

5<sup>th</sup> Smart Grids & Cleanpower Conference  
5 June, Cambridge  
[www.cir-strategy.com/events](http://www.cir-strategy.com/events)



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Head of Energy

## Sainsbury's 20x20 Sustainability Plan Energy Efficiency & Store Generation Technologies

20x  
20

5<sup>th</sup> June 2013

Sainsbury's

# 20x Key facts 20

- **1107 stores**
  - **582 supermarkets**
  - **525 convenience stores**
- **150,000 colleagues**
- **24 million customers**



# 20x 20

## Sainsbury's 20x20 Sustainability Plan

### Best for food and health



- 1 We'll continue to reduce salt, saturated fat, fat and sugar in our own brand products and we will lead on providing clear nutritional information, enabling our customers to make informed choices.
- 2 We'll double the sales of lighter alcohol wine and reduce the average alcohol content (ABV) of own brand wine and beer.

### Sourcing with integrity



- 3 We'll source all of our key raw materials and commodities sustainably to an independent standard.
- 4 Our own brand products won't contribute to global deforestation.
- 5 All the fish we sell will be independently certified as sustainable and we'll strengthen our position as the leading retailer for sustainable seafood.
- 6 Our sales of fairly traded products will hit £1 billion.
- 7 We'll double the amount of British food we sell.
- 8 All our meat, poultry, eggs, game and dairy products will be sourced from suppliers who adhere to independent higher welfare standards.
- 9 Our suppliers will also be leaders in meeting or exceeding our social and environmental standards.

### Respect for our environment



- 10 We'll put all waste to positive use.
- 11 We'll make sure that our own packaging has been reduced by a half compared to 2005.
- 12 We'll have reduced our operational carbon emissions by 30 per cent absolute and 65 per cent relative, compared with 2005.
- 13 Through robust water stewardship, we'll ensure that our supply chain approach is sustainable in areas of vulnerability.
- 14 We'll have our own carbon footprint of 5...

### Making a positive difference to our community



- 15 We'll have encouraged over 20 million children to enjoy physical activity in the decade.
- 16 We'll have donated over £400 million to charitable causes in the decade.

### A great place to work



- 17 We'll create 50,000 new job opportunities in the UK and at least half of our colleagues will have received externally accredited training.
- 18 20,000 of our colleagues will have reached 20 years of service at Sainsbury's.
- 19 We'll increase the number of colleagues with shares in our business by 25 per cent.
- 20 We'll have provided 30,000 people from disadvantaged groups with work opportunities.

**12. We'll have reduced our operational carbon emissions by 30% absolute and 65% relative compared with 2005**

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# Sainsbury's 20x20 Sustainability Plan

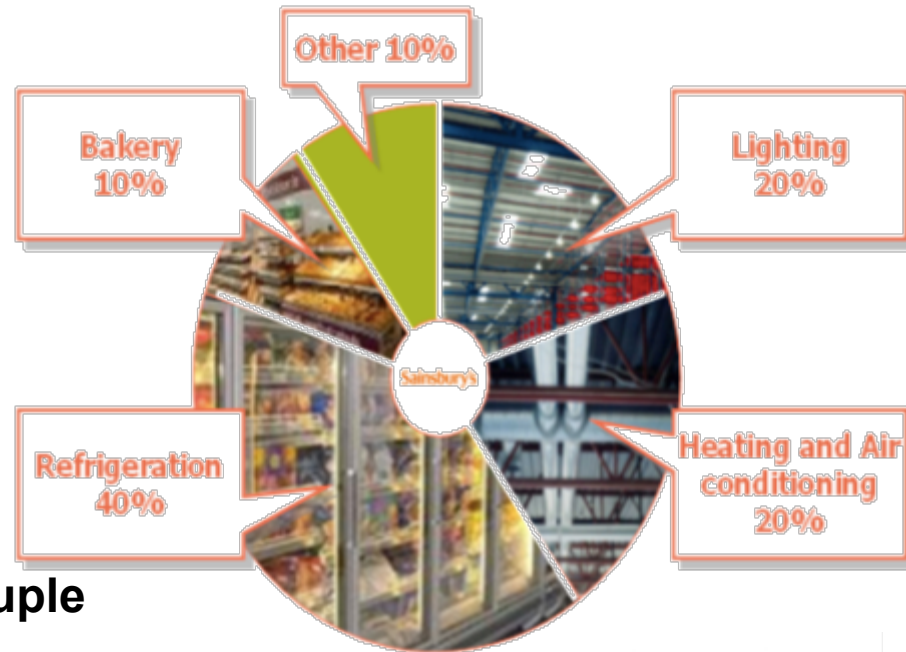
**12. We'll have reduced our operational carbon emissions by 30% absolute and 65% relative compared with 2005**

- **Move from relative to ABSOLUTE – decoupling sales growth from emissions**
- **Delivery Goals**
- **Continue to introduce proven & next generation renewable technologies in our new & existing stores**
- **Use renewable heat in majority of supermarket stores by 2030**
- **Convert all refrigeration systems to natural refrigerants (i.e. CO<sub>2</sub>) by 2030**

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## Sainsbury's energy – size of the prize

- Utilities - up to 60% of store's controllable costs
- CRC places Sainsbury's 4<sup>th</sup> in terms of size of usage
- Retail accounts for 10+% of CRC scope
- Demand equivalent
  - 1 supermarket = 1,000 homes pa
  - 1 convenience store = 100 homes



- Our corporate energy bill is set to quadruple by 2020 unless action taken

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# RESET – 6<sup>th</sup> year completed March 2013



Since 2007/08  
investment in RESET  
has generated energy  
savings

=

Operating  
110 supermarkets annual  
usage of electrical power

**RESET has  
finished but  
learnings  
continue...**

**Raised profile of energy**

**Changed ways of working**

**Positive Relationship with FM**

**Energy focus to every decision**

**Rethink and redesign**

**...drive for  
energy  
efficiency  
never  
stops.. ..  
....**

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# Refrigeration



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# Lighting



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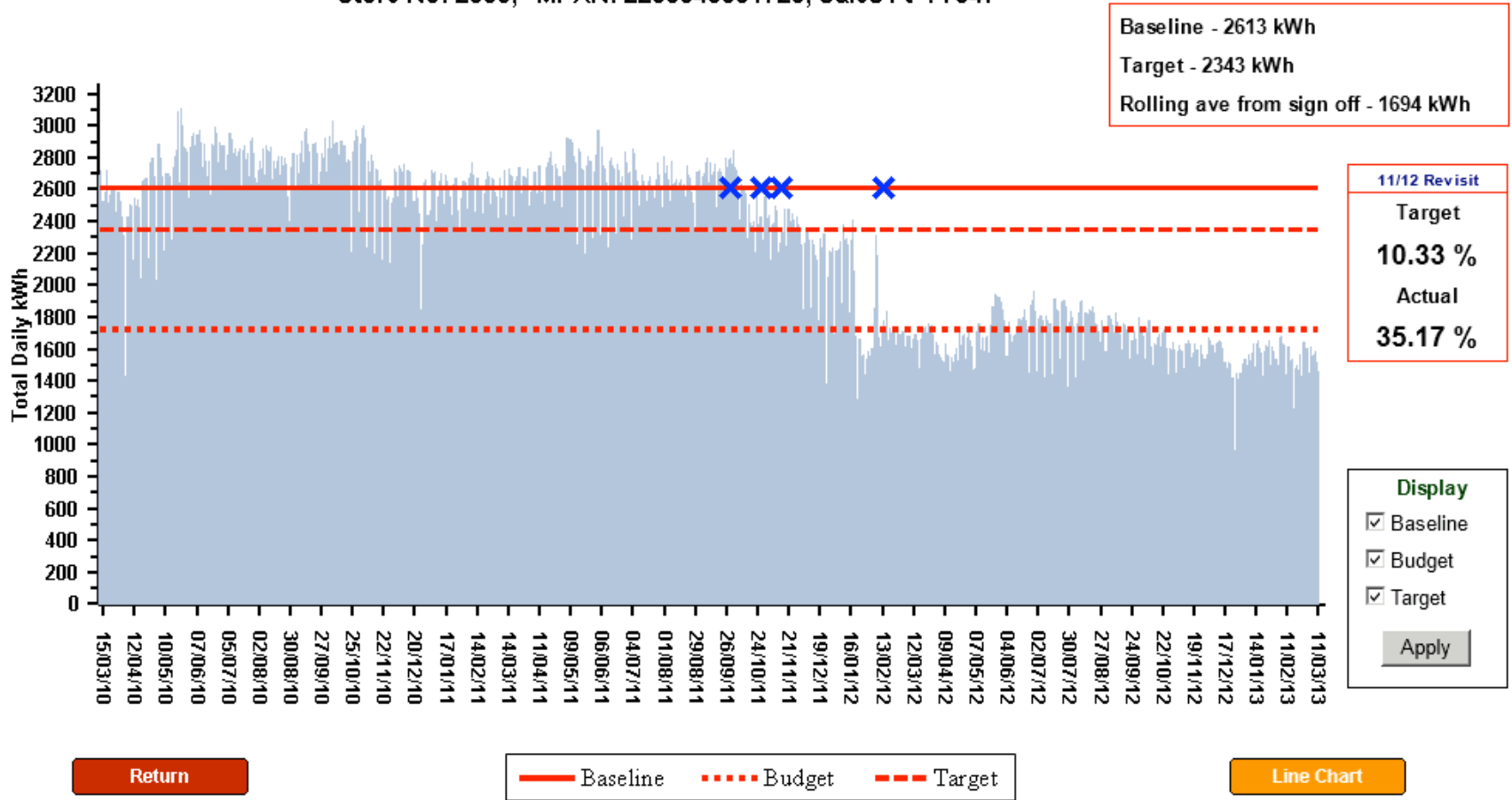
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## Heating, Ventilation and Controls



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3 Year Historic Electricity Profile for Dingles (Fri 12/03/2010-Mon 11/03/2013)  
Store No: 2056, MPAN: 2200040331720, Sales Ft<sup>2</sup>: 7547



# 20x 20

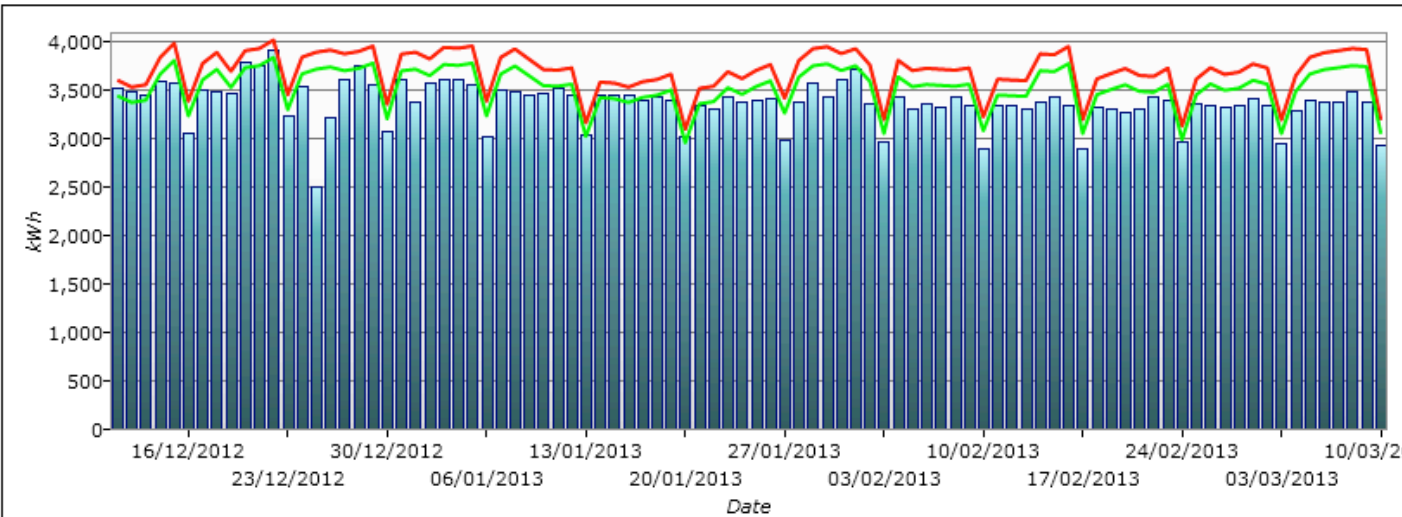
## Beckenham (A0228)

Tue 11 Dec 2012 to Sun 10 Mar 2013

Project Profile



Three Months by Day

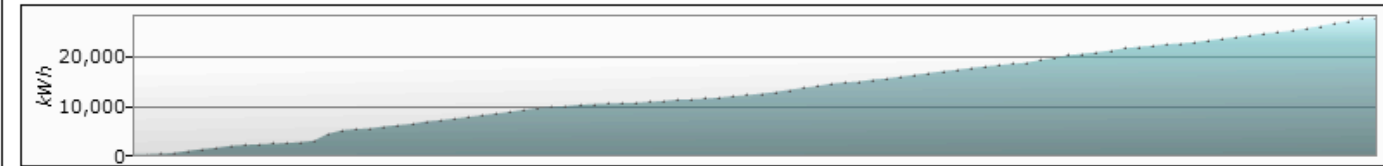


**Reset 6**

- Usage
- Baseline

Daily	kWh	Saving
<b>Baseline</b>	3,678	
<b>Target</b>	3,665	4.50 %
<b>Actual</b>	3,374	8.28 %
<b>Saving</b>	305	

Total	kWh	Saving
<b>Baseline</b>	331,054	
<b>Target</b>	316,157	4.50 %
<b>Actual</b>	303,640	8.28 %
<b>Saving</b>	27,414	



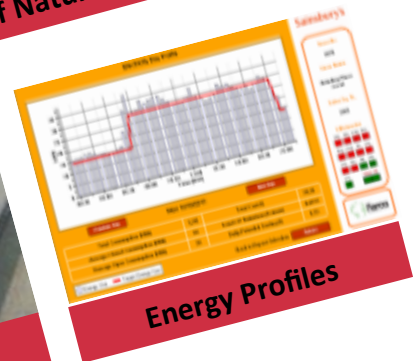
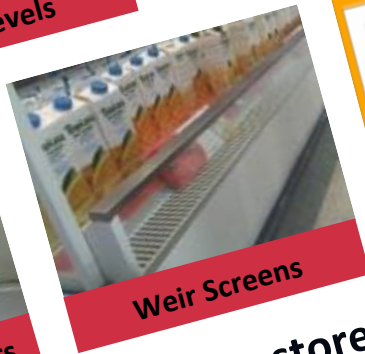
Data:

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# Energy efficiency – convenience stores

## Average Energy Reductions of 14% achieved across 250 Convenience Stores

**14%**  
Reduction



Energy Reset extended to 250 convenience stores.  
Energy saved is equivalent to the annual energy use of 40 convenience stores

20x  
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# Colleague engagement critical

## Trading Day Energy Checklist



Make Sure.....

- Products are not overstocked onto air flow grills in fresh and frozen cabinets

When not in use.....

- Close loading bay door
- Switch off Loading bay lights
- Switch off Plant room lights
- Close Cold room doors
- Switch off Food to go ovens
- Turn off Bakery ovens and Doughnut fryers
- Switch off Checkout conveyor belts
- Turn off Canteen Extract fans



## Closedown Energy Checklist



Make Sure.....

- Sales Lighting is at re-stocking level (Approx 1 in 3 fittings should be on)
- Customer car park lights are correctly timed to suit store trading hours
- Cold room doors are closed when not in use

Check the following is turned off.....

- Over door heaters (front/back door)
- All sales floor spotlights
- Refrigeration cabinet lights
- Bakery ovens & ventilation fans
- Food to go ovens
- Counter lighting/equipment
- Office equipment (PCs-not REPOS photocopiers, printers) & lighting
- Customer display televisions/radios/ lamps in GM
- Sainsbury's Signage
- Air conditioning units in office JSR/Concessions



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# Low carbon glide path

2012/13  
new stores programme  
achieved 51% reduction  
energy vs. '05/06

2012/13  
extensions programme  
achieved 54% reduction  
energy vs. '05/06



2006 - Oakley



2008 Dartmouth



2009 Bath Southgate



2009 Gloucester Quays



2010 Durham Extension



2011 Hythe



2008 Standard Supermarket - Milton Keynes



2010 Crayford



2011 Bath Odd Down



2012 Ely



2009 High Wycombe



2011 Dawlish



2012 Kings Lynn



Standard Supermarket 2012 Trowbridge



Standard Supermarket 2013



2012/13



2020

**Standard Specification Stores**  
80% of the initiatives trialled at Dartmouth are now rolled out to new stores and extensions.

# 20x CO<sub>2</sub> refrigeration 20

150 stores by end  
March 2013

CO<sub>2</sub>



Switch to natural  
refrigerants in 150 stores  
so far has saved 83,000  
tonnes CO<sub>2</sub>e

# 20x Renewables 20 Solar PV generating power

- 189 Sainsbury's stores
- 82,000 solar PV modules
- 120,177m<sup>2</sup> rooftop PV area
- 19.3MWp installed PV capacity
- Reduction of circa 8,000 tonnes of CO<sub>2</sub> a year





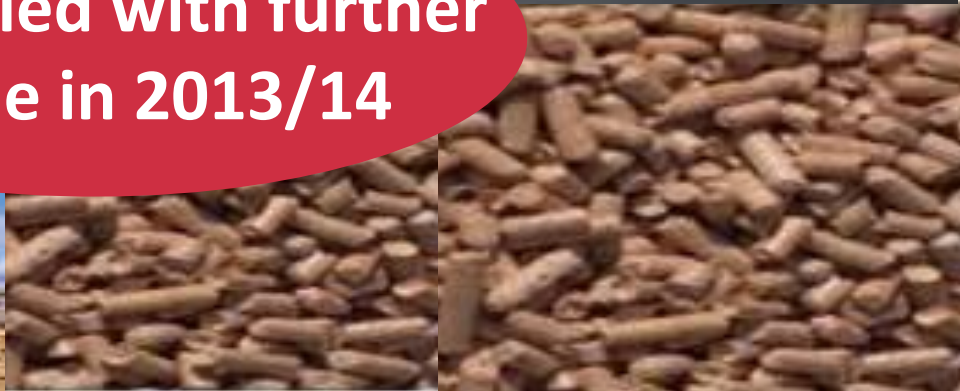
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# Renewables

## Biomass boilers generating heat & hot water



71 installed with further  
22 due in 2013/14



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# Renewables GSHP Innovation

12 installed with further  
12 due in 2013/14



Crayford is a World 1<sup>st</sup>

- Pioneering geothermal renewable technology system.
- GSHP - provides heating, hot water and cooling for the store.
- Growing sales not emissions

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1st supermarket installation in the world  
of GE's latest LED lighting technology



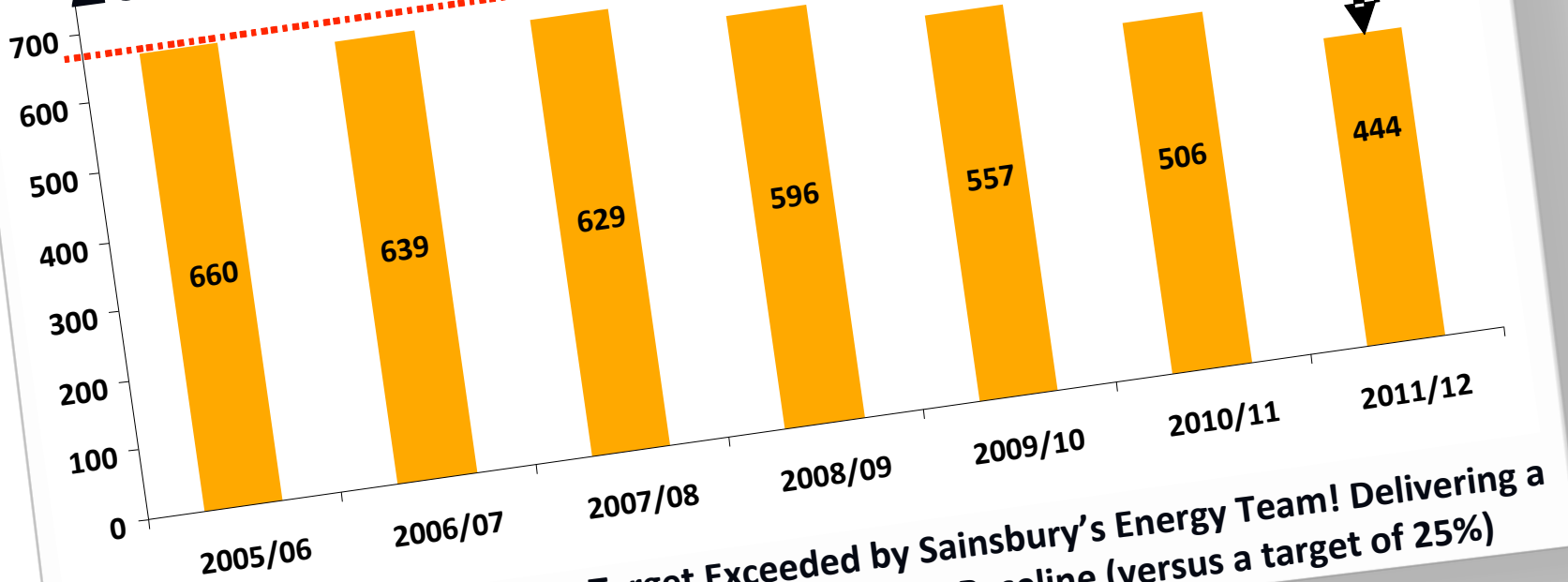
Lumination™ Linear Suspended is delivering a 59%  
lighting energy saving for Leek store

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# Recent relative energy efficiency target

**Target: Reduce CO<sub>2</sub>/m<sup>2</sup> by 25% by 2012 against 05/06 Baseline**

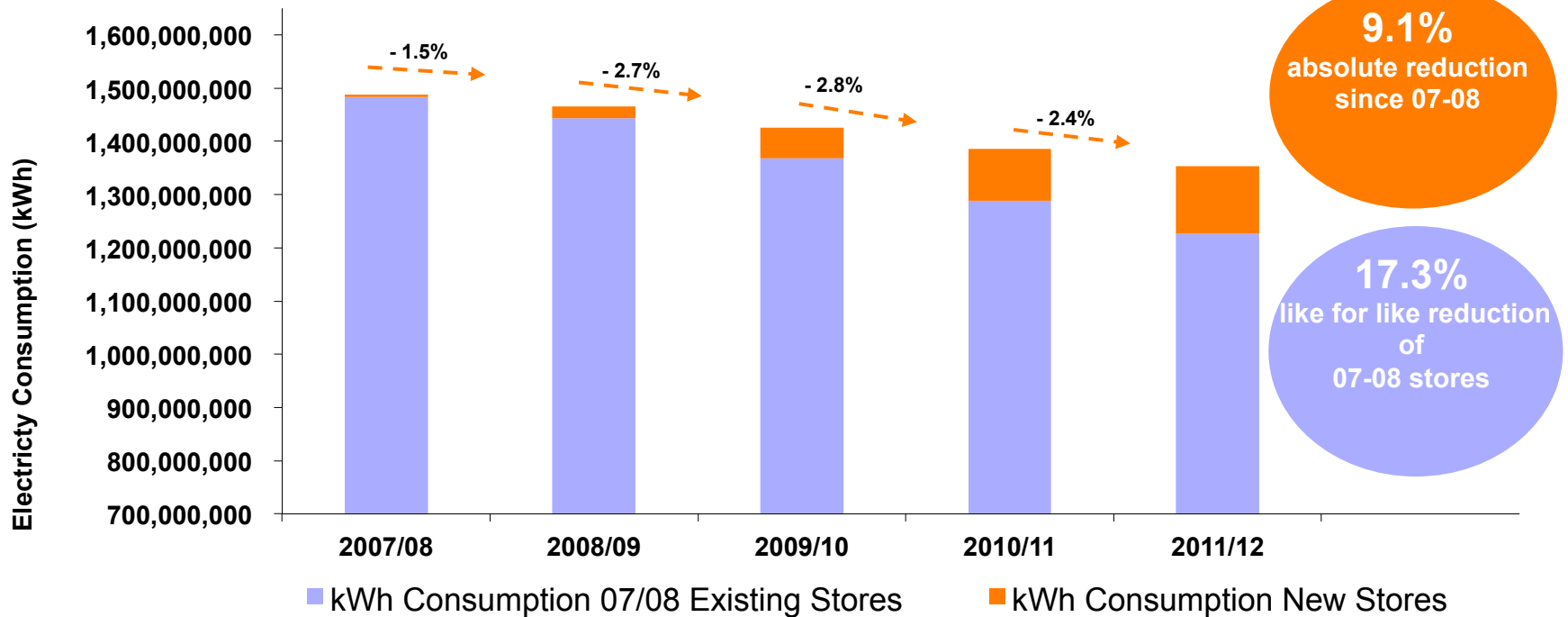


**31% Achieved!**

**2012 Energy Reduction Target Exceeded by Sainsbury's Energy Team! Delivering a 31% reduction in CO<sub>2</sub>/m<sup>2</sup> against 2005/06 Baseline (versus a target of 25%)**

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# Electricity savings



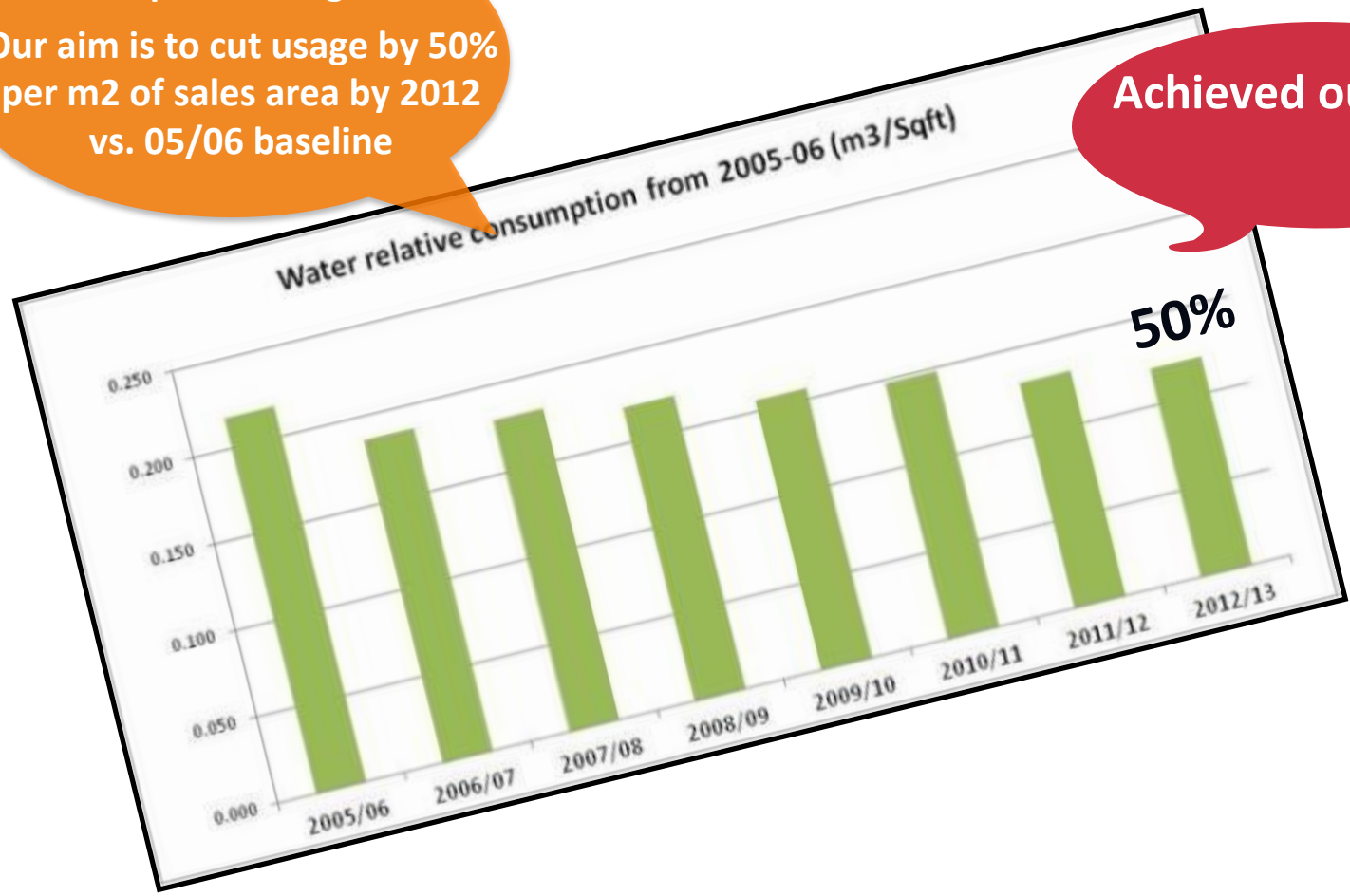
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# Water in our stores – target & external recognition

Corporate Target:

Our aim is to cut usage by 50% per m2 of sales area by 2012 vs. 05/06 baseline

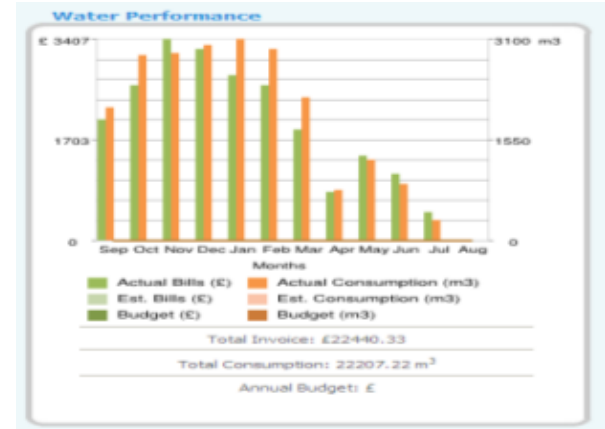
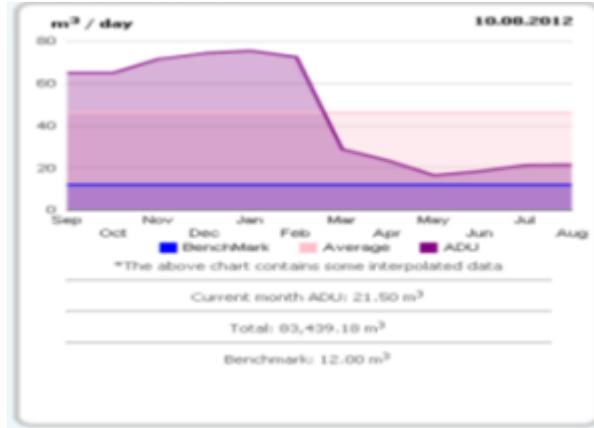
Achieved our target



# 20x Water - Successes

## 20

### Leaks



### Shared Supplies



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# External recognition



2011

WINNER x 3 Gold – Hythe, ZFWTL, Water  
HIGHLY COMMENDED x 2 Silver – Crayford, Bee Hotels



2011 WINNER

Dawlish, Sustainable Retail Building of the Year



2012 WINNER

Sustainable Business of the Year Award



2011 WINNER – Energy category - Crayford  
2012 WINNER - Energy category – Hythe



2011 WINNER - Low carbon / Heat Pump  
2012 WINNER – Retail category



2011 WINNER \_ Green retail initiative  
2012 WINNER - Waste and resources  
2012 WINNER - Energy efficiency





**Questions.....?**