

Our Environmental Footprint

Positive
Places

Hammerston



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Foreword

“Hammerson has set out an ambition to become Net Positive in carbon emissions, water, resource use and socio-economic impacts by 2030.

One of the critical steps in establishing a strategy for achieving this is to develop comprehensive and robust baseline data for each of these four impact areas. As part of this process, in August 2016 Hammerson appointed JLL Sustainability Upstream to undertake a detailed carbon footprinting exercise. This was a complex but revealing exercise that has been important in helping shape our strategy for tackling our Net Positive objective. I am pleased to be able to share here a summary of the results, what is included and how the footprint was calculated.

I hope you find the report interesting. If you have any further questions or comments please feel free to contact us.”

Louise Ellison

Group Head of Sustainability, Hammerson plc
May 2017



About This Report

This report summarises our carbon, water and waste footprint. This data forms the foundation of our Net Positive carbon plan. It allows us to identify which business areas and activities we need to focus on and to measure and report on our progress. To help us do this the data has been analysed in a number of different ways reflecting business activities, portfolios, geographies and emissions sources.

A Big Thanks

It has only been possible to establish a robust and clear data set through the willingness of many different people both within and outside the company to provide us with data. We would therefore like to take this opportunity to thank everyone who has been involved and particularly some of our key retailers and suppliers who have been very supportive of the process.

For more information

Contact sustainability@hammerson.com
Visit sustainability.hammerson.com

Our Net Positive Objective

In 2017 our sustainability vision became even more ambitious, with a new objective to become Net Positive for carbon, resource use, water and socio-economic impacts by 2030.

Positive Places



Carbon

Net Positive for Carbon means emissions avoided exceed emissions generated.



Resource Use

Net Positive for Resource Use means waste avoided, recycled or re-used exceeds materials used that are neither recycled, renewable sent to landfill.



Water

Net Positive for Water means water replenished by external projects exceeds water consumed from mains supply.



Socio-economic impacts

Net Positive for Socio-economic impacts means making a measurable positive impact on socio-economic issues relevant to our local communities beyond a measured baseline.

Net Positive and Environmental Footprinting

One of the critical steps in establishing a strategy for Net Positive is to develop a comprehensive set of baseline data. Undertaking this environmental footprinting exercise:

- Provides the business with an accurate carbon emissions baseline to track our progress against and a toolkit for updating the footprint over time enables Hammerson to clearly communicate our impacts, both within and outside the scope of Net Positive.
- Presents a baseline footprint for water and waste from which to lay out plans.
- Provides recommendations to enable Hammerson to improve the robustness of the underlying data.

Behind the Data

Equity share

Hammerson's carbon footprint has been calculated based on an equity share basis including all assets and investment interests. This supports the businesses commitment to be Net Positive for environmental impacts arising from all business activities from which the company generates its net income.

For operational impacts

The following approach has been taken to apportion Hammerson's operational emissions:

1. Total usable floor area of each asset is calculated. This equates to the sum of provided Common Parts Area and Net Lettable Area.
2. The equity ownership percentage is applied to that total usable floor area to calculate a total Hammerson owned floor area for each asset.
3. These asset level Hammerson owned floor area values are then aggregated together on a portfolio level (e.g. for UK Shopping Centres).
4. The aggregated portfolio Hammerson owned floor area values are then compared to the total portfolio level usable floor areas to calculate the overall percentage of the portfolio owned by Hammerson. This figure is then used to calculate the proportion of universal impacts for which Hammerson is taking responsibility.

For development emissions

Environmental impacts resulting from Hammerson's developments have also been apportioned based on the percentage stake we hold in the asset. For example if we own a 50% stake in a development, we have included 50% of the carbon emissions, waste and resource use resulting from the development in our footprint.

Primary and secondary data

Impacts were calculated from a combination of primary and secondary data collected from a number of sources. A significant amount of primary data was supplied by our property management teams, tenants, partners and suppliers.

Where primary data was not available secondary data was used to estimate impacts. The secondary data comes from benchmarks created from primary data or from external industry bodies:

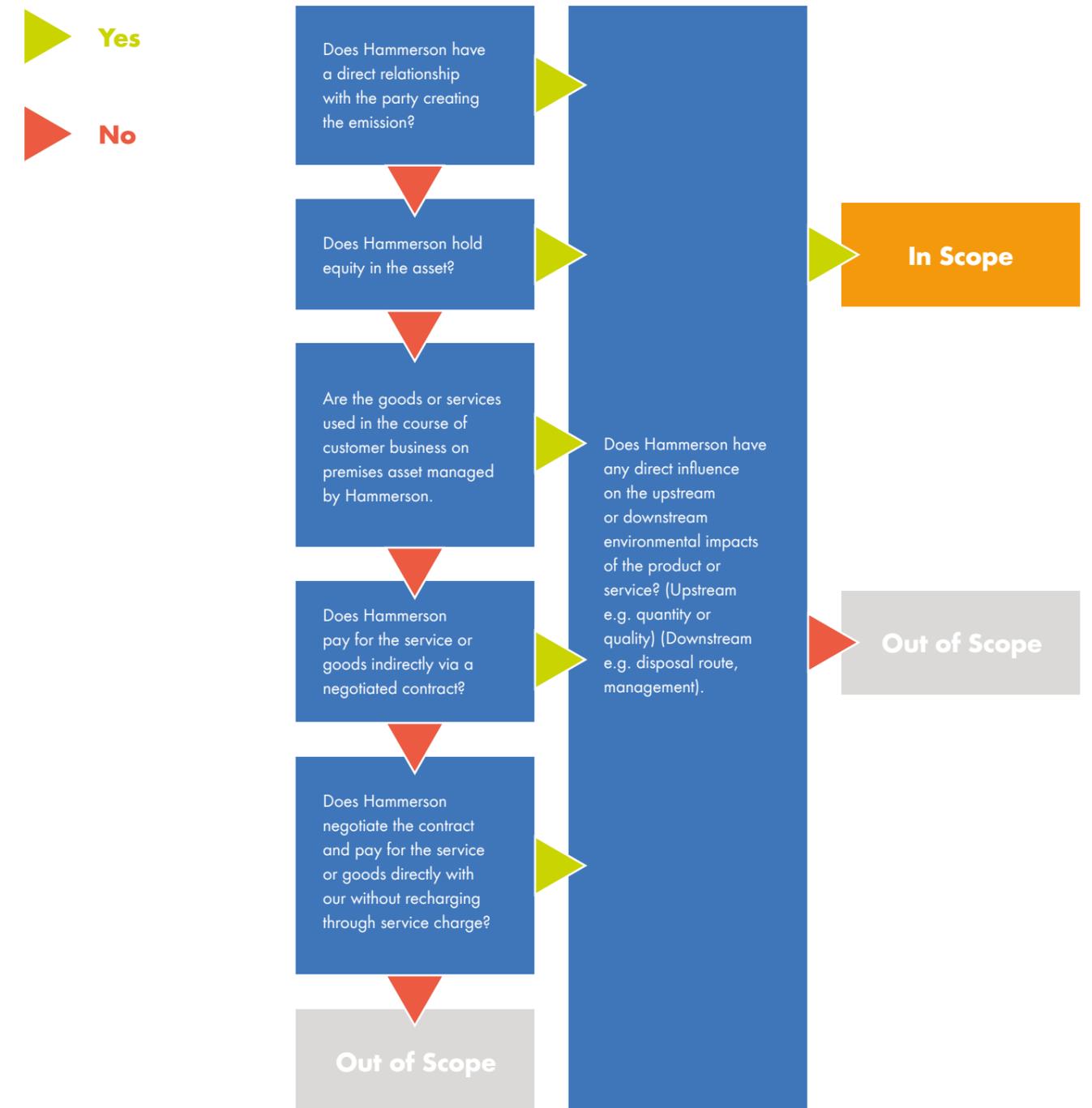
- DEFRA 2015 emissions factors were used across the study. Country specific factors were also used where relevant.
- Building services embodied carbon emissions for fit-outs were estimated using embodied carbon data provided in the 'Research Report - Embodied Carbon' publication from CIBSE.
- Materials embodied carbon emissions were calculated using the ICE (Institute for Civil Engineers) database and are based on a cradle to gate scope of analysis.
- Professional services and design emissions were assumed based on Green Construction Board findings that these account for 5% of a project's total emissions.

Overall, emissions were calculated from 47% of primary data sources and 53% from secondary sources.

What is in and out of scope?

Establishing clear boundaries for what is in and out of the scope of our Net Positive objective is important. We developed this decision tree as a tool that can be applied to any impact source to tell us whether it is in or out of scope.

For each impact source, you can follow the process, answering the questions in turn, with the resulting answers dictating whether or not the particular source is included.



A Comprehensive Footprinting Study

For our Net Positive targets we have significantly extended our reporting approach to include emissions from the tenanted areas of our assets. Our carbon emissions based on this broader reporting approach are shown in the orange arrow below.

Standard Operational Control Reporting Approach

Hammerson has publicly reported carbon emissions since 2008 on an operational control basis. This includes all assets over which we have operational control and includes the areas that we control, i.e. common parts, back of house and car park within Hammerson assets.

- Landlord energy, water, waste & refrigerants.
- Tenant sub-metered energy, water, waste & refrigerants.
- Vacant unit energy consumption.
- Corporate travel, waste and water.

2015 Carbon footprint



34,934
tCO₂e/year

Equivalent to carbon emissions from:



4,367
UK households

The standard approach to calculating and reporting carbon emissions is an operational control approach. This includes all the emissions from the landlord controlled areas of our assets plus our corporate emissions and anything we directly purchase and sub-meter to our customers. Our carbon emissions calculated on this basis are set out in the blue arrow to the left.

New Extended Reporting Approach

Hammerson has committed to becoming Net Positive for its equity share of the emissions for which it has the most influence/control.

Hammerson's equity share emissions in scope of Net Positive commitments:

- Landlord energy, water, waste & refrigerants.
- Tenant sub-metered energy, water, waste & refrigerants.
- Vacant unit energy consumption.
- Tenant obtained energy, water & refrigerants.*
- Developments, refurbishments & fit-outs.
- Corporate travel.

* Excludes F&B water



193,233
tCO₂e/year



23,856
UK households

To the left we can clearly see the step change our new reporting approach creates. By only reporting landlord controlled emissions we would be significantly under-estimating the real environmental impacts of our assets. The emissions we do not directly control are of course hard for us to reduce but we are convinced that it is crucial to know the scale of the challenge if we are to find ways of tackling it.

Influencing Impacts Outside of Net Positive Scope

Although Hammerson's 2015 visitor, staff commuting and delivery travel emissions fall **out of scope**, information on Hammerson's equity share of the footprint has been included here to show the scale of the challenge and to help guide our future management of these activities.

- Visitor travel 897,936 tCO₂e
- Freight 26,697 tCO₂e
- Staff commuting 45,129 tCO₂e



969,762
tCO₂e/year



121,220
UK households

The third arrow shows the emissions generated by travel to our assets. Using the steps within the decision-tree shows they are excluded. However we have calculated them for the purposes of transparency and to demonstrate what an opportunity is presented by the fundamental changes to the automotive sector we are beginning to see. We will be doing what we can to support these changes by, for example, making sure our car parks can support electric vehicle charging.

Our Carbon Footprint for Net Positive - getting to the detail

Having calculated our Carbon Footprint, the graphic below illustrates the proportions of those emissions that are generated by the different key functions of the business.

Impacts from the different key business activities of the company



This data forms the foundation of our Net Positive carbon plan. It allows us to identify which business areas and activities we need to focus on and to measure and report on our progress. To help us do this the data has been analysed in a number of different ways reflecting

business activities, portfolios, geographies and emissions sources. It is calculated on a location basis so does not reflect emissions reductions achieved through the purchase of clean electricity.

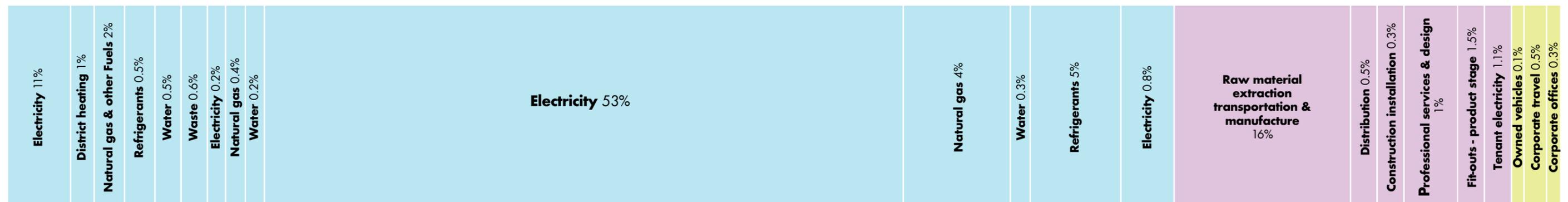
Our carbon emissions analysed by scope

We would traditionally take responsibility for scope 1 and 2 emissions. Including scope 3 emissions in our Net Positive ambition has significantly increased the challenge but also the potential impact.



Key Emission Drivers

Analysing the different drivers of our emissions allows us to focus our strategy on those areas where we can drive the most change. On the basis of these results, tenant electricity consumption at our centres and the embodied carbon emissions of materials used for our developments are two key areas that we will focus on.



Exploring Our Carbon Footprint

Our carbon emissions (tCO₂e/yr) by source

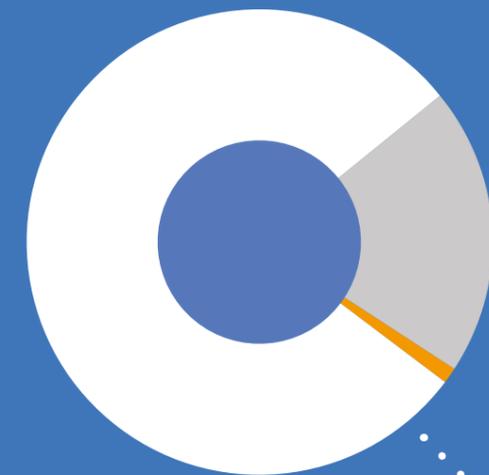
Operational emissions are the largest contributor to Hammerson's carbon footprint at **79%**.

Development emissions represent **20%** our emissions.

Carbon emissions from Hammerson's corporate business activities, our offices, fleet travel and business travel, make up just **1%** of the overall carbon footprint of the business.

The majority of operational carbon emissions come from tenant activities with 127,409 tonnes of CO₂e/ year coming from the utilities, refrigerants and waste services they procure for the space they occupy within Hammerson's assets.

These significant emission sources are included in our footprint but we do not have direct control over them. To address these emissions we will need to collaborate with our retailers closely and set up systems that encourage energy efficient fit outs and store operations.



- Operational emissions **153,012 - 79%** tCO₂e/yr
- Development emissions **38,571 - 20%** tCO₂e/yr
- French shopping centres **1,650 - 1%** tCO₂e/yr

Case study: On-site renewable energy generation at Westquay

Our PV installation at Westquay, Southampton became operational in August 2016, and to the end of 2016 generated 32.12mWh of clean electricity. It is operating ahead of forecast, and we are looking to build on our success in 2017 by retrofitting a further array at another asset. Our PV installation at Westquay positions that asset as a leader in the UK retail sector with regards to on-site renewable generation.

Our carbon emissions (tCO₂e/yr) by region

The majority (**86%**) of Hammerson's emissions come from our UK and Ireland operations.

Our French portfolio makes up **7%** of Hammerson carbon positive emissions. The widescale use of nuclear power in France makes emissions from electricity much lower than in the UK.

The pan - European VALUE and VIA retail assets are responsible for the remaining **7%**.

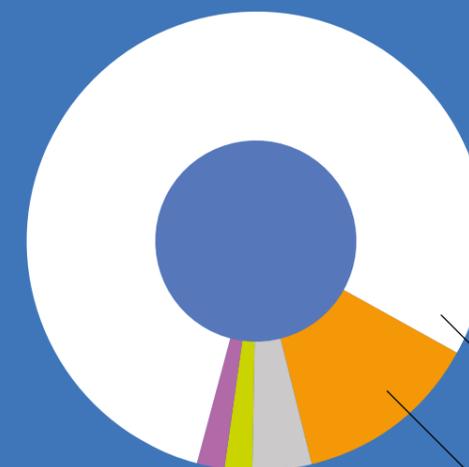
- The UK and Ireland Shopping Centre portfolio is responsible for almost 50% of Hammerson's 2015 Net Positive emissions.
- UK Retail Parks make up the second largest emissions source (32%).

- UK and Ireland **166,377 - 86%** tCO₂e/yr
- France **13,845 - 7%** tCO₂e/yr
- Pan European - Value Retail and VIA Outlets **13,011 - 7%** tCO₂e/yr

Our carbon emissions (tCO₂e/yr) from developments and fit-outs

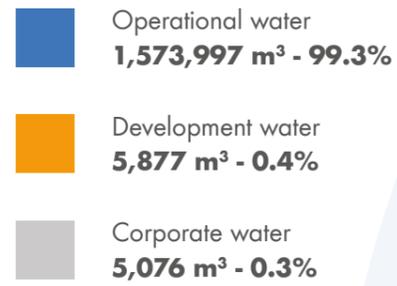
The majority of carbon emissions from our development emissions come from the product stage of the development process. **79%** come from raw material extraction, supply and processing of building materials used in the development, the transport of raw materials to the manufacturer and the manufacturing of the goods/ products.

The next largest contributor to development emissions is the fit out of assets, making up **13%** of all development emissions.



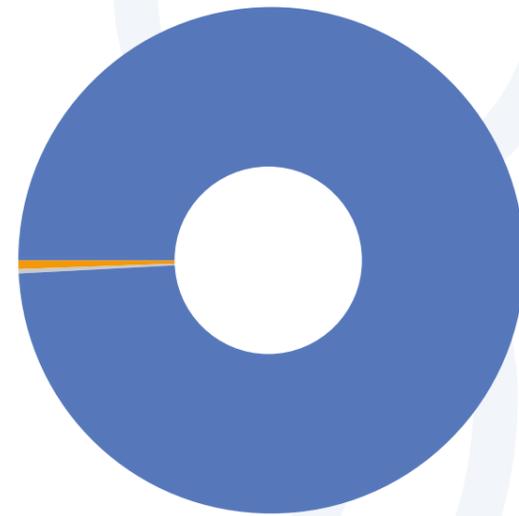
- Product stage development **79%** tCO₂e/yr
- Construction installation process **2%** tCO₂e/yr
- Transport **2%** tCO₂e/yr
- Professional service **4%** tCO₂e/yr
- Fit out **13%** tCO₂e/yr

Our Water Footprint



Operational water use at Hammerson's assets makes up **99%** of our 2015 water demand.

1% is used at our development sites & corporate offices.

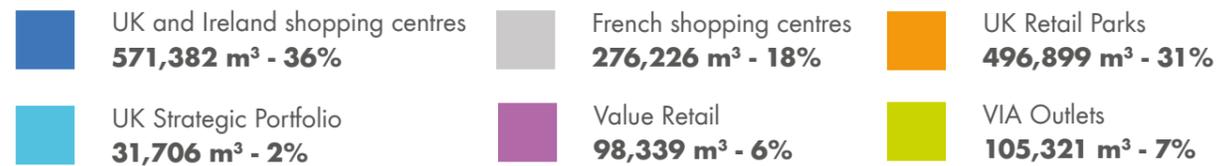
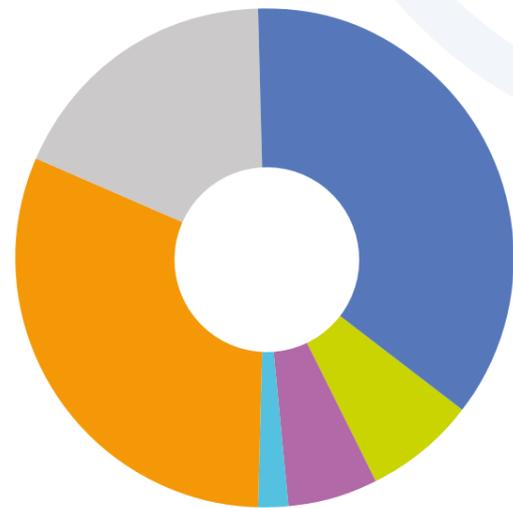


Absolute water used by portfolio

Hammerson's UK Shopping centre portfolio makes up **36%** of its water use, with the UK Retail Parks the second largest user at **31%**.

The French Shopping Centres are also significant consumers of water and make up **18%** of the total water usage.

13% of our water demand comes from the Premium Outlets portfolios across Europe.



Our Waste Footprint



Hammerson's development waste makes up **72%** of our 2015 waste footprint. The remaining **28%** of waste comes from our operational portfolio and corporate waste.



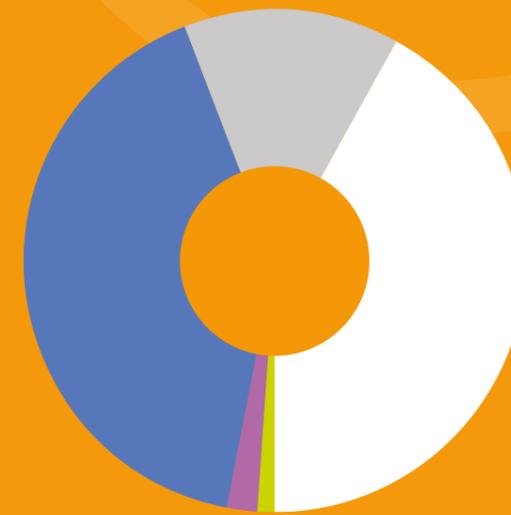
Total waste arisings by portfolio (operational and development)

Hammerson's UK and Ireland activities make up **83%** of our 2015 waste generation.

- Hammerson's UK Shopping Centre portfolio makes up **42%**.
- UK Retail Parks is the second largest contributor at **41%**.

The French Shopping Centres are also significant generators of waste and make up **14%** of the total waste disposal.

The remaining **3%** of waste generated is from premium outlets portfolios across Europe.



Our award winning project with Costa in 2015 to create and open an industry first - a zero energy coffee shop.



Influencing tenant water use

Water use by our tenants, especially our food and beverage tenants is significant but outside our direct control and heavily influenced by tenant operational processes and policies. As such, only tenant water use for toilet facilities is included in our Net Positive targets. We will work closely with our retailers to tackle water use through a range of activities:

- Promoting water efficient fittings.
- Invest in water metering technology.
- Supporting store level water efficient behaviour through our asset Environmental Coordinators.

- Rewarding water efficiency through our Positive Growth retailer sustainability awards scheme across the UK portfolio.
- Collaborating with retailers to create outstanding units, such as the Eco Store with B&Q at Merthyr Tydfil.



Driving down fit out emissions

In 2017 our second Zero Energy Eco-Pod will open. This builds on our award winning project with Costa in 2015 to create and open an industry first - a zero energy coffee shop. The first Costa Eco-Pod achieved the highest Energy Performance Certificate rating of A+, won a BCSC Gold Award, and demonstrated the power of collaboration between landlord and tenant in achieving excellent sustainability outcomes.

The project is now driving change across both the Hammerson and Costa portfolios. Our second Eco-Pod with Costa is set to open in Swansea in 2017, and design learnings have been applied to the development of Rugby Retail Park, where we have achieved BREEAM Outstanding, a major achievement for a retail park and a World first.

Managing our development waste

The high percentage of waste from the UK shopping centre portfolio is largely due to the majority of development activities occurring in the UK in 2015.

The Westquay South development generated the most development waste in the development portfolio with 27,131 tonnes being produced.

97% of this waste was diverted from landfill. To achieve our Net Positive target for waste we need to make sure waste avoided, recycled or reused exceeds materials used that are neither recycled or renewable or sent to landfill.



What We Have Learnt

1.

To Partner and Collaborate

Tenant energy use is the biggest contributor to our overall carbon footprint. This means collaboration with tenants is vital to bring those emissions down. To illustrate the opportunity collaboration represents just ten of our key tenants are responsible for 43% of electricity demand across Hammerson's UK Shopping Centre portfolio.

4.

More detailed footprints

More detailed water and waste footprints for those activities in scope of our Net Positive commitments, including detailed assessment of consumption by tenant type will be invaluable. This will require investment in metering for more accurate water data monitoring and close relationships with our waste management suppliers. Initiatives are already underway in both these areas.

To improve our data

We are encouraged by the quantity and quality of data we have been able to gather, particular from third parties, for this footprint. However, we will continue to work on improving the data coverage that our benchmarks are created from and therefore the robustness of the footprint. We will focus in particular on the data relating to tenant obtained utilities, fit-outs of tenant spaces, JV partner data (particularly Value Retail and VIA Outlets) and the number of developments feeding into the benchmarks.

2.

Looking beyond our direct control

Although Hammerson's 2015 visitor, staff commuting and delivery travel emissions are not within the scope of our Net Positive objective, data on these has been included here to illustrate the scale of the challenge and to help guide our future management of these activities. Any emissions reductions we achieve in these areas will contribute to the achievement of our Net Positive carbon emissions target.

5.

3.

Establishing a defined monitoring system

At the start of 2017 we held a workshop with key internal and external stakeholders to evaluate the current position of our monitoring and how to establish our Net Positive reporting system. The environmental footprint set out in this report provides the baseline for this process.

Hammerson Positive Places

Our sustainability vision is to create retail destinations that deliver Net Positive impacts economically, socially and environmentally.

Positive Places is our strategy for making that happen.

If you have any questions about our environmental footprint or the information contained within this document please contact the Hammerson Sustainability Team at:

sustainability@hammerson.com

**Positive
Places**