

**Project:** Ludham House & Waxham House  
Lismore Circus, London. NW5

**Works:** Replacement Heating mains to estate.  
**Completed:** 2015-16.

- **What was the reason behind siting the pipework externally rather than internally?**

The project was designed from the outset with the district heating pipework rising internally to the building's façade, located at the balcony side of each dwelling. The project then proceeded to construction stage on this basis.

However, the contractor attempted several pilot holes in order to establish common, vertical riser positions for the pipework to pass through the slab of each floor level, but found an array of live electrical cables and conduits emanating from distribution risers and buried within the concrete floors. This, in itself, would still not have caused the final [external] solution to have been adopted as the contractor, under our advisement, continued to search for a safe riser position further along the passage, but each attempt yielded similar results as the first.

Finally, after several attempts to locate a rising path for the pipework to pass, it became apparent that there was no aligned strategy to the laying of the horizontal power cables within the floors and further, that to continue to attempt to core-drill the floors was far too dangerous a task for the personnel and further attempts had to be aborted.

The next stage was for the contractor to review if it was possible for new riser services to run internally to the dwellings, but this was discounted as completely impracticable, mainly due to the increased fire risk created which would have compromised the integrity of the floor levels between properties, but also it would have proven almost impossible logistically (Attempting to coordinate all of the residents being in occupation for each riser at a time, is virtually impossible).

- **Detailed information about the rationale behind the siting, and the practical need for the boxing:**

With the above situation being found during the contract programme, the design and construction team were then faced with the task of finding a suitable and practicable position that suited a common riser strategy for the whole building and the one now in situ was found to meet these requirements in full. A consequence of this revised strategy meant that we now had to find a method of concealing the new pipework that was;

- Practical – in terms of providing a weather-proof means of protection for the insulated pipework beneath.
- Robust – as the covering has a need to be allowed to be removed and replaced in future for maintenance and adjustment of valves and fittings concealed within.
- Aesthetic - In harmony with the base building structure.

The product manufacturer selected (Pendock Ltd) appeared to meet all of these requirements. Before installation, the D&B team reviewed the product alongside the manufacturer and found that this was a flexible method that had been used on many other estates and their respective buildings.

The product is formed in 3.0mm thick aluminium for rigidity, can be cut to virtually any accessible building contour and finished in a powder coated finish to any RAL colour (Gardenia - Colour reference 10B15 was selected as the most suitable colour match). This was the reason the final cladding solution was adopted.

It should be noted, that the external pipework solution was never installed in an attempt to circumvent the planning process and, if it had been known from the outset, that the only way to run the new services was that which was finally chosen, then the planning process would have begun at that point and the project delayed until a decision or decision in principle had been reached.

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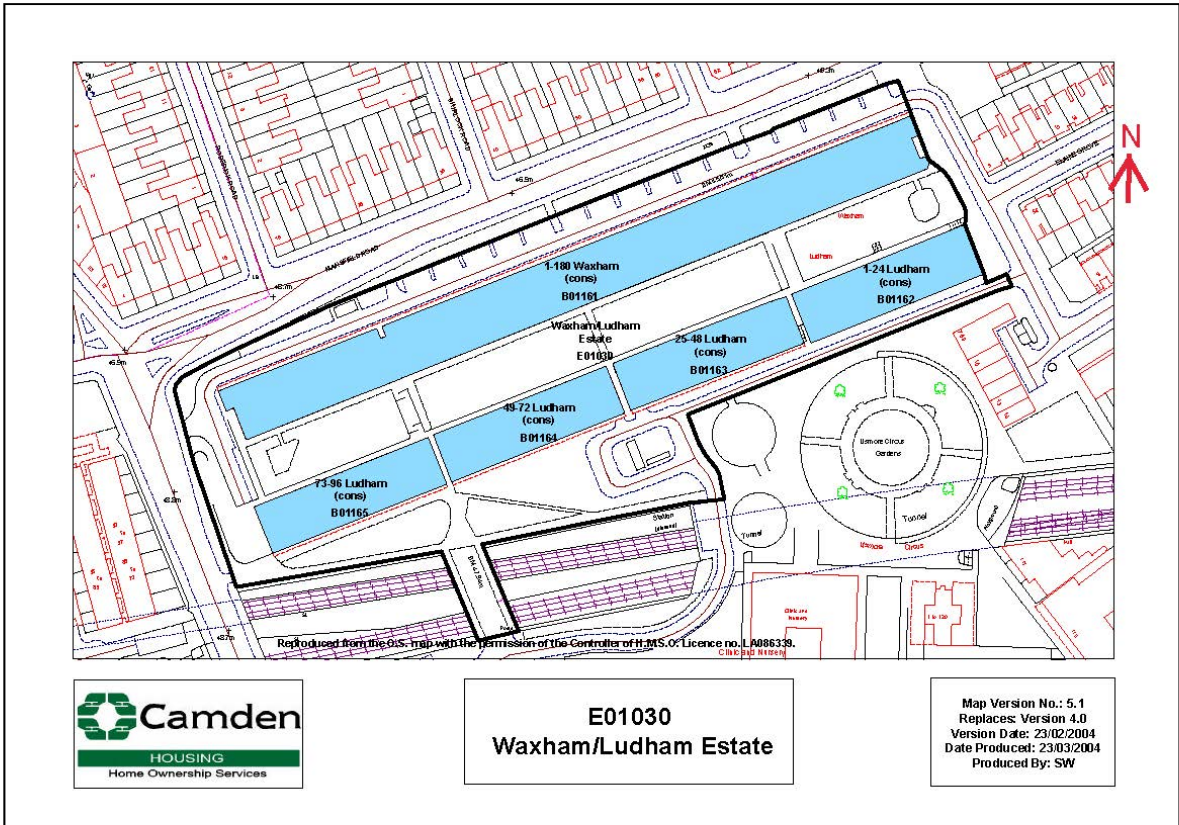
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- PHOTO GALLERY

The photo gallery that follows shows some typical building elevations prior to works commencement and the encased pipework as at completion and the building-sympathetic colour rendering that was applied to the finished product.



SITE LOCATION PLAN



LUDHAM - VIEW OF TYPICAL FRONT ENTRANCE, PRIOR TO WORKS



LUDHAM - WITH CLADDING COMPLETED



WAXHAM (GARDEN ENTRANCE)





WAXHAM - VIEW OF PARTIAL REAR ELEVATION, PRIOR TO WORKS



WAXHAM – REAR ELEVATION (FACING EAST) WITH CLADDING COMPLETED



WAXHAM – REAR ELEVATION (FACING WEST) WITH CLADDING COMPLETED

# PENDOCK

## Waxham

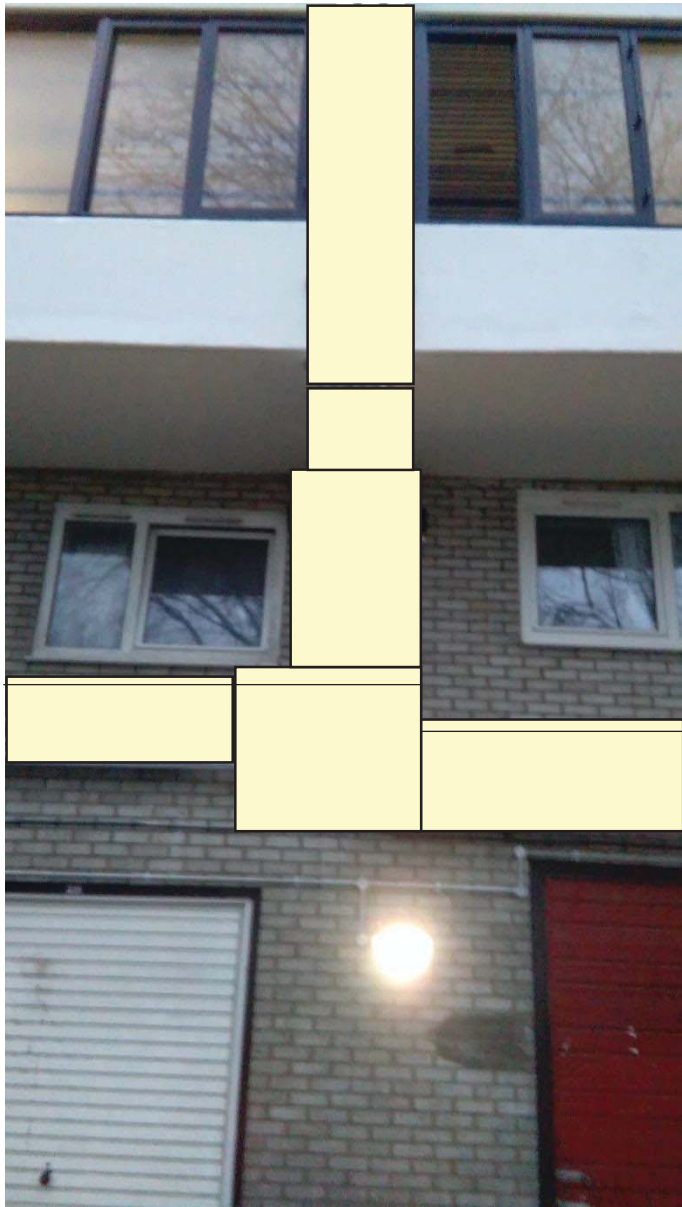
**External Metal Pipe Boxing to Cover approximately 250 meters of Lateral Pipework & 21 no. Risers 11 meters in height on the Mansfield Road Elevation of the building** – The Boxing is a Channel Profile, of various sizes & lengths as detailed below. All Lateral Boxing will have a 25 degree angle on the top edge. Each Riser is supplied with a 25 degree angled sloping Top Cap. Butt joint covers & 100mm x 50mm fitting angle are supplied. In addition there are 2 no. small riser & lateral sections by the entrances on the elevation facing the Ludham building. All Metal boxing to be PPC in Gardenia (colour reference 10B15).



## Lateral & Riser Pipe Boxing on Mansfield Road Elevation



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Entrances on Mansfield Road Elevation of Waxham Building



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Entrances on Ludham Facing Elevation of Waxham Building

