



# Waste Reduction in Construction

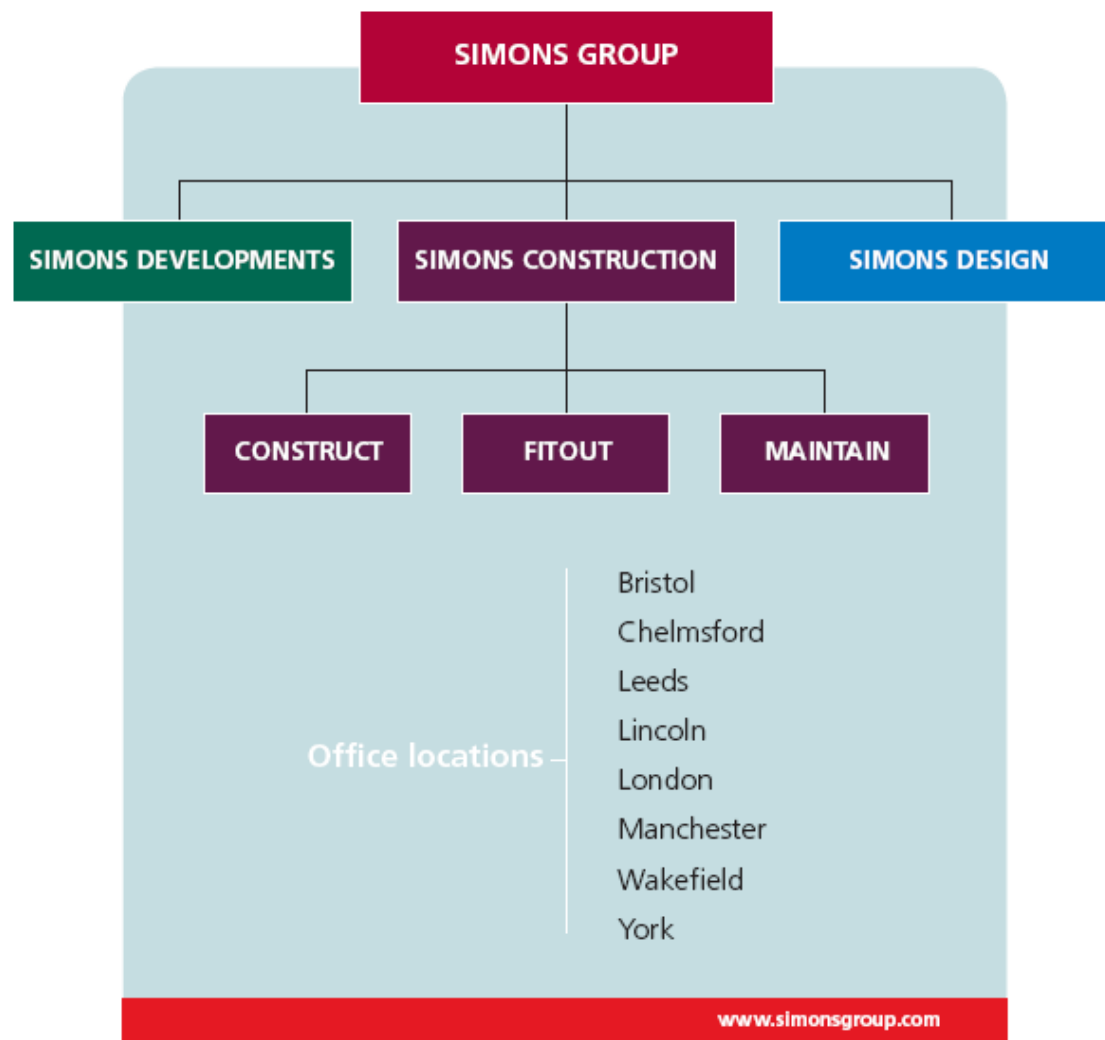
Barry Smith, Sustainability Manager, Simons Developments

**Who?**

Why?

How?

What?



- Commercial
- Retail
- Leisure
- £200m-250m annual turnover
- About 500 employees





HOUSE OF FRASER

Sainsbury's

Upstream



Partnering



Repeat  
Business

+

Continuous  
Improvement



Downstream



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# UK Waste Arisings 2004

(Environment in your Pocket 2006)

**Total UK Waste 335 million tonnes**

**Construction & Demolition 32% (107 million tonnes)**

Mining and Quarrying 29%

Industry 13%

Commercial 12%

Household 9%

Dredged Materials 5%

Agriculture <1%

Sewage Sludge <1%

On “business as usual” building projects, waste disposal costs about 0.5% of project cost.

Buying the materials in a skip costs 10 to 20 times the cost of disposal.

**The true cost of waste is  
5 to 10% of the project cost**

(5% of £250M = £12.5M)

# Legislation

Duty of Care  
Waste Framework Directive  
Landfill Regulations  
Hazardous Waste Regulations  
etc.

## Site Waste Management Plans

# Climate Change

**Waste = Carbon**

Anything manufactured to throw away wastes carbon.

**Low waste = Carbon efficient**

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# Simons & SWMPs

**We're odd.**

We like “informal” rather than “formal” processes  
**“Culture” vs “Procedure”**

Up to now, we haven't tended to write it down  
**SWMPs were only introduced into our  
Procedures in April 2007**

# Good Waste Management

## **Step 1 - Minimise Waste**

Saves buying excess materials.  
Saves on the cost of disposal.

## **Step 2 - Segregate Waste**

Reduces the cost of disposal.

# Minimise Waste

Consider waste during design

Be aware of board sizes, pack sizes, etc. **THINK!**

Be aware of pitfalls of “bespoke” orders & long lead-ins

Local specification & sourcing

Be clear in specification & detailing

Consider delivery sizes / packaging / temporary protection

Ensure materials are stored properly on site

Good housekeeping - return unused materials to stockpiles

Return transit packaging to suppliers for reuse

Don't over-order! (Get just enough)

Hand over surplus materials for maintenance

# Segregate Waste

Construction site skips do not go to landfill – they go to Transfer Stations or Materials Recycling Facilities

Both of these remove a proportion of recyclable materials (40-50% reduction in tonnage to landfill as a minimum)

Cost of using TSs / MRFs to dispose of mixed skips is the same as landfilling mixed waste (if you could).

Segregating waste on site saves money as less work has to be done at the MRF separating the waste types.

# Simons' "20/40/60 Rule"

**Total Waste**

**Down 20%**

**Costs**

**Down 40%**

**Waste to Landfill**

**Down 60%**

## Lincoln Yard, 1999-2002

**Total Waste**

**Down 73%**

**Costs**

**Down 76%**

**Waste to Landfill**

**Down 87%**

## Sherwood Park, Nottingham

Only 13.5 cu.m of waste produced per £100,000 of construction value

CBPP KPI “average” is 47 cu.m per £100k

**Total waste down 72%**

68% of all waste produced was recycled

**Waste to Landfill**

**Down 89%+**

## Cribbs Causeway, Bristol

Quantity of waste **less than half** the CBPP average

Site segregated the remaining waste into

General, Inert, Metals, Timber, Plasterboard, Composite Sheeting, Office & Canteen Waste, Paper & Card

**and only paid for the disposal of  
4 of these waste streams  
(90% reduction in waste to landfill)**

## 3 Critical Factors to good Construction Waste Management

### Site Team

Culture - Training - Encouragement - Reward

### Site Conditions

Space - Access - Programme

Local Recycling Infrastructure

Availability - Economics

Who?

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## Remember this?

**“On “business as usual” building projects, waste disposal costs about 0.5% of project cost.”**

Simons have a monthly Cost of Waste KPI

Our typical cost of waste varies between  
0.11 and 0.17% of turnover

$0.5 - 0.17 = 0.33\%$  of turnover saved

**0.33% of £250m = £825,000 p.a.**

## Remember this?

“Buying the materials in a skip costs 10 to 20 times the cost of disposal.

**The true cost of waste is 5 to 10% of the project cost”**

**What is the real saving if we reduce disposal costs by £825,000 per annum?**

**If you regarded SWMPs as an  
opportunity rather than a chore,**

**HOW MUCH COULD  
YOU SAVE?**

# Reputation & Green Credential

Feel-good factor for staff

Brand Image

# The Future?

SWMP's **will be essential** to achieve

## **“Waste Neutral” Projects**

(Cost of waste less than or equal to value of recycled materials incorporated)

## **“Zero Waste to Landfill” Projects**

(All recycled somehow!)

# The Future?

SWMP's **will be essential** to achieve

## **“Waste Neutral” Projects**

(Cost of waste less than or equal to value of recycled materials incorporated)

## **“Zero Waste to Landfill” Projects**

(All recycled somehow!)

## **“No Waste” Project**



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