C D S

Discover what's beneath.

Environmental Solutions

and the states

Part of The CDS Group



<u>In</u>troduction

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 has since expanded its activities to include Parks and Leisure and Environmental Solutions.

We have an unswerving commitment to customer service and an innovative approach to problem solving which, combined with our experience and technical expertise, can transform areas of problematic contaminated land into a wide range of developments serving local communities and nature alike.



<u>Ab</u>out us

<u>Specialists</u> in Environmental investigations and Solutions



The CDS Group are a team of highly qualified and dedicated specialists - field surveyors, engineers and designers - with an outstanding network of partners which includes architects and construction consultants, enabling us to offer an unrivalled service in the design and development of parks, leisure, sports facilities, cemeteries and crematoria. 5

We are committed to helping our clients transform parcels of historic contaminated land into modern, green developments which can, once more, serve and enhance the local community

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



<u>En</u>vironmental

A methodology based on <u>best practice</u>

minated land from historical land uses, fly and industrial and commercial activities can nd all over the UK. Such parcels of land are found in built up areas, where land values h and the d for new developments such as schools,

g and open space is great.

CDS can assess the historical and present use of parcels of land and determine the cost implications of the potential contamination that may be encountered. As a result of the initial review,

CDS can carry out a detailed Phase 1 Desk Study Assessment.

This may be followed by a targeted site investigation to assess the nature of the ground conditions and levels of both soil and groundwater contamination (asbestos, heavy metals, hydrocarbons) encountered on site, as well as

the risks posed from land gas contamination. On completion of the investigation works, CDS advise on the best course of action for the

development of the site and highlight the remedial measures required to ensure the environment, groundworkers and future users of the site are not at risk from contamination.



Site investigations

Our engineers offer a wide range of investigation techniques to suit the site ground conditions and the objectives of the investigation. Whether the works are related to cemeteries, crematoria, parks, leisure spaces or another type of development, our team can design and undertake a site investigation which is fit for purpose.

Site Investigations are typically carried out in a phased approach to provide a bespoke solution for each site:



Phase 1

Desk study assessment and walkover survey

The aim of phase 1 is to identify potential geotechnical and contaminative risks which may impact the site based on the nature of the development. This assessment enables us to

devise a specific plan of action for the next stage of works.

Phase 2 Site investigation work

A targeted intrusive investigation based on the information gathered from Phase 1 which enables us to undertake a cost effective and efficient investigation that ensures potential risks are identified and addressed.

Phase 3 Production of remediation strategy

If Phase 2 demonstrates a significant risk of contamination, CDS will design a time and cost efficient site-specific remedial strategy.

Phase 4 Remedial works and validation

Having received agreement on the remedial strategy with the Local Authority, CDS will oversee and document the remedial action and provide the required validation report for the planning department. This ensures the works are carried out in accordance with regulations to remove the risk to the environment and the end users of the site.



<u>Geotechnical investigations</u>

The CDS team of in-house specialists can help to design and undertake geotechnical investigations for the assessment of ground conditions relating to the design of foundations, roads and soakaways.



Our knowledge and experience enables us to offer our clients a cost effective and appropriate methodology to achieve their requirements.

Geotechnical site investigations can be undertaken using a variety of equipment and techniques such as:

Topographical surveys

Topographical data captures site levels, features and assets at a frequency determined specific to the project requirements. Topographical surveys can also be used to help create groundwater contour maps, depth to bedrock surveys and cemetery mapping.

Trial pitting

A quick and useful way to identify soil conditions on site, assess the risk of contamination and groundwater ingress and trench stability. Trial pitting requires access for an excavator onto the site and can lead to significant disturbance of the land due to the scale of the excavation.

Rotary drilling

A specialist rock drilling rig which can core through and sample rock to enable accurate logging on the rock recovered. This method can also drill through rock to target depths using open hole techniques to allow for the installation of monitoring wells or groundwater abstraction pumps.

Dynamic probing

A rapid tool for a wide variety of geotechnical uses. Dynamic probing can be used to investigate the presence of below ground obstructions, old mine workings, solution features and sinkholes. It is

also an effective way to investigate the depth to bedrock - particularly useful on cemetery sites to assess whether burial depths can be achieved.

Cable percussive boreholes

A tripod drilling rig towed to site by a 4x4 and used to drill boreholes to depths greater than those achieved by windowless sampling. Uses include pile design boreholes, with SPT's, SPT(c), U100s, as well as drilling borehole soakaways, groundwater abstraction wells and enabling the installation of groundwater and land gas monitoring wells.

Windowless sampling

A simple, cost effective alternative where trial pitting is considered unsuitable. Windowless sampling is carried out using a small rubber tracked rig, drilling a borehole approximately 100mm in diameter to depths of up to 5m bgl allowing for the installation of groundwater and land gas monitoring wells.

Soakage testing

Drainage of new and existing sites is an increasingly important aspect of all developments, with surface water flooding becoming increasingly common due to poorly maintained infrastructure and increasingly heavy rainfall events which overwhelm drainage systems. CDS undertake site specific surveys of drainage systems, carry out soakage testing (BRE365, Borehole Soakaways and NHBC 5.3 Tests) and design new drainage strategies to help prevent surface water flooding and designing drainage for newdevelopments.

Geoenvironmental investigations

The CDS team of in-house specialists can help to design and undertake geoenvironmental investigations for the assessment of contaminated land, risk of land gases and assessment of



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Contaminated land assessments

An assessment of the ground conditions on site using a variety of intrusive drilling and sampling techniques. Accurate and detailed soil logs are produced, and potential contaminated material is sent for laboratory analysis.

Land gas well installation and monitoring

Where a site contains deep made ground, pockets of highly organic natural soil or is in close proximity to a landfill site, the risk to a proposed development from land gases needs to be assessed. Land gas monitoring boreholes can be

installed on site, and monitored in accordance with current guidelines to assess the levels and impacts of land gases.

Groundwater monitoring well installation, monitoring and sampling

Groundwater monitoring wells can be installed in boreholes to assess the depth to groundwater which can impact on developments such as cemeteries, and the construction of foundations and drainage features such as detention basins. The wells are monitored to assess variations in groundwater levels throughout the year and can be remotely monitored using dataloggers which record levels every minute to provide a detailed assessment of changes observed. Where required, monitoring wells can also be purged and sampled to collect groundwater samples for contamination testing.



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Regeneration, design and <u>planning</u> services

Once a site has been investigated and solutions have been implemented, geotechnical or geoenvironmental, the CDS design and planning team will deliver a useable, safe and valuable future asset to its clients.





Our experience

CDS have many years' experience in planning and delivery and can provide a full planning application service that comprehensively covers all of the required elements. In all cases, CDS start with a pre-application meeting with planners. Following this, our planning team put together a detailed and costed framework for the required studies. This ensures the development is managed meticulously and is cost efficient from start to finish, covering:

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

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



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 nontechnical 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







Charnwood



London Borough of Hounslow















CROYDON





Environmental Solutions

> CDS Environmental Solutions, Building 51, Wrest Park Silsoe, Bedfordshire MK45 4HS T: +44 (0)1525 864387 Part of The CDS Group