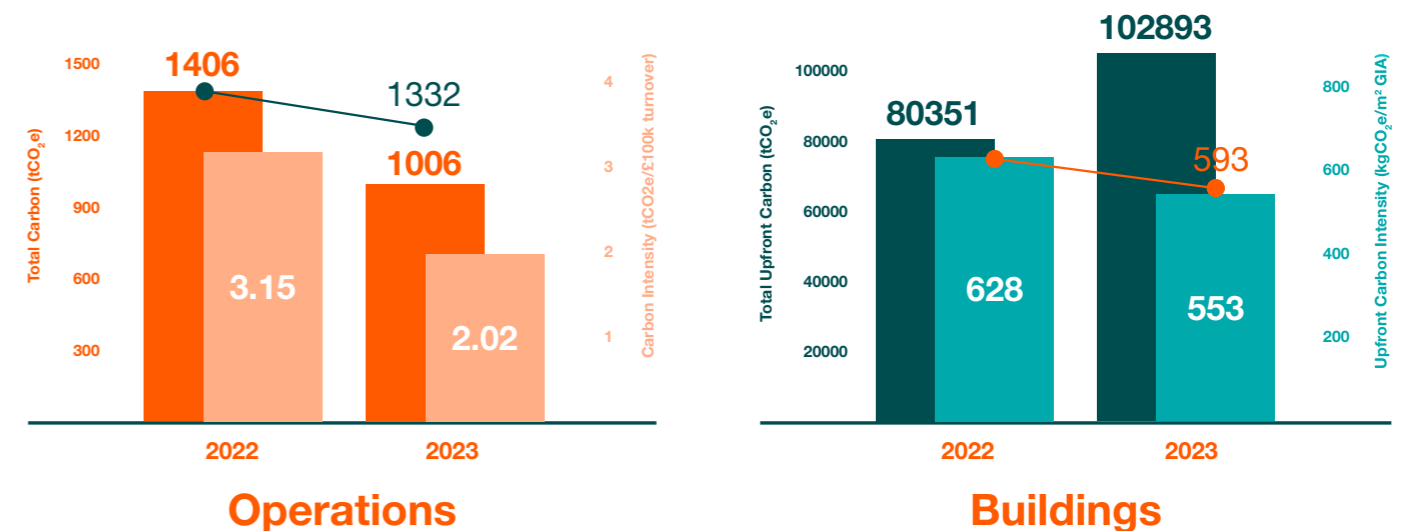


FIGURE 3
Overview of the total carbon emissions in the context of AHMM's net zero carbon trajectories



OPERATIONS



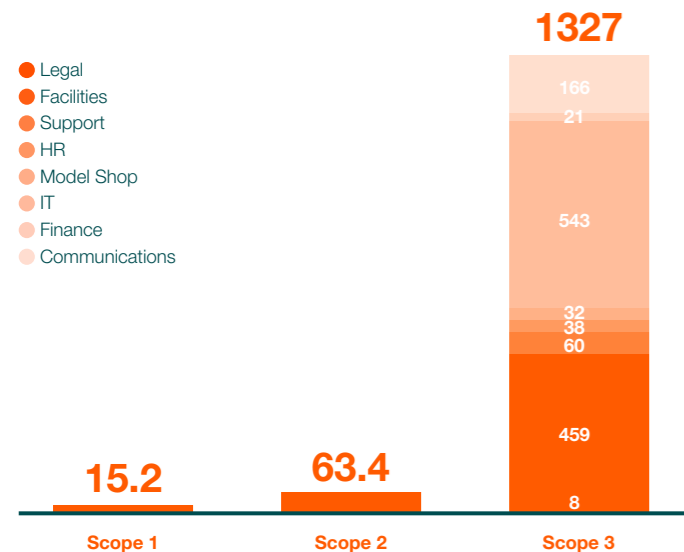
Operations

AHMM's baseline for operational emissions is comprised of Scope 1, 2, and 3 emissions. Scope 3 is broken down by business department, assigning responsibility for carbon emissions in the same way that financial responsibility is assigned.

2022 Baseline Footprint

AHMM's operational baseline carbon footprint is our 2022 emissions total. This was calculated with help from an external consultant before being verified by the Science Based Targets Institute.

FIGURE 4
AHMM 2022 operations baseline scope breakdown (tCO₂e)



Scope 1

Our emissions for Scope 1 are derived from the gas boilers in our Morelands HQ. They are a very small proportion of our total emissions at 15.2 tCO₂e.

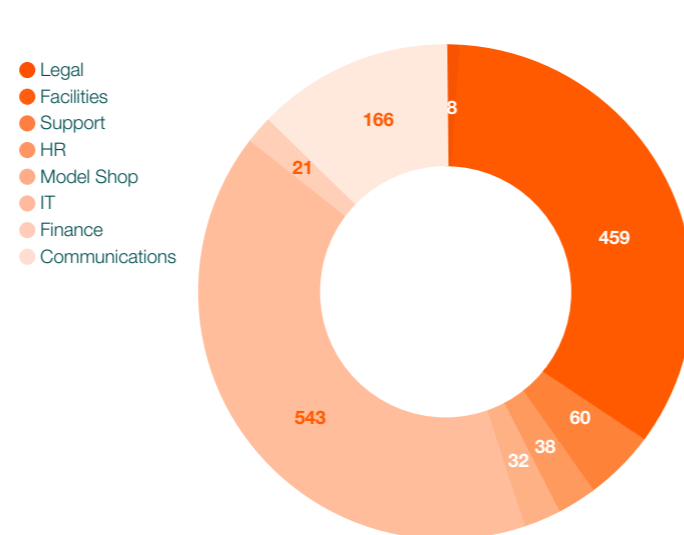
Scope 2

AHMM's Scope 2 emissions are 63.4 tCO₂e and are created by purchased electricity across our office locations.

Scope 3

Scope 3 baseline emissions are by far the largest at 1327.4 tCO₂e. They are derived from all other purchased goods and services and are organised by the business units that hold the responsible budgets.

FIGURE 5
Breakdown of 2022 operations Scope 3 emissions (tCO₂e)



Breakdown to Business Departments

When Scope 3 emissions are broken down by department, the shape of the business becomes visible. The IT expenditure is the largest contributor to our baseline emissions, at 38% of the total. This is mostly due to equipment purchases.

The smallest contributor to our baseline is our legal department, which contributes less than 1% of our emissions, through commissioning of professional services.

Targets

AHMM's Science Based Targets have near and long term goals.

Near-term (2030)

Our near-term target is to reduce our operational emissions by 42% by the year 2030.

For Scope 1 this means that the total figure needs to reduce from 15.2 to 8.8 tCO₂e per year, which equates to a reduction of 0.8 tCO₂e per year.

Scope 2 emissions need to reduce from 63.4 tCO₂e to 36.8 tCO₂e per year, a 3.3 tCO₂e reduction per year.

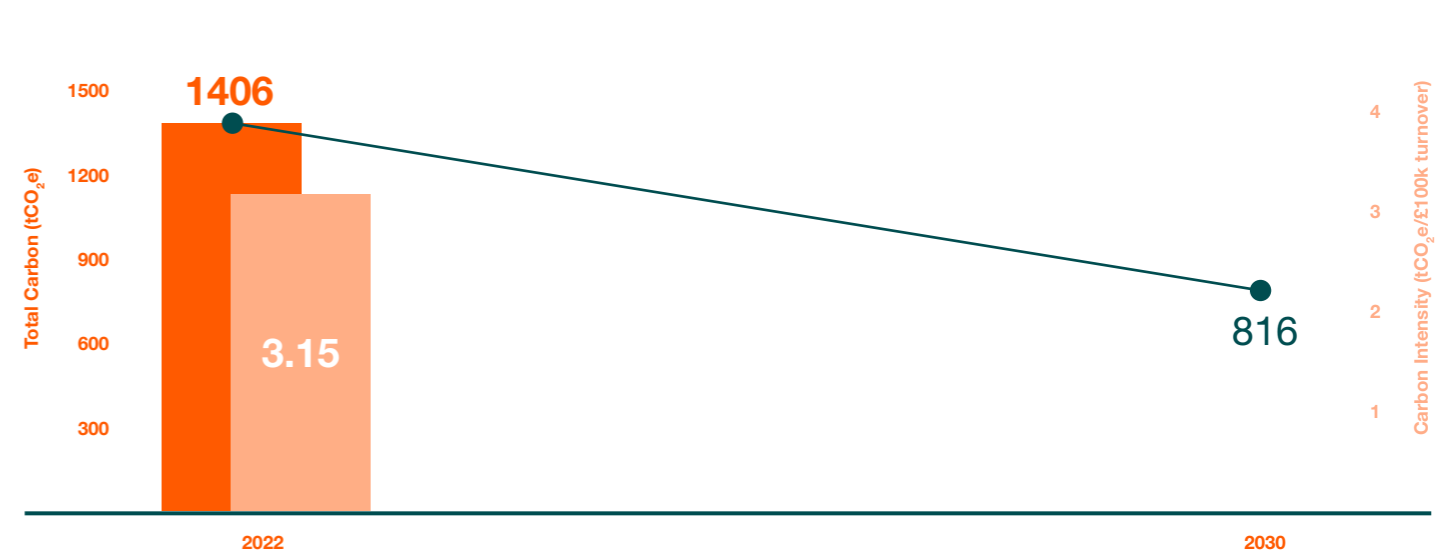
Finally, Scope 3 emissions need to reduce by 42%, from 1327 to 769.9 tonnes per year, which would mean a 69.6 tonne reduction per year.

Long-term (2040)

Our long-term targets represent a 90% reduction in annual emissions.

This will be achieved by reducing Scope 1 emissions from 15.2 to 1.5 tonnes, Scope 2 emissions from 63.4 to 6.3 tonnes, and Scope 3 emissions from 1327 to 132.7 tonnes.

FIGURE 6
2022 operations emissions near term carbon reduction trajectory



Baseline Reduction Trajectory

The near-term targets and net zero carbon pathway define a trajectory for our operational carbon reductions, illustrated by Figure 6. The carbon reduction trajectory is consistent with limiting global warming to 1.5°C.

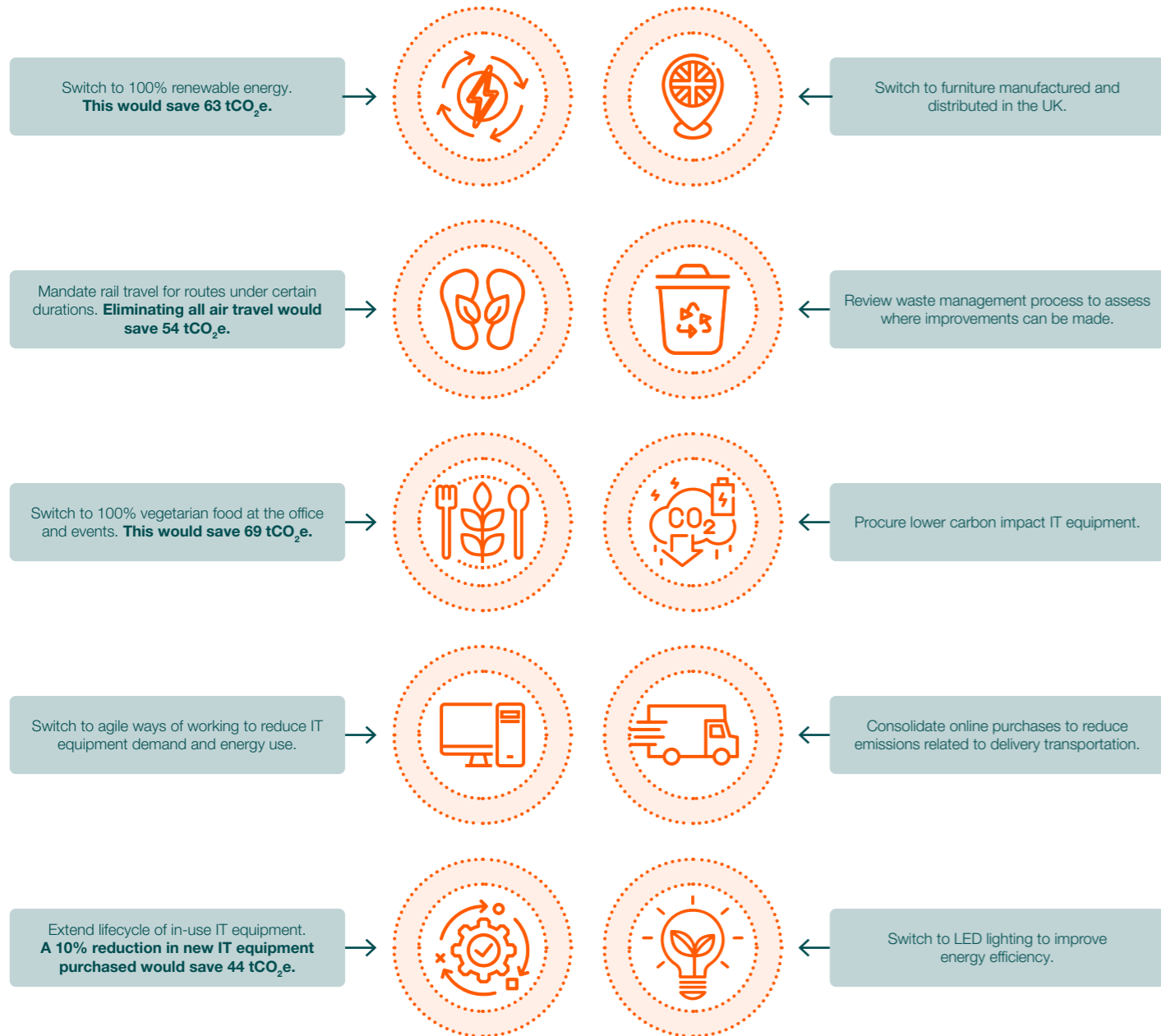
We are also showing the carbon intensity of our business, quantified as tonnes of carbon per £100k of turnover.

Net Zero Action Plan

Based on our defined reduction trajectory, our net zero carbon action plan articulates where we could make changes to our operations on a department by department basis.

We have begun to action many of these, including extending the lifespan of our IT equipment, switching to vegetarian catering, and adjusting the set point temperatures in our meeting rooms.

FIGURE 7
10 priority reduction measures



2023 Emissions

FIGURE 8
2023 operations emissions
in the context of AHMM's net zero trajectory

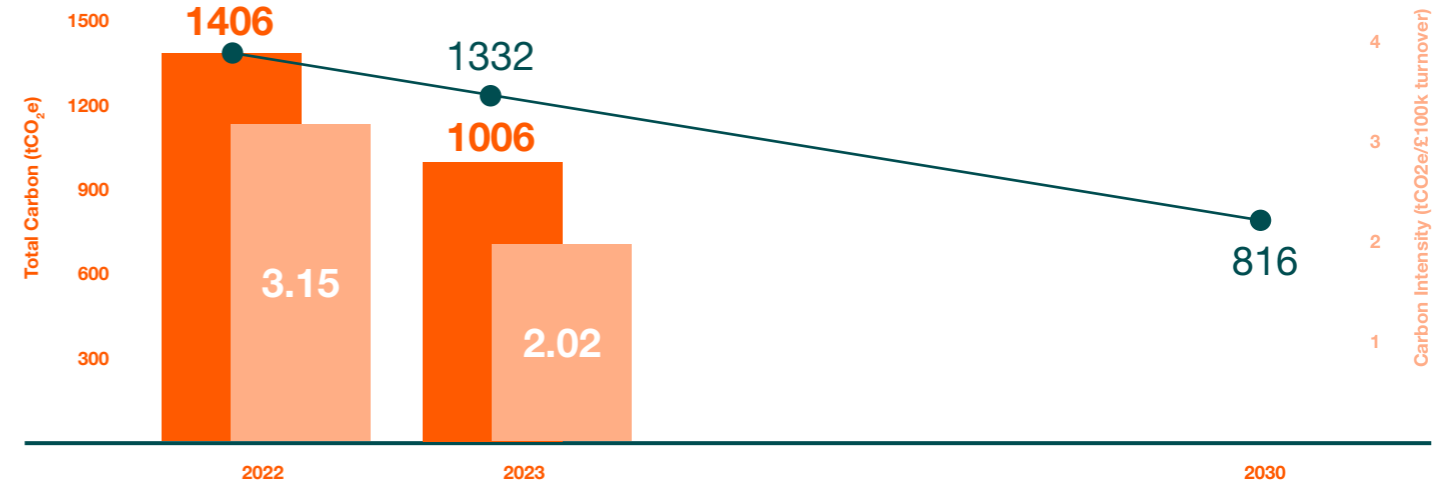
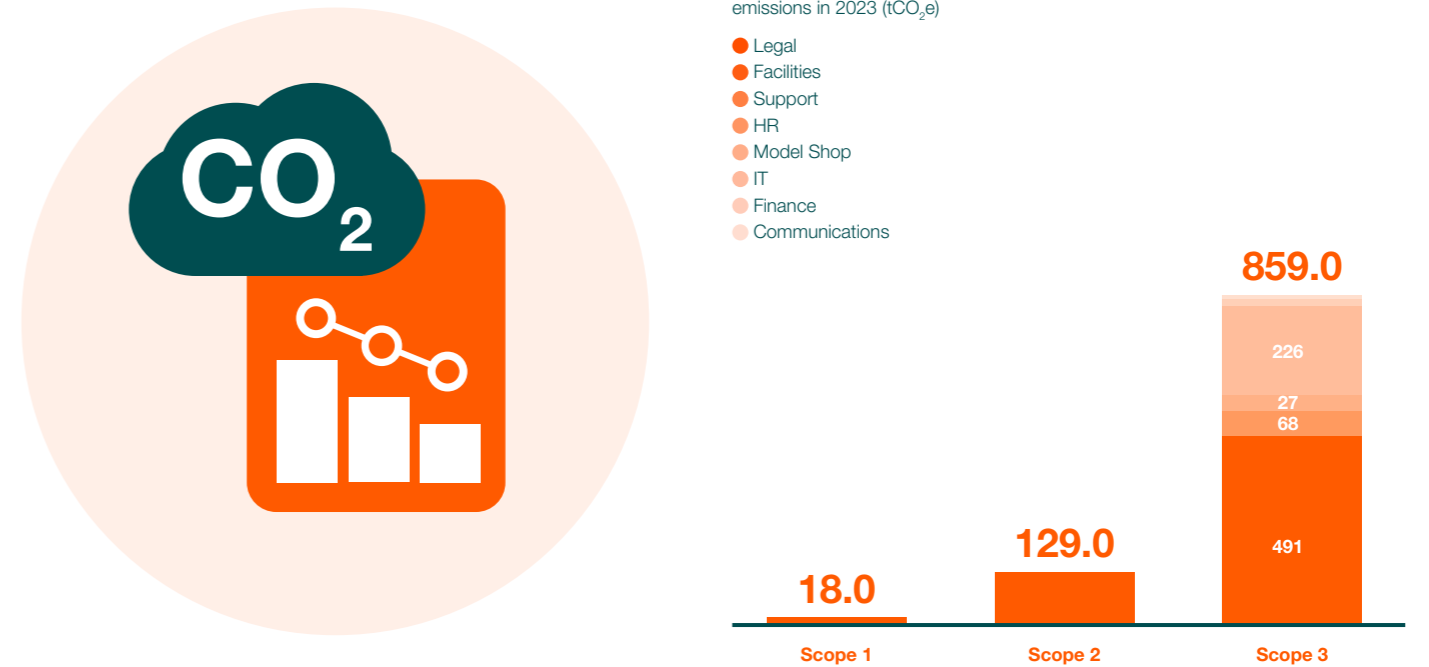


FIGURE 9
AHMM total operations
emissions in 2023 (tCO₂e)

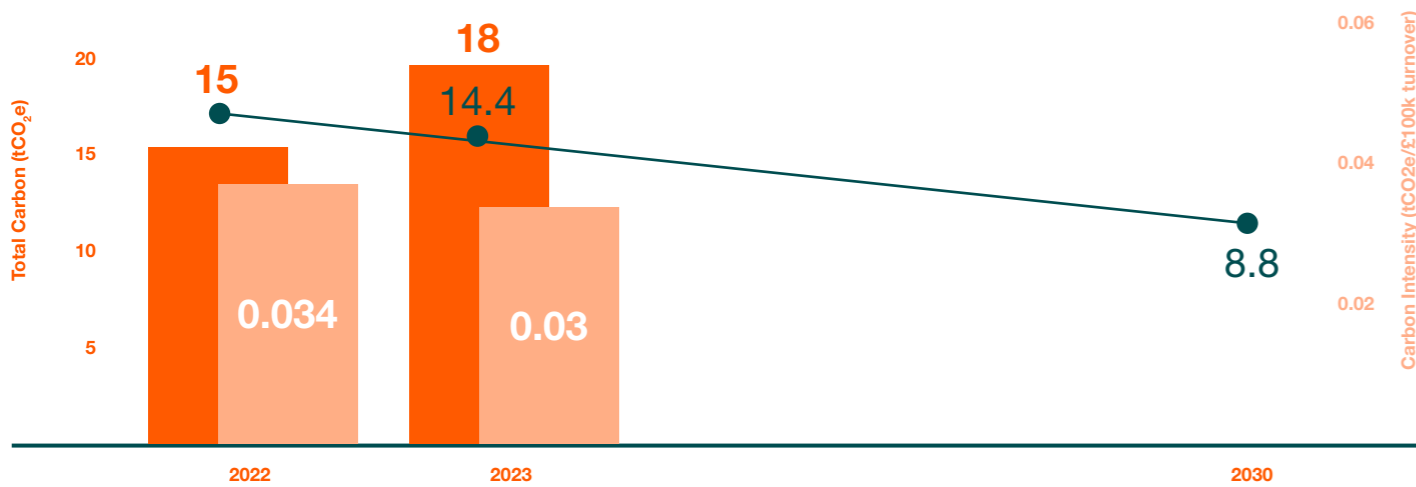


Scope 1

AHMM's Scope 1 emissions in 2023 were 18 tonnes. This is an increase in emissions of 2.8 tonnes from our 2022 baseline. Clearly, this misses our reduction trajectory requirements of 1.1

tonnes in this scope. Looking into our other data, we think this is because our attendance in our office was higher in 2023 than it was in 2022 and this created greater domestic hot water and heating demand. We have also improved data collection in 2023.

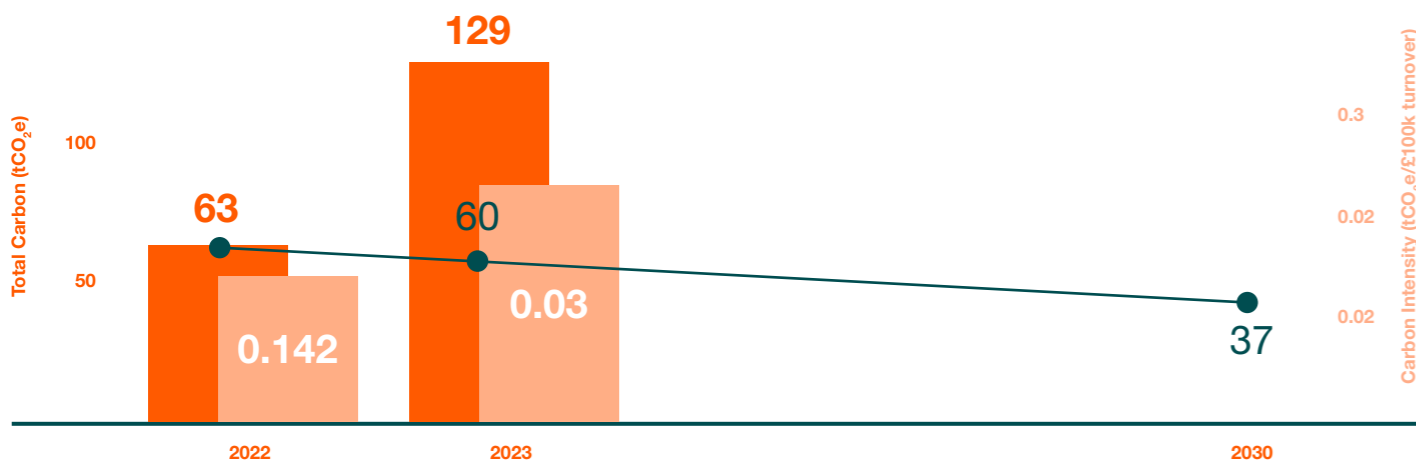
FIGURE 10
AHMM's operations
Scope 1 emissions trajectory



Scope 2

Our Scope 2 emissions also increased in 2023 compared to our baseline. In 2023 we created 129 tonnes of carbon, an increase of 65.6 tonnes – doubling our emissions. Again, we think this is due to increased attendance in our offices post pandemic as well as better data collection.

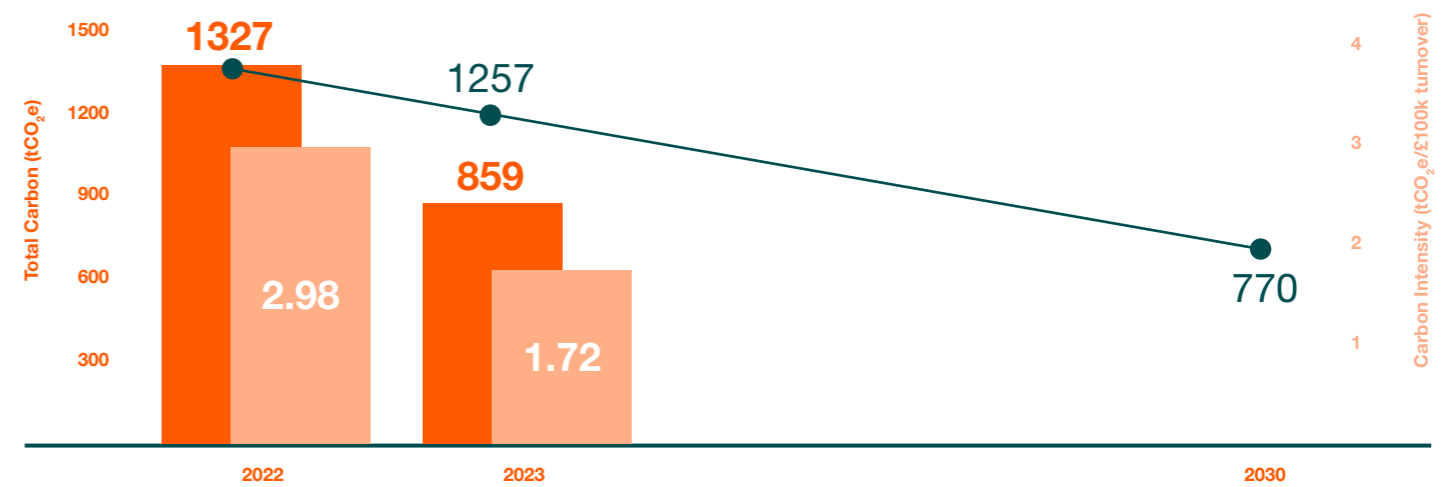
FIGURE 11
AHMM's operations
Scope 2 emissions trajectory



Scope 3

Scope 3 is where we have made big reductions. Our 2023 total emissions were 859 tonnes, down 513 tonnes from 2022. This can be largely attributed to reductions in IT equipment purchases and our events budget.

FIGURE 12
AHMM's operations
Scope 3 emissions trajectory



Summary

The notable reduction in Scope 3 emissions in 2023 shows positive progress, although the increases in Scope 1 and 2 emissions highlight the challenges of increased office attendance.

We will continue to refine and implement our net zero carbon action plan to achieve our long-term sustainability goals and stay aligned with our targets.

By focusing on reducing carbon at a departmental level and optimising operational efficiencies, we aim to mitigate future emissions and maintain our trajectory toward net zero carbon.

PROJECTS

The image features a dark teal background on the left and a large, vibrant orange shape on the right. The orange shape is composed of several overlapping geometric forms: a large circle at the top right, a vertical bar extending downwards from its left side, and a smaller circle positioned in the center of the orange area. The overall design is modern and minimalist.

Projects

In line with our operations emissions, we have started to report the upfront carbon of all building projects that have reached practical completion in each calendar year from 2022 onwards.

We have used the RICS whole life carbon methodology for calculations, focusing on project emissions at practical completion (Modules A1-A5) using AHMM's Delivering Net Zero in Use Toolkit⁴.

For the majority of projects, data about key building elements (substructure, superstructure, facade, finishes, and services) was taken from post Stage 4 information, as this provided the most accurate information for assessment. For a small number of projects, carbon data was taken from earlier project stages, due to historical reporting practices.

Where information on modes and distances of transportation, and material specification is not known, the RICS default assumptions have been used.

For projects where upfront carbon data is unavailable, we have used conservative estimates based on RIBA Business as Usual figures (office projects: 950 kgCO₂e/m², residential projects: 850 kgCO₂e/m²).

2022 Baseline Footprint

In 2022, AHMM's total upfront carbon amounted to 80351 tCO₂e, translating to a normalised upfront carbon intensity of 628 kgCO₂e/m² across our completed projects.

Targets

The 2022 baseline figure provides a critical reference point for tracking our progress and assessing the impact of our carbon reduction strategies over time.

Our near-term (2030) target is to reach LETI 2030 Design Target (Band A)⁶. We have calculated our carbon reduction trajectory based on this target, aiming for an upfront carbon intensity of 350 kgCO₂e/m² by 2030.

This means that the upfront carbon intensity should improve 5.6% (35 tCO₂e) year on year (slightly quicker than our operations), equating to an upfront carbon intensity of 593 kgCO₂e/m² in 2023.

AHMM remains committed to reducing the environmental impact of our projects through continuous reporting, analysis, and identification of carbon reduction opportunities early in the design process, to achieve and surpass our carbon reduction targets.

2023 Emissions

AHMM's 2023 emissions show that our projects' total upfront carbon increased to 102893 tCO₂e. This due to the completion of larger-scale projects.

However, our upfront carbon intensity decreased compared to 2022. Our results, at 553 kgCO₂e/m², demonstrate a 13% area weighted reduction, meaning that we are building more, but with greater carbon efficiency.



FIGURE 13
AHMM's projects upfront carbon emissions reduction trajectory

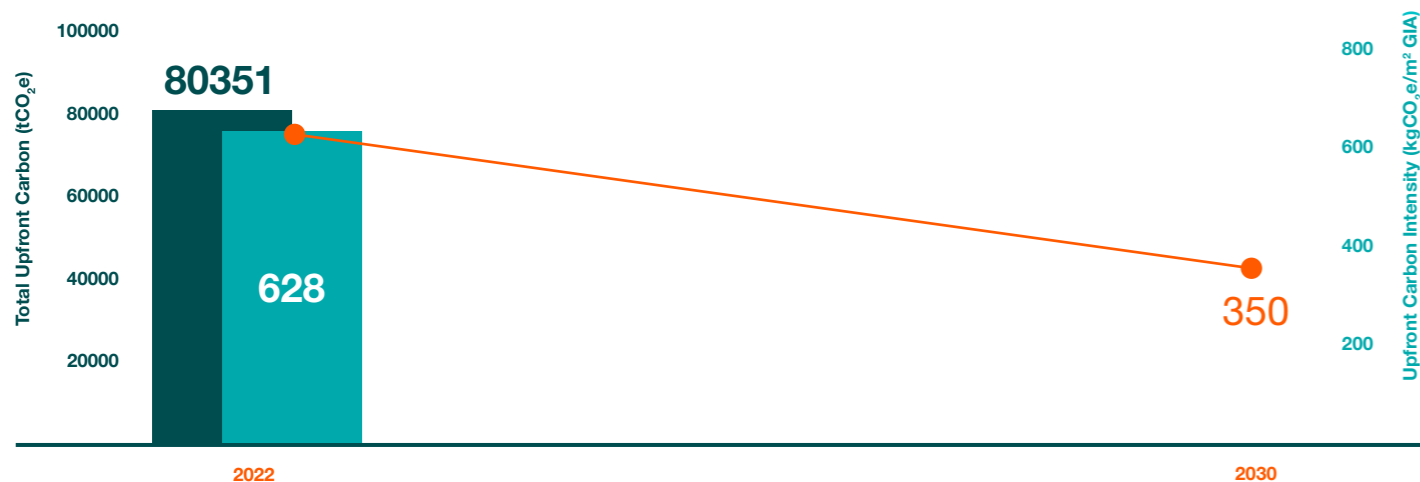
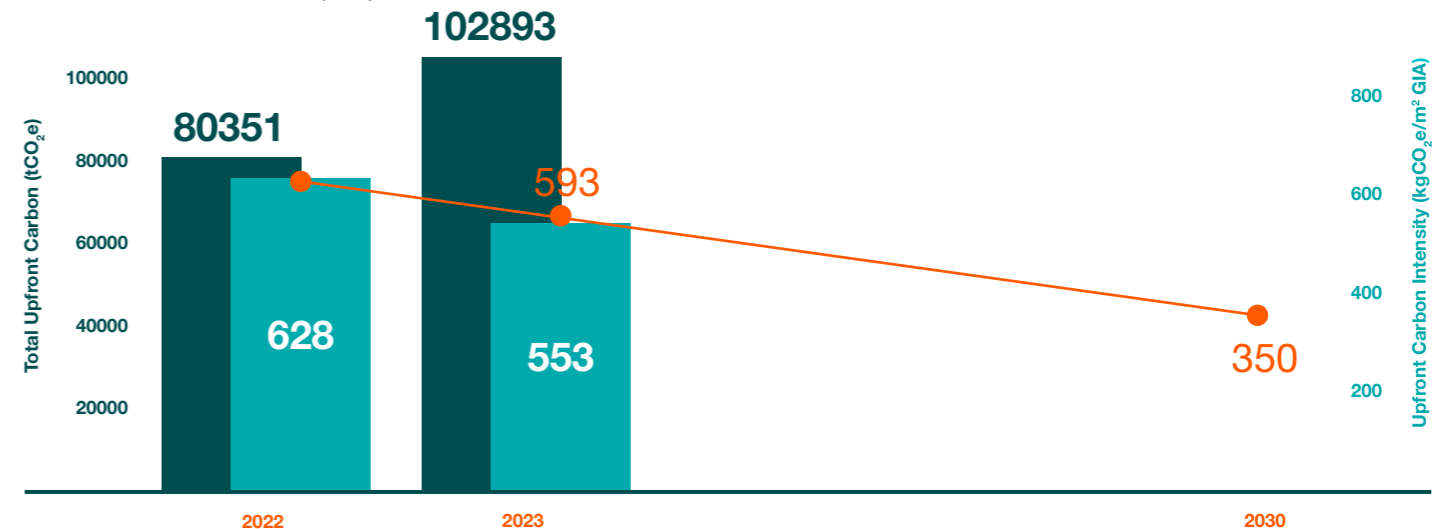


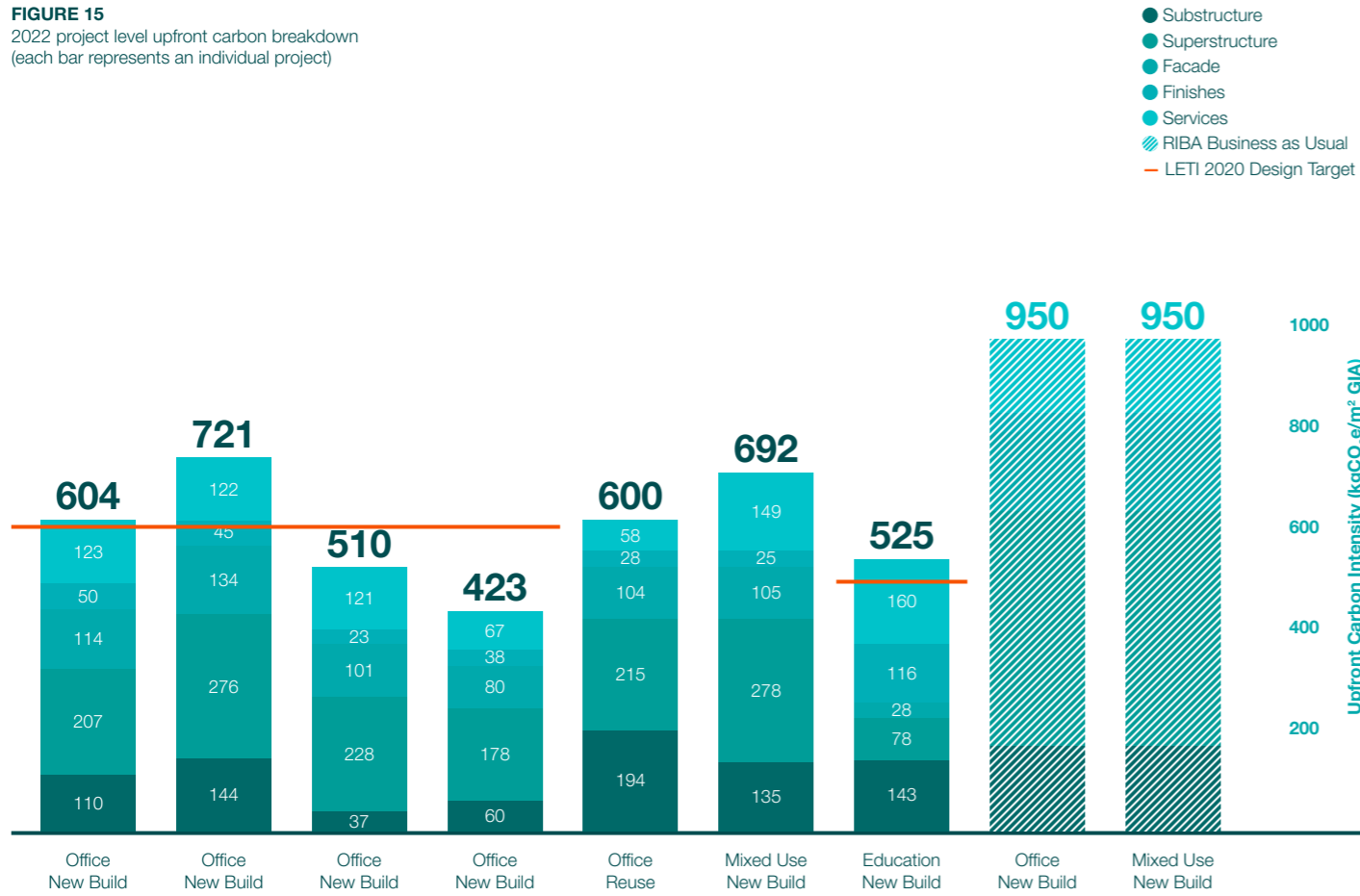
FIGURE 14
2023 projects upfront carbon emissions in the context of AHMM's net zero trajectory



Project Level Breakdown

We have analysed total project emissions by breaking them down into individual projects and comparing them against specific project targets. This detailed breakdown provides a clearer picture of the overall emissions.

FIGURE 15
2022 project level upfront carbon breakdown
(each bar represents an individual project)



Summary

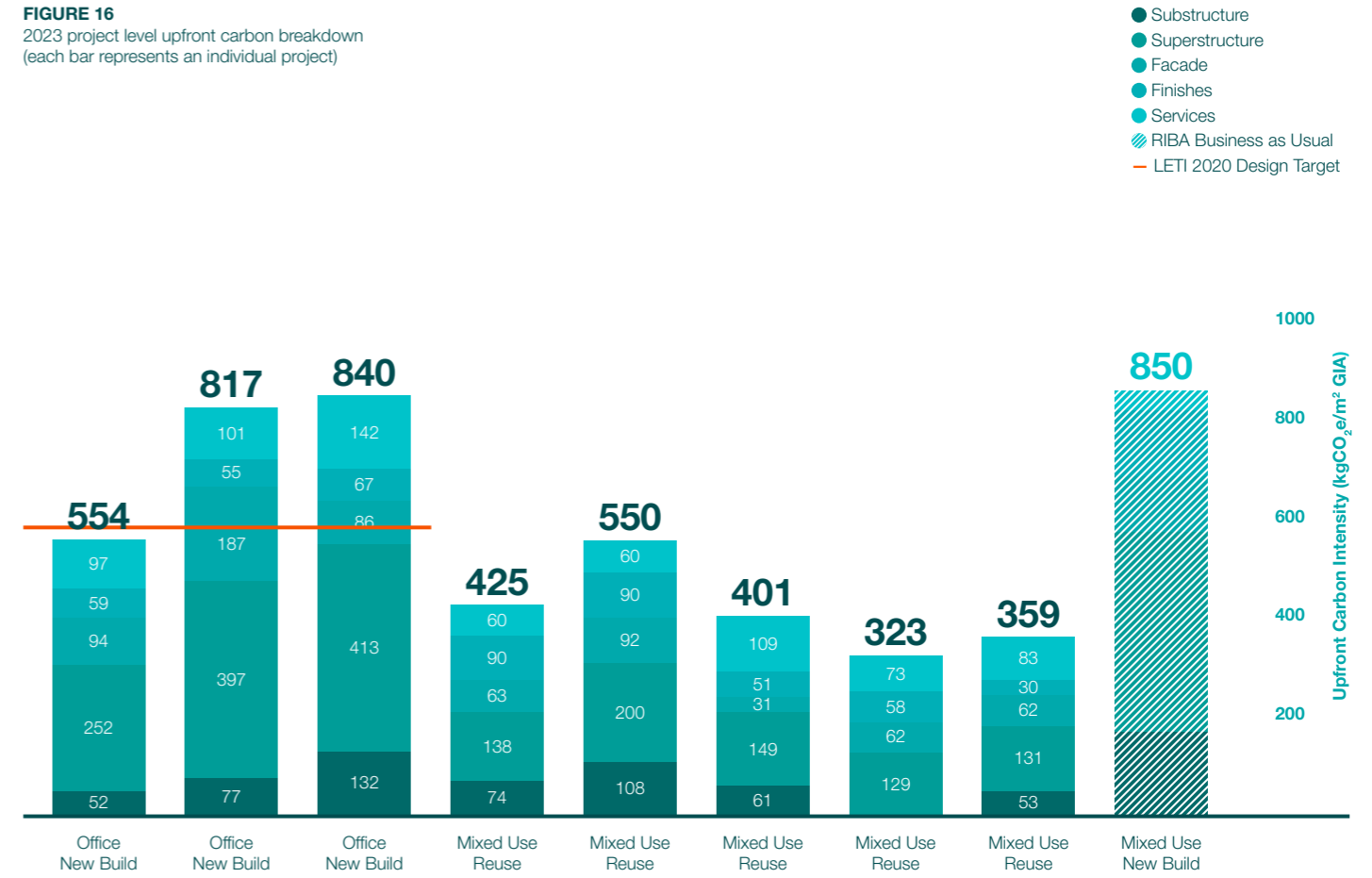
AHMM’s 2022 baseline established a total upfront carbon footprint, providing a reference point for future reduction efforts. AHMM aims to achieve LETI Band A by 2030, targeting a significant reduction in upfront carbon intensity.

Despite an increase in absolute upfront carbon emissions in 2023 due to larger-scale projects, the upfront carbon intensity showed substantial progress, reflecting greater carbon efficiency largely driven by a

2023 Projects

The data reveals that most of the projects completed in 2022 were new build offices. Among the key building elements, substructure and superstructure were identified as the most carbon intensive components.

FIGURE 16
2023 project level upfront carbon breakdown
(each bar represents an individual project)



Therefore, the overall decrease in upfront carbon intensity can, in part, be attributed to the higher proportion of retrofit projects.

higher proportion of retrofit projects. Our commitment to reducing the environmental impact is reinforced by continuous reporting, analysis, and proactive identification of carbon reduction opportunities throughout the design process.

AHMM is committed to reducing our carbon footprint. Using 2022 as our baseline, we have established clear targets for both operational and project related emissions.

We have established near-term targets and long-term goals for reducing our operational emissions, and we made notable progress in 2023, largely due to significant reductions in Scope 3 emissions.

While total project emissions rose in 2023 due to larger projects, we improved carbon intensity, largely due to a higher proportion of retrofit projects.

Our commitment to transparency and progress is reflected in our regular reporting and focus on high impact areas.

As we move towards our future goals, we aim to refine our strategies, enhance data accuracy, and continue to apply rigorous analysis to improve our decisions and meet our targets.

Our detailed plans and proactive measures will help us stay on track to achieve both our short-term and long-term goals, advancing towards a net zero carbon future.



References

1 AHMM's Net Zero Action Plan

<https://www.ahmm.co.uk/profile/sustainability/net-zero-action-plan-2023/>

2 Science Based Targets Institute

<https://sciencebasedtargets.org/>

3 UNFCCC Race to Zero

<https://climatechampions.unfccc.int/system/race-to-zero/>

4 Low Energy Transformation Initiative

<https://www.leti.uk/>

5 Delivering Net Zero in Use Toolkit

<https://www.ahmm.co.uk/profile/sustainability/delivering-net-zero-in-use-toolkit/>

6 LETI Carbon Alignment

<https://www.leti.uk/carbonalignment/>



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We welcome feedback and comment, as well as the opportunity to discuss and collaborate to develop our thinking together.

[CONTACT HERE](#)

AHMM CARBON EMISSIONS ●

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