

# Defence Fuel Infrastructure

Specialist solutions reducing risk,  
cost and operational downtime

# Contents

How we help customers

Introduction

Where we work

Why we are different

Our work in the defence sector

Our services

- Design and build
- Maintenance: PPM and POL services
- Pipework and fuel filtration systems
- Automatic pump gauge, valve, bulk metering and alarm servicing

- Tank testing, NDT and separator maintenance
- Fuel compliance testing and fuel uplifts and transfers
- Oil storage surveys and cathodic corrosion protection
- Protective coatings
- Hazardous area electrical services
- Emergency response

Our network

Case study

Why you can trust us



# How we help customers

Adler and Allan has been working on MoD fuel infrastructure for over 20 years, servicing, maintaining and refurbishing mission critical assets, including; BFIs, MTFIs, heating & generator tanks, pipelines and other fuel infrastructure assets.

Our world-class fuel infrastructure services and innovative solutions to the Defence sector take into account the compliance, safety and mission critical requirements of an operational base, whilst saving on costs and with minimal to no loss of operational down time.

Specialising in hazardous area and electrical installs, we have a team of VAREC and NICEIC approved, as well as DNV and CompEx accredited electrical engineers who will design and maintain systems, whilst providing value for money and reducing operational downtime.

We are fully conversant with the numerous regulations concerning the design, installation maintenance, inspection and testing of electrical equipment for use in explosive atmospheres including MoD specific JSP317, JSP 375, JSP 482 Chapter 8 and ESTC 6 requirements.

By carefully building this approach over the years, we have become the ideal specialist partner for fuel infrastructure projects.

## You will benefit from:

- A specialist turnkey fuel infrastructure service
- Reduced risk and operational downtime
- Highly experienced team from a military background
- Fully compliant works
- Extended asset life cycle
- Highest safety standards
- Truly cost-effective approach

Ensuring your fuel infrastructure is fully operational 24/7 365 days a year.

In addition to the MoD, our Specialist Defence fuel infrastructure services are used across 50 Armed Forces sites worldwide, including:

- US Visiting Forces (USVF)
- Air Force Civil Engineering Centre (AFCEC)
- Naval Facilities Engineering Command (NAVFAC)
- US Army Corps of Engineers (USACE)
- Department of Defence (DoD) through their Prime contractors in the UK and overseas



# We know that being mission ready with an ageing fuel infrastructure creates challenges.

We are the UK's leading fuel infrastructure maintenance and emergency pollution response service (ERPS) for the UK MoD worldwide.

At Adler and Allan we have built a reputation through our collaborative approach, and today we are proud to be:

- 'Tier One' preferred MoD supplier and a recognised USVF supplier
- The largest fuel infrastructure maintenance provider in the UK to the USVF
- Vetted and security cleared to work on most MoD sites

We understand  
your operational  
needs are  
mission critical

## We are relied upon because:

- Our specialist team are ex-military, having worked within the fuel and infrastructure sector, and understand the challenge of an operational and mission critical environment. Our outcomes are focused on military needs and their mandatory requirements
- We work to the highest compliance and safety standards including Practitioner Guidelines (PG) set by the MoD
- All work is carried out to current MoD publications, including but not limited to DIO Technical Standard PET 01, 02 and 04, and SFG20
- We provide strategic turnkey solutions, via a full spectrum of over 500+ qualified specialists, meaning more effective project management
- Over 20+ years experience working in the Defence sector, working and consulting with MoD, USVF and Defence contractors
- Hazardous and restricted areas are our specialism. We have a team of VAREC and NICEIC approved, as well as DNV and CompEx accredited electrical engineers
- We are API and EEMUA 159 accredited to work on US bases

All this means we provide the ultimate peace of mind. When it comes to operational readiness, we believe there's no one better in the business.



# Our work in the Defence sector

**OVER 120M**   
Litres of fuel storage

**ZERO**   
Reportable incidents on site in 10 years (of contract)


**12** BFI fuel pump upgrades completed 

**OVER 5km**   
of new hydrants installed


**OVER 50**   
Armed forces sites worldwide depend on our services

Operating as the preferred tier 1 supplier for mod sites **TIER 1** 

**6600**   
Non-compliant electrical glands replaced


**10.5 km**   
of non-compliant electrical cable replaced

**OVER 900**   
Full defence site inspections conducted within the last 8 years

**700+**   
Breakdown and callouts per annum over the last 9 years

**OVER 1500**   
Control Valves maintained

**41,000,000** LITRES   
Total capacity of fuel storage tanks cleaned and inspected

**60,000**   
On-site tasks carried out during the last 8 years

**100%**   
Regulatory compliance and safety record

**21km**   
Length of hydrants maintained

We are the largest fuel infrastructure maintenance provider in the UK to the USVF



# Comprehensive turnkey solutions to meet the highest demands of an operational Defence environment

## Design and build

- Design solutions to optimise existing fuel infrastructure
- Installation of refuelling systems and military aviation fuel infrastructure
- New or replacement refuelling systems and military aviation fuel infrastructure
- Inclusive of all: research drawings, technical specs and access to specialists
- Hazardous area electrical design

## Maintain and refurbish

- Maintenance and refurbishment of refuelling systems and military aviation fuel infrastructure
- Specialist PPM and Predictive Maintenance POL services
- Hazardous area electrical services
- Protective coating & linings

## Respond

- Emergency spill response
- Waste removal
- Emergency fuel delivery



## Specialist consultancy

Access to highly trained and certified ex-military personnel with expert knowledge of the Defence sector, operational sites and compliancy.

# World class design and build

Our designs meet current and future fuel infrastructure operational requirements and MoD legislative framework, ensuring your capacity and compliance is future-proofed.

We take your operational requirements and place them at the centre of our thinking. Our designs will futureproof your fuel infrastructure assets whilst helping to improve your strategic operational capability.

Whether directly with the military or with Defence contractors we will keep your critical infrastructure and assets mission ready.

We can do this because:

- Our team have a detailed knowledge of your infrastructure, all with military background and an in depth knowledge of your sites
- 50+ years experience from former members of the Royal Engineers in the design team
- Our recognised experts are highly qualified in their specialist areas of design from site research to CAD, using the latest tools, technologies and innovative solutions
- Only we understand how to design your infrastructure in a way that truly keeps your site operational through the works
- A complete turnkey design including the fuel infrastructure, electrical and monitoring aspects
- We genuinely reduce risk and downtime throughout the project

# When you work with us you get:

- A collaborative process with your input at all stages
- Clear visibility of all compliance and regulatory design aspects
- A full programme management plan
- Full design plan, including:
  - Specification and conception design
  - Engineering, project and asset management as well as integrity services and DSEAR assessments
  - Access to a highly skilled team of experts
  - A full turnkey innovative solution that can guarantee a compliant and long lasting operational facility



# Maintaining assets for the future

We ensure operational capability 24/7 365 by building and installing safe and compliant fuel infrastructure for MoD, USVF and FM contractors, ensuring your site remains fully operational by working closely with you and stakeholders.

Adler and Allan has many years' experience in tank services from fabrication of bespoke-build steel oil tanks and installation of oil tanks and pipework to Bulk Fuel Installations (BFI's) and Motor Transport Fuel Installations (MTFI's), providing a full range of services to the Defence sector.

We also offer a high quality 24/7 365 planned preventative maintenance (PPM) fuel-management service. Our PPM services proactively guard against disruption caused by ageing assets and lack of maintenance, protecting your site from operational downtime.

## Specialist PPM services

We provide innovative and effective PPM solutions and Predictive Maintenance to the UK and US Defence sector worldwide, including: M&E equipment, interceptor and site gullies, tanks and general machinery, and a comprehensive site assessment by specialist engineers. We can provide one-off reactive, or contracted 3, 6 or 12 monthly maintenance tasks as well as servicing to ensure your site remains operational.

## POL Services critical to the Defence sector

We offer extensive expertise and quality 24/7 365 petroleum, oils and lubricant (POL), maintenance, logistics and fuel-management service. We operate within challenging environments, delivering effective solutions and services for the Government, UK MoD and Defence sector globally.

## Pipework

We carry out the planning and installation of above and below ground pipework. As part of our pipeline services, we provide full site surveys and make recommendations on the best materials, configurations and pollution prevention methods for pipework, to prevent leakage, stock losses and environmental damage.

## Fuel filtration systems

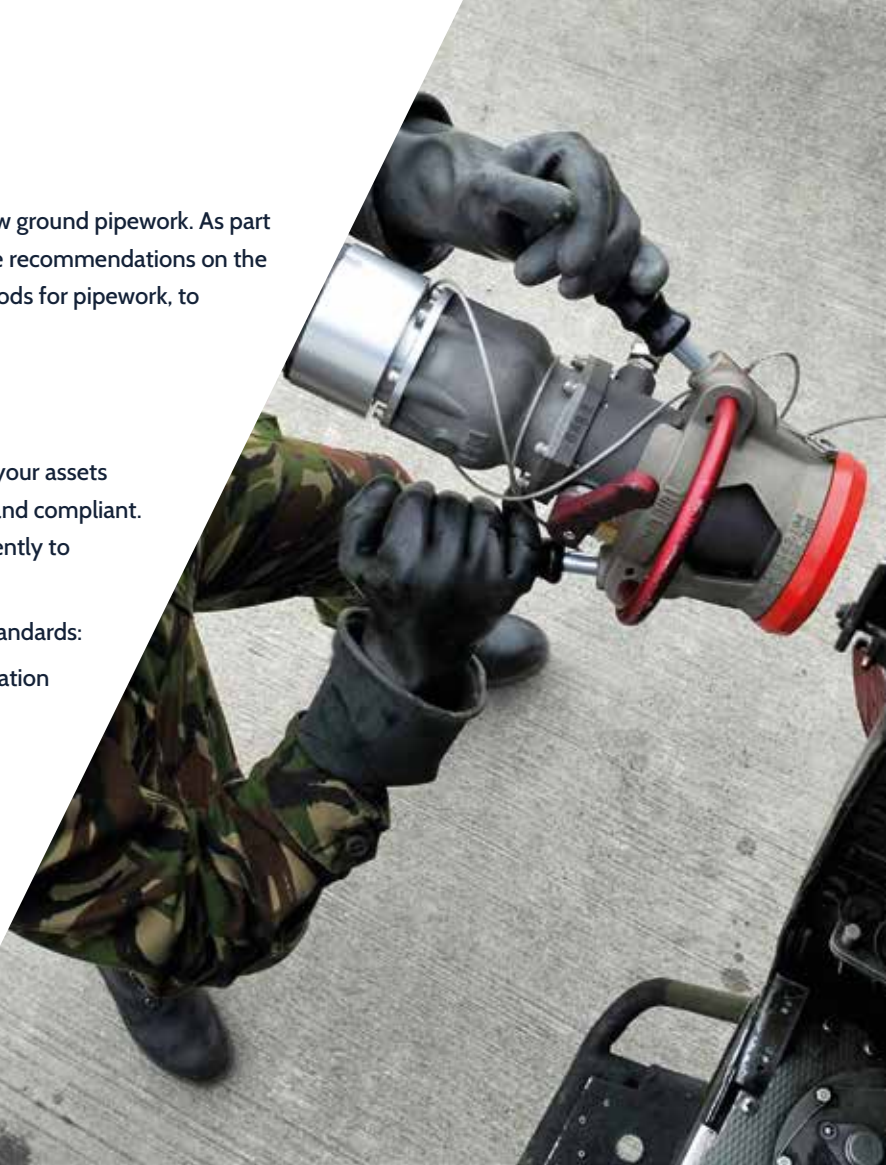
We will install the right filters to ensure the fuel you put into your assets remains of the highest quality, keeping your operations safe and compliant. Filters are installed to the Energy Institute (EI) guidance. Currently to Amendt 5.

We install FWS Filters and Micro-Filters to the following EI standards:

1. EI 1581 5th Edition - Specifications and laboratory qualification procedures for aviation fuel filter/water separators - 2011
2. EI 1590 3rd Edition - Specifications and qualification procedures for aviation fuel microfilters - 2014

We also, Installed Micro-Filter Vessels at Brize Norton and Lossiemouth to the following EI standards:

1. EI 1596 2nd Edition - Design and Construction of Aviation Fuel Filter Vessels - 2013
2. EI 1590 3rd Edition - Specifications and qualification procedures for aviation fuel Microfilter - 2014



# Maintaining assets for the future

## Automatic pump, gauge, valve, bulk meter and alarm servicing

Modern pollution prevention measures such as oil tank gauges and tank alarms have effectively reduced the risks to the environment of accidental over-fills or spills.

We provide a comprehensive range of pumps, gauges, alarms and overfill protection as part of our tank installation services. All our fuel pumps and management systems include dispensing flow rate variable from 20 to 500 litres per minute, stand-alone or computer linked for single or multi-user sites, electronic or hydrostatic gauging systems and leak detection equipment.

Adler and Allan is contracted by a number of UK MoD and worldwide Defence sector clients to regularly service this equipment, ensuring your site remains operational.

## Tank testing including EEMUA accredited non-destructive testing (NDT)

Regular tank and fuel line testing should accompany routine inspections to minimise the risk of tank failure, fuel contamination and potentially lethal leakage. EEMUA 159 certified NDT tests structure, weld strength, roof supports, and thickness of tanks used to store fuels and other substances.

It is available for tanks either in or out of service and tests the quality of materials, fabrication and continuing integrity once in-use, without destroying serviceability.

## Interceptor / Separator installation and maintenance

We are one of the country's leading separator installation companies specifying, supplying and installing standard or bespoke oil separators, including full retention separators to the most stringent standards.

Maintaining interceptors and filters is essential to ensure your site remains environmentally Compliant with The Environment Agency standard, PPG3 and European standard, EN858-2. If our monitoring systems detect any filters become blocked we will replace them to reduce the pollution risk as well as the risk of flooding as water cannot run off-site.





# Maintaining assets for the future

## Fuel compliance testing

We ensure fuel quality by providing fuel testing and analysis in our dedicated laboratory with fast turnaround sampling and analysis.

Our mobile tank cleaning unit provides mobile fuel testing, tank cleaning and polishing on site. Fuels are tested to British Standard methods, covering all possible types of contamination, including microbial activity, water content, appearance and particulates.

## Fuel uplifts and transfers

With a specialist tanker fleet, we provide fuel uplifts, transfers and manage fuel crossovers. All our drivers are trained in operating fuel transfer pumps, handling hazardous materials and spill response procedures, ensuring problems are dealt with safely and professionally.

We handle all types of fuel and can uplift from above and underground storage tanks.



## Oil storage surveys and maintenance

According to the Fuel Storage Regulations, oil storage facilities, including those on Defence sites, should be inspected annually in accordance with current Pollution Prevention guidelines and OFTEC. Our OFTEC accredited auditing ensures oil storage facilities, including storage tanks, separators, bunds and pipework, meet current legislation by facilitating annual inspections and managing required maintenance to ensure continued compliance.

## Cathodic corrosion protection

Cathodic corrosion protection is designed to prevent leaks and corrosion on metallic assets, such as pipelines, that come into contact with sea, ground water and rivers which could cause contaminated fuel or pollution. Adler and Allan's corrosion protection division provides expertise in the application of Impressed Current Cathodic Protection (ICCP), Sacrificial Anode Systems and surge prevention.





## Protective coatings

Our AdlerCoat™ polyurea coating services are designed to protect, improve, and extend asset life, protecting against deterioration, degradation and structural weakness.

Our anti-static protective coatings and linings are suitable for fuel tanks, valve pits delivering aviation fuel, manway chambers, bunding, oil storage tanks, and practically any external or internal surface.

Our polyurea spray lining is the toughest and most durable protective lining currently available, 100% resistant to hydrocarbons. Spray lining is an effective way of preventing deterioration and extending the life of a range of structures, forming a waterproof and chemical barrier. It is extremely fast creating a useable surface within 24 hours and withstands expansion, contraction and a wide range of temperatures.

# Hazardous area electrical services

We provide a turnkey hazardous area electrical solution from design, installation, commissioning and certification, competent in routine inspection and testing, and able to provide fault diagnostics, instigate and rectification services. Services include:

- Visual and detailed inspections and electrical remedial works for:
  - Flammable goods stores (to PG01/17)
  - MT vehicle servicing pits (to DMG 13)
  - Tanker servicing bays (to DMG 13)
  - BFI (to PETO2)
- Electrical maintenance and inspection MTFI (to PETO2 / PETO4)
- Motor overload testing, 11 monthly earth testing and motor temperature and vibration testing for BFI (to PETO2)
- Periodic inspection 3,6,11,12 and 24 month, lightning protection inspection and testing / conductive, anti-static floor inspections for Explosive Storage Areas (to ESTC6)
- Airfield obstruction light maintenance including low and high level
- All DSEAR areas, surface finishing area spray bays, carpentry and fibreglass workshops





## Emergency response

We are available 24/7 365 and can mobilise in under two hours to respond to an MoD or USVF emergency so that you can maintain your operation, ensure environmental compliance and stay in control. We are the emergency pollution response service (EPRS) provider for the UK MoD and Defence sector worldwide, with specific arrangements in place for naval.

We can contain and clean up any type of spill from hydrocarbons, chemicals or firewater and quickly and effectively remove the waste and ensure it is compliantly disposed of. Our response services include:

- 24/7 365 emergency fuel deliveries
- Containment and clean-up of fuel, oil and chemicals spills on land and in the marine environment
- Hazardous waste / contaminated land disposal
- Pollution prevention / spill control risk assessments
- Accredited spill response training and exercises

# National coverage

With highly trained teams, specialist equipment and vehicles, and a nationwide network of depots, Adler and Allan has grown to become one of the UK's leading environmental risk reduction specialists.



# RAF Brize Norton

## Fuel Facility Refurbishment & Ongoing Maintenance

Originally opened in 1937 as an RAF training base, Brize Norton in Oxfordshire is now the RAF's largest station.

Following an initial comprehensive refurbishment of the fuel infrastructure facilities Adler and Allan won the maintenance contract at Brize Norton at the end of 2014, bringing a dedicated team on-site to install the largest fuel infrastructure on an MoD site since WW2 and improve maintenance practices and operational efficiency to ensure the fuel infrastructure facilities are safe, functional, compliant, resilient and sustainable.

### Client challenges

The fuel infrastructure facilities at Brize Norton are in constant high demand, therefore it is important that any work undertaken doesn't impact the base's overall performance and keeps operational downtime to a minimum.

### The Adler and Allan difference

By developing a schedule of works, where only small sections of the fuel infrastructure are offline for the minimal amount of time possible, Adler and Allan has been able to improve its fuel infrastructure facilities by completing an extensive restoration of the fuelling systems over a period of 18 months, with minimum impact to the base's day-to-day functions.

## Outcome

By working closely with the MoD and staff at Brize Norton, we have developed a long-term, trusted relationship, introducing innovative solutions to constantly improve the efficiency of ongoing maintenance and the base's mission critical fuel infrastructure facilities, including;

- Supported the design and install of the fuel infrastructure
- Development of effective maintenance procedures
- Compliance with safety inspection legislation
- Improved facility to test the functionality of major assets
- Systems evolved to allow for minimal disruption to operations during essential maintenance
- Upgrading the current primary fuel filtering systems by installing new micro-filters to ensure a high quality of fuel



# Why we are trusted by so many Defence organisations worldwide





# Environmental risk reduction, decarbonisation and engineering solutions



## Environmental consultancy

Environmental  
protection, advice  
and monitoring



## Pollution reduction services

Pollution  
prevention  
and reduction  
strategy and  
implementation



## Energy services

Net-Zero and  
green strategy  
implementation



## Asset decommissioning services

Safe and  
compliant  
decommissioning  
of legacy  
environmental  
infrastructure



## Environmental emergency response

24/7 365  
environmental  
emergency  
response services

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