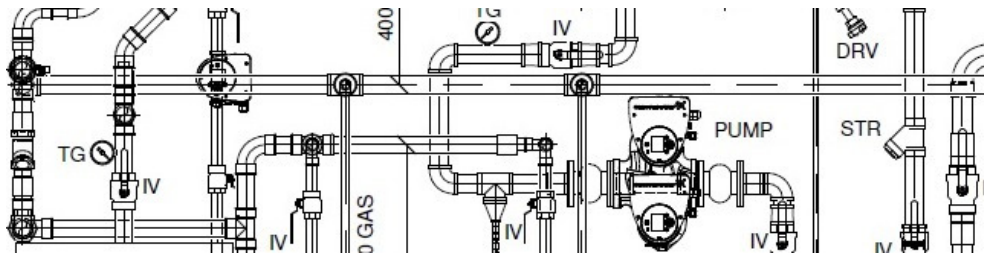




**DRINKWATER ASSOCIATES (UK) LTD.**



**Building Services / Architectural / Engineering CAD  
Draughting**

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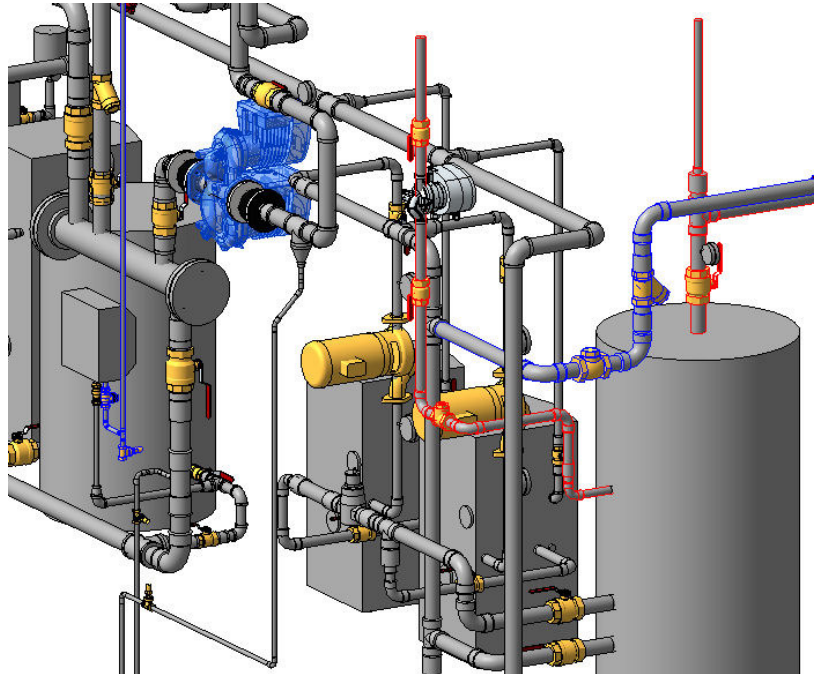
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## INTRODUCTION

At **Drinkwater's** we offer a complete CAD service to the Architectural, Engineering, Building Services and Construction sectors. Working at the forefront of CAD technology, our focus is to deliver 100% accurate production/installation/fabrication drawings, allowing you a smooth transition from design concept through to project completion.

**Drinkwater's** role in today's pressurised and fast paced Building sector, is to provide construction projects with the ability to maintain high standards of drawing production for today's fast track market. Through our expertise and experience within the industry, we can assist you to bring your project, whether large or small, to complete on time and within budget. Our core skills and main activities are the provision of M&E Co-ordinated services layouts, through to O&M support at the end of the project.

We can produce spatially co-ordinated building services drawings for Healthcare, Commercial, Retail, Leisure and large scale Domestic Projects of any size.



**Fig 1** – Small Plantroom 3D Revit Model - Hot Water and Heating

## DISTRICT HEATING CO-ORDINATION

At **Drinkwater's** we specialise in the installation co-ordination of District Heating Networks starting at the Energy Centre through to the Consumers' Heat Interface Units including:

- Full spatial co-ordination of the Gas Boilers / Biomass Boilers / CHP Plant, Thermal stores, Pumps and ancillary equipment in accordance with the consultants/designers drawings.
- Co-ordination of buried District Heating Primary pipework with all existing underground services such as BT, Power, Gas and media (data supplied by third party) and route proposals for Local Council.
- Full set of installation drawings with levels and dimensions for setting out of the trenches, and any details of co-ordination around existing services.
- Spatial co-ordination of Satellite Plant Rooms for the Secondary Heating and Hot Water supplies.
- Co-ordination and production of all layout drawings for the Secondary and HWS supplies to the consumer HIU from the Satellite Plant Rooms (Risers and laterals within Blocks)
- Accurate location of weld positions of buried DH pipework which is paramount for Leak Detection and future maintenance.

We can regularly survey your installation, discussing the progress with your site team and keep the drawings up to date with any changes, adding the required Weld References to the Network Trench Drawings in readiness for submitting to the client along with your O&M manuals.



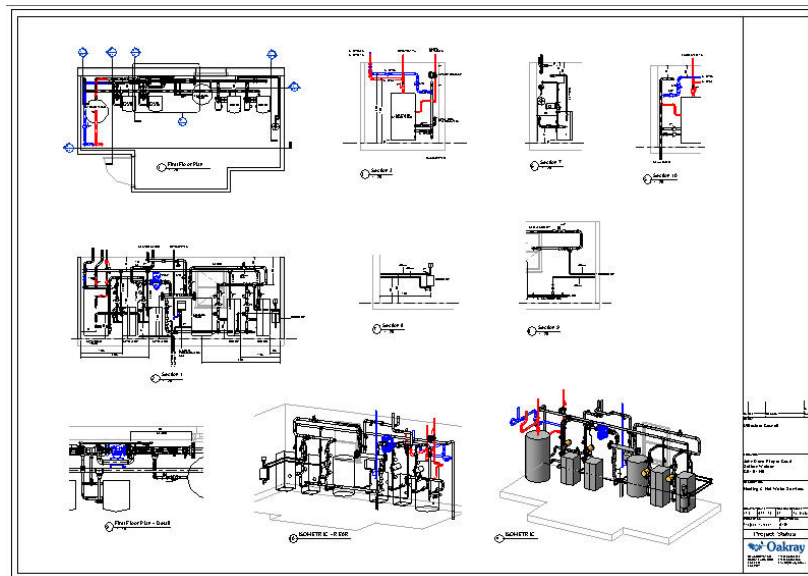
**Fig 5** – On site solution for a hidden obstacle (1m dia unrecorded conduit from another DH Network)

## FULL MULTI-SERVICE ME&P CO-ORDINATED INSTALLATION DRAWINGS

If working for the main contractor or subcontract building services company we will deliver accurate fully levelled and dimensioned single service installation drawings and models, providing each trade's precise information to carry out clash free installations. We work closely with project managers, engineers and the design team to incorporate onto the installation drawings, all information required to successfully complete the project.

## PLANTROOM CO-ORDINATION 2D & 3D REVIT MEP

We produce fully co-ordinated accurate installation drawings in either 2D or 3D (Revit MEP). Spatially co-ordinating and producing detailed drawings and layouts prior to installation will highlight any potential problems which in turn will save on costly alterations and lost time.



**Fig 2** – Revit Produced Plantroom Installation drawing with 3D views helping the fitters quickly visualise the layout.

### **LAYOUT DRAWINGS, SCHEMATICS & VALVE CHARTS**

We are able to convert your consultants CAD Layouts into your own 'Company Standard' drawings and tailor them to your requirements adding any other information that you may need to show.

We will produce full service layouts co-ordinated with the architecture from a simple consultants/designers schematic layout. We believe this to be the best solution to avoid costly clashes, especially if the project is Design & Build.

We will produce Schematic Layouts, either from the consultant's drawing (for new installations) or in many cases where existing Schematics do not exist, or have been lost, we can produce a new Schematic layout for an existing installation by coming down to site and carrying out a full survey and create a drawing based on the information obtained.

From the Schematic and site survey information, we are able to produce detailed Valve Charts for mounting on the Plantroom wall. We will send this information either as a PDF file for you to print, or if you prefer, issued as a print mounted in a frame.

### **AS INSTALLED DRAWINGS (RECORD DRAWINGS)**

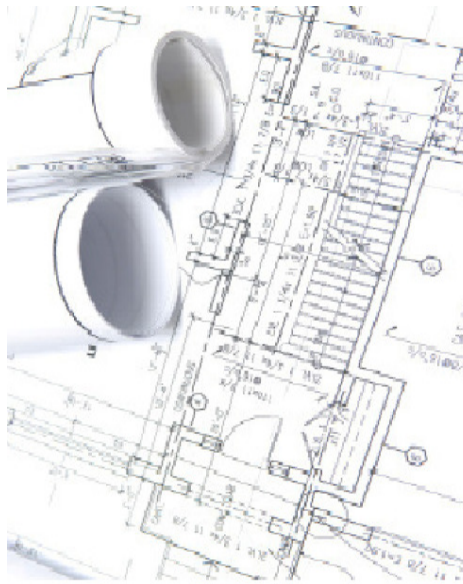
On completion of your installation, we will come to site with the latest installation drawing and fully survey and document any changes enabling us to revise the drawing accordingly to produce the 'As Installed' Record Drawing to issue with your O&M manual.

The As Installed drawings can be compared with the latest Construction Issue drawings identifying any changes to be incorporated into the Clients Variation Account. Please contact one of our Commercial experts to discuss our Commercial services or request a copy of our Commercial brochure detailing these services.

### **CAD TRACING**

If your company's requirement is to translate engineers' hand marked comments and sketches into a more presentable electronic format, we have a dedicated tracing team who are experienced in all aspects of building services.

We can also convert 'Hand Drawn' (pre CAD) layouts and schematics into 2D CAD format.



**Fig 3** – Tracing (Converting Sketches & Hand drawn Layouts into CAD)



## **SURVEYING SERVICES**

We are able to visit site and survey any installation whether it is for record purposes (post completion of work) or for documenting a current installation in readiness for future improvements or modifications to the system.

We will accurately measure the complete installation in relation to its architectural surroundings and document all the relevant Plant & Equipment and produce either a 3D model or 2D plans, sections and elevations.

If you need a condition survey for an existing installation prior to any Capital Improvements or system modifications, one of our Engineers can visit site and produce a detailed report based on their findings which will be backed up with full photographic evidence. These are very important if you are going to be working on or improving/modifying an installation and do not want to be blamed for any existing damages. These reports can be very cost effective.



**Fig 4** – We will fully survey and document your installation



## **O&M PREPARATION**

Everyone leaves the O&M manuals to the end of the project and tries to ignore them. Unless these are submitted to the client at the handover of the project, you are unlikely to receive any retention monies.

We have been producing O&M Manuals for many years and it is a service of ours that we highly recommend.

We can produce a complete manual or set of manuals with all the required information in to keep your client happy. We normally get involved with the production of the manuals when we are working on the installation drawings, but we can offer a retrospective service if the job has already been completed.

## **SUMMARY**

Our Project Team of experienced CAD Co-ordinators & Engineers has experience of working in a range of sectors and across all ME&P disciplines in the UK and abroad

Collectively the skill of our team, our investment in Technology and our established management expertise allows us to provide effective and efficient services to our clients.

Using our services provides numerous advantages including time and cost savings, especially during the installation process.

We offer a very reactive service and due to our location and flexibility can be on site at very short notice.

### **Areas of Speciality:**

2D and 3D installation drawings for:

- Energy Centres
- Boiler Rooms
- Boosted Cold Water Plantrooms
- Sprinkler Plantrooms
- Ventilation Layouts
- District Heating Installations from Energy Centre to consumer
- Pinch point co-ordination details
- Domestic ME&P Layout Drawings
- Fabrication Drawings

Record Drawing Surveys

Condition Surveys

O&M manual preparation – Hard Copy and Electronic format