

Entec

Creating the environment for business

Organic waste treatment services

Entec is one of the UK's leading waste management consultancy providers with over 800 staff based strategically throughout the UK. Entec has extensive experience in organic waste treatment technology services on a formal and objective basis. We can provide a complete skill base of experienced staff who are able to support your specific project requirements from conception through to a full turnkey operation.



BiogenGreenfinch Digesters at Twinwoods, North Bedfordshire



Market Segments

Entec is focussed on supporting customers who are in the process of developing organic waste treatment facilities capable of handling waste products ranging from household food and green waste, food and drink process waste, retail food waste, animal rendering, sewage treatment and agricultural waste.

Skills

Entec has a team of waste management, engineering, planning, licensing, health & safety and design specialists able to support at all stages of the project life. Our key skills and experience lie in our understanding of the procurement and business development processes. In brief: project evaluation, technology performance reviews and justification, site suitability through procurement, planning, licensing, CDM supervisor role and commissioning stages including performance testing and certification.

Typically, organic waste treatment incorporates either aerobic composting or anaerobic digestion of waste, the latter with associated infrastructure to manage methane production and utilisation, power generation and external connection to the national grid. Entec has a dedicated team to manage and advise on achieving grid connectivity. In addition we have experience in advising on the use of digestate and compost as a growing medium and its application to land.

Entec has extensive experience in developing and advising on a range of anaerobic digestion and in-vessel composting plants, working for both private and public sector organisations across the UK.

Underpinning all our waste procurement work is the strategic context of waste management in the UK, and the supporting regulations and strategy.



Service Provision

Entec can provide the following range of services either as a full project package or individually tailored to meet your project needs:-

- Business development / procurement Support – business plan preparation, market and commercial feasibility studies, technical feasibility studies including technology evaluation, technology due diligence and risk reviews;
- Pre tender qualification and tender documentation preparation, development and technical bid assessment, contract and specification preparation and assistance during contract negotiations;
- Feedstock characteristics and availability assessment;
- Site investigation – site location and selection studies, geotechnical investigation and ecological studies;
- Planning & environmental permit licensing applications, environmental impact assessments, visualisations and planning reviews, HACCP plan and ABPR compliance assessment;
- Plant layout, engineering design – feasibility, concept design and detailed design. Development of performance specifications and contract documents;
- Civil engineering design, grid connection evaluation and design, process mass and energy balance calculations;
- Process support, pilot plant and bench scale testing, project and design management, commissioning support and operator training, process performance monitoring and troubleshooting;
- HAZOP, HAZAN, DSEAR and HAC studies;
- General health and safety management consultancy, CDM-C and CDM supervisor, procurement and installation project management and programme management including critical path analysis.

Examples of Previous Relevant Experience

Greater Manchester Waste Disposal Authority - PFI Procurement

Technical assessment and ranking of various composting and ABPR compliant processes, including open-row composting, single and double pass in-vessel composting, and anaerobic digestion processes. The assessments included a review of the process, the potential sites, the process for obtaining planning permission, appropriate waste management licences, animal health approval, HACCPs, and the market and quality protocols for any output materials.

West Berkshire Council - Waste Management Procurement

Technical due diligence assessment of IVC facilities proposed for the treatment of Garden and Food waste including assessment of the suitability of the proposed plant design in consideration of the site selected and the design life requirements.

Gwynedd Council - In-Vessel Composting Plant Procurement

Technical review of composting technologies, development of contract performance specification documentation and evaluation criteria and assessment of bids, preparation of planning application including bioaerosol assessment and supporting statements; environmental permit application, construction and commissioning supervision.

Isle of Anglesey - In-Vessel Composting Plant Procurement

Preparation of the planning application including bioaerosol assessment for new IVC facility, detailed design, HACCP and engineer to contract through the procurement and construction phases of the project.

Yorwaste - Composting Facility Licensing;

Preparation of the SVS application and the HACCP plan, identifying the critical control points, establishing critical limits, monitoring systems and corrective actions.

Brett Aggregates - In-Vessel Composting;

Preparation of planning and waste management license applications including: detailed ecology surveys, a mitigation strategy for badgers; a landscape and visual assessment; noise and general amenity assessments; and a bioaerosol risk assessment.

City of Edinburgh Council - Anaerobic Digestion Plant Performance Assessment

Investigation of the efficacy, cost and benefits of installing an appropriate digestion plant including modelling the quantity of wastes from a number of potential sources and evaluating the potential biogas production and electricity generation and assessment of whole life costs.

Wakefield MDC - Anaerobic Digestion Technology Assessment

Detailed assessment of anaerobic digestion technologies and formalised evaluation and scoring of bids.

Confidential Client - Anaerobic Digestion Plant Design & Construction

Feasibility assessment of treating of an effluent with a high organics content using anaerobic digestion, conceptual and detail design of the overall process, construction management and process commissioning support.

Defence Estates

Entec has been commissioned to undertake a feasibility assessment to investigate the potential for development of an anaerobic digestion facility adjacent to an MoD base which would take food waste from the base and combine it with 50,000 tpa of chicken manure from one of the largest egg producing facilities in the UK. The feasibility assessment is to investigate the potential for producing electricity to offset the bases energy demands and to use heat in the base's existing district heating system. Entec has also been commissioned to assist in obtaining DEFRA funding for the scheme.

For further information please contact:-

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