

TOMORROW'S OFFICES AT THE UNIVERSITY OF CANTERBURY:

Allan Brent and the UC Sustainability Team.

Tomorrow's Offices is a programme providing a framework for offices at the University of Canterbury (UC) to progress towards a sustainable future. This paper contains suggested guidelines and maps the steps to developing environmental and social best-practice in the offices at UC. It is intended for office unit leaders and other interested office community members to be a directive guide for the Tomorrow's Offices programme.

Tomorrow's Offices was to be piloted in the Facilities Management (FM) offices, Human Interface Technology Lab (HIT Lab) and potentially other small office units. Though still on the long term list of priorities, it has been temporarily put to one side. The aim of the project is to develop University of Canterbury offices to a level of environmental and social excellence and best-practice with a view to concurrently maintaining the traditional and necessary performance indicator of economic best-practice. Pending more extensive development, feedback from the pilot period and the potential allotment of additional staffing resources in future, the programme may be extended throughout the offices at UC.

This paper can be regarded as a starting point for the development of the 'Tomorrow's Offices' programme (under any guise) when it is resumed. It is divided into five sections supplemented with appendices:

- a. Ultimate goals for sustainability in UC offices.
- b. The vision for Tomorrow's Offices at UC.
- c. Benchmarking indicators for sustainability in UC offices.
- d. Practical Guides: Towards Tomorrow's Offices.
- e. Completing the map: Achieving Change.

The term 'your office' is used extensively throughout the paper and is used in conjunction with the term 'office community'. Together, these denote the people working in your office unit along with the office's infrastructure. Sections are presented with an '*In your office*' heading which should be used as a directive as to what steps towards programme goals you can take with your community. A facilitator will work closely with your office communityⁱ to aid putting into place the mechanisms with which to achieve these steps. It is envisaged that comprehensive support mechanisms will constitute a significant portion of the operational programme. The range of mechanisms will includeⁱⁱ:

- Practical workshops offered in conjunction with other University initiatives;
- Links to a comprehensive range of guides, case studies and templates;
- Phone and/or email support providing advice and updates;
- Comprehensive feedback mechanisms;
- One-on-one specialist support;
- Advice on environmental risk and responsibility in your office.

A widespread suite of communications, created by the UC Sustainability Team, relating to other sustainability initiatives at UC though often relevant to areas of the Tomorrow's Offices programme, will also be released over 2008.

The combination of ample support networks and communications will provide perhaps the most effective conditions to create change in your office unit. Nonetheless, it is hoped that this resource, in its conceptual role, will provide your office with many of the tools it required to progress towards a future of sustainable practice. We wish you success on your journey towards Tomorrow's Offices.

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See www.sustain.canterbury.ac.nz for links to various aspects of Tomorrow's Offices

ⁱ See Appendix I for facilitator concepts.

ⁱⁱ See Appendix II for support documents.

A: ULTIMATE GOALS FOR SUSTAINABILITY IN UC OFFICES

Sustainability has been identified by the Vice-Chancellor, Prof. Roy Sharp, as one of five broad and ongoing strategic challenges currently facing UC. 'Sustainability' policy is likely to be enshrined in UC statutes by mid-2008 at the latest, and it will be these policies which provide UC office users with a formal structure within which to work towards sustainability. But just what does 'sustainability' mean in UC offices? This paper aims to make sense of the often misunderstood term, and help administrators to transform this into an institutional criterion within a goals framework. However, a first important step towards taking sustainability seriously at UC will be beginning the development of a community understanding of what is meant by the term.

It is not always easy to think of the world outside of our offices. Climate change, Canterbury water and wind farms are things which we all often see in 'in the news' but do not connect directly with our daily lives. However, these kinds of issues have real impacts on today's world and their impact on tomorrow's is likely to be vast unless we change the ways we conduct our business now. Even if one may not easily make the connection between these issues and 'the world', with *** our home in the Canterbury region. Sustainability in UC offices means awareness and consideration of such environmental and social issues through simple means, 8am to 5pm daily. It means considering the effects and consequences of the operations, actions and decisions taken in your office each and every day. Many formal definitions of sustainability exist, but for a conceptual and UC variation, it might be abstracted to the following four ideal conditions:

- i. Reducing, with an ultimate aim of eliminating, reliance on non-renewable resources, particularly energy sources including fossil fuels, in all areas of University operations.
- ii. Reducing the impact of the University's material demands by increasing the efficiency with which materials are used, and reducing, with the ultimate aim of eliminating, the pure wastage of used materials.
- iii. Minimisation of the University's physical impacts to ecosystems on all scales.
- iv. Fostering strong and united communities both on campus and amongst those whom the University supports.

The above is strictly one of many, often equally valid, interpretations of sustainability. In spite of this lack of clarity in the formal definition, it can be easier to recognise the common ground that our current societal practices are some distance from being sustainable. This inversion of the concept to what is not sustainable could prove a useful and practical tool in considering the concept of sustainability.

In your Office:

The challenge of participation in Tomorrow's Offices is to transform the concept of 'sustainability' into part of the daily business of running your office: continually undertaking the actions, large and small, towards sustainability. The steps below provide the map for making this transformation.

B: THE VISION FOR TOMORROW'S OFFICES AT UC

Although sustainability is effectively an ongoing process, it is necessary to have targets towards which to work. Forming such an 'endpoint' makes the shift from the sustainability paradigm into an institutionally compatible goal. Setting this ideal, or vision, is a vital first step in the direction of sustainability in your office setting. With a vision affirmed, specific steps can be taken in its achievement. The ideas below, formed by the author, provide a mere indication as to the appropriate level to pitch the visions for your office of tomorrow. They are carefully balanced between being specific to one's own office and more general terms, they retain flexibility, though are necessarily idealistic.

In Your Office:

In making statements like those below, your office community will be able to develop a unique vision for its own office of tomorrow. Consideration must be made of all of the following areas, though your office community may have additional areas it wishes to include. Through initially using informal discussion tools including group brainstorming and focus groups, and then moving to more formal

communicative means, statements will be easily transferable into a more prescriptive statement of vision.

With internal review and circulation, support will be built and all the necessary knowledge and views will be harnessed to bring your vision into line with other strategic plans and to a representative, highly supportable state. When your office community has sufficiently considered its statement of vision, this should be publicly and definitively pronounced. As any other strategic goal, your statement will need to be reviewed on occasion. Some thoughts include:

Energy & Heating

“Our office should utilise a carbon neutral source of electricity, and a renewable source of heat energy. Our guidelines will promote the energy efficient use of lighting, computer hardware and the appropriate use of heating.”

Material Consumption & Waste Disposal

“Our office should have appropriate systems in place to foster the maximum diversion of waste to the recycling and composting systems provided. ‘Systems’ includes both ‘infrastructure’ (see below) and support/educative mechanisms for our office community. Systems should retain flexibility such that our changing needs over time, etc. can be catered to”

“Our guidelines should encourage the efficient use of office consumables on a day to day basis, with particular regard to paper. Systems should address motivations for inefficient use as barriers to a sustainable office, providing incentives and disincentives where appropriate.”

Water

“Guidelines should encourage our community to make the most efficient possible use of water in the office setting. This system will necessarily be supported by appropriate ‘infrastructure’ (see below).”

Food

“The food consumed in our office, as elsewhere, remains an individual choice. However, it will be beneficial to consider promoting healthy dietary choices amongst our office community. Any common procurement of food in offices should be included in best-practice purchasing guidelines including environmental and health considerations. Disposal of food waste ought to be in line with our disposal vision.”

Transport

“Office guidelines should promote the maximum use of walking and cycling amongst our community as our ideal transportation option. Public transport and ridesharing should be promoted where these are not feasible for our office community. Travel by car, especially individually, should be minimised.”

Infrastructure & Lands

“In the long term, our office should include design features which support our visions under the ambit of:

- Energy and heating
- Material Consumption & Waste Disposal
- Water
- Social & Community.”

“Our visions for buildings should account for the interactions of the buildings with nearby areas. We ought to strive for a healthy and clean environment indoors and outdoors. We can refine and improve our visions when infrastructure improvements come.”

Decision Making

“Ultimately, our office community should give due consideration to sustainability in their decision making process and engage fully with one another to achieve best-practice in all areas of their work. Sustainability starts with decisions.”

Social & Community

“As a result of our highly enhanced working environment, we hope our office community is engaged through strong and healthy social relations. This will result in high productivity and a happy, healthy community. This strength will feed back to allow achievement of our other visions more easily. Our office’s best-practices should additionally work to enhance the lives of those indirectly connected with our office and UC.

"In addition to the above, our office and community will engage in continual improvements they can make in pursuit of the goals of sustainability, and on reaching such levels, will strive to continue practice at those high standards, and search for ways to improve beyond performance targets."

In creating a statement of vision, your office is setting an important 'endpoint' for its sustainability journey, and will be in a position to measure its progression towards its set of ideals.

C: BENCHMARKING INDICATORS FOR SUSTAINABILITY IN UC OFFICES

In business as in wider society, we measure what we value. Given the values set above, it is logical that your office seeks to measure its performance with respect to the values implied in its statement of vision. Measuring against these values has importance as a directional indicator: 'Are we moving towards or away from sustainability and Tomorrow's Office?' Benchmarking of performance indicators provides the means of measurement, and will allow your office to know where it is in the present, track where it has been, and anticipate where it is going with respect to its indicators. This emphasises the need to set effective indicators before monitoring even begins. While many forms of benchmarking exist, one of the most effective ways is to measure performance parameters against the best-practice of a comparable institution. At UC this will entail each office unit comparing their progress towards their differing visions with themselves and one-anotherⁱⁱⁱ.

In Your Office:

In pursuing sustainability and Tomorrow's Offices, your office community will need to be aware of, to understand and to freely communicate your office's performance against environmental, social and economic indicators. Comprehensive development of indicators in these three areas will be essential. Indicators should address each area in your statement of vision, and should be representative of both the state and change within these areas. Much of the institutionally applicable monitoring like energy consumption will be handled centrally, but it is highly likely that some in-house monitoring will be necessary. When your office community takes an active role in understanding and responding to the information provided by these indicators, you are highly likely to advance in a sustainable direction. Appropriate indicators include:

Energy & Heating

- Total and per. capita electricity use per m² in your office.
- Total and per. capita heating fuel consumption per m² in your office.

Material Consumption & Waste Disposal

- Procurement trends for key office consumables.
- The proportion of waste (by weight) diverted from rubbish for recycling.
- The proportion of waste (by weight) diverted from rubbish for composting.
- The proportion of waste diverted through other environmentally friendly schemes.

Water

- Total and per. capita use of water in your office building.
- Total and per. capita water wastage and recycling rates of water in your office.

Food

- How often and how much your office purchases local, organic and fair-trade food products.
- How well your office adheres to Material Consumption & Waste Disposal indicators above.

Transport

- The proportion of employees driving their car to work alone each day.
- The number of business air travel flights undertaken by your office community this year.

Decision Making

- The level of core consideration for sustainability in decision making in your office.
- The level of core consideration for, and inclusion of sustainability in purchasing decisions and contract tender process in your office unit.
- The transparency of these decision making processes.

ⁱⁱⁱ See Appendix III for indicator framework concept.

Much of this data will be provided by Facilities Management or the relevant authority on campus, but some will require in-house monitoring.

Next, further interaction will be necessary to identify what practicalities are necessary to deliver your goals towards Tomorrow's Office...

D: PRACTICAL GUIDES: TOWARDS TOMORROW'S OFFICES AT UC

Actual achievement of the visions laid out above is long term and will effectively be ongoing. It should be realised that while large progressions towards sustainability will require capital expenditure from the University, there is an abundance of choice and action which can be made towards your office's vision on a daily basis. These represent perhaps the most effective contribution your office community can make towards sustainability, and are the major route to your ideals for Tomorrow's Offices.

In Your Office:

Your office will again need to bring together its entire community to develop guidelines for action. These guidelines will need to be at a level specific to your office, but generally must not fall below a common level of performance^{iv}. The guidelines should again address the same areas as those included in your statement of vision. Depending on how you present these tips in your office, it may be useful to include a short preamble for each area, and also highlight the considerations associated with each tip. Though the headings from the statement of vision are used below, it may be useful to depart from these, concentrating instead on actual issues such as energy, water, paper, recycling, etc. Ideas include:

Energy & Heating

Energy and Heating is the major drain on resources at the University of Canterbury. Its costs, however, are highly controllable, and it is an area where actions can have a very large cumulative effect. A large number of actions can be taken, though it may be helpful to begin with just a few.

In offices and other workspaces, individuals should:

- Switch off computer monitor when they don't need to be read and also overnight. This saves around 40% of the energy used for traditional monitors.
- Switch off computers overnight unless advised not to by ICTS. Updates are infrequently installed and there is usually no need to leave your computer switched on.
- Turn off printers and photocopiers if they are the last to leave at night, unless advised not to by ICTS.
- Switch off lights in areas which are not being used.
- Switch off one's own lights if away for over ten minutes and also overnight.
- Make all use of natural ventilation for cooling in the summer; don't use the air conditioning with any windows open as this makes the unit work significantly harder and less efficiently.
- Avoid use of portable heaters or fans in offices. These are significantly less efficient than centralised systems.

In support of the individual initiatives taken, the University will offer support by:

- Enabling available energy saving settings on computers. These will reduce the energy consumption to a minimum. One should ask about the settings on their machine.
- Installing low cost 'energy-saver' light bulbs. These use a fraction of the energy of a standard incandescent bulb and can last up to ten times as long.
- Making maximum use of natural light by keeping windows clean. Ensure you make enquiries if this has not been done for a while.
- Setting heating thermostats at 19°C and air conditioning at 23 - 24°C. If you have any control over this, ask your team not to adjust the settings.
- Stopping draughts to ensure maximised heating efficiency in the winter.
- Checking heating and air conditioning equipment is working as efficiently as possible, e.g. due to obstruction by furniture.
- Regularly cleaning lights and light fittings, this can make a large difference to the lighting levels in your office.

^{iv} See Appendix IV for 'common performance level' concept.

Material Consumption & Waste Disposal

The University of Canterbury's offices use a massive array of materials. While it may appear that the use of many of these is effectively environmentally benign, there may be costs at other points in the material life cycle. Community should challenge one another to consider the wider implications of their materials use, and actively seek to reduce it. This applies to both ends of the 'cycle'; what an office purchases, how it uses materials and what and how it disposes of these.

Generally, individuals should:

- Make correct use of the recycling system provided to offices and the University at large, and actively participate in maximising the diversion of waste through this system.
- Make efficient use of materials within the useful in-office lifetime. For example, use and re-use such basic items as paperclips instead of staples where possible. Incremental savings across your office will create large cumulative savings over time.
- Thought should be made as to the life-cycle effect of such small actions. Using the paperclip example again, the lack of staples will assist in recycling paper once it has been discarded.

With regard to paper, individuals should:

- Print and photocopy documents only when strictly necessary.
- Design your documents, handouts and memos so that they minimise paper use.
- Use double-sided printing and photocopying wherever possible. This could reduce your paper consumption by at least one third.
- Collect single-sided paper and re-use it for notes and drafts, store single-sided paper in a box or A4 folder on your desk and near printers.
- Re-use all paper before recycling as practical.

In the tearoom, individuals should:

- Use the microwave rather than the stovetop or oven where possible.
- Defrost food naturally instead of using the microwave.
- Avoid warming up cooking equipment too early. Label equipment with recommended or required warm-up times to minimise the amount of time it's left running idle.
- Let food cool before putting it in the fridge or freezer.
- Keep food covered to reduce moisture build-up on the inside of the fridge. Make sure containers and bottles are moisture free before placing them in the fridge.

In support of the individual initiatives taken, the University will offer support by:

- Quality up-keeping of the extended recycling system and its improvement over time.
- Developing purchasing policies with more stringent environmental components.
- Gradually replacing all printers with 'duplex' capable models.
- Modifying default computer settings as a means to reduce paper and other physical wastages.
- Making sure your office's oven, fridge and freezer seals are kept clean, are properly fitted and are replaced when they're not working properly.
- Ensure there's adequate ventilation at the top and back of refrigeration equipment using manufacturer's specifications on minimum clearance.
- Setting refrigerator temperatures between 2 - 5°C, and freezers to -18°C. If this is readily controllable, do this yourself and ask your team not to change the settings.
- Defrosting the fridge/freezer at least twice a year to keep it running efficiently.
- Avoiding positioning your fridge or freezer next to ovens or in direct sunlight. This will make the unit run much harder over time.
- Gradual replacement of fridges, freezers and dishwashers with energy-efficient models.
- Continuing to use carbon neutral energy supplier Meridian Energy.

Water

Water is a resource at a turning point in the Canterbury region. With a steadily growing population and economy, but fixed availability, it is becoming ever more precious. The University of Canterbury is in a unique position to take a regional and national lead on water saving initiatives. While water saving is most effectively tackled through water conservation technology in infrastructure, staff in University offices should nonetheless be well informed on the nature of the issues facing Canterbury, such that they take their awareness into their own homes, families and communities. This is a case where sustainability attitudes and actions in Tomorrow's Offices are most valuable in outreach beyond the workplace.

Individuals should:

- Wait until the dishwasher is full before turning it on.
- Always use the economy cycle on your dishwasher. If your dishwasher is able to heat its own water, use this function – it's more economical than drawing water from the hot water cylinder.
- Don't use a full flush when a 'half' flush will suffice.
- Report dripping taps and running toilets or urinals that are not operating 'on demand.'
- If your office includes labs, think about water use when you plan your experiments and use electric vacuum pumps.

The University will support these initiatives by:

- Adjusting thermostats so that hot water temperature at the tap is no more than 55°C, saving both energy and money.
- Maintaining water fixtures at a high standard, and responding to reports of dripping, etc.
- Incorporating water-efficiency in new and retrofit building specifications.
- Optimising water usage for irrigation of the grounds

Food

Despite the reduction of the possibility to make poor dietary choices in Tomorrow's Offices, the choice of food one eats remains an individual one. Discussions amongst your office community on the benefits of 'healthy eating', an area of increasing public visibility, are not necessarily an effective tool in promoting healthy and sustainable diet options. Options like organic, local and fair-trade should be placed in the consciousness and advocated in your offices, particularly by community members already using them. Leadership in this area will come in the form of promotional and stocking initiatives in UCSA cafes on campus.

Transport:

Alongside all commercial operators in modern society, the University of Canterbury has a strong dependence on motorised transportation. This is one constituent of modern society's reliance on fossil fuels. In the University's scope, this includes daily transport within Christchurch and vicinity to and from campus; transport of goods to campus; travel to field stations around the South Island; community air travel and others. Transport is difficult to tackle without high levels of institutional support. The points below should be discussed in your office, but will be the subject of a comprehensive communications scheme underpinned by a University strategic plan. Issues to discuss include:

- Promoting walking and cycling whenever possible.
- Promoting the use of UC Rideshare in your office.
- Promoting the maximum use of Christchurch's extensive MetroBus system.
- Promoting the maximum appropriate use of communication technologies such as video-telephones and the Access Grid to avoid costly and carbon intensive air travel in conducting business. This is a current ICTS project.
- Making consideration of transportation in purchasing and disposal decision making, and checking whether your needs can be sourced locally.

Decision Making

Decision making is a key area where UC community members can make continual advances towards sustainability. While basic decisions permeate to the heart of the sustainability issue, direct strategic decisions can also be made in your office which will take you towards Tomorrow's Office. Decisions in procurement are a key area which your office can progress towards sustainable practice. This can be achieved through establishment of preference guidelines and the potential insertion of sustainability considerations in tenders and contracts. Using the example of paper, your office should:

- Prefer products with an Environmental Choice NZ license (EC-26-07 Office Paper and Stationery) or other third-party audited life cycle ecolabel, or others showing that they meet similar criteria.
- Prefer paper products with post-consumer recycled content - minimum 30%, best 100%
- For paper products with virgin fibres, prefer those made from fibre sourced from third-party certified legal and sustainable forestry.
- Prefer paper products which have been bleached with reduced use of chlorine - minimum ECF (elemental chlorine free), best TCF (totally chlorine free) or PCF (process chlorine free).

Making decisions such as these has far reaching effects. In this case, paper waste is diverted from landfills, a viable market for paper recycling is supported, forestry related impacts on soils and ecosystems are reduced and impacts from pulping trees including energy, water, and chemical usage are reduced. However, these decisions must be informed, and the provision of advice on environmental risk and responsibility will be made to support your progression towards Tomorrow's Office.

E. Completing the map: Achieving Change

It is common ground that the sustainability paradigm is one without exclusive solution. No one route, no single formula and no one set of actions will create a pathway to sustainability either in the offices of the University of Canterbury or elsewhere; sustainability might therefore be phrased a 'divergent problem'. However, what is clear on scales both larger and smaller than the offices of UC, is that the most solid foundation for achieving sustainability lies in the strength of the community seeking it. Achievement of sustainability in Tomorrow's Offices at UC can only be realised when the University of Canterbury community is strong about and committed to adopting these changes. This strength of community must be fostered in your office in every way possible.

Implementing guidelines pursuant to your vision of Tomorrow's Office is only one step on the journey that is sustainability at UC. While it is vital for your office to affirm its goals and visions, this step will prove entirely superficial unless the community 'buys in' to the achievement of these goals. This requires knowledge and understanding. The Tomorrow's Offices programme aims to aid your office community in gaining this. However, it is hoped that the programme will also act as a catalyst for administrators and wider office communities to develop their environmental and social awareness and literacy, which will be both personally and institutionally beneficial.

This paper has stressed throughout that implementation of the Tomorrow's Offices programme requires the participation of both individuals and office communities. This dualism is highly likely to create a strong sense of 'ownership' towards these visions, and thereby offers a means to achieve maximum community 'buy in' to the programme. This engagement will be most effectively developed if your whole office community is vigorously encouraged to participate at all levels and all stages in the programme. It is this 'buy in' which will undoubtedly prove the single biggest contributor to the success of your Tomorrow's Office programme.

Appendices

I: Facilitators

Facilitators will be a vital component in the success of 'Tomorrow's Offices'. They provide the vehicle to deliver many, if not all of the 'mechanisms' listed in the introductory section: they are the initial focal point of motivation in the programme, the initial store of knowledge, the giver of feedback and thereby an implicit arbiter of success. Facilitators are clearly all-important in the initial stages and require a very specific skill set. Knowledge is required from practical to theoretical levels; social skills and 'bedside manner' are vital to achieving 'buy in' from office communities; and ability to apply a variable mixture of idealism, realism and pragmatism is required to achieve any results for the programme.

This high level will require facilitator training and thereby represents an investment on the part of the University. The programme will realistically require additional staffing resources. If 'Tomorrow's Offices' is to progress beyond a simple pilot, the questions of priority must therefore be asked at the highest institutional levels. At the time of writing, sustainability as an institutional reality is in its embryonic stages. Given that it has been identified as one of five key strategic goals, and that offices currently contribute hugely to the lack of institutional sustainability, an administration presented with a well developed concept for 'Tomorrow's Offices' or similar is presented with a very attractive proposal. It has very high potential to achieve specific sustainability goals; works to create the community attitudes vital to achievement of the strategic goal; and requires only a fraction of the expenditure of infrastructure improvements.

II: Support Documents

As discussed above, one of the functions of the facilitators is to disseminate the supporting documents necessary for the operation of the 'Tomorrow's Offices' programme. These form the non-personal aspect of the resources which need to be available to office communities. As outlined in the introductory section, these documents should include 'a comprehensive range of guides, case studies and templates' and... email support providing advice and updates'. The process of compiling these will need to be complete before commencing the programme.

III: Indicator Framework

The adherence to goals, validated by monitoring, or benchmarking, is vital to the continuing success of any progressive initiative, and 'Tomorrow's Offices' or similar will present no exception. It is therefore critical that a workable set of indicators is implemented. Section C: 'Benchmarking Key Indicators for Sustainability in UC Offices' states that much of the monitoring 'will be provided by Facilities Management or the relevant authority on campus'. Much of this monitoring currently takes place in some form, but a re-assessment of the parameters monitored and more palatable vehicle for presenting this information will need to be undertaken at a level higher than the office units catered to in 'Tomorrow's Offices'. Section C also states that some indicators 'will require in-house monitoring'. This is necessary to smooth the differences of each office in real terms. It brings flexibility in allowing each office unit to measure the parameters most relevant to them. However, this poses difficulties in that this is likely to be highly variable throughout the various office units, large and small, on campus. Therefore, in addition to re-assessing the centrally-monitored parameters, the 'relevant authorities' must undergo a shared trial period with each unit to complete the set of indicators. The complete set should trade off the flexibility discussed with a need to allow valid comparisons between offices for all the indicators.

IV: Common Levels of Performance

Section D: 'Practical Guides: Towards Tomorrow's Offices at UC' states that office guidelines 'will need to be at a level specific to your office, but generally must not fall below a common level of performance.' Exactly what this common level will be again poses the question of flexibility. Individual guidelines are highly unlikely to prove universally appropriate, and therefore the trial period for indicators can doubly serve as a test-bed for practice guidelines. It is suggested that these guidelines are formulated from the highest position possible within the University, colouring the University of Canterbury vision for sustainability with a set of concrete measures. For buy in to adhere to these levels of practice, a number of specific institutional support mechanisms (e.g. checking fridge seals regularly) will need to be implemented. These are also listed in section D under headings communicating the University's commitment to support.

