

Curriculum Vitae

Dr. ROBERT (ROBIN) A.K. SZMIDT



- **A renowned specialist working in the field of waste and resources with particularly emphasis on biowaste and organics.**
- **Interfacing between the waste industry, engineered solutions and product-use.**

Robin¹ comes from a background of land-based industries - first and foremost a highly qualified biologist – working in an engineering sector. He is known as a specialist in composting and Dry (High Solids) Anaerobic Digestion and related interfaces. With considerable international experience, projects span, recycling and landfill diversion, technology and regulation. Robin has acted as specialist project consultant for a number of high-profile companies and public-sector bodies. He developed various milestone Anaerobic Digestion (AD) and renewable energy projects since 2003 as well as in-vessel compost systems. He works closely with others developing technical solutions for a range of production, waste and recycle streams, particularly integrated biological & thermal systems. Work is always at the highest level of integrity and independence, not simply technology: he is a vetted Expert Witness.

Specific expertise in technical development and implementation through:

- Waste Management : primarily biodegradable waste streams
- Concept Appraisal and Project Design
- Engineering & Interface Management for related technologies, e.g. biomass
- Environmental Control
- Organic-waste derived products
- Sustainable Resource-use

Qualifications: BSc, PhD, MCIWM, CEnv, M.I.Hort.,

Key Skills: Technical analysis, project development, team leader, problem solving, presentation / coordination, materials' use

CURRENT STATUS:

Founder and Director of Target Renewables Ltd., (TRL). www.targetrenewables.com

Linked in <https://www.linkedin.com/in/robinszmidt>



KEY RELEVANT PROJECTS :

A list of recent client-projects and publications, including technical and facility development, due-diligence and Expert Witness work is shown as an Annex to this document.

Robin trained as a CIWM WASTE SMART trainer (2014) delivering bespoke CIWM-approved waste-training to a number of companies and organisations in Scotland.

¹ Normally known as Robin, Robert is the given name.

INTERNATIONAL EXPERIENCE :

A number of international waste and renewables projects in both the public and private sectors. These include:

- Europe (UK, Austria, Finland, Germany, Iceland, Ireland, Netherlands, Sweden, Switzerland)
- USA
- Canada
- Hong Kong & PR China
- Middle East including Oman, Israel and the Palestinian Territories (Gaza and West Bank)

Project waste streams and process-feedstocks include source segregated material, unsegregated wastes and Mechanical-Biological treatment (MBT) technologies. In most cases projects relate to renewable and recovered energy, not just disposal or materials' recovery. Energy projects currently include biomethane, CHP systems and AD outputs. Both in the UK and for international projects, Robin has worked with funders to assess project opportunities (German / UK / Israel / USA).

EXPERT WITNESS :

Previous civil, criminal and arbitration cases have included alleged and/or facts of:

- Waste treatment facilities, particularly organics : engineering and process assessment, including process performance compared to warranty values
- Odour, emissions and pollution from biodegradable waste and crop production sites
- Export of inappropriate wastes and recycle
- Patent (infringement and content)
- Waste types and regulatory compliance
- Horticultural crop production including mushrooms and mushroom compost
- Production of illegal substances using a range of growing media (composts and hydroponics)

Note that business and project associations may mean I self-exclude from some enquiries.

PREVIOUS EMPLOYMENT : prior to Target Renewables Ltd

Kuttner (UK) Limited (2008 – 2013)

Supporting the parent engineering group company, Küttner Energy & Environment GmbH with UK-based consultancy, design and project development for large-scale environmental engineering solutions. Particular emphasis on public-sector procurement projects, e.g. local authority procurements under EU rules. Kuttner leads a network of bidders and companies including waste-stream separation, process technology, product use and environmental protection.

Active Compost Limited (ACL) Founder & Managing Director: 2000 – 2008 (ACL was rebranded as Kuttner (UK) Limited in 2008)

Scottish Agricultural College (SAC) 1984 – 2003 including:
2000 – 2003 : Business Development Manager / Head of Compost Technology Unit (in SAC Engineering Division).

Horticultural Advisory Service for Scotland (head) including diagnostics laboratories and advice. Head of GIUS (protected crops) division. Liaison with associate organisations, e.g, USDA.

UK Ministry of Agriculture Fisheries and Food 1982 - 84
Lee Valley Experimental Horticulture Station

MEMBERSHIPS OF RELEVANT ORGANISATIONS :

- Chartered Institution of Wastes Management (CIWM)
- Society for the Environment
- Anaerobic Digestion & Bioresources Association (as TRL)
- Renewable Energy Association (REA)
- International Society for Horticultural Science (ISHS)
- Institute of Horticulture (IoH)
- UK Register of Expert Witnesses: Member
- Witness Directory: Member
- Federation of Forensic & Expert Witnesses : Member

EDUCATION :

University of London, Wye College: BSc Hons
University of Stirling PhD (biology of composts)

ACADEMIC :

Robin has published over 50 scientific, technical and popular papers and articles related to his career, and continues to publish papers and articles when possible, depending on project confidentiality. He has supervised a number of public-sector development projects as well as individual students, to PhD level, including published research parallel to his technical activities. A publication list is available on request. He remains in close contact through research with colleagues in Glasgow University as well as overseas. Current academic interests include work on the use of composts and AD-derived material (digestate) in restored land (quarries and landfill) and circular economics in the waste sector.

A selection of recent publications are listed in the Annex to this document.

COMMITTEES :

- Committee Member: Scottish Organics Recycling Group of the Renewable Energy Association (REA) 2015 – present)
- Evaluator / Rapporteur: European Commission Horizon2020 CE-RUR-08-2019: 'Bio-based fertilisers from animal manure (BIOCHAR, bIOeCOsim4.0, FERTIMANURE and INNOMANURE) (2019)
- Chair of the Dry-AD Working Group with the Anaerobic Digestion and Bioresource Association (ADBA) (2014 – 18)

Robin has been appointed to a number of high-level national and international committees, including the BSi PAS100 (compost) and PAS110 (digestate) panels and policy-advisory groups. He was vice-chair and chair of the Scottish branch of The UK Composting Association. He was also an invitee participating in consultation for the Composting Code of Practice hosted at the office of the UK Deputy Prime Minister and acted as rapporteur at a previous sector EU Conference. He also provides industry liaison to DEFRA in respect of Animal By-Products Regulations (biosecurity) for Dry-AD projects across the UK. He has provided editorial comment to the American Biogas Council in their development of the Digestate Standard and Testing & Certification Programme which used the UK PAS100 / PAS110 as a template.

PERSONAL DETAILS :

☎ +44 (0) 1292 440000 & +44 (0) 7952 748 549 (mobile)

Email: r.szmidt@targetrenewables.com

Skype: targetrenewables.raks

Date & place of birth: 14th October 1956. Coventry. England, UK)

Nationality: British (mother born Ohio, USA, father born Poznan, Poland)

Languages English (mother tongue), French, German (basic)

Other interests

- Masters swimming (UK and USA (Oregon)) including open water
- Photography

Social media

Business

<https://www.facebook.com/target.renewables>

Personal

<https://www.facebook.com/ayrshire.masterswim>

ANNEX (Projects and Publications)

KEY RELEVANT CONSULTANCY PROJECTS : (further details on request, but may be confidential)

- European Commission Rapporteur H2020: CE-RUR-08 (Scope B) : Closing nutrient cycles (2019)
- Design-development for aerobic composting of digestate and sludge and hybrid Wet-Dry AD (EcoProtech, Finland) (2018-2020)
- Expert witness in respect of facility performance and warranty issues at a very large MBT waste, recycling and organic-waste treatment facility (2018-19) (confidential client, UK)
- Technical assessment of a proposed large-scale anaerobic digestion facility (c. 100m euro) on behalf of a potential investor (2018) (confidential client, NL)
- Technical due diligence on behalf of an investor seeking to refinance a series of large anaerobic digesters in Slovenia (2018) (confidential client, UK, NL, SI)
- Options-appraisal, and bid support for a large Wet-AD & biomethane facility integrated with a commercial energy park (Aberdeen, Scotland, UK) (2016-19)
- Retained expert witness in respect of engineering failures at a large MBT and organic waste processing facility (confidential client, UK) (2017 -)
- Technical adviser to Martin GmbH für Umwelt- und Energietechnik (DE) for TTV 'Dry' AD solutions integrated with thermal systems (Various sites in Europe) with projects in Finland, Sweden and the UK & Ireland (2015 -)
- Technical adviser to Thöni Industriebetriebe GmbH (A) for Dry-AD, Wet-AD and compost systems including public – private (client-supplier) interface advice under EU procurement rules (Various sites in Europe) (2015 -)
- Technical support, method development and regulatory liaison / approval on behalf of both client and supplier: to achieve the first ABPR compliance of a Swedish Dry-AD facility in line with UK-equivalent regulatory requirements (2017)
- Expert witness in respect of process efficiency and odour control system at a large MBT-AD and waste facility (confidential client, UK) (2016 – 17)
- Bid consultant and technologist for a Far East 'Dry' Anaerobic Digestion project (>\$100m USD project value), on behalf of a major international waste company (2013)
- Independent assessor of technical-supply bids on behalf of investors: AD and waste-water treatment. Strictly confidential (USA) (2017)
- Investment options-appraisal for a portfolio of AD sites (NL) (2016)
- Investment options-appraisal for novel energy conversion, including static gas engines (UK) (2014)
- Expert Witness in respect of illegal export of segregated and unsegregated waste (2013)
- Expert Witness in respect of use of recycled materials in large-scale cultivation and production of illegal substance, including hydroponics (UK) (2012-13)
- Technical consultant / adviser to Kuttner Energy & Environment GmbH (DE) for both UK and English-language transnational Dry-AD projects (Israel, Finland, USA, Far East) (2008 – 2013).

- Options appraisal for biomass thermal processing at key locations across Scotland (confidential client, UK) (2007)
- Animal By-Products Regulations (ABPR) UK quality and hygiene & safety compliance strategy for Kuttner Energy & Environment GmbH and HZI-Kompogas AG Dry-AD systems (2003 – 2007)
- Principal contribution, including contribution to EIAs to achieve planning permission for UK Dry-AD organics' facilities and preferred technology supplier status (various, including Greenwich Council, Cheshire East Countrystyle Ltd, Tamar Energy Limited, Material Change Ltd.) (2006 – 2013)
- Advice and options-appraisal including waste-data analysis on behalf of Fife Council and development of in-vessel composting facility with environmental protection: leading to public procurement of a Dry-AD facility (<https://www.letsrecycle.com/news/latest-news/cut-and-dried-solution/>) (2003-2004)
- Project development at Lochhead landfill site in association with Fife Council, integration of an organics recycling facility (2003)
- Data source for various UK Councils in respect of Dry-AD including Cheshire East, Comhairle nan Eilean Siar (Western Isles Council), Greenwich Council, Fife Council, Glasgow City Council, Lancashire County Council, London Boroughs of Hounslow, Bromley and Bexley, South Ayrshire Council (2003 – 2017)
- Use of digestate, mineral wastes and composts in land restoration (2002 – 2019)

EXAMPLE PUBLICATIONS & PRESENTATIONS (full list on request)

High Solids AD integrated into Composting (2018). Biocycle **59** (1), p59.

Warranties, Credible Performance Measures & Contract Pitfalls. (2018). Biocycle West Coast 18. Accelerating Organics Recycling.

Reconfiguring In-Vessel Composting to High Solids AD and Post-AD digestate Processing. (2017). Biocycle Refor17.

Maximizing AD Financial Performance in a Changing AD Landscape: The UK Experience, (2017). Biocycle East Coast 17.

Integrating AD with Composting, (2016). REA Conference

Integrating High Solids AD into Composting : The Foodwaste Challenge, (2016) Biocycle West Coast.

High Solids AD and Foodwaste (2016). A Circular Economic Solution. ADBA National Conference

Foodwaste in a Circular Economy: A UK Perspective (2015). International Conference on Biological Waste as Resource With a Focus on Food Waste. Pub.The Hong Kong Institute of Education.

Adding AD to Existing Composting Site Footprint (2015). Biocycle **56** (2), 42-45.