

ARC BAUEN LTD
NEW ALDI STORE, MON BANK, NEWPORT
CONSTRUCTION & ENVIRONMENTAL MANAGEMENT PLAN

EXECUTIVE SUMMARY

The works to the site incorporate the construction of a class A1 food retail store together with welfare accommodation, associated car park and landscape work. This report outlines how this project will be constructed efficiently under controlled environmental conditions.

The report considers and provides methods to ensure the disruption to adjacent site occupiers and road users are minimised.

The content of this report will also address anticipated conditions relating to the planning permission for the development.

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Arc Bauen

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1.0 INTRODUCTION

This report has been prepared for the benefit, use and information of the Client, as well as providing a clear statement of the processes incorporated by Arc Bauen Ltd.

The report is a qualified assessment based on current information and is subject to refinement as the project evolves. We have prepared our report to outline how this project will be constructed including a review of the construction methodology and site logistics. This report describes the proposed outline programme and key activities for the construction of a Class A1 food retail store, together with welfare accommodation, associated car parking and landscaping work. Potentially significant environmental impacts associated with these activities are identified and, where necessary, proposals for mitigation are outlined.

2.0 PROGRAMME OF WORKS

The total duration for the works is twenty-six weeks inclusive of all snagging. On completion of the works the Client takes one week to stock the store in readiness for trading.

Our construction methodology statement which follows explains how this will be achieved.

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3.0 MATERIALS AND RESOURCE USE

3.1 Construction Waste

A specialist waste management organisation will be employed during the construction works, with specific responsibility for the coordination of the disposal of all surplus materials, and the management of an effective document control system to track and confirm that the proper procedures have been followed. The location of the waste handling site that the materials will be taken to will be dependent upon their specific make up, but we anticipate that sites close to the proposed works and within the County of Gwent will be used amongst others as appropriate. Wherever possible, materials will be recycled and re-used either onsite, or provided for use elsewhere.

3.2 Construction

Estimates of key construction materials are listed below:

- 400m³ of reinforced concrete
- 75 tonnes of structural steelwork
- 350m² blockwork construction
- 500m² internal walls, partitions and general fit-out materials.

3.3 Plant and Equipment

Consideration has been given to the types of plant that are likely to be used on-site during the construction phases of the Proposed Development. The plant and equipment associated with each key element of the construction process is set out in Table 1.

Table 1: Estimated Types of Plant during the Construction Phase

Plant	Stage		
	Substructure	Superstructure	Fit –out
360° Excavators	✓	✓	
Dumpers	✓	✓	
Mobile Cranes		✓	
Air Compressors	✓	✓	✓
Power Tools	✓	✓	✓
Hand/Power Tools	✓	✓	✓
Scaffold	✓	✓	
Delivery Trucks	✓	✓	✓
Skips and Skip Trucks	✓	✓	✓
Forklift Trucks	✓	✓	✓

Note: ✓ Usage of plant at each stage.

3.4 Hours of Work

It is anticipated that the core working hours for the noise and traffic creating construction will be set out as follows:

- 0730 - 1800 hours Weekdays:
- 0730 - 1300 hours Saturday: and
- We do not anticipate working on Sunday or Bank/Public Holidays.

Although night time working will not normally be undertaken, it is expected that the store clean will take place at night outside of the approved hours, but this will not create any amenity issues.

4.0 PROPOSED CONSTRUCTION METHODOLOGY

4.1 Substructure Works

The anticipated substructure works consist of plain concrete pad bases and strip footings together with a reinforced suspended concrete slab. External drainage will also be installed at this time and, wherever possible, stormwater soakaways will be provided. Foul will discharge into the nearby public foul sewer connection.

4.2 Superstructure Works

The superstructure works comprise new build which is primarily steel frame construction with a concrete ground floor slab. The external walls are part constructed with a block inner and outer leaf of self-finished cladding panels.

4.3 Mechanical and Electrical Services

The store utilises a partial heat recovery system which in plain terms re-uses the expelled warm air from the refrigeration plant and re-cycles it back into the store for heating. The building is controlled by a management system to assist its efficiency and all the electrical and refrigeration equipment is to the latest efficiency standards.

4.4 External Works and Landscaping

It is anticipated that once the structure and building envelopes have been completed the common/service areas surrounding the building will commence. This will include completion of service and drainage lines, landscaping of the surrounding paving and erection of external lighting.

Only when all external works are finalised and the building envelope is completed, will the safety hoarding/Heras fencing be adjusted and final 'dressing' of external public areas take place.

4.5 Commissioning and Building Handover

As each system is completed throughout the building, then it will be tested in accordance with the mandatory specifications and codes. On completion of all works the buildings and systems shall be subjected to statutory inspections and testing before finally being handed over and occupied by the Client. A safety file is provided for the store, which remains in the store for use by any maintenance operatives.

5.0 SITE LOGISTICS

5.1 Introduction

The management of the site logistics is key to the success of the project. The Traffic Management Plan (appended to this CEMP) identifies the location of the welfare facilities, materials storage, waste management, on site parking and smoking area. The site manager will be responsible for the logistics of the deliveries and materials storage. This is to minimise both off and on-site congestion. Material storage will be in phases with easy access to minimise breakage and waste. The delivery vehicles will enter site and egress the site in a forward movement.

5.2 Concrete Pumps

A concrete pump will be used for the slab construction, but will be contained within the site.

5.3 Site Accommodation

The site accommodation will be located adjacent to the newly formed site entrance serving the front of the store. This provides safe access for site visitors from the public footpath. The office is stacked over the canteen and gives the site manager a clear view of site activities and the boundary to the public highway and site boundaries.

5.4 Personnel Access

The proposed site personnel access is adjacent to the main vehicular access point. All personnel will be required to report to the site office for a site induction on site safety issues.

5.5 Deliveries

All deliveries will be organised through the site manager so that he can prepare the site to receive the delivery. As the construction programme requires the car park road base construction is to be laid as soon as possible, a bowser will be provided at the site entrance, and vehicle wheels and axles will be cleaned prior to joining the public highway. The only craneage will be to lift and install the structural steelwork and roofing materials.

5.6 Construction Vehicle Movements

Table 2 provides indicative construction HGV movements for the Proposed Development.

Activity	Approximate HGV Movements	Estimated Loads per Day
Substructure/Ground Formation	120	12
Superstructure	30	3
Fit Out	60	2
Total Period of Activities	210	17

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6.0 POTENTIAL ENVIRONMENTAL IMPACTS

6.1 Potential Impacts during Demolition and Construction

A review has been undertaken of the potential sources of adverse impacts associated with the construction works. The results of this have been presented in Table 3.

Table 3:

Issue	Potential Impacts
Dust/Air Quality	Wind blown dust from ground surfaces, stockpiles, vehicles, work faces and cutting and grinding of materials. Exhaust emissions from lorries and plant delivering and removing materials including dust and particulates.
Ecology	No impact anticipated
Energy Usage	Indirect impacts associated with energy consumption such as CO ₂ emissions, depletion of natural resources, air pollution etc (Material selection and embodies energy issues are covered during the sustainable design section).
Fuel & construction materials storage	Accidental spills, contamination to ground. Temporary fuel bowzers to be double lined and bund to be fitted as a secure method to ensure no contamination.
Hazardous materials and contaminated land	Exposure of the work force to deleterious/hazardous material and contaminated land, mobilisation of any source contaminants and creation of pathway from source to groundwater receptor. Minimal risk due to ground conditions.
Noise	Increased road noise levels from vehicles. Increase noise levels from plant during general construction works (e.g.

	from the use of air compressors and diamond cutters) on-site. Site working hours restricted.
Site surroundings & pedestrian access	Restrictions on pedestrian access to walkways, footpaths and roads. N/A as site is self contained.
Traffic	Traffic congestion caused by the site traffic. Increased vehicle movements mainly consisting of HGV's. Transfer of mud and material from vehicles onto the public highway. Disruption from abnormal or hazardous loads. Exhaust emissions.
Waste	Waste generation. Site waste management plan to reduce waste in ordering and on-site re-use.
Water and Water Usage	Increased sediment loadings to storm water system. Potentially contaminated storm water runoff. Natural resources depletion. N/A standpipe only.
Vibration	Increased vibration levels from vehicles. Increased vibration levels from plant during general construction works. No vibration techniques required in construction of the site.

Note: HGV – Heavy Goods Vehicles, CO₂ Carbon Dioxide

6.2 Washing Down Vehicles

Washing down of vehicles will take place in a designated area within the confines of the site. All deliveries to site will be directed to this clearly marked wash down point and accompanied by a banksman who will direct and supervise drivers. The location of this wash down point will be at least 10m away from any surface water drainage installation.

Run-off will be collected in a polythene lined skip (8 yds) with settled solids removed regularly and water recycled, and reused, wherever possible. Any excess water will be discharged to foul sewer with prior permission from the water authority. Consideration will be given to erecting a screen to prevent spray or wind drift from the designated area.

6 MITIGATION MEASURES

7.1 Management of Trade Contractors

Individual contractors (e.g. for waste removal) will incorporate relevant requirements in respect of environmental control, based largely on the standard of 'good working practice' as outlined in the statutory requirements.

7.2 Public Relations

The site manager will deal with complaints and enquiries. This individual will be named at the site entrance, with a contact number prior to the start of construction. The site will either be controlled by the site manager at all times. There will be regular meetings with representatives from the LA during the construction period to discuss the forthcoming works, potential for environmental impact and effective management of same.

7.3 Tree Protection

Should there be a necessity to protect any existing trees they will be protected in accordance with BS 5837: trees in relation to construction: 2012.

- The barriers will be vertical weld mesh panels secured with uprights driven into the ground. Tree protection barriers will be erected prior to any materials being brought onto site and before any stripping of soil or erection of site huts.
- Once erected, fences should not be removed or altered.

- No excavation or building work shall be undertaken within the protective fencing including erection or storage of temporary buildings, soil, spoil or any other materials.
- There shall be no burning on site.
- Re-surfacing of the car park nearest the protected trees will be carried out in the final phase of the contract when the majority of other works are completed.
- Method statements will be produced for:
 - * Method statement for re-surfacing areas near trees
 - * General specification for effective tree protection

7.4 Construction Vehicle Management

The vehicles for site operatives are to be parked in the designated area. There will be a general policy of no off-site car parking and the site labour force will be encouraged to share rides or use public transport.

7.5 Access and Egress

All deliveries will need to be kept off the highway. The site entrance will be clearly identified and deliveries will arrive at a designated time windows so that vehicles can enter and egress the site in a forward driving manoeuvre.

7.6 Road Cleanliness

To minimise site-generated material on roads vehicles and equipment leaving site will have axles and wheels washed down at an area close to the exit onto the access road. It is anticipated to lay the car park road base by the middle of the construction process therefore reducing the risk of debris on the roads.

7.7 Dust Suppression

At all times, good site practice procedures will be followed in order to mitigate air pollution and proposed measures currently planned include:

- Brushing and water spraying of heavily used site hard surfaces and access points as required.
- Effective wheel/body washing facilities to be provided and used as necessary; size of site may only require a standing point and hose wash.
- Vehicles transporting materials capable of generating dust to and from site to be suitably sheeted on each journey to prevent release of materials and particulate matter.

Dust from stock piled surplus excavated material will be controlled by frequently spraying with water. This process causes the nuisance dust particles to cling together into a larger, heavier mass which results in the surface being more resistant to the effects of wind. In addition, and for any period where the stock piled remains for more than a few days, the surface of the pile will be sheeted over with tarpaulin.

7.8 Management of Noise and Vibration

At all times, good site practice procedures will be followed in order to mitigate noise and vibration impacts.

Measures currently planned to be adopted include:

- Off site pre-fabrication to be used, where practical.
- All plant and equipment to be used for the works to be properly maintained, silenced where appropriate, and operated to prevent excessive noise and switched off when not in use and where practicable;
- Plant will be certified to meet relevant current legislation and British Standard BS 5228 standards;

- All Trade Contractors to be made familiar with current legislation and the guidance in BS5228 (Parts 1 and 2).
- Loading and unloading of vehicles, dismantling of site equipment such as scaffolding or moving equipment or materials around site will be conducted away from noise sensitive areas.
- Noise complaints immediately investigated.
- Wherever possible, plant and equipment will be switched off when not in use;
- Burning of wastes or unwanted materials will not be permitted on-site; and all hazardous materials including chemical, cleaning agents, solvents and solvent containing products to be properly sealed in containers at the end of each day prior to storage in appropriately protected storage areas.

7.9 Site Waste Management Plan

The disposal of all waste or other materials removed from the site will be in accordance with the requirements of the Environment Agency, Control of Pollution Act (COPA), 1974 Environment Act 1995, special Waste Regulations 1996, Duty of Care Regulations 1991 and the Site Waste Management Plan Requirements.

In general, and in accordance with the principles of the UK Government's 'Waste Strategy 2000', a principal aim during construction will be to reduce the amount of waste generated and exported from the Proposed Development site. This approach complies with the waste hierarchy whereby the intention is first to minimise, then to treat at source or compact and, finally, to dispose of off-site as necessary. All relevant contractors will be required to investigate opportunities to minimise and reduce waste generation, such as:

- Agreements with material supplies to reduce the amount of packaging or to participate in a packaging take-back scheme;

- Implementation of a 'just in time material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste;
- Attention to material quantity requirements to avoid over-ordering and generation of waste materials;
- Re-use of materials wherever possible;
- Segregation of waste at source where practical and re-use and recycling materials off-site where re-use on-site is not practical (e.g. through use of an on-site waste segregation facility. See appendix Traffic Management Plan – to follow).

Overall the waste management for the site comprises:

- Loads are ordered on a need basis to prevent over ordering and on-site damage.
Waste skips are provided for wood, metal, glass, plasterboard and mixed waste. Skips will be covered to prevent dust and debris blowing around the site and will be cleared on a regular basis. Burning of wastes or unwanted materials will not be permitted on-site. All hazardous materials including chemicals, cleaning agents, solvents and solvent containing products will be properly sealed in containers at the end of each day prior to storage in appropriately protected and bunded storage areas.









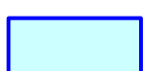


APPENDIX A

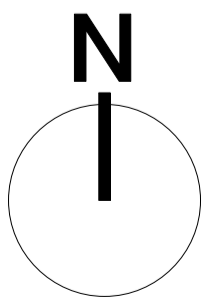
Traffic Management Plan

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LEGEND: -

- | | | | |
|---|-----------------------|---|-------------------------------------|
|  | WELFARE |  | HERRAS FENCING |
|  | MATERIALS STORAGE |  | CROWD BARRIER |
|  | CAR PARKING |  | FIRE EXTINGUISHERS |
|  | SITE WASTE |  | FIRST AID |
|  | FIRE ASSEMBLY POINT |  | SITE INDUCTION / SIGNING-IN STATION |
|  | VEHICLE TRAFFIC ROUTE | | |



0 25 M
Scale - 1:250 @ A1



**ALDI NEWPORT, MON BANK
TEMPORARY SITE SET-UP PLAN**

Arc Bauen