

Your requirement is an

Environmental Impact Assessment
Pre-feasibility study/ Feasibility study
Integrated Pollution Control (IPC) Licensing
Clean Water Act permit
Environmental Protection License
Industrial Water Quality Assessment
Invasive Species Study
Wetland Delineation

Our hands-on approach is always available in helping you to find the best solution for your project within the regulatory tools and scientific norms. We assist you in obtaining your project permits/licenses and keep your project on schedule as our laboratory provides the latest techniques and facilities to accomplish every task at one door step saving your valuable time and money.

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Our Project Laboratories

Digana

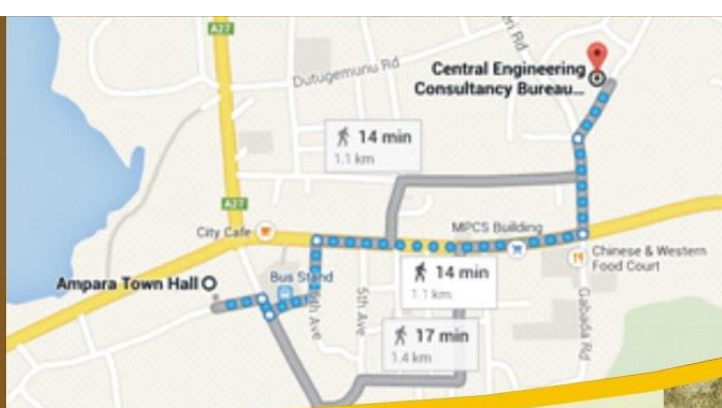
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Laboratory Services In Ampara

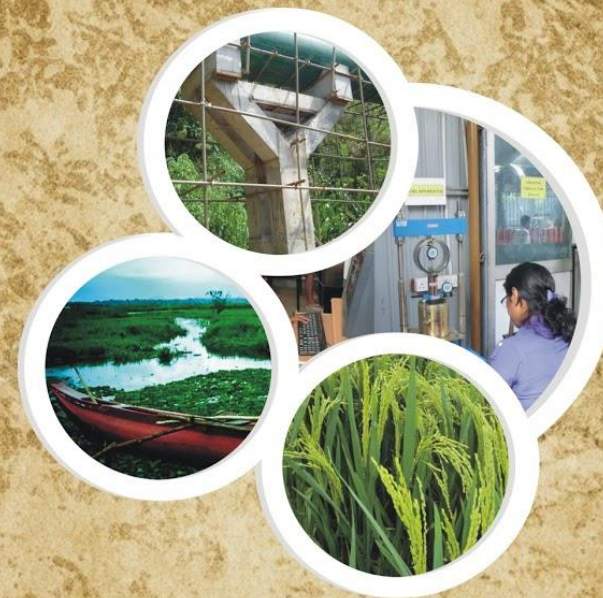
The newly established Ampara Laboratory is one of our prized entities, which is to be introduced at the forefront for the development of the South-East. We as a consultancy service provider want to improve the quality concepts of the engineering works, thereby improving safety concepts, assurance and reliability of the laboratory tests, and to provide a more confident output which would forge long term sustainability. This step is also taken to create awareness and encourage the concepts of Laboratory Services in the society.



CECB Laboratory Services



Soil / Rock / Aggregates / Concrete / Cement / Clay Bricks



CECB Laboratory Services South-East

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Understanding the requirements of proper guidance and professional knowledge in environment related projects, the CECB Laboratory Services has initiated modern Environmental Monitoring & Testing facilities now meeting international standards. We provide consultancy services and technical advice for both natural and industrialized areas. The continuous Research programmes conducted in our laboratory are focused on current environmental issues.

Testing facilities available in Ampara laboratory

Concrete, Cement & Aggregate Testing Facility

Fresh Concrete Testing

Mix Design for G15/G20/G25/G30/G35/G45
Slump Cone Test (BS 1881:part 102)
Flow Table (BS 1881:part 105)
Temperature Monitoring (BS 1881-130)
Bulk Density Measurement (ASTM C642-97)



Cement Blocks & Paving Blocks Testing

Compressive Strength of Cement Block
- 4", 6", 8" (SLS 855 (part 2) : 1989)
Compressive Strength of Paving Blocks
(BS 6717-1-1983)



Testing of Hardened Concrete

Concrete Coring (50mm, 60mm, 100mm)
(BS 1881:Part 44 & BS 6089:1981)
Compressive Strength of Concrete Cubes &
Cores (BS 1881 : Part 120)
Ultra Sound Pulse Velocity Meter (BS 1881-203)



Aggregates Testing

Aggregate Crushing / Impact Value - BS 812
Alkali-Silica Reactivity of Aggregates - ASTM C 289
Bulk Density of Aggregates
Clay Lumps & Friable Particle - ASTM C 142-97
Clay Silt & Dust Content - BS 812 : Part 1 : 1975
Elongation / Flakiness Index - BS 812
Los Angeles Abrasion Value Test - ASTM C 131-06
Point Load Index - ASTM D 5731-08
Organic Impurities of Aggregates - ASTM C 40
Rock fill Max./Min. Density - ASTM C 29 - 29M
Sieve Analysis(Unwashed) - BS 882 : 1992
Specific Gravity & Water Absorption- ASTM C 127-07



Soil / Rock Testing Facility

Physical Parameters (Soil)

Atterberg Limits (LL, PL) - ASTM D 4318
Bulk Density - BS 1377 Part 2 : 1990
California Bearing Ratio (CBR) - ASTM D 1883-87,
BS 1377 Part 4 : 1990-2007, AASHTO T 193- 2007
Crumb Test - ASTM D 6572-06
Hydrometer Analysis - ASTM D 421 / D 422
Moisture Content - ASTM D 2216
Sieve Analysis - ASTM D 421 / D 422
Specific Gravity of Soil - ASTM D 854
Proctor Compaction Test (Standard/ Modified)
- ASTM D 698-78, 1990
Swelling Test - BS 1377 Part 2 : 1990



In-Situ Soil Testing & Sampling

DS/UDS Sampling & Augur Boring up to 5m
Field Density - ASTM D 1556-82
Plate Bearing Test - ASTM D 1194-94
Dynamic Cone Penetration (DCPT) - ASTM D 6951
Field CBR - ASTM D 4429
Rock fill Max./Min. Density



Additional testing facilities available in Colombo & Galle laboratories

Environmental Monitoring & Testing Facility

Air Quality Monitoring & Testing (ASTM Method)

Use of advanced Major Scale instruments; High Volume Samplers,
Low Volume Samplers, CO analyzer, O₃ Analyzer allowing the
testing facility of
Particulate Matter - PM_{2.5}, PM₁₀
CO content, O₃ Content (in-situ analysis)
SO_x, NO_x content



Noise & Vibration Testing (BS / ISO Methods)

Noise Monitoring
Vibration Monitoring

Water Quality Testing (ASTM/APHA/USEPA/USGS Methods)

pH, Acidity or Alkalinity, Turbidity
Cl⁻, SO₄²⁻, CO₃²⁻, HCO₃⁻, NO₃⁻, NO₂⁻, PO₄³⁻ contents
Electrical Conductivity
COD, BOD
Total Dissolved Solids
Total Hardness, Total Oil & Grease
Total Phosphate



Bacteriological Analysis (SLS Method)

E.coli & Coliform Testing

Concrete, Cement & Aggregate Testing Facility

Cement Physical Testing

Abrasion Resistance Test (BS EN 13892-3 (2004) Part 3)
Compressive /Flexural Strength of Cement (SLS ISO 679 : 2008)
Initial & Final Setting Time (SLS ISO 679:2008)
Determination of Soundness (BS EN 196-3)
Cement Mortar Cube Strength (ASTM C-109/ C109m)

Cement Blocks & Paving Blocks Testing

Abrasion Resistance of Paving Blocks (SLS 39 : 1978)

Testing of Hardened Concrete

Schmidt Hammer Test (Rebound Hammer Test) (ASTM C805)
Bar Spacing/Cover Detection using Cover Meter (BS 1881:204)
Coring of 50mm/100mm Diameter Cores (BS 1881:Part 44 & BS 6089:1981)
Carbonation Depth Determination (BS EN 14630 : 2006)
Concrete Permeability Test (DIN 1048 : Part 5)
Concrete Abrasion Test (BS EN 13892-3:2004)
Concrete Water Absorption Test (BS 1881-120:1983)
Flexural Strength Beam (BS 1881-118)
Indirect Tensile Strength (ASTM D - 3967-2008)

Aggregates Testing

Aggregate Soundness Test
- ASTM C 88, BS 812:121, AASHTO T-104
Brazilian Test (Soaked/Unsoaked) - ASTM D 3967-08
Chloride Content (Water/Acid Soluble) - BS 812 :117
Sulphate Content (Water/Acid Soluble) - BS 812 :118
Sand Vibration Proctor (Single Point)
- BS 1377 : part 4 : 1990
Slake Durability Test - ASTM D 4644



Advanced Soil / Rock Testing Facility

The soil/earth that we stand on is the one source that holds everything together, from the tiniest plant to the large trees, from the houses we live in, to the skyscrapers and mega structures that we take great pride in creating. Hence the importance of understanding the soil we live on is an essential part in any sort of construction work that is to be carried out.

Shear Strength & Consolidation

Parameters of Soil

Consolidation Test - BS 1377 Part 5 : 1990
C U Triaxial Compression Test (with PWP- Measurement
50mm, 70mm, 100mm Ø samples) - BS 1377 Part 7 : 1990
U U Triaxial Compression Test (Soil)
(50mm, 70mm, 100mm) - BS 1377 Part 7 : 1990
Unconfined Compression Test - ASTM D7012-07
Direct Shear Test - BS 1377 Part 7 : 1990
Triaxial Permeability - BS 1377 Part 7 : 1990



Shear Strength, Elastic Modules

& Poisson's Ratio in Rocks

Rock Triaxial Test - ASTM D 7012-07
Unconfined Compressive Strength,
with Poisson's Ratio & Young's Modules
- ASTM D 7012-07 & ASTM D 2938-79
Uniaxial Compressive Strengths- ASTM D 2938
(50mm, 70mm, 100mm)



Physical Parameters (Soil)

Shrinkage Limit Test - BS 1377 Part 2 : 1990
Soil Permeability - constant head & falling head Method
ASTM D 2434, BS 1377 Part 5 : 1990
Triaxial Permeability - BS 1377 Part 6 : 1990
Pinhole Test - BS 1377 Part 5 : 1990, ASTM D 4647-06



Chemical Parameters (Soil)

pH - BS 1377 :Part-3 :1990
Chloride Content W/A - BS 1377 :Part-3 :1990
Sulphate Content W/A - BS 1377 :Part-3 :1990
Mass Loss on Ignition - BS 1377 :Part-3 :1990
Organic Matter Content - BS 1377 :Part-3 :1990
Carbonate Content - BS 1377 :Part-3 :1990

