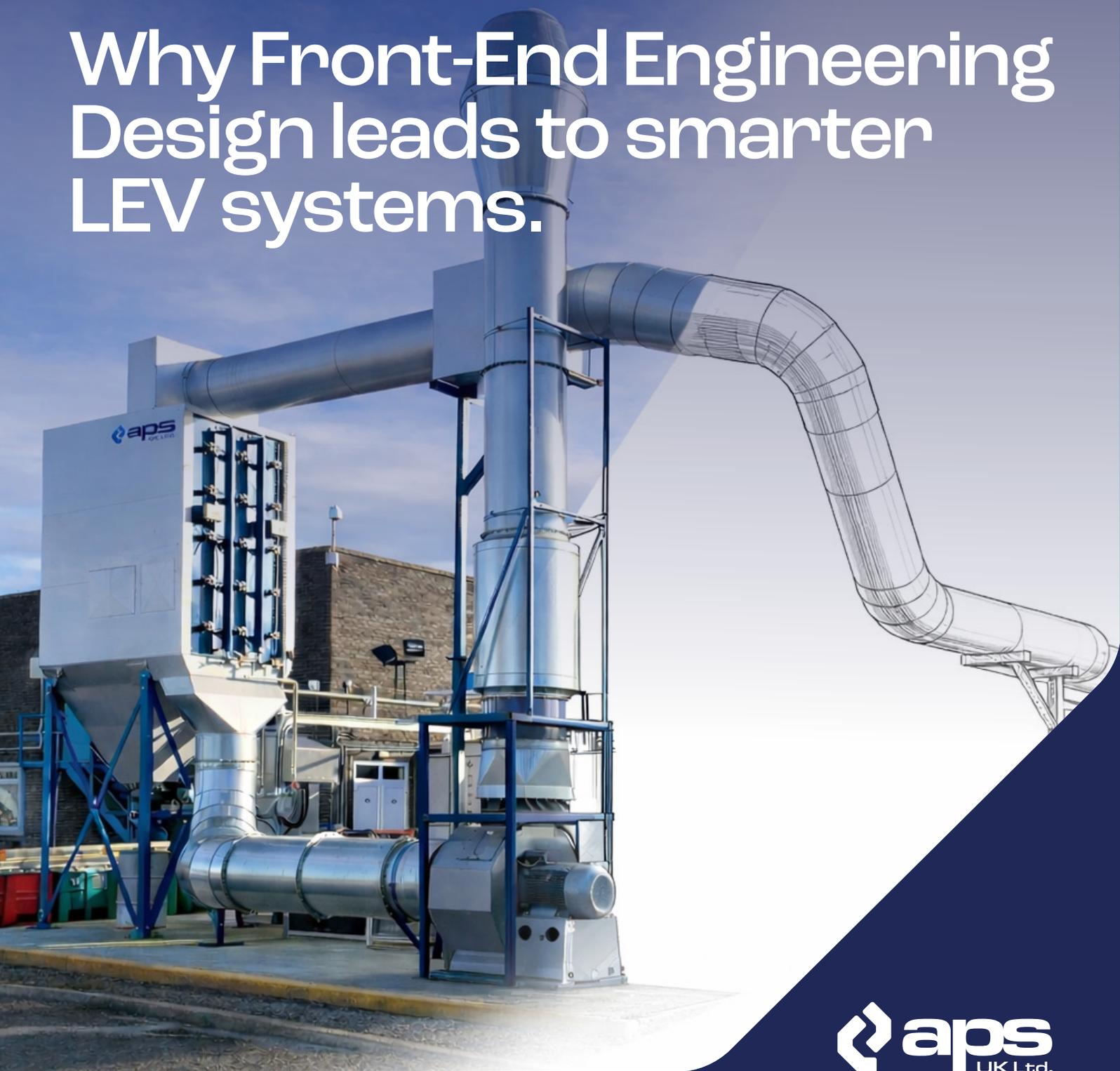


# Why Front-End Engineering Design leads to smarter LEV systems.



Want to safeguard your employees from harmful production dust? A high-quality, well-designed dust extraction system shields your team from both short and long-term health risks, as well as supporting consistent product quality and regulatory compliance.

The effectiveness of any LEV starts long before installation. It begins with smart, bespoke design tailored to your needs as a customer. This is where an APS Front-End Engineering Design comes in.

# What is Front-End Engineering Design and how is it used in dust extraction?

**Front-End Engineering Design**, also known as **FEED**, is a crucial engineering design phase, and at APS, it's where we begin bridging the gap between conceptualisation and execution. In this stage, our qualified designers and engineers conduct the preliminary scoping, planning and design work of a dust extraction project, outlining technical requirements whilst assessing potential risks and costs.

We use FEED to develop detailed plans for effective Local Exhaust Ventilation (LEV) systems, helping to:

1. Protect your operational staff from harmful dust
2. Safeguard your processing equipment

The purpose of FEED is to give you as a customer a detailed framework for decision-making, by determining a project's feasibility and giving an accurate cost estimate before a full investment commitment is made.

By completing the FEED process, you gain clarity on system design and expected performance, reducing the risk of redesigns and ensuring the final solution protects staff and equipment effectively.

In short: it helps you make sure **you're making the right decision.**



# How does FEED work?

So, you've decided you need a new LEV dust extraction system. **But where do you start?**

Any extraction project that involves external parties needs clear, detailed accurate information from the outset. Without it, assumptions creep in, requirements get misinterpreted, and you end up with the closest standard solution that fits your chosen supplier, not you.

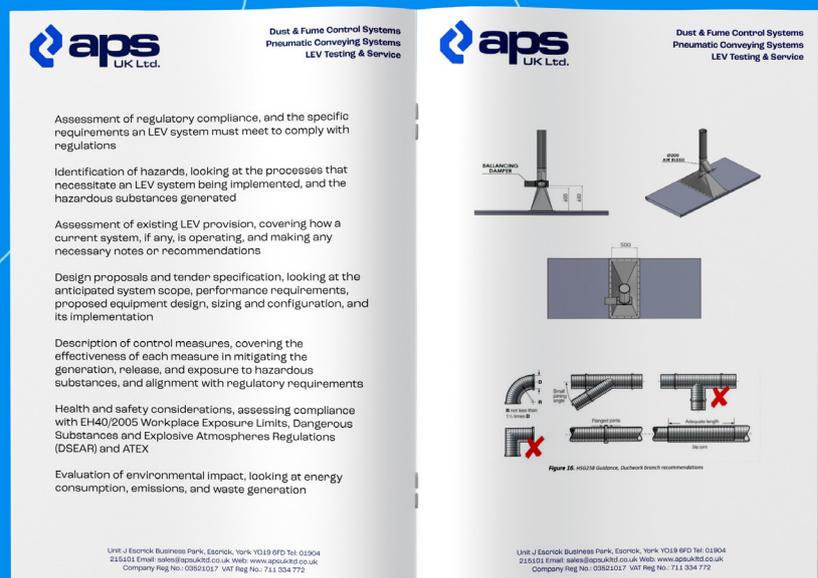
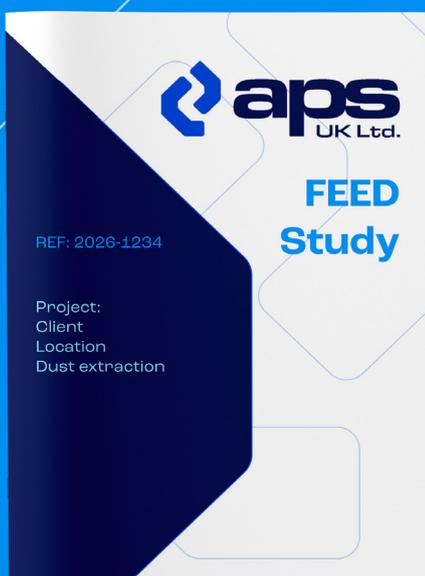
**FEED** prevents this by considering all your individual requirements, from how and where dust is generated, to site layout, operator workflows and the compliance standards your system must meet.

With APS, you'll go through a **collaborative process** with our engineers focused on bringing you the best end solution for your LEV extraction needs. You'll articulate your expectations to us, we'll assess your site and processes, and our P602 certificated designers will create a sizable document detailing everything your dust extraction partner – or ourselves – should be considering when implementing your new system.

A FEED study will cover, in detail, a foundational project roadmap from initial risk assessments through to the timelines for full system implementation.

It will include:

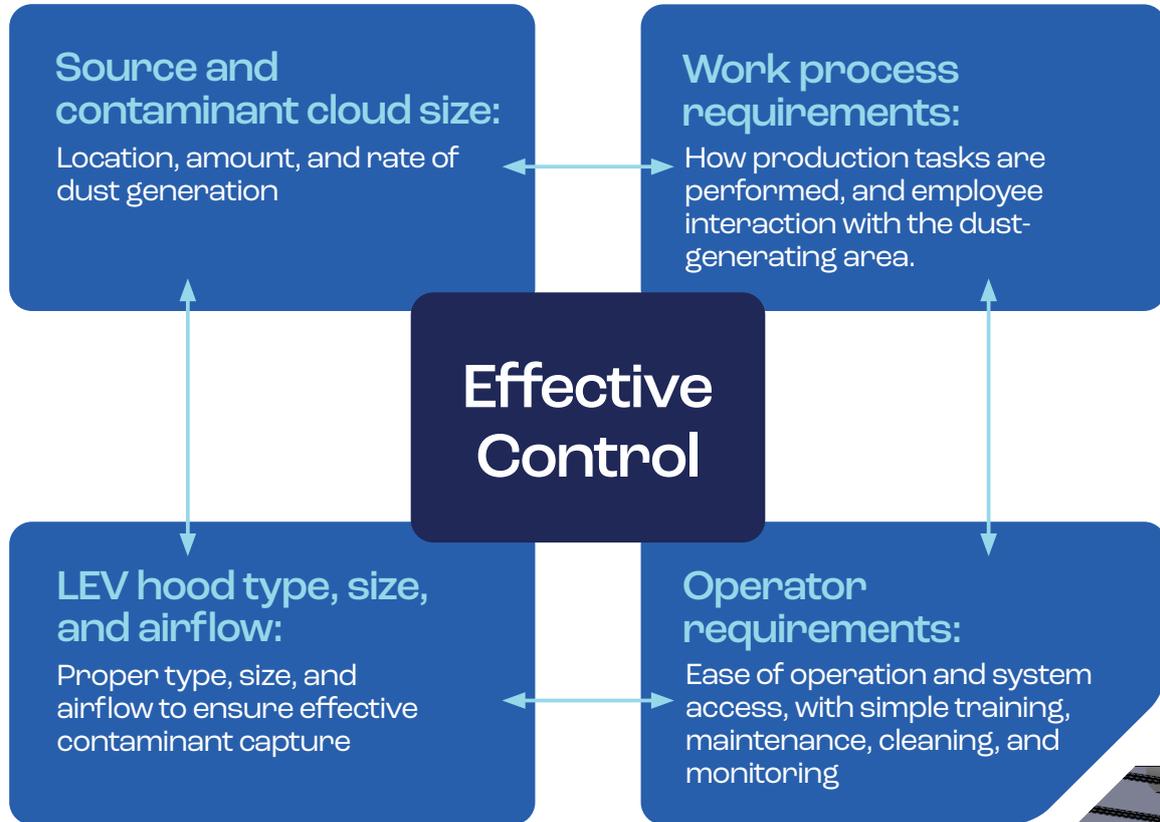
1. Assessment of regulatory compliance and the requirements an LEV system must meet
2. Identification of hazards that necessitate an LEV system being implemented
3. Assessment of existing LEV provision and how a current system, if any, is operating
4. Design proposals and tender specification, including system scope, performance requirements and configuration
5. Description of control measures and their effectiveness in reducing exposure, benchmarking
6. Health and safety considerations in line with EH40/2005 Workplace Exposure Limits, DSEAR and ATEX
7. Evaluation of environmental impact including energy consumption, emissions, and waste generation



# Why FEED is important for LEV and dust extraction

In LEV and dust extraction, FEED ensures that a system is effective and efficient in capturing and removing dust at source, helping you ensure your operational team and production line is safeguarded from harmful airborne particles.

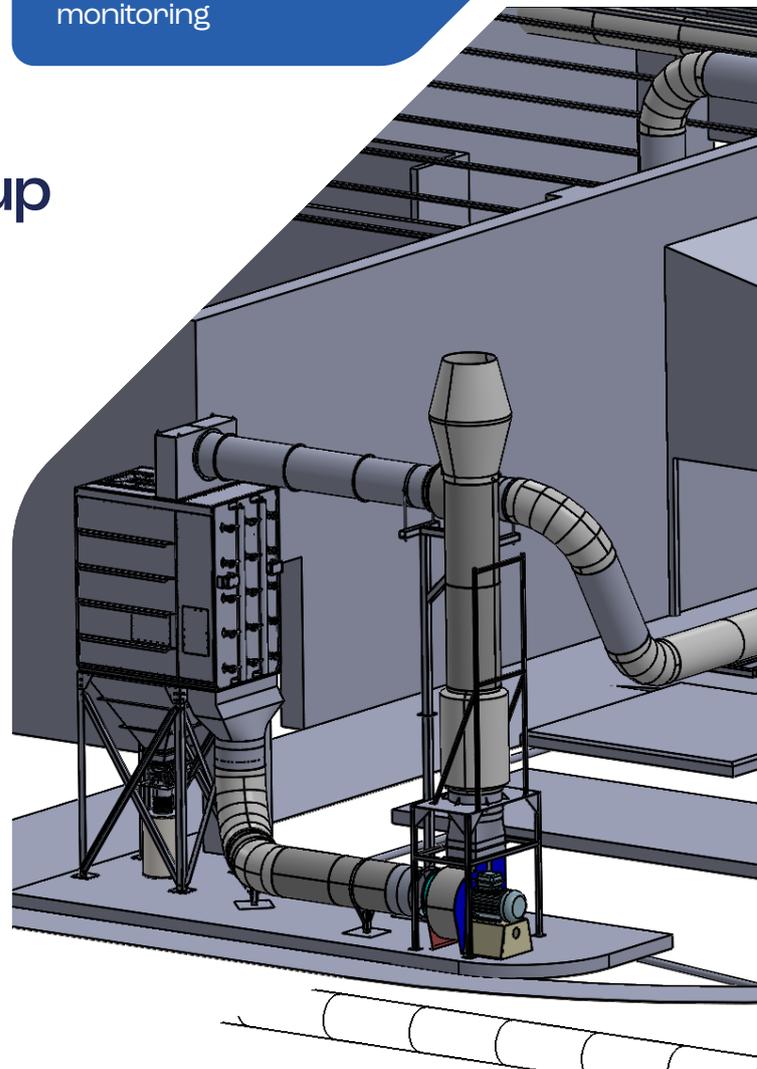
A good system design will maximise effective dust control by considering:



## Why using FEED sets you up for success

FEED helps ensure your dust extraction system is designed correctly from the start, giving you key benefits such as:

1. **Accurate costs:** You'll get reliable cost estimates, protecting your budget from overspend
2. **Smoother project timelines:** Issues are identified and addressed early, keeping your project on track
3. **Optimised system performance:** Your system will be tailored to your processes, so it performs efficiently from day one
4. **Stronger compliance and safer operations:** You'll meet your legal duties and maintain a high level of staff safety



# Case study: FEED in action



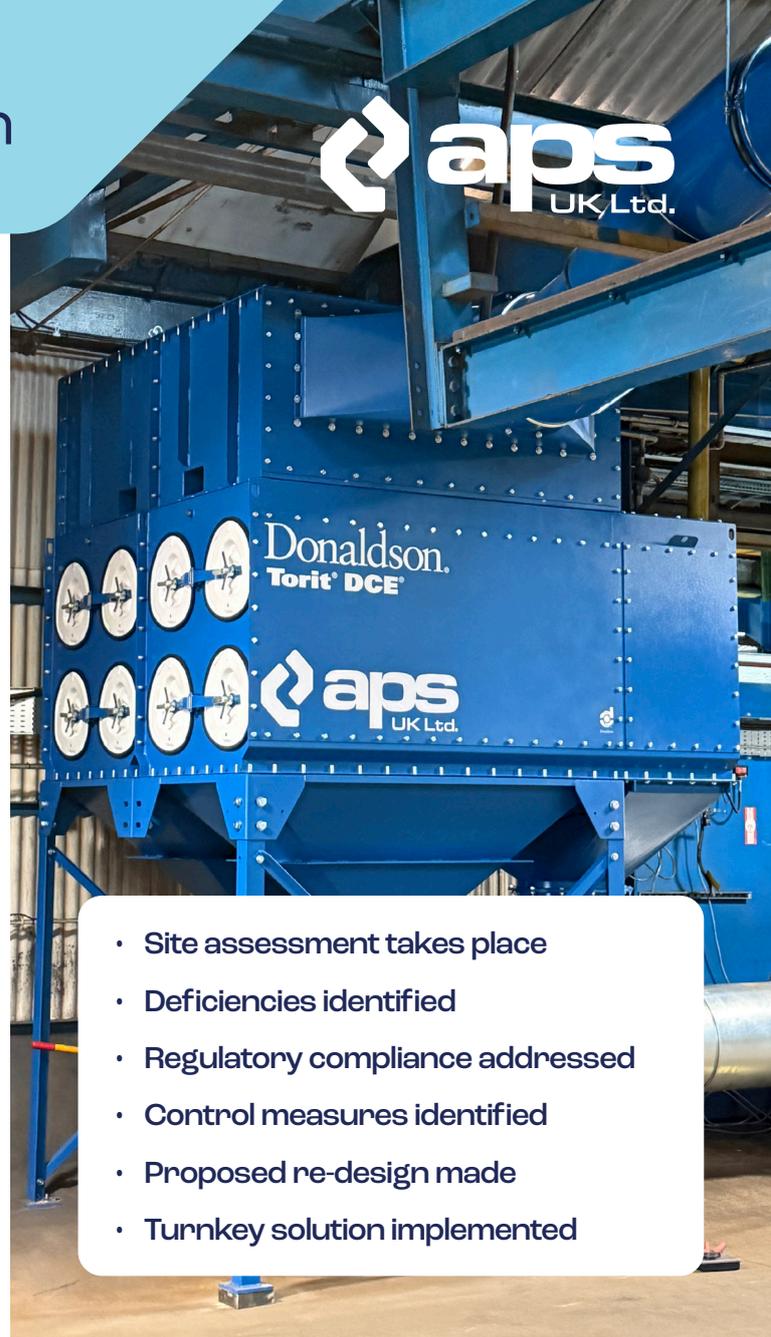
At APS, we recently worked with a waste management firm to provide a detailed FEED study for an LEV system to control the emission of hazardous substances in the workplace, ensuring safe exposure levels for workers.

Our initial site assessments identified significant deficiencies in the existing extraction system, which contributed to operator exposure to dust above safety limits.

Our designers and engineers then worked to develop a proposed LEV redesign aimed at maximising employee safety and protecting waste processing equipment, considering factors including regulatory compliance and technical requirements

This detailed outline looked at improving dust capture efficiency and bettering system monitoring options, to develop a system which could collect airborne particulate without disrupting day-to-day operations.

Following on from the FEED study, the resulting turnkey project would provide a compliant, energy-efficient, and easily maintainable LEV system, forming the basis for long-term operational safety.



- Site assessment takes place
- Deficiencies identified
- Regulatory compliance addressed
- Control measures identified
- Proposed re-design made
- Turnkey solution implemented

## Why you should opt for FEED

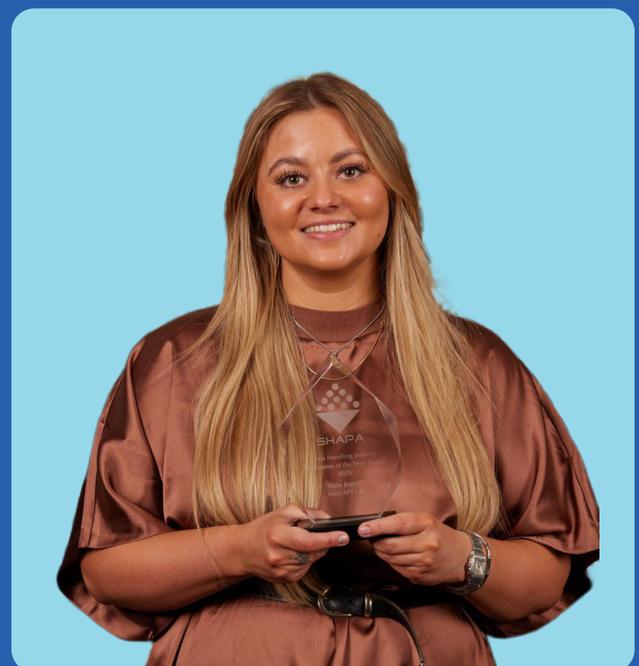
“If you want a dust extraction system that’s safe, compliant, and built to last, start with FEED. Choosing the FEED process helps you avoid guesswork, ensuring your system is designed right the first time.

It turns often highly complex projects into clear, informed decision-making frameworks, giving you accurate costs and design expectations so you don’t face any surprises along the way.

“Opting for FEED, means opting for peace of mind.”

### Katie Burrell

P602-qualified Project Engineer at APS





**We Consult.  
We Design.  
We Install.**



**Get in Touch.**

Call 01904 215101

E-mail [sales@apsukltd.co.uk](mailto:sales@apsukltd.co.uk)

Visit [www.apsukltd.co.uk](http://www.apsukltd.co.uk)