Embedding RICS Ska into UCL Projects

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Adopting Ska at UCL

- Sustainable Building Design Specification
  - Target for major refurbishments & new build to achieve Breeam ‘Excellent’
- Ska filled gap for minor refurbishment projects
  - Target Ska ‘Gold’

- Apr 2012
  - piloted Ska Office on Gordon Square learning space refurbishment
  - 2 Ska Assessors
- Jul 2012 - Jan 2013
  - 9 refurbishment projects
  - 2 “Mini-Ska” projects
  - 1 “Ska-Labs” project
  - 2/4 Ska Assessors
  - Projects: offices, wet & dry labs, student hubs, engineering & maintenance

Approach on 50-51 Gordon Square

- Identified in-scope & best practice measures
  - architect, mechanical, electrical, QS, PM, Ska assessor
- UCL set target at ‘gold’
- Clear & early ownership allocated
- Stage D design review
- Incorporated into & report attached to pre-lims
- Design stage assessment - Silver
- On-site scoping meeting
- Site audit (mid-delivery)
- Handover stage assessment - Silver

- 12 month occupancy stage assessment (not yet undertaken)

Lessons Learnt

- Pragmatic targeting
- Aim high – targeted measures are always lost
- Scope project with full design/construction teams
  - Achieve buy-in to Ska
  - Allocate ownership
  - ‘One-team’ approach to sustainability
  - Learning opportunity for framework suppliers
- Interim reviews needed to keep on track
- Pre-tender review important – last chance!
- Objectives & measures need to be captured in pre-lims, Ska report attached
- On agenda at Pre-start meeting
- Share learning across suppliers, document compliant products

- Design teams tend to embrace the challenge & welcome clarity on sustainability requirements
- Often aligns with their ethos

“Mini-Ska” for smaller projects

- Checklist of 18 measures, scoped for each project
- Small scale projects
  - refurb single room, corridor or maintenance job etc.
- PM led with ad-hoc checks by ES Team

- Combined measures:
  - Efficient lighting
  - Sub-metering (single zone)
  - Materials specification
  - Waste
  - Water saving
  - Daylight
  - Commissioning

‘Mini-Ska’ Combined measures

Measure	Criteria
Efficient lighting	Installed lighting load in the general office area is less than 11W/m2. Lights are automatically controlled for the presence of daylight or occupancy where appropriate. Cellular offices are provided with manual on/off switches and absence detectors to switch the lights off. Separate controls/sensors are provided to lighting areas of up to four workstations. Lighting controls comply with the Energy technology Technology List Criteia All lamps comply with the Energy Technology List criteria (ETL criteria). All fluorescent light fittings are installed with high frequency ballasts All light fittings (luminaires) comply with the Energy Technology List criteria (ETL criteria).

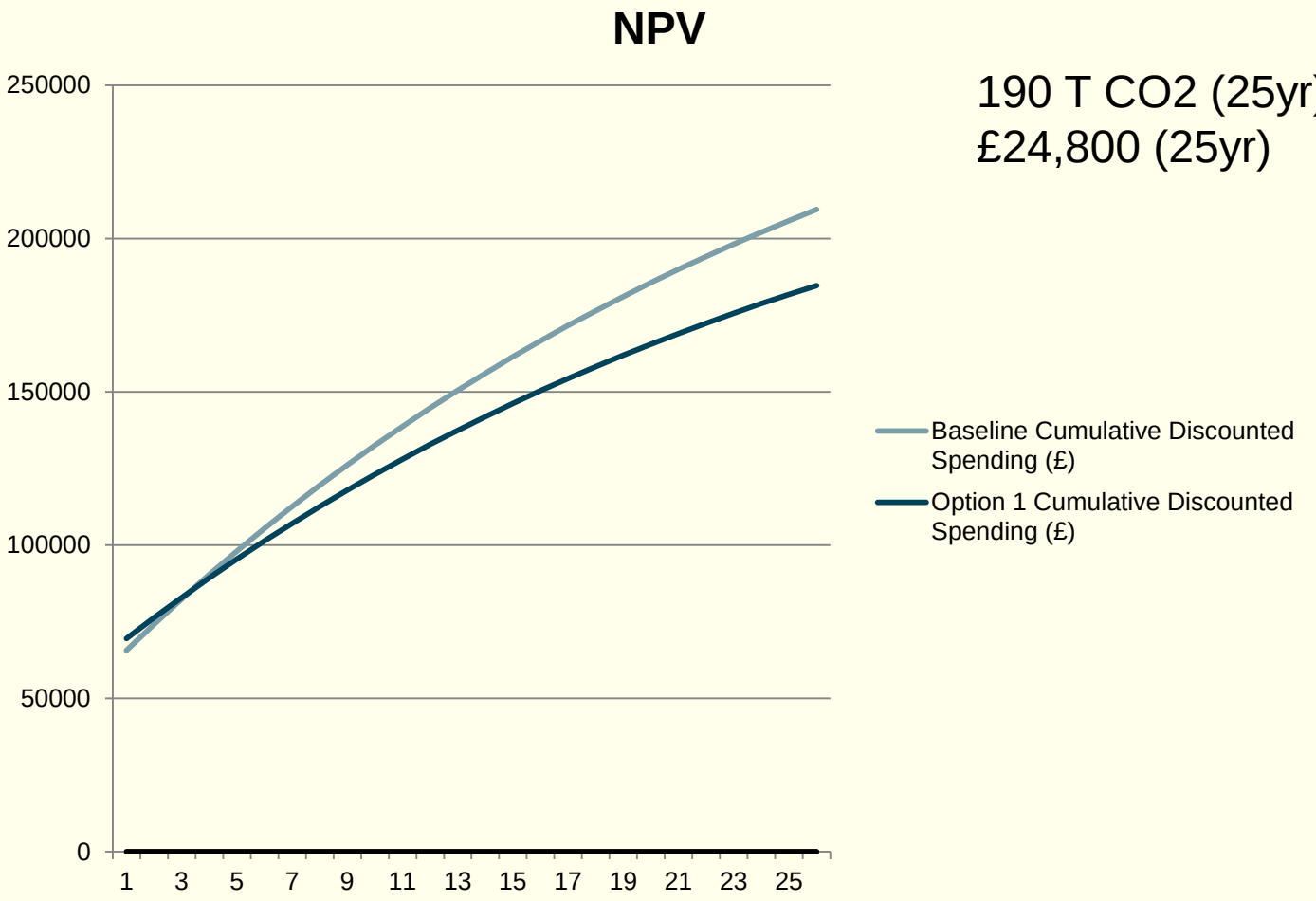
ID	Measure	Criteria					
MS01	Efficient lighting	Installed lighting load in the general office area is less than 11W/m2. Lights are automatically controlled for the presence of daylight or occupancy where appropriate. Cellular offices are provided with manual on/off switches and absence detectors to switch the lights off. Separate controls/sensors are provided to lighting areas of up to four workstations. Lighting controls comply with the Energy technology Technology List Criteia All lamps comply with the Energy Technology List criteria (ETL criteria). All fluorescent light fittings are installed with high frequency ballasts All light fittings (luminaires) comply with the Energy Technology List criteria (ETL criteria).	Gold, Silver, Bronze	Energy & CO2	No	No	

“Ska-Labs” for Lab refurbishments

- Lab specific criteria (still being refined)
- In addition to Ska office
- Developed from S-Labs best practice measures and work of one of our framework M&E suppliers (Couch Perry Wilkes)
- Range of issues:
  - Fume cupboards & extract (recirculation, face velocity, size, sash height, diversity, controls)
  - AHUs (heat recovery, fan efficiency, filters, ductwork sizing
  - Ventilation (air change rates, temperature, source, night settings)
  - Equipment Loads (consumption, location)
  - Envelope (insulation, air tightness)
  - Lighting (efficiency, task)

Carbon Appraisal - Physics Phase 2

Impact of introducing demand control and fan diversity (50%) into heat recovery ventilation system



190 T CO2 (25yr)

£24,800 (25yr)

Ska for HEIs

Strengths

- Structured approach
- Simple & appropriate
- Low cost
- Engages whole design team in sustainability thinking
- Facilitates tracking & ownership
- Tool sits within context of HEIs sustainability requirements

Challenges

- Rationalise ‘easy points’
- Balance trade-offs
- Fit for purpose
- Materials % measures demotivate teams
- Accountability for risk when specifying to Ska requirements?

Opportunities

- Sharing learning across sector
- Future
  - Generic Ska - all measures pick-list incl. Lab criteria, transient spaces, AV needs
  - “Mini-Ska”
  - Extend to envelope and HCV remodelling
  - Re-order to align with design discussions
- Success captured as carbon & opex savings

Questions?

Further information

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