



# Role Modelling Environmental Protection in Critical Care



Helen Polley

Adv Nsg PG Dip, Environmental Management PG Dip  
Critical Care Complex  
Counties Manukau Health  
NZ



# Who are you listening to?

- Rural background – South Waikato
- Nursing for last 32 yrs
- Different roles & countries
- Several specialties
- NZMAT (New Zealand Medical Aid Team)
- Environmental Management PG Dip



# The Importance of being Ernest

(about environmental protection in our work place)

- Population health
- The anthropocene era
- Healthcare contribution 6-8% of GHG
- Prime positioning for role modelling



# Counties Manukau

- Debbie Wilson: Sustainability Officer, appointed in 2012
- Environmental Advisory Group
- Hot spots” in hospital
- First hospital in Australasia to become CEMARS certified

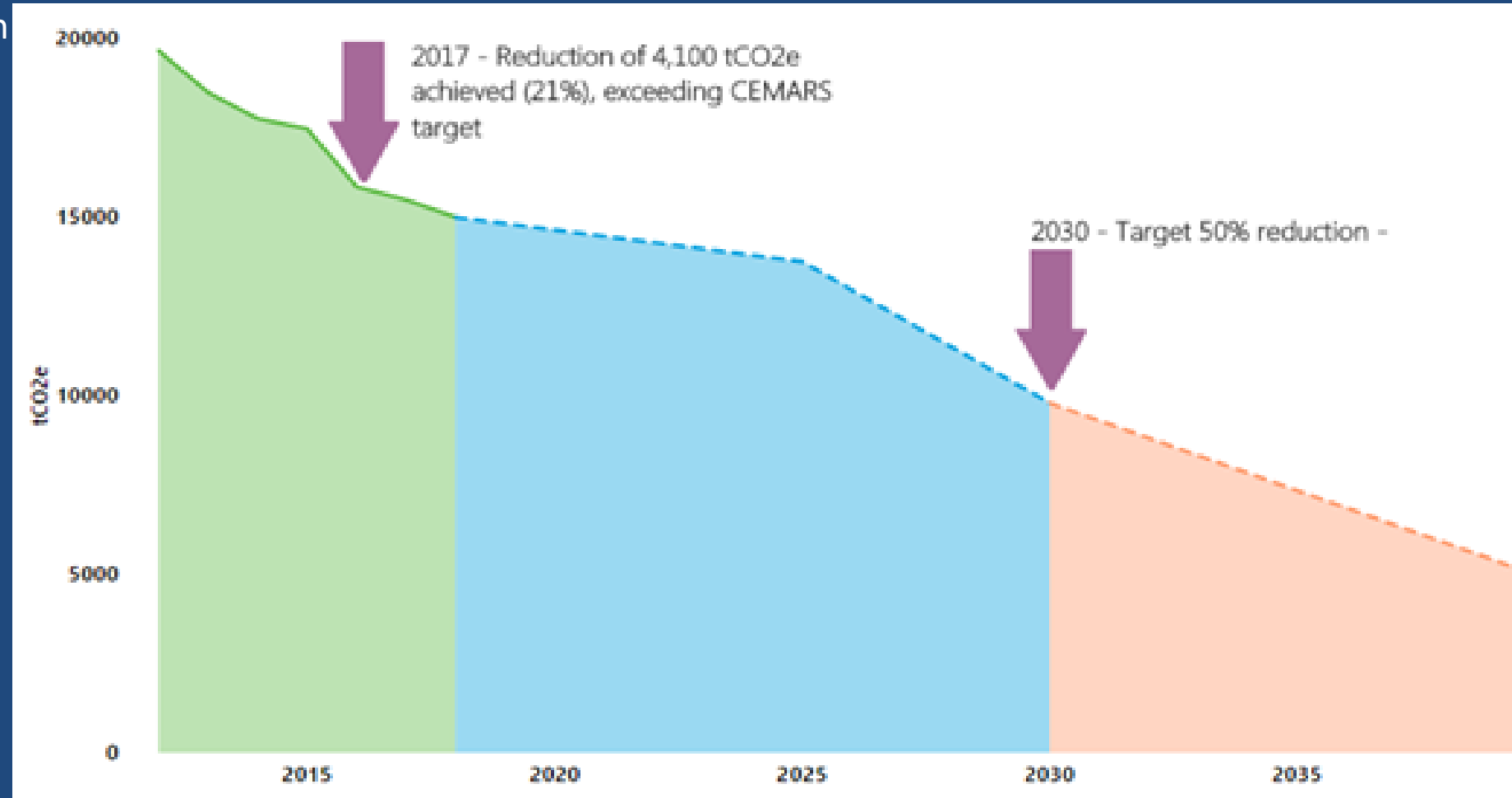


# CEMARS

## (Carbon Emission Measuring and Reduction Scheme)

2017: 21.3% absolute reduction

2050: carbon neutrality




# Critical Care: EPICC ( Environmental Protection in Critical Care)

- Concerned Individuals
- Commencement of formal group (July 2014)
- Low hanging fruit
- Relentlessly Optimistic
- Active following



# Successes



- Removal of disposable plates
- Removal of disposable cutlery
- Removal of Styrofoam cups
- Store room and linen labeling
- Bedside trolley 
- Stacker bins: tidy and well labeled
  - for recycling
- Apron recycling
- PVC recycling
- Tetracycling - Oral care brigade
- Milk bottles: Fonterra take these back

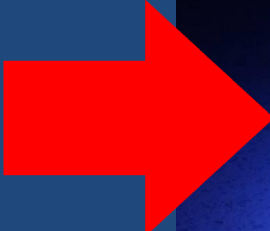


# Experiences



- Compost bin
- Weekly Tips: too time consuming
- Ice containers
- Light switch reminders: stickers wore off

Even activities that are not successful generate conversations & can lead to new ideas. Don't be afraid to try!



# Pivotal message

- Environmental protection is not recycling
- Reduced resource use
- Procurement, life cycle assessment studies
- Policy awareness & involvement as health professionals
- Role modelling
- Raising awareness and starting discussions

➤ [www.orataiao.org.nz](http://www.orataiao.org.nz) NZ Climate & Health Council

➤ [www.greenhospitals.net](http://www.greenhospitals.net)

➤ Sustainable Health Sector National Network (SHSNN)



# Other Critical Care Complexes

- **Consumption**
- **Waste**
- **Toxins**
- **Personal footprint of staff**



# Consumption

## Purchasing, energy, water & building materials



Avoid single use products when possible

- Be mindful of the amount and type of packaging used
- Choose products that are recyclable or made of degradable materials
- Find out which companies recycle their own waste: F & P, Baxter
- Life cycle assessments



- Advocate for energy efficient equipment
- Computers – standby modes
- Occupancy sensors in lesser used areas



- Flow restrictors on taps & showers
- Dual –flush toilets
- Reclaiming water from dialysis units and sterilisers



- Environmentally certified

# Waste

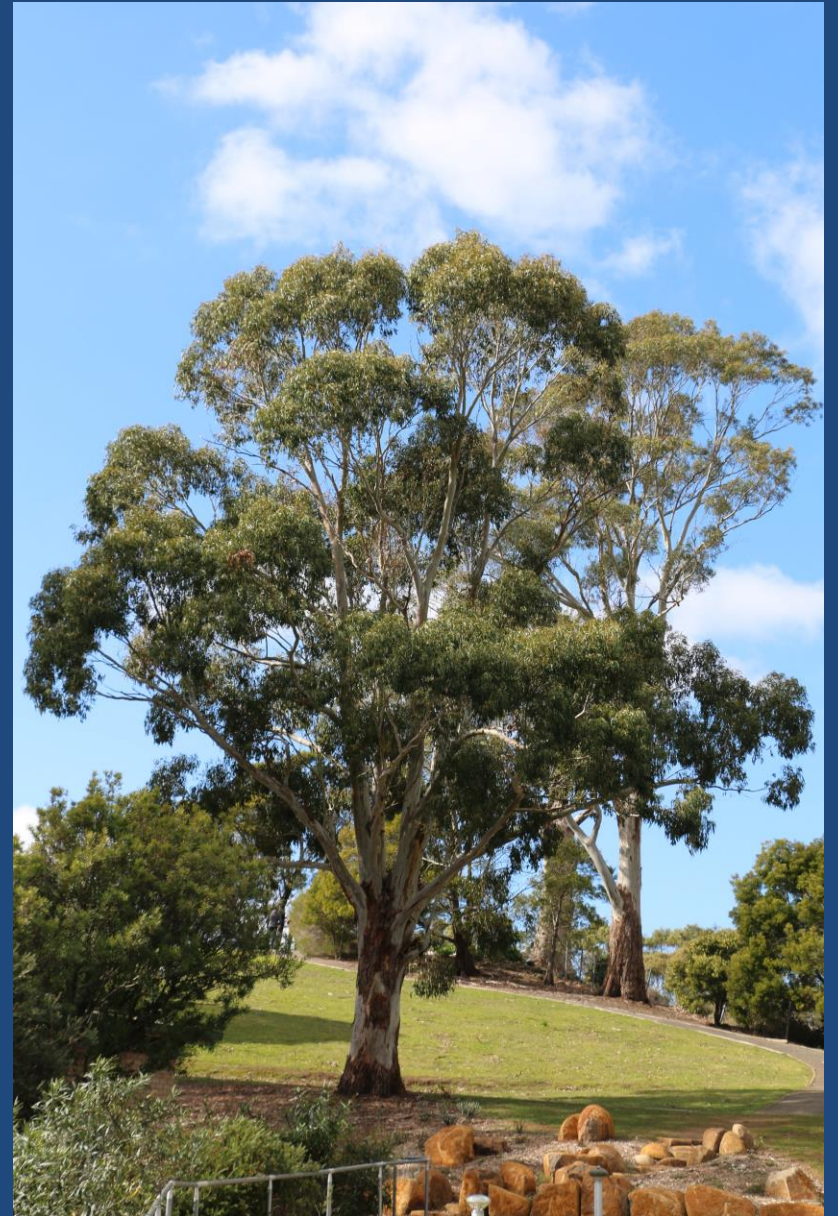
ICU's are thought to be the second largest creators of waste in a hospital

- Point of use separation
- Waste audits
- Thoughtful use and disposal of premade kits  
(unused items can go to medical missions, veterinarians, etc)



# Toxins

- DEHP ( Di-2-ethylhexyl phthalate)
- Cleaning materials
- Air fresheners



# Staff Footprints



- Energy consumption
- Transportation
- Food choices
- General consumption: clothing, food, homewares etc
- Waste



- Grey water usage
- Roof top gardens
- Bee keeping
- Passive heating and cooling
- Natural light
- Healing spaces



Massachusetts General Hospital

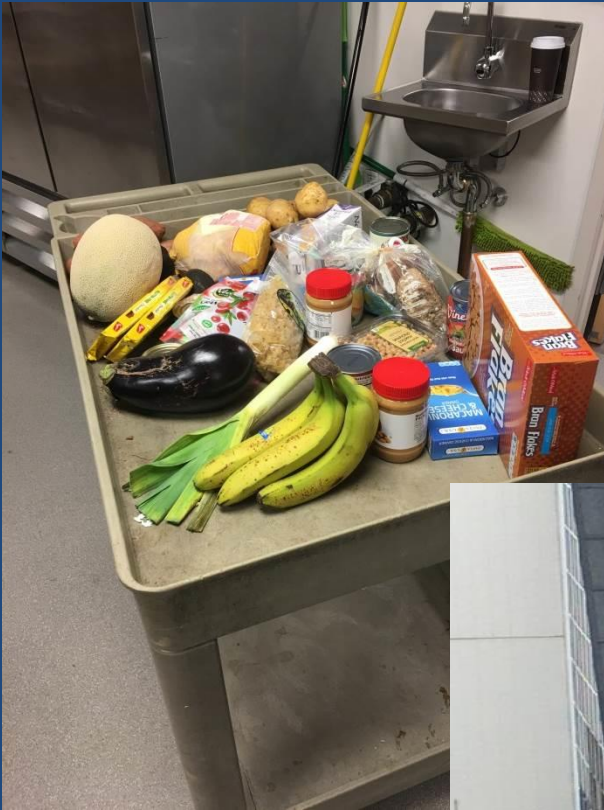


## CMH Mental Health Unit ( Tiaho Mai)

Natural light, natural ventilation, LED's – occupancy sensors in appropriate areas, low flow taps, use of green healing spaces, integrative design, low VOC paints , floor coverings and building materials, use of natural & local products .

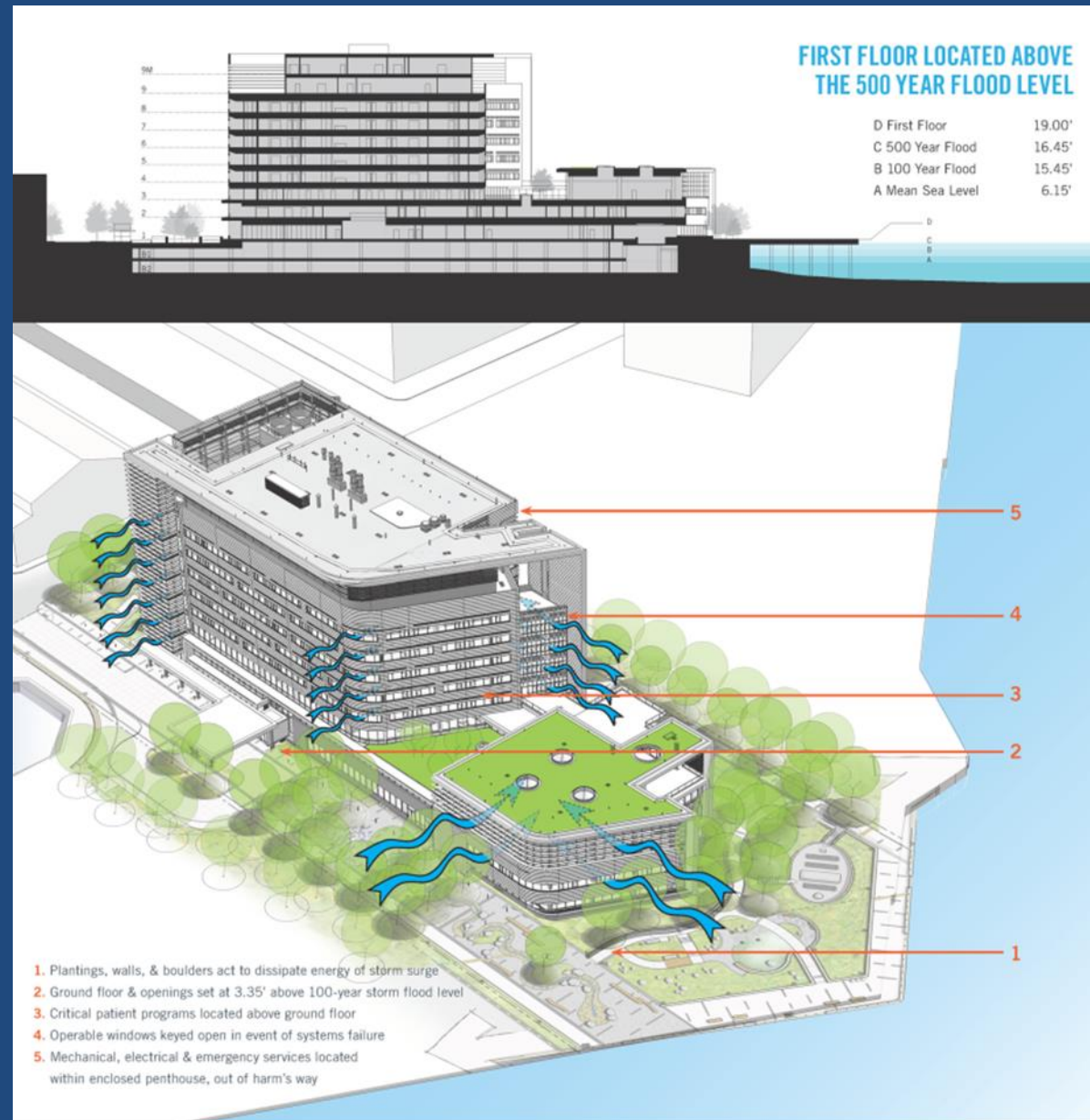
# Boston Medical Centre

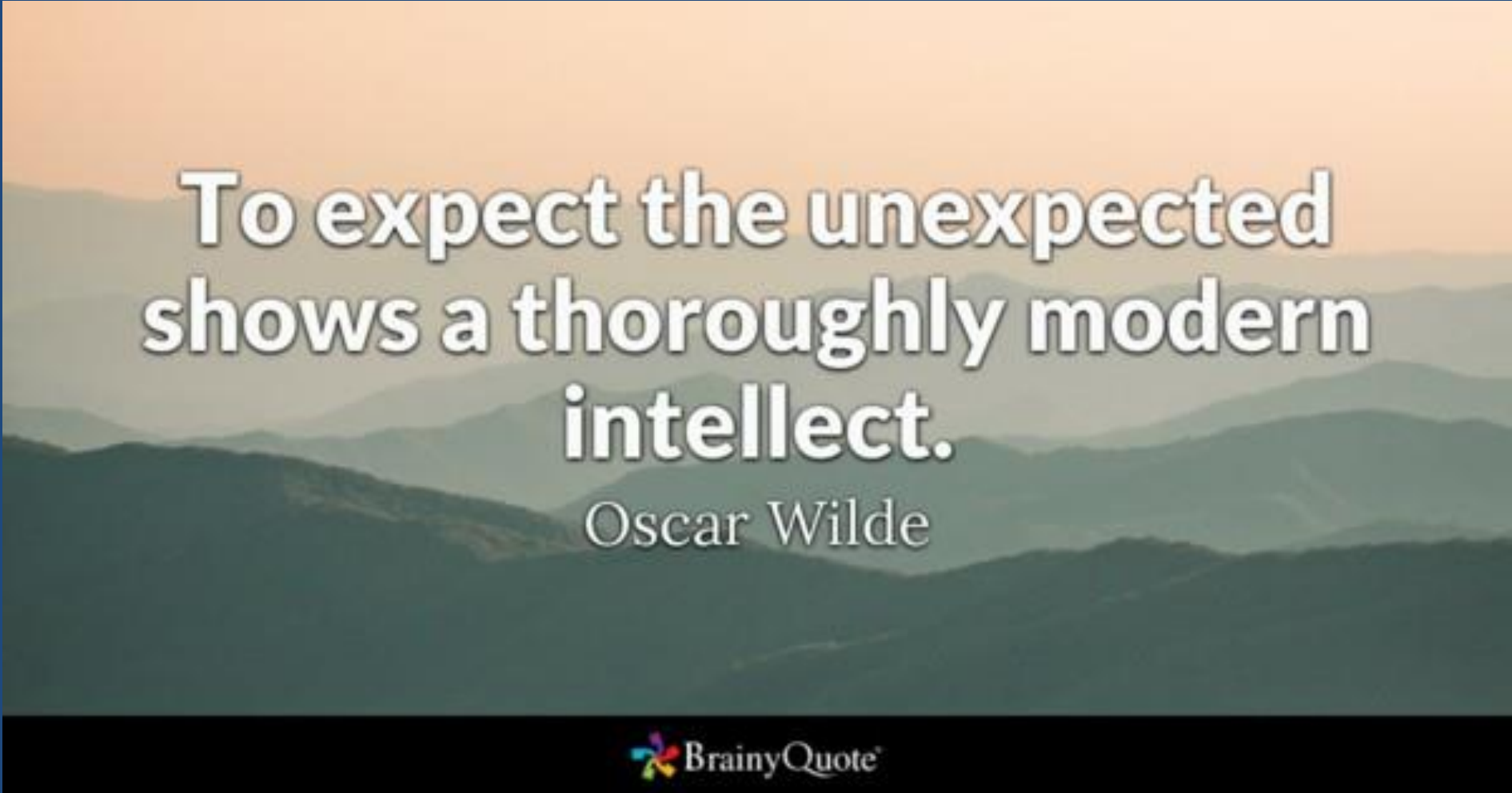




# Spaulding Rehab Hospital Boston, USA

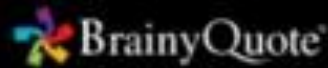
1. Plantings, walls & boulders to dissipate energy of storm surge
2. Ground floor & openings set above 100yr storm level
3. Critical patient programs set above ground floor
4. Windows can be keyed open in event of systems failure
5. Mechanical, electrical and emergency services located within enclosed penthouse out of harms way.



The image features a quote by Oscar Wilde centered over a scenic background of misty, layered mountains under a soft, orange-hued sky, suggesting a sunset or sunrise. The text is in a bold, white, sans-serif font with a subtle drop shadow for readability.

**To expect the unexpected  
shows a thoroughly modern  
intellect.**

Oscar Wilde



Idealistic dreams can become inspiring reality – Helen Polley

- Barr, S., Gilg, A. & Shaw, G. 2011. Citizens, consumers and sustainability: (Re)Framing environmental practice in an age of climate change. *Global Environmental Change*, 21: 1224–1233.
- Chapman, M; Chapman, A. (2011) Greening critical care. *Critical Care*( London, England)15:2:302
- Huffling, K; Schenk, E.(2014) Environmental Sustainability in the Intensive Care Unit Challenges and Solutions. *Crit Care Nurs Q* Vol. 37, No. 3, pp. 235–250
- McGain, F.(2015) Environmental Sustainability in Hospitals; an Exploration within Anaesthetic and Intensive Care settings. The University of Melbourne, Australia.
- McGain, F; Naylor, C. (2014)Environmental sustainability in hospitals – a systematic review and research agenda *Journal of Health Services Research & Policy* 2014, Vol. 19(4) 245–252
- Markle, G. 2014. Accounting for the performance of Environmentally Significant Behaviour: The Symbolic Significance of Recycling. *Symbolic Interaction*, 37(20): 246-263
- Seltenrick, N.(2018) Safe from the Storm: Creating Climate-Resilient Health Care Facilities | *Environmental Health Perspectives* | Vol. 126, No. 10

# Acknowledgements

- EPICC group members
- CMH Critical Care Complex staff members
- Debbie Wilson: Sustainability Officer CMHB
- Peter Murgatroyd: Librarian CMH

