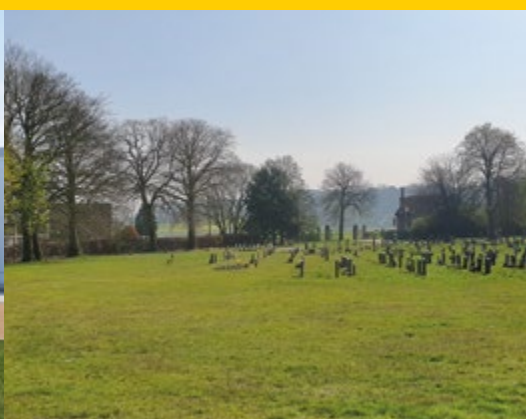


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Discover what's beneath.

Cemeteries & Crematoria

Part of The CDS Group



Introduction

Pioneering technical capability underpinned with exceptional customer service.



For over 20 years, CDS have pioneered the development of cemeteries and crematoria throughout the UK and overseas.

Known for many years as Cemetery Development Services, The CDS Group have since expanded its activities to include Parks and Leisure, and Environmental Solutions. Its roots are very much in the creation of beautifully landscaped and thoughtfully constructed cemeteries and crematoria. Developments that have distinctive spatial qualities where families and friends can reflect and remember loved ones in peaceful surroundings.



About us

Specialists in cemetery, crematoria and mausoleum design and development



CDS are a team of highly qualified and dedicated specialists - field surveyors, engineers and designers - with an outstanding network of partners including architects and construction consultants, enabling us to offer an unrivalled service in the design and development of cemeteries and crematoria.

We are committed to creating environments that provide tranquillity for visitors but also offer excellent commercial value and facilities that can be managed and operated on a day-to-day basis at minimal cost.

CDS brings together talented professionals that combine inspirational creativity, exceptional engineering capability and sound technical advice.

CDS Green Agenda

We are totally committed to making future developments carbon neutral.

We help clients achieve this through our Green Agenda programme designed to maximise sustainability and, wherever possible, actually achieve a net gain in biodiversity.

We do this through a comprehensive range of measures, materials and technologies, such as new electric cremators which can be powered by renewable energy resources so it produces 95% less carbon dioxide emissions than a gas cremator.

In addition, other innovative initiatives include electric hearses, plastic roads, recycled plastic drainage solutions and cemfree cement with 80% lower embodied Carbon Dioxide emissions which all help to provide a more sustainable development.

Cemetery design and development

A methodology based on best practice

What may have begun as trial and error in the early days has since flourished into a robust methodology based on sound best practice. As a result, CDS have developed a proven three-stage process for the delivery of a cost-efficient development programme for new cemeteries or cemetery extensions, delivered through an acclaimed client relationship package.



Stage 1. Feasibility & Client Brief

The feasibility is centred on the outcome of the extended environmental assessments as the development of a cemetery requires Environment Agency approval in order to be viable.

The feasibility will identify any issues likely to alter the anticipated budget or increase estimated cost of development, and includes the following:

- Preliminary designs of hard and soft landscaping and layout options
- Drainage infrastructure investigations
- Memorialisation and grave layout
- Estimated costs
- Schedules and timescales

Stage 2. Design

With the data collected from the Stage 1 Feasibility and Client Brief, we can commence the design programme. In this context CDS ensures that the cemetery is designed so there is either minimal environmental impact, or wherever possible, it actually enhances the environment and one that can be managed on a day-to-day basis at minimal cost.

Our design process:

- Analyse requirements, survey site and adjacent area where necessary, prepare, describe and illustrate outline proposals and submit these to all relevant parties for approval.
- Prepare budget estimate and monitor cost implications during the design stage.
- Liaise with the CDS Design Team to determine the most cost effective design and proposals.
- Prepare a design scheme consisting of drawings and outline specifications showing

materials and appearance, and submit these to all relevant parties for approval.

- Apply for final planning permission, conduct negotiations with Planning Department, carry out any required amendments.
- Liaise with all parties as necessary.
- Complete a detailed design, incorporating structural engineering details.
- Prepare working drawings and construction notes for materials and workmanship required.
- Apply for Building Regulation approval if required.
- Advise on tendering procedures and contract arrangements.
- Advise on warranties and insurances related to building works.
- Instruct Structural Engineer if required by the Local Authority.

Stage 3. Project Management

CDS will ensure that, once a contractor has been selected and the site works have commenced, all aspects of the drainage design are installed as per the detailed specification and the project is finished on time and to budget.

CDS achieves this by providing an ongoing client relationship package. Our engineers also ensure that the contractors are fully briefed on all required works so they are well placed to monitor the project meticulously from start to finish.

Cemetery planning

Any new cemetery or extension to an existing cemetery requires planning approval and many levels of assessment to support an application. The level and degree of studies will be dependent, in part, on the sensitivity of the site (e.g. green belt or areas of significant environmental or historic value).

CDS have many years' experience in cemetery design, planning and delivery and can provide a full planning application service that comprehensively covers all of the elements.

In most cases, CDS starts with a pre-application meeting or report with planners. From this, a detailed and costed framework for the required studies is provided. This ensures the development is managed meticulously and cost efficiently from start to finish, covering:

- Environmental Reports
- Planning Policy Documents
- Landscape Design

CDS have an outstanding record in achieving a successful planning outcome where we have undertaken all the components of the planning process

Groundwater risk assessment

It is a statutory requirement that measures are taken to protect groundwater from potential pollution sources. Burial practices give rise to potential sources of pollution and are covered by these regulations. As such, we strongly recommend to all our clients that a Groundwater Risk Assessment is undertaken.

CDS provides its clients with comprehensive groundwater risk assessments which meet the specification and criteria set out by the Environment Agency.



Tier 1 groundwater risk assessment

comprises a detailed desk study assessment of the site, geological conditions, hydrogeological conditions and proximity to watercourses. Site specific information and burial numbers are used to create a risk score for the site.

Tier 2 groundwater risk assessment

contains all of the site specific desk study information that a Tier 1 groundwater risk assessment has. On top of this, ground truthing is undertaken to determine the exact geological sequence on site, the presence of perched water/ groundwater within burial depth and the likelihood of ground stability issues during burials.

Tier 3 groundwater risk assessment

is only carried out on sites which have been determined to have a very high risk/very high annual burial number. A Tier 3 investigation comprises a detailed Tier 2 assessment and includes the installation of groundwater monitoring boreholes, groundwater quality sampling and long term monitoring of groundwater levels.

Drainage assessment & design

Drainage in cemeteries is complex due to physical, environmental and practical constraints.

CDS specialise in the drainage of cemeteries; designing bespoke solutions to surface and groundwater problems. We designed and project managed the country's first deep groundwater drainage system for cemeteries; leading the way with a new methodology which has since become established as best practice.

Our specialist technical services provide management of the following areas:

- Dewatering and lowering of groundwater levels through deep drainage techniques
- Surface water and catch-all drainage systems
- Spring line diversion and cut off
- Reed bed construction
- Grey water management (grave pumping and environmental wastewater management)



Memorial stability testing



The testing of memorials within churchyards and cemeteries, whether open or closed, is a legal requirement for the operator of the cemetery and should be carried out every five years by a trained professional; with unstable or unsafe memorials identified and cordoned off prior to making safe.

CDS offer a cost effective and simple solution to undertaking memorial stability testing which is in line with the Ministry of Justice and relevant British Standards. Our highly trained and experienced staff carry out a visual assessment of all memorials to ensure each is deemed safe before undertaking a hand load test on the memorial. Details of all memorials are recorded on a handheld tablet along with photographs of the headstone for future reference.

Cemetery mapping

In line with the Burial Act 1853, all cemetery operators must maintain up-to-date plans of all graves, vaults and grave spaces which are related to the storage of all burial records. Having an accurate and up to date system can help with the day-to-day management of the cemetery and ensure that the quality and speed of service to both the family of the loved ones and local funeral directors is sustained.

CDS can help you investigate the status of current burial records and maps for your cemetery. We can propose the most cost effective way to update records and ensure they comply with legal requirements. CDS can work with you to introduce best practice solutions that deliver improvements and greater efficiencies for the future.

Marking out

The opening of a new cemetery or extension area can be an exciting occasion following planning approval. How well a new facility is managed can have a significant impact on the overall look of the site in the future and the inaccurate placement of a burial can have significant impact on future revenue.

Throughout our history, CDS have had experience in all types of ground markers to delineate burial plots including wooden marker posts, plastic ground discs and plastic marker pegs. All of these solutions have the same issue, they are easily hidden in overgrown grass, can be damaged by lawnmowers or lost; resulting in difficulties in maintaining the burial system on site.

CDS have designed a solution where stainless steel poles are driven into the ground by a small tracked drilling rig. This technique means the post is strong and secure and does not require any hand digging or concreting in. A unique laser engraved ID tag is then secured to the post using metal cable ties and a colour coded cap installed on the top to delineate whether the post marks out a path or a burial area.

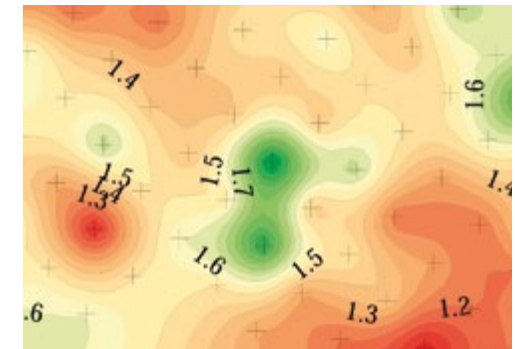
This system has been proven fast and cost effective as well as being highly accurate. The posts are topographically surveyed prior to installation, making them accurate to the nearest centimetre. The posts can also help to ensure accurate alignment of faith burials, particularly

important for specific religions such as Muslim communities. They also help to accurately locate presold burial plots which have yet to be buried around, reducing the risk of the wrong location of plots.



Dynamic probing

As part of the statutory requirements for all burial sites, burials are not permitted to take place directly into unweathered bedrock. CDS have developed a rapid and detailed assessment of depth to bedrock using Dynamic Probing. Data collected from the dynamic probing is plotted spatially on a detailed contour map, providing a rapid and detailed assessment of the depth to bedrock allowing CDS to quickly and cost effectively ascertain whether a site is suitable for burials.



Groundwater abstraction

The provision of water on new cemetery sites can require costly installation to get a supply of mains water to the site making it a significant part of the development cost. In addition, the use of treated drinking water for the watering of grass and memorials, at a time when climate change and carbon emissions are a significant issue, is considered wasteful.

There are several alternatives to mains water supplies to cemetery sites which can be more cost effective and have a lower carbon footprint. CDS are happy to advise clients on the best solution for their site, including green solar and wind powered borehole abstraction pumps, depending on factors such as the underlying geology and depth to groundwater.

Greywater management

Greywater management is an important part of day-to-day operations which all cemeteries should take seriously. Pumping greywater without adequate protection to staff/public and surface water/groundwater is potentially dangerous and in breach of regulations.

Whilst drainage solutions are considered to be the best option, retro-fitting such solutions into existing cemeteries can be difficult and costly due to the need to hand excavate between existing burials and, where space is limited, the loss of land to features such as attenuation basins is not cost effective.

Therefore, the next best option is to manage greywater by pumping and storing greywater from burials to a secure tank on site.

CDS have experience in providing site specific greywater management systems which can be sized according to the volume of water pumped per burial, the number of annual burials and the area of available space on site. The aim of such a system is to minimise exposure to groundworkers and remove the risks posed to the public and the underlying groundwater.

Crematoria design and development

Buildings

CDS partner with several architectural firms who each have considerable experience in designing commercially viable crematoria that are imaginative, functional and empathetic with the local landscape.

We work closely with our clients at every stage, using our expertise to help shape and create the initial design brief before undertaking the conceptual design works.

We continue to push the boundaries of design.

We are committed to making future developments carbon neutral and achieve a biodiversity net gain. We help clients achieve this by introducing new electric cremators which can be powered by renewable energy resources, so it produces 95% less carbon dioxide emissions than a gas cremator. In addition, other innovative new initiatives include cemfree cement with 80% lower embodied CO₂ emissions, plastic roads and recycled plastic drainage solutions, which all help to provide a more sustainable development.



Landscape

Whilst the design of crematoria buildings and ancillary structures play a huge role in the look and feel of a new development, it is the forming, shaping and planting of the surrounding landscape that ensures the building development has real empathy with its environment.

CDS work closely with the architect and designers to ensure that the landform around the development creates distinctive spaces and peaceful surroundings. Informed by professionals, they offer contrast, physically and psychologically, from the daily hustle and bustle providing an environment for reflection and remembrance.

Landscaping brings together contemporary design and traditional style to create beautiful, relaxing spaces, providing visitors with an environment that gives them the time and space to connect



Interior design

In conjunction with the visual impact of the crematorium and the framing of the landscape, sympathetic interior design is a key element in the creation of a space where families and friends can reflect and remember loved ones in tranquility.

At CDS we always work closely with our clients and architects to ensure we create modern and innovative spaces where families and loved ones can spend time before, during and after the service.



Planning and project timeline

Any new crematorium development requires planning approval and many levels of assessment to support the application. The level and degree of studies will be dependent, in part, on the sensitivity of the site (e.g. green belt or areas of significant environmental or historic value).

CDS have several years' experience in crematoria design, planning and delivery and can provide a full planning application service that comprehensively covers all of the elements.

In most cases, CDS starts with a pre-application meeting or report with planners. From this, we put together a detailed and costed framework for the

required studies. This ensures the development is managed meticulously and cost efficiently from start to finish, covering:

- Environmental Reports
- Planning Policy Documents
- Building and Landscape Design
- Highways Reports
- Archaeological Studies
- Ecological Studies

Construction management

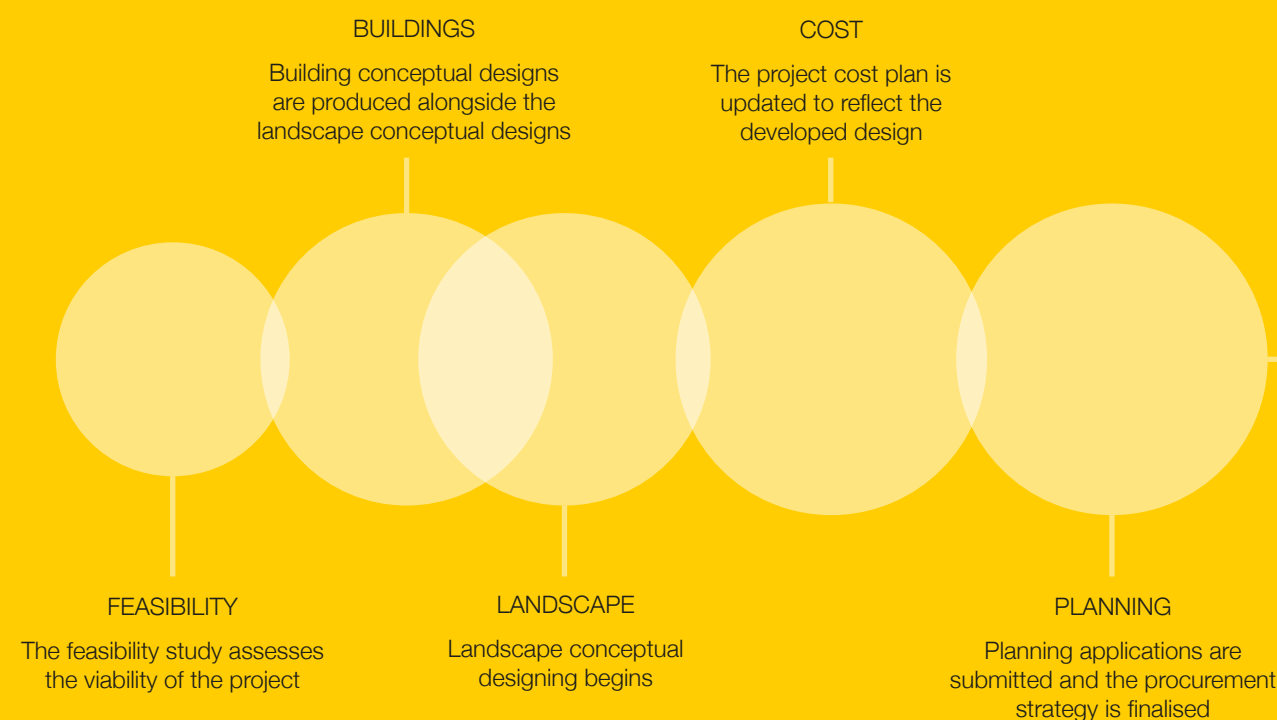
CDS work closely with its partnered cost management team, providing the commercial experience and acumen required for large scale construction projects.

This enables us to provide our clients with detailed construction tender documents, cost proposals, cost management, project services and building consultancy for the design and build of crematoria. Whatever the size of your project, you can rest assured that CDS is totally committed to delivering your project on time, on budget and meeting your expectations.

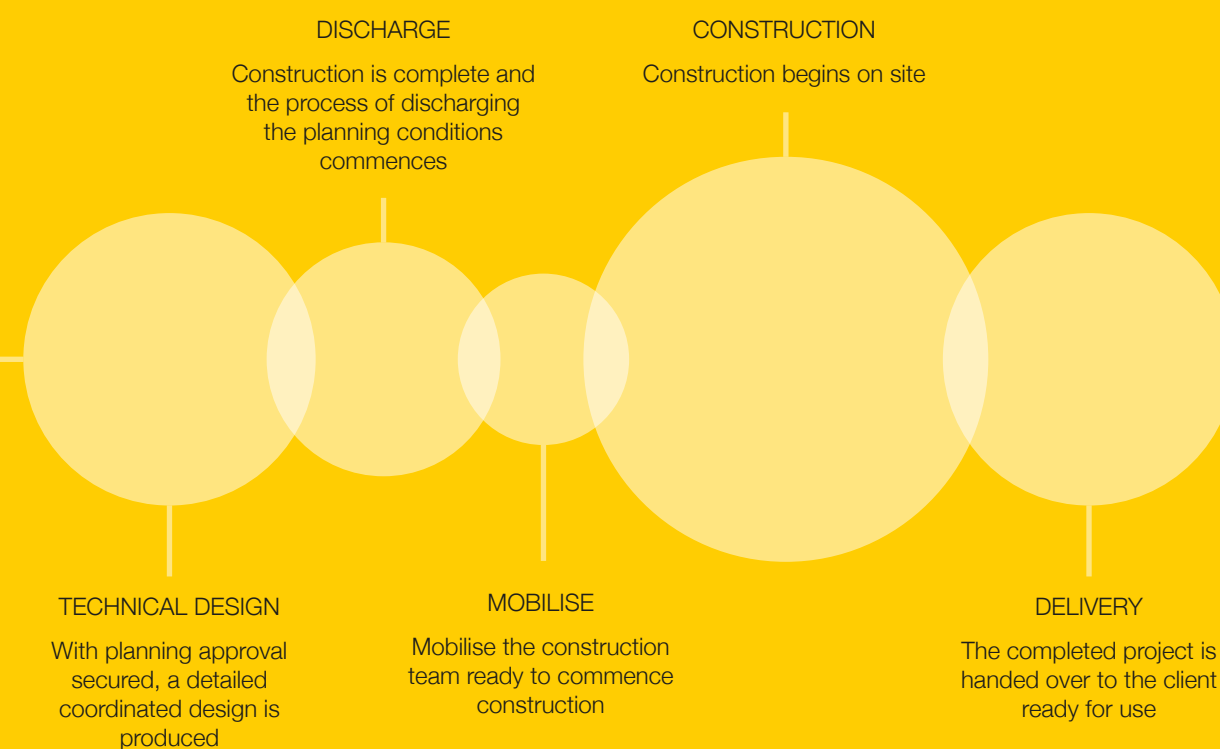


Example timeline

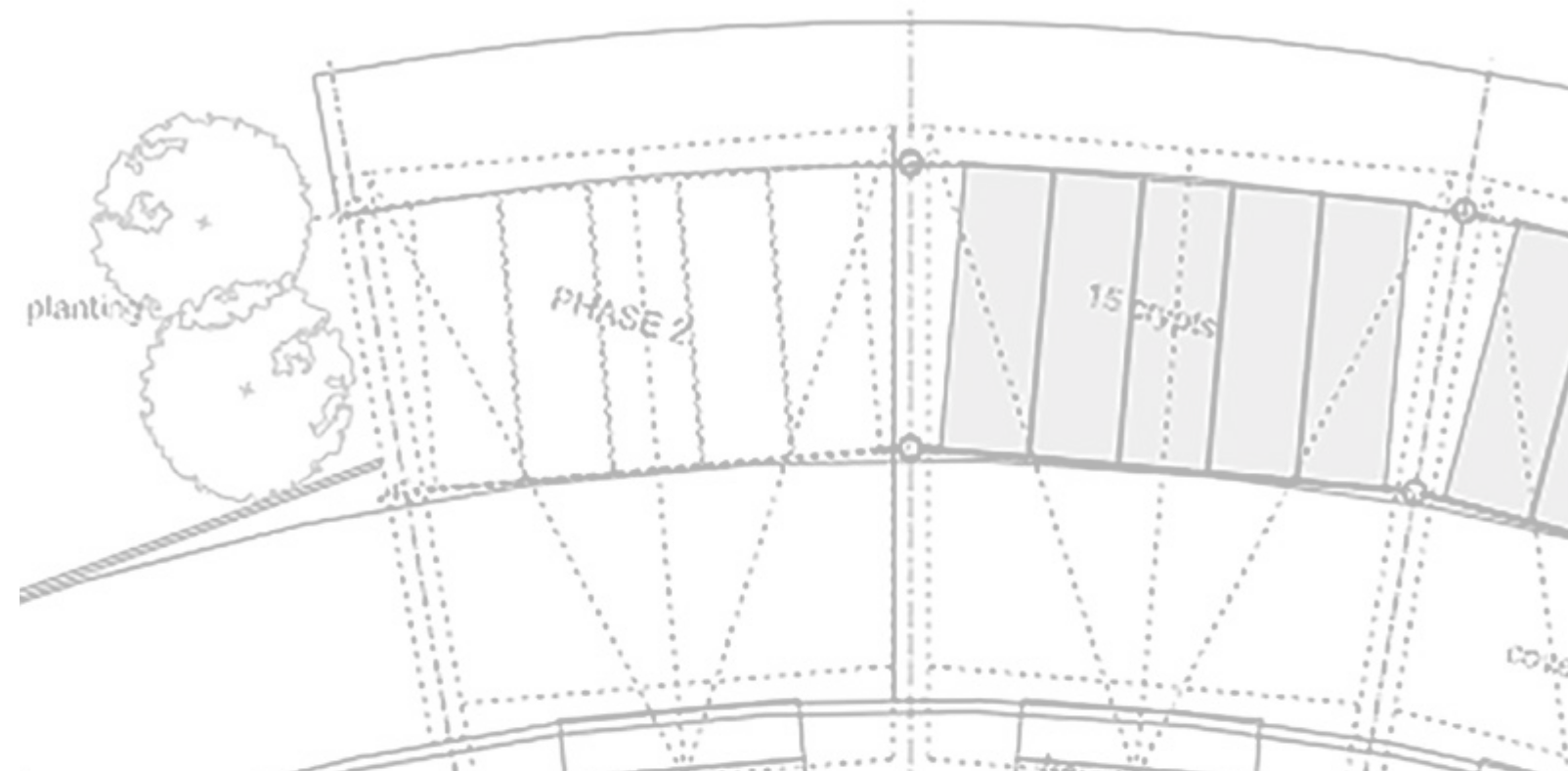
Planning phase



Construction phase



Our Qbox mausoleum system avoids groundwater environmental studies and is adaptable to diverse cultures



We design bespoke mausoleum using the latest innovation in 'vented burial niches'.

Our revolutionary Qbox system is a high quality, long lasting system and an alternative to heavy concrete chambers.

Installation of the patented Qbox system requires no heavy lifting equipment thus minimising disruption, avoiding potential damage to existing infrastructure and enabling installation in parts of a cemetery which would be inaccessible to most conventional concrete formed structures.



Testimonials

“We commissioned CDS to carry out groundwater risk assessments at our three large cemeteries and in addition to undertake a feasibility study of an area we wish to convert to burial land. We were grateful for their prompt visit to the sites to provide a quotation, their staff are very knowledgeable and helpful. The works were carried out professionally and in good time and the reports are very useful in the day to day running of the service.”

KELVIN TAYLOR
Bereavement Services Manager, Enable LC

“We have been very impressed by the level of customer service provided, the consistent high quality and timelines of service provided in respect of technical and non-technical issues.

Furthermore, in my experience, they have always ‘gone the extra mile’ and offered a value added professional approach on every project they have been instructed on. I would not hesitate in recommending the professional services provided by CDS Ltd to other local authorities. The service provided is excellent.”

K MARTYN FENWICK BSC MRICS EHDC

“Entering into a project to develop a new cemetery is rather complicated and a very daunting process. CDS have made the journey to date so easy and taken the pressure off the Town Council by undertaking the technical work that the

Council will be presenting to the EA. CDS’s initial assessment has set us off with confidence and we look forward to working with them throughout the project. Knowing that the company will support us until the Cemetery is completed is very comforting.”

STEVEN TRICE
Town Clerk, Haywards Heath Town Council

“CDS developed a discreet, cost effective solution to our ground water difficulties and stopped a significant problem becoming a major issue. The solution has coped faultlessly since installed even throughout the recent periods of excessive rainfall.”

KEVIN PILKINGTON
Head of Bereavement Services, Croydon

“I have and will continue to work with CDS with great pleasure. CDS have a great understanding of what is required in any given task and have transferred basic thoughts and ideas into reality. The team are professional, constructive, clear and above all very nice to work with... I would be happy to recommend CDS for any aspect of work they feel suited to take on.”

S HOLLOWAY
Islington & Camden Cemetery Services

Our clients



Meet the team

JUSTIN SMITH

Chairman



Justin HND (Dist) is a qualified agronomist and has 30 years experience in plant soil and water management, Justin has developed a number of patented soil management technologies used internationally by the sports and agricultural sector. Justin has been in the cemetery development industry for the past 15 years specialising in ground water protection and planning.

BECKY BALLINGER

Director



Becky has been working with CDS for six years and is responsible for compiling the multiple elements of the planning package and ensuring the client is always informed of every stage of cemetery and crematorium developments.

DARRYL KELLY

Technical Director



Darryl, MGeol, FGS, is a qualified Geologist with over 11 years’ experience in the Site Investigation industry. He recently joined CDS as Technical Director and aims to bring his experience with regards to Site Investigation, Groundwater Monitoring and Modelling to expand, enhance and develop the services that CDS offers its clients.

ALEX VICKERS

Soil Engineer

Alex, BSc (Hons) Soil Science, MPhil, M Soil Sci, is a professional Soil Scientist with specialism in soil water management and drainage. He has over 25 years’ experience in applied soil management and has worked extensively in both the UK, Europe and Africa. He undertakes cemetery risk assessments as well as drainage investigation, design and management.

PAUL CARVILL

CAD Designer

Paul, Dip Des DIT, is experienced in producing 2D and 3D AutoCAD drawings for reports within various disciplines of the company. He works closely with the landscape and drainage engineering and other teams to produce master plans to form the drawings required for planning, burial plot layouts and drainage management schemes.

ANTHONY MILNE

Senior Technician

Anthony has over 30 years experience in the architectural sector and has worked extensively in a variety of sectors including existing and new build housing, retail, commercial and ecclesiastical, as well as in aviation and education. Having spent nearly 5 years as a contractor with his own limited company, he joined EHW in January 2018 as a senior architectural technician. Over the years, Anthony’s role has traditionally been in producing construction information for larger projects, but has also run smaller individual projects in their entirety from conception to completion.

RICHARD GLEN

Landscape Architect

Richard, a Chartered Landscape Architect, joined CDS after running his own Landscape Architecture practice for over 15 years, specialising in the design and assessment of a wide range of projects focusing on waterways and open spaces. Richard brings a wealth of knowledge and experience in landscape design and planting, and his creative design skills bring proposed landscape schemes to life.

MARCELA WRAY

Office Manager

Marcela joined us as Office Manager at the beginning of 2019 and is responsible for the day to day running of the office, arranging client meetings and looking after financial admin.



Cemeteries
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