



Agricultural **LAND DRAINAGE** Specialists

*Raising yields for tomorrow*





Established  
1962

# Experience COUNTS

*Draining your land since 1962*

William Morfoot Ltd is a long-established agricultural land drainage and water management business, operating throughout the UK and beyond. The company provides a complete design and installation service, undertaken using its own equipment and dedicated team of staff. Attention to detail and outstanding customer service have today, helped the company become one of the leading land drainage specialists in the UK.

**Your soils are precious.** They are the foundation to any successful arable farming operation. Increasingly, the value of land itself has been spiralling to higher levels.

To maintain soils in peak condition requires considerable effort. Arable inputs are expensive and to work successfully, a uniform and consistent

soil structure is required. A soil which is aerobic and friable will allow root systems to quickly establish and develop within, to best source the valuable ingredients of oxygen, water and nutrients in a balanced way.

Achieving this balance isn't easy – especially on heavier soils. Professionally installed land drains

systematically helps to restore this balance, to allow your inputs to work to their full potential.

We've been installing land drains on farms across the UK for over 50 years. We work with some of the biggest names in British agriculture.

**And we're proud of what we do.**

Installing  
land drains  
for over  
50  
years





# Increase YIELDS

*More than just an investment*

**Yield Data provided by our clients** has shown that comprehensively drained land is showing a typical average increase in yield of between 25-35%. Put another way, it's increasing yields from 8.5t/ha to 11t/ha.

This represents a big increase on the bottom line. And your investment in land drainage delivers year after year, for the lifetime of the scheme. Not a bad investment when you think of it that way...



*“Spending capital on land drainage has a payback time of just four to five years, and brings an immediate productivity boost. Our most recent land drainage scheme, installed by William Morfoot Ltd, has seen an increase in yield of 8.4t/ha to just over 11t/ha. Yield increases are just one result. There's also a timeliness benefit, as we can travel on the land when we need to, and a soil health effect. All of these things combine to help give the right conditions for optimum crop growth.”*

T. Dye, Norfolk Farms Director,  
Albanwise Farming Ltd.





# Back to BASICS

*Unlock your land's potential*

“  
*William Morfoot Ltd have worked with Salle Farms over many years. Owning well-drained land has undoubtedly allowed us to achieve a combination of improved yields and efficiency.*  
”

P. Hovesen, Norfolk (Farmers Weekly Farmer of the Year 2014)

## Land Drainage – Why?

**Predictability.** It's an important concept for most agribusinesses, at a time when there are many unknowns. Commodity prices, spiralling input costs and the UK's volatile climate mean that it isn't always easy to produce consistent returns in agriculture.

Which is precisely why many growers are looking to manage risks where possible. Advances in technology have assisted in this greatly, with ever-bigger machines offering greater outputs and improved timeliness of arable operations. Scientific advances have also played a big role in recent years.

However, the basic raw ingredient that allows all of these improvements to go on working is often forgotten about – the **soils** in which our crops need to be nurtured and respected, to go on delivering in the years ahead.

Drainage grants finished over 30 years ago in the UK, and many existing land drainage schemes are fast becoming obsolete and ineffective.

### How can investing in land drainage help your farm?

■ **Improved timeliness of operations:** Land drainage helps to dry the land out more quickly post rainfall, allowing arable work to resume in shorter timescales.

■ **Aerobic soils with consistent properties:** Allowing for an even response to spray and fertiliser applications, and other nutrients and trace elements vital for your crop's development. Land drainage is a fundamental ingredient towards building a better soil structure.

■ **Lower your fuel bills:** Wet soils are more difficult to work and commonly can dry out and 'set' in the summer, resulting in them being hard and difficult to cultivate. Land drainage actively assists in developing better horizons within your soil.

■ **Improve land values:** Well-drained land is worth more than wet land. Fact.

■ **Improve yields:** Land drainage typically leads to yield improvements of an average of 25-35%.



**25-35%**  
**Typical yield increase**



# Complete SOLUTIONS

*From concept to completion*

## Preliminary meeting

**Our specialist drainage consultants** meet our customers in the field to talk through the projects we take on.

## The survey

**Detailed surveys** are undertaken by our own consultants, using the very latest in GPS technology and advanced mapping software, to collect the topographical information and other field data we need.

## Proposal plan and report

**A detailed proposal plan**, supported by our topographical data, is provided to our clients. This sets out the precise facts relating to the field and ensures our clients are fully informed ahead of any work starting.

## Confirmation and delivery

**At order confirmation**, we agree timings with our clients. We stick to those timings. We know that arable timings are key for busy farms and waiting for contractors is frustrating. If we can't meet your timescales, we'll tell you – and we won't keep you waiting for weeks on end.

## Practical installation

**Drainage proposals** are implemented by our specialist teams on the ground to get the projects completed. Finally, we supply true records on completion, providing a detailed final plan of the works undertaken.



*At William Morfoot Ltd, we believe service matters. Attention to detail and listening to what our customers want, whilst considering each project we undertake on an individual basis, are essential pre-requisites. Coupling these details with our long-standing experience and in-built knowledge within this specialist sector is the next stage.*

J. Morfoot, Technical Director, William Morfoot Ltd





# The SURVEY

*Invaluable information*



## Time spent in fields gathering survey information is invaluable

It gives us the chance to get a thorough overview of the field and, more importantly, to consider the wider implications of any surrounding water courses, or other external factors:

- **Topographical data**
- **Soil types**
- **Ditch Systems and flow directions**
- **Possible implications of existing underground utilities**

**Our topographical surveys** are undertaken using the very latest GPS surveying equipment, which captures data in the field and allows us to upload that data directly onto our digital maps. We can then prepare detailed proposal plans, which encapsulate the relevant information.

This data is transparent and we welcome the chance to meet with our clients, to show them the contour maps and associated data gathered from our surveys. This data actively demonstrates to our clients the methodology behind the scheme design.



# Proposal MAPS

*Capturing all the detail*

## Capturing existing field data

**Our surveying teams** can capture important existing site information. From plotting specific problem wet areas, to pinpointing gas mains or irrigation infrastructure, our surveys capture what matters.

In addition, our consultants consider the wider impact of the proposed work – such as looking at ditch maintenance requirements, culvert pipes, hedge and tree root implications, and any other possible areas that could affect the overall long term performance of your drainage scheme.



## Contour maps/flow charts

**Our survey data** can quickly be plotted onto Ordnance Survey maps, displaying clearly all the relevant data from the fields to be worked on.

Our in-house processing software gives us the capability to analyse our survey data concisely, through the production of detailed contour maps and flow charts, which show exactly where water will flow to at any given point within your field.

This tool gives us the accuracy to design our drainage schemes with complete precision, making provision for efficient gravel use and optimum performance of your land drains in the years to come.

## Meeting your expectations

**Perhaps, most importantly of all**, the proposal plans can then be put back



on to our GPS equipment for closer analysis in the field. The equipment allows us to take the survey data back to the field again, and to talk first hand with you about the pros and cons of designing field drainage schemes in a specific way.

This transparency makes sure that our clients end up with drainage scheme designs they are totally happy with. Drainage is a long term investment and we believe it's important to spend time on the preliminary surveys and scheme design, to ensure best practice results for the years ahead.





# Land drainage IN ACTION

*Ensuring consistent delivery*

**In order to make sure we can consistently deliver to our clients** in a timely way, we run a number of drainage trenching machines, complete with the associated ancillary equipment. We have an ongoing replacement policy, ensuring that our clients are benefiting from the very latest in drainage technology.

We have introduced GPS technology to our machines in recent years, which has transformed the way in which land drainage work is undertaken.

All of our equipment runs on either tracks, or low ground pressure tyres, ensuring that our equipment can keep moving on a year-round basis – whatever the conditions.

Most importantly, we have a competent, highly skilled and exceptionally experienced team of staff on the ground delivering our projects. This fact alone impresses many of our clients, who are pleased to find a knowledgeable workforce to answer any queries that may arise over the course of our projects.

“*Time after time, works have been carried out within a strict time frame, to exacting standards.*”

D. Mathews, Velcourt





# Managing WATER COURSES

*Delivering quality projects*



As well as the practical installation of new land drainage schemes, we also offer a complete array of water course management services. These include:

- New ditch creation
- Ditch maintenance/restoration
- Culvert installation/replacement
- Ditch infilling/ditch piping/field amalgamation
- Water level control facilities installation, including sluices and other water control devices

Our ditch restoration and water course management services are provided by our own team of experienced professionals, who commonly undertake these works in conjunction with our land drainage projects.

Our consultancy team is able to offer you clear advice on precisely what options are available, ahead of the works starting.

Our excavators are equipped with laser technology, to ensure accurate grading of ditch beds. We have an array of specialist excavator attachments, including V-buckets, hydraulic saws and flails.

The standard of our work speaks for itself. We recognise that ditch systems are often all that is visible once a new land drainage scheme is installed, and we take great pride in delivering quality projects to our clients – many of whom have been long-standing customers over several decades.

**Ditch restoration and water course management, including culvert construction, ditch removal and field amalgamation**



# Land drainage: THE OUTCOME

*Results and management*

**Following the installation of a new land drainage scheme, what can you expect?**



## **Watch the water flow**

Typical flow rates from standard 80mm land drains, with stone laid over a 400-metre length drain run, have recorded flow rates of 12 litres per minute. On a 20m spaced standard scheme, this will be drawing water from 0.8 of a hectare. This equates to 720 litres per hour, or 17,280 litres per day, out of just one single drain. So, on a 10ha field, over an 11-day period, the drains will be draining the equivalent of 2,500,000 litres – enough to fill an Olympic swimming pool!

## **See your crops respond**

Land drainage typically provides rapid improvements, alleviating visible standing water. For the best results, we always suggest that it takes time to return soil structures to optimum condition. This involves good husbandry techniques being employed, such as subsoiling and undertaking of arable operations in the correct conditions. Long-term, improved crop establishment and consistent yields should all be routinely witnessed across drained land.

## **Life expectancy**

The life expectancy of a drain will vary depending on a wide variety of external factors, all of which can influence how long the scheme may operate. However, on a typical scheme, with good management techniques being employed by landowners, we suggest a typical 20-25-year life expectancy period. Not many investments go on delivering a return for this long!



## **Drain maintenance**

Following installation of a new land drainage system, we strongly urge our clients to look after their investment. This involves ensuring that ditch systems are kept clear and drain outfalls remain free from obstructions. We recommend routine jetting of land drains, to flush away any build up of material on the walls of the pipes. This is particularly true on soils with high ochre contents. At William Morfoot Ltd, our teams can provide drain jetting and ditch maintenance works as needed.





# Farming for TOMORROW

*The next generation*

**Investing in land drainage represents a significant long-term commitment for any farm business.**

Many drainage schemes last for decades, providing payback year after year. Whilst the initial outlay is significant in terms of investment, the cost has to be realistically considered over the lifetime of the scheme – therefore making the annual cost a fraction of the initial outlay.

Land drainage needs to be considered as another ‘tool’, along with other inputs which aid growers in better managing their crops. As such, recognition of when land drainage is required needs to be assessed on the same professional basis that fertilisers or sprays are applied.

Selecting a reputable land drainage contractor who can undertake a thorough appraisal of your fields through comprehensive surveys and, subsequently, provide a recommendation fit to stand the test of time, is therefore key.

Professionally installed land drainage systems lead to improved long-term yields. They also make the management of farmland and decision making more straightforward – and less stressful.

Finally, there is an element of pride in owning land which is properly cared for and fit to hand on to the next generation.



*William Morfoot provide us with a high standard of workmanship, supported by a professional management team that work closely with us to deliver a competitive and reliable service.*

W. Forbes, J B Shropshire & Sons Ltd

## Case STUDY

*Mark Ruffles, Broke Bros., Norfolk*



**We farm some very heavy land in mid Norfolk** and had recognised that

we had drainage issues across a significant proportion of the farm – a lot of which stemmed from old and out-of-date drainage systems from previous generations. We had experienced some disappointing yields across the fields which needed draining, as well as timeliness issues when the land became wet, with regard to some of our routine arable operations. We have some complex topography on our land, so we knew that we needed specialist help to get the land drainage proposals and scheme design completed properly.

William Morfoot Ltd were highly professional from the outset, preparing detailed proposal drawings, supported by comprehensive levels data and excellent all round knowledge as to what needed to be done. Given that we are viewing our investment in land drains as a minimum of a 25-year term, we were most concerned that the scheme design was right.

We completed over 100 acres of comprehensive drainage work last year and plan to continue our drainage program this year. Having a contractor who turns up on time and completes work to a high standard is critical for our business, and we have already seen the benefits of their work

through improved yields. We had tight windows in which the draining could be done, owing to cropping plans for the current year, and William Morfoot Ltd successfully kept ahead of our drilling operation as promised.

We are confident that there will be rapid payback on our investment in land drainage over the next few years and, with the continued trend towards intense rainfall over short periods of time, we are sure that installing comprehensive new schemes across the land that we have will help us to farm the land better and more profitably going forward.





## Get in TOUCH...

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If you would like to find out more about our land drainage and water management services, you can reach us at:

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