



Drainage Information

Pack

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ESS Mission Statement

The aim of ESS (UK) LTD is to work in partnership with our customers and continue to expand our services with an emphasis on quality and value for money throughout the UK and Ireland

About Us

Engineering Support Solutions UK Ltd was founded in 2006 is rapidly becoming known as the UK's leading authority in mechanical and electrical engineering. Primarily specializing in fluid movement, we accommodate for the support, installation, maintenance, and repair of pump equipment.

ESS UK Ltd has since expanded to cater for all means of engineering works from bespoke designs, to supply and commissioning, in irrigation, to air conditioning, to wastewater management. ESS UK Ltd caters for all your engineering needs.

Based on the Slough Trading Estate, Berkshire we have permanently staffed offices and a fully fabricated workshop. This enables us to carry out all possible works including renovations and repairs in house. Thus, enabling us to provide a faster completion time than any of our competitors.

We host a fleet of vans and a full staff of engineers with over 45 years of combined experience within the pump industry. We facilitate for works across the UK and Ireland. Operating a 24/7 365 days per year emergency call out service to all our customers.

We guarantee to deliver the highest quality of works and services at the most competitive prices. Our consistency, professionalism and reliability has enabled us to gain access to deliver works in some of the most prestigious and secure locations across the country including The Royal Households, HM Treasury and Heathrow Airport.

ESS UK Ltd has the experience and amenities to carry out projects of all sizes from retrofit, to larger scale projects and tenders.

Contents

Page 4 – Drainage Services Overview

Page 5 – What Not to Flush

Page 6 – Wastewater & Sewage Ejection

Page 7 – Warning Signs your Drains Need Attention

Page 8 – High Pressure Water Jetting

Page 9 – Tankering

Page 10 – Specialist Drainage Services

- CCTV Surveys
- Drain Re-lining
- Root Cutting
- Dye Testing
- Excavation

Page 13 – Emergency Call Outs & Service Contracts

Page 14 - 15 – Services Overview

Drainage Services

Engineering Support Solutions we cover a wide variety of drainage services, across the commercial and domestic fields

They range from high pressure water jetting, and tankering to relining and root cutting with everything in between.

In this information pack we hope to be able to provide you with a brief but informative overview of the services that we can provide to assist with maintaining a healthy drainage system for your site/property.

Whilst this information pack provides you with the core services that we can provide, our services are not limited to what you read. If you have any further questions or would like to talk about a service not mentioned in this pack, please feel free to give our office a call, where one of the friendly staff will be happy to run through any queries you may have.



What Not To Flush

One of the biggest problems that face any sewage system or sewage pits is the build-up of 'rag'. The term rag refers to any non-biodegradable products that should NOT be flushed down the toilet. The build-up of the rag products causes blockages in the pipeline and can stop the pumps in the pit from working efficiently or even all together.

Below, is a list of the most common products that should NOT be flushed:

- Baby wipes
- Q-Tips & Cotton Pads
- Menstrual Products
- Incontinence Products
- Condoms
- Nappies
- Dental Floss
- Kitchen Roll & Tissues
- Medication
- Cigarette Butts
- Cat Litter
- Hair
- Gum
- Cooking Grease
- Fish
- Food
- Plasters & Bandages
- Tights or Clothing

There are many more products that can cause issue, but these are of the most common.

Wastewater & Sewage Ejection

Base Install

ESS UK Ltd provides specialist knowledge and guidance for bespoke base installs, specific for your systems required flow and lift requirements. We have a vast array of pumping technologies at our disposal to manage all forms of fluid and waste media.

Refurbishment

ESS UK Ltd has a team of specialist engineers devoted to repairs and refurbishments. No matter what your fault is we will do our utmost to determine whether a repair is more cost effective and viable before upgrading any unit. This includes:

- Pump & Motor Repairs
- Control Panel Inspection & Repairs
- Fluid Level Controls Inspection & Repair
- Float Replacement

Retro Fit

We always ensure we supply you with the most modern equivalent for any pumps and units we replace. Supplying you with all your system requirements from alarms & indicators to complete control panel customization.

Warning Signs your drains need attention

There can be several indicating factors that show your drains require some attention.

These factors include:

- Water taking longer than usual to drain away in your vessels such as toilets, kitchen sinks etc.
- Foul or unpleasant smells emanating from various areas within your building or property.
- Debris build up in the sinks, toilet basins and external manholes.
- Among many others.

All these factors can be indicators of something as simple as your drains needing a through high pressure water jet, or they can be something more sinister like a build-up of material due to a collapsed line or root ingress.

By having a regular scheduled clean of your drainage pipe work will ensure that some of the above-mentioned indicators will be kept at bay. You can also ensure you have an understanding of your drainage systems health but undertaking a CCTV survey of the drains. This will give you a good indication of any possible displacements of the pipework or root ingress etc that you make be able to fix with a minor solution, before an excavation is the only route left available.

High Pressure Water Jetting

What is High Pressure Water Jetting?

High Pressure Water Jetting, sometimes known as HPWJ, is the most effective way of cleaning and clearing blockages within any drainage pipework.

How does it work?

The high pressure of the water in combination with the specialist grade nozzles provides the perfect combination for a non-invasive solution to break down the toughest of blockages to ensure free flow is accomplished, minimizing the requirement of harsh chemicals



Suction Tankers

Suction takers are the perfect way to empty most septic tanks, Cess Pits, Interceptors, Aco Channelling etc.

We can provide a range of tanker sizes to accommodate a multitude of access issues and tank access points.

Our full fleet of tankers are available 24/7 so we can help support all needs no matter what the day or time.



Specialist Drainage Services

ESS UK Ltd are able to offer a more specialist service when the issue calls for it. Below is a few examples of the types of service that may be required that we can offer our experience in.

CCTV Drain Surveys

A full CCTV drainage survey of your drain lines provides you with an in-depth survey of the condition of your lines, as well as a cause for any issues you may be experiencing.

On completion of each survey, you will receive a full report of each of the CCTV Lines, a plan showing how each of the lines are connected and video footage of the lines themselves.

One of the main Positives of completing a drain survey is that it gives you undisputable evidence of any causes of the drain lines backing up, such as root ingress, collapsed lines or displacements to name a few.

There are many reasons to recommend that a CCTV survey, a few good examples of this are:

- Purchasing a new property-
 - This can provide you with a clear indication of any hidden problems or issues that without the CCTV could be costly to discover later down the line.
- Before excavation of any replacement drainage lines-
 - To give you're a clear picture of what is going on within the line and whether excavation is indeed the only conceivable option as opposed to the costliest.
- Recurring issues despite regular maintenance.
 - To help identify what is the root cause to resolve the issues once and for all.

Flow Control:	No flow control	Pipe Shape:	Circular
Year Constructed:	Not Specified	Dia/Height:	100 mm
Inspection Purpose:	Sample condition survey	Material:	Polyvinyl chloride
Comments:		Lining Type:	No Lining
Recommendations:		Lining Material:	No Lining

Scale:	1:222	Position [m]	Code	Observation	MPEG
Depth: m					
22FWS01		0.00	MH	Start node, manhole, reference: 22FWS01	00:00:00
		0.00	WL	Water level, 5% of the vertical dimension	00:00:00
		0.04	JN	Junction at 3 o'clock, 100mm dia	00:00:09
		4.20	JN	Junction at 2 o'clock, 100mm dia	00:00:19
		6.81	JN	Junction at 3 o'clock, 100mm dia	00:00:26
		6.81	JD	Joint displaced, 5mm displacement, 1 - 1.5 x pipe wall thickness	00:00:26
		7.90	LR	Line deviates right	00:00:31
		11.35	JN	Junction at 3 o'clock, 100mm dia	00:00:44
		11.35	GP	General photograph taken at this point: Line is very dry here, as if not in use.	00:00:44
		13.72	LR	Line deviates right	00:01:03
		25.35	LU	Line deviates up	00:02:35
22FWS01BR1		25.68	OCF	Finish node, other special chamber, reference: 22FWS01BR1: Stack or Downpipe found.	00:02:35



Example of a Clear Line



Example of a Joint Displacement



Example of a Debris Found



Specialist Drainage Services

Drain Re-lining/Patching

What is drain Re-lining/Patching?

Drain Re-lining or patching is the process of installing a resin drain liner that adheres to the inside of the existing pipework, which is then hardened using heat or UV Light until it becomes a sturdy structure. The difference between lining and patching is simple. The lining aspect is to fully line a length of pipework usually with any entering pipework lines having access ports cut in, effectively giving a whole new interior to existing pipework. Patching is the term that refers to a small section or join that has been realigned.

Lining is a fantastic way of repairing faults within the drain line such as cracks, displacements, and imperfections in the pipework, without the need of excavation and replacement. Lining is a longer-term and cost-effective alternative to excavation which would have your drains back working to a 'like new' standard.

However not all cracks, displacements etc. can be solved with lining and would require excavation.

Root Cutting

One of the major but silent issues that can cause your drainage system to back up is an ingress of roots.

Though you may have any trees directly on your property, this does not guarantee your drainage line will be safe from root ingress. Due to the nature of how roots branch out to stabilize their growth and to find nutrients they can become an all too common culprit in drainage blockages. Some if left for too long have been known to cause collapses within the drain line.

However, using specialist cutting equipment we can cut back the root ingress, so you have the full diameter of pipework back in use. However once cut back, the pipework will require repairing. Drain lining is usually the preferred method to avoid regrowth.

Specialist Drainage Services

Dye Testing

Dye testing is a way to try and locate which part of your drainage system each manhole flows through without the need of a CCTV survey.

Dye testing consists of (as you may have already guessed) popping some dye solution or chips into the manhole, sink, toilet etc. in question and flushing the system with the normal out flow process that your drainage system performs, whilst checking all other Manholes in a conceivable distance to see if the dye reappears, meaning the two manholes are connected.

Whilst dye testing can tell you what parts of your drainage system are linked; it cannot tell you the condition of your drainage system.

Excavation

While we believe that excavation should be the absolute last resort to any drainage issue, unfortunately it still comes down to this being the option you must take. Here at ESS (UK) Ltd we have a wealth of knowledge and experience with the installation of replacement line, cess pits, pumps, chamber systems etc. meaning that we can diagnose the issue, report on the findings, provide you with all the options and complete the excavation and repair or replacement installation all with our dedicated team of quality engineers. This means for the entirety of your project you will only have to deal with one point of contact, providing you with a simple transition from start to finish.

Emergency Call Outs & Service Contracts

Emergency Callouts

ESS UK Ltd offers 24/7 support service to all of our customers. We like to operate a rapid response, getting to site to fix the problem immediately without delay.

Service Contracts

Here at ESS (UK) Ltd we like to tailor the service contracts to each individual site, as what works for one site it not always the case for another. The frequency that we would recommend the services on your drainage system to be completed is all dependant on how busy each site is and what the daily usage is of the facilities in question.

A range of service contracts are available, as we have a large portfolio of facilities that we manage. Please enquire for more details as we are always looking for new clients to devote our skills and expertise too.

Services overview

To give you a brief overview of the services that Engineering Support Solutions Group can provide, we have collated the list below. Of course, our remit of services is not limited to this list, but it helps to provide a good overview of what we cover under our Group umbrella.

- | | |
|---|---|
|  Booster systems (Installation, Repair, Servicing, Commissioning) |  Emergency Call Outs |
|  Boreholes (Water Supply) |  Engineers (Dismantling) |
|  Building Repairs & Improvements |  Entrance Matting |
|  Building Services Installation |  External Electrical Installations |
|  Building Services Maintenance (M & E) |  Fans & Associated Plant |
|  Circulating & Temperature Transfer (HVAC) |  Fencing Timber & Metal |
|  Combined Mechanical & Electrical Services |  Flooring General |
|  Compressed Air Installation |  Flooring Rubber, Plastic, Cork, Lino |
|  Condensation Control |  Flooring Tiles |
|  Control Panels |  Flooring Timber Hardwood |
|  Conveyors |  Fluid Transfer & Circulation |
|  De-Humidification System |  Freezing & Chemical Treatment |
|  Drain Clearing |  Gas Appliances |
|  Drain Inspection (CCTV) |  Gas Installations |
|  Drain Lining & Trenchless Repair |  Gas Pipeline |
|  Drainage Band |  Gas Protection Systems |
|  Drainage Cast Iron |  Gas Ventilation |
|  Drainage Deep Drainage Works |  Heat Exchanger & Cooling Tower Installation |
|  Drainage Tankers Drains & Sewers (Renovation) |  Heat Pumps |
|  Drains & Sewers New Installations Ductwork |  Heating Installation (Central- Gas) |
|  Electric Motors (Power Supply) |  Heating Installation (Central – Oil) |
|  Electric Motors (Rewinds & Bearings) |  Heating Installation (Central – Solid Fuel) |
|  Electrical |  Heating Maintenance (Of All Above) |
|  Electrical (General Works & Services) |  Heating Systems |
|  ¹⁴ Electrical Installations & Maintenance |  Heating Under Floor |
| |  Heating Warm Air & Direct Feed (Installation) |
| |  Heating Warm Air & Direct Feed (Maintenance) |
| |  Incinerators |
| |  Incinerators Plant |
| |  Installation of Steel Stairs |

Services overview Continued

-  Irrigation & Water Systems
-  M & E Major
-  M & E Contractors
-  M & E Chemical & Petrochemical Works
-  M & E Heat Exchangers & Coolers
-  M & E Sluice & Lock Gate Installations
-  M & E Supply & Installation of Cables
-  M & E Ventilation & Odour
-  Machinery Removals
-  Mechanical Air Conditioning
-  Mechanical Electrical Repairs
-  Mechanical Installation
-  Mechanical Maintenance
-  Mechanical Services Installation
-  Mechanical Services Maintenance
-  Metal Fabrication
-  Metal Fabrication (General)
-  Metal Fabrication (Sheet)
-  Metal Louvres & Grilles
-  Metalwork (Architectural & Black Smith
-  Metalwork (Building General)
-  Metal Flooring & Lock Gates
-  Metal Stainless Steel Fabrication]
-  Mezzanine Floors (Design & Installation)
-  Personnel M & E Engineers
-  Personnel Site Engineer
-  Pipelines – Compressed Air
-  Pipelines – Fabrication
-  Pipelines – Leak Detection
-  Pipelines – Mechanical
-  Pipelines – Petrochemical
-  Pipelines – Pre-Insulated Mains
-  Pipelines – Pressure Testing
-  Pipelines – Steam Mains

-  Pipelines – UPVC/MDPE Pipework
-  Pipelines – Steel Pipelines
-  Pipelines – CCTV Pipeline Surveys
-  Pipelines Chlorination & Sterilization
-  Pipelines Pipe Freezing Repair
-  Plumbing
-  Plumbing Temporary Site
-  Plumbing Tube Conveying Systems
-  Pressure Vessels & Tanks
-  Pressurisation Units (Installation, Repair, Servicing, Commissioning)
-  RPZ Valve Installation, Test & Supply
-  Pump Installations
-  Pump Station Servicing
-  Pumps
-  Rainwater Harvesting Systems
-  Refrigeration
-  Service Contracts
-  Servicing & Commissioning
-  Sewage Plant Machinery
-  Sewage Plant Operation
-  Sewage Treatment Works (Civils & Package Plant)
-  Sewerage Lining
-  Tank Cleaning
-  Tanking
-  Waste Disposal Sewage
-  Waste Stack Pipe Installation
-  Wastewater & Sewage Ejection
-  Water
-  Water Coolers
-  Water Features
-  Water Garden Services
-  Water Storage Tanks
-  Water Treatment Plant
-  Welding
-  Welding Equipment