

The Built Environment

Getting Fit for the Future

Shepherd and Wedderburn Conference 2016
Thursday 10th November 2016

CBRE

Introduction

1. The Built Environment
2. Responding to Occupiers' Desires
3. EPC & The Action Plan

THE BUILT ENVIRONMENT

- **How do we define the built environment?**

In social science, the term **built environment** refers to the man-made surroundings that provide the setting for human activity, ranging in scale from buildings and parks or green space to neighbourhoods and cities that can often include their supporting infrastructure, such as water supply or energy networks.

Roof, K; Oleru N. (2008). "Public Health: Seattle and King County's Push for the Built Environment." J Environ Health. 71: 24–27.

CHANGING FACE OF THE BUILT ENVIRONMENT

- **Dream within a dream?**

- How does the phrase “the environment” impact behaviours?

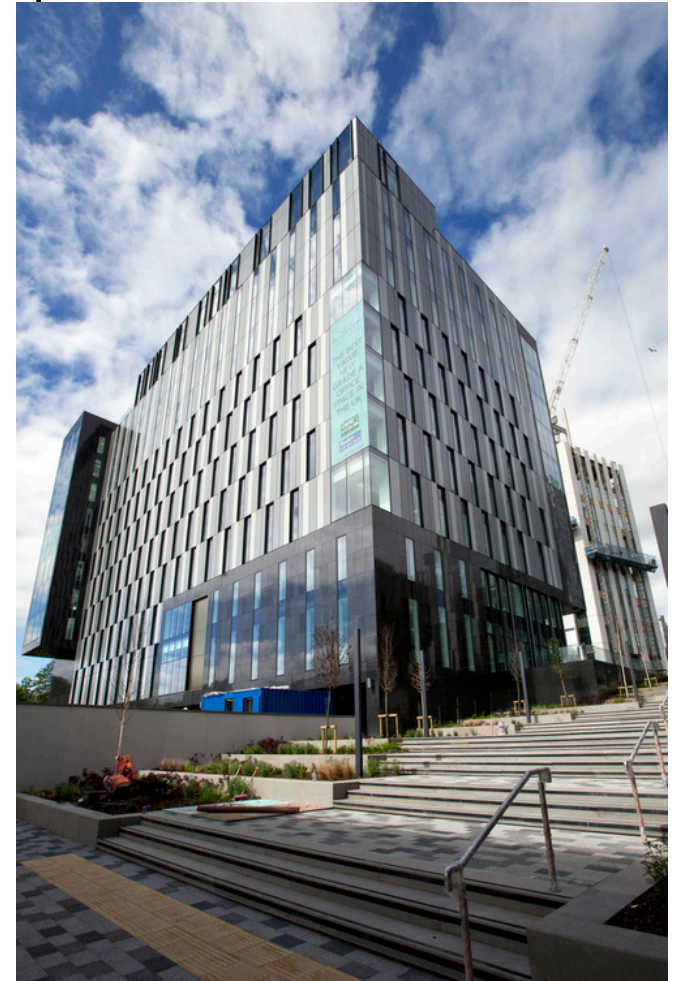
- **Productivity**

- **Enjoyment**

- **Revenue**

- **Creativity**

*Commercially,
Consider Occupier
Demand*



WHAT DO OCCUPIERS LOOK FOR?

FLEXIBLE
FOOTPRINT



HOSPITALITY
DRIVEN



ALL PURPOSE
ALL TIME



CASUAL
COLLISIONS



TECHNOLOGY



CHOICE AND
FLEXIBILITY



WELLNESS



OUTDOOR
SPACE



WHAT DO OCCUPIERS LOOK FOR?

OPTIMISING ASSETS

- Real estate cost savings
- Operating cost reductions
- Square footage reductions
- Co location into larger regional hubs



IMPROVING THE WORKING ENVIRONMENT

- Increase collaboration spaces
- Employee satisfaction
- Increased innovation
- Client experience

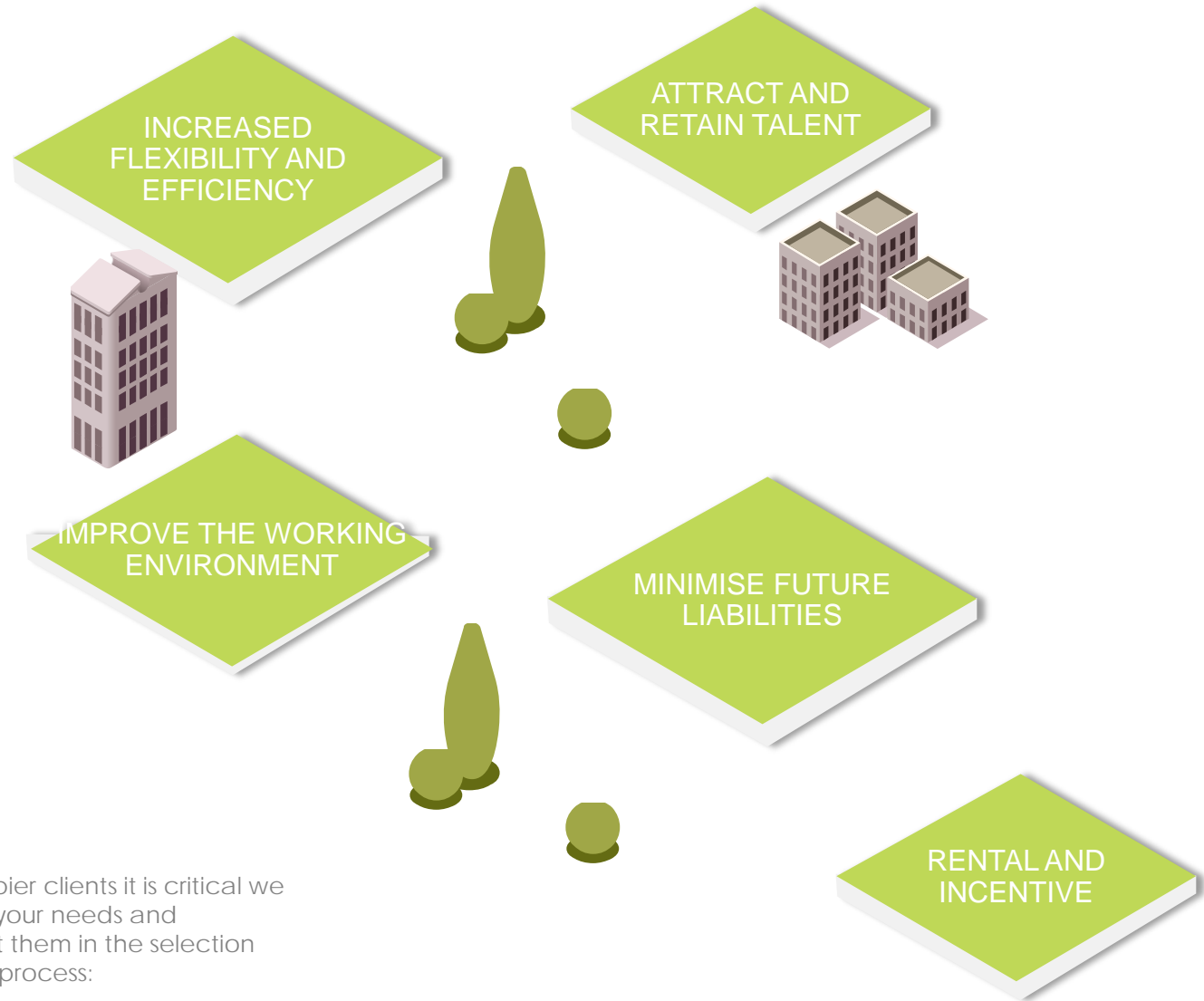


HEALTH AND WELL BEING

- Generating business
- Cross team opportunities
- Community engagement
- Brand reputation



INFLUENCING OCCUPANCY DEMAND



In advising occupier clients it is critical we fully understand your needs and effectively reflect them in the selection and negotiating process:

WHAT INFLUENCES ARE THERE?

■ **Legislation**

- Building (Scotland) Act
- Building (Scotland) Regulations (to name a few)
- Energy Performance Regulations (from Section 63 CCA 2009)

■ **Innovation**

- Construction techniques
- Technology
- Workplace strategy

■ **Fashion**

- New styles

■ **Services**

- Good quality or sympathetic lighting
- Fresh air

INNOVATION

- **Construction techniques**

- Modular construction
- Move away from automatic assumption of using steel
- Thermal massing
- Night time cooling

- **Technology**

- IT
- Wireless data
- Wireless charging
- Electrical car park chargers

- **Workplace strategy**

- Efficient operational flow
- Hot desking

SERVICES

- **Good quality and/or sympathetic lighting**
 - Task dependence
 - Personality influence (mood?)
 - External and internal lighting linkages
 - Efficiency
- **Fresh air**
 - Temperature based design criteria
 - Direct link to productivity
 - Carbon dioxide based design criteria
 - Fresh air delivery systems
- **Heating & Cooling**
 - Temperature based design criteria
 - Heat emitters
 - Passive cooling

LEGISLATION - THE EPC & ACTION PLAN

- **Material change in EPC legislation from 01st September 2016**
 - The assessment of energy performance of Non-domestic Buildings (Scotland) Regulations 2016
 - Buildings > 1,000m²
 - Constructed before 4th March 2002
 - Non Green Deal properties
 - Transaction related

ACTION PLAN REQUIRED

PROPERTY EXPOSURE ON EPCS

- **In Scotland, the expectation is that 40% of Scottish assessed EPCs will be subject to an Action Plan requirement**
- **In England & Wales, the expectation is that 18% of English & Welsh assessed EPCs will be subject to restriction on sales or lettings**

The Herald, 13.05.13

THE IMPACT OF THE EPC ON TRANSACTIONS

Now and/or Future?

- Marketability of the asset
- Future rental incomes
- Attractiveness to tenants
- Cost liability for improvement
- Improved building stock
- Improved energy efficiency
- Improved market rental income

EPC CHANGES - SCOTLAND

- Section 63 Climate Change (Scotland) Act 2009 Form of Regulations for Non Domestic Buildings
 - Incorporated into the Energy Performance of Buildings (Scotland) Regulations 2013
 - Draft Scottish Statutory Instrument
 - Part 1: Preliminary (Existing)
 - Part 2: Energy Performance Certificates (Existing)
 - **Part 3: Improvements Measures (NEW)**
 - **In addition to providing prospective tenant/buyer with an EPC, a separate, non automatically generated “ACTION PLAN” is required.**
 - Part 4: Public Buildings (Existing)
 - Part 5: Approved Methodology & Approved Organisations (Existing)
 - Part 6: Register of Energy Performance Data (NEW)
 - Lodging of all related information to a centralised register managed by/on behalf of ministers
 - Open access for members of the public to the register via the ‘keeper’.
 - Part 7: Enforcement (Existing)

ACTION PLAN

- From the Interpretation:

*“**Action Plan**” means a document prepared in accordance with regulation 10 containing a programme for the implementation of measures to:*

- (a) Improve the energy performance of a building or building unit; and*
- (b) Reduce emissions of greenhouse gases produced by or otherwise associated with that building or building unit.*

ACTION PLAN - IMPROVEMENT WORKS

Schedule 2 of the Regulations

- *The works are:*
 - (a) *Upgrading heating controls*
 - (b) *Upgrading lighting controls*
 - (c) *Installing draught stripping to doors and windows*
 - (d) *Installing an insulation jacket to a hot water tank*
 - (e) *Upgrading low energy lighting*
 - (f) *Installation of insulation in an accessible roof space*
 - (g) *Replacement of a boiler*

ACTION PLAN - IMPROVEMENT WORKS

The criteria are:

- With regard to the improvement works, the energy consumption cost reduction should be less than the cost of the improvement works over 5 years
- The boiler should be replaced if greater than 15 years old

CLARITY

- From the Section 63 Climate Change Working Group at Scottish Government:

Minimum Ratings do not exist in Scotland.....

at this time.

FIRST STEPS

- Understand the potential liability
- Have all assets inspected
- Create a Risk Management Plan to understand the potential income liability
- Ensure that the correct data is being recovered from inspections
 - Fabric
 - Services
 - Activities

TARGET ITEMS FOR UPGRADES

- Heating & Cooling Temperatures c/w humidity - Set Points
- Occupied and unoccupied times that affect the set points
- Lighting standards in Lux within the activity area
- Ventilation Standards
- Occupation densities & associated
- Equipment gains are taken from the activity database
- Hot water usage is spread across the rooms and room types opposed to just being for room with a sink for instance
- Understand whether the building is simple or complex. Complex modelling offers more outputs and avenues to understand the ratings

understand the activity within the space

SUMMARY

- The built environment is continuously changing
- The need for designers to work with occupiers in what they are looking for
- Challenge traditional conventions
- EPCs had little or no value previously with no obligation to improve
- With a direct link to the ability to let or sell, the need to improve the asset is obvious