



workplace⁶

Anika Spears

Design Project Manager



Breakfast with the Stars

If we were building your standard premium grade office building...

Energy

= 87 kgCO₂/m²

= 309 cars*

Water

= 31,100,000L

= 15.5 olympic pools*

* based on a car producing 4.5t CO₂/ year

** based on an olympic pool capacity of 2 mega L



Today

- „ Overview
- „ What made us 6 Green Star?
- „ Computer fly through
- „ Questions



**WE ARE
HERE!**

How the project began...



Expression of interest



Developer



Building owner



D&C contractor

How the project began...



Architect



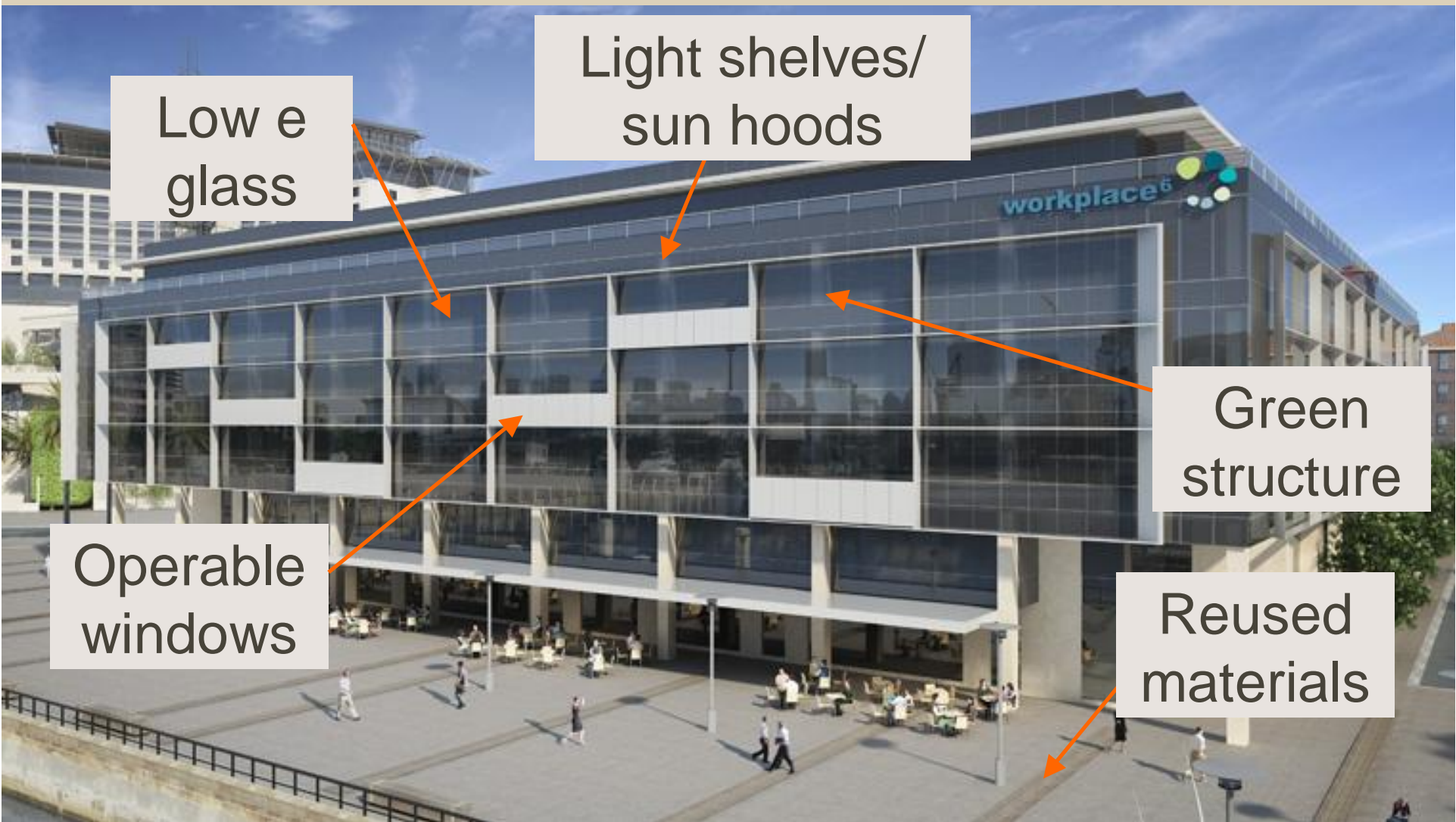
Electrical, mechanical
hydraulics, lifts services &
ABGR, daylight, PMV modeling



Structural Engineers



ESD advice



Low e glass

Light shelves/
sun hoods

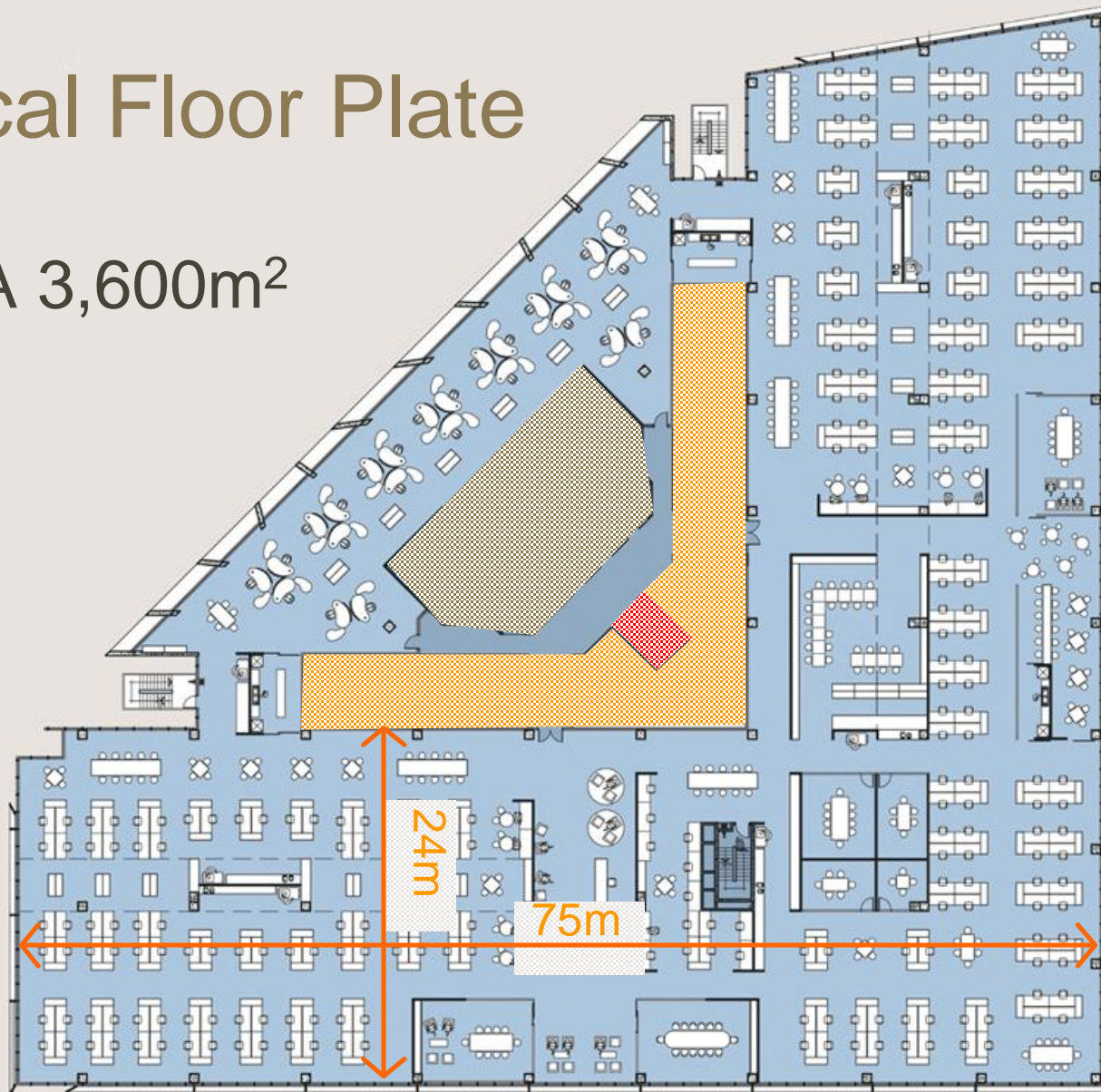
Operable windows

Green structure

Reused materials

Typical Floor Plate

„ NLA 3,600m²



What made us 6 Green Star?

Management

Credit No	Title	Points Available	Points Achieved
MAN 1	GS Accredited Professional	2	2
MAN 2	Commissioning Clauses	2	2
MAN 3	Building Tuning	1	1
MAN 4	Commissioning Agent	1	1
MAN 5	Building Users Guide	1	1
MAN 6	Environmental Man.	3	2
MAN 7	Waste Man.	2	2
	Total	12	11

Management

„ We are all accredited professionals



- „ CIBSE commissioning/ on going services tuning
- „ Good construction management

Indoor Environment Quality



Credit No	Title	Points Available	Points Achieved
IEQ 1	Ventilation Rates	3	1
IEQ 2	Air Change Effectiveness	2	2
IEQ 3	Carbon Dioxide Monitoring	1	1
IEQ 4	Daylight	3	0
IEQ 5	Daylight Control Glare	1	0
IEQ 6	High Frequency Ballasts	1	1
IEQ 7	Electric Lighting Levels	1	1
IEQ 8	External Views	2	1
IEQ 9	Thermal Comfort	2	2
IEQ 10	Individual Temp. Control	2	0
IEQ 11	Asbestos	Na	Na
IEQ 12	Internal Noise Levels	2	1
IEQ 13	VOC	3	3
IEQ 14	Formaldehyde Min.	1	1
IEQ 15	Mould Prevention	1	1
IEQ 16	Tenant Exhaust Riser	1	1
	Total	26	16

Low VOCs

paints, carpets,
adhesives &
sealants

Internal atrium

Inter-connecting
tenancy stair

Natural daylight

Mould prevention

Good lighting design

Max 400 lux

High frequency ballasts

External views

CO₂
monitoring

Good air distribution

Low VOC

Comfortable noise
levels

Chilled beams for
thermal comfort

50% greater
fresh air rates

Energy

Credit No	Title	Points Available	Points Achieved
ENE 1	Energy	Yes	Yes
ENE 2	Energy Improvement	15	13
ENE 3	Electrical Sub metering	1	1
ENE 4	Tenancy Sub metering	1	1
ENE 5	Office Lighting Power Den.	4	3
ENE 6	Office Lighting Zoning	1	1
ENE 7	Peak Energy Demand Red.	2	2
	Total	24	21

ABGR = 5 star + 40% improvement

h
alternative
energy

o
efficient
air conditioning

w
good
lighting design

Transport

Credit No	Title	Points Available	Points Achieved
TRA 1	Provision of Car Parking	2	0
TRA 2	Small Parking Spaces	1	1
TRA 3	Cyclist Facilities	3	3
TRA 4	Commuting Public Transport	5	5
	Total	11	9

Water

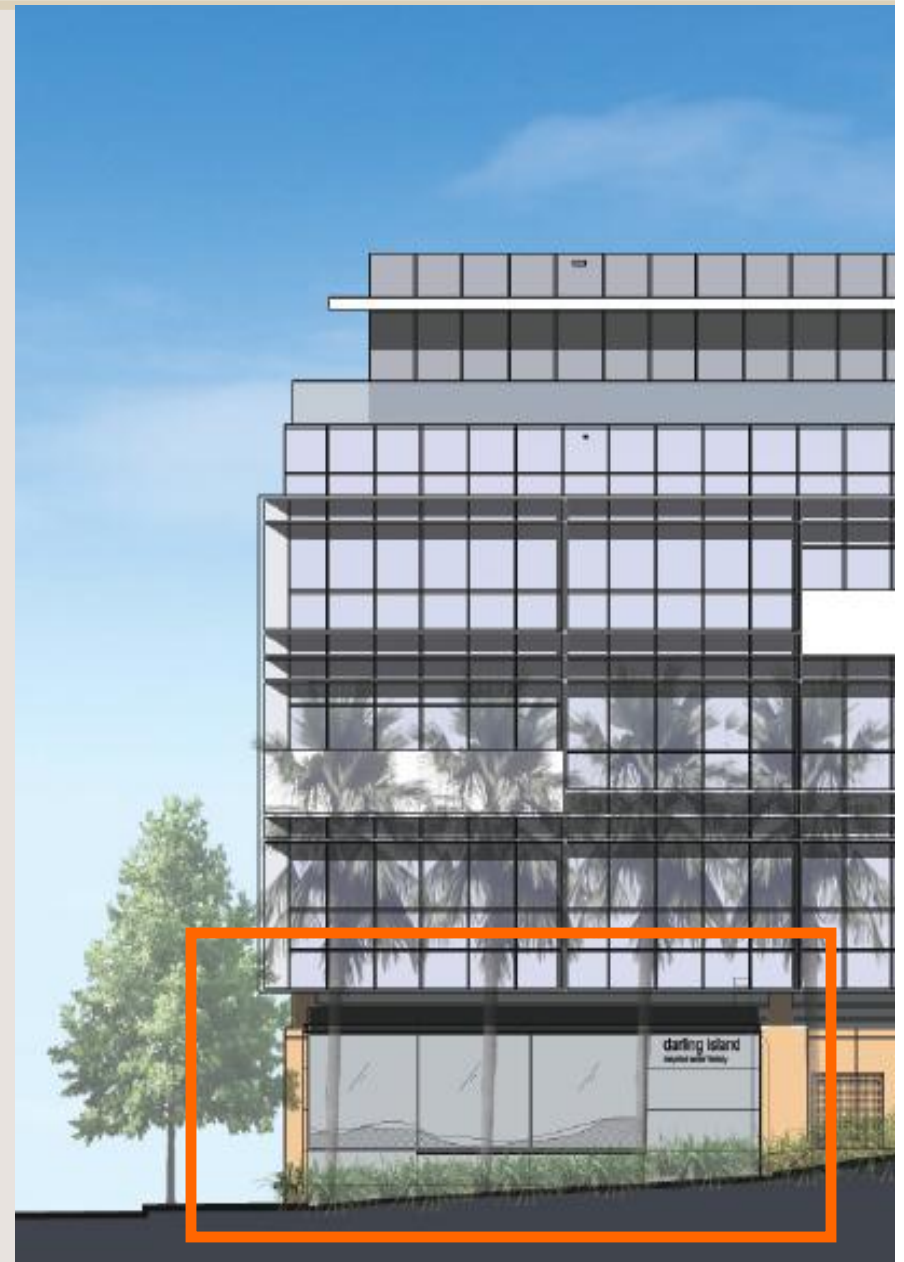
Credit No	Title	Points Available	Points Achieved
WAT 1	Potable Water Efficiency	5	5
WAT 2	Water Meters	2	2
WAT 3	Landscape Irrigation	1	1
WAT 4	Cooling Tower Water	4	4
WAT 5	Fire Systems Water	1	1
	Total	13	13

Saving Water

- „ 4 star water fixtures
6 star urinals
- „ Extensive water metering
- „ No cooling towers
16.5 million L/ year
saved

Recycle Water Factory

- „ Produces 40,000L/ day
- „ Sewer mining
- „ On display for public viewing



Giving Back to the Community

- „ All building grey water
- „ All site and park irrigation water
- „ Saving 31.1 million L of drinking water/ year!!
- „ Exceeding Green Star benchmarks



Materials

Credit No	Title	Points Available	Points Achieved
MAT 1	Recycling Waste Storage	2	2
MAT 2	Re-use Façade	Na	Na
MAT 3	Re-use Structure	Na	Na
MAT 4	Shell and Core/ Int. Fitout	3	0
MAT 5	Recycled Content Concrete	3	3
MAT 6	Recycled Content Steel	2	2
MAT 7	PVC Minimisation	2	2
MAT 8	Sustainable Timber	2	2
	Total	14	11

Land Use and Ecology

Credit No	Title	Points Available	Points Achieved
ECO 1	Ecological Value of Site	Yes	Yes
ECO 2	Reuse of Land	1	1
ECO 3	Contaminated Land	2	2
ECO 4	Change in Eco Value	4	1
ECO 5	Topsoil and Fill Removal	1	0
	Total	8	4

Emissions

Credit No	Title	Points Available	Points Achieved
EMI 1	Refrigerant ODP	2	2
EMI 2	Refrigerant GWP	1	0
EMI 3	Refrigerant Leak Detection	1	1
EMI 4	Refrigerant Recovery	1	1
EMI 5	Watercourse Pollution	2	2
EMI 6	Reduced Flow to Sewer	4	4
EMI 7	Light Pollution	1	1
EMI 8	Cooling Towers	1	1
EMI 9	Insulant ODP	1	1
	Total	14	13

Innovation

Credit No	Title	Points Available	Points Achieved
INN 2	Exceeding Benchmarks	5	1
INN 3	Environment Design Initiatives		2
	Total	5	3

6 star = 75

Workplace 6 = 83 points

If we were
standard...

Energy

= 87 kgCO₂/m²

= 309 cars*

Water

= 31,100,000 L

= 15.5 olympic pools**

but we are not!

Energy

= 39 kgCO₂/m²

= 138 cars

Water

= 2,100,000 L

= 1 olympic pool

ZERO IMPACT

* based on a car producing 4.5t CO₂/ year

** based on an olympic pool capacity of 2 mega L



Panel question time

