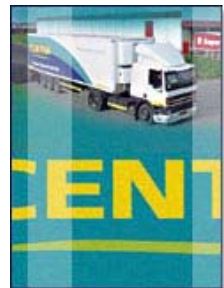


**Musgrave**  
G R O U P



MANAGING OUR ENVIRONMENT

# Environmental Report 2001

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# Group Managing Director's Statement

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Dear Reader,

We made a major commitment in the year 2000, with the publication of our Corporate Environmental Charter, a first for any Irish-based retail and distribution business, towards a strong philosophy of leadership and communications with our stakeholders. As an integral part of that public statement, we are now in a position to report our findings and gauge our performance in our first Group Environmental Report.

In reading through the report, I was generally pleased to note how far we have progressed in integrating key environmental issues with our business activities. This report has highlighted two important criteria for us - the establishment of our environmental status, which includes the collection of baseline data, plus the implementation of projects aimed at improving our environmental standing. These projects range from raising environmental objectives and communicating to our staff, suppliers and retail partners the value of better environmental management and the economic, social and political 'drivers' behind this. We have sent a clear message to all our stakeholders, including our suppliers on how they can start looking at their own systems and responsibilities towards us, for delivering a solid, sustainable supply chain, focused on improving environmental standards. The one issue that is to the forefront of my mind and has gripped every business in this country today, often threatening to hold us to ransom, is waste management. This has, in recent times, been the main burden and concern of our retail partners and, in an effort to improve waste management performance and afford stability we have acted positively and proactively in establishing a "one stop shop" approach to waste management, a first for Irish business.

You will find that when you read this report, we have made every attempt to measure our performance with regards to environmental management. We have, in certain areas, experienced difficulty in quantifying our

impacts as we have many issues to contend with and systems to implement within our complex business structure. I can say with confidence that our immediate challenge for managing the environment in a proper manner is to measure accurately our environmental burdens and progressive changes on a year-to-year basis, so we can report accurately for future years and enable meaningful dialogue and analysis with our stakeholders. Please be assured that this will happen, but it will take time.

As we improve and work towards integrating the environment into our daily decision-making processes and at the same time provide a strong leadership role to our trading partners, we are mindful of other related issues which also play a fundamental role in the way we carry out our business. Of major importance to us at present is the issue of our retail customers and how they perceive us, the environment at large and what they see as the key issues within our trading and retail environments. We feel very strongly about these views and in order to facilitate this, we are about to embark on a major public attitude survey, which will focus on environment, openness, honesty, social and ethical issues, all working towards our responsibility on a global to local level, so we can take direct action to bring about a positive environmental change through our business and trading efforts.

Finally, in closing I hope you find this report interesting, informative, and see this as a first step towards recognising the importance that we have put, not only in words, but firm action on the ground, towards environmental progress and openness.



Seamus Scally  
**Group Managing Director**

# Musgrave Group - an Introduction

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**Musgrave Group is Ireland's largest grocery and food distributor. The company operates a countrywide distribution network, servicing 24% of the market in the Republic of Ireland and 11% in Northern Ireland; a 20% share of the market on the island. Musgrave is in partnership with independent retailers.**

Musgrave was founded in Cork in 1876. The group is now the second largest private company in Ireland and one of the fifteen largest corporations overall. Musgrave is a family-controlled Irish company and pioneered voluntary group retailing in Ireland. Musgrave also pioneered cash and carry wholesaling.

In 2000, group sales were in excess of €2.0bn (IR£1.6bn). Sales have grown by 16.7% annually over the past five years, and pre-tax profits have grown strongly over the same period. The gross assets of the Group at the end of 2000 were €782m (IR£616m).

## **Musgrave SuperValu-Centra**

Musgrave Group owns the franchises to the SuperValu group of over 200 supermarkets and the Centra group of over 300 supermarkets, foodmarkets and convenience stores. The franchise stores are independently owned by the retailers who operate them.

The SuperValu and Centra retailers account for 22% of the grocery market in the Republic of Ireland and for almost 10% of the Northern Ireland market. In total, SuperValu and Centra retailers account for 72% of Musgrave Group sales.

SuperValu is the only supermarket group now operating in every one of the thirty-two counties on the island. Centra operates in every county in the Republic and continues its expansion in Northern Ireland. The stores are franchised, distributed to and supported by Musgrave. The company buys in bulk for the stores and provides an extensive range of support services to the independent retailers, including marketing, technology, location strategy, store design and financial

management systems. Musgrave also has professional advisers visiting the stores.

## **Musgrave Cash & Carry**

Musgrave owns nine large cash and carry outlets and a dedicated delivered services operation for the professional catering customer. The Cash & Carry Division operates in the Republic and Northern Ireland and accounts for 21% of Group Sales.

The group has 64,000 m<sup>2</sup> of the country's premier cash and carry space, servicing 32,000 regular retail and catering trade customers, and accounting for an estimated 30% of the Irish cash and carry market. The Musgrave Cash & Carrys are in Cork, Limerick, Galway, Waterford, Belfast and Derry, with three in Dublin. Musgrave also has a 5,000 m<sup>2</sup> dedicated multi-temperature food warehouse in Dublin for distribution to its Foodservices customers.

## **Budgens plc.**

Musgrave Group owns, on a fully diluted basis, a 44% interest in the UK supermarket chain Budgens plc., which operates more than 200 supermarkets and convenience stores in the southeast of England.

## **SuperToys/World of Wonder**

Musgrave Group operates the franchise to the SuperToys retail stores, the largest group of specialist toy and entertainment retail outlets in Ireland. SuperToys is developing the new World of Wonder children's leisure and entertainment offering, which includes computers, computer games, CDs and leisure products.

## **Musgrave Spain**

Musgrave owns a wholesale and retail distribution company called Distribuidora de Alimentacion del Sureste SA (Dialsur), based in the Alicante region of South Eastern Spain. Dialsur operates a franchise chain of 75 Dialprix retail outlets and a chain of 16 medium-sized cash and carry outlets.

# Musgrave Environmental Charter

## ► Main Commitments

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**In our environmental charter, published in November 2000, Musgrave Group outlined our environmental policy principles in six key areas of our business.**

### Communications

As a responsible employer, we will inform our employees, our trading partners and the community on Musgrave Group environmental standards.

We will adopt a 'consumers right-to-know' campaign on environmental affairs, to help consumers make informed decisions.

### Waste Management

Musgrave Group will actively seek to minimise wastes generated by the commercial activities of the business.

Through improved management of our operations we will improve our control of the costs of waste management within the businesses (and assist our customers to do likewise).

The group will comply with statutory guidance and where practical, exceed the legislative requirements through 'best practice'.

### Transport

Musgrave Group will take steps to minimise environmental impacts arising from the transport fleets and to maximise the efficiency of operation of the fleets.

### Supplies & Products

Encourage and influence good environmental practice with suppliers and trade customers to reduce environmental impacts and improve environmental performance.

### Buildings

The companies will apply the principles of 'best environmental practice' in the design, construction and development of Musgrave Group buildings.

Musgrave Group will endeavour to influence and guide the development of retail partners' premises to assess and consider best environmental practice.

The companies will promote Energy Efficiency in buildings and equipment throughout the business.

### Reporting

Widely publicise Musgrave Group Environmental charter / policy.

Produce and publish a corporate Environmental Report to show environmental performance on a periodic basis.

## *Getting the Message!*

**We see communications as the art of getting our message across. This message won't just contain well-chosen items of which we are proud – we will also describe the areas in which we particularly fall down and where we must improve for the future.**

Musgrave SuperValu-Centra (MSVC) are committed to environmental best-practice and are endeavouring to bring this about in our business and influencing our retail partners to do the same. To achieve this, it has been recognised that communication is a component of this commitment. Disclosure of the company's environmental aims, achievements and failures to our customers is a key step in gaining support for the initiatives we have undertaken.

MSVC's communication of their environmental programme with the public has been through the news and advertising media, and through local campaigns. The broadsheet and radio/television current affairs correspondents are forwarded regular press releases on the environmental programme. The environmental charter is on public display in all MSVC buildings – framed copies have also been forwarded to all 520 of our retail partners. The Musgrave Group Environmental Charter, as well as this document, is published on and can be downloaded from the Musgrave Reports section at our website at [www.musgrave.ie](http://www.musgrave.ie). The company is also committed to the sponsorship of other initiatives for the environment – for example, our sponsorship of the Tidy Towns competition in Ireland, since 1992.

The MSVC Environment Action Team (EAT), which is responsible for devising, reviewing and implementing the environmental programme is drawn from the key departments in the company.

Since the initiation of our environmental programme in 1999, environment has been a specific agenda item in most of our business meetings. Our SuperValu and Centra councils - composed of representatives of our retail partners - have had several addresses from members of the EAT on subjects as diverse as environmental risk management, waste management, packaging regulations and training. We have convened workshops with retailers, suppliers and staff members for consultation during the preparation of the Environmental Charter, and more recently in preparing the tenders for our regional waste management contracts. Our sales managers also regularly update our retail partners on environmental management issues at cluster meetings.

A key channel to passing on environmental management techniques and tools to our operatives and to the staff of our retail partners has been through professional environmental training. In the past, we have taken this approach to food hygiene, health and safety, sales and quality with our retailers to great effect. We are using this system in respect of environmental management – we have a one-day environmental management training course available on our company training schedule. We have, since November 2000, inserted an environmental management module in the Retail Management Diploma, which MSVC co-organise and deliver with the Dublin Institute of Technology.

Our Environmental Charter commits Musgrave Group to communicating environmental information to all our stakeholders, where possible. We feel that we have made a good start in this area, and we will continue to do so in the upcoming years. Some of our achievements to-date are detailed in this section.

- The Musgrave Group Environmental Charter was launched at our Tramore Rd. headquarters in November 2000. The launch was attended by the Minister for the Environment and Local Government, as well as all the EAT members and our staff in MSVC, Cork.
- MSVC (Northern Ireland) now features as one of the Northern Ireland's best companies in regard of environmental engagement. MSVC moved from the 5<sup>th</sup> quintile range of scores to the 1<sup>st</sup> quintile in 2000, indicating a mark between 80-100%, a vast improvement on the company's 1999 performance in the Environmental Management Survey carried out by ARENA Network.
- In 2001, MSVC introduced a degradable plastic checkout bag in SuperValu and Centra stores nationwide. We estimate that up to 140 million carrier bags, the equivalent of 68,000 km<sup>2</sup> of plastic will be removed from Ireland's waste chain annually. The unique checkout bag starts to degrade after 18 months under normal conditions.
- In July 2000, SuperValu introduced the "Bag for Life", a re-usable, reinforced plastic bag, that the retailer replaces when it has worn out. Centra stores introduced their version in February 2001. In tests, the bag has been shown to have a life-span of up to one year and each Bag for Life could potentially eliminate the need for up to 350 regular plastic supermarket bags. This is the latest initiative MSVC have taken on board in an effort to cut down on the use of plastic bags.
- In June 2001, MSVC were invited by Ecosense (an EU-funded project based in County Kerry and facilitated by the local authorities in that area), as the largest retail chain in the county, to make a detailed presentation focussing on the Environmental Management initiatives of the company.
- In July 2001, MSVC hosted a Sustainable Development forum. The purpose of the workshop was to assess the progress of Musgrave Group in the implementation of the Environmental Charter and to consider and debate the effects of our business in the future. The forum was chaired by Ms. Sadhbh O'Neill – a well-known and respected environmental activist, and attended by EAT members, retailers, consultants and suppliers. We intend that our next environmental programme for the years 2002-2004 will reflect the issues discussed and debated at this forum.

Michael Nason, Managing Director MSVC:

*"The reaction from all those to whom we have outlined our environmental programme has been very positive. It has been terrific to bring back such encouraging words to EAT and the Board."*

From November 1999 to-date, MSVC have been introducing environmental items on the agendas of business meetings and forums – see **Table 1** below.

Forum	Personnel numbers Involved	Target of new personnel Involved
EAT Meetings	17	-
MSVC Board Presentations	12	-
SuperValu Council Presentations	20	10
Centra Council Presentations	20	10
Consultative Workshops/Brainstorms	35	20
Conference Presentations	350	110
Retail Diploma Trainees	31	40
Supplier Forums	0	25
Environmental Management Trainees	20	80
Premises Environmentally-Audited	42	50
<b>TOTAL PEOPLE INVOLVED</b>	<b>547</b>	<b>345</b>

**Table 1:** Indications of the numbers of people that have been involved in the environmental programme between 1999 and 2001. We have also indicated our target for 2002 for involving people in the business who have not been involved to-date

## ▶ Case Study: Charter Development

Following the initial environmental review of the business in autumn 1999, the EAT commenced on the formulation of the Corporate Environmental Charter for MSVC. Initially, the EAT scheduled a one-day brainstorming session and workshop, that was hosted by consultants and attended by EAT members, Retailers and Suppliers. The format of the workshop was three-tiered:

- Phase 1: Generation of the policy areas in which the company can have significant positive impacts.
- Phase 2: Application of the principles to underpin the policy areas.
- Phase 3: Generation of the essential strands to formulate the implementation and action plan for each policy area and related principles.

The draft policy was presented to MSVC Board and ratified in March 2000. The policy was modified and adopted by the other Musgrave Group companies in Ireland prior to its launch in November 2000.



In our work programme for 2002 and beyond, we will focus on new projects; some are detailed below.

- We will begin work on environmental workshops with our suppliers – this will be addressed in more detail in our Supplies and Products section.
- The one-day Environmental Management training course, aimed to bring up the standard of management at distribution and retail premises, will be launched in autumn 2001 – 20 staff will be trained at the pilot event.
- There will be least 3 events per annum annually thereafter.
- We will undertake a “Public Attitude Survey” to assess the concerns of the public in regard to their shopping and to inquire what the public want their supermarkets and produce suppliers to achieve for the environment.
- It is our continued aim that all our main business meetings, including Management Team meetings, SuperValu and Centra Council meetings and Annual Conferences will have an environmental item on the agenda/itinerary that will be treated with equal importance to other agenda items.

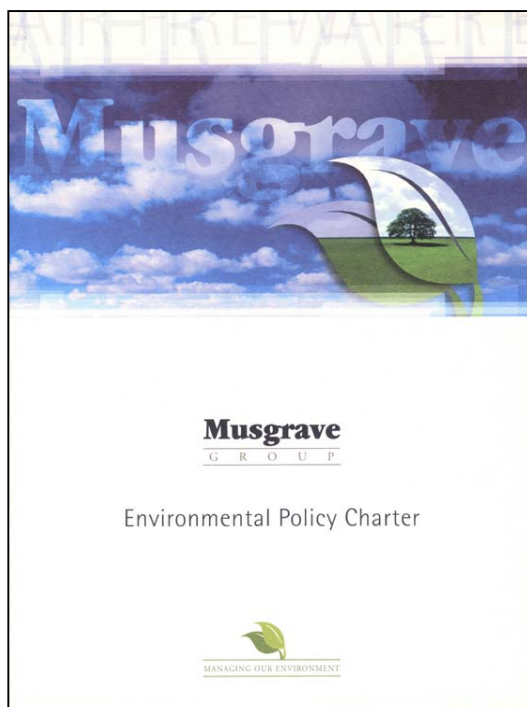
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**We are committed to finding out our customers concerns in relation to the environment and responding to those challenges.**

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### *Getting the Message!*

We will continue to publicise our Environmental Charter launched in 2000 and to fulfil our commitments made therein.



# Waste Management

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## Getting Wiser!

**We have not historically paid enough attention to management of our wastes – we must see all processes in our business as resource uses. We will treat waste generation as an efficiency item, just in the same way as we manage our fuel or electricity use or as we distribute produce.**

Over the past five years, waste management has become a more pressing issue for our country, and indeed our business. Ireland is moving toward a future where landfill is not sustainable. MSVC are leading by example in the principles of waste management, by striving to reduce, reuse and recycle our wastes and dispose of what remains in the most environmentally suitable manner available.

Since embarking on our environmental programme in 1999, waste management has been identified as the issue that is testing everyone in our organisation and our retail partners. MSVC understand and support the principle that waste management costs will rise to allow alternative treatment systems to be initiated and operated successfully and within the framework of EU legislation. The significant rise in costs has focussed our efforts in rationalising and consolidating the management of wastes in our business.

Our first step was to gain an understanding of what our wastes were and how they were being generated throughout the business. We do not yet have definitive figures and tonnages for our wastes. However, we have taken steps in the past year that have allowed us to progress to a point where we can expect to accurately measure our waste tonnages in future.

MSVC acknowledge that bad practice has previously been widespread throughout the business. We are committed to begin eliminating cases of litter offences, illegal dumping and back-of-store burning of wastes within the next two years. We will achieve this target through the implementation of regional contracts and through extensive environmental management training at MSVC premises and at our retailers' stores.

Joe Murphy, Centra Sales Manager and EAT Member:

*“Our storeowners have certainly been impressed with our approach to waste management – they were beginning to realise that it would have become a major cost for their businesses“.*

# Waste Management

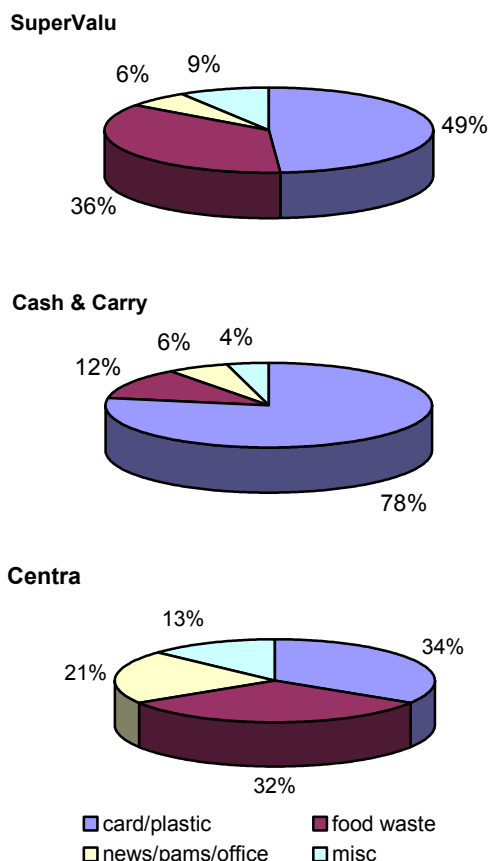
## Achievements

Our Environmental Charter commits Musgrave Group to minimise our wastes and to manage what we produce more effectively. We have made good progress in this area; this was one of the areas we tackled first, as a priority for our business and for our retailers. Some of our achievements to-date are detailed in this section.

- As our first step, we carried out a waste characterisation project at two distribution centres (Cork & Dublin), three SuperValu stores (ranging in area from large to mid-range) and two Centra stores (both small high-street stores). The stores were chosen to reflect the range of premises across the business. The surveys undertaken were carried out over a one-day period, but were structured to estimate the wastes generated over a weeklong period. Charts demonstrating the breakdown of wastes generated (% by weight) at each type of the premises are illustrated below.
- From the data gathered, we prepared estimated waste tonnages for all MSVC premises and for all those of the retail partners. The tonnages were estimated as a function of facility turnover, rather than store area. The main purpose of undertaking this exercise was to add information to the waste contract specifications that were being prepared – to allow the contractors involved to submit proposals that were as meaningful and accurate as possible at the time.
- Segregation of the card fraction of our waste stream has already been initiated at our Galway and Belfast distribution centres. It is estimated that ca. 20% (by number) of our retail partners have also initiated (or continued) segregation schemes in 2000 – this percentage will be determined more accurately in the near future.

- Waste management rooms/areas are now a standard feature of new retail stores and large refurbishments of existing stores.
- We have increased the number of public recycling banks at MSVC, SuperValu and Centra premises, from 35 in 1999 to 48 in 2000.

Typical Waste Categories (% by weight) at each store type



# Waste Management

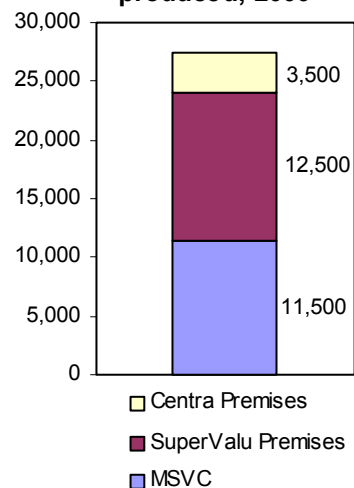
## Indicators

The breakdown of wastes generated by the different businesses is estimated in **Table 2** below.

Business	Estimated waste generated in 2000, (tonnes)
MSVC	11,500
SuperValu Premises	12,500
Centra Premises	3,500
<b>TOTAL</b>	<b>27,500</b>

**Table 2:** Distribution of the tonnages of wastes estimated across the businesses in 2000. The estimates have been made based on turnover. When the regional 'one-stop-shop' contracts are implemented in the next two years, the information on wastes generated will be more accurate – with increased tonnages of recycled wastes

**Estimated tonnes waste produced, 2000**



Our estimates for 2000 were that the businesses (in both Northern Ireland and the Republic of Ireland) generated *ca.* 27,500 tonnes of wastes. Our estimate for current recycling (mainly card), across the businesses, is *ca.* 9 % (by weight). The wastes generated have been calculated to be 0.51 kg/case delivered, and our recycled wastes have been calculated to be 0.046 kg/case delivered. [Cases delivered is our best indicator in the stores of our retail partners, but also takes into account the turnover of MSVC.] When our regional contracts are implemented in the next two years, we will have much more accurate data on wastes generated, with increased tonnages of recycled wastes.

If we estimate that *ca.* 91% (by weight) of our wastes are landfilled, then the methane (CH<sub>4</sub>) that will be generated by the landfilled wastes

arising from the businesses in 2000 will be 2,710 tonnes CH<sub>4</sub> (using the Intergovernmental Panel on Climate Change (IPCC) Guidelines for Greenhouse Gas Inventories). Applying a turnover-related indicator, this is equivalent to 0.057 kg CH<sub>4</sub>/case delivered. It is our aim to measure our landfilled percentage more accurately in the future and to reduce the methane generated as a consequence of our wastes.

# Waste Management

► Upcoming

Our environmental programme for 2002 and beyond will include projects in this area, such as those described below.

- The Southern regional 'one-stop-shop' contract will be launched in Autumn 2001. This is the cornerstone of our waste policy – to contract one company to consolidate the management of the wastes generated in a region, offering to all premises involved a comprehensive waste management service. The service will include waste handling, recovery, recycling, appropriate disposal and opportunities for waste minimisation. It is envisaged that the remaining regions will have this service 'up-and-running' by the end of 2002.

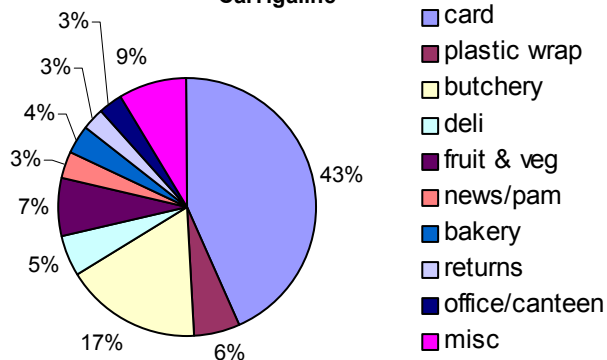
- Comprehensive training will be given to retail managers in adopting the new contractual regime as part of their environmental management training. This will include areas such as waste handling, storage, data collection and retailer responsibility, if the contracts are to be successfully implemented.

## ► Case Study: Detailed Waste Characterisation

A comprehensive waste characterisation project was carried out in August 2000 to obtain a detailed picture of the types of waste generated by a typical SuperValu store. The store chosen is considered the flagship store in terms of floor space and range of services and products offered to customers.

For a period of five full days, all the waste generated at the store was analysed for its content and weight prior to disposal and recycling. A range of data was obtained to allow us to comprehensively adapt the data to other premises.

Detailed Waste Categories - Super Valu, Carrigaline



# Transport

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**Ireland is currently in its equivalent of the Industrial Revolution, which swept across UK and mainland Europe two hundred years ago. For this reason, we have little traditional “heavy”-industry – our industry is very technology- and healthcare-focussed. Consequently, our air quality has historically been very good. However, with the onset of economic prosperity, air quality has gradually worsened, with transport being the major contributor, especially in urban areas.**

MSVC runs one of the largest haulage fleets in Ireland and recognise that the environmental impacts associated with this part of their business are very significant. In 2000, our fleet travelled over 10 million kilometres in the course of our business. Our logistics department continually seek new means and routes to reduce our mileage, while increasing our business.



Our transport department have regular communications with the transport research organisations and the major truck manufacturers to discuss transport research and development issues.

In association with our retail partners, we take as many steps as we can to minimise disruption to neighbours during our deliveries. Because of this we carry out most of our deliveries between 08:00 and 21:00 hrs. However, we remain keenly aware that deliveries during social hours are not the best way of minimising nuisance to the majority of fellow road-users. We are continually making every effort to get the balance right.

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**In 2000, our fleet travelled over 10 million kilometres in the course of our business.**

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*On the Road to Efficiency!*

Our Environmental Charter commits Musgrave Group to minimising the environmental impacts of our transport fleet and to maximise fleet efficiency. We had not targeted this area initially for attention – we have focussed to-date on gathering information on the fleet impacts. Some of our achievements are detailed in this section.

- In 2000, Centra launched a road safety campaign, in association with the National Safety Council, aimed at young children between the ages of 6 and 10, to make them more aware of their own road safety. For 2001, Centra are currently in discussions with the National Safety Council and the Department of Education with a view to getting more schools involved in Centra's road safety initiative.
- We have, in 2000, introduced a dual-fuel car – the Toyota Prius, to our fleet car list. Dual-fuel cars appear to offer the best alternative to reducing the emissions from the fleet of our sales staff. While the current tax system prevails, the benefit-in-kind tax penalties on our staff are still greater in comparison to an equivalent petrol combustion vehicle. We believe that this is the reason we have still not achieved any uptake of this vehicle by our staff.
- In the interests of safety, reliability and emissions control, we replace our delivery trucks every four years – we will be replacing up to forty trucks in 2002. Our trucks are serviced and maintained on a regular schedule. Our drivers have yearly training in minimising fuel consumption and defensive driving. We run a “Driver of the Year” competition annually.
- In 2000 we have begun using a closed loop washing system to wash our fleet tractors and trailers - the water is reused several times before disposal. We have estimated that trucks are generally washed using ca. 90% recycled water. We try to optimise our use of truck-tyres – we re-tread tyres as often as we can safely, at our maintenance garage.

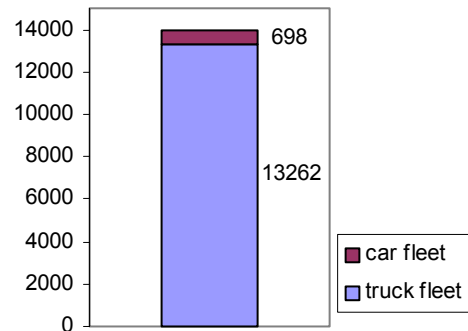
Pat Mulgannon, Health & Safety Manager, MSVC and EAT Member:

*“All our trucks are currently in compliance with the Euro 3 emissions regulations. We’d like to improve on this and we are presently scheduling trials of LPG tractors for the future”.*

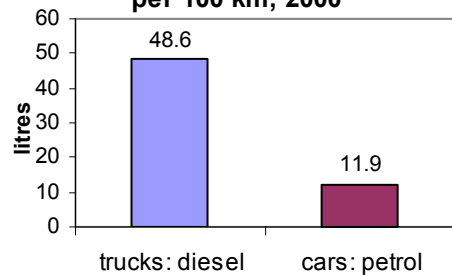
The total fleet emissions for MSVC in the Republic of Ireland and Northern Ireland calculated using the Intergovernmental Panel on Climate Change (IPCC) Guidelines for Greenhouse Gas Inventories were 13,960 tonnes CO<sub>2</sub> in 2000, equivalent to 0.253 kg CO<sub>2</sub> per case delivered to our retailers. This contribution is divided between truck and car emissions in the ratio 95:5 (approximately).

On average the truck fleet consumes 48.6 litres diesel per 100 km, while the car fleet consumes, on average, 11.9 litres petrol per 100 km.

**Tonnes carbon dioxide from transport fleet, 2000**



**Fuel consumption per 100 km, 2000**



### ► Case Study: “Backhauling”

Since the mid 1980s we have operated a backhauling system for our ambient deliveries, from our Cork and Galway depots. In 2000, our trucks travelled, following their deliveries to our retail partners, to 51 suppliers to haul supplies back to our distribution depots. This saves our suppliers 123 delivery journeys weekly. It has been estimated that the average delivery journey saved is ca. 453 km, which has taken ca. 2,900,000 truck kilometres off the Irish roads each year, which is equivalent to ca. 4,000 tonnes CO<sub>2</sub> emissions avoided in 2000.

In 2000, we commenced a backhauling system for our chill deliveries from our Dublin and Cork depots. Our trucks travel, following deliveries to our retailers, to 40 suppliers to haul supplies back to our distribution depots daily. This saves our suppliers 80 delivery journeys daily. It has been estimated that the average delivery journey saved is ca. 96 km, which has taken ca. 1,900,000 truck kilometres off the Irish roads each year, which is equivalent to ca. 2,600 tonnes CO<sub>2</sub> emissions avoided in 2000.



Our environmental programme in 2002 and into the future will focus on the reduction of our transport fleet's impacts. Selected projects will include the following.

- We will examine on trial, delivery trucks operating on liquid petroleum gas for our fleet. It is envisaged that using these trucks should result in a considerable drop in carbon dioxide emissions per truck.
- We are keen that our staff (who have company cars) choose a fuel-efficient or dual-fuel car. We will examine the feasibility of a number of schemes in 2002 that will encourage this choice.
- Furthermore, amongst our other office-based staff, we are determined to encourage the use of public transport, especially to and from work. We will examine the possibility of offering employment benefits, in the future, that will encourage use of public transport or reward employees who walk or cycle to work.

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**We aim to continually improve our logistical practices and investigate alternative technologies to maximise fleet efficiency.**

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# Supplies & Products

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**The recent anti-globalisation demonstrations in Seattle, London, Montreal and Genoa have led us to examine what exactly consumers want to buy off supermarket shelves! It is increasingly evident that cost and quality are not the only issues of interest to a growing number of consumers worldwide.**

MSVC has over 600 suppliers whose products are distributed to SuperValu and Centra stores. 83% (by number) of these products are food products, with 17% non-food. In terms of numbers, 94% of these products are ambient (non-perishable) with 6% chilled- or fresh-produce.

Suppliers of products are currently required to fulfil a rigorous Code of Practice (CoP) as part of their contract with MSVC. The CoP is

quality and hygiene focussed at present, but is structured in a fashion that would allow easy introduction of environmental measures.

MSVC are committed to placing environmental issues in an equal priority classification as price, quality, delivery and security-of-supply. This is to be achieved through working closely with our suppliers and customers toward better environmental practice. The company has not yet embarked on this part of the environmental programme, and we acknowledge that this will be one of the most important components of our environmental programme within the next two years.

*Food for Thought!*



Our Environmental Charter commits Musgrave Group to influencing and encouraging good environmental practice in our supply chain. This is not an area we have focussed our attention on in the first year of our environmental programme. However, some of our achievements to-date are detailed in this section.

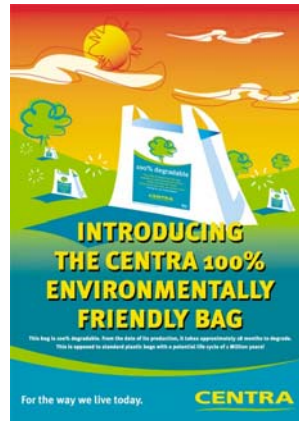
- MSVC commenced 'paperless trading' via an Electronic Data Interchange (EDI) system in 2000. This allows suppliers and customers to trade with MSVC via their computer systems and the internet. It is expected that by the end of 2001, nearly 800 suppliers will be using this trading system. Central Billing of our retail partners will commence shortly using EDI. It is expected that the office paper wastes arising in our business will be significantly reduced as a result of this initiative.
- Since mid-2000, we estimate that 80% of chilled products are distributed in re-usable plastic crates rather than the disposable card and 'shrink-wrap' packaging previously used. Several of our retailers also use re-usable crates for their home deliveries. We have not measured the reductions in card waste at either our distribution centres or at retailers' premises.
- MSVC support the initiative by the Irish Department of the Environment and Local Government to introduce a levy on plastic carrier bags, and we feel that this measure will reduce the use of plastic bags and encourage the 'Bag-for-Life' initiative.



Edel Frost, MSVC Own-Brand Manager and EAT Member:

*"Following the recent Foot & Mouth, BSE and Genetically-Modified Foods issues, the feedback we have received from retail consumers is that there is increasing interest in the way supermarket produce is prepared. We must assume that this is a very positive development in relation to 'Greening our Supply Chain'."*

We have few indicators at this point, to rate the effectiveness of our environmental programme on this part of our business. We have introduced HACCP (Hazard Analysis and Critical Control Points) for health, safety and hygiene at our retailers' stores. We are close to 100% for installation of barcode-scanning checkout technology at our retailers' stores. In the same way, we will introduce systems to improve on the environmental properties of the supplies and products on supermarket shelves.



## ► Case Study: Degradable Bags

SuperValu and Centra stores have introduced the Symphony Plastics Ltd. SPI-Tek<sup>2</sup> environmentally responsible bag in 2001. This bag, under normal conditions, starts to decompose after 18 months – on exposure to the atmosphere, as well as in landfill. This compares to a potential life cycle for a standard plastic bag of several decades.

It is estimated that Irish consumers use over a billion plastic bags annually – enough carrier bags to carpet the entire planet. The bags are as strong and durable as standard plastic bags, but break down at a much quicker rate. The manufacturers have designed the polymer to degrade leaving no toxic by-products. The technology has been independently tested and shown to be safe for direct food contact under EU standards.

The technology, branded as SPI-TEK™, utilises patented additives to allow time-controlled degradation of the plastic material in sunlight, compost and water, leaving no solids, only water and carbon dioxide.

Eoin McGettigan, Executive Chairman, MSVC: *“As a major Irish retailer, we have been concerned about the environmental impact of plastic bags for some time and have taken several initiatives in an effort to cut down on the number of plastic bags used in SuperValu and Centra. With our partnership with Symphony, the equivalent of 68,000 km<sup>2</sup> of plastic will be removed from Ireland’s waste chain – a significant first step to a cleaner future.”*

## ▣ Supplies & Products

▶ Upcoming

Our future environmental programmes, starting in 2002 will initiate our embarkation on this key area of our business. The main elements in this programme will include the following projects.

- ▶ Over the next two years, MSVC will commence its programme to 'Green the Supply Chain'. This will be addressed in partnership with our suppliers and retail partners. We will be seeking information from our suppliers about the environmental performance and the environmental properties of their products – and on the options for improving the environmental performance of those products. We will be seeking permission from our suppliers to audit or rate their environmental performance. It is our intention that the best way to achieve the improvements we require is through facilitated workshops, negotiation and training.
- ▶ Following the introduction of our 'Bag-for-Life', we do not currently have enough data to assess its success or effectiveness. We want to measure its uptake, by stores and consumers and the reduction in plastic bags used. Similarly, the effectiveness of the use of the degradable bag will be assessed.

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**Musgrave are initiating a major programme to 'Green the Supply Chain'.**

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# Buildings

## *Let's Do it Right!*

**The Greek and Roman civilisations utilised best-practice without electricity in the design of their buildings – those buildings made efficient and effective use of natural resources available to provide light and heat. These buildings have survived the test of time – today's buildings should be a testament to our own generation.**

MSVC have always been aware of efficiency in building management as a cost-efficiency exercise. As part of our environmental programme, we have committed to implementing Sustainable Principles in the design of building structures and operations. We want to reduce our energy use (and our greenhouse gas emissions), to utilise new technologies, to avoid unnecessary consumption of natural resources and to blend in with our surrounding natural and built environments.

While our business is not one of those that would be expected to have a major impact on the environment, we have found that our retail partners and ourselves have not always reduced the potential risks to the environment from our operations to an acceptable level. We have not adequately managed the hazardous materials that we regularly have on our premises, for example heating oil, waste cooking oils, cleaning materials and pesticides/fertilisers.

We are currently examining the life cycle of our buildings – to assessing how our buildings and their component parts work and operate during their lifetime, to assessing their lifespan efficiency and to improving their ongoing performance.

Liam O'Connor, Senior Store Engineer,  
MSVC and EAT Team Leader:

*"We are looking forward to having all our retailers' supermarkets in compliance with new legislation and best practice. We are specifying leading-edge technology as standard, with improved environmental performance – we want our stores to be on a level with the world's best!"*



Our Environmental Charter commits Musgrave Group to sustainability in the design, construction and management of our buildings and providing help to retailers to do so too. We have already embarked on a number of projects to achieve these policy principles. Some of our achievements to-date are detailed in this section.

- Following acoustic assessment of the existing environment and the effects of expansion and development, especially with regard to the haulage operations, acoustic barriers have been erected at the Cork and Dublin distribution depots to reduce the impacts on our residential neighbours.
- Our refrigeration systems at MSVC buildings have all had their ozone-depleting potential reduced by the elimination of CFC refrigerants. We have replaced R502, which is a chlorine-containing liquefied gas with R404, a mixture of hydrofluoroalkanes. This compound also has a reduced global warming potential in comparison to R502. R404 is also now replacing R502 in a structured phase-out across the retail stores.
- We are now, as standard, fitting plate heat exchanger technology on the refrigeration systems at retail stores. The hot discharge refrigerant gas heats water as it leaves the compression stage and enters the condensing phase, providing hot water for stores at no additional daily cost.
- Retailers with newer stores are now being fitted, as standard, with the latest reverse cycle heat pump technology in their air conditioning units. The typical co-efficient of performance for these units is 3:1, which means that for every 1 kW electricity used, the system delivers 3 kW of performance, in heating or cooling mode.
- In the design of retail stores, we specify all our wooden shelving and display furniture to be supplied by a company that applies a strict environmental policy. The company supplies both natural wood products and board products. The natural wood products are all sourced from managed forests supported by the Forest Stewardship Council, the Forests Forever Campaign and the Timber Trade Federation. All MDF and chipboard products are manufactured from 100% recyclable materials.
- In store design, we have always been keen to provide the best quality lighting for the displays of produce. With advances in technology, we have been able to specify lighting systems that provide no decrease in light intensity or quality, but which provides significant reduction in energy use (and greenhouse gas emission equivalents). Although these systems can be more expensive initially, our retail partners have been happy to invest because of the savings accruing from energy efficiency.
- In May 2001, MSVC hosted a workshop on Sustainable Construction, attended by MSVC Store Design Engineers and external consultants. The focus of the workshop was to plot the course for the construction, refurbishment, retrofitting and management of Musgrave Group and retailers' buildings in the future, based on sound environmental and life-cycle principles. The Store Design team are committed to carrying our several pilot projects in 2002-2004 to change the way in which buildings are designed, built and managed.

Over the past two years, our store designers have been specifying (as standard) more electricity-efficient lighting systems for our retailers' stores. The new lamps used now provide a similar light intensity to the previous models, with a reduced electrical power use of ca. 18%. Furthermore, less numbers of the new lamps are required to provide the light intensity required. We have illustrated the reductions in energy use and greenhouse gas emissions equivalents for three different-sized stores, at which the new systems have been installed – see **Table 3** (all calculations in this section have been undertaken using the methods described by the IPCC organisation).

Store Area (m <sup>2</sup> )	kWh – year 2000 (old system)	kWh – year 2000 (new system)	CO <sub>2</sub> emission reduction	
			(tonnes/yr)	%
230	29,353	19,212	7.34	35
370	58,705	33,073	18.56	44
930	146,765	80,007	48.33	45

**Table 3:** Indication of the projected scales of energy savings and greenhouse gas reductions achieved by the installation of improved lighting technology at retailers' stores

The MSVC buildings utilise electricity for lighting, air-conditioning and refrigeration at all their premises – Dublin, Cork, Galway and Belfast. Heating is by gas-combustion systems at Dublin, Cork and Belfast, but by kerosene-combustion system at Galway. The greenhouse gas emission equivalents for electricity and heating for our buildings for 2000 are demonstrated in **Table 4**.

If we relate these emissions to turnover, we find that the business is generating 0.139 kg CO<sub>2</sub>/case delivered.

Facility	Year 2000			
	Electricity use (kWh)	Fuel use (litres kerosene)	Fuel use (gas, TJ)	CO <sub>2</sub> emissions (tonnes/yr)
Cork	4,920,000	N/A	6.542	3,927.5
Dublin	3,600,000	N/A	3.840	2,821.0
Galway	650,000	25,000	N/A	535.07
Belfast	394,132	4,628	N/A	297.29
<b>TOTAL</b>				<b>7,580.86</b>

**Table 4:** Estimated contribution from MSVC buildings to greenhouse gas emissions to atmosphere in 2000 using IPCC Guidelines for Greenhouse Gas Inventories



Our environmental programme over the next number of years will see the preparation and implementation of several projects in this section. Some of the projects envisaged are detailed below.

- ▶ Our environmental programme for the next year involves the preparation of three further Codes of Practice in relation to buildings. We will prepare and begin to implement a Code of Best Practice in the design, construction and facility management of MSVC buildings. We will prepare and seek approval for a Code of Practice for the design, construction, retrofit and facility management of the premises of our retail partners. We will also prepare a Code of Conduct for contractors working on MSVC premises to minimise environmental impact, especially nuisances caused to neighbours and the general public – this Code of Conduct will be a strictly enforced contractual item.
- ▶ In our Codes of Practice, we will seek to minimise the effects on our environments, and to use new and unique technologies to achieve these ends. We will strive to reuse materials, where possible; we will specify products containing recycled materials, when practicable; we will design efficient and waste-minimal systems, as a priority.
- ▶ In the preparation of these Codes of Practice, we will consult widely with our designers, our retail partners and our equipment and materials suppliers. We will examine best practice throughout the world, and will seek advice from the leading researchers in the likely achievements in future technology.
- ▶ Specifically, we will continue to target the reduction of energy use as a priority for our business, and those of our retail partners – we will aim to reduce, year-on-year, the greenhouse gas emission equivalents for our lighting, heating, refrigeration and air-conditioning.

### ▶ Case Study 'State-of-the Art' Lighting

In the SuperValu supermarket in Carrigaline, Co. Cork, we have installed a state-of-the art lighting system, which contributes further energy saving over the previously described systems.

This system has replaced the traditional ceiling-mounted units with “down-lighters” mounted over and attached to the produce shelving. This has allowed maintenance of the light power on the produce, with a further reduction in lamp wattage and electrical power used, as has been illustrated below. If we take the average savings over the old lighting systems as a baseline, then this achieves a reduction in greenhouse gas emissions of ca. 70% for the bigger stores – see **Table 5** below.

Store Area (m <sup>2</sup> )	kWh – year 2000 (new system)	kWh – year 2000 (state-of-the art system)	CO <sub>2</sub> emission reduction	
			(tonnes/yr)	%
2695	103,346	56,769	33.72	45

**Table 5:** Indication of the scales of energy savings and greenhouse gas reductions achieved by the installation of State-of-the-Art lighting technology at SuperValu, Carrigaline.

# Reporting

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## *Truth to Tell!*

**In legend, Aesop recounted his fables to illustrate the effects and outcomes of good and bad practice – a successful approach to making a major impact on his audience.**

Musgrave Group believes that our actions for the environment must be disclosed to achieve their greatest effects. We want to provide an example to other Irish companies in the implementation of our environmental programme.

In structuring our approach to environmental issues, the EAT was convened to represent most of our business departments – our rationale is that reporting is not unique to our accounting division, it applies across the board.

MSVC are not new to the concept of reporting and disclosure – we have been preparing an annual report for competition since 1999 to the standards of the Irish Business Excellence Model (the Irish equivalent of the European Foundation for Quality Management model). Our scores for the “Impact on Society” section, to which our environmental programme most applies, have steadily increased since 1999.

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## ► Achievements

Fiona O’Donovan, MSVC,  
Retail Accountant and EAT Member:

*“The application of financial management principles to our environmental programme seems an effective way of assessing the value of what we have achieved and what we are planning.”*

Our Environmental Charter commits Musgrave Group to publishing the results of our environmental programme for stakeholders, and the general public. Indeed the publication of this report is a demonstration of this commitment in practice. Some of our achievements to-date are detailed in this section.

- We remain at a very early stage in our environmental programme – we are still in the process of designing projects in which we can successfully measure the effects with the intention of disclosing results.
- Within the next reporting period, we would aspire to reporting verified improvements in our waste management performance, our energy efficiency, our greenhouse gas emissions and training of our staff.

# DELICATESSEN



## *Truth to Tell!*



As described in our achievements section, we are carefully selecting our reporting indicators to report our achievements and failures over the future reporting periods. We have tried, where possible, to relate all our indicators to our turnover and our cases delivered – these will tie our performance to the growth and fundamentals of our business and the businesses of our retailers – distribution of goods

### ► Case Study: Baseline Environmental Review

In 1999, we commenced our environmental programme with an extensive review of our business. The review encompassed 23 premises countrywide, including the 4 distribution centres and 19 supermarkets – both SuperValu and Centra outlets. The purpose of the review was to rate the existing performance of the business, to identify areas of concern and to help chart the progress of the organisation (and its partners) in regard of the environment.

The outcome of the review was:

- i. there was a broad range of existing performance, with outstanding environmental management accomplishments evident alongside some quite poor operations,
- ii. the main areas of concern were: waste management, energy and resource management, materials management and training, and
- iii. there was a need for the development of a policy and structured programme to be implemented across the business.

Following the review, the company prepared the Corporate Environmental Policy, which committed the company to report their environmental performance – this report, less than a year following that public commitment, is testimony to our company's resolve in fulfilling our undertakings.

## ▣ Reporting

▶ Upcoming

Our commitment to reporting is reflected in our planned environmental programme for the future. Some of our planned projects are described below.

- ▶ In preparing the specification for our regional waste contracts, period reporting by the appointed companies is an inherent part of the required service. Each participating retailer (as well as the MSVC premises) will receive a report on the tonnages of wastes collected from their businesses on a monthly basis. This report will also detail the breakdown of the weights of different categories of wastes collected and the weights of collected materials subsequently recycled or reused.
- ▶ As part of the environmental training programmes for MSVC and retail premises, one of the fundamentals that will be expressed will be the requirement for recording environmental performance. All trained environmental managers will be required to demonstrate regularly that they can report on their business' waste management, energy management and general environmental management. These reports will form the basis of MSVC future Environmental reports for competition.
- ▶ As our organisation develops as a reporting entity, we will examine the published indicators of the worldwide authorities, such as the Global Reporting Initiative (GRI), EUROSTAT and the Organisation for Economic Co-operation and Development (OECD) with a view to assessing our performance internationally.

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**This report constitutes our first steps in Environmental Reporting. We aim to build on this and evaluate our performance year-on-year.**

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## Summarised Environmental Indicators

Sector	Year 2000	Context	Annually Calculated Indicator
<b>Sales &amp; Distribution</b>			
⇨ Kilometres (million)	12.61	The equivalent of one SuperValu or Centra truck travelling the circumference of the earth every day for over ten months of the year.	
⇨ Cases (million)	54.37	The equivalent of all the groceries bought in Dublin city in one year.	0.253 kg CO <sub>2</sub> /case
⇨ Energy consumption (GWh)	53.09	The equivalent of the energy generated by the use of over 130 tanker loads of diesel.	1.107 kg CO <sub>2</sub> /km
⇨ Emissions (kilotonnes CO <sub>2</sub> equiv.)	13.96		
<b>Buildings</b>			
⇨ Area (km <sup>2</sup> )	0.05	The equivalent of the area of 6 soccer pitches.	
⇨ Energy Consumption (GWh)	12.73	The equivalent of the energy used by 425 standard semi-detached houses in a year.	0.139 kg CO <sub>2</sub> /case
⇨ Emissions (kilotonnes CO <sub>2</sub> equiv.)	7.58		16.03 kg CO <sub>2</sub> /m <sup>2</sup>
<b>Waste</b>			
⇨ Tonnes (thousand)*	27.56		0.507 kg waste/case
⇨ Landfill Emissions (kilotonnes CH <sub>4</sub> )	2.71		0.050 kg CH <sub>4</sub> /case

\* Including estimates for the wastes generated at the retail stores

\*\* Broad estimate made following waste characterisation at a cross-section of distribution centres.

This report has been developed by the Musgrave Environment Action Team and Patel Tonra Ltd., Environmental Consultants to the Musgrave Group.

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G R O U P

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