

12 December 2008

Bob Hawes
Builddev Pty Ltd
Suite 1 Level 3, Sparke Helmore, 28 Honeysuckle Drive
NEWCASTLE NSW 2300

Our ref: 22/14235/84050
Your ref:

Dear Bob,

Lot 25 Honeysuckle Drive ESD Summary

The following is a summary of the ESD initiatives that are proposed to be incorporated into the design of the development at Lot 25 Honeysuckle Drive.

Green Building Rating Targets

- ▶ 4.5 Star NABERS Energy; and
- ▶ 5 Star Green Star.

Energy

- ▶ High efficiency Variable Refrigerant Volume air conditioning system with Heat Recovery capability on the refrigeration system;
- ▶ Heat Recovery Ventilation System to recover heat / cool from relief and exhaust air and precool/preheat fresh air entering the building;
- ▶ External shading devices to reduce solar gain and / or glare on each façade, to be optimised through computer modelling and simulation;
- ▶ Solar Hot Water heating system;
- ▶ Consideration of on-site generation for peak load reduction and renewable energy generation;
- ▶ Use of performance glazing on all glazed areas;
- ▶ Use of natural ventilation louvres on all above ground car parking levels as opposed to mechanically forced ventilation;
- ▶ Lighting control system incorporating daylight sensing dimming control on perimeter zones;
- ▶ High efficiency best practice lighting with T5 fluorescent battens and electronic ballasts;
- ▶ After hours zone control for HVAC services and lighting;
- ▶ All intermittent occupancy areas equipped with PIR sensors for HVAC and lighting control; and
- ▶ Sub-metering of energy use.

Water

- ▶ Use of air cooled A/C plant to eliminate cooling tower water consumption;
- ▶ Low flow plumbing fixtures for all shower and tap outlets;
- ▶ Dual flush WC's and ultra-low flush volume urinals;



- ▶ Rainwater harvesting storage and reuse;
- ▶ Fire testing water storage and re-use; and
- ▶ Sub-metering of water use.

Indoor Environmental Quality

- ▶ Provision of dedicated tenant exhaust riser for printing and copying room exhaust systems to be fitted as part of the tenant fitout;
- ▶ Provision of 50% increase in outside air ventilation rates over the AS1668.2 minimum requirement;
- ▶ Specification of low VOC paints, adhesives, carpets and sealants;
- ▶ Specification of low formaldehyde composite wood products;
- ▶ Active humidity control in the space and ductwork for mould prevention;
- ▶ Extensive natural daylight levels in all areas and provision of long distance views to reduce eyestrain; and
- ▶ Provision of solar shading devices on perimeter areas to eliminate glare.

Environmental Initiatives

- ▶ Elimination of cooling towers;
- ▶ Extensive deep soil landscaping to improve the ecological value of the site over the current condition;
- ▶ Control of external lighting to reduce impacts on neighbours and contribution to 'sky glow';
- ▶ Endeavour to provide Shell and Core or Integrated delivery approach to minimise waste during fitout;
- ▶ Use of recycled structural steel where possible;
- ▶ Use of recycled aggregate and industrial waste component (fly-ash) incorporated into cement content;
- ▶ Use of Forest Stewardship Certified sustainable timber sources where possible;
- ▶ Reduction of PVC usage through the use of alternative piping and cabling materials;
- ▶ Provision of cycling spaces and associated lockers and showers for 5% of the building staff;
- ▶ Provision of no more than the minimum car parking spaces required by local planning allowances;
- ▶ Reclamation and remediation of contaminated land on-site;
- ▶ Recycling of construction waste;
- ▶ Use of refrigerants with zero Ozone Depletion Potential; and
- ▶ Use of insulation, which avoids the use of ozone depleting substances in manufacture and composition.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'A Bagnall', is written over a faint, light blue circular stamp.

Andrew Bagnall

ESD Consultant / Mechanical Engineer
02 4979 9956