TDAC / SPECIALIST SOFTWARE SOLUTIONS

From ground data to engineering decisions

Geotechnical Data & Engineering Platform

TDAC combines developed geotechnical data-management and calculation tools with an evolving platform designed to connect investigation records, laboratory results, interpretation, engineering analysis and reporting.

A CONNECTED GEOTECHNICAL WORKFLOW

01 / CAPTURE

Projects, locations, observations and samples

02 / PROCESS

Laboratory readings, results and structured datasets

03 / INTERPRET

Ground models, parameters and engineering cases

04 / DELIVER

Borelogs, tables, calculations and report packages

Engineering knowledge at the centre

The aim is practical: reduce repeated data entry, improve consistency and preserve the connection between an engineering output and the evidence behind it. Field, laboratory and design teams contribute to a common information workflow.

ONSHORE INFRASTRUCTURE / MARINE / OIL & GAS / OFFSHORE WIND

02 / CAPTURE, TESTING AND DATA

Connect the field, laboratory and office

An organised information chain from the project brief to reviewed investigation data.

Designed around real geotechnical work

Investigation information often moves between field sheets, test schedules, spreadsheets and reports. TDAC’s platform design links these records through consistent project, location, sample and test identifiers, preserving the context needed for interpretation.

Project and location records

Organise project details, boreholes and investigation locations, coordinates, levels, methods and dates. Associate observations and supporting files with the location and depth interval to which they belong.

Field investigation data

Structure borehole descriptions, stratification, SPT and CPT records, groundwater observations, sampling and rock-core information. Maintain original observations alongside processed information.

Samples and laboratory workflow

Connect the sample register with requested tests and laboratory results. The wider platform design includes receipt, custody, assignment and review stages so the origin of each result remains clear.

Raw readings to usable results

Link test inputs to calculated parameters, plots and summaries. Development covers classification and laboratory processing workflows, including particle-size distribution, specific gravity and Atterberg limits.

AGS-aligned data organisation

Use a structured geotechnical data model with planned import mapping, validation and exchange. Agree the supported AGS version, fields and file formats for each implementation.

Validation and historical records

Design checks for missing information, units, duplicate identifiers and inconsistent depth intervals. Bring historical records into a review workflow that retains source references and flags uncertain extraction.

One identity, retained through the workflow

Project → location → sample → test → result → engineering use

03 / INTERPRETATION, DESIGN AND REPORTING

Turn structured data into engineering outputs

Keep observations, interpretations and calculations distinct, connected and reviewable.

Ground interpretation

Bring field and laboratory evidence together to develop interpreted layers, ground profiles and adopted parameters. The platform design retains the basis and version of an interpretation alongside the factual records.

Engineering calculations

Connect selected data and parameters to defined TDAC calculation workflows. Record inputs, assumptions and outputs so engineers can assess the result and its suitability for the design problem.

Developed TDAC tools / modules	Role in the wider software programme
Geotechnical data management	Organisation of investigation records and engineering information.
CPT interpretation	Processing and interpretation of cone penetration test data.
Geotechnical design modules	Specialist calculation and assessment workflows.
Pile drivability analysis	Assessment workflows supporting pile installation planning.
Spudcan penetration analysis	Penetration assessment for offshore geotechnical applications.

These are developed tools within the TDAC programme. Their connection to the shared platform, supported methods and deployment are defined for each implementation.

Borelogs and reports

Compile borelogs, laboratory summaries, parameter tables and factual or engineering report packages. Use agreed templates and include the information relevant to the selected reporting scope.

Preserve the calculation basis

Report generation uses saved engineering results rather than silently repeating design calculations. The intended review trail connects each result to its data, adopted parameters, method and assumptions.

The wider development programme includes foundation, settlement, liquefaction, embankment and retaining-system workflows. Availability is assessed module by module.

04 / CLIENT VALUE AND DELIVERY

Built around your workflow

Start with a defined operational need and build around the client’s data and review process.

Who the solution is designed for	Intended value
Investigation contractors	Connect location records, sampling and investigation outputs; reduce repeated handling.
Geotechnical laboratories	Keep sample identities, test inputs, calculations and summaries connected.
Engineering consultants	Reuse reviewed data in interpretation, engineering assessment and reporting.
Developers and asset owners	Retain structured investigation information for review, handover and future reuse.

A focused implementation

Begin with one representative project and dataset. Define users, required fields, supported tests, outputs and review responsibilities; configure or develop the agreed functions; check the results against reference examples; then establish handover and support arrangements.

Development direction

Offline mobile capture, enterprise approvals and audit, client portals and database-specific AI assistance are roadmap items. Planned AI use focuses on retrieving and reviewing authorised geotechnical information, with source references and engineering oversight.

Each appointment identifies available functions, additional development, integrations, operating environment and acceptance checks. A prototype or specification is not presented as a completed enterprise deployment.

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