



List of papers and extended abstracts

Opening lectures		
	Authors. Presenter (with affiliation)	
Integrated evaluation of the performance of construction products with respect to European regulations	Rein Eikelboom (Ministry of Infrastructure and the Environment)	Netherlands
Risk communication - a tool for acceptance?	Misse Wester (School of Architecture and the Built Environment, ABE, at the Royal Institute of Technology)	Sweden

1. New alternative products and production methods

Toughness performance of recycled aggregates	Ayan, Azadani, Omer & Limbachiya. Vahid Ayan (Islamic Azad University)	Iran
Soil treatment with non-traditional additives in earthworks	Blanck, Cuisinier & Masrouri. Gaëtan Blanck (Laboratoire Environnement Géomécanique et Ouvrages)	France
Pilot-scale leaching behaviour study of ready-mix concrete containing fly-ash from sewage sludge thermal treatment	Chen, Blanc, Gautier, Gourdon, Méhu & Jayr. Jacques Méhu (LGCIE & Insa de Lyon)	France
Valorisation of municipal solid waste incinerator (MSWI) fly ashes: solving problems	De Boom, Lenormand, Carette, Obein, Staquet, Pierre & Degrez. Aurore De Boom (CREA-SURF, Université Libre de Bruxelles)	Belgium
Value creation out of municipal solid waste incinerator (MSWI) bottom ash	De Vries, Rem & de Keizer. Marc de Keizer (Inashco)	Netherlands
Commercial production of accelerated carbonated aggregate from municipal solid waste air pollution control residues (APCR)	Gunning, Hills & Carey. Colin Hills (University of Greenwich)	UK
Fly ash from combusted paper fibre sludge used as final cover material for landfills	Hargelius. Kristina Hargelius (Ramböll)	Sweden
Use of industrial residues as additives in tailings paste for the mitigation of acid rock drainage: Effect of green liquid dregs and fly ash addition on geotechnical stabilization of tailings	Jia, Stenman, Mäkitalo, Maurice & Öhlander. Yu Jia (Luleå University of Technology)	Sweden
Plasma vitrified air pollution control (APC) residues as pozzolanic additive to cement	Kourti, Deegan, Boccaccini & Cheeseman. Christopher Cheeseman (Imperial College London)	UK
Determination of potential reactivity of municipal solid waste incineration (MSWI) fly ashes in cementitious materials	Lenormand, De Boom, Degrez, Pierre & Staquet. Aurore De Boom (CREA-SURF, Université Libre de Bruxelles)	Belgium
Evaluation of properties of fly ash stabilized sewage sludge (FSS) as liner on landfills	Ländell, Håkansson & Mácsik. Märta Ländell (SGI - Swedish Geotechnical Institute)	Sweden
A factorial approach for the investigation of mechanical and leaching properties of incinerator bottom ash - cement blends	Onori, Poletti & Pomi. Alessandra Poletti (University of Rome)	Italy
Laboratory testing of reclaimed asphalt pavement - crushed rock for footpath applications	Piratheepan & Arulrajah. Jegatheesan Piratheepan (Swinburne University of Technology Melbourne)	Australia
Properties of mineral binder based on the fly ash from brown coal assigned for road construction	Pytel & Mróz. Zdzislaw Pytel (AHG University of Science and Technology)	Poland
Carbstone: A novel process for the production of construction materials from slags and CO ₂	Quaghebeur, Nielsen, Laenen, Van Mechelen & Nguyen. Mieke Quaghebeur (VITO - Flemish Institute for Technological Research)	Belgium
Alkaline activation of ceramic waste materials	Reig, Tashima, Borrachero, Monzó & Payá. Lucia Reig (EMC, Universitat Jaume I)	Spain

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Sustainable use of crushed autoclaved aerated concrete (CAAC) as a filter media in wastewater purification	Renman & Renman. <i>Gunno Renman (Royal Institute of Technology)</i>	Sweden
Evaluating the durability of two recycled aggregates to be used in basal drainage layer of landfills	Rodrigues, Roque & da Silva. <i>António José Roque (LNEC - Laboratório Nacional de Engenharia Civil)</i>	Portugal
Soil improvement effects from recycled bassanite derived from waste plaster boards	Sato, Fujikawa & Oshikata. <i>Kenichi Sato (Fukuoka University)</i>	Japan
Steel slag characterization for the recovery in bituminous paving mixtures	Sorlini, Rondi & Sanzeni. <i>Luca Rondi (University of Brescia)</i>	Italy
Relationship between hydraulic conductivity and dry density of foundry green sand	Sundsten. <i>Malin Sundsten (SWECO Infrastructure AB)</i>	Sweden
Upgraded municipal solid waste incinerator (MSWI) bottom ash as aggregate in concrete	<i>Van der Wegen, Hofstra & Speerstra.</i> <i>Gert van der Wegen (SGS INTRON B.V.)</i>	Netherlands
Engineering properties of ternary blended cements containing thermally activated paper sludge and fly ash	Vegas, Urreta, Cano, Frias, Goñi, García & Vigil. <i>Iñigo Vegas (TECNALIA, NANOC)</i>	Spain
Cr(VI) formation during thermal treatment of waste. Application to ceramic materials for recycling in construction	Verbinnen, Billen, Van Coninckxloo & Vandecasteele. <i>Bram Verbinnen (University of Leuven)</i>	Belgium

2. Leaching tests: harmonization, validation, standardization, application

Assessment of leaching from construction & demolition waste concrete	Butera, Christensen & Astrup. <i>Stefania Butera (Technical University of Denmark)</i>	Denmark
Recent developments towards standardisation in geochemical modelling of leaching processes	Comans, van Zomeren & Dijkstra. <i>Rob Comans (ECN - Energy research Centre of the Netherlands)</i>	Netherlands
Leaching behaviour methodology as a tool for stabilised/solidified metallic waste characterisation	Coz, Ruiz-Labrador, Alonso-Santurde, Coronado & Andrés. <i>Alberto Coz (University of Cantabria)</i>	Spain
Development of leaching tests for (recycled) metal surfaces: theory, test results and practice	Dijkstra, van der Sloot & Comans. <i>Joris Dijkstra (ECN - Energy research Centre of the Netherlands)</i>	Netherlands
Interlaboratory Validation of Leaching Methods in the Leaching Environmental Assessment Framework (LEAF) for Acceptance by U.S. EPA	Garrabrants, Kosson, Delapp, van der Sloot, Stefanski, Thorneloe, Helms, Baldwin & Kariher. <i>Andrew Garrabrants (Vanderbilt University)</i>	USA
Robustness validation of two harmonised European leaching tests for assessment of the leaching of construction products, including waste-based construction materials	Hjelmar, Wahlström, Comans, Kalbe, Grathwohl, Méhu, Schiopu, Hyks, Laine-Ylijoki, Van Zomeren, Krüger, Schoknecht, Wendel & Abdelghafour. <i>Ole Hjelmar (DHI)</i>	Denmark
Development of leaching procedures for synthetic turf systems containing scrap tire granules	Kalbe, Krüger, Berger, Wachtendorf & Hally. <i>Ute Kalbe (BAM Federal Institute for Materials Research and Testing)</i>	Germany
Seepage in embankments - Outdoor lysimeter tests	Marks, Brand, Tiffert, Schnell & Kocher. <i>Tanja Marks (BAST - Federal Highway Research Institute)</i>	Germany
Harmonization of test methods for the execution of the European Construction Products Directive (CPD). Validation of a European leaching test for construction products	Nebel & Spanka. <i>Gerhard Spanka (German Cement Works Association)</i>	Germany
A leaching test for low-strength pervious shaped materials containing zinc ashes	Spooren, Quaghebeur & Nicolai. <i>Jeroen Spooren (VITO - Flemish Institute for Technological Research)</i>	Belgium
A reference database in LeachXS™ Lite for release of substances from construction products including alternative materials	Van der Sloot, Kosson, Hjelmar, Comans, Seignette, Garrabrants & van Zomeren. <i>Hans van der Sloot (Hans van der Sloot Consultancy)</i>	Netherlands
The role of sample preparation in testing of metal leachability from metallurgical slag	Vítková, Ettler, Mihaljevič & Šebek. <i>Martina Vítková (Charles University in Prague)</i>	Czech Republic

3. Technical properties + Quality control

On the reuse of solid residues derived from various MSWI processes for concrete production: evaluation of the mechanical and environmental characteristics	Abbà, Sorlini, Collivignarelli & Bruggi. <i>Luca Rondi (University of Brescia)</i>	Italy
Changes in ceramic blocks porosity with phosphate sludge due to salt crystallization	Bersch, Brehm & Kazmierczak. <i>Claudio de Souza Kazmierczak (UNISINOS - University of Vale do Rio dos Sinos)</i>	Brazil
Study of rheological and mechanical properties of recycled brick aggregate concrete	Braymand. <i>Sandrine Braymand (IMFS, Université de Strasbourg)</i>	France
Modelling of technical properties of alternative raw materials based structural ceramic using mixture design experiments (MDoE)	Coronado, Alonso-Santurde, Martín-Torre & Andrés. <i>María Coronado (University of Cantabria)</i>	Spain
The influence of fluidized ashes on formation of the microstructures of autoclaved aerated concrete	Łaskawiec, Małolepszy & Zapotoczna-Sytek. <i>Katarzyna Łaskawiec (Research Centre of Concrete - CEBET)</i>	Poland
Characterisation of an artificial aggregate from the ceramics industry for use in the production of structural concretes	Medina, Frias, Sánchez de Rojas & Guerra. <i>Moisés Frias (CSIC - Eduardo Torroja Institute for Construction Sciences)</i>	Spain
Distribution of the acid extractable Pb contents in solid waste melting slag	Mizutani & Kanjo. <i>Satoshi Mizutani (Graduate school of Eng, Osaka City Univ)</i>	Japan
Properties of autoclaved sand-lime bricks with an addition of lime rich ashes	Pytel. <i>Zdzisław Pytel (AHG University of Science and Technology)</i>	Poland
Preparation and properties of blended cements with utilization of waste, secondary and natural raw materials	Staněk, Schwarzerová & Bibora. <i>Petr Bibora (Research Institute of Building Materials JSC)</i>	Czech Republic
Composite products of waste materials for roads and civil engineering	Tyllgren. <i>Per Tyllgren (Svenskt VägCentrum)</i>	Sweden

4. Environmental impact. Life cycle and risk analysis

Environmental behaviour of inorganic pollutants present in raw and desalinated French marine sediments	Achard, Bénard, Campredon, Merdy & Lucas. <i>Romain Achard (INERIS - Institut National de l'Environnement Industriel et des Risques)</i>	France
Development of an expert tool for the selection of suitable recycling options	Broos, Quaghebeur, Nielsen, De Brouwere, Buekers, Bleux & Laenen. <i>Kris Broos (VITO - Flemish Institute for Technological Research)</i>	Belgium
Life cycle assessment of recycling and re-use of construction and demolition waste	Ekvall, Bolin & Fredén. <i>Tomas Ekvall (IVL Swedish Environmental Research Institute)</i>	Sweden
Environmental characterisation of reclaimed asphalt	Enell, McNally, Licbinsky, Quinn, Huzlik & Wik. <i>Anja Enell (SGI - Swedish Geotechnical Institute)</i>	Sweden
Construction projects using alternative materials: a framework to assess their sustainability	Fevre-Gautier, Vaxelaire, Beylot, Michel, Brulot, Lannou & Stoos. <i>Stéphane Vaxelaire (BRGM)</i>	France
An application to measure the whole life cost and whole life carbon footprint of pavement maintenance	<i>Steven Finnie (URS)</i>	UK
Assessing of economical-transportation criteria for the optimal location of construction and demolition waste management facilities in Cantabria (Spain)	Galán, Dosal, Coronado, Andrés & Viguri. <i>Berta Galán (University of Cantabria)</i>	Spain
Waste-to-Materials: Carbon recycling into built infrastructure	Gardner, Nuss & Bringezu. <i>Kevin Gardner (University of New Hampshire)</i>	USA
An analytical protocol for the knowledge of wastes by substances	Hennebert & Papin. <i>Pierre Hennebert (INERIS - Institut National de l'Environnement Industriel et des Risques)</i>	France
Risk assessment and life cycle assessment of reclaimed asphalt	Huang, Parry, Wayman, McNally, Andersson-Sköld, Wik, Enell & Ličbinský. <i>Anja Enell & Yvonne Andersson-Sköld (SGI - Swedish Geotechnical Institute)</i>	Sweden
Seepage in embankments - Indoor lysimeter tests	Kellermann-Kinner, Marks, Bürger & Kocher. <i>Tanja Marks (BAST)</i>	Germany
The GeDSeT project: constitution of a decision support tool (DST) for the management and material recovery of waterways sediments in Belgium and Northern France	Lemière, Michel, Jacob, Haouche, Alary, Laboudigue, Brequel & Hazebrouck. <i>Pascale Michel (BRGM)</i>	France
Evaluation of pollutant release from construction products	Lupsea, Schiopu & Tiruta-Barna. <i>Maria-Octavia Lupsea (Univ Paris-Est, CSTB - Scientific and Technical Centre for the Building Industry)</i>	France
Estimates of the chemical form of fluorine in steel slag by the application of saturated column test	Nakamura, Yoneda, Matsui & Nakayama. <i>Kengo Nakamura (Kyoto University)</i>	Japan
Leaching of heavy metals and polycyclic aromatic hydrocarbons from reclaimed asphalt; Application of an up-flow percolation test	Quinn, McNally & Magette. <i>Aoife Quinn (University College Dublin)</i>	Ireland
Risk assessment of emission from (secondary) construction products and contaminated soil, an example of a general approach applied in the Netherlands	Spijker, Groenenberg & Comans. <i>Job Spijker (RIVM - National Institute for Public Health and the Environment)</i>	Netherlands
Classification of waste to enable utilization in an environmental safe way	Stiernström, Breitholtz, Lindé, Hemström, Enell & Wik. <i>Sara Stiernström (Stockholm University)</i>	Sweden
CPR: From material emission data to a life cycle perspective	Suer, Wik & Erlandsson. <i>Pascal Suer (SGI - Swedish Geotechnical Institute)</i>	Sweden
Geochemical modelling of Copper (II) speciation in MSWI bottom ash leachates	Toller, van Schaik, Berggren Kleja, Gustafsson, van Zomeren & Comans. <i>André van Zomeren (ECN - Energy research Centre of the Netherlands)</i>	Netherlands

5. Durability, aging and long-term performance

Recycling potential of smelting wastes – implications based on the long-term environmental stability testing	Ettler, Mihaljevič, Šebek, Johan, Křibek & Vítková. <i>Vojtěch Ettler (Institute of Geochemistry, Mineralogy and Mineral Resources, Charles University)</i>	Czech Republic
Microstructure of aged municipal solid waste incinerator (MSWI) bottom ash in road construction	Frogner-Kockum, Lindqvist, Loorents & Arm. <i>Paul Frogner-Kockum (SGI - Swedish Geotechnical Institute)</i>	Sweden
Carbon footprint assessment of geopolymers and blended cement materials prepared with plasma treated air pollution control residues from EfW plants	Kourti, Deegan, Boccaccini & Cheeseman. <i>Christopher Cheeseman (Imperial College London)</i>	UK
Leaching of harmful compounds from reclaimed asphalt under real conditions	Ličbinský, Huzlík & Jandová. <i>Roman Ličbinský (CDV - Transport Research Centre)</i>	Czech Republic
Assessment of the effect of aging on green liquor dregs cover for tailings deposits - Field investigation	Mäkitalo, Lu, Stahre, Maurice & Öhlander. <i>Maria Mäkitalo (Luleå University of Technology)</i>	Sweden
Formation of secondary Fe-rich products in landfilled municipal solid waste incinerator (MSWI) bottom ash as a result of natural weathering	Saffarzadeh & Shimaoka. <i>Amirhomayoun Saffarzadeh (Kyushu University)</i>	Japan
Acid resistance of ettringite-based material	Stegemann, Russel, Zhou, Bai, Abdul Rani & Maduka. <i>Julia Stegemann (University College London)</i>	UK
Iron speciation in municipal solid waste incinerator (MSWI) bottom ash: methods, results and implications	Steketee, Timmerije & van Aalten. <i>Jaap Steketee (Tauf bv)</i>	Netherlands

6. Case studies and demonstration projects

Dredged Materials in Dike Construction – DredgDikes Project Overview	Cantré, Nitschke & Saathoff. <i>Elisabeth Nitschke (University of Rostock)</i>	Germany
Recycled aggregates applied in road construction - long term leaching study at field site	Engelsen, van der Sloot, Petkovic, Wibetoe & Lund. <i>Christian Engelsen (SINTEF)</i>	Norway
Sustainable use of alternative materials for sealing of a landfill. A successful dialogue between authorities and enterprises.	Kempi. <i>Michael Kempfi (Municipality of Örebro)</i>	Sweden
Absoils - Sustainable methods and processes to convert ABandoned low-quality SOILS into construction materials	Kreft-Burman, Lahtinen, Ollila, Forsman, Niutanen & Lehtonen. <i>Kata Kreft-Burman (Ramboll Finland Oy)</i>	Finland
Stabilisation as an alternative for mass exchange for clays with high sulphide content	Lindroos, Autiola, Lahtinen, Kreft-Burman & Mäkelä. <i>Noora Lindroos (Ramboll Finland Oy)</i>	Finland
STABLE - Controlled Treatment of TBT-Contaminated Dredged Sediments for the Beneficial Use in Infrastructure Applications	Lindroos, Autiola, Majjala, Lahtinen, Leinonen & Niutanen. <i>Pentti Lahtinen (Ramboll Finland Oy)</i>	Finland
Stabilisation studies for contaminated sediments from Baltic Sea area - Case SMOCS	Lindroos, Lahtinen, Autiola, Reinikainen, Kohonen & Lampinen. <i>Noora Lindroos (Ramboll Finland Oy)</i>	Finland
OSAMAT - Utilisation of oil shale ashes in road construction	Ronkainen, Koroljova, Pototski, Puhkim, Lahtinen & Kiviniemi. <i>Marjo Ronkainen (Ramboll Finland Oy)</i>	Finland
Fly ash as a road construction material	Vestin, Arm, Nordmark, Lagerkvist, Hallgren & Lind. <i>Jenny Vestin (SGI - Swedish Geotechnical Institute)</i>	Sweden
Remediation of Oskarshamn harbour – stabilization of contaminated sediments	Wilhelmsson, Lindmark & Nilsson. <i>Anna Wilhelmsson (COWI AB)</i>	Sweden

7. Cradle-to-cradle

Improvement of recycled concrete aggregates properties by carbonation	Belin, Habert, Thiéry & Roussel. <i>Guillaume Habert (Université Paris-Est, IFSTTAR)</i>	France
Reuse and recycling of excavated cement stabilized soil as alternative construction materials	Fujikawa & Sato. <i>Takuro Fujikawa (Fukuoka University)</i>	Japan
Evaluation of concrete made with coarse recycled aggregate from precast concrete	Gonçalves, Cavalheiro, Kulakowski & Kazmierczak. <i>Marlova Piva Kulakowski (UNISINOS - University of Vale do Rio dos Sinos)</i>	Brazil
Recycling of autoclaved aerated concrete	Nielsen, Vrijders, Broos & Quaghebeur. <i>Peter Nielsen (VITO - Flemish Institute for Technological Research)</i>	Belgium
Carbonation kinetics of a bed of recycled concrete aggregates	Thiéry, Dangla, Belin, Habert & Roussel. <i>Mickaël Thiéry (Université Paris Est, IFSTTAR)</i>	France

8. Policies, legal incentives and barriers to recycling

Improvement of aggregate cycles in Stockholm and the Baltic Region - Activities and results of the BRA initiative	Aid & Brandt. <i>Graham Aid (Royal Institute of Technology)</i>	Sweden
Sustainable reuse of iron and steel slags in road applications: Technical requirements for environmental acceptance	Domas & Reynard. <i>Jérémy Domas (CTPL - Technical and Promotional Center for Iron and Steel Slags)</i>	France
Review of 25 years of soil reuse and sustainable land management policies in the Netherlands – finding the balance between environmental protection and the need for recycling	Gadella, Honders & Van Dreumel. <i>Michiel Gadella (Ministry of Economic Affairs, Agriculture and Innovation)</i>	Netherlands
Characterisation of supply chain for reused building components in Europe	Hemström, Palm, Lindblom, Vegas, Lisbona, Horckmans, Ratman-Kłosińska & Ferrando. <i>Jacob Lindblom (IVL Swedish Environmental Research Institute)</i>	Sweden
End-of-Waste criteria for waste-derived aggregates	Hjelmar, van der Sloot, Comans & Wahlström. <i>Ole Hjelmar (DHI)</i>	Denmark
Review of 30 years of contaminated site remediation in the Netherlands – effectiveness of legal, financial and technical instruments	Honders, Gadella & Molenaar. <i>Ton Honders (Ministry of Economic Affairs, Agriculture and Innovation)</i>	Netherlands
Technical requirements to facilitate recycling	Lindgren, Hermelin & Dittlau. <i>Åsa Lindgren & Klas Hermelin (Swedish Transport Administration)</i>	Sweden
Use of alternative materials in civil engineering – Handbooks, experiences and future development in a Swedish context	Rogbeck, Svedberg & Håkansson. <i>Yvonne Rogbeck (SGI - Swedish Geotechnical Institute) & Bo Svedberg (Luleå University of Technology)</i>	Sweden
IRCOW: Innovative strategies for high-grade material recovery from construction and demolition waste	Vegas & Lisbona. <i>Iñigo Vegas (TECNALIA)</i>	Spain
Sustainability of construction materials and products – substances of concern and assessment tools	Wahlström, Laine-Ylijoki & Järnström. <i>Margareta Wahlström (VTT Technical Research Centre of Finland)</i>	Finland

Closing lecture

Recycling of materials in construction: An overview of the last two decades, illustrated by the WASCON conferences	Vandecasteele. <i>Carlo Vandecasteele (ISCOWA and K.U. Leuven)</i>	Belgium
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