

Aldi Stores Limited

Sustainability Statement

July 2018

1. Introduction

- 1.1 The statement details the measures Aldi take to minimise any environmental effects of their developments and operations and achieve sustainable development.
- 1.2 This assessment provides an evaluation of the likely rating that the development would achieve under a formal assessment. In turn, this enables the development to be benchmarked against current best practices in sustainability.
- 1.3 This report will also details the sustainable measures that Aldi employ in the operation of the store and demonstrate how the efficiencies of the retailer reduce the overall environmental impact of their operation.
- 1.4 This report includes the following: -
 - A review of the policy documents that provide context to the statement.
 - An identification of the general sustainability themes.
 - An overview of the sustainability measures that would be built into the development proposals.
 - A table summarising the proposed sustainability measures.
 - An assessment of Energy Use of the Building against re-usable energy within the development.

2. Aldi's Sustainability Philosophy

- 2.1 Aldi are committed to achieving sustainable development as part of its operations. As a group, Aldi operates an Environmental Management Policy, which has been endorsed by senior management. The objectives for achieving sustainable development as part of their operations includes the day-to-day running of their retail stores, to designing sustainability initiatives within their new buildings. This statement addresses Aldi's sustainability proposals that will be built into their new developments.
- 2.2 Aldi's philosophy for sustainability builds upon national objectives for achieving sustainable development. These overarching principles are based on the following documents:
- Securing the Future: Delivering UK sustainable development strategy - May 2005.
 - National Planning Policy Framework - March 2012.
 - National Planning Policy for Waste – October 2014.
- 2.3 This strategy presents a generic approach to meeting the targets and objectives for sustainable development. The strategy is based on a number of key themes that are relevant to Aldi's proposals. The themes listed below form the context of this statement.

Sustainability Themes

- **Minimise Energy Use:** the objective is to minimise energy needs in development by following a hierarchical approach to minimising energy use.
 - **Sustainable Building Materials:** this theme covers a range of sustainability impacts including, minimising the energy required for producing and transporting building materials, using recycled material from local sources as far as possible and by choosing materials with a low embodied energy.
 - **Sustainable Construction:** this theme covers the methods used during the construction phase to reduce disturbance and the impacts on the surrounding environment.
 - **Sustainable Transport and Accessibility:** the objective is to minimise car usage and to encourage walking, cycling and the use of public transport.
 - **Waste Management:** the amount of waste generated in the construction process is to be minimised following the national waste strategy: reduce, reuse, and recycle.
 - **Site Management:** the objective is to ensure that the site is managed effectively to ensure that sustainability measures are implemented effectively.
- 2.4 The sustainability measures that are proposed as part of Aldi's development proposals have been developed in accordance with these themes. These measures are presented in detail in Section 3 – Proposed Sustainability Measures.

3. Proposed Sustainability Measures

Introduction

- 3.1 Any proposed development by Aldi puts sustainability at the centre of the design process of the scheme, and makes commitments to meet and exceed standards of best practice by encouraging the use of techniques that will enhance the development during both the construction and operational phases
- 3.2 A number of measures have been incorporated into the scheme to address issues of sustainability. These measures are presented under the broad sustainability themes identified within paragraph 2.3.

Minimise Energy Use

- 3.3 The development will incorporate a range of energy saving and efficiency measures in order to minimise the energy demand, and reduce CO₂ levels arising from the development. Aldi's approach to minimising energy use within its buildings reflects an energy saving hierarchy, similar to current best practice within the UK.

Step 1 – Improving the Building Envelope

Building Fabric Performance

- 3.4 A buildings ability to retain heat is governed by the choice of construction materials as well as structural design. The envelope of the building will incorporate building elements with U - Values that as a minimum meet standards set out in the current Building Regulations.

Air Permeability

- 3.5 The air permeability rate (APR) can also affect a buildings ability to retain heat, with lower permeability yielding greater energy efficiency during operation. During winter months, heat can be lost through air spaces in the buildings construction. The minimum standard for air permissibility as set out in the ADL (2013) is 10m³ of air /hour/per m² @50 Pa. The design of the development would ensure this standard is met.
- 3.6 For the retail units, consideration is also given to the loss of heat from openings and loading areas in delivery areas. Heat loss would be minimised by specifying seals on external access doors to limit the ingress of cold air. Service bays will include seals between the building and the delivery vehicle to reduce heat loss when delivering goods from HGV's. In the retail area (customer area), automatic sliding doors included at entry points ensure that when customers are not entering the building, the building is sealed thereby reducing excess heat loss.

Step 2 – Reducing Energy Demand

Ventilation

- 3.7 Aldi look to make best use of natural ventilation to reduce the usage of energy associated with mechanical ventilation systems, where possible.
- 3.8 Due to the depth of the retail area, the effectiveness of natural ventilation is limited. The use of mechanical ventilation would be put forward to meet the fresh air rates for the development, though heat recovery is utilised by Aldi to minimise the amount of energy usage associated with bringing air to the room condition. Ventilation to the office office/staff area is

achieved via natural ventilation with openable windows in the staff room. The cash office and toilet areas would be mechanically ventilated to satisfy security concerns and building regulations.

Heating and Hot Water

- 3.9 In general terms, the requirement for space heating and hot water represents a large proportion of the energy demand for any development.
- 3.10 Energy efficiency has also been a key consideration in supplying heating and hot water to the retail area. It is recognised the operation of the retail area will have very low hot water demands however due to the larger floor areas, the space heating requirements form the largest demand on energy.
- 3.11 With the above in mind, the heating to the retail area will be via re-usable energy as illustrated in Step 3 (3.19 – 3.25).

Lighting

Lighting within the retail areas

- 3.12 The use of large windows to the front of the retail unit is a common design feature of Aldi stores. The inclusion of these windows helps to provide natural light to the sales floor, and will improve the stores atmosphere and quality of working environment for retail staff. The use of natural light will also reduce the energy demand required for lighting within this area. The extent to which daylight can penetrate the sales floor is dependent on the specifics of each development proposal, and will be influenced by the orientation of the windows, the layout of the sales floor and shading from neighbouring buildings and landscaping. Where possible, the development will look to achieve a 2 % daylighting factor across 35 % of the sales floor. High level glazing is also incorporated into the design along the length of the building where the Retail Space is bordered by an external wall. Along with the large shopfront, this also improves the ambience of the area with the use of natural light which again will reduce the energy demand for lighting in this area if daylight dimming controls were incorporated into the design.
- 3.13 Lighting in the store consists of recessed and suspended LED light fittings. These lights will incorporate the use of drivers powering LED chips that are 100% efficient, and increasing the operational life of the LED lamps. The actual average efficiency within current Aldi stores is 129 lumens / circuit watt. Lighting within the amenity and storage areas would also consist of energy efficient LED lighting.
- 3.14 Outside trading hours, when the store is closed to the public, lighting levels would be maintained at one-third of the usual levels for stocking shelves. When the store is completely unoccupied, all lights (external and internal) would be switched off.

Lighting external areas

- 3.15 Lighting will also be supplied to the car parking areas to ensure the security and safety of the sites users. This lighting will be designed in accordance with the CIBSE Lighting Guide 6 – *The External Environment*. The Lighting to all external areas will consist of energy efficient LED lighting. The lighting will be controlled by time switch and photocell arrangement, to ensure that the lighting is not used during daylight hours, when not required. External car park lighting columns will be switched off by a time switch, one hour after the store has closed to minimise energy use.

Cold Food Storage

- 3.16 Chiller cabinets in the retail store have the potential to use a large proportion of the energy requirement for the development. When choosing the fittings, consideration is given to their demand for energy. Various specifications are proposed to reduce unnecessary energy use. These include the use of sliding doors on chest freezers, and night blinds to improve the energy efficiency of the chiller cabinets when not in use.
- 3.17 The Aldi store also incorporates a 'walk-in' type freezer in the warehouse for the storage of frozen food. As the store will be designed to the appropriate specification to reduce energy demand, the cold store evaporators would be designed run at two speeds to achieve the required temperature in their surroundings, whilst a dedicated control panel would monitor the internal temperature to ensure the cold store only uses the necessary amounts of energy required.

Building Management System

- 3.18 All Aldi developments are designed with a full Building Management System provided by the controls specialist. This will monitor the conditions within the building and will adjust temperatures and start and stop times for plant. It will also monitor heat loss elements such as freezer doors and loading bay doors and if they are left open for excessive times, a report is generated that can then be resolved. This is all controlled from a remote station that can deal with issues and if necessary call out engineers as required. The overall effect is to reduce the energy demand for the building by controlling elements and recording when excessive heat is lost through human failure.

Step 3 – Re-Usable Energy

- 3.19 In order to minimise energy demand in stores, Aldi seek to re-use and re-cycle any waste energy where possible. The greatest area to recover energy in the store is the 'Waste Heat' generated by the refrigeration system and this is recovered to heat the building.
- 3.20 Aldi use a system to recover waste heat from the food refrigerator circuits which would otherwise be discharged into the atmosphere. The heat from the refrigerator would previously have been rejected when the refrigerant hot gasses are cooled in the condensers by external air. Previously a gas heating system was used to make up any shortfall in heating demand.
- 3.21 With the input and detailed design of a 'refrigeration engineer' and a 'mechanical services engineer', the waste heat is harnessed via a CO2 refrigerant lead heat recovery system that rejects the waste heat into a low temperature hot water heating circuit which in turn provides heat to an underfloor heating array or a number of ceiling mounted convectors on the sales floor if the store is leasehold. This system provides 100% of the total building heating demand. The heat recovery system has totally removed the need for an independent gas heating system. The underfloor heating system provides heat to the store with a high percentage of radiant heat, minimising the negative affect that the sales floor chillers have on the store heating.
- 3.22 To demonstrate the effectiveness of this system, Aldi have used a typical model in Leicester which, being in the Midlands, represents the average for the whole of the UK. The typical energy demand for an Aldi Development in the Midlands is 271,624 kwh per year.
- 3.23 The total energy demand for heating to an Aldi Store is 115,416 kwh. The refrigeration installation would generate 150,000 kwh which is more than sufficient to heat all the store.

- 3.24 With all the energy demand required to heat the building, being recovered from re-usable energy, 115,416 kwh of the total energy demand for the building of 271,624 kwh is generated from re-usable energy. This represents over 40% of the energy demand for the development being created by re-usable energy.

Sustainable Building Materials

- 3.25 The materials theme covers a range of sustainability objectives, including minimising the energy required for producing and transporting building materials, using recycled material from local sources as far as possible and by choosing materials with low embodied energy.

Material Specification

- 3.26 The use of materials for the development of Aldi's stores will vary from site to site. Notwithstanding this, Aldi is committed to using materials that perform well with regard to the environment, either through their composition and manufacture, and/or through their performance during the commissioning life of the development. Aldi aim to include materials, which are rated highly within *The Green Guide to Specification 4th Edition (Anderson et al. January 2009)*. Where possible the external walls, roof, floors, internal walls and the frame will be constructed from materials, which demonstrate a high rating within this guide.

Timber

- 3.27 The use of timber in the development will also reflect good sustainable practice. Any timber used in the development will be derived from a sustainable source, including FSC and PEFC sources. Temporary timber, used during the construction process will be reused where possible.

Reuse of Materials

- 3.28 Scope exists to limit the requirement for new aggregates by using materials recovered from the site or a nearby source.
- 3.29 The design of the development includes proposals to reuse materials that are derived from the demolition of the previous buildings on site. During the detailed design stage, the potential for reclaiming aggregates for the use in the development's footings would be assessed.

Reusing concrete and masonry

- 3.30 During construction, efforts are made to reuse many of the aggregates derived from the demolition of any former buildings. The opportunities for doing this are dependent on the presence of buildings on the site and the availability of space for crushing recovered materials. As part of the design, aggregates are recovered for high-grade purposes, including for use within pedestrian and car parking area.

Procuring Materials

- 3.31 Where possible, materials required for the construction of the development will be procured from locally available stock. The feasibility and extent to which this is possible would be identified at the detailed design stage. In addition, preference will be given to procuring materials from manufacturers and suppliers, which are accredited with an EMS including BS EN ISO 14001 or a similar standard.

Sustainable Construction

- 3.32 The construction phase has the potential to cause an adverse effect on the surrounding environment. These aspects would be minimised by following appropriate procedures and best practice guidance. Principles of sustainable construction are based on methods that would be used to reduce the environmental effects during the construction phase.

Construction Site Impacts

- 3.33 During the construction phase, monitoring would be conducted at appropriate frequencies to ensure that energy and resource use impacts are limited. The following monitoring activities would take place:

Monitor Waste

Waste streams would be monitored during construction. The construction site manager will keep waste transfer notes and monitor the performance of the site against recognised benchmarking figures for the construction industry.

Adopting best practices for dust

- 3.34 Where necessary the spread of dust would be minimised by following best practice principles for reducing dust. This will include wheel washing and dampening down the construction site in dry weather.

Working Hours

- 3.35 Working hours would be agreed with the local authority prior to the commencement of construction. In normal circumstances, construction works would be conducted in standard working hours i.e. - between 0800 to 1800 hours on weekdays, and between 0800 to 1300 on Saturday.

Construction Traffic

- 3.36 The construction phase will inevitably cause a change in the usual transport patterns on the site, where plant vehicles will require access to the site. To limit disruption associated with this, various control measures will be employed to reduce impacts on the surrounding transport networks. Transport movements associated with construction will be managed to limit simultaneous deliveries to the site. Traffic Management plans will be produced for all Construction Sites.

Sustainable Transport and Accessibility

- 3.37 Proposed stores offer choice and accessibility for shoppers. The majority of car trips to the food stores are not new to the network, but rather transferred or linked trips and new stores usually mean shoppers can make shorter trips and continue to access local facilities, thus contributing to a sustainable shopping experience. The proximity of the development to local amenities and existing public transport infrastructure is site specific.

Cycle Parking

- 3.38 Aldi provide cycle storage facilities at stores. Cycle parking will be in accordance with the Local Authorities cycle parking standards and compliant to design features including being secure, sheltered and located in an appropriate position within the development.

Car Parking

- 3.39 Whilst methods to access the site by non-car transport are promoted, Aldi stores incorporate car-parking provision for shoppers in accordance with the Local Authorities car parking standards. The spaces will also include compliant parking for people with disabilities as well as parent and child spaces. To minimise vehicle movements generally, Aldi will allow the store car park to be used by shoppers visiting the store and the local area, thereby removing the need for customers to move their car from one car park to another.

Water Conservation and Management

Minimising Flood Risk

- 3.40 The potential risk associated with flooding varies between locations. As such a flood risk assessment will always be prepared for new store proposals based on the risk factors for the particular site. The proposed strategy would ensure an assessment is undertaken to identify any potential risk of flooding to the proposed development and adjacent properties as a result of the development in accordance with the requirements of the National Planning Policy Framework and Local Authority Planning Guidance. An assessment of the storm water and foul water drainage proposals would be undertaken in order that the proposed development does not exacerbate flooding elsewhere.
- 3.41 The development proposals would seek to meet the requirements of the National Planning Policy Framework. Additionally, the selection hierarchy for disposal of storm water within Building Regulations Part H would also be met. Consideration will be given firstly to infiltration techniques (to ground), to watercourse and then to sewer. Sustainable Urban Drainage Systems (SuDS) would also be used wherever possible to mimic as far as practicable the natural run-off regime, improve water quality and attenuate peak flows. The specific measures put forward would depend on the nature of the development site, as well as the risk of flooding and the ground condition on the site. All SuDS measures put forward would be proposed in consultation with the local planning authority and the Environment Agency to ensure suitability.

Permeable paving

- 3.42 Permeable surfacing provides a surface suitable for pedestrian and/or vehicular traffic, while allowing storm water to infiltrate through the surface and into underlying layers. Surfaces with an aggregate sub-base can provide good water quality treatment. The storm water can be temporarily stored before infiltration to the ground, reused, discharged to a watercourse or other drainage system dependent on the ground conditions for each site.

Geocellular Attenuation Systems

- 3.43 Geocellular attenuation systems can be used to control and manage storm water runoff either as a soakaway or as a storage tank dependent on the ground conditions for each site. The modular/honeycomb nature of geocellular systems mean they can be tailored to suit the specific requirements of each site.

Wider drainage pipes

- 3.44 Often the increased risk from flooding is minor, and can be dealt with by making minor enhancements to the existing drainage infrastructure on site. One way to do this is to increase the diameter of the drainage pipes, to ensure that a greater volume of water can be accommodated

Waste Management

- 3.45 The demand for new materials and the disposal of waste places demand on energy and resources. Reducing the amount of waste through reuse will help lessen the demand for new resources and decrease the impact on the environment through extraction, processing and transport costs of new materials.
- 3.46 The UK government approach to addressing the waste problem and minimising the use of natural resources is to practise the 3R's in the Waste Hierarchy, i.e. reduce – reuse – recycle. These sustainable waste management principals will be adopted for both the construction and operational phases of the development.

Construction Waste

- 3.47 Principles of the Waste hierarchy will be reflected in the proposal during the construction phase. An on-site management plan will be prepared to demonstrate how waste will be handled during the construction process. The Plan will be prepared in accordance with The DTI Site Waste Management Plans - Guidance for Construction Contractors & Clients - Voluntary Code of Practice (2004). The plan will demonstrate how waste will be handled during the construction process. Such principles will include the re-use of existing on-site materials including secondary aggregates where possible, whilst ensuring that waste from the construction process will be sorted on site, disposed of responsibly and recycled where appropriate.
- 3.48 Where possible, materials will be reclaimed from the demolition of the existing buildings to reduce the amount of new material used. This practice will also benefit the amount of waste needing to be transported off-site, reducing transportation impacts.

Recycling

- 3.49 Even though plans will be produced to reduce waste where feasible, certain waste from the development of the site will be unavoidable. Where this is the case, waste materials will be disposed of responsibly, and recycled where materials permit.
- 3.50 The potential for recycling materials from the construction and demolition process would be fully investigated. Where space exists, recyclable materials such as metals, timber, cardboard and paper would be sorted on site, and segregated into separate colour coded bins. An appointed waste contractor would be used to remove these materials from the site and take them to the appropriate recycling facilities. Where space is not available on site, waste will be removed and segregated offsite by the appointed contractor.

General Waste Disposal

- 3.51 Where materials cannot be recycled, this waste will be removed from the site and disposed of appropriately. All wastes would be subject to controlled collection and storage on-site, to keep the construction site tidy, avoid unsightly accumulations of waste and minimise dust, pest infestation, odour and litter. Wastes would not be stored in areas of the site adjacent to sensitive environmental features or receptors.

- 3.52 Licensed waste carriers would remove the residual waste from site to suitable licensed disposal sites. The disposal sites would be identified in consultation with the local authorities and the Environment Agency to ensure their suitability.
- 3.53 During this stage all relevant UK waste regulations would be complied with. The Construction Manager would keep waste transfer notes that fully describe the waste in terms of type, quantity and containment in accordance with the relevant regulations. This process will allow waste streams to be monitored from the site.

Reduction of Detrimental Environmental Effects

- 3.54 The development will provide various measures to reduce, offset or mitigate detrimental environmental effects arising from the development proposals. Materials that limit the release of pollution will be used throughout to reduce the buildings potential to pollute.

Watercourse Pollution

- 3.55 The potential for polluting local watercourses will be site dependent. Nevertheless, the design of the car parks and areas where vehicles are stationary for any period of time would include oil interceptors. These systems will be located around the perimeter of the car park to prevent contamination into the nearby drainage system. The interceptors would be regularly checked in line with the manufacturers recommendations to ensure that they are working appropriately.

Remediation of Contaminated Land

- 3.56 The potential for contamination will vary from site to site and be dependent on the former use of land. As part of the construction of retail developments, there is often a requirement to remediate land so that it conforms to a higher standard of health and safety. Where land has been previously developed (Brownfield) or where greenfield sites are suspected of being potentially contaminated, ground investigations would be conducted on the site, and remedial measures taken if contaminants were found.

Light Pollution

- 3.57 External lighting would be designed in accordance with guidance set out by the Institute of Lighting Engineers (ILE) to reduce the detrimental effects of night time light pollution. During the operation of the development, external car park lighting columns would be switched off outside of store operating hours to prohibit the effects of light pollution.

Site Management

- 3.58 Whilst measures would be designed into the development to improve efficiency, the appropriate management of the site is also crucial in ensuring that these measures are made effective. The development would be managed during the construction and operation phases to ensure the performance of the sustainability measures put forward are optimised. This section provides a brief description as to the scope of management measures that would be used following the developments commission.

Commissioning the Retail Development

- 3.59 An individual would be appointed during the commissioning of the development to ensure all the commissioning is carried out appropriately. Where necessary, a separate, specialist agent would be appointed to ensure that mechanical ventilation and renewable systems are commissioned.

Building User Guide

- 3.60 A building user guide would be provided for the development aimed at providing general members of staff as well as the facilities manager, information relating to the operation of the development. The manual would include details about the building's services, emergency information, the energy efficient features of the development and how to best manage these, water use, transport facilities, waste policies, information about the suppliers and installers of the fittings, suppliers of further training and useful links to further reading relating to the environment.

Building User Training

- 3.61 In the first 12 months prior to the retail store opening, members of staff would be fully trained to be able to use the building to ensure optimum efficiency. The training would be based on the scope of measures outlined in the building user guide.

Operational Management

Environmental Management

- 3.62 Aldi operate an Environmental Management System and have produced an environmental statement that has been endorsed by senior management.

4. Summary of Measures for sustainability

Main themes	Sub Theme	Proposed Measures to be incorporated into the development
Minimise Energy Use	Improving Building Envelope	Improve building fabric performance by using materials with low U values.
		Reduce Air Permeability for the development.
	Reducing Energy Demand	Use of LED technology for internal / external lighting.
		Detailed Specification of energy saving fitting for refrigeration system
	Allocation of Renewable Energy	Re-use of waste heat from refrigeration system to heat the retail area.
Sustainable Building Materials	Material Specification	Use of recycled and secondary aggregates where possible.
		Use of timber from sustainable sources, including the reuse of timber where possible, whilst procuring new timber from sustainable sources such as FSC and PEFC sources.
		Use of materials that where possible have a low embodied energy, including making firm commitments to procure materials from local sources where possible.
		Procuring materials will be done with consideration to manufacturers and suppliers with accredited EMS and ISO Standards.
Sustainable Transport and Accessibility		Cycle parking for the site would be provided in accordance with LPA cycle parking standards
Water Conservation and Management	Water Use within the Retail	A pulsed water meter would be proposed for the development to monitor water use.
		2/4 litres wc's in retail store.
	Minimising Flood Risk	Proposals would be put forward that would not add to the flood risk in the area. A number of SUDS and engineering solutions could be put forward for this purpose, subject to site specific conditions
Waste Management	Construction Waste	Recycling would occur during the construction phase where waste would be segregated and split into recyclable components.
		General waste would be disposed of responsibly and sent to licensed waste handling facilities.
Reduction of detrimental Environmental Effects		Hydrocarbon traps will be placed around the perimeter of the car park area where necessary.
		The development does not include materials that are toxic to humans.
		All insulation materials and refrigerants have an ODP value of 0 and a GWP of 5 or less.
		Where necessary, land contamination would be remediated.
		External lighting will be compliant to best practice guidelines from the Institute of Lighting
Site Management	Commissioning and Handover	A building user guide and building education would be provided as part of the development's handover

5. Aldi operation as a Retailer

- 5.1 Aldi prides themselves on offering genuine quality products at heavily discounted prices. Crucial to this objective is the efficient running of operations to avoid having to transfer unnecessary costs on to customers. Such efficiencies also have added advantages in making the day-to-day running of stores more environmentally sustainable. In addition to efficiency, Aldi endeavours to generally operate in a sustainable manner as a commitment to achieving a 'greener' company.
- 5.2 Aldi operates up to 150 stores from a company owned local regional distribution centre. The distribution centre is located close to the stores reducing delivery distances and deals with all ambient, chilled, frozen and fresh goods. The following are examples of their operation methods:

The Distribution Depot

- At the distribution depot, goods are prepared, packaged and palletted ready for delivery straight to the shop floor of the store they are intended for. In addition to reducing the amount of packaging necessary for transportation, this also minimises the amount of vehicular movements required to each store.
- The company places strict controls over packaging to minimise waste. Only returnable and reusable crates and pallets are used. The aim is to ensure that any waste that is generated is limited to cardboard and plastics, which are then recycled.
- In order to operate as efficiently as possible, racking is used in the warehouses of the distribution centre
- The warehouses are constructed in brick and built for longevity and sustainability. This method reduces the need for painting and recladding which would require replacement every 20 years.
- The warehouse freezer operates on Co2, rather than R404A refrigerant. This is a more efficient and environmentally friendly method which reduces the risk of leakage into the atmosphere.
- The warehouses have automatic roller doors in a temperature controlled area to minimise heat gain and energy loss. The temperature controlled areas have de-humidifiers which reduce the number of defrosts required by reducing energy costs.
- The warehouses have high level glazing and skylights utilising natural day light.
- The warehouses operate a self-tipping policy ensuring delivery drivers are not left standing with engines running.
- The warehouses are sympathetically designed incorporating high quality planting which encourages ecological diversity.
- The truck washers at the warehouse use recycled water.
- The distribution centre has 4,400 Solar Photovoltaics (SPV) situated on the roof of the building, which during the summer months generate enough electricity to power the entire site.

The Delivery Vehicles

- Aldi delivery vehicles are compartmentalised and insulated to allow different operating temperatures.
- Centralising deliveries enables Aldi to service the stores with a mixed container of ambient, fresh, chilled and frozen products thereby reducing the number of vehicles on the road whilst reducing pollution.
- Aldi route deliveries to reduce truck, movements allowing deliveries to more than one store, optimising the capacity of each vehicle.
- Aldi's delivery vehicles are fitted with Michelin Energy tyres for 4% greater fuel efficiency.
- All delivery vehicles operated by Aldi operate on Dual Fuel with Diesel and LPG for maximum efficiency and lower emissions.

The Sourcing of Products

- Each depot has an in-house Trading Director who sources local bread, produce and milk deliveries. This allows for the stores to be provided with the freshest possible product, but equally reduces vehicle movements nationally.
- Where possible, delivery vehicles haul produce from suppliers in the area of store deliveries back to the depot. This prevents empty vehicles being driven on UK roads, increasing efficiency but also reducing emissions.

Store Operation

- The operation of each Aldi's stores exemplifies the company's view that efficiency and commercial success form the bases of a socially and environmentally responsible company.

Store Servicing

- Each store has a bespoke service pod to allow efficient unloading by the driver. The service pod incorporates a ramp which mitigates the need for tall lifts and scissor lifts. This minimises the time that a delivery vehicle stays on site. The delivery vehicles engine is never left running when stationary.
- All card and plastic packaging is collected in stores and compressed into bales and collected by Aldi delivery vehicles and returned to the central depot. This ensures fully loaded vehicles are sent for recycling of card and plastic from the central depot.
- Any organic waste in the store is stored in paladins and removed regularly by the delivery vehicles to the distribution depot and sent to anaerobic digestion plants to generate renewable energy.
- All Aldi stores and distribution depots operate an internal mailing system. Each Aldi store has its mail delivered by its daily delivery vehicle. This is less costly for the company but also reduces the need for postal deliveries and collections.
- Aldi's store design incorporates a warehouse for storage of products at different temperatures, i.e. ambient, fresh, chilled and frozen. The warehouse has been designed as a result of years of experience to hold enough stock to prevent unnecessary deliveries, but is

also of sufficient size to ensure the freshest possible products and to prevent over-stocking. This efficient stock holding in stores further reduces the need for multiple daily deliveries.

- The warehouse back-up chiller is extremely efficient as it chills sensitive products but also recycles the heat that it generates by providing heating to the warehouse. This reduces the need for a separate warehouse heating system.
- All warehouses are lit by way of minimal energy efficient LED lighting.

Shop Floor

- All of Aldi's carrier bags are made of recyclable materials. A minimal charge is put on each carrier bag to discourage excessive use. Customers are instead encouraged to re-use carrier bags and boxes. Aldi promote 'Bags for Life'.
- All Aldi stores have full height glazing to the front and on the long elevation of the retail space to make best use of natural light, considerably reducing the need for electrical lighting on the shop floor.
- Aldi stores are lit by efficient recessed and suspended LED light fittings.
- Lighting is maintained at one third light level when stocking the store outside of opening hours.
- Aldi stores utilise a suspended ceiling that adds additional insulation, reducing the need to heat high level space as seen in larger retail units.
- The internal height of an Aldi store is significantly lower than other larger format food retailers, being 3.5m compared to approximately 6m.
- Outside trading times, all internal and external lights are switched off by staff when leaving the store. If staff fail to turn off appliances or lighting, a power saving circuit is activated by means of a relay when setting the stores security system. This will de-energise a number of power circuits and one third of the Sales Area lighting.
- All shop floor chillers are fitted with blinds that automatically come down after the store is closed. This saves energy by preventing cold air escaping.
- Aldi's freezer cabinets have glass sliding lids allowing the consumer to see the product whilst preventing the escape of cold air.
- Aldi's shop floor heating system is via the 'waste heat' generated from the refrigeration. This provides a full 100% of the energy demands for the retail area. The staff area is heated separately and controlled with individual thermostatic controls.
- Aldi stores are not fitted with air conditioning due to their efficient heating systems. Instead, stores are designed to be 'self-sufficient'. External doors are not left open, but rather effective building techniques to incorporate good insulation and natural circulation enable temperatures to remain stable in both the winter and summer.
- All of Aldi's main entrances are fitted with sliding doors to minimise heat loss.
- Littering of external areas is kept to a minimum by stringent management regimes, whilst coin operated trolleys minimise the potential for these to be taken off site, vandalised and discarded.