



PAVEMENT ENGINEERING

Our highly skilled pavement engineering specialists are able to advising on new build construction as well as rehabilitation and maintenance of existing pavements, using engineering judgment to determine maintenance solutions maximising long-term benefit and minimising cost. We are able to undertake pavement assessment and evaluation and to design and determine maintenance solutions for flexible and rigid pavements.

TECHNICAL ADVICE

Appia provides assistance to a number of key clients and their advisors in the UK including contractors, consultants, banks, public and private companies, central and local government. We have assisted in legal matters where strong technical skills were paramount. Our team responded quickly and professionally to our clients' needs resulting in production of technical reports to be submitted as evidence. The outcome of recent cases has been positive for our clients. Our service to support legal matters includes:

- Investigation of problems, defect and failures
- Design and construction advice
- Specification Advice
- Evidence based analysis of current failures
- Preparation of advice notes and expert reports

PAVEMENT ADVICE

Our team of skilled engineers are fully conversant with current pavement evaluation techniques and pavement design and have over 25 years' experience in highways maintenance practices from local authority to local government projects. To support your pavement maintenance design/ evaluation needs, we can offer the following services.

- Value Engineering
 - Material Specification
 - Scheme Appraisal
 - Whole Life Costing
- GPR Procurement and Analysis
 - Determining Material thickness
 - Specifying Core locations etc.
 - Moisture
 - Utility detection etc.
- LWD Procurement and Analysis (Prima Testing)
 - Ensuring reinstatement compaction with LWD
 - Site Supervision
 - Testing Sub-grade (Unbound material)



- Visual Survey Procurement and Analysis
 - HAPMS Visual Surveys including input into HAPMS
 - UKPMS Visual Surveys
 - Engineering Surveys
 - Concrete Surveys
 - Bespoke Surveys
- FWD Procurement and Analysis
 - Structural Properties of pavement
 - Load transfer efficiency
 - Back-analysis
 - Evaluation of performance
 - Overlay designs



Plus advice and analysis of:

- Dynamic Cone Penetrometer (DCP)
- Deflectograph
- Coring including core log specification

RECYCLING ADVICE

Appia's engineers have substantial knowledge of recycling and materials and can help highway authorities to reduce the amount of waste that is going to landfill and to meet statutory targets set by the Government and the EU Landfill Directive. We have helped recycling solutions using bituminous emulsions, foamed bitumen, and hydraulically bound products to stabilise and modify WRAP, crushed concrete and other secondary aggregates used in both rigid and flexible materials to promote:

- **Sustainability** – In both construction and maintenance of highways, new products (virgin materials) have predominated; in consuming these we deplete the resources available to us on the planet. By minimising this consumption and recovering and reusing materials we prolong the life of the planet along with everything and everyone on it.
- **Energy Efficiency** - removing minerals from the ground, processing them and then transporting them to the point of manufacture has a major impact upon the environment. Recycling significantly reduces the amount of CO₂ (reducing your carbon footprint) released into the atmosphere.
- **Cost** – efficient and well-programmed recycling can realise significant savings (typically 30%).

To discuss how we can help you please contact one of our team today:

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