

Sainsbury's Supermarkets Ltd and Cranford (Hayle) LLP

# Sainsbury's

MARSH LANE, HAYLE



## SUSTAINABILITY STATEMENT

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Sainsbury's  
Try something new today

Marsh Lane, Hayle

Sainsbury's  
*Try something new today*

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## 1. Introduction

This report sets out Sainsbury's approach to sustainability at a national level, as well as how it will integrate sustainable measures in the proposed new Hayle development. Sainsbury's development teams understand the need to consider energy efficiency and to incorporate sustainable technologies from the outset.

The store at Hayle will target the following:

- Natural daylight sunpipes 'light tubes',
- Embodied carbon measurement and management,
- Rainwater harvesting to flush wc's,
- BREEAM Rating 'very good',
- All food waste to anaerobic digestion rendering or composting.

## Sainsbury's Commitment and Approach to Sustainability

Sainsbury's is acutely aware of the need to embrace sustainable development principles in all of its developments. Sainsbury's seeks to implement such principles throughout their entire business practice through its approach to Corporate Social Responsibility and its own Environmental Management Systems.

Sainsbury's Corporate Responsibility Report sets out 5 principles that underpin Sainsbury's approach to Corporate Responsibility:

- The best for food and health
- Sourcing with integrity
- Respect for our environment
- Making a positive difference to our community
- A great place to work

As a company, Sainsbury's has a long history of combining effective resource use, reducing waste and good business management. There are company records as far back as 1913 detailing how cardboard packaging is recycled. In 1999 Sainsbury's opened the country's first low energy retail concept store at Greenwich, which trialled new and emerging technologies and a holistic approach to sustainable design and development.

Sainsbury's have continued to commit to improving energy efficiency, energy management, reducing waste and increasing recycling in all of their operations.

Every business decision Sainsbury's makes has sustainability at its core. Understanding the connections between the business decisions made regarding, for example, customer service, colleague training, store design or product sourcing, helps to minimise environmental impact.



Low Carbon Store - Dartmouth



Re-usable carrier bags



Recycling facilities

#### In recent years Sainsbury's have:

- won the carbon management City of London Liveable Award 2006
- Winners of Mitchelmores sponsored "Eco building of the Year" award for Low Carbon store in Dartmouth 2008.
- were the first retailer to trial CO<sub>2</sub> refrigeration system, which has much less environmental impact than conventional systems
- renewed energy supply agreements which ensure 10% of all electricity is sourced from renewable supplies
- reduced road mileage by almost 5%
- Increased the number of stores catering for plastic recycling from 59 to 80
- worked with Government funding of over £500k to set up recycling bank trials at six London stores leading to a 13% increase in customer recycling.
- secured a grant of £20,000 from Envirowise to help reduce the weight of glass jars
- reduced by 40% the amount of waste packaging used in own-brand Easter eggs and introduced recyclable and reusable alternatives
- introduced two new reusable 'shoppers' - a 'Try Something New Today' super shopper and a pocket/handbag-sized shopping bag, Fold-A-Shopper- to encourage our customers to avoid using plastic carrier bags
- Were the first in the industry to change the free carrier bag to contain 33% of recycled materials.
- drove down carrier bag usage by 35% by April 2009, against an April 2008 baseline
- increased recycled content of standard carrier bags to 50% - achieved in April 2008.
- Since 2005, have reduced total packaging weight by 13.32% relative to sales.
- Participated in the community corporate responsibility index. In 2007, Sainsbury's achieved 98.5% and came in the top 25 platinum leaders band. This is a 5% improvement on the previous year.
- Trialled river transport on Thames as a more environmentally responsible way of delivering food to west London stores.
- 30% of construction projects in the south were delivered using Sainsbury's recycling and consolidation centre, delivering 88% reduction in vehicle movements.
- 91% of main construction suppliers are accredited to a recognised Environmental Management System.
- In 2008/09 recycled 82.3% of Construction Waster from all new-build, extensions, refurbishments and acquisitions of stores and offices.
- Have achieved 28% reduction in energy consumption per square foot in all stores touched by annual extension and refurbishment programme in 2008/09.
- Contract directly with renewable energy generators for procurement of renewable energy.
- In December 2008, signed first contract with a new Wind Farm, near Glasgow, with three turbines commissioned in June 2009. Entire output taken from this source which accounts for just under one per cent of total electricity needs.

## Looking to the future

Looking ahead, Sainsbury's are committed to addressing sustainability across the whole estate and will:

- Reduce carbon emissions per sq metre by 25% by 2012 against an 05/06 baseline (having already reduced emissions by 20% from 1997/8 to 04/05 and made further reductions of more than 9% during 2009. With this progress - are on track to achieve 2012 target)
- Reduce waste sent to landfill by 50% against the 05/06 baseline by 2012. (Significant progress made towards achieving this target in 2008/09, having reduced waste to Landfill by 26% from the 2005/06 baseline)
- Continue to work closely with the Carbon Trust.
- Reduce own brand packaging weight by 33%, relative to sales, by 2015 against a 2009 baseline
- Make the best use of rainwater and other recycled water in store, depots and offices. Sainsbury's target is to achieve a 50% reduction in mains water use per square meter of sales floor by 2012 verses an 2005/06 baseline
- Reduce CO<sub>2</sub> emissions per case transported by 15% by 2012, against a 2005/06 baseline. (significant progress made in 2009, achieving a reduction of 131.4 kg CO<sub>2</sub> per case - on track to meet this target).
- From April 2009, 20% of the supermarkets' online deliveries will be made using electric vans.
- Achieve a 12% reduction in electricity usage in depots by 2010 (against a baseline of 2005/06)
- Aim to reduce the like-for-like distance the fleet and supplies travel by 5 million km by 2010. (achieved a 6.4 million km reduction in 2008/09, which when combined with 1.25 million km reduction in 2007/08 totals a 7.65 million km reduction to date. Therefore on schedule to achieve this target a year ahead of schedule).
- target to recycle 90% of construction waste on 100% of our development projects by 2012. ( significant progress made in 2009 and on track to meet this target).



Electric vehicles for on-line deliveries



With specific regard to Sustainable Construction, Sainsbury's are committed to building stores that have a low impact on their environment and will do this through intelligent design, sustainable sourcing of materials, efficient use of energy and resources and site waste reduction programmes.

The need to consider energy efficiency and to incorporate renewable technologies from the outset is understood by Sainsbury's development teams and the developers that Sainsbury's partner in bringing projects forward.

## 2. Sustainable Design and Construction

Sainsbury's are committed to reducing the environmental impact of the proposed Marsh Lane, Hayle scheme in both its design and construction. This will be through intelligent design, sustainable sourcing of materials, reuse of redundant materials from the existing site, efficient use of energy and resources and site waste reduction programmes. A minimum level of performance equivalent to BREEAM (Buildings Research Establishment Environmental Assessment Method) 'Very Good' will be achieved.

Modern off-site construction techniques will be incorporated where possible. Any components that can be assembled in a factory will be, this will significantly cut down the build time on site. The main benefit of this will be minimising the disruption to nearby residents and businesses; whilst simultaneously reducing carbon emissions, vehicle movements and waste. Sainsbury's will encourage an environmentally aware supply chain and aim to use construction suppliers that have accreditation to a recognised Environmental Management System, such as ISO14001.

Simplicity and energy efficiency have been the key factors in the design of the building. The low level massing, large cladding panels and use of natural daylight, all stem from this philosophy. Reducing the overall volume of the store will inevitably lead to efficiencies in heating/cooling and lighting as well as limiting the materials required for construction.

### Sustainable Drainage

Sainsbury's will ensure that the rate of runoff of surface water from the site will be no worse than the original conditions before the development, taking into account predicted climate change impacts over the lifetime of the development.

Surface water will be collected, stored in an attenuation tank beneath the car park and returned at greenfield rate to the re-aligned drainage channel to the South West of the car park. Rainwater harvesting for non-potable uses and water efficiency measures will be incorporated into detail design measures.

### Water Use

Water usage is a growing issue; Sainsbury's target is to achieve a 50% reduction in mains water use per square meter of sales floor by March 2012 versus an 05/06 baseline. This will be met by encouraging improved efficiency, using more rainwater and eliminating leaks.

The major water consuming appliances in a building are usually taps, water closets (W.C's) and urinals. As standard Sainsbury's will install percussion taps, waterless urinals and low flush w.c's to minimise water usage. An energy checklist is carried out by stores every quarter including checks on taps and system leakage to minimise wastage. Plans are in place to make further improvements to water metering to help identify additional improvements



Waterless urinals



## Materials and construction waste

Materials used on the building have been selected for their simplicity and efficiency in construction as well as whole-life considerations such as long term maintenance.

Eurobond metal panels are proposed for cladding the building, which avoids wastage during construction and benefits from a long design lifespan. The subtle grey colour, should enable to the building to fit in quietly within the landscape.

Construction waste sent to landfill will also be minimised as far as possible on this scheme with our construction partner being required to separate and recycle waste materials (with a target of 80% recycling). Off-site construction (OSC) techniques will also be used wherever possible which will further mitigate the quantity of construction waste and reduce the number of site visits during the construction process.

Waste will be kept to a minimum throughout the construction phase by the use of economical design and construction processes combined with good management practice. A waste management hierarchy will be put in place, as follows:

- eliminate waste at source wherever possible;
- reduce waste on site by employing good management systems; and
- recycle waste on site wherever possible.

This hierarchy will be further managed in a number of ways:

- Economical design;
- Employ off site manufacture wherever possible;
- Ensure correct management procedures are employed when measuring and procuring materials to ensure correct quantity and specification;
- Clean, tidy and safe storage of materials on site;
- Timely delivery of materials;
- Manage client expectations to minimise design changes;
- Control of quality to minimise defective work;
- Re-use of materials on site wherever possible;
- segregation of waste for recycling.

The management of waste on the Sainsbury's site at Marsh Lane will be given high priority owing to its environmental and economic impact.

## Considerate Constructors Scheme

This development will achieve a level of performance equivalent to that required under the Considerate Constructors Scheme. It is normal practice for contractors working on Sainsbury's projects to commit to a 'higher than satisfactory' performance; which will be the ultimate goal.



### 3. Carbon and Energy Reduction

Sainsbury's adopt a proactive strategy of understanding climate change and implementing programmes to reduce direct environmental impact. Sainsbury's goal is to reduce their carbon dioxide emissions by:

- Sourcing energy responsibly
- Minimising energy demand
- Promoting efficient consumption

It should be recognised that Sainsbury's already purchase their electrical energy from suppliers that produce 10 per cent of electricity from renewable sources with an additional 40 per cent coming from Combined Heat and Power plants.

The Electrical & Environmental systems design will detail M&E services efficiencies that in some cases exceed the requirements of current Building Regulations. Sainsbury's aims to achieve a target Energy Performance Certificate of 'B' on all new stores.

## Energy Efficient Technologies

To minimise the on site energy demand at Marsh Lane, Hayle the planned store will incorporate the following energy efficient technologies:

### Lighting

- A rationalised 900lux lighting level
- Fluorescent high T5 16mm frequency lighting with efficiency exceeding Building Regulation requirements
- Accent display lighting typically 35/70w CDM-T with efficiency exceeding Building Regulation requirements
- External lighting typically 150w Metal Halide with efficiency exceeding Building Regulation requirements
- Presence detector operated lighting in staff facilities area and Service yard
- Removal of staff operated sales area lighting override facility
- LED external 'Sainsbury's' signage, including totems
- LED Frozen case lighting
- LED lights in cold storage rooms

### Heating/Cooling

- Variable Speed Drives used in Air Handling Units to minimise energy use.
- Extract hoods in Bakery to work on a variable fan basis rather than on/off.
- Optimised duct work sizing to reduce pressure needed to move air.
- Sales floor positively air pressurised.
- Building sealed to achieved less than 5m<sup>3</sup> /Hr air leakage.
- Heat is recovered from refrigeration packs and utilised to heat the store
- Cold air is removed from the chiller aisle and utilised to cool certain area's of the store specifically the computer rooms and offices

### Refrigeration

- Refrigeration energy load is to be reduced through night blinds and weir screens on cabinets which reduce the amount of cold air spilled into the aisle.
- Operating conditions settings, including those for ambient temperature, to be adjusted to reduce energy use.

### Monitoring and Metering

- Full Building Management System that pre authorises all power usage.
- Energy ICT metering system to allow modelling and performance management
- Embodied Carbon Measurement and Management



Solar tubes and high efficiency lighting



Night blinds on chiller cabinets



Solar tubes on roof of Sainsburys Store in Dartmouth

## Other Incorporated Technologies

In addition the following technologies have been considered and incorporated:

### **Natural Light**

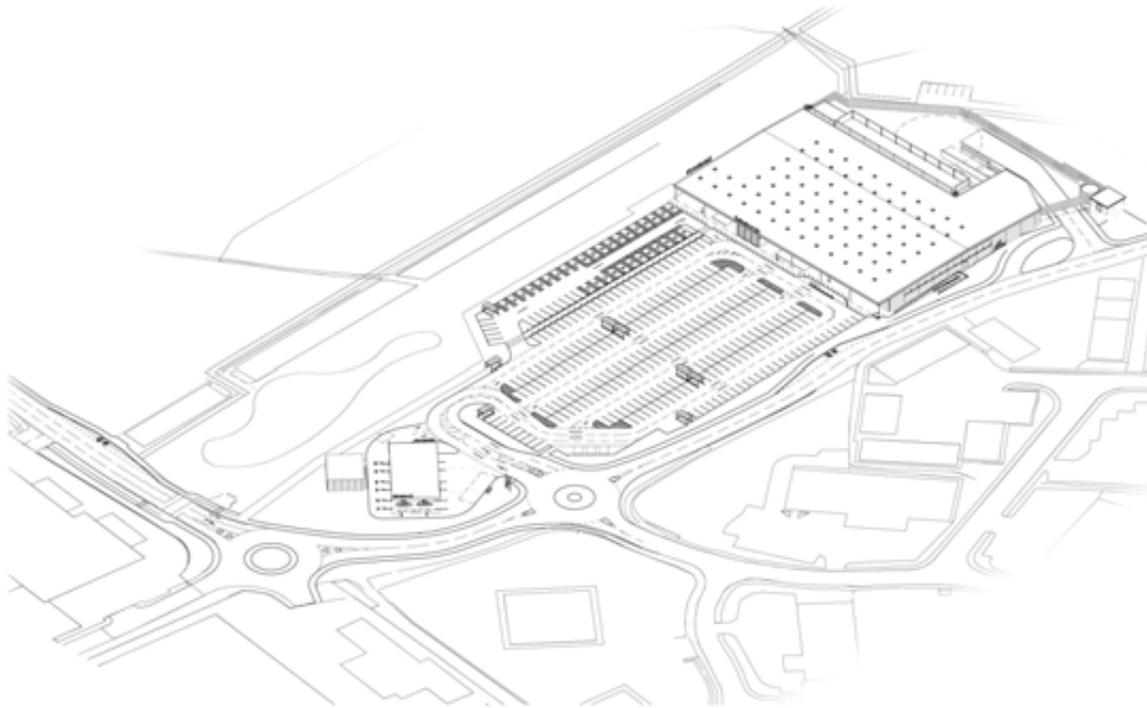
In order to limit the amount of artificial lighting required the scheme incorporates a large proportion of natural lighting. Solar Tubes have been incorporated to allow natural light to enter the store. Further glazed elements on the front and north elevations ensure that further natural daylight can enter the store. A large roof overhang on the West Elevation prevents excessive solar gain and therefore reduces the need for artificial cooling.

### **Rain water Harvesting**

In order to conserve water a system of rainwater harvesting will be incorporated, the water will then be re-used for non-potable uses. This will reduce the mains water demand and loads on existing drainage.

### **Detailed Design**

Following the grant of planning approval, the detailed design phase will commence and a detailed store plan will be prepared that will form the basis for calculating the base-load energy demand of the building. In turn this will enable the sustainable energy design to be finalised.





Typical recycling bank

## 4. Waste management and recycling

Full consideration has also been given to how the development can contribute towards reducing operational waste and increasing segregation and recycling.

Sainsbury's is keenly aware of its legal responsibilities in terms of waste management and is actively promoting the legal and safe disposal of waste that it produces. In addition the company actively promotes the recovery, reuse and recycling of as much of its waste as is practical.

Each store has a recycling target and the financial and environmental benefits of recycling are emphasised to store management and colleagues. Recycling is further promoted through the development and sale of recycled goods and providing space for recycling banks at stores.

On-site recycling bank facilities will be provided in this scheme that will allow the safe and responsible disposal of metals, plastics (including shopping bags), glass, fabric and paper for the use of customers and indeed the wider public. Furthermore, once the store is in operation, we aim to ensure that metals, plastics and cardboard are sorted in back of house areas and recycled via specialist waste companies. Another recent initiative will be to distribute unsold food by *Fairshare Food* to local charities such as homeless hostels or animal sanctuaries. All other food waste is to be composted or taken through a process of 'anaerobic digestion rendering'.

## 5. Working with the local community

Making a positive difference to the community is one of the five key principles which are detailed in Sainsbury's Corporate Responsibility (CR) report produced annually which defines values that underpin the way Sainsbury's operate. The CR report demonstrates that the company are continuing to invest in community initiatives and have so far donated £70 million worth of sports and activity equipment through "Active Kids" since 2005. A further £18 million was donated in 2008/09 meaning Sainsbury's are still on track to deliver £100 million worth of Active Kids equipment by 2011.

At a local level, Sainsbury's recognises that each of its stores plays an important role in the community in which it is located and store managers are encouraged to appoint Community Champions from amongst their colleagues whose role is to develop positive links with community organisations and stakeholders of all types.



English Schools Football Association – Sainsbury's under 11 cup champions

