

Aldi Selby

RETROSPECTIVE PROJECT

Noise pollution is the propagation of noise or sound with ranging impacts on the activity of human or animal life, most of which are harmful to a degree. The source of outdoor noise worldwide is mainly caused by machines, transport and propagation systems.

THE BRIEF:

Following the redevelopment of an old police station site in Selby, North Yorkshire a major UK food retailer opened a new store to serve the local community.

Not long after opening however noise complaints were reported to the store staff and the Local Authority by residents whose properties backed on to the plant compound at the rear of the store.

DESIGN

Acoustic housings which achieve desired noise reduction target whilst maintaining plant air flow, maintenance access and most importantly store trading.

CREATE & MAKE

Acoustic louvre and splitter combination for the plant housing and gas cooler - individual acoustic enclosures for the condensing units

DELIVER & INSTALL

Deliver 'Flat Pack' acoustic louvre enclosure and smaller enclosures. Provide a full Installation service with no interruption to store trading.

THE CHALLENGES:

The heating and cooling equipment which was installed for this site was ranging between 45-50 dB(A). The desired reduction our solution was to achieve was ≤39 dB(A) during daytime operational hours and, ≤30 dB(A) during nighttime operation.

Due to the location of the heating and cooling equipment airflow was a key consideration on this project.

We had to design an access hatch to allow for an isolator switch located behind the larger enclosure to be accessible from inside our enclosure.

PROJECT TIMELINE:

- Feb 24 - Enquiry Received from Contractor. Site Visit and Project Meeting.
- Feb/Mar 24 - Concept Design with Acoustic Consultant. Tech Subs on Materials.
- Mar 24 - Quotation issued to main contractor Project Sign Off documents prepared.
- Apr 24 - Order Received - Commence manufacture. Palletised parts prepared for installation.
- Jun /Jul 24 -Installation completed and signed off . Local Authority approval issued.

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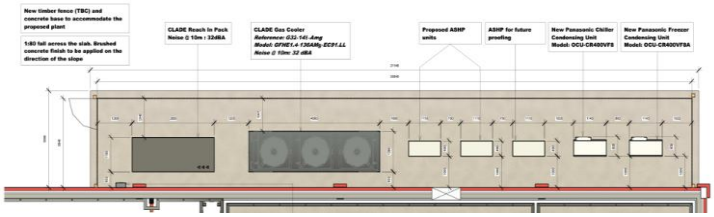
THE SITE (BEFORE):

The C02 Refrigeration, Heating/AC plant was installed and commissioned to the regular store format and a 3.5m high perimeter fence was erected to create a barrier between the store and the neighbouring houses.

Unfortunately, the resultant day time and nighttime noise levels caused nuisance to the properties which were only 3.0m away from the fence resulting in local authority intervention.

The services pipework and cabling had been installed and the store was fully operational.

Proposed Plant Layout









THE SITE (AFTER):

Providing a full acoustic encasement retrospectively is not easy - the applied acoustic treatment has to be designed to allow for sufficient air flow and control to ensure that recirculation is avoided

The entry and exit of pipework and electrical services have to be designed to maintain acoustic integrity at the same time as providing for comprehensive maintenance access

The 2 x Refrigeration Condensing Units were installed in separate EG Unity acoustic housings, and the Pack Housing and Gas Cooler were encased in a single housing with full ambient and discharge air separation.







THE FINAL WORD:

Our project at Aldi Selby came with its challenges, but with meticulous design the installation of these units was efficient in its execution, and powerful in its overall performance.

Tim Simpson from Wave Refrigeration had this to say:

"From making initial contact and arranging a site scoping meeting I was very impressed with Environ, there attention to detail, and manufacturing an acoustic noise solution was very impressive! Following the completion of work the solution was that affective you struggled hearing the refrigeration plant run at all - I will certainly be using Environ again in the future"

Tim Simpson – Wave Refrigeration

Environ Group offer a comprehensive range of acoustic and in house manufacturing services including full product design

TO FIND OUT MORE ABOUT ENVIRON GROUP PLEASE MAKE CONTACT TODAY

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