

CoreNet Technical Forum

7 More London – Raising the Bar

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Raising the Bar managing practical sustainability

Introduction

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Raising the Bar managing practical sustainability

Agenda

PwC London accommodation strategy 2006-2013

7 More London brief

BREEAM Outstanding

Managing change & collaboration

Designing for sustainability

Understanding the building

Constructor Innovations



7 More London in context

PwC London accommodation programme
2006-2013

Objectives

Two centre location strategy

Long term cost containment

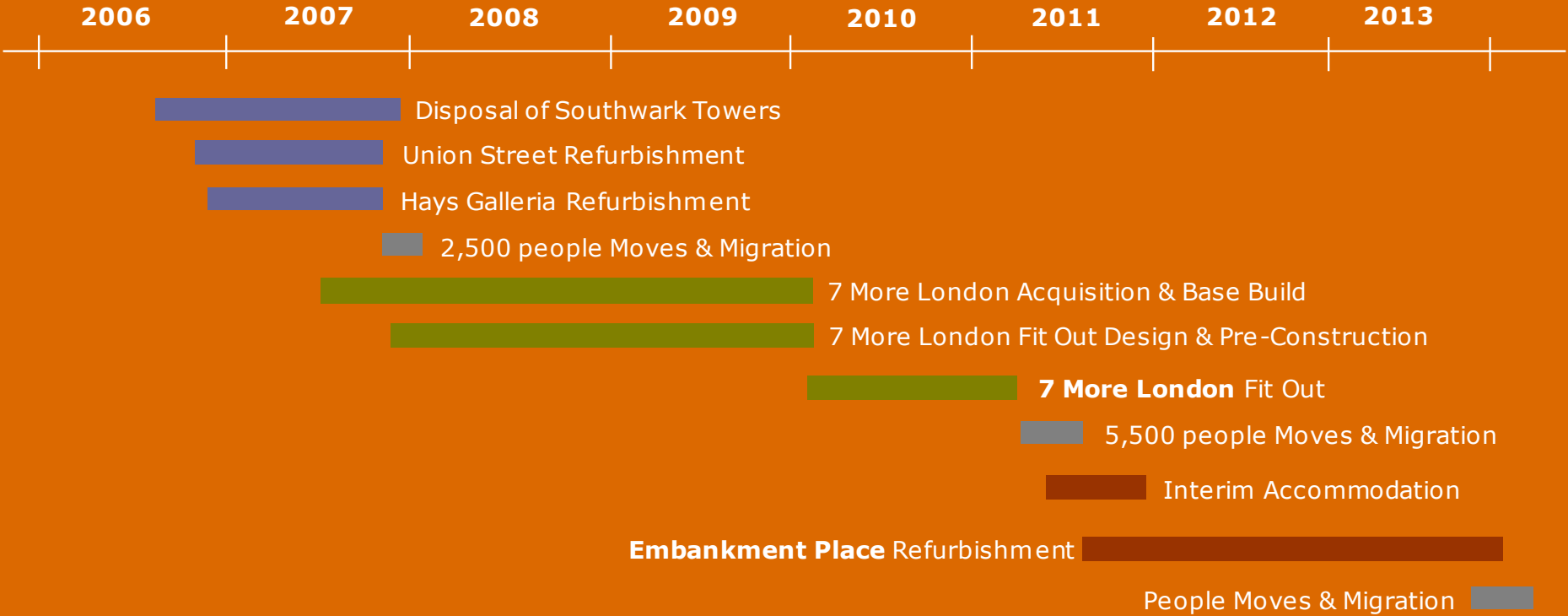
Exemplar sustainable design & operations

Close link to transport hubs

Best place to work



PwC London accommodation strategy timeline



7 More London brief

Reinforce PwC brand & evolving culture

Continued innovation in new working practices

Enable change, offer choice, connectivity & function rather than hierarchy

High quality entertaining & interactive space

Sustainability as good business practice for occupiers



7 More London BREEAM

Base build planning requirement to achieve BREEAM (2006) *Very Good*

PwC encouraged developer to achieve BREEAM (2006) *Excellent*

New BREEAM (2008) opportunity to drive for *Outstanding*

- 85/100 BREEAM points
- Collaboration between landlord & tenant to achieve *Excellent*
- Collaboration between fit out team & PwC team to achieve *Outstanding*
- Close engagement with BRE on pilot



Managing stakeholders



Project management



Workplace
FM Operations
Finance &
Procurement
Property & Real Estate
Project Governance
Technology
Change Management
Furniture installation
Moves & relocations
Catering design
Approved inspector
Fire engineering
Vertical transport

BDP.

Interior design
Building services
Specialist lighting
design
Acoustic consulting
Sustainability
Disability access
Structural engineering



Cost management
Technology project
management
CDM co-ordinator
Contract services
Change management

morelondon

Developer
Base build contractor
Base build consultants



Fit out contractor

7 More London Managing Change

Base build

(£3.5m) 82 tenant change requests

1. Practical items (eg. Soft spots in slabs for future flexibility)
2. Client changes (eg. Dedicated client lifts)
3. BREEAM benefits (eg. 80% recycled aggregate in concrete, vinyl flooring omitted in wet areas)

Fit out

1. Establishing achievable targets & workable controls
2. PCSA – early engagement of contractor
3. Contractor Incentivisation Scheme linked to BREEAM Outstanding

Indirect Benefits

- (£9.0m) 850 change requests
- Contractors final account agreed within 10 days of Practical Completion
- Project completed on time & 15% cost saving on budget

Contractor Incentivisation Scheme

Cost

- Incentivisation scheme activated by achieving target

Quality

- Part 1 snags at PC
- Part 2 snags one month after PC

HSE

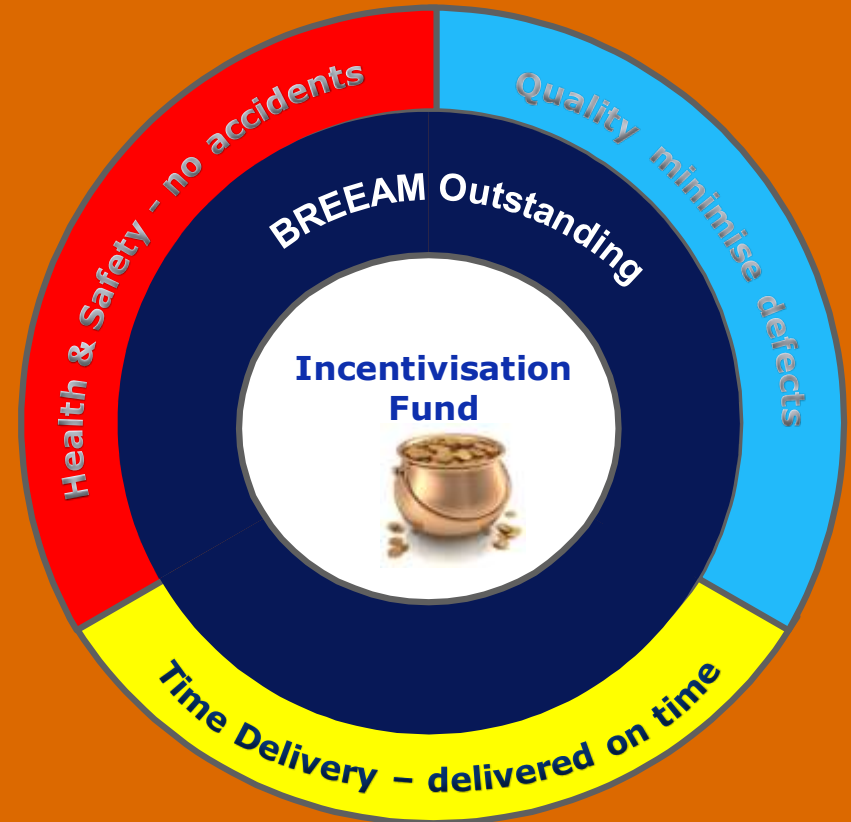
- RIDDOR accident free construction project

BREEAM Outstanding

- waste management targets, Considerate Contractor Scheme, site credits

Programme

- Delivered to PC date





Sustainability – Raising The Bar

LONDON'S MOST ECO-FRIENDLY BUILDING

Foster and Partners' 7 More London is the capital's first building to win the highest green rating possible, the equivalent of three Michelin stars – the implications for architects are huge

Kieran Long



IT MIGHT look like just another modern corporate HQ but 7 More London, the last piece of the More London office development next to Tower Bridge, is the most eco-friendly building in the city.

At least, that's according to the Breeam sustainability assessors. Rigorously assessing against a bewildering array of criteria, Breeam (Building Research Establishment Environmental Assessment Method) is the Michelin star system for eco-friendly buildings.

survive ever more onerous pressure to create energy efficient buildings?

Into the middle of this debate enters 7 More London, the result of a grand collaboration between PwC, Fosters, developer More London, architect and environmental engineer BDP and a variety of other consultants. All were determined that the building reach the Outstanding mark, and the ways it has done so reveal both the possibilities

Architecture will have to change in terms of design, materials and insulation. Buildings will have the option of natural ventilation

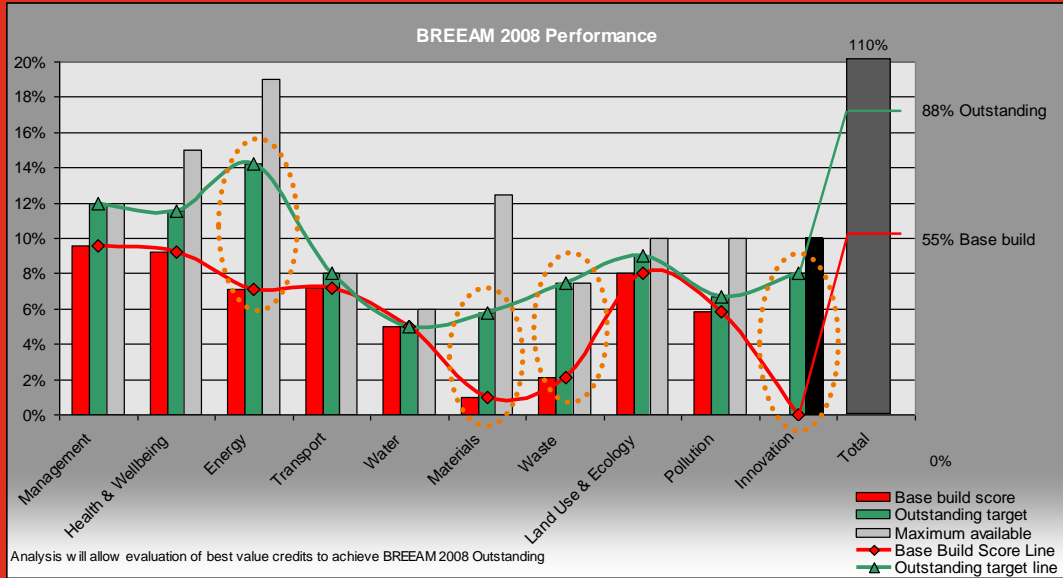
which turns out to be a private garden in the heart of the building, an interior courtyard, bringing light into the centre of the office floors.

Behind these architectural gestures is an energy strategy that is the basis of this building's low-carbon credentials. The building relies for power on a biodiesel-fuelled combined heat and power plant in the basement. This mini power station heats the building and uses waste heat to power refrigeration when cooling is required. The office interiors are heated and cooled by radiance systems using natural air convection, meaning a fresher and healthier interior environment than ordinary air conditioning.

Enclosing all this is a tautly engineered skin of high-performance glass, shielded



BREEAM – Sustainable Investment



- Good business sense was the essence of investment and sustainability.
- Water harvesting and PV's not pursued but structure and infrastructure is future proofed.
- Initial cost analysis indicates a 4-5 year payback in energy costs alone.
- Post occupancy monitoring will assist in measuring the operational performance in use and provide a useful case study.

Base Build
2006



73%



Excellent



Base Build
2008



55%



Very Good

BREEAM Innovation Credits

“Encouraged a new approach to environmental design”

involvement of an accredited BREEAM expert

meeting 50% of building energy demand using low and zero carbon technologies

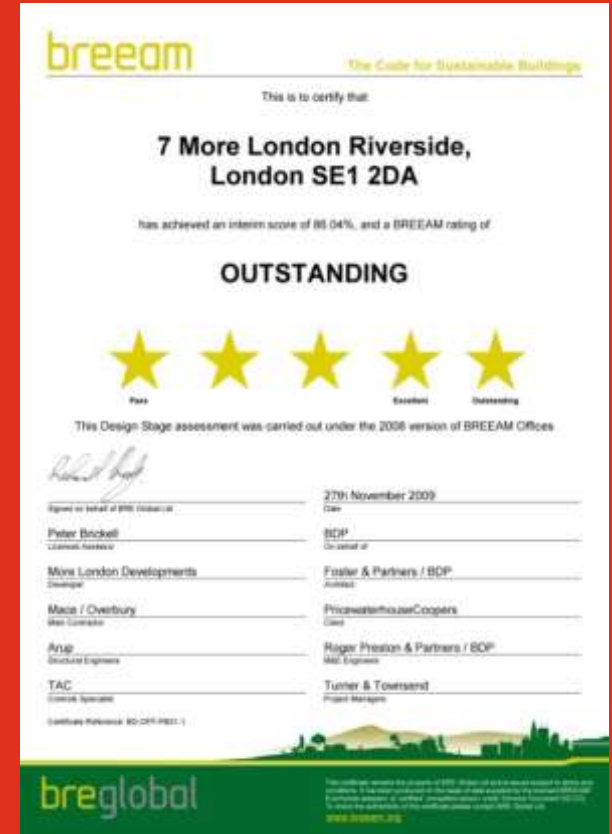
building as a learning resource

80% recycled aggregate used in concrete

water sub-metering

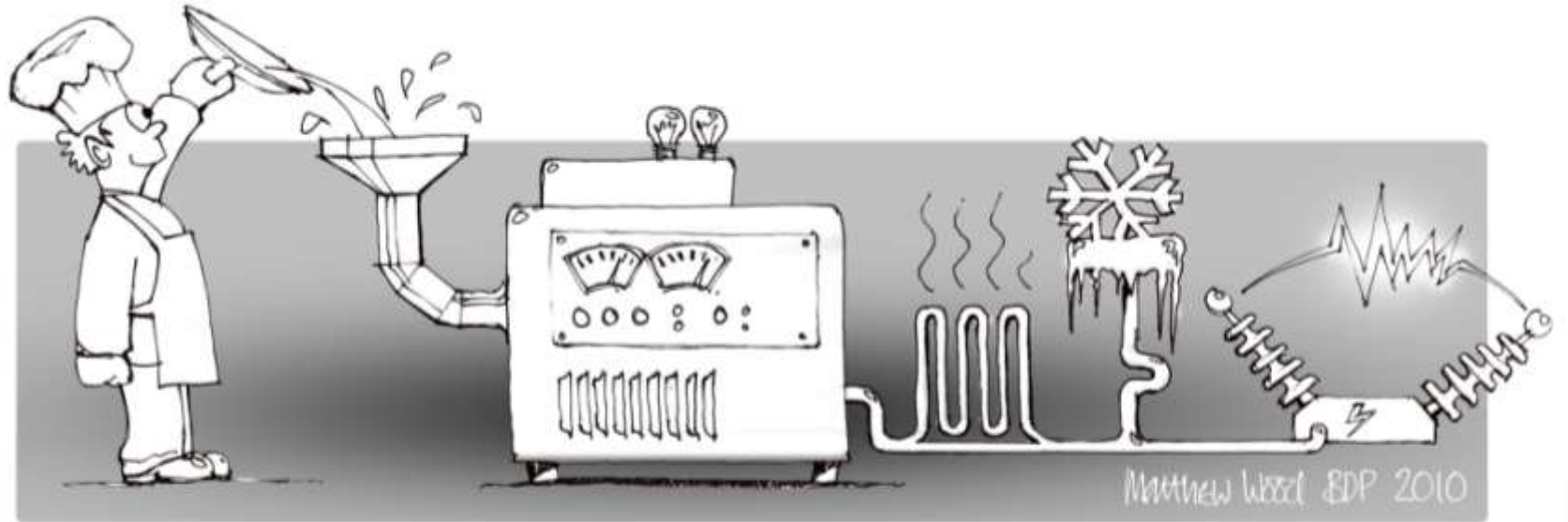
exemplar performance from fit out contractor

heat recovery from chillers



PwC – Sustainable Supply Chain

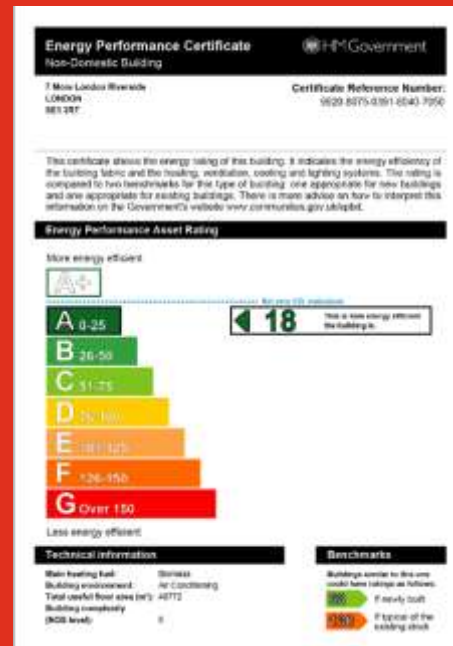
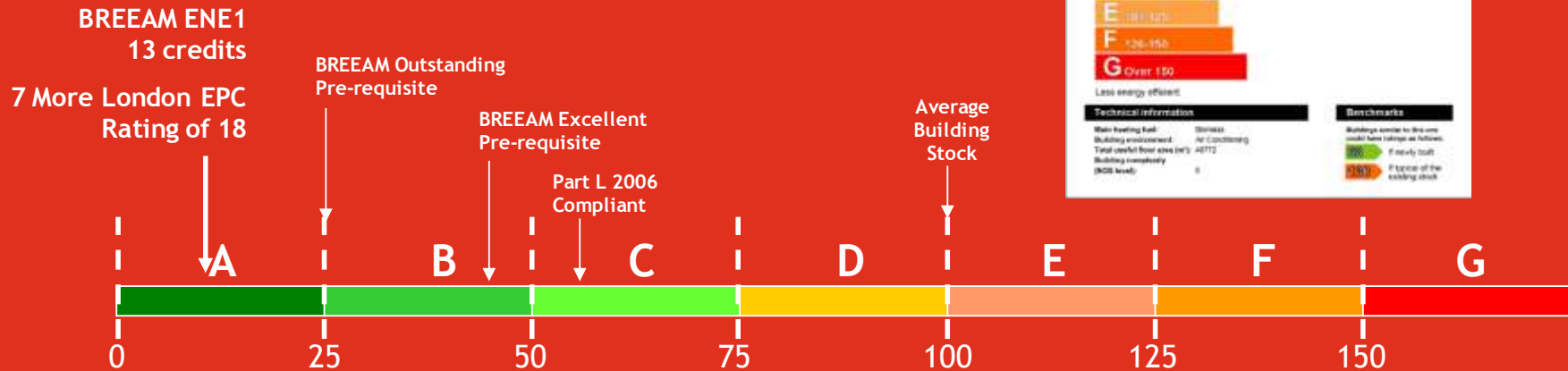
Tri-generation innovation



Converting waste cooking oil into heating, cooling and electrical energy.

Energy Performance and Technology Infrastructure

This building is achieving the highest standards in energy reduction with an EPC rating of 'A'



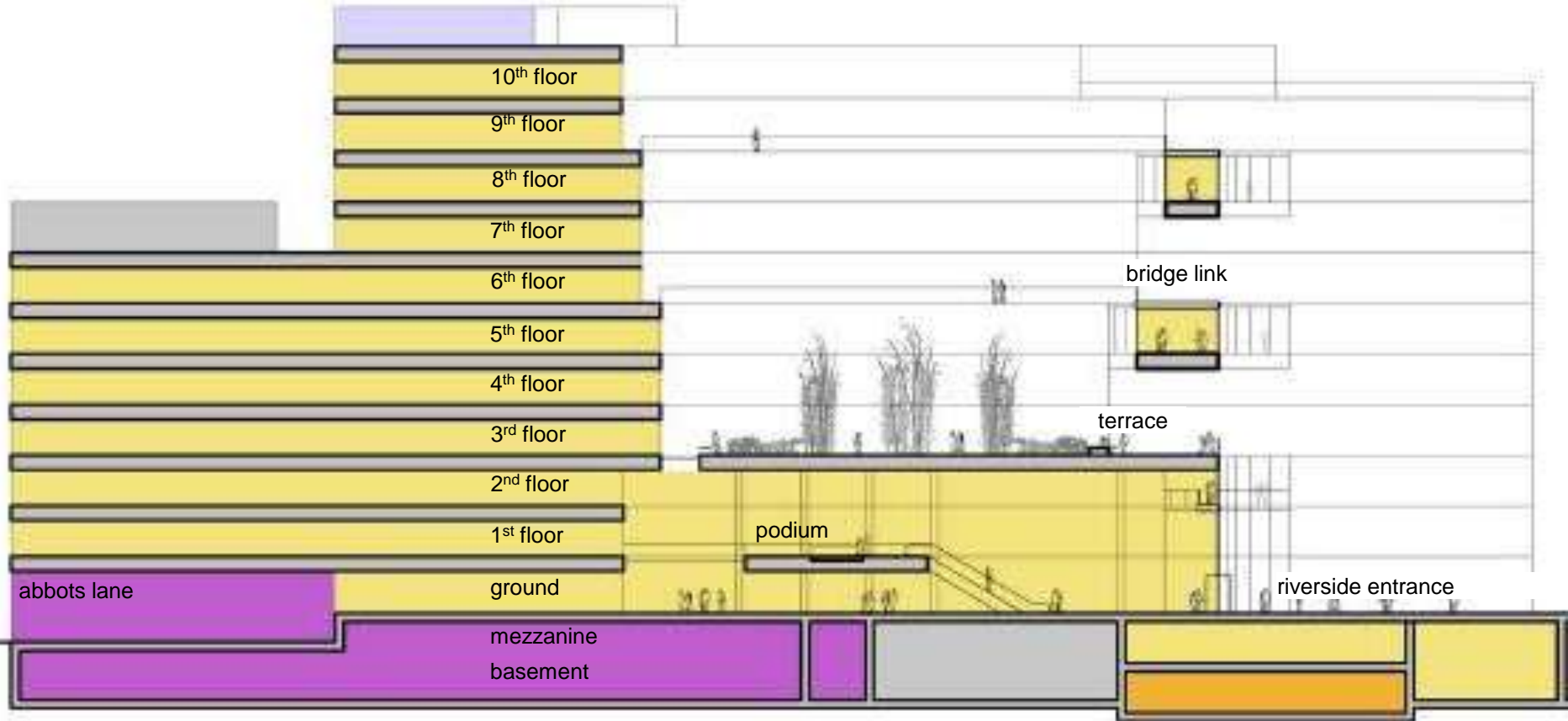
Influencing the Base Build

Building elements provide natural fixes upon which the stack plan is based

- riverside entrance
- abbots lane entrance
- 1st floor podium
- client lift from 1st to 9th floors
- bridges on 2nd, 5th & 8th floors
- 3rd floor landscaped terrace
- access to 10th floor terrace



Influencing the Base Build



Understanding the building

- special areas
- support space
- practice space



7th floor



8th floor



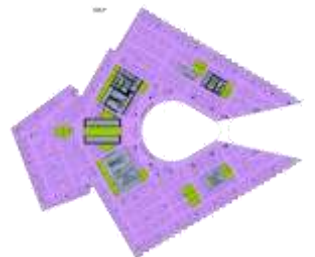
9th floor



10th floor



3rd floor



4th floor



5th floor



6th floor



basement



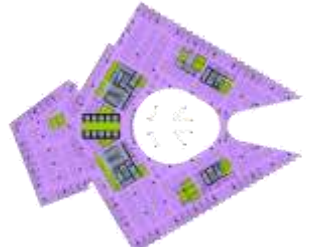
mezzanine



ground



1st floor



2nd floor



Understanding the building

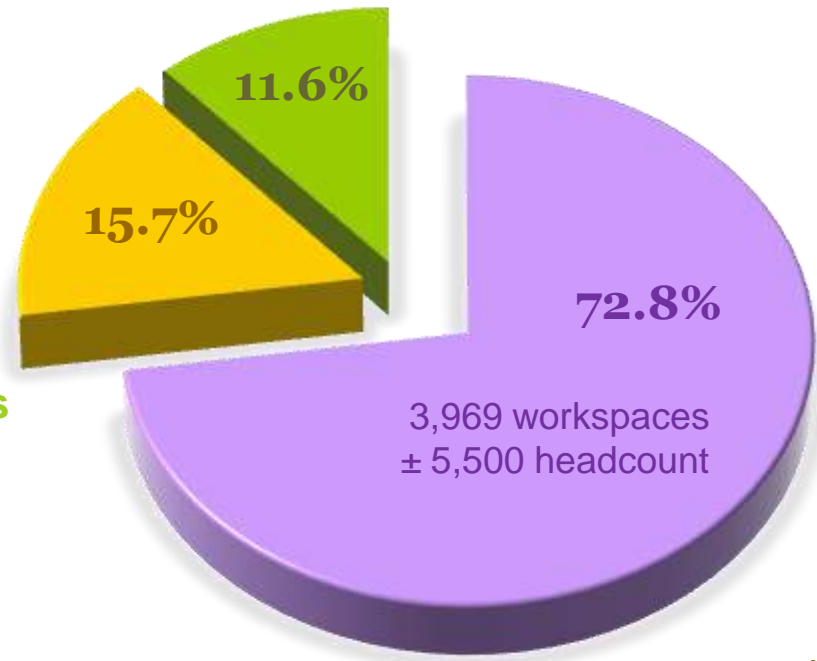
Types of Space

centralised special areas

- staff & client meeting rooms
- client dining
- staff dining
- club lounge / business centre
- café / deli bar
- welcome / reception / waiting
- primary circulation

centralised support areas

- DPC / stationery / mail room
- MER
- loading bay / security
- Kitchen, pantries & catering store
- facilities / maintenance rooms
- primary circulation



practice space

- offices
- open plan desks
- secondary circulation

shared facilities included in practice space

- primary circulation
- vending areas
- copy areas
- break-out areas
- comms / SER
- meeting / project space

- NLA of 460,000ft² across 13 floors
- 3,969 workspaces at 115ft² per w/s
- 5,500 heads at 84ft² per head with room for future growth

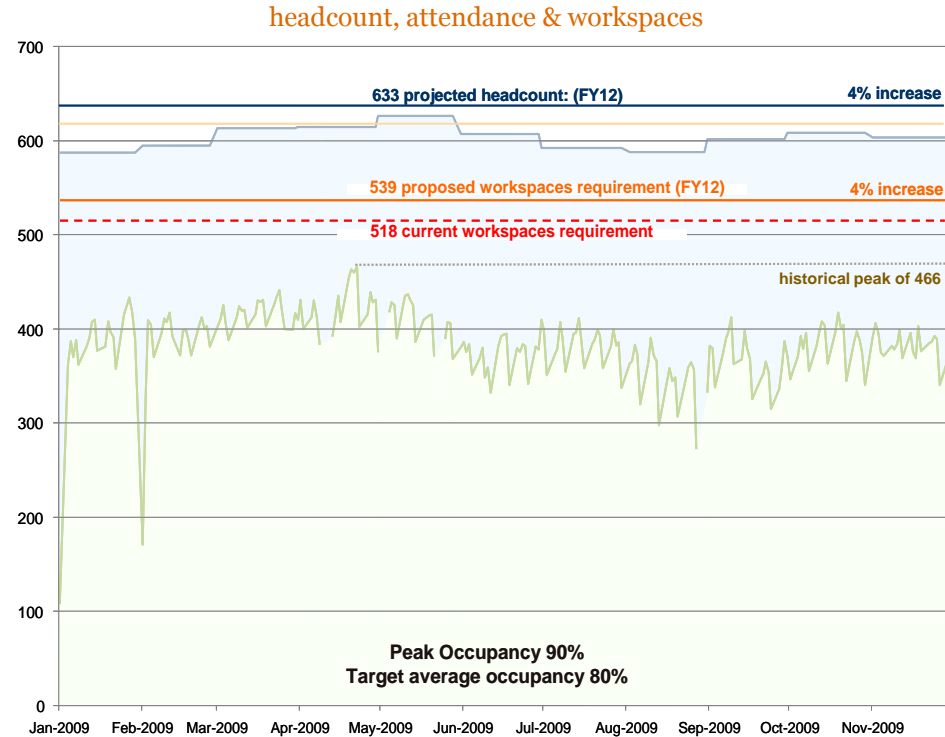
Understanding the Groups

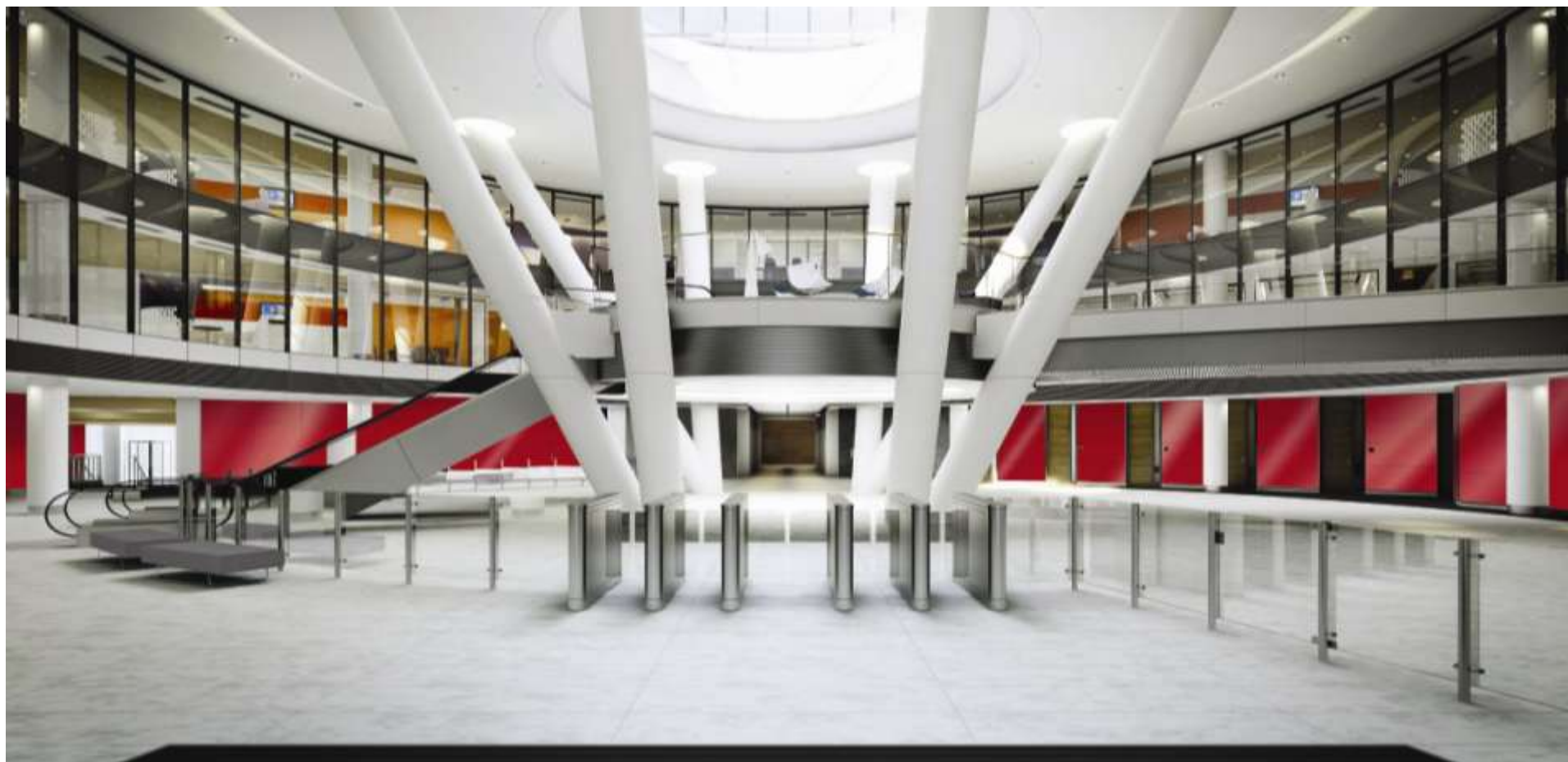
An approach to quantifying group space requirements, is to understand historical space usage

To demonstrate to groups their current requirement and then overlay growth projections

Data includes seasonal and daily patterns for each Line of Service, each Business Units and Industry Groups within those LoS.

Annual Occupancy









Generic practice floor

50,000 ft²

580 workspaces at 86ft² per w/s
(incl. 53x assigned offices)

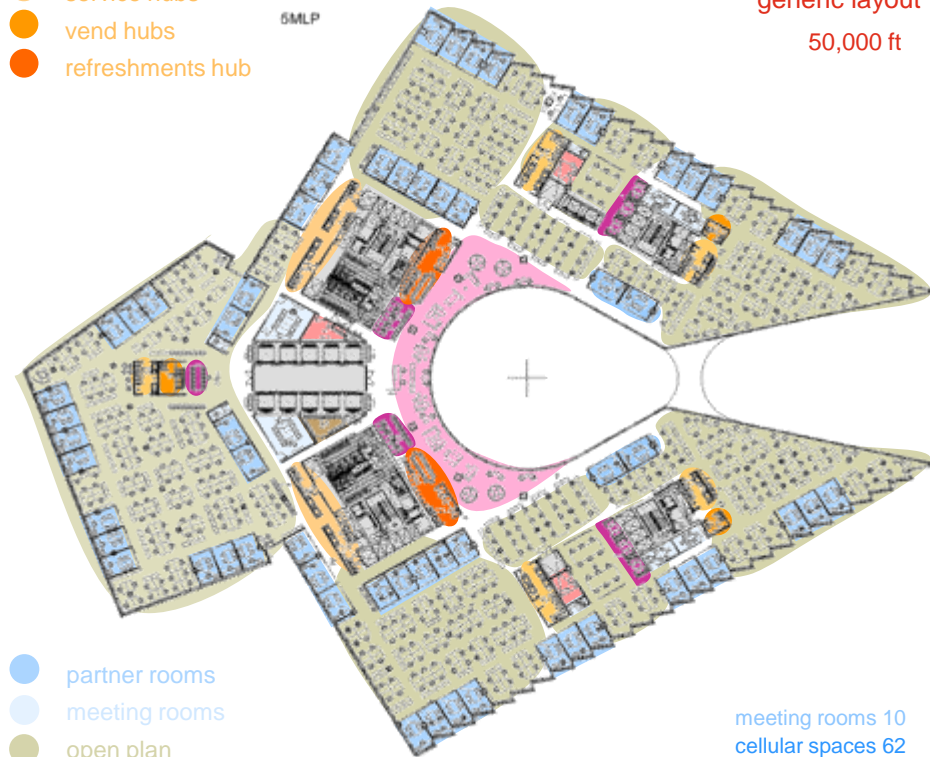
6x unassigned meeting rooms
alternative workspaces areas (160 seats)

9x services hubs

2x main refreshment hubs

5x vending points

- service hubs
- vend hubs
- refreshments hub



- partner rooms
- meeting rooms
- open plan
- alternative areas
- fixed alternative

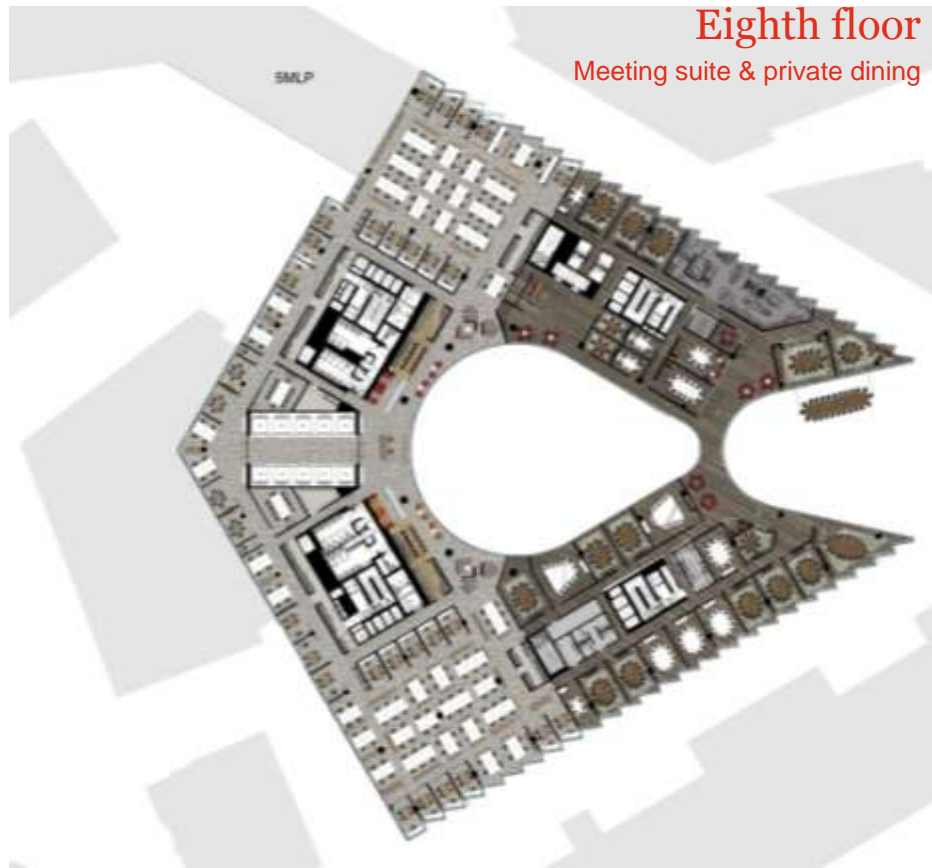
practice floor

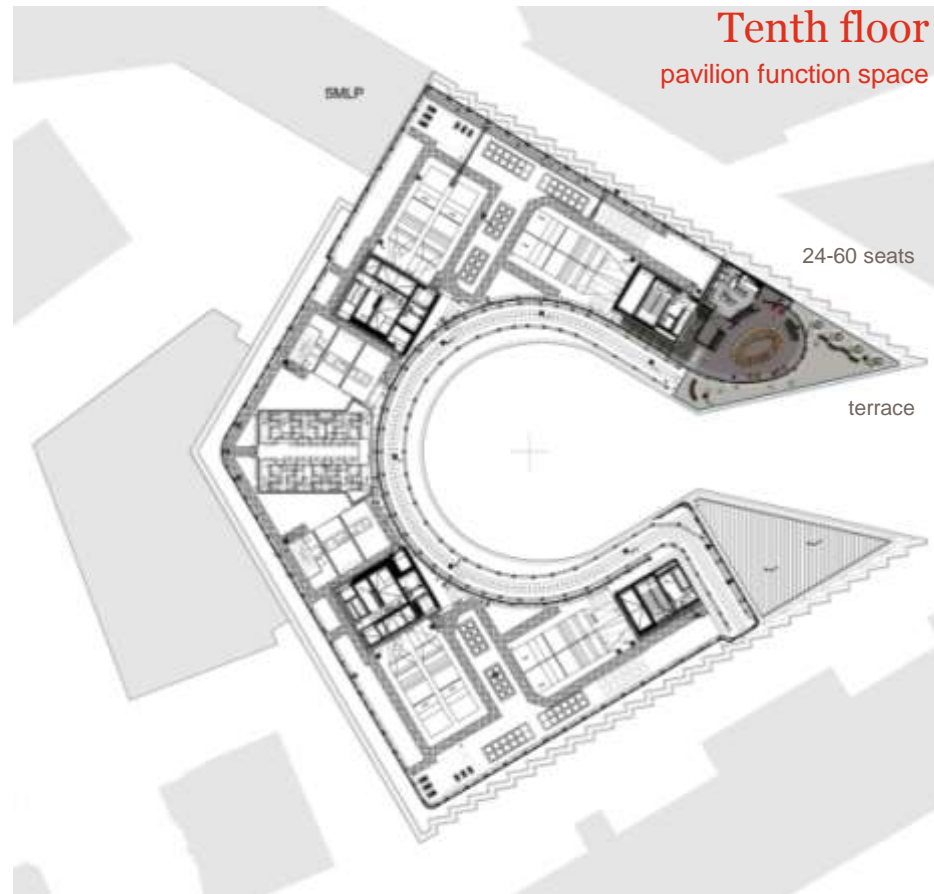
generic layout

50,000 ft

meeting rooms 10
cellular spaces 62
open plan workspaces 361
alt. open w/spaces 150
total workspaces 573









Construction innovations in Achieving BREEAM

Unique innovations specific to Overbury

- Designing Out Waste
- Trade Contractors tasked with producing specific waste minimisation plans
- Avoiding production of waste in first place was the primary target
- Minimisation and re-usable packaging
- Extensive pre-fabrication, assisted by 3D Modelling of services
- Take Back Schemes – Knauf plasterboard
- Every bin that leaves site individually weighed – gave accurate calculation of waste
- Recycling rate 95% achieved



The Considerate Constructors Scheme

BREEAM outstanding requires audit score > 36

2010 criteria now focuses on client engagement with project delivery and community

Requires new approach from contractors, designers and client

Site based initiatives include:-

- 100% CSCS compliance including client team
- “Women in Construction Day”
- Participation in “Future Jobs” programme
- Safety Leadership Team
- Collocated Project Team
- Cycling to work promoted including provision of facilities

Overbury achieved audit score of 38.5

Received CCS Gold Award

Project was National Award runner up

Thank you

