MANCHESTER CITY COUNCIL
gd lodge architects

PROPOSED NEW FISH MARKET
NEW SMITHFIELD MARKET, MANCHESTER

SUSTAINABILITY STATEMENT

SS_01/April 2013

1. Introduction

The aim of the Sustainability Statement is to provide a framework for establishing sustainability principals that will inform the design of the building and how it operates. This framework can be divided into:

Site
Pollution
Energy

2. Site

2.1 Land Use

The proposed site for the new fish market is the existing fish market car park. On completion of the new build, the old fish market will be demolished and a new parking area formed. The existing fish market is at the end of its useful life and needs to conform to current standards.

By constructing the new market before demolishing the old, allows trading to continue as long as possible which is fundamental to existing vendors who have an established and demanding customer base.

Excavations for the new building along with suitable demolition materials are to be kept on site and used as the sub base for the new car park. The existing cross fall across the site means that the existing footings and floor slab of the old market can be left insitu below the new car park level avoiding unnecessary excavations.

2.2 Landscape

The existing hard landscaping comprises coarse macadam surfacing for both the internal access roads and car parking with a concrete apron around the building perimeter. Other than around the gatehouse, there are no designated foot paths with pedestrians and vehicles sharing the same routes.

Soft landscaping comprises tree and shrub planting along Bessemer St., around the site entry at Whitworth St. and boundary planting to the south of the site. Around the fish market site, some of the traffic islands to the existing parking area are planted. These will be affected by the new fish market and it is proposed to provide replacement tree and shrub planting to the new parking area.

2.3 Flooding
The site of New Smithfield Market is not within an area of flood risk as designated by the Environment Agency.

The new fish market will connect into the existing foul drainage system. Water management systems (including low flush wc's and flow restrictors to sinks and showers) will aim to ensure that the outfall into the existing system will not exceed that currently experienced. With regards surface water, there will be no change to the current rain water run off area since the area of new roof and hard landscaping is comparable with existing.

3. Pollution

3.1 Waste
The New Smithfield Market operates a waste management strategy that aims to reduce emissions of CO2 and create a low carbon economy in the most efficient way appropriate to the market operation. Refer Waste Management Statement WMS_01 for more details.

3.2 Noise
The new fish market should achieve betterment of the existing noise levels produced by the existing operation. The existing building is poorly insulated and the external mounted refrigeration and ventilation plant is old and inefficient compared to current standards.

Natural ventilation will be utilized as much as possible. Where mechanical ventilation is required this will aim to use slow speed low noise fans. External condenser units will be 15% more efficient than current systems and operate an ‘on demand’ system which means that day time ratings of 45dB and night time ratings of 37dB can be achieved.

3.3 Lighting
External street lighting is to be reused from the existing car park along with low energy LED flood lights to the service (rear) elevation with anti glare shrouds / louvers to minimise light pollution.

4. Energy

4.1 Envelope
The new fish market will be insulated exceed current technical standards using Firesafe zero ozone depleting insulation. By forming the cold rooms and freezer units independent of the main building envelope, the only areas requiring an insulated envelope will be the first floor offices and staff areas. The main building envelope therefore only needs to act as a weather screen to the insulated 'pods' within, whether these are heated (staff areas) or chilled (processing and storage areas).

4.2 Power

Given the hours of trading and type of occupancy an electric system is deemed the most efficient in terms of demand and reaction. Heating will be electric panel or convector type radiators. Hot water will be provided by point of use water heaters.

Given the large roof area (2200m²), consideration was given to the potential for solar panels or photovoltaics, but both were felt to be impractical. The demand for hot water is minimal and the hours of operation limit the benefits of electricity generated by sublight. However it is hoped that the meters and electrical distribution can be installed in such a manor to facilitate future input from photovoltaics to offset some of the electrical loads to cooling plant which operates 24hrs.

4.3 Internal Lighting

Low energy lamps are to be used throughout along with motion detectors and time clocks where appropriate. Natural daylight is to be used in both the first floor offices and the public Buyers Walk.





