

# Sustainability performance, methodology and data 2018

Landsec reports sustainability performance in accordance with our corporate commitments and industry disclosure standards. We are committed to transparent reporting on our annual performance to further drive positive change.



# 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 disadvantaged people to secure jobs by 2020.

● ● ● **Performance: On track**

Since 2011, we have secured employment for 1,149 people from disadvantaged backgrounds through our Community Employment Programme. In 2017/18 187 jobs have been secured, with 101 in London and 86 in Retail.

 **Fairness**

**Commitment** ↻  
 Ensure the working environments we control are fair and ensure that everyone who is working on our behalf – within an environment we control – is paid at least the Foundation Living Wage by 2020.

● ● ● **Performance: On track**

We continue to be an accredited Living Wage employer, both for our employees and those working on our behalf on our sites. We participate in the Living Wage Employers Group, looking at how companies can encourage others within their supply chain to adopt the Living Wage Foundation rates. In March 2018 we launched our Sustainability Charter for partners which reinforces our Living Wage commitment and is being used as a tool to facilitate discussions with our supply partners, driving up minimum standards and increasing collaboration.

 **Diversity**

**Commitment** ↻  
 Make measurable improvements to the profile – in terms of gender, ethnicity and disability – of our employee mix.

● ● ● **Performance: On track**

With 41% of our senior management being female, we now significantly exceed the Hampton-Alexander recommendations for females on our Board, Executive Committee and their direct reports – combined target of 33%). We are also delighted that the engagement scores for our colleagues who identify as Black and Asian are now as positive as for other ethnic groups.

 **Health, Safety and Security**

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

● ● ● **Performance: On track**

This year we continued our work with the Health in Construction Leadership Group and played a key role in industry health, safety and security initiatives. We have taken part in a number of cross-industry forums to share best practice and learn from others so that the business can anticipate and respond to incidents.

## Efficient use of natural resources



### Renewables

#### Commitment

Continue to procure 100% renewable electricity across our portfolio and achieve 3 MW of renewable electricity capacity by 2030.

●○○ Performance: **Complete**

We continue to procure electricity derived from 100% renewable sources via our portfolio-wide contract with SmartestEnergy. As of 1 April 2017, at least 15% of our total gas volume is classified as green gas through our corporate contract with Corona Energy, further demonstrating our commitment to renewable and low carbon sources of energy.

○●○○ Performance: **On track**

Following the solar PV installations at Trinity Leeds and White Rose, our installed renewable electricity capacity has increased to 1.4 MW. Further solar feasibility studies are currently underway at Bluewater and other retail assets.



### Waste

#### Commitment

Send zero waste to landfill with at least 75% recycled across all our operational and construction activities by 2020.

●○○ Performance: **Complete**

We are now diverting 100% waste from landfill. This is an improvement in the amount of waste diverted from landfill in 2016/17 (99.96%).

○●○○ Performance: **On track**

We continue to increase the amount of operational waste recycled, with a total of 74.9% compared to 70.8% at the end of 16-17.

- 77.5% of waste recycled in London.
- 79.7% of waste recycled in Shopping Centres.
- 55.4% of waste recycled in Leisure and Retail Parks (managed by Savills).



### Carbon

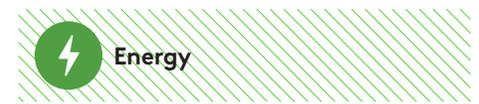
#### Commitment

Reduce carbon intensity (kgCO<sub>2</sub>e/m<sup>2</sup>) by 40% by 2030 compared to a 2013/14 baseline, for property under our management for at least two years.

○●○○ Performance: **On track**

We have reduced carbon intensity by 28.6% compared to 2013/14 baseline. This is an improvement compared to the 2016/17 reduction of 16.3%<sup>1</sup>. These reductions were achieved through a combination of energy efficiency projects, changes in our portfolio, and changes in emissions factors.

1. This year, we have re-baselined our carbon emissions and intensity to further align with the SBTi reporting methodology. Specifically, we have removed emissions from the delivery of energy to our tenants. This has lowered our 2016/17 carbon intensity reduction against the baseline from 18.5% to 16.3%.



### Energy

#### Commitment

Reduce energy intensity (kWh/m<sup>2</sup>) by 40% by 2030 compared to a 2013/14 baseline, for property under our management for at least two years.

○●○○ Performance: **On track**

We have reduced portfolio energy intensity by 14.3% compared to our 2013/14 baseline. This is an improvement compared to the 2016/17 reduction of 13.2%. This year we implemented 60 energy reduction projects across both London and Retail portfolios, with further measures identified and agreed for the majority of our highest consuming assets. These will drive further energy reductions in support of our energy and science-based carbon targets.

## Sustainable design and innovation



### Resilience

#### Commitment

Assess and mitigate physical and financial climate change adaptation risks that are material across our portfolio.



○○● Performance: **On track**

We partnered with Willis Towers Watson to research the possible effects of different climate change scenarios on our business and our assets. Using the findings from the research we're improving our approach to investment, developments and operations, which reduces our exposure to climate related risks. For the first time this year we're disclosing our strategy and data on climate risk, in response to the Task Force for Climate-related Financial Disclosures (TCFD), see page 24 for more information.



### Materials

#### Commitment

Source core construction products and materials from ethical and sustainable sources.



○○● Performance: **On track**

This is a new commitment for 2018, and we are building on existing work undertaken in design for our developments. In Retail, we delivered 86% responsibly sourced materials at Westgate, and we're on track to deliver 40% at Selly Oak. In London, we're focusing on early stages design, setting our responsible sourcing strategy using our Sustainability Brief, as well as the BREEAM and LEED methodologies.



### Biodiversity

#### 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.



○○● Performance: **On track**

In total, 63 measures across the portfolio have been identified to support our net gain commitment which are planned for installation in the next 3-5 years. A total of ten measures have been installed since 2016/17.



### Wellbeing

#### Commitment

Ensure our buildings are designed and managed to maximise wellbeing and productivity.



○○● Performance: **On track**

We're making progress in both London and Retail, using the BREEAM health and wellbeing frameworks to deliver a consistent level of design quality in acoustics, indoor air quality and natural light. Building on these core design factors in London, we are creating best in class cycle facilities and amenity spaces, giving building occupants the opportunity to lead a healthy lifestyle at work. In Retail, we worked with over 75% of our brand partners at Westgate, using green lease clauses to support the use of healthy materials in their fit-outs.

# Quick reference

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<b>05</b>	<b>Sustainability Reporting Methodology</b>
<b>09</b>	<b>Corporate commitment performance</b>
09	Portfolio carbon intensity – Table 1
09	Carbon emissions pathway – Chart 2
10	Portfolio energy intensity – Table 3
10	Energy intensity progress – Chart 4
11	Portfolio recycling rates – Chart 5
<b>12</b>	<b>Greenhouse gas emission reporting</b>
12	CO <sub>2</sub> e conversion factors – Table 6
12	Scope 1 and 2 emissions 2016-2018 – Table 7/Chart 8
13	Scope 1, 2 and 3 emissions 2016/18 – Table 9
13	Scope 3 emissions 2016/18 – Chart 10
<b>14</b>	<b>EPRA Reporting</b>
15	Absolute portfolio energy – Table 11
16	Like-for-like portfolio energy – Table 12
17	Absolute portfolio greenhouse gas emissions (energy) – Table 13
17	Like-for-like portfolio greenhouse gas emissions (energy) – Table 14
18	Absolute portfolio water, waste and refrigerant gases – Table 15
19	Like-for-like portfolio water, waste and refrigerant gases – Table 16
20	Absolute portfolio greenhouse gas emissions (other) – Table 17
20	Like-for-like portfolio greenhouse gas emissions (other) – Table 18
20	Absolute portfolio – sustainability certification – Table 19
21	Landsec headquarter environmental performance – Table 20
22	EPRA Sustainability Performance Measures – Tables 21-24
<b>24</b>	<b>Task Force for Climate-related Financial Disclosures (TCFD)</b>
27	Metrics and Targets
28	Data from our Resilience Research
<b>29</b>	<b>Independent Assurance Statement</b>

# 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 ( $\text{kgCO}_2\text{e}/\text{m}^2$ ) 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 ( $\text{kWh}/\text{m}^2$ ) 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. The boundary of our commitments includes all properties within our portfolio which have been under our management, or “operational control”, for at least two years. 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  $15.5^\circ\text{C}$  and our cooling degree days (CDD) quantify the number of days and the length of time that temperatures have exceeded  $15.5^\circ\text{C}$ .

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 ( $\text{m}^2$ ). 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  $11.8\text{m}^2$ , this assumes 5% are disabled bays. The number of spaces is multiplied by  $11.8\text{m}^2$  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/m<sup>2</sup> where kWh electricity equivalent is used. Carbon emissions are reported as kgCO<sub>2</sub>e/m<sup>2</sup>. CO<sub>2</sub> 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 boundary includes all properties within our portfolio which are under our management, or “operational control”, for at least one 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, and some hazardous waste (e.g. WEEE and fluorescent lamps). We endeavour to divert all waste from landfill except where necessary, such as Japanese Knotweed and asbestos. 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 is reported in tonnes and associated carbon emissions are reported as tCO<sub>2</sub>e, 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, anaerobic digestion and incineration.

Waste reporting for construction activities follows BREEAM Wst 01 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 is excluded.

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## **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 (tCO<sub>2</sub>e).

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 2017. Since April 2017, at least 15% of our gas purchases are from green sources (i.e. biogas). In line with the WRI Greenhouse Gas Protocol guidance, our market-based emissions from biogas are not reported as scope 1; the CH<sub>4</sub> or N<sub>2</sub>O emissions from biogas are reported as scope 2, and the CO<sub>2</sub> 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 remainder of our gas purchases. Scope 2 market-based emissions are reported using the conversion factor associated with each individual electricity, heating and cooling supply, as well as the CH<sub>4</sub> or N<sub>2</sub>O conversion factors associated with biogas.

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"> <li>1. Developments – where the construction cost is &gt;30% of the value of the asset</li> <li>2. Portfolio Projects – where construction cost is &lt;30% of the value of the asset</li> </ol> <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><b>Developments</b> Primary data of construction materials applied in developments.</p> <p><b>Portfolio Projects</b> Primary procurement data from Landsec.</p>	<p><b>Developments</b> Sturgis Carbon Profiling</p> <p><b>Portfolio Projects</b> 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 2017
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 2017
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 2017
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 2017
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

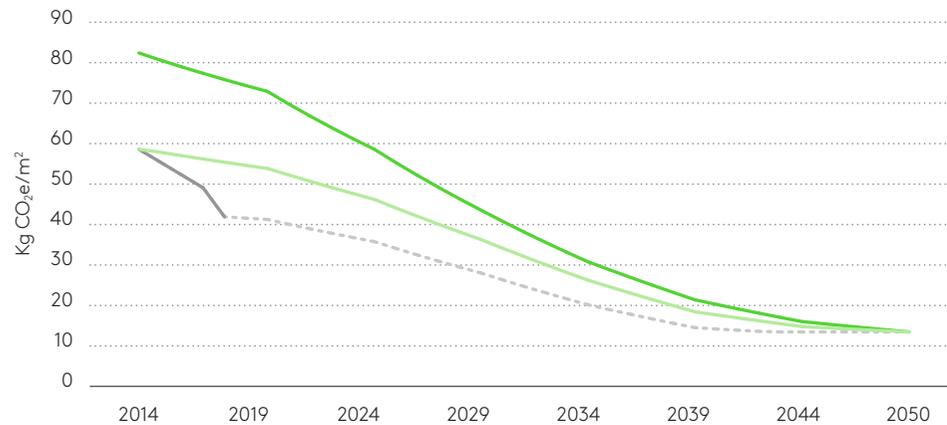
Scope 3 category	Scope 3 category	Applicability	Methodology/justification for exclusion	Activity data source	Emission factor data source
9	Downstream transportation and distribution	No	Landsec is a Real Estate Investment Trust who develop and manage property assets, which we lease to our customers. We 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><b>Tenants which Landsec procures energy for and recharge</b> Calculated by metered energy consumption from tenants multiplied by UK emission factors.</p> <p><b>Tenants which procure their own energy</b> 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><b>Landsec procured</b> Primary data from tenants.</p> <p><b>Tenant procured</b> Data on Net Lettable Areas (NLA) of let spaces</p>	<p><b>Landsec procured</b> UK Government greenhouse gas reporting – Conversion factors 2017.</p> <p><b>Tenant procured</b> '2017 Real Estate Environmental Benchmarks' (BBP REEB)</p>
14	Franchises	Yes	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 (kgCO<sub>2</sub>/m<sup>2</sup>) 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

Impact area	Units of measure	Indicator	London			Retail			Total		
			2013/2014 Baseline	2017/18	% change	2013/2014 Baseline	2017/18	% change	2013/2014 Baseline	2017/18	% change
Greenhouse Gas Emissions	annual kgCO <sub>2</sub> e	Scope 1	6,529,512	7,640,911	17%	4,545,485	3,687,845	-19%	11,074,997	11,328,756	2%
		Scope 2	21,742,358	16,220,338	-25%	16,394,704	15,520,733	-5%	38,137,062	31,741,072	-17%
		Scope 3	24,115,010	15,609,930	-35%	5,820,401	6,023,246	3%	29,935,411	21,633,175	-28%
		Total GHG Emissions	52,386,880	39,471,179	-25%	26,760,589	25,231,824	-6%	79,147,470	64,703,003	-18%
	kgCO <sub>2</sub> e/m <sup>2</sup> /year	GHG-Int	109.96	79.47	-28%	30.62	24.03	-22%	58.61	41.83	-28.6%
	m <sup>2</sup>	Portfolio Area	476,400	496,678	4%	873,905	1,050,142	20%	1,350,305	1,546,819	15%

**Landsec carbon emissions intensity pathway** Chart 2



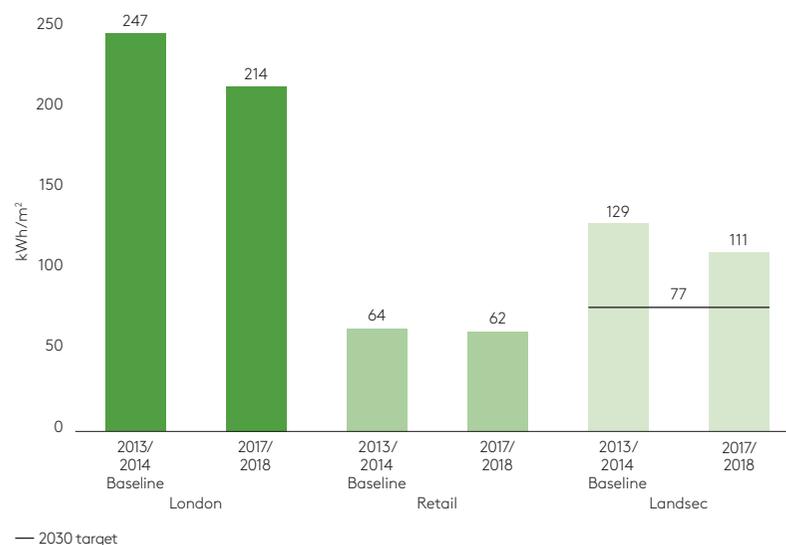
We have reduced portfolio carbon intensity by 28.6% compared to our 2013/14 baseline. This has been achieved through a combination of energy efficiency projects, changes in our portfolio and changes in the UK's energy generation mix. This chart indicates our performance against the required science-based decarbonisation pathways of our portfolio and the wider sector. We are currently outperforming our target pathway and are on track for our 2030 commitment.

**Commitment – Reduce energy intensity (kWh/m<sup>2</sup>) by 40% by 2030 compared to a 2013/14 baseline, for property under our management for at least two years** Table 3

Impact area	Units of measure	Indicator	London			Retail			Total		
			2013/2014 Baseline	2017/18	% change	2013/2014 Baseline	2017/18	% change	2013/2014 Baseline	2017/18	% change
Energy	Fuels	for landlord shared services	13,964,698	19,131,857	37%	9,879,340	8,993,412	-9%	23,844,039	28,125,268	18%
		(sub)metered exclusively to tenants	73,836	61,400	-17%	111,842	1,141,623	921%	185,678	1,203,022	548%
		Total landlord-obtained fuels	14,038,535	19,193,256	37%	9,991,182	10,135,034	1%	24,029,717	29,328,291	22%
	kWh Electricity	for landlord shared services	49,837,264	45,058,073	-10%	36,817,835	44,148,178	20%	86,655,099	89,206,250	3%
		(sub)metered exclusively to tenants	53,825,512	41,929,085	-22%	9,467,502	10,551,850	11%	63,293,014	52,480,936	-17%
		Total landlord-obtained electricity	103,662,776	86,987,158	-16%	46,285,337	54,700,028	18%	149,948,113	141,687,186	-6%
	Total Energy	for landlord shared services	63,801,963	64,189,929	1%	46,697,175	53,141,589	14%	110,499,138	117,331,519	6%
		(sub)metered exclusively to tenants	53,899,348	41,990,485	-22%	9,579,344	11,693,473	22%	63,478,692	53,683,958	-15%
		Total landlord-obtained energy	117,701,311	106,180,414	-10%	56,276,519	64,835,062	15%	173,977,830	171,015,477	-2%
	kWh/m <sup>2</sup> /year	Energy intensity	247	214	-13.5%	64	62	-4.1%	129	110.6	-14.3%
	m <sup>2</sup>	Portfolio Area	476,400	496,678	4%	873,905	1,050,142	20%	1,350,305	1,546,819	15%

**Landsec energy intensity progress**

Chart 4

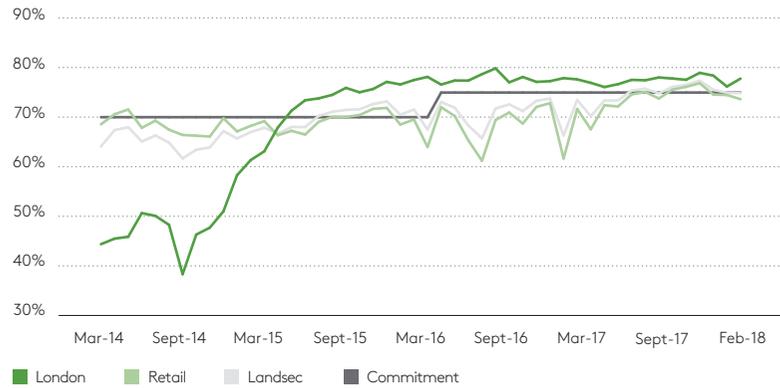


We have reduced portfolio energy intensity by 14.3% compared to our 2013/14 baseline. This has been achieved by savings realised from our active energy management programme. This year, we implemented 60 energy reduction projects across both London and Retail portfolios, with further measures identified and agreed for the majority of our highest consuming assets. This chart shows the energy intensity improvements we have made in our London and Retail portfolios and Landsec as a whole. We have reduced London portfolio intensity by 13.5% since 2013/14. Our Retail portfolio intensity has reduced by 4.1%. Overall we have reduced combined portfolio intensity by 14.3% and are on track for our 2030 commitment.

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

**Landsec monthly portfolio recycling rates 2014-2018**

Chart 5



We are now diverting 100% from landfill and are recycling 74.9% of waste. This is an improvement in the amount of waste diverted from landfill in 2016/17 (99.96%) and an increase in the amount recycled (70.8%) when compared to the end of 16-17. Our London portfolio continues to divert 100% from landfill with 77.5% of waste recycled. In our Retail portfolio, we are now diverting 100% from landfill and recycling 74.0%.

# Greenhouse gas emission reporting

## Greenhouse gas emission reporting

CO <sub>2</sub> e conversion factors – location based*				Table 6
	2016/17	2017/18	% change	
Electricity	0.51680	0.44572	-13.8%	
Natural gas	0.20899	0.21201	1.4%	

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

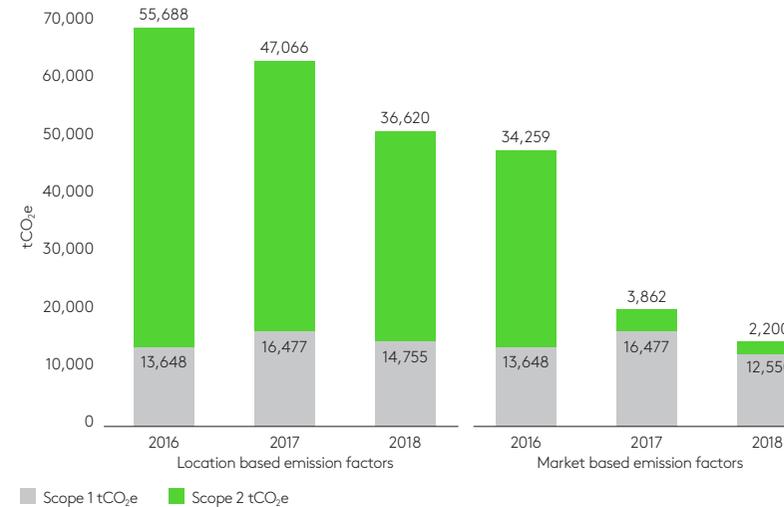
This table above outlines the location-based emission factors used for the 2017/18 year and how they compare to the previous year.

## Landsec – Scope 1 and 2 emissions 2016–2018

Scope 1 and 2 mandatory reporting	Location based emission factors			Market based emission factors			Table 7
	2016	2017	2018	2016	2017	2018	
Scope 1 tCO <sub>2</sub> e	13,648	16,477	14,755	Scope 1 tCO <sub>2</sub> e	13,648	16,477	12,550
Scope 2 tCO <sub>2</sub> e	55,688	47,066	36,620	Scope 2 tCO <sub>2</sub> e	34,259	3,862	2,200
Scope 1 and 2 tCO <sub>2</sub> e	69,336	63,543	51,374	Scope 1 and 2 tCO <sub>2</sub> e	47,907	20,338	14,749
<b>Intensity</b>							
Scope 1 and 2 tCO <sub>2</sub> e/m <sup>2</sup>	0.041	0.038	0.028	Scope 1 and 2 tCO <sub>2</sub> e	0.026	0.012	0.008

## Landsec Scope 1 and 2 emissions 2016–2018

Chart 8



Scope 1 and 2 GHG emissions using location-based emission factors have dropped by 19% since the previous year. This has been driven by a reduction in electricity consumption and the drop 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. In terms of market-based emissions we have seen a significant reduction of 27%. This has been due to increasing the number of sites supplied with 100% renewable electricity via our contract with Smartest Energy and by procuring at least 15% of our total gas purchase from green sources.

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 2016/17

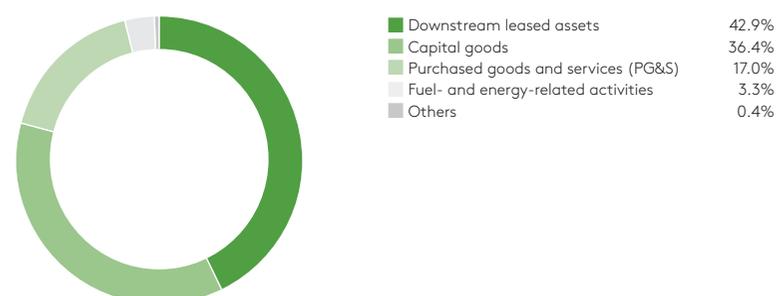
Table 9

GHG Scope	Category	Emissions (t CO <sub>2</sub> e)	% of total emissions	Emissions (t CO <sub>2</sub> e)	% of total emissions
Scope 1	Scope 1	16,477	2%	14,755	4%
Scope 2	Scope 2	47,066	7%	36,620	9%
Scope 3	1. Purchased goods and services (PG&S)	61,647	9%	59,936	15%
	2. Capital goods	283,570	41%	128,551	32%
	3. Fuel- and energy-related activities	13,982	2%	11,699	3%
	4. Upstream transportation and distribution	Grouped under PG&S	0%	Grouped under PG&S	0%
	5. Waste generated in operations	740	0%	769	0%
	6. Business travel	360	0%	366	0%
	7. Employee commuting	182	0%	182	0%
	8. Upstream leased assets	Not applicable	0%	Not applicable	0%
	9. Downstream transportation and distribution	Not applicable	0%	Not applicable	0%
	10. Processing of sold products	Not applicable	0%	Not applicable	0%
	11. Use of sold products	Not applicable	0%	Not applicable	0%
	12. End-of-life treatment of sold products	Not applicable	0%	Not applicable	0%
	13. Downstream leased assets	258,428	38%	151,596	37%
	14. Franchises	Not applicable	0%	Not applicable	0%
	15. Investments	Not applicable	0%	Not applicable	0%

The GHG Protocol categorises Scope 3 emissions into 15 distinct categories, of which 8 are applicable to Landsec. The chart below highlights clear hot spots::

### Landsec Scope 3 emissions 2017/18

Chart 10



The two largest contributing categories are Capital goods and Downstream leased assets, making up 69% 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 as to the year on year reductions for both categories. For Capital Goods, we have finished a number of buildings in development, and not brought new projects online at this stage. For Downstream leased assets, we have updated the energy Benchmark from the non-domestic National Energy Data-framework 2011 to those in the 2017 Real Estate Environmental Benchmarks.

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## 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.
- **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.

Additionally, this year we are reporting on seven EPRA Social Performance Measures at corporate level, including employee diversity, training, development, employee turnover and health & safety. EPRA Governance Performance Measures are disclosed in the Annual Report (p. 175).

**Absolute portfolio energy**

Table 11

EPRA Sustainability Performance Measures (Environment)				London			Retail			Landsec			
Impact area	EPRA codes	Units of measure	Indicator	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	
Energy	Elec – Abs kWh		Electricity	for landlord shared services	74,317,783	68,733,954	54,403,135	48,159,946	48,766,892	47,412,799	122,477,730	117,500,847	101,815,934
				(sub)metered exclusively to tenants	54,479,700	41,424,327	49,031,565	9,943,359	10,048,713	16,659,565	64,423,059	51,473,040	65,691,130
				Total landlord-obtained electricity	128,797,483	110,158,282	103,434,700	58,103,306	58,815,606	64,072,364	186,900,789	168,973,888	167,507,064
				Proportion of landlord-obtained electricity from renewable sources	–	91%	99%	–	83%	82%	–	88%	93%
	DH&C – Abs kWh		District Heating and Cooling <sup>1</sup>	for landlord shared services			5,238,034						5,238,034.70
				(sub)metered exclusively to tenants			6,641,102						6,641,102.30
				Total landlord-obtained heating and cooling			11,879,137						11,879,137.00
				Proportion of landlord-obtained heating and cooling from renewable sources			–						–
	Fuels – Abs kWh		Fuels	for landlord shared services	48,696,564	57,398,425	50,369,174	18,230,207	22,058,795	20,024,789	66,926,772	79,457,220	70,393,964
				(sub)metered exclusively to tenants	3,805,666	2,716,191	2,943,692	11,439,703	11,896,101	13,000,133	15,245,369	14,612,292	15,943,825
				Total landlord-obtained fuels	52,502,231	60,114,616	53,312,867	29,669,911	33,954,896	33,024,923	82,172,142	94,069,512	86,337,790
				Proportion of landlord-obtained fuels from renewable sources	–	–	17%	–	–	17%	–	–	17%
	Total energy – Abs kWh		Total energy	for landlord shared services	123,014,348	126,132,379	110,010,344	66,390,154	70,825,687	67,437,588	189,404,502	196,958,067	177,447,933
				(sub)metered exclusively to tenants	58,285,366	44,140,518	58,616,359	21,383,062	21,944,814	29,659,698	79,668,429	66,085,333	88,276,058
				Total landlord-obtained energy	181,299,715	170,272,898	168,626,704	87,773,217	92,770,502	97,097,287	269,072,932	263,043,400	265,723,992
				Proportion of landlord-obtained energy from renewable sources	–	59%	66%	–	52%	60%	–	57%	64%
Energy-Int	kWh/m <sup>2</sup> /year	Energy intensity	Total building energy intensity	253	279	266	78	87	80	146	157	144	

2017/18 – % of total assets included: 100%

2017/18 – % of data estimated: 0.4%. In this disclosure, estimation refers to filling either invoice or meter reading gaps, not to whether invoices are based on “estimated” or “actual” readings.

1. 2017/18 is the first year Landsec purchases District Heating and Cooling.

**Like-for-like portfolio energy**

Table 12

EPRA Sustainability Performance Measures (Environment)				London			Retail			Landsec			
Impact area	EPRA codes	Units of measure	Indicator	2016/17	2017/18	% change	2016/17	2017/18	% change	2016/17	2017/18	% change	
Energy	Elec – LfL	kWh	Electricity	for landlord shared services	44,883,942	36,276,992	-19%	46,237,410	44,586,227	-4%	91,121,352	80,863,218	-11%
				(sub)metered exclusively to tenants	29,164,891	37,396,869	153%	10,048,713	10,551,850	5%	39,213,604	47,948,720	22%
				Total landlord-obtained electricity	74,048,832	73,673,861	-1%	56,286,123	55,138,077	-2%	130,334,955	128,811,938	-1%
				Proportion of landlord-obtained electricity from renewable sources	93%	99.9%	8%	85%	94%	10%	90%	98%	9%
	Fuels – LfL	kWh	Fuels	for landlord shared services	31,451,466	33,536,559	7%	21,769,961	20,024,790	-8%	53,221,428	53,561,348	1%
				(sub)metered exclusively to tenants	2,444,703	2,759,690	13%	11,896,101	12,562,918	6%	14,340,804	15,322,608	7%
				Total landlord-obtained fuels	33,896,169	36,296,249	7%	33,666,063	32,587,707	-3%	67,562,232	68,883,956	2%
				Proportion of landlord-obtained fuels from renewable sources	-	18%	-	17%	-	17%			
	Total energy – LfL	kWh	Total energy	for landlord shared services	76,335,408	69,813,550	-9%	68,007,372	64,611,017	-5%	144,342,779	134,424,567	-7%
				(sub)metered exclusively to tenants	31,609,594	76,433,551	142%	21,944,814	23,114,768	5%	53,554,408	99,548,319	86%
				Total landlord-obtained energy	107,945,001	109,970,110	2%	89,952,186	87,725,785	-2%	197,897,187	197,695,894	0%
				Proportion of landlord-obtained energy from renewable sources	64%	73%	14%	53%	66%	23%	59%	70%	18%
Energy-Int	kWh/m <sup>2</sup> /year	Energy intensity	Total building energy intensity	258	263	2%	86	84	-2%	135	135	-0.1%	

2017/18 – % of total LfL assets included: 100%

2017/18 – % of data estimated: 0.2%. 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&amp;C – LfL is not applicable to Landsec.

## Absolute portfolio greenhouse gas emissions (energy)

Table 13

Impact area	EPRA Sustainability Performance Measures (Environment)			London			Retail			Landsec			
	EPRA codes	Units of measure	Indicator	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	
Greenhouse Gas Emissions	GHG – Dir – Abs	annual tonnes CO <sub>2</sub> e	Direct	Scope 1 (location-based)	9,020	10,561	9,276	3,363	4,059	3,688	12,383	14,620	12,964
				Scope 1 (market-based)	9,020	10,561	7,681	3,363	4,059	3,078	12,383	14,620	10,759
	GHG – Indir – Abs	annual tonnes CO <sub>2</sub> e	Indirect	Scope 2 (location-based)	33,429	26,858	20,114	22,259	20,207	16,505	55,688	47,066	36,620
				Scope 3 (location-based)	47,778	36,809	30,778	15,380	14,750	15,160	63,158	51,560	45,938
				Scope 2 (market-based)	19,378	1,626	1,149	14,881	2,236	1,051	34,259	3,862	2,200
				Scope 3 (market-based)	37,193	19,438	3,898	13,449	10,858	3,739	50,642	30,296	7,638
	GHG-Int	tCO <sub>2</sub> e/m <sup>2</sup> /year	GHG Intensity	Total GHG emission intensity (location-based)	0.126	0.121	0.095	0.037	0.037	0.029	0.071	0.068	0.052
				Total GHG emission intensity (market-based)	0.092	0.052	0.020	0.028	0.016	0.006	0.053	0.029	0.011

2017/18 – Emissions outside of scope (tCO<sub>2</sub>e)<sup>1</sup>: 1851.11

1. Since April 2017, biogas accounts for 15% of total gas purchases. In line with the GHG Protocol Guidance, the “market-based” CO<sub>2</sub> portion of the biofuel combustion is reported separately from the scopes in 2017/18.

2017/18 – % of total assets included: 100%

2017/18 – % of data estimated: 0.4%. 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 greenhouse gas emissions (energy)

Table 14

Impact area	EPRA Sustainability Performance Measures (Environment)			London			Retail			Landsec			
	EPRA codes	Units of measure	Indicator	2016/17	2017/18	% change	2016/17	2017/18	% change	2016/17	2017/18	% change	
Greenhouse Gas Emissions	GHG – Dir – LfL	annual tonnes CO <sub>2</sub> e	Direct	Scope 1 (location-based)	5,787	6,176	7%	4,006	3,688	-8%	9,793	9,864	1%
				Scope 1 (market-based)	5,787	5,077	-12%	4,006	3,078	-23%	9,793	8,155	-17%
	GHG – Indir – LfL	annual tonnes CO <sub>2</sub> e	Indirect	Scope 2 (location-based)	18,482	12,753	-31%	19,165	15,511	-19%	37,647	28,265	-25%
				Scope 3 (location-based)	24,184	21,603	-11%	14,478	12,079	-17%	38,662	33,682	-13%
				Scope 2 (market-based)	945	8	-99%	1,787	667	-63%	2,732	674	-75%
				Scope 3 (market-based)	2,379	1,405	-41%	3,796	2,961	-22%	6,175	4,366	-29%
GHG-Int	tCO <sub>2</sub> e/m <sup>2</sup> /year	GHG Intensity	Total GHG emission intensity (location-based)	0.116	0.097	-16%	0.036	0.030	-17%	0.059	0.049	-17%	
			Total GHG emission intensity (market-based)	0.022	0.015	-29%	0.009	0.006	-30%	0.013	0.009	-29%	

2017/18 – Emissions outside of scope (tCO<sub>2</sub>e)<sup>1</sup>: 1509.30

1. Since April 2017, biogas accounts for 15% of total gas purchases. In line with the GHG Protocol Guidance, the “market-based” CO<sub>2</sub> portion of the biofuel combustion is reported separately from the scopes in 2017/18.

2017/18 – % of total LfL assets included: 100%

2017/18 – % of data estimated: 0.2%. 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 refrigerant gases**

Table 15

Impact area	EPRA Sustainability Performance Measures (Environment)			London			Retail			Landsec			
	EPRA codes	Units of measure	Indicator	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	
Water	Water – Abs	m <sup>3</sup>	Water	for landlord shared services	345,839	406,688	354,894	432,194	443,129	250,200	778,032	849,817	605,094
				(sub)metered exclusively to tenants	70,155	21,786	71,120	199,782	207,262	378,619	269,937	229,048	449,740
				Total landlord-obtained water	415,994	428,473	426,015	631,976	650,391	628,820	1,047,969	1,078,865	1,054,834
Water-Int	m <sup>3</sup> /m <sup>2</sup> /year	Water intensity	Total building water intensity	0.58	0.70	0.67	0.56	0.61	0.52	0.57	0.64	0.57	
Waste	Waste – Abs (recycled)	annual metric tonnes	Waste	Total weight of waste – Recycled	6,123	6,908	7,165	18,512	17,824	18,778	24,635	24,732	25,943
				Total weight of waste – Energy from Waste	2,186	1,985	2,047	7,939	8,180	7,357	10,125	10,165	9,404
	Waste – Abs (landfill)	Waste	Total weight of waste – Landfill	0	0	0	256	37	0	256	37	0	
			Proportion of waste – Recycled	74%	78%	78%	69%	68%	72%	70%	71%	73%	
	Waste – Abs (EfW)	proportion of total waste %	Waste	Proportion of waste – Energy from Waste	26%	22%	22%	30%	31%	28%	29%	29%	27%
				Proportion of waste – Landfill	0%	0%	0%	1%	0%	0%	1%	0%	0%
Refrigerant gases	Refrigerant gases – Abs	annual tonnes CO <sub>2</sub> e	Direct	Refrigerant gases	897	1,311	1,206	333	530	556	1,230	1,841	1,763

2017/18 – % of total assets included: Water – 100%, Waste – 100%, Refrigerant gases – 75%

2017/18 – % of data estimated: Water – 4%, Waste – 0%, Refrigerant gases – 100% (estimated using the 'screening' methodology)

## Like-for-like portfolio water, waste and refrigerant gases

Table 16

Impact area	EPRA Sustainability Performance Measures (Environment)				London			Retail			Landsec		
	EPRA codes	Units of measure	Indicator		2016/17	2017/18	% change	2016/17	2017/18	% change	2016/17	2017/18	% change
Water	Water – Lfl	m <sup>3</sup>	Water	for landlord shared services	223,385	212,109	-5%	441,313	217,050	-51%	664,698	429,158	-35%
				(sub)metered exclusively to tenants	19,069	49,353	159%	207,262	357,340	72%	226,331	406,693	80%
				Total landlord-obtained water	242,454	261,462	8%	648,575	574,389	-11%	891,029	835,851	-6%
	Water-Int	m <sup>3</sup> /m <sup>2</sup> /year	Water intensity	Total building water intensity	0.58	0.62	8%	0.62	0.55	-11%	0.61	0.57	-6%
Waste	Waste – Lfl (recycled)	annual metric tonnes	Waste	Total weight of waste – Recycled	4,544	4,572	1%	16,647	17,532	5%	21,191	22,103	4%
	Waste – Lfl (EfW)		Waste	Total weight of waste – Energy from Waste	1,458	1,467	1%	7,539	6,147	-18%	8,998	7,614	-15%
	Waste – Lfl (landfill)		Waste	Total weight of waste – Landfill	0	0	0%	34	0	-100%	34	0	-100%
	Waste – Lfl (recycled)	proportion of total waste %	Waste	Proportion of waste – Recycled	76%	76%	0%	69%	74%	8%	70%	74%	6%
	Waste – Lfl (EfW)		Waste	Proportion of waste – Energy from Waste	24%	24%	-0%	31%	26%	-17%	30%	26%	-14%
	Waste – Lfl (landfill)		Waste	Proportion of waste – Landfill	0%	0%	0%	0%	0%	-100%	0%	0%	-100%
Refrigerant gases	Refrigerant gases – Lfl	annual tonnes CO <sub>2</sub> e	Direct	Refrigerant gases	699	781	12%	519	547	5%	1,219	1,328	9%

2017/18 – % of total assets included: Water – 100%, Waste – 100%, Refrigerant gases – 75%

2017/18 – % of data estimated: Water – 4%, Waste – 0%, Refrigerant gases – 100% (estimated using the 'screening' methodology)

## Absolute portfolio greenhouse gas emissions (other)

Table 17

Impact area	EPRA Sustainability Performance Measures (Environment)			London			Retail			Landsec			
	EPRA codes	Units of measure	Indicator	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	
Greenhouse Gas Emissions	GHG - Dir - Abs	annual tonnes CO <sub>2</sub> e	Direct	Scope 1	932	1,327	1,234	333	530	556	1,857	1,857	1,790
			Indirect	Scope 3	1,180	1,060	1,014	1,441	1,455	1,230	2,516	2,516	2,244

2017/18 - % of total assets included: Water - 100%, Waste - 100%, Refrigerant gases - 75%

2017/18 - % of data estimated: Water - 4%, Waste - 0%, Refrigerant gases - 100% (estimated using the 'screening' methodology)

Scope 1 includes emissions from Refrigerant gas and Passenger vehicles

Scope 3 includes emissions from Waste, Water and Business travel

Emissions from Passenger vehicles and Business travel are included in London

## Like-for-like portfolio greenhouse gas emissions (other)

Table 18

Impact area	EPRA Sustainability Performance Measures (Environment)			London			Retail			Landsec			
	EPRA codes	Units of measure	Indicator	2016/17	2017/18	% change	2016/17	2017/18	% change	2016/17	2017/18	% change	
Greenhouse Gas Emissions	GHG - Dir - LfL	annual tonnes CO <sub>2</sub> e	Direct	Scope 1	699	781	12%	519	547	5%	1,219	1,328	9%
			Indirect	Scope 3	381	406	7%	1,197	1,119	-6%	1,578	1,526	-3%

2017/18 - % of total assets included: Water - 100%, Waste - 100%, Refrigerant gases - 75%

2017/18 - % of data estimated: Water - 4%, Waste - 0%, Refrigerant gases - 100% (estimated using the 'screening' methodology)

Scope 1 includes emissions from Refrigerant gas

Scope 3 includes emissions from Waste and Water

## Absolute portfolio - Sustainability certification

Table 19

Impact area	EPRA Sustainability Performance Measures (Environment)			2016/17	2017/18	% change
	EPRA codes	Units of measure	Indicator			
Certification	Cert-Tot	% of total floor area (m <sup>2</sup> )	Percentage of portfolio which is BREEAM rated	33.1%	34.9%	5.4%
			Outstanding	0.23%	0.22%	-2.6%
			Excellent	17.32%	17.41%	0.5%
			Very Good	8.64%	10.18%	17.8%
			Good / Pass	6.92%	7.09%	2.5%

2016/17 figures have been restated due to improved accuracy in the quality of data concerning BREEAM rated areas.

The table above outlines the percentage of our portfolio 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.

## Landsec headquarter environmental performance

Table 20

Impact area	EPRA Sustainability Performance Measures (Environment)				Landsec HQ
	EPRA codes	Units of measure	Indicator		2017/18
Energy	Elec – Abs	kWh	Electricity	Total landlord-obtained electricity	433,901
				Proportion of landlord-obtained electricity from renewable sources	100%
	Fuels – Abs	kWh	Fuels	Total landlord-obtained fuels	495,956
				Proportion of landlord-obtained fuels from renewable sources	18%
	Total energy – Abs	kWh	Energy	Total landlord-obtained energy	929,858
				Proportion of landlord-obtained energy from renewable sources	23%
Energy-Int	kWh/m <sup>2</sup> /year	Energy intensity	Total building energy intensity	197	
Greenhouse Gas Emissions	GHG – Dir – Abs	annual tonnes CO <sub>2</sub> e	Direct	Scope 1 (location-based)	101
				Scope 1 (market-based)	84
	GHG – Indir – Abs	annual tonnes CO <sub>2</sub> e	Indirect	Scope 2 (location-based)	153
				Scope 3 (location-based)	60
				Scope 2 (market-based)	0
	GHG-Int	tCO <sub>2</sub> e /m <sup>2</sup> /year	GHG Intensity	Total GHG emission intensity (location-based)	0.066
				Total GHG emission intensity (market-based)	0.022
Water	Water – Abs	m <sup>3</sup>	Water	Total landlord-obtained water	2,518
	Water-Int	m <sup>3</sup> /m <sup>2</sup> /year	Water intensity	Total building water intensity	0.53
Waste	Waste – Abs	annual metric tonnes	Waste	Total weight of waste – Recycled	73
				Total weight of waste – Energy from Waste	28
				Total weight of waste – Landfill	0
	proportion of total waste %	Waste	Waste	Proportion of waste – Recycled	72%
				Proportion of waste – Energy from Waste	28%
				Proportion of waste – Landfill	0%
Refrigerant gases	Refrigerant gases – Abs	annual tonnes CO <sub>2</sub> e	Direct	Refrigerant gases	9

Emissions outside of scope (tCO<sub>2</sub>e): 12.46

1. Since April 2017, biogas accounts for 15% of total gas purchases. In line with the GHG Protocol Guidance, the “market-based” CO<sub>2</sub> portion of the biofuel combustion is reported separately from the scopes in 2017/18.

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

Please note that, in 2016/17, Landsec didn't disclose the performance of its own office separately due to a head office move mid-way through the year.

## Employee diversity performance

Table 21

Impact area		EPRA Sustainability Performance Measures (Social)			2017/18	
Diversity	EPRA codes	Units of measure	Indicator		Female	Male
	Diversity-Emp	% of employees	Gender diversity	% of total employees	53.5%	46.5%
			Gender by level	Executive	28.6%	71.4%
				Senior Leader	38.1%	61.9%
				Leader	24.4%	75.6%
				Manager	51.5%	48.5%
				Professional	53.4%	46.6%
				Support	78.9%	21.1%
			Ethnicity diversity	Asian	4.1%	1.8%
				Black	3.6%	1.1%
				Other	2.8%	1.5%
				Race/Ethnicity Not Recorded	3.1%	2.3%
				White	40.0%	39.8%

## Employee diversity performance

Table 22

Impact area		EPRA Sustainability Performance Measures (Social)			2017/18				
Diversity	EPRA codes	Units of measure	Indicator		Asian	Black	Other	Race/ Ethnicity Not Recorded	White
	Diversity-Emp	% of employees	Ethnicity by Level	% of total employees	5.9%	4.7%	4.2%	5.4%	79.8%
				Executive	0.0%	0.0%	0.0%	0.0%	100.0%
				Senior Leader	0.0%	0.0%	0.0%	9.5%	9.5%
				Leader	3.6%	2.4%	3.7%	4.9%	85.4%
				Manager	5.4%	3.0%	3.5%	3.5%	84.7%
				Professional	9.2%	6.1%	4.3%	4.3%	76.1%
				Support	5.3%	8.3%	6.8%	5.3%	74.4%

## Employee development and turnover

Table 23

Impact area EPRA Sustainability Performance Measures (Social)				2017/18			
Development and Turnover	EPRA codes	Units of measure	Indicator	Female	Male	Landsec	
	Emp-Training	Number of hours	Hours of training	Average hours of training per employee	12.4	12.2	12.3
	Emp-Dev	% of employees	Performance appraisals	% of total employees received performance appraisals	45.0%	50.0%	95.0%
	Emp-Turnover	Number of employees	New hires	Total number of new hires	92	58	150
				Rate of new hires	15.0%	9.0%	24.0%
			Employee turnover	Total number of employee turnover	46	71	117
				Rate of employee turnover	7.5%	11.5%	19.0%

## Health and Safety performance

Table 24

Impact area EPRA Sustainability Performance Measures (Social)				London			Retail			Landsec		
Health & Safety	EPRA codes	Units of measure	Indicator	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18
	H&S – Emp	% of total days	Absentee rate	Absentee rate for employees						1.08%	1.44%	1.31%
	H&S – Asset	%	% Assets	100%	100%	100%	100%	100%	100%	100%	100%	100%
	H&S-Comp	Total number	Number of incidents	Developments						12	16	14
				Managed Portfolio	3	10	1	4	11	11	7	21
			Number of fatalities	Developments						1	0	0
				Managed Portfolio	0	0	0	0	0	0	0	0

# TCFD Disclosure

Governance	Describe the board's oversight of climate related risks and opportunities	<p>Our leadership team takes responsibility for climate related risks and opportunities, with our Chief Executive taking overall responsibility. The Board receive an annual update on our wider sustainability programme which includes discussion of risks and opportunities. Ongoing oversight of climate related risks and opportunities is carried out by our Sustainability Committee, which is chaired by the Chief Executive and attended by our Director of Corporate Affairs and Sustainability and Group HR Director – all members of our Executive Committee – together with our Head of Sustainability &amp; Public Affairs and senior representation from the London and Retail businesses.</p> <p>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 legal, regulatory and economic risks, as well as the physical risks to our assets. The committee also approves and reviews research and analysis to determine sustainability risks and opportunities.</p>
	Describe management's role in assessing and managing climate related risks and opportunities	<p>The Sustainability Committee is supported by our Investment Committee, London Executive Committee and Retail Executive Committee. Each committee reviews opportunities and risks as described above which include climate related matters. This can include investment in assets, divestment of assets, investment in energy efficiency projects, investment in renewables and approving development or refurbishment plans which include reviewing aspects of sustainable design. In addition to our committees, management across our business must meet a series of annual key performance indicators (KPIs). These are linked to executive and senior management reward. We have several indicators specific to sustainability opportunities including energy management, which are intended to incentivise progress against our science-based carbon reduction target and energy efficiency commitment.</p> <p>In addition to our governance and incentives, our Sustainability Matters training programme supports awareness and knowledge of climate related risks and opportunities. In 2017/18 we carried out a number of training courses for finance, tax and treasury disciplines across our business, exploring climate risk and encouraging the delegates to take ownership of the risks to the business in their own departments. The training courses were successful and have resulted in additional meetings, discussions and research projects.</p>

Strategy	Describe the climate related risks and opportunities the organisation has identified over the short, medium, and long term	<p>Our sustainability strategy was formed following a detailed sustainability materiality review, carried out by JLL and completed in March 2016. The review was undertaken in line with best practice methodologies supported by the Global Reporting Initiative (GRI) and AccountAbility, and involved consultations with stakeholders inside and outside the Company. The resulting materiality matrix plots issues according to their importance to our stakeholders and to our business. The current matrix shows that our most material issues are energy and carbon, and sustainable building design, although our programme covers twelve thematic areas which are referenced and discussed throughout this document.</p> <p>To approach the assessment of climate-related risks we have divided our time horizons into two distinct periods, up to 2030 and beyond 2030. This is because risks or opportunities which may materialise up to 2030 may require investment, divestment or operational actions to be planned in the near future. Beyond 2030, the risks and opportunities will change, in part due to intensification of the effects of climate change. Accordingly, we may need to take account of these changes in development decisions as many of our assets have a designed lifespan of 50 to 60 years.</p> <p>The biggest opportunity presented by climate change is for us to reduce our emissions, which generates savings for our business and for our customers. To determine how we would respond to this opportunity, we set a science based target for reducing our emissions. The target was developed and assessed by the Science Based Targets initiative, and is designed to prevent the worst impacts of climate change by keeping us within a two degrees of warming scenario. We have also set targets which support our carbon target, including procurement of 100% renewable electricity across our portfolio, achieving 3 MW of on-site renewable electricity capacity by 2030, and reducing energy intensity (kWh/m<sup>2</sup>) by 40% by 2030 compared to a 2013/14 baseline.</p> <p>To determine the risks presented by climate change we partnered with Willis Towers Watson, conducting research using stochastic modelling to help determine the likelihood of temperature change, as well as potential weather patterns and natural hazards. The modelling looked at how future weather patterns are likely to affect our assets over our two defined time horizons: up to 2030 and beyond 2030.</p> <p>The likelihood of future weather events was modelled 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. We focused on a best-case scenario, where global average temperature increases by two degrees, and a worst-case scenario, with a temperature change of four degrees. The risks analysed included energy pricing risk, the risk of overheating, risk of building failure or damage due to windstorm, and the physical risks posed by coastal, inland and flash flooding.</p> <p>The findings of the study showed in the period up to 2030, the risks of natural hazards are unlikely to increase in a material way as a direct result of climate change. Natural weather variability will continue, which means storms and flooding could continue to affect our assets. We also found that an increase in average temperature is likely to affect our operational costs of cooling and heating, but not in a financially material way. Our modelling shows the requirements for more cooling, but less heating, will cancel each other out when it comes to costs.</p> <p>The effects beyond 2030 are likely to be different. The risk of inland flood, coastal flood and windstorm will increase. The impact of these hazards will become more relevant towards 2050, resulting in an increased negative impact on the current Landsec portfolio if our control measures remain the same.</p>
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Strategy continued	Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning	<p>Our response to climate-related risks and opportunities spans all areas of our business including investment, development, operation and divestment. Specifically, climate risks and opportunities play a key role in our acquisitions strategy, selection of insurance and energy procurement processes.</p> <p>Through our Responsible Property Investment Policy, we're continuing to assess energy efficiency and climate risks when we buy new assets. Beyond 2030 we may need to consider selling assets with high residual risk from natural hazards. We will also undertake risk assessments of proposed developments and investments where necessary to ensure resilience to physical risks from climate change such as windstorm and flooding, especially in the north of England and Scotland.</p> <p>Through our Sustainability Brief for developments and design process, we are responding to the risks presented by higher cooling costs and lower heating demand. This includes adapting building services design, moving away from heating while also keeping summer cooling capacity to cope with intense heatwaves.</p> <p>Using our new Sustainability Charter we are encouraging our partners to improve their preparation and response to climate related risks such as storms, flooding and overheating. We have also included this criteria in the selection and engagement process for partners and plan to work with them in the year ahead to assess and encourage progress.</p> <p>We have an Energy Reduction Plans in place for all our assets, which outlines how we will manage the asset effectively. Through these plans we will continue to plan and deliver improved controls and efficient energy systems. The Energy Reduction Plans form part of the operational financial planning for each asset, with budgets for energy efficiency measures planned in advance by each asset team.</p> <p>Building on our energy reduction plans we are actively investing in our renewable energy generation capacity to improve our resilience, reduce carbon emissions and reduce operational costs. In August 2017 we installed the UK's largest solar PV system on a shopping centre at White Rose in Leeds, and we continue to increase our renewable power capacity installing a smaller system at Trinity Leeds in 2017 and planning a further system at Westgate, Oxford for 2018.</p>
	Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	<p>Our existing processes give us confidence that our business activities, strategy and financial planning are resilient to climate-related risks and we are currently well positioned to benefit from the transition to a low carbon economy through to 2030. These processes will also help us to mitigate risk after 2030, as the effects of climate change become more severe. We're committed to the ongoing review of these risks and will reassess if there are major changes to our portfolio or unexpected changes to the trajectory of climate change.</p>
Risk Management	Describe the organisation's processes for identifying and assessing climate related risks	<p>Board has overall responsibility for risk management which includes climate related risks. The Board recognises the importance of identifying and actively monitoring climate-related risks. Sustainability and climate-related risks feature prominently on our risk register. The sustainability risk includes aspects concerning carbon, energy and physical risks to our assets.</p> <p>The Director of Risk Management &amp; Internal Audit has established a network of risk champions across the business, tasked with developing both awareness of key risks and improving control measures. Accordingly, the sustainability risk is continually reviewed by our sustainability risk champion, with support from our Executive board director responsible for sustainability risk Miles Webber, Director of Corporate Affairs &amp; Sustainability.</p>
	Describe the organisation's processes for managing climate related risks	<p>We have an established risk management and control framework that enables us to effectively identify, evaluate and manage our principal and emerging risks. Climate related risks determined through our research include changes to the heating and cooling needs of our buildings, which are not financially material but will require incremental changes to the design and maintenance of our assets. This risk is managed through engagement with our development and operation teams, as well as our external partners, to ensure they are aware of this risk and are taking the necessary mitigating actions. Our research also showed residual risks to our assets from windstorm and flooding. Although these events are not expected to intensify in the short term, we manage this risk by working with our investment and portfolio teams to ensure they are aware of the risks specific to the assets, enabling them to make informed decisions. Where appropriate, we also work with asset teams to make them aware of any operational implications arising from climate related risks.</p>
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management	<p>Ownership and management of all risks including sustainability risks are assigned to members of the Executive Committee. They are responsible for ensuring the operating effectiveness of the internal control systems and for implementing key risk mitigation plans, and are supported by risk champions. The sustainability risk which includes climate related risks is included in this process. 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 across our business.</p>

## Metrics and Targets

In addition to the metrics and targets listed above, as recommended by the TCFD, you can find more detail on our progress against our carbon, energy and renewable energy generation targets on page 2 of this report.

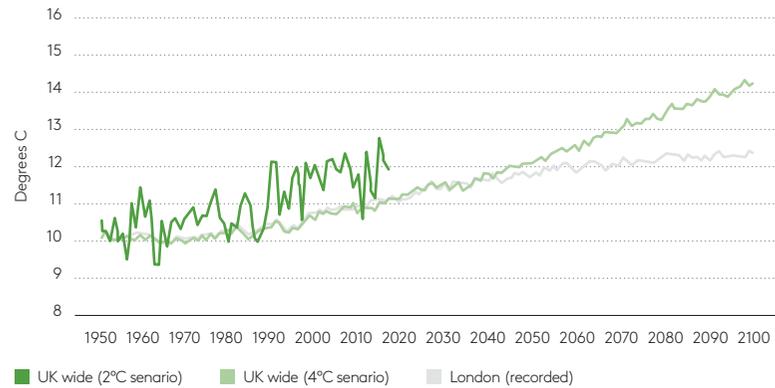
<b>Materials and Buildings Group Metrics</b>				Table 25
<b>Financial category</b>	<b>Climate related category</b>	<b>Metric</b>	<b>Unit of measure</b>	<b>Landsec 2017/18</b>
Revenues	Risk Adaptation & Mitigation	Revenues/savings from investments in low-carbon alternatives (e.g., R&D, equipment, products or services)	£	583,369.00
	Risk Adaptation & Mitigation	Expenditures (OpEx) for low-carbon alternatives (e.g., R&D, technology, products, or services)	£	1,383,987.00
Expenditures	Energy/Fuel	Total energy consumption	kWh	265,723,992.15
	Energy/Fuel	Proportion of energy consumption from renewable sources	%	64%
	Energy/Fuel	Total electricity consumption	kWh	167,507,064.49
	Energy/Fuel	Proportion of electricity consumption from renewable sources	%	93%
	Energy/Fuel	Total fuel consumption (i.e. gas)	kWh	86,337,790.66
	Energy/Fuel	Proportion of fuel consumption from renewable sources (i.e. green gas)	%	17%
	Energy/Fuel	Total building energy intensity by floor area	kWh/m <sup>2</sup>	144
	Water	Percent of fresh water withdrawn in regions with high or extremely high baseline water stress	m <sup>3</sup>	0
	Water	Total building water intensity by floor area	m <sup>3</sup> /m <sup>2</sup>	0.57
	GHG Emissions	Total GHG emissions intensity by floor area	tCO <sub>2</sub> e/m <sup>2</sup>	0.052 <sup>1</sup>
Assets	Location	Percentage of portfolio located in designated high-risk flood hazard areas	% floor area	16%
	Risk Adaptation & Mitigation	Percentage of portfolio which is BREEAM rated	% floor area	34.90%
	Risk Adaptation & Mitigation	Investment (CapEx) in low-carbon alternatives (e.g., capital equipment or assets)	£	1,287,500.00

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

## Data from our Resilience Research

### Yearly temperature history & projections

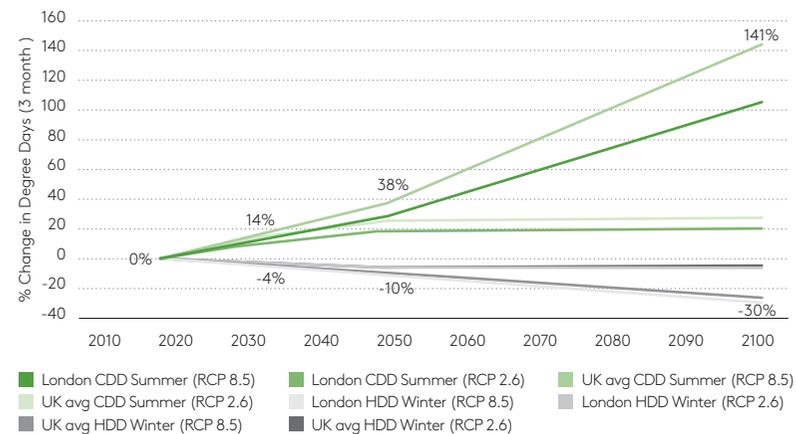
Chart 26



Our research shows projected average temperature change in both two and four degree warming scenarios. In the four degree warming scenario, average temperature rises to over 14 degrees. This will mean warmer winters but very hot summers.

### Projected change in degree days for summer & winter months

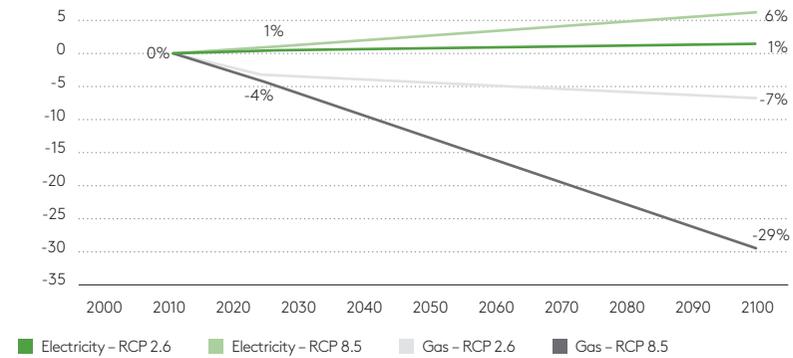
Chart 27



Our research shows a significant increase in degree days which will mean higher cooling costs for our assets, although up to 2030 this will be offset by lower heating costs. Our assets will also consume more electricity from cooling which will make it harder to achieve our carbon target in the lead up to 2030 as the grid is still decarbonising.

### Change in energy consumption

Chart 28



This graph shows the predicted change in energy consumption associated with heating and cooling. In the four degrees of warming scenario, gas consumption drops by 29% and electricity consumption increases by 6%.

### Assets exposed to physical climate risks

Chart 29



This shows the total number of our assets exposed to physical climate risks. Almost all of the UK is exposed to windstorm, where as a much smaller proportion of our assets is exposed to flooding.

# Independent Assurance Statement

## Independent Assurance Statement to The Management of Landsec 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 Landsec Group PLC ("the Group") 2018 Annual Report and Accounts and the online Landsec Performance Data Report 2018 (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)<sup>1</sup> and to meet the requirements of a Type 2 assurance engagement as defined by AA1000AS (2008).<sup>2</sup> The AA1000AS (2008) assurance principles of Inclusivity, Materiality and Responsiveness have been used as criteria against which to evaluate the Report.

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** and reviewed company-level documents to understand the progress made in the area of sustainability during the reporting period and test the coverage of topics within the Report.
- 2. Conducted site visits at two sites (Bluewater and White Rose)** to understand how the sustainability agenda is being managed at the site-level.
- 3. Reviewed the Group's approach to stakeholder engagement** through interviews with employees with responsibility for managing engagement activities and review of selected associated documentation.
- 4. Reviewed the coverage of key issues within the Report** against the key issues raised in external media reports and the sustainability reports of the Group's peers, as well as the topics discussed in our management interviews, site visits and by the Sustainability Committee and other internal working groups.
- 5. Interviewed staff responsible for data reporting and carried out the following activities to review selected sustainability data:**
  - Reviewed the guidance on data reporting, key processes and quality assurance performed.
  - Selected a sample of data points from across the business and sought documentary evidence to support the data.
  - Conducted a walk-through of data reported from a sample of sites to test consolidation.
  - Reviewed any explanations provided for significant variances.
  - 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:

- **Community employment:** People into jobs through the Community Employment Programme
- **Greenhouse gas emissions:** Direct GHG emissions (MtCO<sub>2</sub>e), Indirect GHG emissions (MtCO<sub>2</sub>e), and GHG intensity from building energy (tCO<sub>2</sub>e/m<sup>2</sup>/year)
- **Waste:** Waste diverted from landfill (tonnes) and percentage of waste recycled

- 6. Reviewed information or explanation about selected data, 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 (as presented in the table above).

We have only sought evidence to support the 2017/2018 performance data relating to the corporate commitment performance and greenhouse gas emission reporting (pp. 5-13). We do not provide conclusions on any other data from prior years or EPRA and TCFD related disclosures.

## Our conclusions

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

### Inclusivity

Has the Group been engaging with stakeholders across the business to develop its response to sustainability issues?

- We are not aware of any key stakeholder groups that have been excluded from dialogue.
- We are not aware of any matters that would lead us to conclude that the Group has not applied the Inclusivity principle in developing its response to sustainability issues.

### Materiality

Has the Group provided a balanced representation of key topics concerning its sustainability performance?

- We are not aware of any key topics concerning the sustainability performance of the Group which have been excluded from the Report.
- Nothing has come to our attention that causes us to believe that the Group's management has not applied its processes for determining material issues to be included in the Report.

### Responsiveness

Has the Group responded to stakeholder concerns?

- We are not aware of any matters that would lead us to conclude that the Group has not applied the responsiveness principle in considering the matters to be reported.

### Completeness and accuracy of performance information

- We are not aware of any material reporting units that have been omitted from the stated scope of the company-level sustainability data.
- Nothing has come to our attention that causes us to believe that the data relating to the above topics has not been collated properly from company-level systems.
- 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.

- This is the first year that Landsec has fully integrated its sustainability report into the annual report and accounts with separate sustainability content on the website. The website includes more detailed data disclosure and provides illustrative examples of its sustainability activities and programmes. We note that Landsec is further developing tailored communications and communications channels aligned to the interests and needs of different stakeholder groups (e.g. customers, governments and communities).
- In its Annual Report Landsec has included references to the work it has done to understand and quantify its economic contribution to the UK as well as respond to the Task Force on Climate-related Financial Disclosures (TCFD) recommendations by reporting more information on the impact of climate change on the business. These disclosures demonstrate how Landsec is seeking to understand how it creates and protects value in the long term for a wide variety of stakeholders. One key area of value creation that hasn't yet been fully explored is social value, however we understand that Landsec is in the process of commissioning a study to better understanding the social value created through its operations.

## 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 ISQC1.<sup>3</sup> 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 2017/18. 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

11 June 2018

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. The 2008 edition of AccountAbility's AA1000 assurance standard.
3. Parts A and B of the IESBA Code; and the International Standard on Quality Control 1 (ISQC1)