Module: Introduction

Page: Introduction

CC0.1

Introduction
Please give a general description and introduction to your organization.

Crest Nicholson is a leading residential developer, one of the top 10 listed house-builders, building homes across the southern half of the UK. We aim to improve the quality of life for individuals and communities by providing better homes, workplaces, retail and leisure spaces in which people aspire to live, work and play – now and in the future.

To deliver that ambition, we have been on a journey of innovation and transformation to position the Group for profitable growth. Whether carrying out systematic scientific research into low carbon housing solutions, partnering with our supply chain to drive out waste, or developing our product for a rapidly evolving market, the focus is on delivery, quality and choice for our customers and sustainable business value for our shareholders.

Our operational focus remains concentrated in the southern half of England with an emphasis on creating well designed, high quality homes in sustainable communities. Our portfolio meets the needs of a wide range of purchasers, from first time buyers to investors, with a product range that includes houses, apartments and commercial units on mixed-use developments.

CC0.2

Reporting Year
Please state the start and end date of the year for which you are reporting data.
The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.
We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been

offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.
Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed
Sat 01 Nov 2014 - Sat 31 Oct 2015

CC0.3

Country list configuration

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

Select country
United Kingdom

CC0.4

Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

GBP(£)

CC0.6

Modules

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire.

If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx.

Further Information

Module: Management

Page: CC1. Governance

CC1.1

Where is the highest level of direct responsibility for climate change within your organization?

Board or individual/sub-set of the Board or other committee appointed by the Board

CC1.1a

Please identify the position of the individual or name of the committee with this responsibility

Chris Tinker, Executive Board Director, Strategic Projects and Regeneration Chairman and Executive Management Team member has direct responsibility to the Board for sustainability, including climate change. Chris also chairs a committee responsible for researching and exploring longer term business challenges and opportunities in which five strategic areas of work have been identified. Each area of work has its own working group and further mention of this committee will be referred to as the Strategic Pillar Working Groups. The pillars include responsibility for exploring supply chain partnerships, responsible resource management and delivering to our customers' needs, within which adapting our homes to a changing climate is a key element.

CC1.2

Do you provide incentives for the management of climate change issues, including the attainment of targets?

Yes

CC1.2a

Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
All employees	Monetary reward	Emissions reduction project	Employees receive a 20% uplift in their car allowance if they choose a carbon efficient car (≤120gCO2/km)
Other: Site Managers	Recognition (non-monetary)	Emissions reduction target	Results of environmental audits form part of the Site Manager of the Year decision criteria
All employees	Monetary reward	Efficiency project	Employees are eligible to purchase a tax free bike under the Government's Cyclescheme
Other: Site teams	Monetary reward	Efficiency project	Employees incentivised to reduce waste through a league table. The winning site team receive a monetary reward and trophy. The winning division also receives a trophy.
Other: Site teams	Monetary reward	Efficiency project	Employees and contractors working on our SW division sites are incentivised to share ideas on resource efficiency. For any ideas that are implemented, they receive a monetary reward.

Further Information

Page: CC2. Strategy

CC2.1

Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Annually	Board or individual/sub-set of the Board or committee appointed by the Board	UK	> 6 years	

CC2.1b

Please describe how your risk and opportunity identification processes are applied at both company and asset level

Crest Nicholson's Climate Change Policy commits to ensuring the risks and opportunities related to climate change are understood and managed accordingly, at both company and asset levels. At a company level, climate change risks and opportunities are identified through a materiality assessment, as well as a risk and opportunities assessment, the results of which inform the business strategy – published in our 2015 Integrated Report (IR). As demonstrated in the IR and the About Us section of our website, Crest Nicholson is pursuing many of the climate change related business opportunities, while ensuring key risks are reviewed, mitigated and managed. These include but are not limited to: flood risk; overheating risk; severe weather; energy security; cost of energy/carbon; and consumer demand-side energy consumption.

Risk management and future opportunities are a regular agenda item for all parts of the business with emphasis on continuous improvement and differentiation. The risk management framework consists of managing and monitoring risks through risk registers that are maintained at both divisional (covering division and asset level risks) and Group level (covering significant division-level and company-wide risks).

At divisional level each management board undertakes a regular assessment of its division and asset level exposure to financial, operational and strategic risks, including climate change, and the measures that have been put in place to manage those risks. The significant risks highlighted within each divisional register are incorporated in the Group risk matrix which is reviewed and monitored by the Audit Committee (the Committee). The Committee is responsible for reviewing the effectiveness of the Group's internal controls and risk management systems including the Group's control framework; this is then reflected in the risk matrix. The committee approves the internal audit programme and monitors the implementation of any recommendations made.

CC2.1c

How do you prioritize the risks and opportunities identified?

Company-wide and asset level risks are assessed in terms of their impact and probability and given an inherent risk ranking. Mitigating actions are considered and a residual risk rating is identified. These residual risk ratings are then used to prioritise investigation of further mitigating actions.

Assessment of potential opportunities related to risk mitigation occurs through the Business Improvement Workgroups (BIWs) and the Strategic Pillar Working Groups, where cost-benefit analysis is undertaken involving oversight and approval by an Executive Director. Opportunities are then prioritised on the basis of greatest cost-benefit.

CC2.1d

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment

CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process

i) How the business strategy has been influenced by climate change:
In 2014 we carried out a detailed materiality assessment with key internal and external stakeholders to ensure that our business strategy takes into account

significant risks and opportunities, including those relating to climate change and other environmental/social sustainability issues. In 2015, we reviewed and further mapped out our material issues, aligning them closely with our business strategy, as outlined in our 2015 Integrated Report. Through our membership of Forum for the Future and the UK Green Building Council, along with dialogue with government departments, including DECC, DCLG, HBF's National Technical and Sustainability Committee and the Zero Carbon Hub (closed in March 2016), we are kept informed of current and emerging issues relating to climate change and work to understand the short and long-term implications to our business. Examples of how we have responded:
a. During land acquisition and design stage, an overheating risk assessment is carried out and where deemed necessary a full dynamic overheating assessment of new homes is undertaken, and a hierarchy of solutions is followed to mitigate the impacts. To further combat overheating risk, our new range of Group house types will be modelled for the worst case scenario of overheating, allowing us to mitigate the risk through design.
b. We have established a Make Waste History (MWH) campaign, aiming to drive out unnecessary waste of raw materials, energy and water across the business. Divisional MWH forums are in place to realise the campaigns aim, developing and implementing innovative ideas.

ii) What aspects of climate change have influenced the strategy:
a. Adapting to more frequent extreme weather events, such as floods and potential overheating. To manage the climate change risks we apply appropriate Flood and Water Management Plans to our developments, among other activities.
b. Zero Carbon Homes policy was dropped by Government, but we made significant investment in related R&D of low carbon homes via the AIMC4 project. We have a fabric specification to achieve the Fabric Energy Efficiency Standards that are required as part of the 2013 Approved Document L. We are now working on a collaborative research project, AIMCh, exploring the opportunity to industrialise the house-building process by researching alternative construction methods, including off-site manufacture. This will help safeguard against increasing occurrences of severe weather, material availability issues and reducing embodied carbon.
c. Presenting opportunities to develop green business. We have linked emissions reductions to our business strategy, e.g. integration of carbon emission reduction considerations from the built environment into our master-planning and design processes.
d. Reducing our operational carbon footprint; emissions from our offices, on-site construction, business travel and commuting. In 2014, we set a target to reduce our carbon emissions associated with office energy consumption per person by 10% by 2017, which has been achieved this year.

iii) The most important components of the short term strategy that have been influenced by climate change:
a. Building homes now that achieve levels of energy efficiency and sustainability that meet and exceed current Building Regulations
b. Adopted a sustainable procurement process that gives preference to suppliers of sustainable products, such as timber from certificated sources, or suppliers willing to partner to reduce waste and emissions
c. Set a policy ambition to create local ecological/biodiversity enhancement on our sites and developed a framework supporting internal processes and tools to deliver that ambition.
d. Established divisional forums with responsibility to develop and implement energy and waste reduction initiatives in line with our MWH campaign

iv) The most important components of the long term strategy that have been influenced by climate change:
a. Two of the five Strategic Pillar Working Groups include a review of our product portfolio to identify opportunities for future-proofing homes against changes in the climate to maintain comfortable living environments; this will result in a new range of Group house types. Secondly, researching alternative construction methods, including off-site manufacture, to safeguard against increasing occurrences of severe weather, material availability issues and reducing embodied carbon.
b. Carrying out research into low-carbon homes, such as the AIMC4 collaborative project, yielding economic benefit from cost-effective early application of knowledge to design of low carbon emission homes. The focus has now moved to the AIMCh collaborative research project, which closely aligns to our Strategic Pillar Working Group that is reviewing alternative methods of construction and explores the potential to industrialise the low-carbon house-building model.

v) How this is gaining a strategic advantage over competitors:
a. Delivers a reputational advantage by placing us among the leaders in sustainable house-building in the UK. In 2015, we came 1st place in the NextGeneration Sustainability Benchmark, which reviews the sustainability performance of the top 25 housebuilders in the UK.

b. Understanding and developing cost-effective customer friendly solutions for low-carbon homes is reducing risks and costs. In 2015 we delivered 755 homes (27% of our homes built) to Code for Sustainable Homes level 4 and 32% of our homes built had at least one type of renewable or low carbon energy source.
c. Research into the way in which home occupiers respond to new designs and technologies of low-carbon homes has resulted in increased desirability of product offering, which may in-turn increase cash-flow and margin. Following research in the AIMC4 consortium we developed a fabric-first, 'fit and forget' approach to low-carbon initiatives within the home, improving the home's energy efficiency whilst minimising the interaction required by the homeowner

vi) What have been the most substantial business decisions made:
a. During this reporting year, a business decision has lead us to fund and participate in AIMCh, a collaborative research project examining alternative methods of construction that could allow us to reduce material supply constraints, improve quality, reduce waste, close the performance gap, reduce weather dependencies and result in a more efficient use of resources, including energy, water and raw materials.
b. Developing our strategic programme of research that focused on understanding the building performance of our homes once lived in as well as how our customers interacted with and lived in our homes. The research programmes, involved the in-depth monitoring of homes to record energy and water consumption, along with indoor air quality. This was combined with qualitative feedback gathered during interviews with the occupiers.

CC2.2b

Please explain why climate change is not integrated into your business strategy

CC2.2c

Does your company use an internal price of carbon?

Yes

CC2.2d

Please provide details and examples of how your company uses an internal price of carbon

Although the Zero Carbon Homes policy has been dropped by the Government, our developments built in London will still be made to meet the policy requirements. Therefore, we will continue to include a cost of carbon in our development cost models for London units to be built under the 2016 Building Regulations to reflect the likely 'Allowable Solutions' component of the Zero Carbon Homes policy. This allows us to compare the cost-effectiveness of on and off-site carbon reduction measures.

CC2.3

Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)

Direct engagement with policy makers
Trade associations
Other

CC2.3a

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Energy efficiency	Support	Energy efficiency of new build homes (Part L Building Regulations, England). The Zero Carbon Hub (ZCH), which closed in March 2016, was a non-profit public/private partnership established to take day-to-day operational responsibility for co-ordinating delivery of low and zero carbon new homes. Stephen Stone, Crest Nicholson CEO, sat on the Executive Group of the ZCH Design vs As-Built work programme. A Director was seconded to the ZCH to manage one of the Design Vs As-Built work-streams. A Director was invited to work on the 2016 Zero Carbon definition and implementation with the Department of Communities & Local Government (DCLG) and the Department of Energy and Climate Change (DECC) as part of a small, select group. Our Group Technical Director sat on the Zero Carbon Hub Steering Group for the Builders Handbook (how to deliver new building regulations for SMEs) and is a member of the Steering Group for the Guide to Linear Thermal Bridging (a key element of achieving energy efficiency in homes). This Director was also an official ambassador for the Zero Carbon Hub and sat on the overheating risk steering group, into which the company invested £10,000.	Development of practical, cost-effective, customer friendly solutions ensuring that new regulations can be delivered effectively on site.
Energy efficiency	Support	The Group Technical Director is a lead member in a consortium, AIMCh, which is looking at the industrialisation of the house building process, reporting to government. Part of its considerations is how we can meet the required delivery of new homes, whilst maintaining quality and meeting Building Regulations now and in the future. This will ultimately contribute to the delivery of more energy efficient	Development of practical, cost-effective, customer friendly solutions for delivering high quality energy efficient homes with minimal wasted resources.

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
		homes. It is also examining alternative construction methods, including off-site manufacture, which could bring with it a reduction in resource consumption, including materials, water and energy.	
Energy efficiency	Support	Energy efficiency of new build homes (Part L Building Regulations, England). Our Group Technical Director and Group Sustainability Director sit on the Home Builders Federation (HBF) National Technical and Sustainability Committee.	Development of practical, cost-effective, customer friendly solutions ensuring that new regulations can be delivered effectively on site.
Other: Reduction of emissions from the built environment	Support	In 2015, Crest Nicholson were members of UKGBC, which is an NGO that campaigns for a sustainable built environment.	Development of practical, cost-effective, customer friendly solutions for reducing emissions.
Other: Reduction of emissions from the built environment	Support	A Director sits on the Green Construction Board low carbon home valuation group.	Development of practical, cost-effective, customer friendly solutions for reducing emissions.

CC2.3b

Are you on the Board of any trade associations or provide funding beyond membership?

Yes

CC2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Home Builders Federation (HBF)	Consistent	There is much uncertainty following the EU referendum.	Crest Nicholson influences the HBF position in a variety of ways: Our CEO is a non-executive director on the Board of the HBF, which observed on his appointment that: “His wealth of experience and appetite to improve the climate in which the industry operates –

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
		Therefore the stance is a 'wait and see' position.	particularly with regards to the sustainability agenda - will supplement and enhance the skills of the existing board members". Two Crest Nicholson Directors sit on the HBF National Technical & Sustainability Committee: assisting in providing expert feedback to Government on the technical aspects and tools required to deliver low carbon emission homes via the Building Regulations New Home Valuation Forum: deriving sales value from the enhancements of low carbon emission homes.

CC2.3d

Do you publicly disclose a list of all the research organizations that you fund?

CC2.3e

Please provide details of the other engagement activities that you undertake

Crest Nicholson engage with a range of further activities; these are outlined below.

i) Homes and Communities Agency
An Executive board member sits on the HCA Design and Sustainability Advisory Board looking at, amongst other things, related HCA policy and performance (across 40% of all homes completed including all affordable homes). This includes studies into overheating and other climate related risks.

ii) Forum for the Future

a. Description of engagement: we are a member of their Network, which brings together more than 100 international companies united by an ambition to create real and lasting change towards sustainable development.

b. Topic of engagement: Our partnership with Forum for the Future also provides external challenge and support in developing our sustainable business models and driving innovation in customer friendly environmental solutions

c. Nature of the engagement: Working with Forum for the Future, we have developed a framework to explore emerging longer-term challenges and opportunities to climate change resource constraints, economic recession, regulatory expectations, societal demands, technological breakthroughs and a host of other factors are having real impacts on business now and in the future. This stretches our thinking and helps ensure that we have a sustainable business model capable of delivering value now and into the future. Forum for the Future was also instrumental in helping Crest Nicholson to develop its ambition to support ecological and biodiversity enhancements and gains on all our sites.

d. Actions advocated as part of engagement: With a team of 30, drawn from different levels and disciplines across the business, we identified and debated the most significant factors likely have a long-term influence on our business. The 13 factors we identified were then tested among internal and external stakeholders, including local authorities, development partners and suppliers. All of this work has contributed towards the development of our Strategic Pillar Working Groups as well as our ecological and biodiversity ambition, (which was formally launched in 2015).

iii) Board members advise DCLG and DECC on policy outworking and future policy.

iv) A Director sits on the HBF's National Technical and Sustainability Committee as well as the NHBC Standards Committee.

v) Collaborative working and hosting debates with the Town and Country Planning Association. This has included working with the TCPA to publish the Garden Cities Myth-Buster, a short guide to the myths and truths about creating new garden cities.

CC2.3f

What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

The Crest Nicholson development process is required to incorporate the Group's policies and aspirations in respect of sustainability in the round, including Climate Change, Sustainable Procurement, and other environmental matters. These matters are part of the scheduled review and sign-off processes. Innovation and strategic policies are incorporated by our Business Improvement Workgroup (BIW), which in turn are overseen by the Executive Management Team.

The departmental directors with responsibility for overseeing the delivery of different aspects of our climate change strategy meet on a regular basis to review progress and discuss challenges and opportunities. Members of the Group Sustainability Team are represented on all the Business Improvement Workgroups through which they facilitate cross-fertilisation of activity and consistency around climate change across the departments and the divisional businesses.

As part of our company wide Make Waste History (MWH) campaign, divisional MWH forums have been established to develop and implement innovative ideas to reduce our resource consumption. Initiatives are fed back to a MWH Steering Group, which then disseminates the good practice across the business, creating a feedback loop for good initiatives.

CC2.3g

Please explain why you do not engage with policy makers

Further Information

CC2.1b 2015 Crest Nicholson 2015 Annual Integrated Report attached CC2.3e The Garden Cities Myth-Buster guide

Attachments

https://www.cdp.net/sites/2016/59/4059/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC2.Strategy/Crest Nicholson 2015_annual_integrated_report.pdf
https://www.cdp.net/sites/2016/59/4059/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC2.Strategy/Garden_Cities_myth_buster_UPDATED.pdf

Page: CC3. Targets and Initiatives

CC3.1

Did you have an emissions reduction or renewable energy consumption or production target that was active (ongoing or reached completion) in the reporting year?

Intensity target

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment

CC3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
Int1	Scope 1+2 (location-based)+3 (upstream)	6%	10%	Metric tonnes CO2e per unit FTE employee	2013	0.91	2017	No, but we anticipate setting one in the next 2 years	Scope 1+2+3 well to tank office energy consumption: % of emissions in scope is the scope 1, and 2 and 3 emissions for office electricity and gas divided by the total scope 1, and 2 and 3 emissions.

CC3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
Int1	Increase	38	Increase	38	Target to reduce the 0.91 tco2e per person by 10%. Assume the increase in employees remains the same (as that between 2012 and 2015). The number of employees in 2017 will be 949 FTE. Scope 1 & 2 emissions in 2013 were 454. Intensity was 0.74 tco2e per person. If the 10% target is reached, the new tCO2e per person would be 0.66 949*0.66=628 tCO2e (628-454)/454 = 38% Scope 3 emissions in 2013 were 105. Intensity was 0.17 tCo2 per person. If the 10% target is reached, the new tCO2e per person would be 0.15 949*0.15= 145 (145-105)/105=38%

CC3.1d

Please provide details of your renewable energy consumption and/or production target

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment

CC3.1e

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
Int1	33%	100%	Second year this target has been in place: Current intensity: = (Electricity in Offices tCO2 + Gas in Offices tCO2) / FTE = (374.5 + 93.2 + 91.3 + 12.5) / 792 = 0.72 Performance against target: (0.91 – 0.72)/(0.91 x 10%) = 203% complete. Value entered as 100% as this is the highest value that can be entered. Performance against target is ahead of schedule, and outperformed target. Setting new targets will be investigated.

CC3.1f

Please explain (i) why you do not have a target; and (ii) forecast how your emissions will change over the next five years

CC3.2

Do you classify any of your existing goods and/or services as low carbon products or do they enable a third party to avoid GHG emissions?

Yes

CC3.2a

Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
Product	All of our homes are designed and built to enable sustainable lifestyle choices and a lighter environmental footprint including lower carbon emissions for the third parties who occupy the homes – i.e. low carbon products.	Low carbon product	Other: See Further Information			At a minimum, we meet the Building Regulations that require a minimum energy performance standard for new buildings, in the form of Target CO2 Emission Rate (TER) and Target Fabric Energy Efficiency rate (TFEE). However, when compared to other buildings, our new homes are designed to produce lower carbon emissions. The average SAP rating (based on SAP 2009) of our dwellings built in 2015 was 83.62, compared to an average SAP of a UK home of 56.7, and an

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
						average of 81 for new-build homes in England (as reported in the 2015 DECC Energy Efficiency Statistical Summary report, page 19). The result of these high design standards is a 9,421 tCO2 saving per year by Crest Nicholson customers, when compared to the average UK home (for regulated consumption only). See methodology in the Further Information section. • 32% of our completed homes in 2015 benefit from at least one renewable energy source, minimising the use of fossil fuels and reducing the homes carbon footprint. • Our communities are well connected with 99% of our completed homes in 2015 within 1,500m of a bus service and 81% within 1,500m of local amenities. Furthermore, 57% of our completed homes have access to safe cycle storage and 62% have access to cycle routes. Placing less reliance on cars will help home owners to reduce their carbon footprint. • All of our customers are provided with a Guide to Greener Living which contains advice and guidance on how to make more sustainable lifestyle choices including reducing energy and water consumption.

CC3.3

Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)

Yes

CC3.3a

Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	2	23
To be implemented*	2	88.9
Implementation commenced*	1	45.1
Implemented*	4	42.1
Not to be implemented	0	0

CC3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Energy efficiency: Processes	3 construction sites transferring their compound power supply from generators to a temporary electricity supply	30	Scope 1 Scope 2 (location-based)	Voluntary	778	3000	4-10 years	11-15 years	
Energy efficiency: Building services	Rolling 3 year improvements to the IT equipment across the business.	6.8	Scope 2 (location-based)	Voluntary	1669	18926	11-15 years	Ongoing	This initiative falls into the same scope as our intensity target.
Energy efficiency: Processes	Improvement in water management infrastructure at head office	2.6	Scope 3	Voluntary	4563	2500	<1 year	Ongoing	This initiative falls into the same scope as our intensity target.
Behavioral change	Make Waste History campaign to reduce construction waste	2.7	Scope 3	Voluntary	24200	0	<1 year	Ongoing	Packaging take back scheme implemented. The tCO2e savings are based on the reduction in transport movements to and from site. This initiative is relevant for our construction site activity.

CC3.3c

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	Compliance with, and where possible exceeding, current Building Regulations, which are designed to drive down carbon emissions of new homes. Crest Nicholson also meet, and where possible exceed, local planning requirements which means that many of our developments exceed Building Regulations by a considerable margin. In FY15, Crest achieved 15.65% lower average carbon emissions from our new homes than current regulations demand. Crest Nicholson also met the requirements for the Energy Savings Opportunity Scheme (ESOS) and have begun implementing initiatives across our offices and construction sites that were recommended in the final ESOS reports.
Financial optimization calculations	Our waste and energy costs are monitored on a regular basis. This provides a useful baseline when considering resource reduction projects. All projects undergo a cost benefit analysis, and if the payback period is deemed reasonable and the technology suitably mature, they will be implemented.
Dedicated budget for low carbon product R&D	Projects identified as having potential for yielding cost and carbon savings are assigned specific budgets and resources. As part of one of the 5 Strategic Pillar working groups, we are examining methods of construction that will lead to improved use of natural resources. The budget for this work group is £100,000.
Dedicated budget for energy efficiency	A Crest Nicholson Director led the Field Evidence Gathering phase of the Design vs As Built project for the Zero Carbon Hub over the course of 6 months. Learning from this has shaped our quality procedures. Crest Nicholson is funding a PhD student over 4 years to undertake research into optimum strategies for efficient heating systems and on-going management and control by the homeowner. The budget for this is £40,000 over 4 years. As part of our five Strategic Pillar Working Groups, we will be investing more than £400,000 to develop our new Group house types, which will deliver comfortable, cost effective and low carbon homes for our customers.
Employee engagement	Construction related environmental issues, including waste minimisation and energy use, form part of the subcontractor induction. There is continuous engagement across the functions via the Business Improvement Workgroups (BIW), and in particular the current supplier partnering initiatives for sustainability sourcing and supply through our Commercial BIW. Make Waste History forums provide a responsibility for each division to collaborate and generate innovative ideas on energy, water and waste reduction. Employees receive regular sustainability focused communication via the Group intranet, emails, workshops and noticeboards.
Internal incentives/recognition programs	Employees, who receive car benefit, are eligible to receive incentives to reduce emissions from their cars through the enhanced car allowance related to car emissions and all employees can benefit from the Cycle-to-Work Scheme.
Partnering with governments on technology development	We have undertaken a strategic programme of research into the in-use energy performance and internal comfort conditions of our new homes since 2010. All 3 of these projects were part-funded by Innovate UK. We are also working on a project called AIMCh, also partly funded by Innovate UK. The project brings together a consortium of industry partners to research the costs and benefits of industrialising the housebuilding model through alternative methods of construction. The total project cost is £121,000.

If you do not have any emissions reduction initiatives, please explain why not

Further Information

CC3.2a Further information and explanation of methodology • The annual carbon savings for the average Crest Nicholson home was 'back-calculated' using the methodology from SAP 2009. To do this back-calculation, the energy cost factor (ECF) must first be calculated from the SAP score, using the following equation: ECF = (100 – SAP score)/13.95 (equation taken from SAP 2009 methodology). The ECF is then used to calculate the total cost to heat the home, using the following formula: total cost to heat the home = (ECF / deflator) x (total floor area + 45). Here there are 3 key assumptions: o Deflator = 0.47 (taken directly from SAP 2009 methodology); o Average total floor area (TFA) for the Crest Nicholson homes developed this reporting year: 85.02m2. o Average total floor area (TFA) for the average UK home assumed to be the same as for the Crest Nicholson developments: 85.02m2. • From the total cost to heat the home, the total kWh consumption is calculated using energy cost factor of 3.1p/kWh for mains gas (taken directly from SAP 2009 methodology). A critical assumption here is that all of the regulated consumption for the average home is mains gas, which is not strictly true, but this assumption ensures that the carbon emissions saved are not over-estimated, and avoids the need to make an assumption on the consumption breakdown between electricity and mains gas. The carbon emissions from the property are calculated from the consumption (kWh) using the mains gas carbon factor of 0.198 kgCO2/kWh (taken directly from SAP 2009 methodology). •Calculate the total cost to heat an average UK home using the same steps above but using a SAP rating of 56.7 • The difference between the carbon emissions of a Crest Nicholson property, and an average UK home, is calculated from a simple subtraction of the annual carbon emissions of the two properties.

Page: CC4. Communication

CC4.1

Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s)

Publication	Status	Page/Section reference	Attach the document	Comment
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	p39, p50 to p53, p103		P39 – Reducing environmental impact of homes built P50-53 – Operational GHG emission performance P103 – GHG statement

Publication	Status	Page/Section reference	Attach the document	Comment
In voluntary communications	Complete	p1 to p4	https://www.cdp.net/sites/2016/59/4059/Climate Change 2016/Shared Documents/Attachments/CC4.1/Crest Nicholson_Climate Change Risks and Opportunities Table.pdf	P1-4 – Inventory of climate change risks and opportunities
In voluntary communications	Complete	p1	https://www.cdp.net/sites/2016/59/4059/Climate Change 2016/Shared Documents/Attachments/CC4.1/climate change policy 2015_final.pdf	P1 – Crest Nicholson's policy on climate change
In voluntary communications	Complete	Our Environmental Impact tab	https://www.cdp.net/sites/2016/59/4059/Climate Change 2016/Shared Documents/Attachments/CC4.1/Crest Nicholson_Our Data.html	An extensive data table of points related to operational GHG emission performance
In voluntary communications	Complete	p10, p14	https://www.cdp.net/sites/2016/59/4059/Climate Change 2016/Shared Documents/Attachments/CC4.1/IR Summary_FINAL PDF.pdf	p10 -- Reducing environmental impact of homes built p14 -- Operational GHG emission performance

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Risks driven by changes in regulation
Risks driven by changes in physical climate parameters
Risks driven by changes in other climate-related developments

CC5.1a

Please describe your inherent risks that are driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Fuel/energy taxes and regulations	Energy supply and cost	Increased operational cost	1 to 3 years	Direct	Virtually certain	Low	£1-2m x percentage increase (estimated to be 10%), i.e. £100-200k	Increasing our operational energy efficiency through our newly formed Make Waste History divisional forums, where members will pilot initiatives. New monthly reports are sent to site managers and build managers detailing their energy consumption and related costs and carbon footprint. Crest Nicholson will be following the outcomes and guidance from HM Treasury on the consultation “Reforming the business energy	5 person days/quarter/ division. £2k/year/ for incentive

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								efficiency tax landscape”	
General environmental regulations, including planning	Waste regulations Landfill tax associated with construction, demolition and excavation waste.	Increased operational cost	1 to 3 years	Direct	Virtually certain	Low	£2-3m x percentage increase (estimated to be 10%), i.e. £200-300k	Monthly waste dashboards have been further refined to provide our site teams with clear performance updates and opportunities to reduce waste. Land acquisitions include a financial appraisal of waste costs with a budget covering a period over 2-10 years. These are reviewed at monthly cost reviews at a project level.	No incremental cost
General environmental regulations, including planning	More rigorous EU timber sourcing regulations	Increased operational cost	Unknown	Indirect (Supply chain)	About as likely as not	Low	Direct supply timber £2.14m x percentage increase, estimated to be in the range of 2-10%. Indirect supply £9.64m x percentage	Quarterly audit of timber supply chain and regular marketplace review of availability and cost.	No incremental cost

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							increase, estimated to be in the range of 2-10%.		
General environmental regulations, including planning	Planning policy for Flood and Water Management (previously within the FWM Act 2010)	Reduction/disruption in production capacity	1 to 3 years	Direct	Unlikely	Low-medium	£1-2k/plot increase in production costs. Potential for delay in commencement of production.	Lobbying through the HBF (trade body). Consultant panel in place. Mitigated through land acquisition cost. Central control and approval over regional site-based strategies.	No incremental cost
Product efficiency regulations and standards	Although we are yet to see how the EU referendum will impact upon future policy, there is a clear understanding that the built environment is a significant player in minimising the impacts of climate change. We could therefore see an	Other: Increased operational costs and potential reduction/disruption in production capacity due to availability of skills and labour	3 to 6 years	Direct	About as likely as not	Low-medium	£2 - 5k/plot increase in production costs. Up-skilling of technical staff and increase in consultant fees. Skills shortage and labour capacity.	Crest Nicholson follows a fabric first approach in order to meet and exceed current Building Regulations. In-house training programme is in place to ensure quality standards are met. Research and development activities to trial constructing to higher	235 training days across the group.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	increase in on-site carbon reduction requirements beyond current levels.							standards to mitigate.	
Other regulatory drivers	Government is considering more stringent regulation in the future with increased levels of performance testing via Part L of the Building Regulations	Increased operational cost	1 to 3 years	Direct	About as likely as not	Medium	Impact primarily through delayed completions and cash collection and increased supervisions costs, and additional testing during construction.	Senior Director was involved in industry-wide evidence gathering. Provisions made in quality manual and training of staff and subcontractors. Represented on the 2016 regulations with regard to performance testing, informing regulatory changes. Lobbying through the HBF.	No incremental cost

CC5.1b

Please describe your inherent risks that are driven by changes in physical climate parameters

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in precipitation extremes and droughts	More frequent extreme weather events. Challenges to project economics and market affordability from future-proofing new homes against flood risk, extreme storms, drought and overheating.	Increased operational cost	>6 years	Direct	More likely than not	Low	Delays to production. Increased after sales costs.	Already design to high standards for new build. Procedures focused on improving build quality and resilience. Participated in the ZCH Overheating Project to define overheating and its likely impact. Introduced an overheating policy and assessment process.	£5k/site for dynamic modelling of overheating risk. Cost only applicable to a proportion of sites where risk is assessed as high.
Other physical climate drivers	Supplier manufacturing plants located in areas subject to high physical risk from climate change which could lead to project delays.	Reduction/disruption in production capacity	Unknown	Indirect (Supply chain)	About as likely as not	Low	Localised disruption to supply. Additional cost to source alternative solutions.	Diversity in supply chain to mitigate risk.	No incremental cost.
Change in mean (average) precipitation	Length and cost of construction projects are likely to increase in	Reduction/disruption in production capacity	>6 years	Direct	About as likely as not	Low	Increased production costs and	New project and site working procedures and infrastructure.	Approx. 10 person days per quarter in

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	wetter conditions due to health & safety considerations, poorer visibility, more challenging earthworks and overall poorer working conditions on-site.						project duration.	Strategic workstream researching alternative construction methods that are more resilient to weather impacts during construction.	strategic workstream
Change in precipitation extremes and droughts	Changes to the flood risk of the land bank.	Increased capital cost	1 to 3 years	Indirect (Client)	About as likely as not	Low-medium	No financial implications.	The majority of land is secured on option. Flood risk is re-assessed at point of purchase and cost/risk factored into the land value purchase price.	No incremental cost.
Change in precipitation extremes and droughts	Length and cost of construction projects are likely to increase with greater occurrences ofextreme precipitation. This is due to works unable to take place in wet conditions, health & safety considerations,	Reduction/disruption in production capacity	>6 years	Direct	More likely than not	Low	Increase production costs and project duration	Strategic workstream researching alternative construction methods that are more resilient to weather impacts during construction.	Approx. 10 person days per quarter in strategic workstream

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	more challenging earthworks and poorer site conditions.								

CC5.1c

Please describe your inherent risks that are driven by changes in other climate-related developments

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Induced changes in human and cultural environment	New lower-carbon products and technologies that are likely to be unfamiliar to customers could influence their choice of new home and their occupancy experience.	Reduced demand for goods/services	1 to 3 years	Direct	About as likely as not	Low	Sales revenue x percentage change	Customer-centric design and specification is central to our design and procurement ethos – resulting in careful selection of materials and products. Undertaking research and development programmes which will prototype test different technologies and construction methods prior to taking to market. Communication and training programme for sales advisors to promote the wellbeing and cost-saving benefits	132 training days across the group.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								of low-carbon homes to customers. Developed a commissioning manual to ensure correct set up of heating and ventilation equipment.	

CC5.1d

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1e

Please explain why you do not consider your company to be exposed to inherent risks driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1f

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Opportunities driven by changes in regulation
Opportunities driven by changes in physical climate parameters
Opportunities driven by changes in other climate-related developments

CC6.1a

Please describe your inherent opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Fuel/energy taxes and regulations	Developing higher energy efficiency homes that result in lower running costs.	Increased demand for existing products/services	3 to 6 years	Direct	Likely	Medium	Increased sales rates and sales values.	Strategic workstream developing high-quality energy efficiency designs and specifications, coupled with innovative	Approx. 1 person day/week in consortium work. Approx. 10 person days per quarter in strategic workstream

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								construction techniques to deliver more comfortable, appealing and cheaper to run homes. Consortium researching off-site manufacturing that will improve quality, closing the performance gap resulting in lower running costs for customers.	
Fuel/energy taxes and regulations	Pursuing opportunities for reductions in operational energy use. Working towards greater energy efficiency, resource efficiency.	Reduced operational costs	1 to 3 years	Direct	Very likely	Low-medium	£1-2m x percentage decrease, estimated to be in the range of 5-10%	Make Waste History divisional forums and central steering group responsible for regular review of operational costs for energy, water consumption at offices and sites, and development of reduction measures. Monthly reporting including cost and consumption	5 person days/quarter/ division.£2k/year / for incentive Approx. 1 person day/week in consortium work.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								metrics. Energy saving assessments undertaken at sample of sites with specific recommendations developed to reduce cost, consumption and carbon – findings presented back to members of the Executive Management team, group Directors and regional production Directors to develop action plans. Member of a consortium researching off-site manufacturing that will reduce energy consumed in production.	
Fuel/energy taxes and regulations	Pursuing opportunities for reductions in materials	Reduced operational costs	1 to 3 years	Direct	Virtually certain	Low-medium	£10m x percentage decrease in the range of 1 – 5%	Make Waste History divisional forums and central steering group	5 person days/quarter/ division. £2k/year/ for incentive

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	and resource use to achieve leaner, smarter production.							responsible for regular review of costs associated with material waste arising's and disposal, and development of reduction measures. Packaging take-back scheme in place with supply-chain partner. Monthly reporting including cost and consumption metrics with action plans developed. Group league table published quarterly with financial incentives. Member of a consortium researching off site manufacturing and developing new Group house types that will reduce waste during production.	Approx. 1 person day/week in consortium work.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
General environmental regulations, including planning	Cost-effective compliance with evolving building regulations and climate change legislation informed by participation in pilot schemes and R&D projects.	Reduced capital costs	1 to 3 years	Direct	Very likely	Medium	Ability to mitigate potential costs resulting from not complying or achieving building regulations. Reducing cost of failure.	Involvement in industry groups etc. Strategic workstream and member of consortium funded by Innovate UK researching alternative construction methods that are more resilient to weather impacts during construction.	Approx. 1 person day/week in consortium work. Approx. 10 person days per quarter in strategic workstream

CC6.1b

Please describe the inherent opportunities that are driven by changes in physical climate parameters

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in mean (average) temperature	Considering the potential threat of overheating in highly insulated homes and the opportunities afforded by cost-	Other: Ensuring continuing demand for products/ services.	3 to 6 years	Direct	Likely	Low-medium	Higher sales rates (potential for value uplift). Lower risk of claims.	Overheating assessment of all sites and at risk sites subject to further analysis and modelling.	£5k per affected site.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	effectively 'future-proofing' homes.								

CC6.1c

Please describe the inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	Differentiation through sector-leading climate change performance and risk management	Other: Selected as preferred development partner/ increased ability to secure planning permission - professional reliable partner.	1 to 3 years	Direct	About as likely as not	Low-medium	e.g. 2-10% additional sites secured	Engagement and influence with key stakeholders including policy-makers. Representation on working groups reporting to key development partners - contributing thought-leadership and an evidence base to inform future plans	No incremental cost.
Changing consumer behaviour	Versatility, track-record and reputation enable capture of larger customer base.	Increased demand for existing products/services	1 to 3 years	Direct	About as likely as not	Low-medium	Price premium on sale values.	Strategic workstream developing high-quality energy efficiency designs and specifications, coupled with	Approx. 10 person days per quarter in strategic workstream

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								innovative ways to engage and inform customers on behavioural changes which can contribute to a reduction in running costs and more sustainable outcomes.	
Other drivers	Innovative, proven and viable solutions consistently applied, including low-carbon processes, products and technologies	Reduced operational costs	3 to 6 years	Direct	More likely than not	Low-medium	£10m x percentage decrease in the range of 1 – 5%	Make Waste History divisional forums and central steering group responsible for regular review of operational costs for energy, water consumption at sites, and development of reduction measures and innovative non fossil-fuel solutions. Development of low-carbon specifications, installation and monitoring of technologies.	5 person days/quarter/ division.

CC6.1d

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1e

Please explain why you do not consider your company to be exposed to inherent opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1f

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

Page: CC7. Emissions Methodology

CC7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Wed 01 Nov 2006 - Wed 31 Oct 2007	467
Scope 2 (location-based)	Wed 01 Nov 2006 - Wed 31 Oct 2007	732
Scope 2 (market-based)		

CC7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

CC7.2a

If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

CC7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CO2	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	IPCC Fourth Assessment Report (AR4 - 100 year)

CC7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference
Electricity	462.19	kg CO2e per MWh	Defra 2015
Natural gas	184.45	kg CO2e per MWh	Defra 2015
Diesel/Gas oil	2.9088	kg CO2 per liter	Defra 2015
Motor gasoline	2.1944	kg CO2 per liter	Defra 2015

Further Information

Page: CC8. Emissions Data - (1 Nov 2014 - 31 Oct 2015)

CC8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Operational control

CC8.2

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e

5027

CC8.3

Does your company have any operations in markets providing product or supplier specific data in the form of contractual instruments?

Yes

CC8.3a

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
2134		Crest Nicholson's reporting year did not fit in with the changes made to Scope 2 reporting, so location-based reporting used in line with GHG methodology. Market-based methodology likely to be used in following reporting year.

CC8.4

Are there are any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

CC8.4a

Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded

CC8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 10% but less than or equal to 20%	Assumptions Extrapolation	Extrapolated from metered site consumption to cover 100% of plot completions. Business travel/personal travel split for fuelcards.

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 2 (location-based)	More than 10% but less than or equal to 20%	Assumptions Extrapolation	Extrapolated from metered site consumption to cover 100% of plot completions.
Scope 2 (market-based)			

CC8.6

Please indicate the verification/assurance status that applies to your reported Scope 1 emissions

Third party verification or assurance process in place

CC8.6a

Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2016/59/4059/Climate Change 2016/Shared Documents/Attachments/CC8.6a/Verco GHG 2015	Page 1	ISO14064-3	100

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
			verification statement - ALL SCOPES - WTT Outside draft 08-12-14 final.pdf			

CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emissions Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission

CC8.7

Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures

Third party verification or assurance process in place

CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Location-based	Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2016/59/4059/Climate Change 2016/Shared Documents/Attachments/CC8.7a/Verco GHG 2015 verification statement - ALL SCOPES - WTT Outside draft 08-12-14 final.pdf	Page 1	ISO14064-3	100

CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment
No additional data verified	

CC8.9

Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

Further Information

Page: CC9. Scope 1 Emissions Breakdown - (1 Nov 2014 - 31 Oct 2015)

CC9.1

Do you have Scope 1 emissions sources in more than one country?

No

CC9.1a

Please break down your total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 metric tonnes CO2e

CC9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By facility

CC9.2a

Please break down your total gross global Scope 1 emissions by business division

Business division	Scope 1 emissions (metric tonnes CO2e)

CC9.2b

Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
Offices	93		
Construction sites	3975		
Business travel	959		

CC9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)

CC9.2d

Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)

Further Information

Page: CC10. Scope 2 Emissions Breakdown - (1 Nov 2014 - 31 Oct 2015)

CC10.1

Do you have Scope 2 emissions sources in more than one country?

No

CC10.1a

Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)

CC10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By facility

CC10.2a

Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)

CC10.2b

Please break down your total gross global Scope 2 emissions by facility

Facility	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Offices	375	
Construction sites	1759	

CC10.2c

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)

Further Information

Page: CC11. Energy

CC11.1

What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

CC11.2

Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	Energy purchased and consumed (MWh)
Heat	0
Steam	0
Cooling	0

CC11.3

Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year

20721

CC11.3a

Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Natural gas	5165
Diesel/Gas oil	15236
Motor gasoline	109
Liquefied petroleum gas (LPG)	212

CC11.4

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Comment
No purchases or generation of low carbon electricity, heat, steam or cooling accounted with a low carbon emissions factor		

CC11.5

Please report how much electricity you produce in MWh, and how much electricity you consume in MWh

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
4549	4549				We collect diesel consumption data but we do not break down the diesel use on site between generator use and fuel for the forklifts and other plant and machinery. Therefore the remaining answers are unknown, unless we make some significant assumptions. Understanding this data more fully will be of value to us in the future.

Further Information

Page: CC12. Emissions Performance

CC12.1

How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Increased

CC12.1a

Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities	0.7	Decrease	As per 3.3b Crest Nicholson have implemented a number of emission reduction activities that total 42.1tCO2. 6462 is the FY14 carbon footprint 42.1 / 6462 x 100 = 0.7% of the FY14 carbon footprint
Divestment	0	No change	Not applicable
Acquisitions	0	No change	Not applicable
Mergers	0	No change	Not applicable
Change in output	2.1	Increase	Number of active developments increased from 54 in 2014 to 59 in 2015. Build completions increased by 10%, from 2,509 in 2014 to 2,763 in 2015. These factors contributed to a 133tCO2 (excluding Scope 3 WTT) increase in site based electricity consumption. 6462 is the FY14 carbon footprint (Scopes 1 and 2) 133 / 6462 x 100 = 2.1% of the FY14 carbon footprint
Change in methodology	0	No change	Not applicable
Change in boundary	9.6	Increase	Diesel consumption has increased due to the inclusion of additional suppliers outside group trading agreements, which had not been included within scope before due to data unavailability. This added 591.8 tCO2 to the carbon footprint. Addition of gas at Bath Riverside site - heat coming out of the BWR district heating system (biomass/CHP/gas top-up). This added 31.2 tCO2 to the carbon footprint. 6462 is the FY14 carbon footprint (591.8 + 31.2) / 6462 x 100 = 9.6% of the FY14 carbon footprint
Change in physical operating conditions	0	No change	Not applicable
Unidentified	0	No change	Not applicable
Other	0	No change	Not applicable

CC12.1b

Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

CC12.2

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
8.9	metric tonnes CO2e	804800000	Location-based	12.4	Decrease	The direction of change is downward due to revenue increasing at a greater rate than emissions. FY2015 calculation: 7160 tCO2 / 804.8 £million = 8.90 FY2014 calculation: 6462 tCO2 / 636.3 £million = 10.16

CC12.3

Please provide any additional intensity (normalized) metrics that are appropriate to your business operations

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
9.04	metric tonnes CO2e	full time equivalent (FTE) employee	792	Location-based	0.6	Decrease	Employee number increased and number of houses built increased therefore increasing emissions. However, employee numbers increased at a greater rate than the emissions, resulting in a decrease in emissions intensity per FTE. FY2015 calculation:

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
							7160 tCO2 / 792 FTE = 9.04 FY2014 calculation: 6462 tCO2 / 711 FTE = 9.09
2.68	metric tonnes CO2e	Other: 1,000 square feet	2667	Location-based	11	Decrease	Employee number increased and number of houses built increased therefore increasing emissions. However, employee numbers increased at a greater rate than the emissions, resulting in a decrease in emissions intensity per FTE. Based on the floor area of homes built over this period. 2,667,403 square feet – which comprises the sum of both full and, in proportion, partial built complete delivery during FY2015. FY2015 calculation: 7160 tCO2 / 2,667 per thousand sqft = 2.68 FY2014 calculation: 6462 tCO2 / 2,143 per thousand sqft = 3.02

Further Information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

No, and we do not currently anticipate doing so in the next 2 years

CC13.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership

CC13.1b

What is your strategy for complying with the schemes in which you participate or anticipate participating?

CC13.2

Has your organization originated any project-based carbon credits or purchased any within the reporting period?

No

CC13.2a

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance

Further Information

Page: CC14. Scope 3 Emissions

CC14.1

Please account for your organization's Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, calculated	22.3	GHG Protocol / Defra voluntary reporting guidance. Metered activity data from offices and sites. Emissions calculated using Defra 2015 conversion factors. GWPs from IPCC Fourth Assessment Report (AR4 – 100 year).	100.00%	Water usage for offices and sites
Capital goods	Not evaluated				
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, calculated	1162	GHG Protocol / Defra voluntary reporting guidance. Metered electricity and gas data from offices and sites. LPG supplier data and site purchase records for diesel. Emissions calculated using Defra 2015 conversion factors. GWPs from IPCC Fourth Assessment Report (AR4 – 100 year).	100.00%	Well to Tank (WTT) emissions. Electricity and gas consumption for offices & sites. LPG and diesel consumption on site.
Upstream transportation and distribution	Relevant, not yet calculated				Currently insufficient data but will be considered in future years
Waste generated in operations	Relevant, calculated	1.6	GHG Protocol / Defra voluntary reporting guidance. Activity data from waste contractor for offices and sites. Emissions calculated using Defra 2015 conversion factors. GWPs from IPCC Fourth Assessment Report (AR4 – 100 year).	100.00%	Recycled and landfilled office waste andl landfilled construction waste.
Business travel	Relevant, calculated	846	GHG Protocol / Defra voluntary reporting guidance. Based on employee expenses and fuel card re cords. Emissions calculated using Defra 2015 conversion factors. GWPs from IPCC Fourth Assessment Report (AR4 – 100 year).	100.00%	This figure includes Well to Tank (WTT) emissions for business travel, and company owned vehicles.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Employee commuting	Relevant, calculated	742	GHG Protocol / Defra voluntary reporting guidance. Employee survey was carried out to ascertain distances travelled and type of transport used. Emissions calculated using Defra 2015 conversion factors. GWPs from IPCC Fourth Assessment Report (AR4 – 100 year).	100.00%	This figure includes Well to Tank (WTT) emissions. Commuting data was extrapolated up based on response rate to give 100%.
Upstream leased assets	Not evaluated				
Downstream transportation and distribution	Not evaluated				
Processing of sold products	Not evaluated				
Use of sold products	Relevant, not yet calculated				Currently insufficient primary data but will be considered in future years
End of life treatment of sold products	Relevant, not yet calculated				Currently insufficient data but will be considered in future years
Downstream leased assets	Not evaluated				
Franchises	Not evaluated				
Investments	Not evaluated				
Other (upstream)	Not evaluated				
Other (downstream)	Not evaluated				

CC14.2

Please indicate the verification/assurance status that applies to your reported Scope 3 emissions

Third party verification or assurance process in place

CC14.2a

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)
Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2016/59/4059/Climate Change 2016/Shared Documents/Attachments/CC14.2a/Verco GHG 2015 verification statement - ALL SCOPES - WTT Outside draft 08-12-14 final.pdf	Page 1 and 2	ISO14064-3	100

CC14.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Purchased goods & services	Change in output	16	Decrease	2014 tCO2e was 26.4 and 2015 was 22.3. Less water consumed in offices due to an investment in motion sensors within all male toilets, which replaced the flush controls that were on automatic timers.
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Change in output	7	Increase	2014 was 1090tCO2e and 2015 is 1162tCO2e Increase due to better data available from our diesel suppliers.
Waste generated in operations	Change in output	11	Decrease	2014 tCO2e was 1.8 and 2015 was 1.6tCO2e. Less landfilled construction waste due to a combination of the Make Waste History campaign, coupled with Crest Nicholson's waste provider driving down the amount of landfilled waste.
Business travel	Change in output	5	Decrease	2014 was 895tCO2e and 2015 was 846tCO2e Decrease due to several factors including employees choosing public transportation to attend meetings, as well as improvement in our IT systems that provided more employees with video conferencing capabilities.
Employee commuting	Change in methodology	7	Decrease	2014 tCO2e was 793.9 and 2015 was 741.8. Decrease was driven by more granular data, coupled with an increase in the % of employees commuting by train and hybrid vehicles.

CC14.4

Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our suppliers
Yes, our customers
Yes, other partners in the value chain

CC14.4a

Please give details of methods of engagement, your strategy for prioritizing engagement and measures of success

The methods used for engaging with the value chain are split out by different stakeholders in the value chain:

1. Customers
(i) Customer information on reducing energy and water use (lowering carbon emissions) in Marketing Suites, in Home Owners Guide, during Home demonstration, in their Guide to Greener Living, and via Customer Services after purchase. Homes designed to have continuous improvement in reducing energy and water requirements.
(ii) Customer surveys and other feedback
(iii) Heightened customer awareness on these matters in feedback surveys

2. Suppliers
(i) Integrated partnering to reduce carbon emissions via:
• Products with high efficiency and low energy/water demand in use
• Enhanced home designs
• Home occupier friendly interface and controls
• Risk assessment of level of carbon emissions, cost/benefit to reduce (including lifecycle carbon emissions)
(ii) Customer satisfaction; Product innovation; Product reliability

3. Partners in the value chain
(i) Integrated partnering to reduce carbon emissions via reduced:
• Transport emissions
• Use of energy and water on-site
• Embodied carbon in products
• Reduced waste generation

These lead to an annualised reduction in our energy use, water use, waste generation and costs.

(ii)Environmental and social risk assessment leading to investigation into accreditations, including BES6001.

CC14.4b

To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Number of suppliers	% of total spend (direct and indirect)	Comment
14	3%	

CC14.4c

If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data

How you make use of the data	Please give details
Stimulating innovation of new products	Integrated partnering to reduce carbon emissions via products with low embodied carbon, high efficiency and low energy/water demand in use.

CC14.4d

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

Further Information

Module: Sign Off

Page: CC15. Sign Off

CC15.1

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
Chris Tinker	Executive Board Director, Strategic Projects and Regeneration Chairman and Executive Management Team Member. Board Member responsible for Sustainability.	Board/Executive board

Further Information

CDP