



Preparing for Sustainable Growth – An SME Metamorphosis

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Abstract

This paper describes an action-orientated research project that aims to improve the environmental practices of a small, but growing, Australian furniture manufacturer. It is imperative that these actions will become increasingly important as the company plans to increase its operations throughout Australia and overseas. In response, an action-orientated research methodology is proposed in-order to create an organisational learning framework; intended to position the company as a good corporate citizen. The article reveals how the first phase of the project has strengthened the company's existing environmental policy, the implications of which have led to the development of an early stage of environmental awareness, assessment of environmental aspects and analysis of current 'design for the environment' practices. Phase two of the project is shown to be currently underway and seeks to integrate business and environmental policy. A more integrative policy is explained in the paper to permit an operating framework that is realistic of the demands of an SME organisation but forward-thinking too, in its application as the organisation evolves into a larger corporate entity. The findings of the research to-date are presented, and are supportive of a learning process that aids the development of environmental strategies in expanding SMEs.

Key Words:

Environmental Management, Organisational Learning, Action Research



1 Introduction

The multitude and scale of relatively large organisations, numbering more than 250 persons or more, may ensure that their activities may be highly visible to society. Environmental and social misdemeanours associated with such conglomerates have therefore attracted society's attention stimulating movement towards improving environmental performance and longer-term sustainable development targets. These practices have included the development of comprehensive corporate social responsibility (CSR) and environmental policies that have driven change throughout these organisations.

In comparison, though SMEs account for more than 90% of all private sector firms in most industrialised nations (Schaper, 2002; SBS, 2004; Kerr, 2006) reportedly their accumulated, individual, contribution account for some 70 % of global pollution (Hillary, 2000). Paradoxically, as Masurel (in press) suggests 'with less environmental visibility, small absolute environmental impact, lack of consumer demand for environmental improvement and lack of organisational networks supporting environmental activities', SMEs generally report difficulties in managing an impact, that to many is considered as minimal (Hillary, 1995; Smith, 1998; Atkinson 2000; Zwetsloot 2000; Biondi 2000; Biondi, *et al.*, 2002; Petts 2000; Madsen and Ulhøi 2001). Many, as Friedman and Miles (2001) describe are simply 'un-sensitized to it'.

Developments towards better environmental behaviour in this sector is required if sustainable outcomes for society are to be achieved. This paper addresses these concerns through an action-research project exploring the development of sustainable business practices in a small furniture company in Australia.

The company typifies the organisational form of a small company, with a loose company structure influentially shaping the way the General Manager has been able to champion his environmental agenda. This has included inviting the researcher into the realms of the reality of the firm (Laahtenmaaki *et al*, 2001), with the intention of bringing environmental change to the company. An action-research approach used previously, by Castka *et al*, (2004) to integrate CSR with SME business planning has shown how 'SMEs want a single, local point of contact through which they can network with other organisations, learn about current and best practice, the business case, the issues considered to be important and how to get started.' Furthermore, Freidman and Miles (2001) suggest that engaging such companies is most rewarding by targeting more proactive SMEs with experience of driving



forward environmental initiatives. This is evidenced too, through the work of Factor (2004) who reports that the more proactive members of an SME pool were those with managers who had previously worked within larger companies where significant stakeholder pressures urged for environmental change. With orders increasing in the participatory organisation, possible growth may challenge current organisational structure and culture to adapt to the demands of a more complex stakeholder community. Furthermore, increasing concerns over environmental issues may also influence the organisation to respond accordingly. Stakeholder influences and organisational responsiveness are therefore inextricably linked, and invariably have consequences for developing the environmental profile of an organisation.

As Curran (2001) explains though, the specialised needs for researching SME organisations in particular suggests that a devotion by the academic community to larger firms sidelines small business research. The reasoning for this behaviour is suggested to reside in the difficulty of defining and recording SME structure, organisationally different from their larger counterparts. This has significance for developing environmental change within SMEs as much of the organisational learning literature describes how culture and structure entwine to bring change to an organisation (Bate *et al*, 2000). Structure is therefore a critical component for shaping organisational learning with implications for the growth and greening of SMEs. As Atkinson *et al*. (2000) purports that structural design influences the manner in which environmental strategy is implemented. Company characteristics are therefore determinants of environmental performance.

Whereas larger companies, therefore, tend to create more formal and hierarchical organisational forms, the lack of formal arrangements within smaller organisations permits the owner/manager to minimise delegation and to exert greater influence over the strategic behaviour of the company (Rodwell and Shadur, 1997; Atkins and Lowe, 1997; Moran, 1998; Oakey and Mukhtar, 1999). This context contrasts sharply with the formalized procedures of larger organisations (Brytting, 1991; Jennings and Beaver, 1997; Chapman, 1999). This loose organic arrangement permits the small company to be free of the structural shackles and long chains of command and dissemination of information that characterises larger organisations (Pratten, 1991; Klass, 2002).

Many small companies are, however, unable to profit from the advantage that this 'loose' or 'organic' business framework may offer (Jennings and Beaver, 1997; Rodwell and Shadur, 1997; Gadenne, 1998; Oakey and Mukhtar, 1999). Instead, these organisations generally lack the resources of larger companies (Vickers and Cordey-Hayes, 1999; Atkinson



et al., 2000; Zwetsloot, 2000) and are constrained by the owner/manager's "irrational" self-perception of the complexity of the business and may therefore not be representative of the 'reality' of contemporary management theory (Brytting, 1991; Jennings and Beaver, 1997). For example, barriers tend to be built on perceptions rather than reality, creating a fear that associates CSR with bureaucratic administration (Castka *et al.*, 2004). As Gagnon *et al.* (2000) describes SME managers as entrepreneurial decision-makers are very different creatures than the administrators of larger organisations, who 'construct organizational environments in which the intendedly rational behaviour of the participants is enabled more closely to meet their basic psychic and emotional behaviour' (Ericson, 1962). Making sense of growing complexity on the area of sense-making favoured by psychologists such as Weick (1995) and enters into a perspective outside the scope of this paper. Nevertheless, Brytting's (1991) PhD thesis *Organising in the small growing firm – a grounded theory approach* provides a useful insight into the behavioural characteristics of the owner/manager. Complex personal and environmental factors, therefore, may determine the effects of these 'wants' and 'desires' on the company's success or failure (Keasey and Watson, 1993; Jennings and Beaver, 1997).

Whereas Bansel (2003) discusses the implication of environmental issue decision-making and actions in light of organisational behaviour in larger companies, the findings serve as a useful contrast to conditions within SMEs; where the decision-making process affecting which environmental issues crop-up on the business agenda, if at all, are more closely tied to the more organic structural arrangements associated with SMEs. Bansel (2003) describes how the issue selection and implementation are closely tied to individuals within the company, the culture of the company and inherent values and concerns of both individuals and the organisation. When managers own concerns therefore align appropriately with those of the organisation, environmental issues are deemed worthy of managerial attention and more likely to be implemented within an organisation.

Bansel (2003) describes that it is top management that chooses the issues to go on the agenda and this is important for the development of environmental policy with consequences for the allocation of resources to drive change. Where change has occurred within SMEs it is not surprising therefore that the change agent is often driven by individuals within the organisation where control over resources and values closely align (Vickers and Cordey-Hayes, 1999).

With resources limited, SMEs demonstrate 'slim-line' organisational structures that interact with key stakeholders (Biondi *et al.*, 1992). SMEs subsequently, demonstrate that



they are able to enhance their reputation through close links with local communities and authorities, and obtain skills and knowledge through the use of external partners, such as external consultants and multi-national organisations (De Bruijn and Hoffman, 2000; Biondi *et al.*, 2002). Their priority, therefore are a small set of stakeholders who generally do not bring the environmental issues to the SME agenda. With legislation reportedly as the basic driving force behind the majority of organisations it is hardly surprising that weak or non-existent SME environmental regulations foster a sense of minimal responsibility to the environment (Beaumont, 1991; Saha and Darnton, 2005; Dummett, 2006).

Most SMEs, however, are concerned about environmental and social issues (Factor, 2004; Masuel, in press) but in accordance with the Tragedy of the Common's perspective described by Hardin (1968) will continue to treat the natural environment as a common domain until regulatory policy creates 'a level playing field' (Revell and Blackburn, in-press) A gap between personal concern for the environment and regulatory requirements within SMEs is thus described Petts *et al.* (1999) and Tilley (1999). In response, the UK government are preparing mandatory reporting practices for SMEs (Castka, *et al* 2004).

Although larger companies are currently more pressurised to report on environmental affairs than SMEs (Baylis *et al.*, 1998) the use of a report may provide an opportunity for SMEs to communicate their environmental performance to external stakeholders (Zwetsloot, 2000). Though Friedman and Miles (2001) report of a case study whereby an SME implemented an environmental policy, few feel the need for formal environmental policy (Castka *et al*, 2004). Most SMEs, are instead at best sceptical about publishing environmental statements or are totally unaware of environmental reporting practices. As a result, few SMEs publish any environmental information, let alone reports. In short, rarely do SMEs anticipate benefits of raising their green profile (Palmer and Van der Vorst, 1997; Biondi *et al.*, 2002).

This may be as a result of a lack of formal business planning, whereby small business owners/managers have been found to take less sophisticated approaches to formal planning than their counterparts in larger firms (Mazzarol, 2000). Furthermore, lacking a regulatory environment, supply-chain and customer pressure their remains minimal incentives for SMEs to develop policies to address these issues. As Schubert and Sedlacek (2005) suggest that 'improper incentives are the root of both market and government failure ... hence cannot be left to individual actions according to the *laissez-faire* principle and the spontaneous creation of relevant markets.' Nevertheless, 'eco-preneurs' (Masurel, in-press), and 'pioneers' (Schubert and Sedlacek, 2006) are instrumental in developing environmental behaviour



within the SME sector. The phenomena of these green champions is investigated in this paper and explores how an individual can initiate a sustainable SME metamorphosis.

2 Methodology

The General Manager of the company contacted the University with a particular issue concerning waste management, the action of contact a pre-requisite for action research (Schein 1988). This contact allowed for regular dialogue between the researcher and the Managing Director, and secured the collaboration required as a precursor to instigating the steps of an organisational learning research project. The early stages of the project, therefore involved getting to know the company and the issues.

From March to July 2006, the environmental policy was reviewed and revised (through collaboration with the General Manager of the company), company literature was used to understand product issues, financial data - pertaining to waste management affairs and physical artefacts - such as products and wastes were collected, marketing and design material, financial accounts and the companies Web-site were reviewed as part of the data collecting exercise. Importantly too, several site visits permitted for a walk-through of the production and related process and functions. Notes were taken at each stage of the manufacturing process which included learning of the inputs and outputs associated with machinery and assessments of possible environmental impacts. The data collected from this activity allowed for an environmental assessment to be developed and brought an understanding of the materials used in the process. The walk-through also brought observations pertaining to human resources and organisational issues. Furthermore, this activity was extended to include the company's warehouses, offices and surrounds. In addition, with permission of the company, photographs were taken at all of these stages.

The design of the model is also strengthened through combining face-to-face semi-structured interviews and observational techniques. This involved regular dialogue, several times a month for six months to understand what the company has achieves so far and reflects the dialectic nature of action research (Coughlan and Coughlan, 2002).

An initial one hour semi-structured interview was conducted with the General Manager. The aim of this interview was to be able to make initial reflections on organisational behaviour within the company and attitudes and learning towards sustainability; and to understand how the initial environmental policy and current environmental initiatives had developed. A more informal 15 minute interview was conducted with the production



manager. This was intended to provide further data on manufacturing processes and environmental impacts.

The design of the model is based on the organisational learning principles that change occurs through cycles of reflection, acceptance and then further action. The model is dynamic and alive and thus designed to bring feedback from the above taken procedures which will continue the sustainability learning programme.

3 Results

3.1 Background of Case-Study Company

Freiberg has been operating since 1946. The company manufactures, and markets, a range of furniture products to suit applications such as call centres, demountable full-height partitioning, office furniture, screen systems and workstations. Freiberg Australia with its head office located in Perth, Western Australia, services commercial, Federal, State and local Government sectors, Clients include BHP Billiton, Alcoa, Worley, GHD Group, Edith Cowan University, TAFE, Department of Defence, Department of Housing & Works, Australian Customs, Department of Fisheries and the West Australian Police Department. The company has grown from 25 to 30 employees in response to an improved order intake exceeding 35%. Meanwhile the company has responded with sufficient capacity to cope with this demand.

3.2 Driver of Original Environmental Policy

The environmental policy was developed by the General Manager, Bob Beaver as a concern for the safety of customers, and in response to the consideration that market opportunities are growing. In addition, there is increasing concern environmental and social issues – both by society and within the business community.

The first policy statement was issued in 2003. The Opening Statement read: *Freiberg Australia believes that every employee has a responsibility to be a good steward of our environment and any resource consumed in the manufacture delivery and installation of its products and service.*

This opening statement has laid down the foundation for the development of environmental awareness amongst staff members, an environmental assessment and an analysis of 'design for the environment' practices, and future opportunities. The drivers behind the 2003 Policy Statement are shown in Figure 1.



Environmental Policy Statement 2003

1. Use environmentally safe, friendly products and/or resources wherever possible in all manufacturing techniques, products and installations.
2. Use products that are environmentally sustainable.
3. Design functional multi use products, which have a long sustainable future.
4. Design to minimize energy and materials wastage.
5. Design products that can be easily recycled or remanufactured.
6. Source local products wherever possible so as to improve transport efficiency .
7. Utilize recycled or recyclable materials in preference to new materials.
8. Manage waste effectively so that it is sold, reused or recycled.
9. Utilize materials that can be recycled wherever possible.
10. Give priority to, and purchase from manufacturers with similar views on conservation and environmental impact.
11. Report and feedback to management the success or money saved through implementing the above policy.

Figure 1: Drivers for the 2003 Environmental Policy Statement.

The General Manager became aware that MDF (Medium Density Fibreboard) used extensively as a structural material in the composition of office furniture, screens and workstations, posed both environmental and H&S risks. This was initially prompted by actions of the local building unions requiring that data sheets of poisonous or dangerous substances to be available within site safety manuals, used by the company on controlled building sites. Union's have been the main instigators in the implementation of H&S data sheets for the workers - on construction sites, especially as poor handling of construction material like MDF or plaster boards, may result in dust particles. MDF in particular is bonded with a formaldehyde-based glue that contains urea, methanol and UF glue and the dust particles pose a significant health risk. Concerned employees and contractors brought this to the attention of the industry.



MDF is manufactured throughout Australia and NZ and generally is accredited to ISO 14001 which complies with the UK Environmental Protection Act 1990, and demands proof of sustainable forestry from its suppliers. The manufacture of MDF is very efficient as it uses up smaller sized forest waste residues and tailings unsuitable for particleboard or solid timbers.

The bulk of Freiberg's waste comprising MDF and particleboard off-cuts are disposed of, by a contract waste disposal firm, at local refuse tips. The awareness that MDF contains toxic material, and that the company was paying for mixed wastes to be tipped at costs between \$8000 to \$ 9000 per year, between 2003 and 2005, has stimulated the company to develop and implement their 2003 environmental policy. In response, the company has been seeking alternative eco-friendly MDF which is proving difficult, especially with the need to source materials from local providers, and improved disposal of waste residues.

This became evident with governmental tender requirements giving preference to suppliers and manufacturers that are locally-based and environmentally sensitive. Within this current circumstance the company has sought to reduce its material use and disposal to landfill activities. The Particle Board (PB) and MDF is now collected and separated at points in the manufacturing process. 100% of the PB waste is now returned to the original supplier and ground up for remanufacturing into new PB.

MDF is selected by the company as the greatest environmental challenge but is one of several operational issues with associated environmental impacts. These aspects were assessed through a 'walk through' of the company's manufacturing operations, results are shown in Table 1.



Manufacturing And Associated Activity	Associated Environmental Effects	Environmental Initiatives
Particle board /wood storage	Fossil fuel use for forklift operation.	None taken – though may be minimal.
Beam saw, router,	Environmental emissions are vapours, dust, noise, waste and use of cleaning agents, paints, solvents and adhesives.	Board Optimisation Software. Removal of hydrocarbon cleaning agents, initiatives under way to remove some adhesive chemicals
Aluminium press's and saw	Low-level power, high level of aluminium waste.	Optimisation Software High proportion of aluminium waste recycled.
Cleaning Agents and Glues	Hydrocarbon-based cleaning agents and toxic and vapour producing glues.	Citric acid now used as cleaning agent. Boards protected from glue vapour emissions encapsulated or coated.
Fabric Attachment and Panel Manufacture	Glues used fabric wastes as off-cuts, foams used as underlay for screen; properties include sound absorption for office screening.	Removal of glue from fabric attachment process, replacement of foam sought.
Spray painting and Exhaust filter	Chemical-based sprays used in confined conditions with filtering system emitting directly to atmosphere. Levels of emissions unknown.	None. Improved filtering of solids from solvents in exhaust extraction
Office and factory lighting, heating, cooling, paper, water, general consumables, and electricity consumption	Environmental associated with the factory include emissions heat, noise, waste and CO ₂ emissions through off-site power generation required for operation of electrical appliances. Electricity bills reportedly low.	Tiles removed from section of roof to allow for natural light to hit factory floor.
Wastes from around the factory	Mixed Waste to Landfill Items included in mixed wastes that terminate in the particle waste board container at the top of Figure above primarily include: fabrics, coke cans, cardboard and aluminium. Environmental emissions may by generation of dust, chemical wastes and CO ₂ emissions associated with re-manufacture handling and transport	100% of PB waste is transported for recycling. Useful off-cuts are recycled into new product No MDF waste is recycled back to chipboard. But where possible useful offcuts are recycled into new Reduction in waste in tandem with separation bins implemented at points around the factory. Waste: PB, PU, Foam, Fabric, Aluminium – Recycled Replacement of (or improved) MDF sought.
Plastic packaging	Plastic waste	Plastic is stored in a central waste bin, sent to recycler and then converted into plastic pellets
Cardboard packaging	Cardboard waste	Cardboard is stored in a central waste bin and recycled through a third party
Old Product Storage	2500 used screens from 1980's housed. Antiquated office desks with electronic controls stored	Screens Sold to recycler for \$20,000

Table 1: Environmental issues associated with the manufacturing process and the environmental initiatives Freiberg has instigated to address these problems.



3.3 *Design for the Environment Analysis*

Freiberg attempts to address 'Design for the Environment' concepts through a number of initiatives targeting different stages of the product lifecycle as described by the following two addressing these two key issues:

- 1) *Client consultation*: on product design practicalities and/or alternatives, to demonstrate cost savings achieved through improved product design (e.g. using computer aided design to optimise board-cutting efficiency; and for designers/architects to include greater consideration of resource and materials in product design. Gains to be made through improved recycle re-use and substitution products.
- 2) *Resource reduction and substitution*: Focus on reduction and substitution in the manufacturing stage such as omitting the unnecessary use of: adhesives and use of particle board, reduced use of MDF and replacement of cleaning agents with citric acid.

3.4 *Driving Environmental Awareness at Freiberg Australia*

The following account provides an insight into the level of environmental awareness within the company. There was no formal environmental awareness programme as such and Bob Beaver, the general manager was driving the environmental agenda. The following illustrates, with quotes from the interview transcript, environmental awareness amongst Freiberg's staff members.

3.4.1 *Interview with General Manager*

Bob Beaver (BB) explained how the company was driving through a range of environmental initiatives designed to meet the requirements of its policy directives. He explained how initially it was difficult to bring the staff on board with each new initiative, for example when the company moved from rainforest timber screen framing to recycled particle board off-cuts, 'the staff were not happy at first' as this new task made it 'harder to do the job'. This brought an initial dip in productivity and instigated a 'go slow manual complaint'.

A similar situation occurred when the company implemented the citric acid cleaning agent as a substitute for hydrocarbon-based cleaning agent and the removal of the glue, for fabric attachment to screens. For example, BB reported how they 'had some complaints



introducing citric acid to replace hydrocarbons with employees complaining that they had to 'rub harder.' When, the staff realised the benefit that they 'didn't get headaches' and could wear clean clothes, and remove gloves in the work place, that they become more highly motivated in their new working environment. Furthermore, the slow process of 'getting behavioural change' which 'soaks through to middle management' was demonstrated through initial 'poor diligence' in placing MDF and piles of fabric in the 'wrong bin'.

Disseminating this strategy, through all levels of the company, has posed problems for BB and essentially, the communication of environmental issues to employees requires constant diligence. Throughout the company he has 'found it difficult to win the agreement of peers and employees on environmental issues.' Furthermore, BB believed that although the 'staff are aware of environmental issues I am not sure whether they care or not' again he reiterated 'it's a slow process.' For example, even in the case of providing separation bins to segregate the waste streams, there was a need for induction procedures and motivation.

3.5 Policy Developments between 2003-2006

The introduction of environmental issues into company practices has been the sole activity of BB who was keen to make 'good environmental decisions'. These were described as including environmental considerations 'from sales, design, manufacture the separation of wastes' to 'equipping people to make sustainable decisions, training, H&S and the feel good factor.'

He discussed the situation as it affected the Finance Director and the Chairman who he suggested 'have been going through a mental change driven by societal issues' which emanate from 'current affairs, competitors, brochuring and the net, recycled paper, plastic bags'. These factors are reported to tie in with the 'feel good factor' and 'what we are doing at work, re-enforces good behaviour.' Overall, whilst some members of the company demonstrated awareness of environmental issues (and a desire to make positive action, e.g. the General Manager) production, others had poor awareness and shown stereotypical responses when these issues were discussed.



3.6 *Developing the New Environmental Policy*

The review revealed key criteria for the overhaul of the existing policy framework:

1. To base the policy around a number of core sustainability strategies such as eco-efficiency, design for the environment, environmental improvements and continuous improvement.
2. Realisation of a broad set of stakeholder responsibilities.
3. Review and development of the policy in accord with the General Managers knowledge of the overall business plan and company objectives.
4. Development of the policy contextually linked to sustainable growth of the business.
5. Awareness of organisational 'realities' associated with growth.
6. Importance of keeping the 'essence' of the more in-depth comments related to the earlier policy statements.

The General Manager was made aware of these policy needs and associated issues were structured into the interview. This revealed that he didn't 'think the company would reach 200 people.' Since the interview the company has taken on considerable orders out-stripping production by 35% and requiring the employment of 5 new staff members. In response, the General Manager, has also since the interview revealed that if the company develops into a larger concern it would challenge the very reason for his drive to be in the business, i.e. to develop new ideas rather than to manage people.

In developing the policy further – which is shown in Figure 2, the needs and desires of the General Manager were fully taken into account and included:

1. Integration with business through: accepting triple-bottom line principles and risk management practices such as taking insurance against potential environmental risk.
2. Reduction of landfill tipping
3. Acceptance of the local community
4. Building for sustainability today but along way off from becoming business practice.



Revised Corporate Mission Statement

Freiberg is a major supplier of office furniture and fittings. We aspire to exceed the demands of our clients becoming market leaders in the supply of quality, innovative and trend-setting products and services. We aim to achieve this target through continually updating and improving our processes and values to meet the highest expectations of our shareholders, owners, employees, customers, government authorities, community and commitment to environmental protection. This responsible business approach will enrich our reputation and corporate value and ensure the future sustainability of our business.

Communication and Reporting

Staff: Freiberg recognises that effective communication of commitment of excellence: to quality, innovation, environmental and socially-related principles to all staff is central to successful policy implementation. We will continue to provide our employees with a motivating work place environment. This includes applying a system of training and cultural reform that will ensure that the spirit of the organisation matches our espoused values.

Stakeholders: We will communicate to our key stakeholders our environmental policy and improvements and future targets and expectations. We recognise that future activities may increase our operations and we will engage appropriately the relevant stakeholders.

Efficiency

The company is committed to the principles of eco-efficiency and 'making more with less'. In particular the company focuses on the principles of eco-efficiency most relevant to its operations: reduce material intensity; reduce toxic dispersion; enhance material recyclability; maximise sustainable use of renewable resources; and enhance material durability.

Continuous Improvement

A philosophy of continuous improvement is central to Freiberg's application of its environmental policy. We have identified a group of key performance indicators relevant to our operations and will measure, monitor and review our performance with an aim to continually learn and improve. Specifically we apply the principles of Eco-efficiency by:

- Assessing our products across their entire life-cycle to maximise sustainability
- Continually seek to source the best practicable environmentally responsible raw materials
- Seek eco-design solutions that maximise material use
- Seek solutions and systems that reduce energy and resource use
- Design products that can be reused, remanufactured or recycled
- Continue to eliminate the use of toxic substances (such as solvents)
- Reduce waste and aim to recycle all by-products
- Review and improve policy

These principles provide the corner-stones to ensure the company can maximise resource productivity and strive towards sustainable growth. In the long term we seek to merge the environmental and business policies and objectives for maximum benefits across the bottom line. With growth more profit, with profit more choices about how you do things, decide to pocket money or improve workplace and environment for employees and customers. Not too expensive, given a choice - better go for the environmental choice.

Figure 2. Revised Environmental Policy Statement 2006.



4 Discussion

Sustainability is a holistic concept that calls for a new paradigm of thinking and acting. An action-orientated research approach as presented in this paper lends well to this scenario as the object-subject situation between collaborators cannot avoid a critical relationship (Sayer, 1992), a behaviour that stimulates both reflection and action. It is through this framework that the researcher has been able to engage with Freiberg Australia and nurture a nascent furniture company with 'green' aspirations into a growing sustainable enterprise.

From the outset the company was keen to build on its existing environmental policy that had enjoyed some success in shaping environmental awareness amongst staff members and allowed for the implementation of several key environmental initiatives. This was the situation when we first were engaged with the company. In effect, the company was going through the first stages of a learning process that culminated in the development of an environmental policy; one that promoted an organic programme to develop environmental awareness within the company and permitted the researchers to make an environmental assessment and analysis of current 'design for the environment' practices.

This first stage of learning is described in the organisational literature as a single-loop learning process but is one that only provides the company with ability to deal with functional responses to environmental issues (Banerjee, 2002, Porter, L, 2001). The staff have therefore been going through a process of 'learning by doing' that has allowed them to undertake functional initiatives such as separating wastes, using environmental benign cleaning agents and the avoidance of pouring chemicals into drains. Other initiatives too, such as the reduction in costs associated with landfill wastes have driven more senior managers, as to become more receptive to the linkage between business and the environment; the first stage before the assimilation of new knowledge can be absorbed into the organisation (Vickers and Cordey-Hayes, 1999). This informal approach to introducing environmental issues into the culture of the business accords with the 'logical incrementalism' of Mintzberg and Westley (1992) who state that change though may occur through gradual shifts in 'mindset'; that by double-looping, restructures the individuals' mental models and results in significant changes in understanding (Bate *et al* 2000).

Individual learning though cannot be separated from the context from which it is occurring and this is evidenced throughout the time spent with the company. Intertwining as a feature of concentric cycles of change is therefore, the cultural context of the learning



environment. Bob Beaver's, personal ethic and the influence of ethical concerns brought by societal stakeholders on senior members of the company are shown to further shift the mindset toward being receptive to linking environmental issues with the business concerns; as Barr *et al.* (1992) describes, organisational renewal occurs through timely adjustments in managers' 'mental modals'. Perhaps, Bob Beaver has already undergone an earlier change in 'mental modals' developed through his own beliefs and experience with environmental issues and as senior management is enabled to bring his values and concerns to the corporate agenda and has emerged as the green champion of the firm.

The first phase of the project has thus been able to stimulate a first order environmental response. This has allowed environmental initiatives to be developed within the organisation and raised significant awareness for the company to contact the University for, further assistance; instigating the afore-mentioned action-research project. The involvement of the researchers has permitted the company to absorb new knowledge¹ and resulted in an environmental assessment to examine the company's approach to (and the required training/change) for life-cycle and eco-efficient design.

The results of the environmental assessment, is changing the way the company looks at its processes, and associated environmental impacts. Bob Beaver and the production manager have both expressed that this is the first time that the company has looked at this issue as a systems approach. This more holistic approach captures the concept of sustainability more appropriately and moves the project into the second phase that seeks an integrated business and environmental policy. A holistic, systems thinking, approach towards organisational learning is also compatible with the work of Peter Senge who as a leading proponent in the field of organisational theory and is highly significant for achieving sustainable outcomes through organisational change (Porter, 2001).

A holistic approach also lends well to adjusting the company to become a learning organisation set within a stakeholder context. This is an important dimension to the learning process, as the company is already taking on further orders and numbers of employees. Increasing operations brings the company under a broader sphere of stakeholder influence and creates new demands both on the organisational structure and governance of the firm (Pratten, 1991; Factor 2004). Castka *et al* (2004) reveals that bringing corporate social responsibility into the governance structure of the firm can bring 'better strategy and profits'

¹ (refer to Vickers and Cordey-Hayes (1999))



The revised policy, therefore, recognises these issues and aspires to move toward sustainability by moving the emphasis of learning from the individual to that of the organisation. Instead of stipulating how the company works on a functional basis, that relates to tasks, routines and practices, the new policy is centred on developing a learning organisation, one that is committed to continuous improvement, efficiency and communication to all its stakeholders.

The shift from individual to organisational learning is also recognised in the revised policy through the approach taken to the environmental awareness programme. This was with agreement with the General Manager, that a more formal approach to developing environmental awareness within the company should be developed. The approach would be to introduce a planned induction programmes for new staff members and video and training programmes for all members of the company. The more formal approach would also work well considering that growing SMEs can become more formalised as owners loose control over the smallness of the firm (Pratten, 1991). This planned undertaking also ties employee motivation with the values of the company and contributes to the overall business performance (Castka, 2004).

The focus of the revised environmental policy recognises that sustainability must mediate between improving environmental performance and business competitiveness (Kerr, 2006) and that all of these issues if managed as a learning organisation, where the business really is the sum of its all if its parts - 'people, profit, planet' (Masurel, in-press) will enrich the reputation, corporate value and the sustainability of the business.

5 Conclusion

Sustained development can only truly be achieved through improved environmental performance by the SME sector, reportedly the greatest environmental contributors to global pollution (Hillary, 2000). This article makes its contribution through the recognition that SME's can contribute to sustainable development. But, lagging behind their larger counterparts they are often cocooned in a chrysalis that shields them from the necessity to become environmentally responsible. They are therefore reported to be rarely involved in the crafting and implementation of environmental policy.

This project has shown how an action-orientated learning research approach is bringing reflection and subsequent environmental change to a SME. Conclusively, this article has



described two orders of organisational learning prompted by single and double-loop learning. These events have shifted the company from functional responses to environmental issues toward a more all encompassing business approach to sustainability. However, change can be 'punctuated' (Sastry, 1997) through 'revolutionary' events (Tushman and O'Reilly, 1996) such as the introduction of a green champion and the birth of a new environmental policy. Thus, the new environmental policy may act as a catalyst for this company to emerge from its chrysalis and take flight as a growing and sustainable organisation.



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