

# Thunderbird 2\_Case Study

# ChimFlue

## Thunderbird 2

### Project

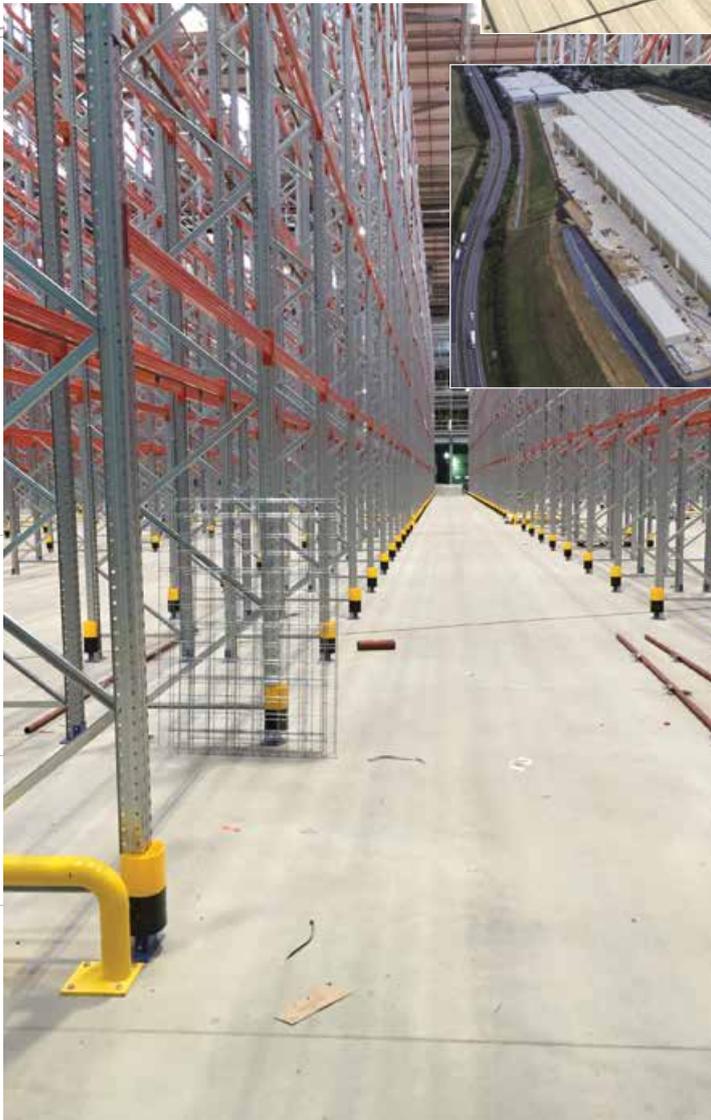
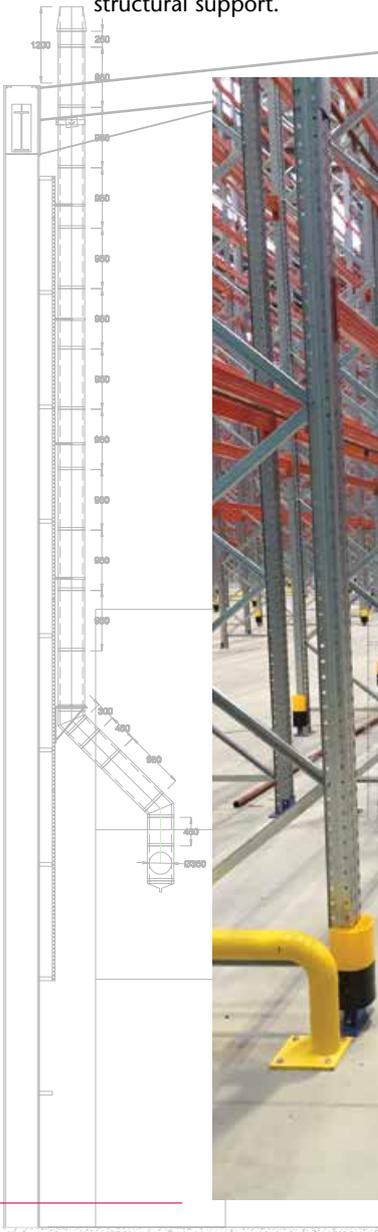
The brief for this project was to design, supply and install one new flue system to serve the proposed 3 No. Hoval Ultra Gas 350 condensing gas fired boilers, five individual flue systems to serve 8 meter high warehouse heaters and five further flues to serve air handling plant. The location of the new build site was next to junction 12 of the A14 at Islip, Kettering and will serve as an impressive state of the art 98,700m<sup>2</sup> automated warehouse facility for retail giant – Primark.

After reviewing the options available we decided to install suitably sized 316 grade stainless steel twin wall insulated flues. The biggest challenge was to find suitable flue routes for all of our systems which did not disrupt operations and also offered a good level of structural support.



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**Chimflue Ltd**  
Andover  
Units 3-6 Viscount Court  
South Way, Andover  
Hampshire, SP10 5NW, UK  
T. + 44 (0)1264 332878  
F. + 44 (0)1264 366647  
E. sales@chimflue.co.uk  
W. www.chimflue.co.uk

**Hatfield**  
Unit 10  
Alpha Business Park  
Travellers Close  
Welham Green, Hatfield  
Herts., AL9 7NT, UK  
T. + 44 (0)1707 266244  
F. + 44 (0)1707 266277  
E. saleswg@chimflue.co.uk  
W. www.chimflue.co.uk

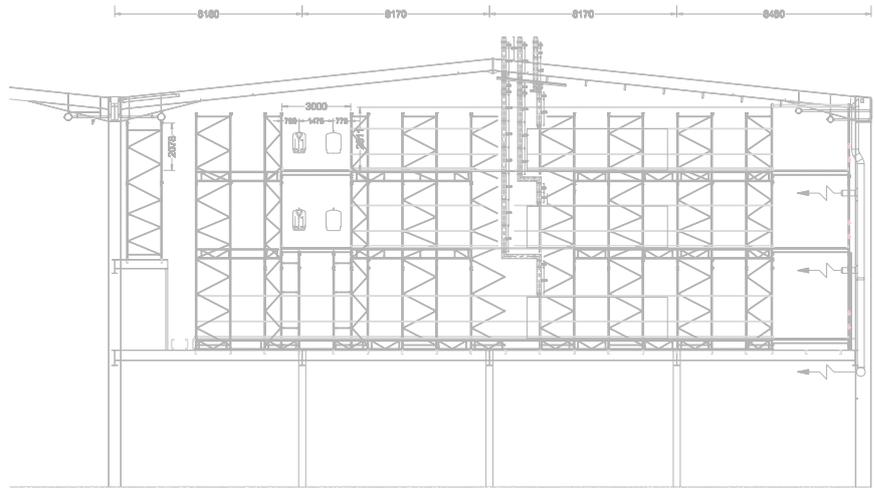


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### Design

Key factors for the design included:

- New condensing boilers being installed required a constant fall on the flue system whilst passing through the plantroom then rising up through the ceilings to terminate above the roof condensing gas fired boilers.
- The 8m high warehouse heaters required large individual flues which had to be supported from adjacent wall purlins before offsetting through pipework and passing through the roof some 18.5m above finished floor level.
- New AHU's required individual flues, 3 on one side of the building and 2 on the opposite side. Each AHU was located on a different level of mezzanine floor and all systems had to rise to termination with a 500mm clearance between casings.
- Installation to be carried out within a short time window with strategically located supports.



### Product Specification

The following product specification was used throughout the project:

- Gas Boiler Internal Flue – Poujoulat Condensor – 316 Grade Stainless Steel Single Wall @ 300mm Diameter.
- Gas Boiler Riser – Poujoulat Therminox TI - 316 Grade Stainless Steel Twin Wall @ 400mm ID / 464mm OD.
- Warehouse Heaters – Poujoulat Therminox TI - 316 Grade Stainless Steel Twin Wall @ 350mm ID / 414mm OD.
- Air Handling Units – Poujoulat Therminox TI - 316 Grade Stainless Steel Twin Wall @ 130mm ID / 194mm OD.



### Installation

The complete design, supply and installation of all systems were completed by Chimflue over a period of 4 weeks on site. Due to the 18.5m high ceiling throughout the warehouse space, access machines were provided by the client to enable our installation teams to carry out the works. In certain areas on the ground level and on each mezzanine level the main contractor had provided our teams with specially erected scaffolding to allow us the height and outreach whilst confined between floors.