



Sustainability Performance and Data 2019



Welcome to our Performance and Data Report

We're committed to reporting our performance, methodology and data every year in a transparent way. In this report you'll find details of our sustainability performance against each of our twelve commitments, along with Energy and Carbon reporting, EPRA and TCFD disclosures

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Corporate commitment and performance summary

Progress

- Complete
- On track
- Incomplete

Commitments

- 🔄 Existing commitment
- + New commitment

Creating jobs and opportunities

Community employment



Commitment



Help a total of 1,200 people furthest from the jobs market to secure employment by 2020.

●○○ Performance: **Complete**

Since 2011 we've secured employment for 1,336 people furthest from the job market through our programme. In the year we secured 187 jobs, 105 in London and 82 in Retail. To deliver on this commitment, we launched the UK's first-ever aerial window cleaning training academy at Her Majesty's Prison & Young Offender Institution Isis, and Ambition:Leeds, a new training academy for retail and hospitality talent, responding to demand from retailers for more skilled recruits ready to join their workforce. Toward the end of the year, we set an ambitious new commitment to create £25m of social value by 2025 through our community employment activities.

Fairness



Commitment



By 2020, ensure everyone working on our behalf, in an environment we control, is given equal opportunities, protected from discrimination and paid at least the Foundation Living Wage.

○●○○ Performance: **On track**

We continue to be an accredited Living Wage employer, both for our employees and those working on our behalf. This year we joined the Living Wage Employers' Group, a cross-industry partnership tasked with driving adoption of Foundation Living Wage rates in the supply chain. In the year we carried out due-diligence in our service and construction partners' organisations to gauge adherence to our Living Wage commitment. Results indicate there are some areas where rates are not being met, we will focus our engagement on these areas in the year ahead. Employers who have yet to transition to the Living Wage by 2020 agreed to communicate this commitment to their staff.

Diversity



Commitment



Make measurable improvements to the profile — in terms of gender, ethnicity and disability — of our employee mix.

○●○○ Performance: **On track**

We continue to meet Hampton Alexander targets with 40% of the Board and 42% of Executive Committee and direct reports being female versus targets of 33%. We have improved disclosure of diversity data in the organisation which has allowed us to set meaningful targets for 2025 around a broader set of diversity characteristics. However, we have moved backwards in terms of female representation at Leader level in the organisation (2018: 24.4%; 2019: 19.5%).

Health, Safety and Security



Commitment

















Maintain an exceptional standard of health, safety and security in all the working environments we control.

○●○○ Performance: **On track**

We continually prepare the business to anticipate and respond to incidents and this year have enhanced our security training and advice for employees and partners. We continue to lead and participate in a number of cross-industry forums in the fields of health, safety and security.

This year we've again we maintained our OHSAS 18001 certification across 100% of our sites. Following the Grenfell fire, we worked closely with customers, partners and other key stakeholders to consider the potential ramifications of cladding across our portfolio.

Efficient use of natural resources


Carbon 	Renewable energy 	Energy 	Waste 
Commitment  Reduce carbon intensity (kgCO ₂ e/m ²) by 40% by 2030 compared with a 2013/14 baseline, for property under our management for at least two years.	Commitment  — Ensure 100% of our electricity supplies through our corporate contract are from REGO-backed renewable sources — Achieve 3MW of renewable electricity capacity by 2030.	Commitment  Reduce energy intensity (kWh/m ²) by 40% by 2030 compared with a 2013/14 baseline, for property under our management for at least two years.	Commitment  — Send zero waste to landfill — At least 75% recycled across all our operational activities by 2020.
<p>  Performance: On track </p> <p> We've reduced carbon intensity by 39.8% compared to 2013/14 baseline, significantly outperforming our target pathway. This is an improvement compared to the 2017/18 reduction of 28.6%. These reductions have been achieved through a combination of energy efficiency projects, changes in our portfolio, and changes in emissions factors. In the year we have successfully transitioned projects in our development pipeline away from fossil fuels toward full or partial electrification, designing in Air Source Heat Pump and electric vehicle solutions. We continue to focus on reducing carbon emissions in the construction supply chain through engaging our design and delivery partners. </p>	<p>  Performance: Complete </p> <p> We continue to procure 100% renewable electricity across our portfolio through our corporate contract. At least 15% of gas volumes are from green sources. </p> <p>  Performance: On track </p> <p> Our current on-site renewable electricity capacity is 1.5 MW. In March we successfully installed a 30 kWp solar PV system on the roof of Westgate, Oxford which will produce approximately 30,000 kWh of electricity per year. We've also completed solar PV feasibility studies for our outlet destinations at Junction 32, Braintree Village and Clarks Village, and commenced a feasibility study for a large-scale solar farm in our strategic land development pipeline. </p>	<p>  Performance: On track </p> <p> We've reduced energy intensity by 18.2% compared to 2013/14 baseline year. This is an improvement compared to the 2017/18 reduction of 14.3%. To deliver on this commitment in Retail we carried out several lighting and equipment upgrades including replacing car park lighting with LED at Bluewater, delivering a saving of over 830 kWh. In London we partnered with our customer at 7 Soho Square to install LED lighting, reducing the building's electricity usage by 13%. In the year we committed to £3m of energy reduction projects which, combined with a drive to improve the efficiency of our existing systems, will deliver further energy reductions in the year ahead. </p>	<p>  Performance: Complete </p> <p> We continue to divert 100% from landfill across our operational activities. </p> <p>  Performance: On track </p> <p> In the year we recycled 74.7% of operational waste, achieving 78.9% in London, 76.8% at our Shopping Centres and 60.0% in our Leisure and Retail Parks which are managed by Savills. We launched coffee cup and fashion textile recycling schemes across our portfolio, working with consumer, customers and our supply chain partners to find better solutions to resource use. Our Refill Me campaign to tackle single-use plastics brought together over 100 retailers to offer shoppers free refills of water. </p>

Sustainable design and innovation

Resilience 	Materials 	Biodiversity 	Wellbeing 
Commitment  Assess and mitigate physical and financial climate change adaptation risks that are material across our portfolio.	Commitment  Source core construction products and materials from ethical and sustainable sources.	Commitment  Maximise the biodiversity potential of all our development and operational sites and achieve a 25% biodiversity net gain across our five sites currently offering the greatest potential, by 2030.	Commitment  Ensure our buildings are designed and managed to maximise wellbeing and productivity.
<p> Performance: On track</p> <p>Following the release of the UK Climate Projections 2018 which forecasts the expected effects of climate change, we conducted further research to determine how climate change will affect our portfolio. This has provided an up to date view of climate risk at the portfolio level, helping to inform our activities across the property lifecycle. In the year our investment and divestment activities have reduced the risk to our portfolio from extreme weather. We are one of 600 organisations publicly committed to the Task Force for Climate-Related Financial Disclosures and offer a greater level of transparency to investors this year through our disclosures.</p>	<p> Performance: On track</p> <p>In the year we have progressed the design of our developments against this target. Our 21 Moorfields development team are targeting procurement of all core construction materials which are manufactured within the UK and Europe only, to reduce emissions from transportation and reduce risk of ethical issues in manufacture and extraction. Building on these processes, we have included responsible sourcing guidelines in our design guides, providing our design and delivery partners with strict environmental and ethical parameters. In the year ahead as our development pipeline progresses to construction, we will report our quantitative progress against this target.</p>	<p> Performance: On track</p> <p>In the year we extended our biodiversity commitment to our assets in London and are assessing opportunities for installations in the year ahead. We've planned and secured budget for biodiversity enhancements to the five sites offering the greatest potential, which will deliver net gain in biodiversity at each site of between 5% and 25%. Completed projects include a 220m² wildflower garden installed at Hatfield Galleria and planting of aquatic plant species in the lakes at White Rose, Leeds. We're also committed to delivering net gain through our development pipeline, and our 21 Moorfields development will deliver over 1,700 m² of new green walls, trees and plants, totalling 76 different species. We are developing a strategy for all future developments to deliver net gain.</p>	<p> Performance: On track</p> <p>Using learnings from our 80-100 Victoria Street project we're have adopted wellbeing clauses in our engineering specifications and design briefs. This will ensure our developments deliver specific wellbeing outcomes and that customers are not prevented from achieving the WELL™ standard during their fit out. Our commercial office developments focus on the delivery of optimal air and water quality, daylighting, acoustic and thermal comfort. In addition to core technical design factors, we are focusing on delivering wellbeing features, with our 21 Moorfields development featuring a central atrium and glazed stairwells to maximise penetration of daylight, a Zen garden and staff wellness centre.</p>

Our benchmarking scores

Taking part in rigorous external benchmarking of our performance helps us to track and assess our progress. It also provides stakeholders with confidence that we're turning our commitments and targets into action. And it underlines our ambition to be a sustainability leader in our industry. This year we received high scores from our key benchmarking schemes, including reaching the CDP A-list for the second time, being the highest scoring UK real estate company in the DJSI and ranking 1st in UK diversified office/retail peer group for GRESB.

Activity	Performance
	2018: A (Leadership) 2017: A (Leadership) 2016: A- (Leadership)
	2018: Score 90% 2017: Score 78% 2016: Score 77%
	2018: Score 73/percentile ranking 93 2017: Score 75/percentile ranking 92 2016: Score 76/percentile ranking 92
	Percentile ranking 91. We continue to retain our established position in the FTSE4Good Index
	Received our fifth Gold Award from EPRA for best practice sustainability reporting
	2018: Score 73%
	ESG rating AA
	Score 82/relative position 11th out of 300
	We've again been named a climate leader, ranking 10th for all FTSE 100 companies and first for our sector

Sustainability Reporting Methodology

All energy, carbon and waste data reported for the financial year is for the 12 months to the end of February, as March data is not available in advance of our reporting duties.

Corporate commitment performance

This section provides an overview of the methodologies used to calculate the performance for the following commitments:

- Reduce carbon intensity ($\text{kgCO}_2\text{e/m}^2$) by 40% by 2030 compared to a 2013/14 baseline, for property under our management for at least two years, with a longer-term ambition of an 80% reduction by 2050. This commitment was approved by the Science-based Target Initiative in 2016.
- Reduce energy intensity (kWh/m^2) by 40% by 2030 compared to a 2013/14 baseline, for property under our management for at least two years.
- Send zero waste to landfill with at least 75% recycled across all our operational and construction activities by 2020.

We plan to extend this report to include methodologies for all sustainability corporate commitments in the future.

Energy and Carbon

We report on sites where we have 'operational control', where we directly purchase energy or appoint agents who control the purchase of energy. Our commitment boundaries include only properties within our portfolio which have been under our management, or 'operational control', for at least two years. Once properties complete at least two years under our 'operational control', they will be included at the start of the following reporting year. We report on all energy procured by Landsec or appointed agents, including that consumed by our customers, and the emissions associated with this energy. Only gas or electricity which is supplied directly to units/demises by utility suppliers is excluded.

Energy consumption is normalised to account for changing conditions and to better communicate energy performance. Landsec uses three normalisation techniques:

kWh electricity equivalent: Natural gas consumption is adjusted so all energy consumption can be reported by one metric: kWh electricity equivalent. Following the Better Building Partnership's REEB methodology, the factor applied to 1 kWh of natural gas is 0.4, which accounts for the natural gas higher coefficient of production.

Degree day correction: Degree day normalisation ensures that the demand for heating (gas) and cooling (electricity) is reported relative to our baseline year. If our baseline year happened to experience, for example, record-breaking temperatures, inevitably our performance in later years would appear unrealistically improved, as we'd demand less heating/cooling as compared with our baseline. The heating degree days (HDD) we use quantify the number of days and the length of time that temperatures have dropped below a base temperature of 15.5°C and our cooling degree days (CDD) quantify the number of days and the length of time that temperatures have exceeded 15.5°C .

We obtain our degree days from <http://www.degreedaysforfree.co.uk> and each asset is assigned to its local region. Local degree days have been sourced for our 2013/14 baseline year and current period degree days are used to calculate a correction factor (base year DD/current period DD = normalisation factor). This normalisation is calculated for both HDD and CDD.

The HDD normalisation factor is then applied to natural gas consumption used for space heating, this is applied to all asset types. The CDD normalisation factor is only applied to London office buildings as these are the primary assets where electricity is used for cooling. In these assets we have calculated that 22% of all office electricity consumption can be attributed to cooling. This has been calculated by detailed analysis of a selection of buildings with adequate landlord sub-metering. The CDD normalisation factor is therefore only applied to 22% of office total electricity usage.

Removal of cooking gas: It has been recognised that natural gas used for cooking, where cooking is the tenants' primary business function, can be directly correlated to their trade. Due to this direct correlation, we remove any natural gas consumption which is used for commercial cooking to better reflect the consumption where we have capacity and capability to drive reductions.

All normalisation techniques have been applied to our 2013/14 baseline year as well as the current reporting period.

Our commitments are measured by intensity based on floor area (m^2). Our methodology for calculating floor area directly matches the area reported to that served by the energy procured. A breakdown of the methods used to calculate floor areas for different types of asset can be found below:

- **Offices:** Office floor areas are based on Gross Internal Area (GIA) but deducting any floor area where Landsec provides no utilities/heating and cooling. Floor area for restaurants where Landsec is supplying natural gas for cooking only is excluded (as the gas is also excluded).
- **Retail and leisure parks:** Retail and leisure park floor areas are calculated using the number of car park spaces. We have calculated an average car parking space size of 11.8m^2 , this assumes 5% are disabled bays. The number of spaces is multiplied by 11.8m^2 to calculate the base floor area. A further 20% is added to account for other landlord areas. Tenant floor area is included where Landsec supplies 100% of the energy to the demise. (The exceptions to this rule are Xscape Yorkshire and Xscape Milton Keynes which are treated as shopping centres due to their form and make-up.)
- **Shopping centres:** Shopping centre floor areas are calculated using the same methodology for retail and leisure parks leisure described above, however instead of using the additional 20% allocation for landlord areas, measured common parts area is used instead. Tenant floor area is included where Landsec supplies 100% of the energy feeding the demise.

These methods of calculating floor area have been utilised for both our 2013/14 baseline year as well as the current reporting period. They are used for all data reporting, including greenhouse gas emission reporting and our European Public Real Estate Association (EPRA) reporting.

Energy is reported as kWh/m² where kWh electricity equivalent is used. Carbon emissions are reported as kgCO₂e/m².

CO₂ is calculated using the 'location-based' method as described by the WRI Greenhouse Gas Protocol utilising annually published UK government conversion factors.

Waste

We report on sites where we have 'operational control', where we directly contract waste management services or appoint agents who control contracting of such services. Our commitment boundaries include only properties within our portfolio which are under our management, or 'operational control', for at least one year. Once properties complete at least one year under our 'operational control', they will be included at the start of the following reporting year. We include all waste services contracted by Landsec or appointed agents and the emissions associated with these, this includes services contracted on behalf of our customers.

Reported mixed recycling includes recyclable waste streams; glass, plastic, metals, paper, cardboard, non-hazardous WEEE and fluorescent lamps. Landsec produces small amounts of hazardous waste from its operations which is recorded at an individual site level and excluded from total waste reported due to its immateriality. We do however stringently manage our statutory obligations around hazardous waste from our combined Energy and Environment management system certified to ISO 14001:2015 and ISO 50001:2011 standards. Confidential paper waste is also reported for some locations where we hold the management contract. This includes our own head office.

We report on different properties for waste and recycling compared to energy and carbon. This occurs as some waste is collated in shared loading bays for multiple buildings and because we do not manage the waste facilities and services for every tenant. We cross reference and check the reported property list with that used for energy and carbon reporting.

Waste performance is not normalised. Waste and recycling are reported in tonnes and associated carbon emissions are reported as tCO₂e, utilising annually published UK government conversion factors.

Landfill tax avoided is calculated by multiplying the relevant annual landfill tax rate by the total tonnes of waste diverted from landfill for the same year, through other processes including recycling, composting, aerobic digestion and incineration.

Waste reporting for construction activities follows BREEAM waste reporting criteria, presenting the total volume of waste arising from the development, the recycling rates achieved and the diversion of waste from landfill. Data is compiled in this format by the nominated supply chain partner and submitted to Landsec on an annual basis. All construction waste from the commencement of the development until award of practical completion is included. Demolition and excavation waste are excluded.

Greenhouse gas emission reporting

We report our full greenhouse gas (GHG) emissions annually in accordance to the WRI GHG Protocol. Emissions are reported as tonnes of carbon dioxide equivalent (tCO₂e).

GHG emissions are broken down into three scopes, scope 1, 2 and 3.

Scope 1 emissions are direct emissions from activities controlled by us that release emissions into the atmosphere, whereas scope 2 emissions are indirect emissions associated with our consumption of purchased energy.

At Landsec, scope 1 comprises emissions from natural gas, refrigerant gases and company owned vehicles. Scope 2 emissions are from electricity, heating and cooling purchased for common areas and shared services. All material sources of scope 1 and 2 emissions are reported.

As the remaining sources (e.g. diesel used in generator testing) represent such a small proportion of total emissions we do not report them.

Both scope 1 and scope 2 emissions are reported using both the 'location-based' and 'market-based' accounting methods. Location-based emissions are reported using UK Government greenhouse gas reporting – conversion factors 2018. Since April 2017, at least 15% of our gas purchases are from green sources (i.e. biogas). Our market-based emissions from biogas are reported as following: the CH₄ or N₂O emissions from biogas are reported as scope 1, and the CO₂ portion of the biogas is reported outside of the scopes, as a memo line. Therefore, our scope 1 market-based emissions are based on the emissions from the remaining 85% of our gas purchases, as well as the CH₄ or N₂O conversion factors associated with biogas. Scope 2 market-based emissions are reported using the conversion factor associated with each individual electricity, heating and cooling supply.

Scope 3 emissions are those that are a consequence of our actions, but which occur at sources we do not own or control and which are not classed as scope 2 emissions. The GHG Protocol identifies 15 categories of which 8 are directly relevant for Landsec. The table below describes how each scope 3 category is treated in our reporting.

Scope 3 emission reporting methodology

Scope 3 category	Scope 3 category	Applicability	Methodology/justification for exclusion	Activity data source	Emission factor data source
1	Purchased goods and services	Yes	Emissions in this category are calculated by multiplying procurement spend by environmentally extended input output (EEIO) emission factors for each relevant economic sector of spend.	Primary procurement data from Landsec.	Carbon Trust, OPEN-IO Database
2	Capital goods	Yes	<p>Landsec's capital assets can be classed into two major groups, as follows:</p> <ol style="list-style-type: none"> 1. Developments – where the construction cost is >30% of the value of the asset 2. Portfolio Projects – where construction cost is <30% of the value of the asset <p>Landsec works with a consultant to estimate the total embodied carbon emissions for each of their Developments until completion. Emissions are then allocated to the reporting year based on a curve showing typical embodied emissions throughout the lifetime of a Development project.</p> <p>Embodied carbon data is not available for Portfolio Projects. For these projects, emissions are calculated by multiplying procurement spend during the reporting year by environmentally extended input output (EEIO) emission factors.</p>	<p>Developments Primary data of construction materials applied in developments.</p> <p>Portfolio Projects Primary procurement data from Landsec.</p>	<p>Developments RICS Whole Life Carbon Assessment for the Built Environment, 1st edition</p> <p>Portfolio Projects Carbon Trust, OPEN-IO Database</p>
3	Fuel and energy related activities	Yes	Calculation based on the location-based method of calculating scope 1 and 2 emissions.	Primary energy data from areas managed by Landsec.	UK Government greenhouse gas reporting – Conversion factors 2018
4	Upstream transportation and distribution	Yes	Procurement spend associated with upstream transportation and distribution has been matched to EEIO emission factors and the carbon emissions have been calculated. These emissions have not been split out but are grouped under the Purchased Goods and Services category.	Primary procurement data from Landsec.	Carbon Trust, OPEN-IO Database
5	Waste generated in operations	Yes	Calculated by multiplying weight of waste and treatment method by UK emission factor.	Waste data from waste contractors.	UK Government greenhouse gas reporting – Conversion factors 2018
6	Business travel	Yes	Calculated by multiplying distance and type of travel by UK emission factor.	Distance data provided by travel provider, combined with expenses data.	UK Government greenhouse gas reporting – Conversion factors 2018
7	Employee commuting	Yes	Number of FTEs multiplied by average commuting distances and distribution across transportation modes. These distances were multiplied by transport emission factors published by UK Department for Business, Energy and Industrial Strategy (BEIS).	FTE data from Landsec.	UK Government – National Travel Survey 2015 UK Government Greenhouse gas reporting – Conversion factors 2018
8	Upstream leased assets	No (Covered in scope 1 and 2)	Reported as scope 1 and 2 emissions.	N/A	N/A

Scope 3 emission reporting methodology continued

Scope 3 category	Scope 3 category	Applicability	Methodology/justification for exclusion	Activity data source	Emission factor data source
9	Downstream transportation and distribution	No	Landsec is a Real Estate Investment Trust who develop and manage property assets, which we lease to our customers. We do not manufacture products and therefore there are no emissions to report under this category.	N/A	N/A
10	Processing of sold products	No	Landsec is a Real Estate Investment Trust who develop and manage property assets, which we lease to our customers. We do not manufacture products and therefore there are no emissions to report under this category.	N/A	N/A
11	Use of sold products	No	Landsec is a Real Estate Investment Trust who develop and manage property assets, which we lease to our customers. We do not manufacture products and therefore there are no emissions to report under this category.	N/A	N/A
12	End-of-life treatment of sold products	No	Landsec is a Real Estate Investment Trust who develop and manage property assets, which we lease to our customers. We do not manufacture products and therefore there are no emissions to report under this category.	N/A	N/A
13	Downstream leased assets	Yes	<p>Tenants which Landsec procures energy for and recharge Calculated by metered energy consumption from tenants multiplied by UK emission factors.</p> <p>Tenants which procure their own energy Actual energy consumption data is requested to tenants that occupy large spaces, particularly FRIs</p> <p>When there is no actual consumption data from tenants, emissions are calculated by multiplying the Net Lettable Area (NLA) of let space Landsec owns but does not have operational control over, by an energy benchmark. The benchmark is drawn from '2017 Real Estate Environmental Benchmarks' published by BBP in January 2018, relating to 2016/2017 data. The benchmark used is the typical practice electricity and gas intensity for offices and enclosed shopping centre.</p>	<p>Landsec procured Primary data from tenants.</p> <p>Tenant procured Primary data from tenants. Data on Net Lettable Areas (NLA) of let spaces.</p>	<p>Landsec procured UK Government greenhouse gas reporting – Conversion factors 2018.</p> <p>Tenant procured UK Government greenhouse gas reporting – Conversion factors 2018. '2017 Real Estate Environmental Benchmarks' (BBP REEB).</p>
14	Franchises	No	Landsec is a Real Estate Investment Trust who develop and manage property assets, which we lease to our customers. There are no franchises within the business and therefore there are no emissions to report under this category.	N/A	N/A
15	Investments	No	Landsec is a Real Estate Investment Trust who develop and manage property assets, which we lease to our customers. There are no investments in addition to the investment in our own property portfolio and there are therefore no emissions to report under this category. Any scope 3 emissions associated with our portfolio are reported under the appropriate emissions categories.	N/A	N/A

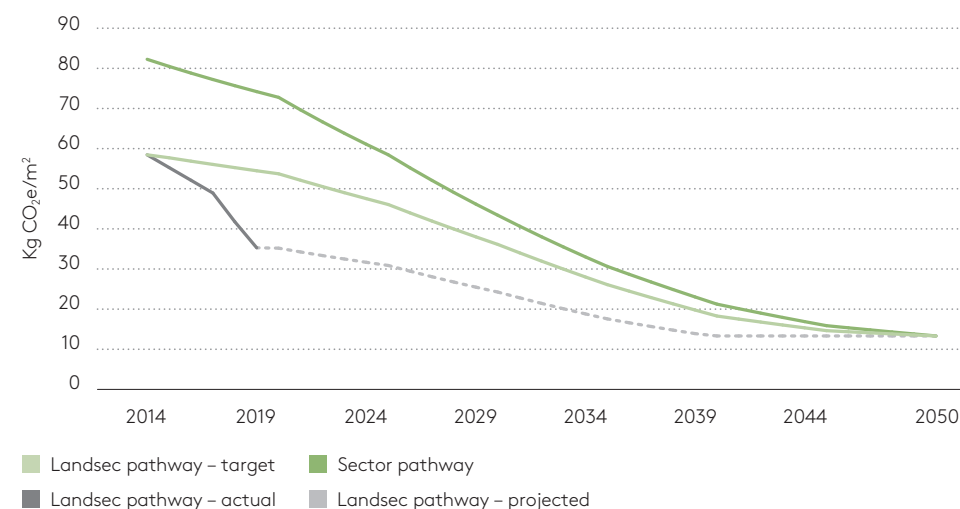
Corporate commitment performance

Commitment – Reduce carbon intensity (kgCO₂/m²) by 40% by 2030 compared to a 2013/14 baseline, for property under our management for at least two years, with a longer-term ambition of an 80% reduction by 2050 Table 1

		London			Retail			Total			
	Units of measure	2013/2014 Baseline	2018/19	% change	2013/2014 Baseline	2018/19	% change	2013/2014 Baseline	2017/18	% change	
Greenhouse Gas Emissions	annual tonnes tCO ₂ e	Scope 1	6,530	6,271	(4%)	4,545	3,570	(21%)	11,075	9,840	(11%)
		Scope 2	21,742	14,115	(5%)	16,395	11,277	(31%)	38,137	25,392	(33%)
		Scope 3	24,115	13,305	(45%)	5,820	5,795	0%	29,935	19,100	(36%)
		Total GHG Emissions	52,387	33,691	(36%)	26,761	20,641	(23%)	79,147	54,333	(31%)
	tCO ₂ e /m ² /year	GHG-Int	0.110	0.068	(38%)	0.031	0.020	(35%)	0.059	0.035	(39.8%)
	m ²	Portfolio Area	476,400	495,813	4%	873,905	1,043,643	19%	1,350,305	1,539,456	(14%)

Landsec carbon emissions intensity pathway

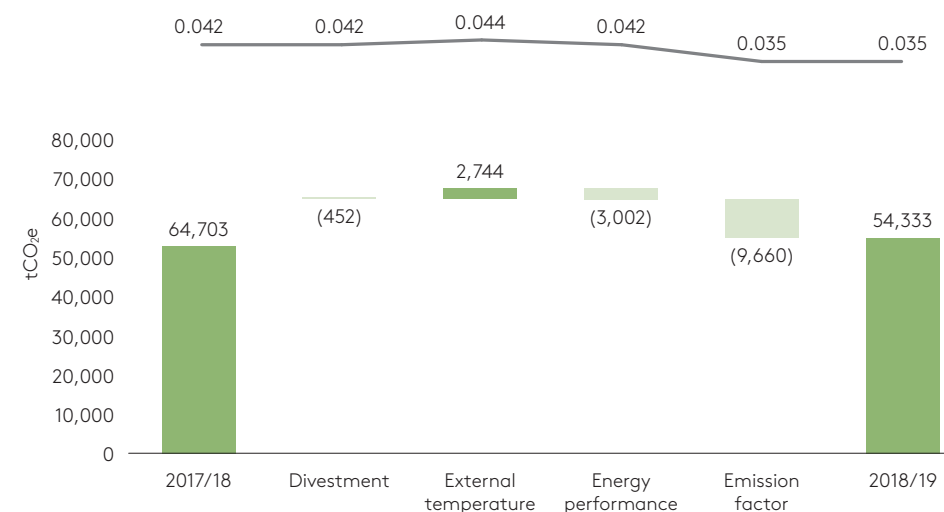
Chart 2



We've reduced portfolio carbon intensity by 39.8% compared to our 2013/14 baseline. This chart indicates our performance against the required science-based decarbonisation pathways of our portfolio and the wider sector. We are currently significantly outperforming our target pathway and are on track for our 2030 commitment.

Carbon performance – year on year driving factors

Chart 3



Our carbon intensity reduction has been achieved through a combination of energy efficiency projects, changes in our portfolio and changes in the UK's energy generation mix. This waterfall diagram shows the main driving factors behind the changes in our carbon performance compared with previous year.

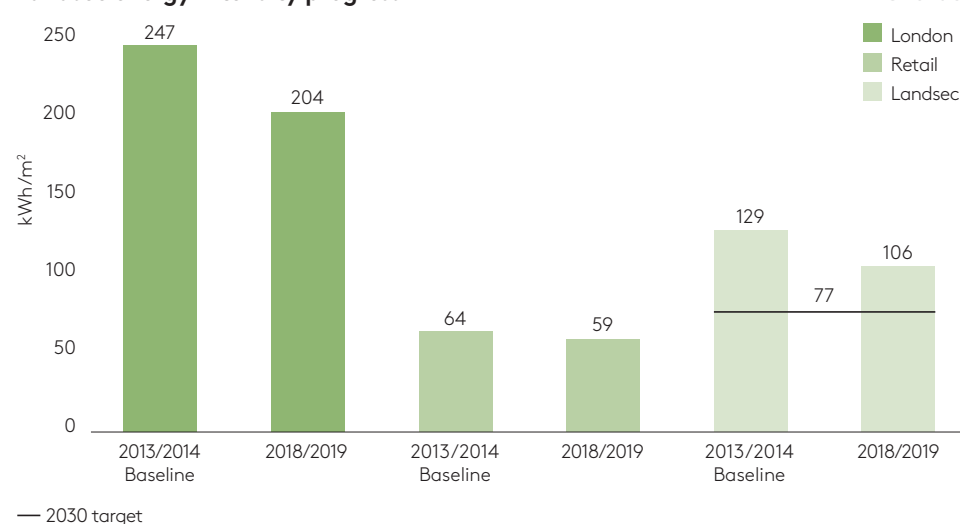
Commitment – Reduce energy intensity (kWh/m²) by 40% by 2030 compared to a 2013/14 baseline, for property under our management for at least two years

Table 4

		London			Retail			Total		
Units of measure		2013/2014 Baseline	2018/19	% change	2013/2014 Baseline	2018/19	% change	2013/2014 Baseline	2018/19	% change
Energy										
	for landlord shared services	13,964,698	14,190,413	2%	9,879,340	8,023,123	(19%)	23,844,039	22,213,536	(7%)
	(sub)metered exclusively to tenants	73,836	3,954,581	5256%	111,842	1,759,551	1473%	185,678	5,714,132	2977%
	Total landlord-obtained fuels	14,038,535	18,144,995	29%	9,991,182	9,782,674	(2%)	24,029,717	27,927,668	16%
	for landlord shared services	49,837,264	46,347,585	(7%)	36,817,835	39,838,991	8%	86,655,099	86,186,576	(1%)
	(sub)metered exclusively to tenants	53,825,512	36,533,835	(32%)	9,467,502	11,799,299	25%	63,293,014	48,333,134	(24%)
	Total landlord-obtained electricity	103,662,776	82,881,420	(20%)	46,285,337	51,638,289	12%	149,948,113	134,519,710	(10%)
	for landlord shared services	63,801,963	60,537,999	(5%)	46,697,175	47,862,113	2%	110,499,138	108,400,112	(2%)
	(sub)metered exclusively to tenants	53,899,348	40,488,417	(25%)	9,579,344	13,558,850	42%	63,478,692	54,047,266	(15%)
	Total landlord-obtained energy	117,701,311	101,026,415	(14%)	56,276,519	61,420,963	9%	173,977,830	162,447,378	(7%)
	kWh/m ² /year									
	Energy intensity	247	204	(17.5%)	64	59	(8.6%)	129	106	(18.2%)
	m ²									
	Portfolio Area	476,400	495,813	4%	873,905	1,043,643	19%	1,350,305	1,539,456	14%

Landsec energy intensity progress

Chart 5

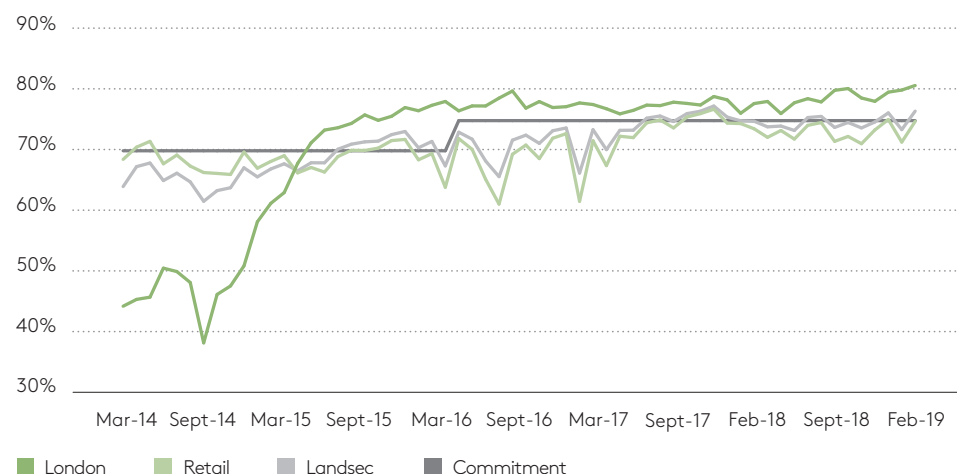


We've reduced portfolio energy intensity by 18.2% compared to our 2013/14 baseline, keeping us on track for our 2030 commitment. This chart shows the energy intensity improvements we have made in our London and Retail portfolios and Landsec as a whole. We've reduced London portfolio intensity by 17.5% since 2013/14. Our Retail portfolio intensity has reduced by 8.6%.

Commitment – Send zero waste to landfill with at least 75% recycled across all our operational activities by 2020

Chart 6

Landsec monthly portfolio recycling rates 2014-2019



We continue to divert 100% from landfill and are recycling 74.7% of waste. Our London portfolio continues to divert 100% from landfill with 79% of waste recycled. In our Retail portfolio, we are still diverting 100% from landfill and recycling 73%.

Energy and Carbon Reporting

This table outlines the location-based emission factors used for the 2018/19 year and how they compare with previous year.

CO₂e conversion factors – Location based¹

Table 7

	2017/18	2018/19	% change
Electricity (kWh)	0.44572	0.35276	(20.9%)
Natural Gas (kWh)	0.21201	0.20953	(1.2%)

1. Combined conversion factor including well-to-tank and transmission and distribution factors.

Landsec – Scope 1 and 2 emissions 2017-2019

Table 8

Scope 1 and 2 mandatory reporting Emissions	2017	Location based emission factors 2018	2019
Scope 1 tCO ₂ e	16,477	14,755	11,490
Scope 2 tCO ₂ e	47,066	36,620	30,518
Scope 1 and 2 tCO ₂ e	63,543	51,374	42,008

Intensity

Scope 1 and 2 tCO ₂ e/m ²	0.038	0.028	0.023
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Scope 1 and 2 mandatory reporting Emissions

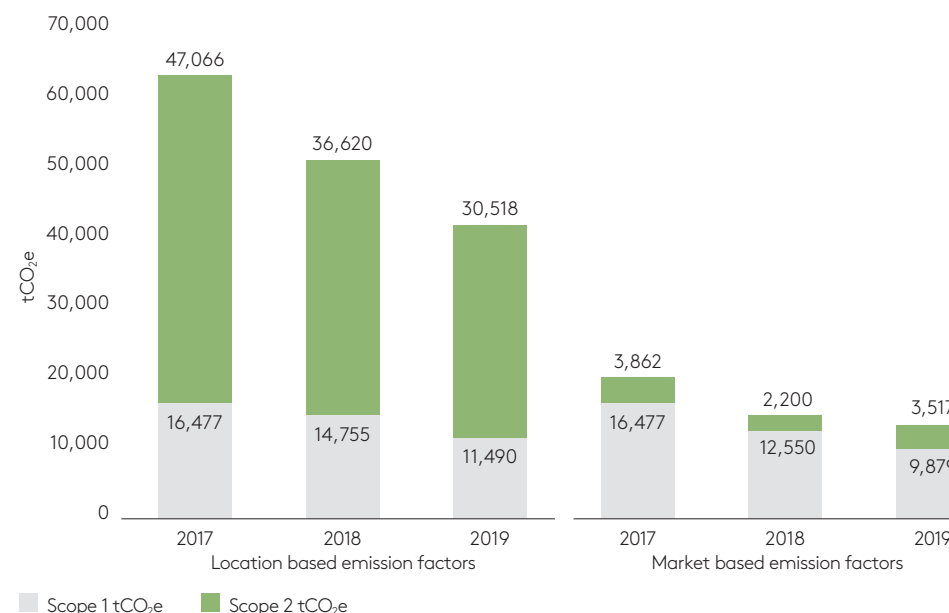
	2017	Market based emission factors 2018	2019
Scope 1 tCO ₂ e	16,477	12,550	9,879
Scope 2 tCO ₂ e	3,862	2,200	3,517
Scope 1 and 2 tCO ₂ e	20,338	14,749	13,396

Intensity

Scope 1 and 2 tCO ₂ e/m ²	0.012	0.008	0.007
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Landsec Scope 1 and 2 emissions 2017-2019

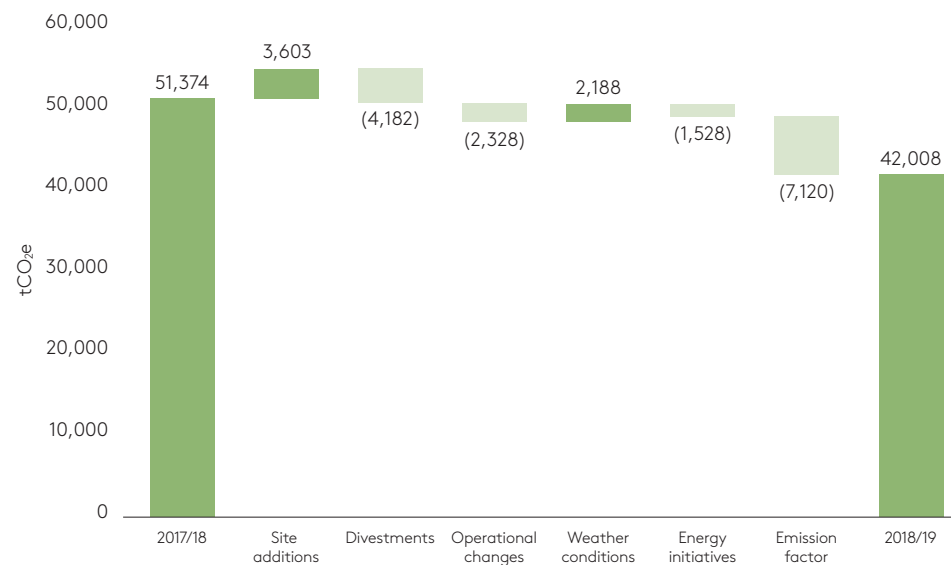
Chart 9



Scope 1 and 2 GHG emissions using location-based emission factors have dropped by 18% compared with previous year. This has been primarily driven by a reduction in UK's emission factors due a cleaner energy mix. Additionally, with more accurate sub-metering of tenant energy consumption, we've been able to more accurately allocate scope 3 emissions associated with energy consumption to tenants and taken it out of our scope 1 and 2 emissions. The detailed breakdown of main factors driving the change in our scope 1 and scope 2 can be seen in chart page 10. In terms of market-based emissions we have seen a reduction of 9%. This has been due to increasing the number of sites supplied with 100% renewable electricity via our contract with Smartest Energy and at least 15% of our total gas purchase from green sources. Detailed full scope 3 reporting is included on page 14.

Landsec Scope 1 and 2 emissions – Location based

Chart 10



Landsec – Energy consumption 2017-2019

Table 11

Energy consumption (kWh)		2017	2018	2019
Natural Gas	for landlord shared service	79,457,220	70,393,965	53,714,180
	(sub)metered exclusively to tenants	14,612,292	15,943,826	27,595,980
	Total Natural Gas consumption	94,069,513	86,337,791	81,310,160
Electricity	for landlord shared services	117,500,848	101,815,934	102,604,274
	(sub)metered exclusively to tenants	51,473,041	65,691,130	64,985,746
	Total Electricity consumption	168,973,888	167,507,064	167,590,020
District Heating and Cooling¹	for landlord shared services	–	5,238,035	9,607,784
	(sub)metered exclusively to tenants	–	6,641,102	7,063,310
	Total Heating and Cooling consumption	–	11,879,137	16,671,094
Energy intensity (kWh/m²)		157	144	142

1. District Heating & Cooling was not consumed in 2016/17.

This table shows the absolute energy consumption with a breakdown by landlord and tenant consumption. In 2018-19, absolute energy intensity has reduced by 1.1% compared with previous year. This has been achieved by savings realised from our active energy management programme. This year, we identified and committed to implement £3m worth of energy reduction projects across our portfolio. For instance, we replaced all car park lampposts with LEDs at our Bluewater shopping centre, delivering a saving of 832.458 kWh in the first six months. More information on our energy programme can be found on page 41 of the Annual Report.

Every year we report our full carbon footprint. We believe it is important to do so to fully understand and disclose the total emissions associated with our business. This table provides a breakdown of our entire emission inventory including scope 3.

Landsec Scope 1, 2 and 3 emissions 2017-2019

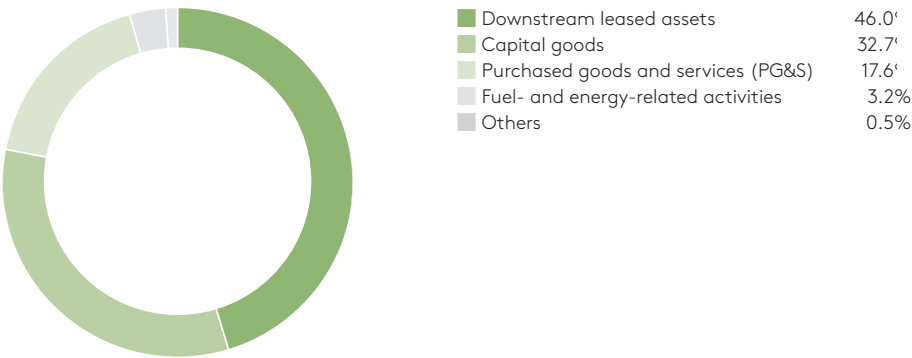
Table 12

GHG scope	Category	2016-17		2017-18		2018-19	
		Emissions (t CO ₂ e)	% of total value chain	Emissions (t CO ₂ e)	% of total value chain	Emissions (t CO ₂ e)	% of total value chain
Scope 1	Scope 1	16,477	2.4%	14,755	3.6%	11,490	3.6%
Scope 2	Scope 2	47,066	6.9%	36,620	9.1%	30,518	9.7%
Scope 3	1. Purchased goods and services (PG&S)	61,647	9.0%	59,936	14.8%	48,123	15.3%
	2. Capital goods	283,570	41.6%	128,551	31.8%	89,149	28.3%
	3. Fuel- and energy-related activities	13,982	2.0%	11,699	2.9%	8,764	2.8%
	4. Upstream transportation and distribution	Grouped under PG&S	0.0%	Grouped under PG&S	0.0%	Grouped under PG&S	0.0%
	5. Waste generated in operations	740	0.1%	769	0.2%	785	0.2%
	6. Business travel	360	0.1%	366	0.1%	324	0.1%
	7. Employee commuting	182	0.0%	182	0.0%	180	0.1%
	8. Upstream leased assets	Not applicable	0.0%	Not applicable	0.0%	Not applicable	0.0%
	9. Downstream transportation and distribution	Not applicable	0.0%	Not applicable	0.0%	Not applicable	0.0%
	10. Processing of sold products	Not applicable	0.0%	Not applicable	0.0%	Not applicable	0.0%
	11. Use of sold products	Not applicable	0.0%	Not applicable	0.0%	Not applicable	0.0%
	12. End-of-life treatment of sold products	Not applicable	0.0%	Not applicable	0.0%	Not applicable	0.0%
	13. Downstream leased assets	258,428	37.9%	151,596	37.5%	125,612	39.9%
	14. Franchises	Not applicable	0.0%	Not applicable	0.0%	Not applicable	0.0%
	15. Investments	Not applicable	0.0%	Not applicable	0.0%	Not applicable	0.0%
Total emissions		682,452		404,474		314,945	

The GHG Protocol splits scope 3 emissions into 15 categories. We assessed each one individually and decided which ones were applicable to our business. For the categories that are applicable we have obvious hot spots which are highlighted below:

Scope 3 emissions by category

Chart 13

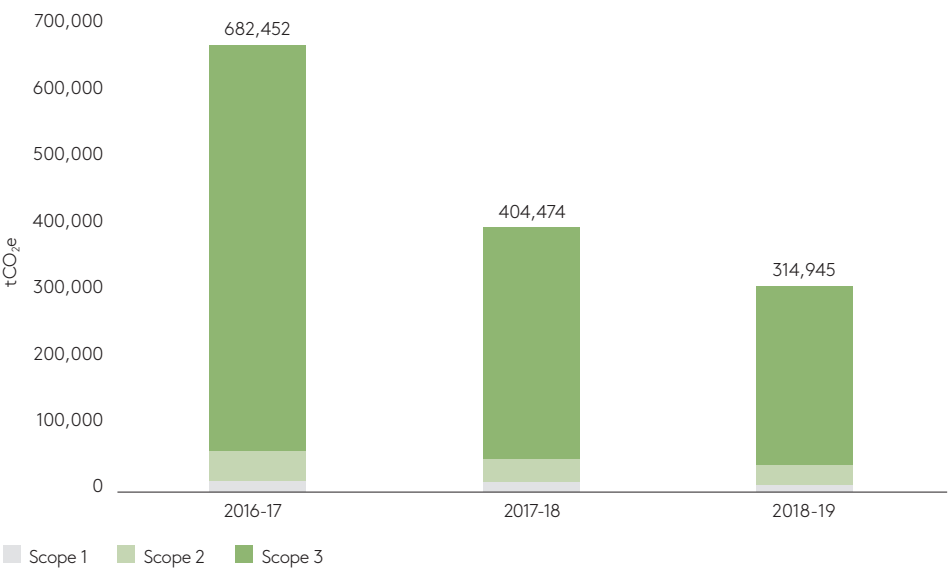


The two largest contributing categories are Capital goods and Downstream leased assets, making up 68.2% of our total emissions.

Capital goods include the emissions associated with the manufacture and transport of materials used within our development activity and Downstream leased assets are those associated with our customers within our assets. In addition to working closely with our supply partners and customers to reduce these emissions, there are additional reasons for the year on year reductions in both categories. For Capital goods, due to the current point in the market cycle there are very few current developments which are undergoing construction. For Downstream leased assets, reductions are primarily associated with changes in UK's emission factors.

Landsec – Total carbon emissions 2017-2019

Chart 14



European Public Real Estate Association (EPRA) Sustainability Performance Measures reporting

Landsec is committed to EPRA Best Practice Recommendations for Sustainability reporting. This common reporting standard is a framework developed by property companies to promote transparency in sustainability reporting. Landsec has won a gold award for EPRA disclosure every year since 2014.

We report on 15 EPRA Environmental Sustainability Performance Measures, covering energy consumption, GHG emissions, water usage, waste generation and treatment method and sustainability certificate attainment.

Each EPRA impact area is reported on in two portfolios; absolute and like-for-like.

- **Absolute portfolio:** The absolute portfolio includes all properties where Landsec has 'operational control', where we purchase energy or appoint agents who control the purchase of energy. In 2018/19, approximately 84% of all portfolio was under our 'operational control', and therefore included in the absolute portfolio disclosures.
- **Like-for-like portfolio:** The like-for-like portfolio is aligned with our financial reporting like-for-like portfolio, based on the EPRA Financial BPR like-for-like definition for rental growth reporting. It includes all properties which have been in the portfolio for at least 12 months prior to the reporting period, but excluding those which were acquired, sold, or included in the development pipeline at any time since. In 2018/19, approximately 82% of all like-for-like portfolio was under our 'operational control', and therefore included in the like-for-like portfolio disclosures.

We also report on seven EPRA Social Performance Measures at corporate level, including employee diversity, training, development, employee turnover and health & safety. Figures associated with EPRA Governance Performance Measures are disclosed in the Annual Report on pages 64-80.

Absolute portfolio – Energy

Table 15

Impact area	EPRA Sustainability Performance Measures (Environment)				London			Retail			Landsec			
	EPRA codes	Units of measure	Indicator		2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	
Energy	Elec – Abs kWh	Electricity	for landlord shared services		68,733,955	54,403,135	55,685,068	48,766,893	47,412,799	46,919,206	117,500,848	101,815,934	102,604,274	
			(sub)metered exclusively to tenants		41,424,328	49,031,565	43,837,437	10,048,713	16,659,565	21,148,309	51,473,041	65,691,130	64,985,746	
			Total landlord-obtained electricity		110,158,282	103,434,700	99,522,504	58,815,606	64,072,364	68,067,515	168,973,888.	167,507,064	167,590,020	
			Proportion of landlord-obtained electricity from renewable sources		91%	99%	97%	83%	82%	96%	88%	93%	96%	
	DH&C – Abs	kWh	District Heating and Cooling	for landlord shared services			5,238,035	9,607,784					5,238,035	9,607,784
				(sub)metered exclusively to tenants			6,641,102	7,063,310					6,641,102	7,063,310
				Total landlord-obtained heating and cooling			11,879,137	16,671,094					11,879,137	16,671,094
				Proportion of landlord-obtained heating and cooling from renewable sources			–	–					–	–
	Fuels – Abs	kWh	Fuels	for landlord shared services		57,398,425	50,369,175	34,310,018	22,058,795	20,024,790	19,404,162	79,457,220	70,393,965	53,714,180
				(sub)metered exclusively to tenants		2,716,191	2,943,692	13,654,043	11,896,101	13,000,134	13,941,937	14,612,292	15,943,826	27,595,980
				Total landlord-obtained fuels		60,114,616	53,312,867	47,964,061	33,954,896	33,024,923	33,346,099	94,069,513	86,337,791	81,310,160
				Proportion of landlord-obtained fuels from renewable sources		0%	17%	16%	0%	17%	16%	0%	17%	16%
	Total energy – Abs	kWh	Total energy	for landlord shared services		126,132,380	110,010,345	99,602,870	70,825,688	67,437,589	66,323,368	196,958,068	177,447,934	165,926,238
				(sub)metered exclusively to tenants		44,140,519	58,616,360	64,554,790	21,944,814	29,659,699	35,090,246	66,085,333	88,276,059	99,645,036
				Total landlord-obtained energy		170,272,898	168,626,705	164,157,659	92,770,502	97,097,287	101,413,614	263,043,401	265,723,992	265,571,274
				Proportion of landlord-obtained energy from renewable sources		59%	66%	64%	52%	60%	70%	57%	64%	66%
	Energy-Int	kWh/m²/ year	Energy intensity	Total building energy intensity		279	266	282	87	80	79	157	144	142

2018/19 – % of total assets included: 100%.

2018/19 – % of data estimated: 0.1%. In this disclosure, estimation refers to filling either invoice or meter reading gaps, not to whether invoices are based on 'estimated' or 'actual' readings.

Like-for-Like portfolio – Energy

Table 16

Impact area	EPRA Sustainability Performance Measures (Environment)				London			Retail			Landsec		
	EPRA codes	Units of measure	Indicator		2017/18	2018/19	% change	2017/18	2018/19	% change	2017/18	2018/19	% change
Energy	Elec – LfL	kWh	Electricity	for landlord shared services	41,965,253	47,898,319	14%	45,396,037	41,688,594	(8%)	87,361,290	89,586,914	3%
				(sub)metered exclusively to tenants	40,841,710	35,974,211	(12%)	10,551,850	11,799,299	12%	51,393,560	47,773,510	(7%)
				Total landlord-obtained electricity	82,806,963	83,872,530	1%	55,947,888	53,487,893	(4%)	138,754,850	137,360,423	(1%)
				Proportion of landlord-obtained electricity from renewable sources	99.9%	99.8%	0%	93%	99%	7%	97%	100%	3%
	Fuels – LfL	kWh	Fuels	for landlord shared services	38,851,183	33,579,021	(14%)	20,024,790	19,404,162	(3%)	58,875,973	52,983,182	(10%)
				(sub)metered exclusively to tenants	2,759,690	9,582,187	247%	12,562,918	13,343,429	6%	15,322,608	22,925,616	50%
				Total landlord-obtained fuels	41,610,873	43,161,208	4%	32,587,707	32,747,590	0%	74,198,581	75,908,798	2%
				Proportion of landlord-obtained fuels from renewable sources	18%	16%	(9%)	17%	16%	(5%)	18%	16%	(7%)
	Total energy – LfL	kWh	Total energy	for landlord shared services	80,816,436	81,477,340	1%	65,420,827	61,092,756	(7%)	146,237,263	142,570,096	(3%)
				(sub)metered exclusively to tenants	43,601,400	45,556,398	4%	23,114,768	25,142,728	9%	66,716,168	70,699,126	6%
				Total landlord-obtained energy	124,417,836	127,033,738	2%	88,535,595	86,235,484	(3%)	212,953,431	213,269,222	0%
				Proportion of landlord-obtained energy from renewable sources	73%	71%	(1%)	65%	68%	4%	69%	70%	1%
	Energy-Int	kWh/m ² /year	Energy intensity	Total building energy intensity	270	276	2%	84	82	(3%)	141	141	0.1%

2018/19 – % of total LfL assets included: 100%.

2018/19 – % of data estimated: 0.1%. In this disclosure, estimation refers to filling either invoice or meter reading gaps, not to whether invoices are based on ‘estimated’ or ‘actual’ readings.

DH&C – LfL is not applicable to Landsec.

Absolute portfolio – GHG emissions (Energy)

Table 17

Impact area	EPRA Sustainability Performance Measures (Environment)				London			Retail			Landsec		
	EPRA codes	Units of measure	Indicator		2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19
Greenhouse Gas Emissions	GHG – Dir – Abs	annual tonnes CO ₂ e	Direct	Scope 1 (location-based)	10,561	9,276	6,312	4,059	3,688	3,570	14,620	12,964	9,881
				Scope 1 (market-based)	10,561	7,681	5,281	4,059	3,078	2,987	14,620	10,759	8,268
	GHG – Indir – Abs		Indirect	Scope 2 (location-based)	26,858	20,114	17,485	20,207	16,505	13,033	47,066	36,620	30,518
				Scope 3 (location-based)	36,809	30,778	24,884	14,750	15,160	14,086	51,560	45,938	38,971
				Scope 2 (market-based)	1,626	1,149	2,762	2,236	1,051	755	3,862	2,200	3,517
				Scope 3 (market-based)	19,438	3,898	5,560	10,858	3,739	3,150	30,296	7,638	8,711
	GHG-Int	tCO ₂ e/m ² /year	GHG Intensity	Total GHG emission intensity (location-based)	0.121	0.095	0.084	0.037	0.029	0.024	0.068	0.052	0.043
				Total GHG emission intensity (market-based)	0.052	0.020	0.023	0.016	0.006	0.005	0.029	0.011	0.011

2018/19 – Market-based emissions outside of scope (tCO₂e): 1,663.06.

1. Since April 2017, biogas accounts for 15% of total gas purchases. The 'market-based' CO₂ portion of the biofuel combustion is reported separately from the scopes.

2018/19 – % of total LfL assets included: 100%.

2018/19 – % of data estimated: 0.1%. In this disclosure, estimation refers to filling either invoice or meter reading gaps, not to whether invoices are based on 'estimated' or 'actual' readings.

Like-for-Like portfolio – GHG emissions (Energy)

Table 18

Impact area	EPRA Sustainability Performance Measures (Environment)				London			Retail			Landsec		
	EPRA codes	Units of measure	Indicator		2017/18	2018/19	% change	2017/18	2018/19	% change	2017/18	2018/19	% change
Greenhouse Gas Emissions	GHG – Dir – Abs	annual tonnes CO ₂ e	Direct	Scope 1 (location-based)	7,155	6,177	(14%)	3,688	3,570	(3%)	10,843	9,747	(10%)
				Scope 1 (market-based)	5,877	6,008	2%	3,078	3,289	7%	8,954	9,298	4%
	GHG – Indir – Abs		Indirect	Scope 2 (location-based)	14,739	13,547	(8%)	15,796	11,552	(27%)	30,535	25,099	(18%)
				Scope 3 (location-based)	23,819	18,892	(21%)	12,155	10,298	(15%)	35,974	29,190	(19%)
				Scope 2 (market-based)	8	40	409%	922	153	(83%)	930	193	(79%)
				Scope 3 (market-based)	1,368	2,562	87%	2,649	2,795	6%	4,017	5,357	33%
	GHG-Int	tCO ₂ e/m ² /year	GHG Intensity	Total GHG emission intensity (location-based)	0.099	0.084	(16%)	0.030	0.024	(20%)	0.051	0.042	(17%)
				Total GHG emission intensity (market-based)	0.017	0.017	(3%)	0.006	0.006	(11%)	0.009	0.009	(4%)

2018/19 – Market-based emissions outside of scope (tCO₂e): 1,553.69.

1. Since April 2017, biogas accounts for 15% of total gas purchases. The 'market-based' CO₂ portion of the biofuel combustion is reported separately from the scopes.

2018/19 – % of total assets included: 100%.

2018/19 – % of data estimated: 0.1%. In this disclosure, estimation refers to filling either invoice or meter reading gaps, not to whether invoices are based on 'estimated' or 'actual' readings.

Absolute portfolio – water, waste and refrigerants

Table 19

Impact area	EPRA Sustainability Performance Measures (Environment)				London			Retail			Landsec		
	EPRA codes	Units of measure	Indicator		2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19
Water	Water – Abs	m ³	Water	for landlord shared services	406,688	354,894	337,978	443,129	250,200	295,465	849,817	605,094	633,444
				(sub)metered exclusively to tenants	21,786	71,120	72,436	207,262	378,619	339,098	229,048	449,740	411,534
				Total landlord-obtained water	428,473	426,015	410,415	650,391	628,820	634,563	1,078,865	1,054,834	1,044,978
	Water-Int	m ³ /m ² /year	Water intensity	Total building water intensity	0.70	0.67	0.71	0.61	0.52	0.49	0.64	0.57	0.56
Waste	Waste – Abs (hazardous)	annual metric tonnes	Total weight of waste produced	Hazardous waste ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Waste – Abs (non-hazardous)			Non-hazardous waste	8,893	9,211	9,328	26,041	26,136	27,398	34,934	35,347	36,725
	Waste – Abs (recycled)		Total weight of waste by disposal route	Recycled	6,908	7,165	7,358	17,824	18,773	19,673	24,732	25,937	27,031
	Waste – Abs (EfW)			Energy from Waste	1,985	2,047	1,970	8,180	7,363	7,725	10,165	9,410	9,694
	Waste – Abs (landfill)			Landfill	0	0	0	37	0	0	37	0	0
	Waste – Abs (recycled)	proportion of total waste %	Proportion of waste by disposal route	Recycled	78%	78%	79%	68%	72%	72%	71%	73%	74%
	Waste – Abs (EfW)			Energy from Waste	22%	22%	21%	31%	28%	28%	29%	27%	26%
	Waste – Abs (landfill)			Landfill	0%	0%	0%	0%	0%	0%	0%	0%	0%
Refrigerant gases	Refrigerant gases – Abs	annual tonnes CO ₂ e	Direct	Refrigerant gases – annual metric tonnes CO ₂ e	1,311	1,206	1,069	530	556	500	1,841	1,763	1,569

1. The amount of hazardous waste produced in our properties is immaterial. Please see page 6 for methodology.

2018/19 – % of total assets included: Water – 100%, Waste – 100%, Refrigerant gases – 75%.

2018/19 – % of data estimated: Water – 2%, Waste – 0%, Refrigerant gases – 37% (estimated using the 'screening' methodology).

Like-for-Like portfolio – water, waste and refrigerants

Table 20

Impact area	EPRA Sustainability Performance Measures				London			Retail			Landsec		
	EPRA codes	Units of measure	Indicator		2017/18	2018/19	% change	2017/18	2018/19	% change	2017/18	2018/19	% change
Water	Water – LfL	m ³	Water	for landlord shared services	269,075	258,734	(4%)	224,811	258,734	15%	493,886	517,468	5%
				(sub)metered exclusively to tenants	49,144	42,568	(13%)	357,340	309,662	(13%)	406,484	352,230	(13%)
				Total landlord-obtained water	318,219	279,800	(12%)	582,150	568,396	(2%)	900,369	848,196	(6%)
	Water-Int	m ³ /m ² /year	Water intensity	Total building water intensity	0.69	0.61	(12%)	0.55	0.54	(2%)	0.60	0.56	(6%)
Waste	Waste – LfL (hazardous)	annual metric tonnes	Total weight of waste produced	Hazardous waste ¹	N/A	N/A		N/A	N/A		N/A	N/A	
	Waste – LfL (non-hazardous)			Non-hazardous waste	7,062	7,129	1%	24,963	24,152	(3%)	32,025	31,281	(2%)
	Waste – LfL (recycled)		Total weight of waste by disposal route	Recycled	5,418	5,575	3%	17,944	17,644	(2%)	23,362	23,218	(1%)
	Waste – LfL (EfW)			Energy from Waste	1,644	1,555	(5%)	7,019	6,508	(7%)	8,663	8,063	(7%)
	Waste – LfL (landfill)			Landfill	0	0	0%	0	0	0%	0	0	0%
	Waste – LfL (recycled)	proportion of total waste %	Proportion of waste by disposal route	Recycled	77%	78%	2%	72%	73%	2%	73%	74%	2%
	Waste – LfL (EfW)			Energy from Waste	23%	22%	(6%)	28%	27%	(4%)	27%	26%	(5%)
	Waste – LfL (landfill)			Landfill	0%	0%	0%	0%	0%	0%	0%	0%	0%
Refrigerant gases	Refrigerant gases – LfL	annual tonnes CO ₂ e	Direct	Refrigerant gases – annual metric tonnes CO ₂ e	919	840	(9%)	547	303	(45%)	1,465	1,143	(22%)

1. The amount of hazardous waste produced in our properties is immaterial. Please see page 6 for methodology.

2018/19 – % of total assets included: Water – 100%, Waste – 100%, Refrigerant gases – 75%.

2018/19 – % of data estimated: Water – 2%, Waste – 0%, Refrigerant gases – 47% (estimated using the 'screening' methodology).

Absolute portfolio – GHG emissions (other)¹

Table 21

Impact area	EPRA Sustainability Performance Measures				London			Retail			Landsec		
	EPRA codes	Units of measure	Indicator		2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19
Greenhouse Gas Emissions	GHG – Dir – Abs	annual tonnes CO ₂ e	Direct	Scope 1	1,327	1,234	1,108	530	556	500	1,857	1,790	1,608
	GHG – Indir – Abs		Indirect	Scope 3	1,060	1,014	955	1,455	1,230	1,253	2,516	2,244	2,209

1. Scope 1 includes emissions from refrigerants and passenger vehicles. Scope 3 includes emissions from water, waste and business travel.

2018/19 – % of total assets included: Water – 100%, Waste – 100%, Refrigerant gases – 75%.

2018/19 – % of data estimated: Water – 2%, Waste – 0%, Refrigerant gases – 37% (estimated using the 'screening' methodology).

Like for Like portfolio – GHG emissions (other)¹

Table 22

Impact area	EPRA Sustainability Performance Measures				London			Retail			Landsec		
	EPRA codes	Units of measure	Indicator		2017/18	2018/19	% change	2017/18	2018/19	% change	2017/18	2018/19	% change
Greenhouse Gas Emissions	GHG – Dir – LfL	annual tonnes	Direct	Scope 1	919	840	(9%)	547	303	(45%)	1,465	1,143	(22%)
	GHG – Indir – LfL	CO ₂ e	Indirect	Scope 3	488	447	(9%)	1,156	1,114	(4%)	1,644	1,561	(5%)

1. Scope 1 includes emissions from refrigerants. Scope 3 includes emissions from water and waste.

2018/19 – % of total assets included: Water – 100%, Waste – 100%, Refrigerant gases – 75%.

2018/19 – % of data estimated: Water – 2%, Waste – 0%, Refrigerant gases – 47% (estimated using the 'screening' methodology).

Landsec headquarter environmental performance

Table 23

Impact area	EPRA Sustainability Performance Measures (Environment)					Landsec HQ	
	EPRA codes	Units of measure	Indicator			2017/18	2018/19
Energy	Elec – Abs	kWh	Electricity	Total landlord-obtained electricity		433,901	367,155
				Proportion of landlord-obtained electricity from renewable sources		100%	100%
	Fuels – Abs	kWh	Fuels	Total landlord-obtained fuels		495,956	535,961
				Proportion of landlord-obtained fuels from renewable sources		18%	16%
	Total energy – Abs	kWh	Energy	Total landlord-obtained energy		929,858	903,116
				Proportion of landlord-obtained energy from renewable sources		23%	50%
Greenhouse Gas Emissions	Energy-Int	kWh/m ² /year	Energy intensity	Total building energy intensity		197	191
	GHG – Dir – Abs	annual tonnes CO ₂ e	Direct	Scope 1 (location-based)		101	99
				Scope 1 (market-based)		84	94
	GHG – Indir – Abs	annual tonnes CO ₂ e	Indirect	Scope 2 (location-based)		153	104
				Scope 3 (location-based)		60	31
				Scope 2 (market-based)		0	0
				Scope 3 (market-based)		19	19
	GHG-Int	tCO ₂ e /m ² /year	GHG Intensity	Total GHG emission intensity (location-based)		0.066	0.043
				Total GHG emission intensity (market-based)		0.022	0.030
Water	Water – Abs	m ³	Water	Total landlord-obtained water		2,518	2,649
	Water-Int	m ³ /m ² /year	Water intensity	Total building water intensity		0.53	0.56
Waste	Waste – Abs	annual metric tonnes	Waste	Total weight of waste – Recycled		73	102
				Total weight of waste – Energy from Waste		28	32
				Total weight of waste – Landfill		0	0
	proportion of total waste %		Waste	Proportion of waste – Recycled		72%	76%
				Proportion of waste – Energy from Waste		28%	24%
				Proportion of waste – Landfill		0%	0%
Refrigerant gases	Refrigerant gases – Abs	annual tonnes CO ₂ e	Direct	Refrigerant gases – annual metric tonnes CO ₂ e		9	23

Emissions outside of scope (tCO₂e)¹: 12.18.

1. Since April 2017, biogas accounts for 15% of total gas purchases. The 'market-based' CO₂ portion of the biofuel combustion is reported separately from the scopes.

Fuels, water, waste and refrigerant gases were calculated based on the floor area occupied by Landsec as a percentage of the total building figures.

Absolute portfolio – Sustainability certification

Table 24

Impact area	EPRA Sustainability Performance Measures			2017/18	2018/19	% change
	EPRA codes	Units of measure	Indicator			
Certification	Cert-Tot	% of total floor area (m ²)	Percentage of portfolio which is BREEAM rated	40.1%	40.2%	0.2%
			Outstanding	0.2%	0.2%	0.2%
			Excellent	19.3%	19.4%	0.2%
			Very Good	17.7%	17.7%	0.2%
			Good/Pass	2.9%	2.9%	(0.6%)

2017/18 figures have been restated to account for information related to entire portfolio, including properties outside our operational control (e.g. FRIs).

The table above outlines the percentage of our portfolio lettable area rated by BREEAM, and the breakdown of these ratings. BREEAM is an established assessment method and rating system for buildings, and continues to be a valuable benchmark for sustainable design.

Employee diversity

Table 25

Impact area	EPRA Sustainability Performance Measures (Social)			2017/18	2018/19	
	EPRA codes	Units of measure	Indicator	Female	Male	Female
Diversity	Diversity-Emp	% of employees	Gender diversity			
			% of total employees	53.5%	46.5%	52.4%
			Board			40%
						60%
			Gender by level			
			Executive	28.6%	71.4%	29%
						71%
			Senior Leader	38.1%	61.9%	41%
						59%
			Leader	24.4%	75.6%	20%
						80%
			Manager	51.5%	48.5%	51%
						49%
			Professional	53.4%	46.6%	56%
						44%
			Support	78.9%	21.1%	74%
						26%
			Ethnicity diversity			
			Asian	4.1%	1.8%	3.9%
						2.7%
			Black	3.6%	1.1%	3.6%
						1.6%
			Other	2.8%	1.5%	3.2%
						1.4%
			Race/Ethnicity Not Recorded	3.1%	2.3%	2.5%
						2.8%
			White	40.0%	39.8%	39.2%
						39.0%

Employee diversity

Table 26

Impact area	EPRA Sustainability Performance Measures (Social)				2017/18					2018/19				
	EPRA codes	Units of measure	Indicator		Asian	Black	Other	Race/ Ethnicity Not Recorded	White	Asian	Black	Other	Race/ Ethnicity Not Recorded	White
Diversity	Diversity-Emp	% of employees	Ethnicity by Level	% of total employees	5.9%	4.7%	4.2%	5.4%	79.8%	6.6%	5.2%	4.6%	5.4%	78.2%
				Board						0.0%	0.0%	0.0%	71.4%	28.6%
				Executive	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
				Senior Leader	0.0%	0.0%	0.0%	9.5%	9.5%	0.0%	0.0%	0.0%	4.6%	95.5%
				Leader	3.6%	2.4%	3.7%	4.9%	85.4%	6.1%	1.2%	3.7%	7.3%	81.7%
				Manager	5.4%	3.0%	3.5%	3.5%	84.7%	7.7%	1.9%	3.8%	5.7%	80.9%
				Professional	9.2%	6.1%	4.3%	4.3%	76.1%	8.7%	6.9%	6.4%	2.3%	75.7%
				Support	5.3%	8.3%	6.8%	5.3%	74.4%	4.5%	12.0%	5.3%	4.5%	73.7%

Employee development and turnover

Table 27

Impact area	EPRA Sustainability Performance Measures (Social)				2017/18			2018/19		
	EPRA codes	Units of measure	Indicator		Female	Male	Landsec	Female	Male	Landsec
Development and Turnover	Emp-Training	Number of hours	Hours of training	Average hours of training per employee	12.4	12.2	12.3	12.2	12.1	12.1
	Emp-Dev	% of employees	Performance appraisals	% of total employees received performance appraisals	45.0%	50.0%	95.0%	49.6%	46.8%	96.4%
	Emp-Turnover	Number of employees	New hires	Total number of new hires	92	58	150	69	47	116
				Rate of new hires	15.0%	9.0%	24.0%	10.9%	7.4%	18.3%
			Employee turnover	Total number of employee turnover	46	71	117	65	33	98
				Rate of employee turnover	7.5%	11.5%	19.0%	10.1%	5.3%	15.4%

Health & Safety

Table 28

Impact area	EPRA Sustainability Performance Measures (Social)				London			Retail			Landsec		
	EPRA codes	Units of measure	Indicator		2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19
Health & Safety	H&S – Emp	% of total days	Absentee rate	Absentee rate for employees							1.44%	1.31%	0.90%
	H&S – Asset	%	% Assets	Asset Health and Safety assessments	100%	100%	100%	100%	100%	100%	100%	100%	100%
	H&S-Comp	Total number	Number of incidents	Developments							16	14	3
				Managed Portfolio	10	1	0	11	11	5	21	12	5
			Number of fatalities	Developments						0	0	0	
				Managed Portfolio	0	0	0	0	0	0	0	0	

Task Force on Climate-Related Financial Disclosures (TCFD)

Our approach to climate risk and opportunity

This section of our Performance and Data report responds to the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD). Here you can find a comprehensive account of our approach to climate risk and opportunity.

Our position on TCFD

We are committed to implementing the recommendations of the TCFD, providing our stakeholders and investors accurate data and insight about the climate-related risks and opportunities which are relevant to our business. We've made a public commitment to assessing and mitigating climate change risks across our portfolio and are one of 580 organisations publicly listed by the TCFD as supporters.

Our approach to climate risk and opportunity is discussed in our Annual Report on pages 40-41, and as part of our principal risks and uncertainties section on page 59. For further disclosures you can access our CDP response at <https://www.cdp.net/en>.

Governance

Our Chief Executive has overall responsibility for climate-related risks and opportunities. The Board receive an annual briefing on our sustainability programme which includes discussion of risks and opportunities. Ongoing oversight of climate-related issues is carried out by our Sustainability Committee, chaired by the Chief Executive. Our Sustainability Committee is comprised of our Director of Corporate Affairs and Sustainability and our Group HR Director – both members of our Executive Committee – together with our Head of Sustainability, Public Affairs and Health, Safety & Security and senior representation from our portfolio management, development and finance functions.

The committee meets quarterly and is the senior forum for determining our sustainability strategy and reviewing performance. This includes responding to climate-related opportunities such as investment in renewables, improvements in energy efficiency and investment in low-carbon technologies. The committee has oversight for climate-related risks including policy, regulatory and legal risks, as well as the physical risks to our assets. The committee also approves and reviews research and analysis to determine our response to climate-related risks and opportunities.

Our Sustainability Committee is supported by our Investment Committee, London Executive Committee and Retail Executive Committee. Each committee reviews the risks opportunities as described above. This can include reviewing and approving investment in energy efficiency projects and renewables, as well as approving development or refurbishment plans which include climate-related aspects of design.

Our commitment to address climate-related risks is embedded across the business, through an energy reduction Group KPI. The performance against this KPI is linked to executive and management remuneration, aiming to incentivise progress against our science-based carbon reduction target and energy efficiency commitment.

Identifying risks and opportunities

As an owner and operator of property, our business is exposed to both risk and opportunity from climate change. The nature and level of risk is dependent on government, business and society's response in the short and long term. In the event of a strong response to climate change in the short term up to 2030, our business will be affected in positive and negative ways by the transition. With a limited response to climate change, our business will be affected in the long term past 2030 by physical effects such as extreme weather and higher temperatures. Accordingly, our analysis focuses on both transitional risks up to 2030 and physical risks past 2030.

To determine how our business may be affected by the physical risk, we conducted research and modelling. This research was carried out in 2017 and 2019. The modelling has enabled us to determine the likelihood of potential future weather patterns and natural hazards. The risks occurring due to these weather and climate patterns include chronic factors such as energy costs from overheating, and acute factors such as windstorm, and coastal, inland and flash flooding. Our exposure to these risks is derived through analysis of our property portfolio, using climate and natural hazard databases such as SwissRe CatNet™ and MunichRe NATHAN™, and is further adjusted based on expert judgement. The research and analysis carried out in 2019 incorporated the Met Office Climate Projections 2018 (UKCP18), which are widely accepted as the most accurate forecasts for how climate change will affect the climate and weather in the UK.

The modelling of all chronic and acute physical risks was based on the four Representative Concentration Pathways (RCPs), which are used by the Intergovernmental Panel on Climate Change (IPCC) to illustrate future concentrations of greenhouse gases in the atmosphere. Although our modelling analysed all four RCPs, we simplified our approach by focusing on two distinct scenarios, a best-case scenario where global average temperature increases by less than two degrees in line with the 2015 Paris Climate Agreement, and a worst-case scenario, where temperatures increase by up to four degrees.

To determine how our business will be affected by a transition to the low-carbon economy, we conducted quantitative and qualitative scenario analysis, using the TCFD recommendations as a guide. The process of scenario analysis was designed to allow us to assess our resilience in two alternate futures, transition to the low-carbon economy or failure to transition. This process relied on a variety of data sources and a panel of experts including insurance, strategy, finance, insight and treasury functions from our business, alongside weather, natural catastrophe, enterprise risk management and academic research representatives from Willis Towers Watson and the Willis Research Network.

Risks and opportunities in the following categories were considered: policy & legal, reputation, technology, and market. Risks and opportunities were assessed against impact and likelihood criteria, with potential impacts across our value chain considered. Preparatory analysis to determine the potential nature of the risks was undertaken by the Enterprise Risk Management team from Willis Towers Watson, through research, gathering insights and constructing the framework for analysis.

The quantitative scenario analysis, carried out in 2017 and 2019, assesses the physical risks of climate change and informs our strategic and financial planning processes where relevant. The qualitative scenario analysis, carried out in March 2019 and assessing broader qualitative factors, will inform our planning in the year ahead.

Strategy and financial planning

Our response to climate-related risks and opportunities spans all areas of our business including investment, development, operation and divestment. Considering the potential different scenarios, we may experience due to climate change, our response will need to change. Please find more detailed analysis on our response to the two, and four-degree scenarios on the following pages. Common to both scenarios is a set of practises which we'll continue to carry out:

- Through our Responsible Property Investment Policy, we assess energy efficiency and climate risks when we buy new assets. We undertake risk assessments of developments where necessary to ensure resilience to physical risks from climate change such as windstorm and flooding.

- Through our Sustainability Brief for developments, we manage the risks presented by higher cooling costs and lower heating demand. This includes adapting building services design, reducing heating capacity and maintaining summer cooling capacity to cope with heatwaves.
- Using our Sustainability Charter, we encourage our partners to improve their preparation and response to climate-related risks where this is relevant to their business. We have also included these criteria in the selection and engagement process for partners and plan to work with them in the year ahead to assess and encourage progress.
- We have Energy Reduction Plans (ERPs) for all our assets, which outline how we will reduce the energy use and carbon emissions of the asset effectively. Through these plans, we will continue to plan and deliver improved controls and efficient energy systems. The ERPs form part of the operational financial planning for each asset.
- We actively invest in our renewable energy generation capacity to improve our resilience, reduce carbon emissions and reduce operational costs. We have multiple renewable energy projects undergoing feasibility studies, and ensure renewables are included at the early stages of design for new developments.

Our ongoing approach to risk

Our risk management and control framework enables us to effectively identify, evaluate and manage climate-related risk. We recognise the importance of identifying and monitoring climate-related risks, which feature prominently on our principal risk register.

Ownership and management of all risks is assigned to members of the Executive Committee, who are responsible for ensuring the operating effectiveness of the internal control systems and for implementing key risk mitigation plans. The Executive Committee is supported by risk champions across the business, who are tasked with maintaining awareness of key risks and control measures.

Our Executive board director responsible for climate-related risk is Miles Webber, Director of Corporate Affairs & Sustainability. Our sustainability principal risk includes including energy transition and physical climate risk and is monitored on a quarterly basis using a series of Key Risk Indicators.

Both the Executive Director and Risk Champion responsible for climate-related risk ensure integration with the overall risk management process. Where climate-related risks correspond to other risks these are discussed between the network of risk champions.

Two degrees scenario

This scenario is aligned with the IPCC's RCP 2.6, in which there is a high likelihood that global temperatures will not exceed more than 2°C over pre-industrial levels by the end of the century. This scenario unfolds between 2019 and 2030, and in this time period global efforts to mitigate climate change intensify immediately, led and supported by strong policy, regulatory and legal responses.

For this scenario to be possible, rapid investment in low-carbon technology will need to occur, with widespread adoption of sustainable consumption, business practices and lifestyles. Businesses not responding to the transition to a low-carbon economy will quickly become laggards, suffering from reputational impacts as the world changes significantly before 2030.

Beyond 2030 in this scenario, the world will have transitioned successfully to a low-carbon economy but will still be affected by high levels of carbon already in the atmosphere. This concentration of emissions will cause an additional one to two degrees of warming over pre-industrial levels, resulting in some physical changes to climate and weather.

Transition risk

What could happen in this scenario in the lead up to 2030?

- Our customers and communities adopt low-carbon lifestyles
- New policy leads to higher development and operational costs
- Infrastructure installation costs increase to support electric vehicles

In this scenario, zero carbon legislation, planning regulation or a carbon tax could lead to higher capital and operational costs. Investment in low-carbon and renewable construction materials and solutions could be required through the planning system and building regulations. Reducing the carbon impact of developments in both construction and operations could become mandatory, increasing capital expenditures in construction. We would be likely to incur increasing infrastructure and energy costs through

widespread adoption of electric vehicles, battery storage technology and other electrical generation, distribution and storage equipment.

Mass adoption of sustainable business practices could begin to occur in this scenario throughout the property industry in the UK. This could lead to marginally diminished competitive advantage which we currently benefit from through our sustainability programme. For example, all new assets brought to market would have compelling sustainability and energy performance credentials, and all retail and leisure destinations would feature electric vehicle charging. This would lead to the requirement for new and innovative technologies and systems to compete for higher rents and valuations. This scenario could lead to higher levels of competition for positive investor favour surrounding ESG, as the standard of disclosure and performance will likely be universally higher.

Opportunities

How could we benefit from the low-carbon transition in the lead up to 2030?

- Higher revenues for sustainable assets from customers
- Higher asset valuation and lower cost of capital
- New subsidies and tax relief for low-carbon solutions

In this scenario, the global adoption of ESG and responsible investment practices could lead to higher valuations and improved availability of capital for low-carbon businesses in the short term. New revenue streams could emerge from investment in renewable energy generation, supported by subsidies or tax relief. We expect property companies offering low-carbon solutions could also benefit from increased capacity to attract customers and improved customer retention.

This scenario could also lead to a long-term benefit after 2030, where our present levels of adoption of low carbon and energy efficiency technologies lead to increased organisational resilience. Specifically, the short payback period and longer asset life of renewable energy generation assets would begin to increase our revenues and avoided costs.

Physical risk

In this scenario, predicted changes in the UK climate are for marginally higher year-round temperatures and lower precipitation in summer. The risk to our business under this scenario from flooding and windstorm remains within the current and natural variability. This means there will be no material change to insurance, repair or other capital and operational costs arising due to the physical impacts of climate change. Our modelling has also determined this will not have a material effect on energy costs for our business or our customers, particularly as there are a several factors which affect energy consumption and costs. In addition, the slight increase in summer cooling costs are offset by lower heating costs in winter.

How we'll need to respond

In the two degrees scenario, based on our analysis, we are confident our current business model allows us to reduce our impact in line with the required mitigation. Our analysis gives us confidence that our business activities, strategy and financial planning mean we are well placed to benefit from the transition to a low carbon economy through to 2030. This includes widespread adoption of low-carbon and renewable technologies, continually driving improved energy efficiency, and engaging our customers and consumers on sustainability and climate change.

We believe our investment in, and development of resilient and efficient assets will help us to mitigate any marginal increase in physical climate risks after 2030. However, we must consider that under this scenario many of our activities will be considered business as usual by 2030, so to continue to derive both reputational and competitive advantage from our sustainability programme, further innovation and investment will be required. We will continue to do this through seeking new product and service offerings from the market and encouraging our consulting and design partners to build in transitional thinking to their advice to us.

Four degrees scenario

This scenario is aligned with the IPCC's RCP 8.5, where climate change will increase by up to four degrees by 2100. In the lead up to 2030, limited actions are taken to mitigate climate change, current levels of investment in low-carbon technology continue, and emissions continue to rise along their current trajectory. In the period between 2030 and 2100, the physical effects of climate change begin to intensify rapidly, and government, business and society will need to adapt to the effects.

Beyond 2030, widespread disruption to markets could begin to occur, and investment in climate change resilient technologies and infrastructure is likely to be required for organisations with physical assets. The policy, regulatory and legal response, although limited in the short term, could begin to force organisations in control of physical assets to adapt to climate change. In this scenario, businesses with high levels of carbon emissions could experience a backlash in consumer, customer and investor sentiment.

Physical risks and their impacts

What could happen in this scenario by 2070?

- **5.4°C** hotter in summer
- **50%** increase in heatwaves
- **35%** more rain in winter
- **9%** increase in electricity use
- **32%** decrease in gas use

In this scenario it is likely we will experience an increase in flash flooding, river floods, coastal flooding and storm surges. These weather events are applicable to a small proportion of assets in our portfolio, noted in the Metrics and Targets section of this report. Increases in year-round temperature are predicted, with summer temperatures at 5.4°C higher and winter temperatures at 4.2°C higher than the current climate. Higher levels of precipitation are predicted in winter at up to +35%, and lower levels of summer precipitation are predicted at down to -47%.

These physical effects could have several effects on our business due to changes in markets, policy, regulation and technology. Accordingly, we do not consider the consequences of these physical risks to be 'transition' risks, as under the four-degree scenario there will be very little transitional activity. We consider these risks and associated impacts to be costs of adapting to the new climate and weather patterns.

In this scenario, the physical risks to our portfolio could pose several market challenges, including potential lower asset values, higher operational costs, higher costs of insurance premiums, and reduced attractiveness to our customers and consumers. Specifically, asset values could fall where they are proven to have poor resilience to windstorm and flooding. Where we own assets in cities, particularly London, we could experience reduced demand for our properties affected by extreme heat and air pollution.

Due to the extreme temperature and weather patterns associated with this scenario, it is likely that poorly designed, operated and maintained assets will experience more frequent building system and envelope failures. This is likely to lead to higher operational costs, but also reputation risks, where customers begin to rely more on property companies to maintain safe and comfortable spaces for their staff and consumers. More extreme weather could also lead to increasing numbers of building failures and natural catastrophes, leading to rising insurance premiums.

In this scenario our business could also be affected by higher raw material costs due to increasing fossil fuel and water costs, disruption to logistics and higher cost of production from taxes and levies. Similarly, we will experience higher construction costs arising from climate change resilient facades and building services with increased capacity.

In the long-term under this scenario, a widespread decrease in combustion-engine vehicle use could lead to assets without good public transport links becoming less attractive to consumers. Consumers and our direct

customers could develop greater awareness and expectations of property businesses, pressurising them to act on climate-related issues, and creating greater favour for destinations which are sustainable.

Opportunities

Owing to the nature of this scenario, there are only limited opportunities as the impacts are predominantly negative for most business types. We could experience higher levels of customer and investor demand for resilient assets which can withstand the increasing frequency of windstorm and flooding. In addition, falling asset values and business failures could lead to opportunity for more resilient businesses to gain increasing market share.

How we'll need to respond

In this scenario, our analysis demonstrates that changes to our strategy and financial planning will be required. This will include divestment of assets which are less resilient to extreme heat and rainfall, or investment into infrastructure to limit the impact of flooding and coastal surge. We believe our strategy for investing in high-quality assets in primary locations will continue to be resilient in this scenario. However, to maintain an effective strategy we will need to increase our prioritisation of climate change factors in investment, development and divestment decisions.

This scenario could also result in changes to our customers' and supply chain partners' businesses, as well as consumer preferences. To continue to be resilient in this scenario, we will need to constantly reassess the risks posed by climate change to ensure we are not exposed to risk of default from business failures or supply chain disruption. Increased due-diligence in supply chain selection will be required, particularly considering the sourcing of construction materials which may be processed or manufactured in countries where the effects of climate change are more extreme.

TCFD Metrics and targets

Table 29

Financial category	Climate related category	Metric	Unit of measure	Landsec 2017/18	2018/19
Revenues	Risk Adaptation & Mitigation	Revenues/savings from investments in low-carbon alternatives (e.g., R&D, equipment, products, services)	£	1,538,662.58	1,918,389.31
Revenues	Risk Adaptation & Mitigation	Avoided energy consumption costs benefitting customers in year, measured against 2013/14 baseline	£	–	£4.0m ¹
Revenues	Risk Adaptation & Mitigation	Percentage of revenues derived from BREEAM certified assets	£	56%	57%
Expenditures	Risk Adaptation & Mitigation	Expenditures (OpEx) for low-carbon alternatives (e.g., R&D, technology, products, services)	£	1,716,526,526.10	1,457,997.84
	Energy/Fuel	Total energy consumption	kWh	265,723,992.15	265,571,273.86
	Energy/Fuel	Proportion of energy consumption from renewable sources	%	64%	66%
	Energy/Fuel	Total electricity consumption	kWh	167,507,064.49	167,590,019.79
	Energy/Fuel	Proportion of electricity consumption from renewable sources	%	93%	96%
	Energy/Fuel	Total fuel consumption (i.e. gas)	kWh	86,337,790.66	81,310,160.07
	Energy/Fuel	Proportion of fuel consumption from renewable sources (i.e. green gas)	%	17%	16%
	Energy/Fuel	Total building energy intensity by floor area	kWh/m ²	144	142
	Energy/Fuel	Forecast change in energy cost by 2100, four-degree scenario	£	–	£0.9m ²
	Water	Percent of fresh water withdrawn in regions with high or extremely high baseline water stress	m ³	0	0
	Water	Total building water intensity by floor area	m ³ /m ²	0.57	0.56
	GHG Emissions	Total GHG emissions intensity by floor area	tCO ₂ e/m ²	0.052 ³	0.043
Assets	Location	Percentage floor area of portfolio exposed a 10-20% risk of inland, coastal and flash flooding in a ten-year period	% floor area	0.4%	0.3%
	Location	Percentage value of portfolio exposed to a 10-20% risk of inland, coastal and flash flooding in a ten-year period ⁴	% Value	1.5%	1.4%
	Location	Insured value of assets exposed to possible significant increase in river flood risk due to climate change	£	£5.7m	£7.0m ⁵
	Location	Insured value of assets exposed to possible significant increase in coastal flood risk due to climate change	£	£281m	£257.3m ⁶
	Risk Adaptation & Mitigation	Percentage of portfolio which is BREEAM certified	% floor area	40.1%	40.2%
	Risk Adaptation & Mitigation	Percentage of portfolio which is BREEAM certified	% portfolio value	61%	60%
	Risk Adaptation & Mitigation	Investment (CapEx) in low-carbon alternatives (e.g., capital equipment or assets)	£	4,402,019.00	2,377,136.00
	Risk Adaptation & Mitigation	Costs of obtaining Energy Performance Certificates for assets which are not currently certified ⁷	£	–	£0.3m

1 Consumption costs measured in 2018/19, based on comparable floor area from 2013/14 portfolio.

2 Increase in cooling costs offset by decrease in gas costs.

3 This figure is based on absolute energy across scopes 1,2 and 3.

4 Based on a return period of 50-100 years meaning there is a 1-2% chance every year or 10-20% in the next 10 years that flooding would occur.

5 Acquired one new asset in river flood risk zone.

6 Divested two assets in coastal flood risk zone.

7 30% of our assets must obtain an EPC before 2023.

TCFD: Data sources

Table 30

Projections	Analysis	2017 analysis	2019 analysis	Source
Energy Consumption	Modelling	Now out of date	Updated	UKCP18 previously CMIP5
Flood Risk	Exposure & Scoring	Now out of date	Updated	Swiss Re CatNet; Munich Re NATHAN
	Probabilistic Modelling	Current	No update minimal impact	CCRA Report 2017; (Next update 2022)
Sea Level Rise	Exposure & Scoring	Now out of date	Updated	UKCP18 previously CCRA 2017 after UKCP09
Windstorm	Probabilistic Modelling	Current	No update minimal impact	ABI Report 2017
Temperature	Review	Now out of date	Updated	UKCP18 previously CMIP5
Precipitation	Review	Now out of date	Updated	UKCP18 previously CMIP5

Independent Assurance Statement to the Management of Land Securities Group PLC

We have performed a limited assurance engagement on selected performance data and qualitative statements in the Physical and Social sections of the Strategic Report, the sustainability content in the 'Additional Information' section of the Land Securities Group PLC ("the Group") 2019 Annual Report and Accounts and the online Landsec Performance Data Report 2019 (collectively referred to as "the Report").

Respective responsibilities

The Group's management are responsible for the collection and presentation of the information within the Report. Management are also responsible for the design, implementation and maintenance of internal controls relevant to the preparation of the Report, so that it is free from material misstatement, whether due to fraud or error.

Our responsibility, in accordance with management's instructions, is to carry out a 'limited level' assurance engagement on selected data and performance claims in the Report ('the subject matter information'). We do not accept or assume any responsibility for any other purpose or to any other person or organisation. Any reliance any such third party may place on the Report is entirely at its own risk.

What we did to form our conclusions

Our assurance engagement has been planned and performed in accordance with ISAE3000 (Revised)¹. The procedures we performed were based on our professional judgement and included the steps outlined below:

- 1. Interviewed a selection of the Group's management** to understand the progress made in the area of sustainability during the reporting period and to test the coverage of topics within the Report.
- 2. Conducted a site visit at Gunwharf Quays** to understand how the sustainability agenda is being managed at the site level.
- 3. Reviewed the coverage of key issues within the Report** against the topics discussed in our management interviews and site visits.

4. Interviewed staff responsible for data reporting and carried out the following activities to review selected sustainability data:

- i. Reviewed the guidance on data reporting, key processes and quality assurance performed.
- ii. Selected a sample of data points from across the business and sought documentary evidence to support the data.
- iii. Conducted a walk-through of data reported from a sample of sites to test consolidation.
- iv. Reviewed any explanations provided for significant variances.
- v. Reviewed the Report for the appropriate presentation of the data including limitations and assumptions.

Our review of data processes was limited to the following selected data sets:

- Greenhouse gas emissions: Direct GHG emissions (MtCO₂e), Indirect GHG emissions (MtCO₂e), and GHG intensity from building energy (tCO₂e/m²/ year)
- Waste: Waste diverted from landfill (tonnes) and percentage of waste recycled
- Safety: number of reportable RIDDOR incidents for Landsec's managed portfolio
- **EPRA and TCFD:** Selected content disclosures relating to EPRA guidelines and TCFD metrics (Energy/Fuel and GHG emissions categories) that are aligned to the specific sustainability Key Performance Indicators (KPIs) identified above.

5. Reviewed information or explanation about selected statements and assertions regarding the sustainability performance of the Group.

The limitations of our review

Our evidence gathering procedures were designed to obtain a 'limited level' of assurance (as set out in ISAE3000 Revised) on which to base our conclusions. The extent of evidence gathering procedures performed is less than that of a reasonable assurance engagement (such as a financial audit) and therefore a lower level of assurance is provided.

Completion of our testing activities has involved placing reliance on the Group's controls for managing and reporting sustainability information, with the degree of reliance informed by the results of our review of the effectiveness of these controls. We have not sought to review systems and controls at the Group beyond those used for selected sustainability data sets (as presented above).

We have only sought evidence to support the 2018/2019 performance data. We do not provide conclusions on any other data from prior years.

Our conclusions

Based on the scope of our review our conclusions are outlined below:

Completeness and accuracy of performance information

How complete and accurate is the 'selected data' presented in the Report?

- With the exception of the limitations identified in the report, we are not aware of any material reporting units that have been omitted from the selected data relating to the topics above.
- Nothing has come to our attention that causes us to believe that the data relating to the above topics has not been collated properly at Group level.
- We are not aware of any errors that would materially affect the data as presented in the Report.

How plausible are the statements and claims within the Report?

We have reviewed information or explanation on selected statements regarding the Group's sustainability activities presented in the Report and we are not aware of any misstatements in the assertions made.

Observations and areas for improvement

Our observations and areas for improvement will be raised in a report to the Group's management. Selected observations are provided below. These observations do not affect our conclusions on the Report set out above.

- **Reporting boundaries** – Due to different reporting requirements, Landsec uses three reporting boundaries and definitions (absolute, corporate target and like-for-like) to disclose energy, carbon and waste performance across its portfolio. Landsec should consider further simplification. This could include ensuring greater consistency in definitions between energy and waste, streamlining related performance disclosures and simplifying the basis on which targets are set. Landsec has taken steps to enhance transparency and understanding of year on year carbon performance through the inclusion of waterfall charts to explain the different drivers of performance and has provided more clarity on the different boundaries used across energy, carbon and waste reporting.
- **Safety** – This is the first year that Landsec has sought assurance over its reported RIDDOR incidents for managed assets. While there are clear processes and controls that support this KPI, Landsec should consider including safety trend reporting data such as year on year performance and highlight reasons for significant changes to further increase transparency. Additionally, Landsec should consider assurance over additional aspects of its safety performance, namely contractor safety at its development sites, in line with peer reporting.

Our independence

We have implemented measures to comply with the applicable independence and professional competence rules as articulated by the IFAC Code of Ethics for Professional Accountants and ISQC1². Ernst & Young's independence policies apply to the firm, partners and professional staff. These policies prohibit any financial interests in our clients that would or might be seen to impair independence. Each year, partners and staff are required to confirm their compliance with the firm's policies.

We confirm annually to the Group whether there have been any events including the provision of prohibited services that could impair our independence or objectivity. There were no such events or services in 2018/19. Our assurance team has been drawn from our global Climate Change and Sustainability Services Practice, which undertakes engagements similar to this with a number of significant UK and international businesses.

Ernst & Young LLP,

London

10 June 2019

1. International Federation of the Accountants' International Standard for Assurance Engagements (ISAE3000) Revised, Assurance Engagements Other Than Audits or Reviews of Historical Financial Information.
2. Parts A and B of the IESBA Code; and the International Standard on Quality Control 1 (ISQC1).