Translation from Finnish
Legally binding only in Finnish and Swedish
Ministry of the Environment, Finland

Government Decree on the Recovery of Certain Wastes in Earth Construction (843/2017)

By decision of the Government, the following is enacted in accordance with section 10, section 32, subsection 2, and section 117 of the Environmental Protection Act (527/2014) and sections 14 and 15 of the Waste Act (646/2011):

Section 1
Purpose

The purpose of this Decree is to promote the recovery of waste by specifying the conditions under which, if fulfilled, the use of waste referred to in this Decree in earth construction does not require an environmental permit in accordance with the Environmental Protection Act (527/2014).

Section 2
Scope of application

This Decree applies to the recovery of waste on a professional basis or at an installation referred to in Annex 1 at earth construction sites referred to in section 3, paragraph 2, and to temporary storage related to this, when the construction and temporary storage is based on a statutory plan, permit, notification procedure or municipal building ordinance.

The Decree does not apply in a Class 1 or Class 2 groundwater area referred to in section 10b of the Act on the Organisation of River Basin Management and the Marine Strategy (1299/2004), in an area intended for residential purposes or as a children's play area, in an area designated for nature protection purposes, in an area intended for the cultivation of food plants, or in an inland flood-risk area.

Section 3
Definitions

For the purposes of this Decree:

1) *holder of the recovery site* means a natural person or legal entity who, on the basis of a proprietary right or lease, is in possession of the property or the part of it where waste is recovered for earth construction;

2) *earth construction site* means roadways, fields, embankments and their structural layers, and foundation structures of industrial and storage buildings;

3) *industrial and storage building* means a building which is used for industrial activities or for the storage of goods and materials, and which is not used for dwelling purposes;

4) *covering* means protecting a structure containing waste to prevent the waste from spreading and exposure to it, with a layer of uncontaminated natural soil or aggregate of at least 10 centimetres in thickness in roadway and field structures and at least 50 centimetres in thickness in embankment structures;

5) *paving* means protecting a structure containing waste with asphalt with a maximum void of 5 per cent, or some other material so that the seepage of rainwater into the structure does not exceed 5 per cent;

6) *road constructed of crushed stone and ash* means a road for use by forestry vehicles where the surface layer is constructed of a mixture of crushed stone and ash;

7) *temporary storage* means the storage of waste intended for recovery in earth construction at the earth construction site prior to commencing the earth construction, or at a separately designated storage site;

8) *party delivering the waste* means the waste producer in accordance with section 6, subsection 1, paragraph 4, of the Waste Act, or another operator who delivers waste for recovery in accordance with this Decree.

Section 4
Requirements for the recovery and temporary storage of waste

Besides the provisions in the Environmental Protection Act and the Waste Act (646/2011), for the recovery of waste without an environmental permit it is required that:

1) the thickness of the waste layer at the earth construction site does not exceed the maximum thickness laid down in Annex 2;

2) the solubility and content of the harmful substances in the waste do not exceed the limit values laid down in Annex 2, and the waste fulfils the other requirements provided in Annex 2;

3) the provisions of Annex 3 are complied with in waste quality management and the solubility and content of harmful substances are determined in accordance with Annex 3;

4) the structure containing the waste is covered or paved, with the exception of a road constructed of crushed stone and ash or a roadway or field where asphalt chippings or crushed asphalt is used in the surface layer;

5) the distance of the structural layer containing the waste from the maximum groundwater level is at least one metre, and the distance of the earth construction site from a waterbody referred to in chapter 1, section 3, subsection 1, of the Water Act (587/2011) or a well or spring intended for domestic water supply is at least 30 metres;

6) if wastes referred to in Annex 1 are mixed together in order to improve their technical characteristics, the final mixture also complies with the limit values specified in Annex 2.

The temporary storage of waste shall comply with the best available techniques. The temporary storage of waste may begin no earlier than four weeks prior to recovery or, if the waste is stored securely, 12 months prior to recovery.

Section 5
Derogation from the environmental permit requirement and notification for registration in the environmental protection database

If the recovery of waste is organised in accordance with this Decree, no environmental permit is required for activities that are subject to an environmental permit in accordance with section 32, subsection 2, of the Environmental Protection Act. The holder of the recovery site shall submit a notification of the activity referred to in section 116, subsection 2, of the Environmental Protection Act to the state supervisory authority for registration in the environmental protection database (*notification of registration*). The notification of registration shall include:

1) the name and contact details and invoicing address of the holder of the recovery site or site intended for temporary storage;

2) information on the location of the recovery site, with the coordinates entered on the site plan or map where the boundaries of the structure are shown, and on any nearby groundwater areas and their classes, and water abstraction sites and waterbodies;

3) information on the intended use of the recovery site and a plan, permit or notification concerning earth construction or a municipal building ordinance referred to in section 2, subsection 1;

4) the name and contact details of the party delivering the waste;

5) the waste code and a description of the solubility, content and other characteristics of harmful substances contained in the waste in accordance with Annex 2, and a quality management report on how the information was produced;

6) information on the quality assurance system under Annex 3 of the party delivering the waste;

7) a description of the quantity of waste;

8) a description including a schematic cross-section of the structure containing the waste, the technical suitability of the waste at the site, the material used for covering or paving, storage and any other activities at the recovery site, and any necessary environmental protection measures connected with these;

9) the dates when the recovery begins and ends during earth construction.

If the notification is made on behalf of the holder of the recovery site, written approval obtained from the holder shall be enclosed with the notification.

If the party undertaking earth construction is not the owner of the recovery site, this party shall obtain the consent of the owner of the recovery site for the recovery of the waste in earth construction.

If the temporary storage of waste takes place elsewhere than in the immediate vicinity of the earth construction site, information on this shall be included in the notification of registration.

Following completion of the earth construction, the holder of the recovery site shall submit a statement to the authority that received the notification of registration referred to in subsection 1 on how the waste recovery in accordance with the notification of registration has been carried out.

Section 6
Delivery of waste and the initiation of recovery

Waste recovery or temporary storage may start when the waste has been delivered to the holder of the recovery site or the temporary storage site in accordance with section 29, subsection 1, paragraph 2, of the Waste Act.

Section 7
Entry into force

This Decree enters into force on 1 January 2018.

This Decree repeals the Government Decree on the Recovery of Certain Waste in Earth Construction (591/2006).

Waste recovery and the reuse of waste in earth construction registered under the provisions in force upon the entry into force of this Decree may continue until the expiry date of the activity stated in the notification of registration without any registration in accordance with this Decree.

Helsinki, 7 December 2017

Kimmo Tiilikainen, Minister of the Environment, Energy and Housing

Else Peuranen, Ministerial Adviser

Annex 1

WASTES INCLUDED IN THE SCOPE OF APPLICATION OF THIS DECREE AND THEIR USE

Crushed concrete, lightweight concrete and expanded clay aggregate waste (waste codes 10 13 14, 17 01 01, 17 01 07 and 19 12 12)

Crushed concrete means waste that is produced from demolished concrete structures or concrete waste from new buildings or the concrete industry by crushing. Lightweight concrete and expanded clay aggregate waste means crushed aggregate generated in similar ways. The use of crushed concrete and lightweight concrete and expanded clay aggregate waste is permitted in roadway and field structures and in the floor structures of industrial and storage buildings.

Fly ash from the combustion of coal, peat and wood-based material (waste codes 10 01 02, 10 01 03, 10 01 17 and 19 01 14), bottom ash (waste codes 10 01 01, 10 01 15 and 19 01 12) and sands from fluidised beds (waste codes 10 01 24 and 19 01 19)

Fly ash and bottom ash from the combustion of coal means waste that is separated mechanically or electrically from flue gases generated in the combustion of coal, and that is extracted from the bottom of the combustion chamber of a coal combustion plant.

Fly ash and bottom ash from the combustion of peat and wood-based material means waste that is separated mechanically or electrically from flue gases generated in the combustion of peat, wood chips, bark residue, primary fibre pulp production, vegetable waste including fibre material generated in connection with the production of paper from pulp, unprocessed wood waste, or any other comparable wood-based material, or a mixture of these, or that is extracted from the bottom of the combustion chamber of the combustion plant.

Sands from fluidised beds from the combustion of coal, peat and the wood-based material referred to above means sand bed material extracted from the combustion process in a fluidised bed plant or sand bed material pulverised in combustion, which is separated from flue gases either in a boiler or during flue gas cleaning.

The use of fly ash and bottom ash from the combustion of coal, peat and wood-based material, and from fluidised sand beds is permitted in roadway and field structures, in roads constructed of crushed stone and ash and in the floor structures of industrial and storage buildings, and as stabilising material at these earth construction sites.

Crushed brick (waste codes 10 12 08 (brick waste only) and 17 01 02)

Crushed brick means waste that is produced from demolished brick structures, brick waste generated in the brick industry or other discarded bricks by crushing. The use of crushed brick is permitted in roadway and field structures, in embankment structures and in the floor structures of industrial and storage buildings.

Asphalt chippings or crushed asphalt (waste code 17 03 02)

Asphalt chippings and crushed asphalt means waste that is produced from discarded asphalt paving by crushing or grinding. Asphalt waste that uses crushed asphalt as a raw material cannot be taken from an area where hazardous substances are treated or stored. The use of asphalt chippings and crushed asphalt is permitted in roadway and field structures.

Treated slag from waste combustion (treated slag from waste combustion belonging to waste codes 19 01 12, 19 12 09 or 19 12 12)

Treated slag from waste combustion means treated slag generated in a municipal waste incinerator. In the treatment, the raw slag is processed to remove iron and other metals. The use of treated slag from waste combustion is permitted in roadway and field structures and in the floor structures of industrial and storage buildings.

Foundry sand (foundry sand belonging to waste codes 10 09 08, 10 09 12, 10 10 08, 10 10 12, excluding foundry dust)

Foundry sand means surplus sand generated in the casting industry that is discarded. The use of foundry sand is permitted in roadway and field structures and in the floor structures of industrial and storage buildings.

Lime (waste codes 10 13 04, 10 13 01, 10 13 13, 03 03 09)

Lime means lime waste generated in industrial processes that is partially or totally burned. The use of lime is permitted in roadway and field structures and in the floor structures of industrial and storage buildings.

Whole tyres and shredded tyres (waste code 16 01 03)

Shredded tyres means tyre shreds prepared from discarded tyres. The use of shredded tyres is permitted in roadway and field structures, in embankment structures and in the floor structures of industrial and storage buildings. Discarded whole tyres may be used in these structures as a binding, supporting or lightweight fill component.

Waste removed from a structure

This Decree also applies to the recovery of waste that has been recovered and removed from a structure and that will be reused for recovery in earth construction in accordance with section 2 of this Decree.

Annex 2

LIMIT VALUES FOR HARMFUL SUBSTANCES AND OTHER QUALITY REQUIREMENTS AND THE MAXIMUM THICKNESS OF THE WASTE LAYER AT EARTH CONSTRUCTION SITES

Table 1. Recovered waste: maximum permitted solubility of harmful substances (mg/kg L/S per 10 l/kg) and content of harmful substances (mg/kg dry material) and layer thickness at the earth construction site. The determination requirements for each waste material are given in Annex 3 (waste quality management).

Harmful substance	**Earth construction site**						
	Roadway[1)] waste layer thickness ≤ 1.5 m		**Field**[1)] waste layer thickness ≤ 1.5 m		**Embankment** waste layer thickness ≤ 5.0 m	**Floor structure of industrial or storage building** waste layer thickness ≤ 1.5 m	**Road constructed of crushed stone and ash**[2)] waste layer thickness ≤ 0.2 m
	Covered	**Paved**	**Covered**	**Paved**	**Covered**		
Solubility (mg/kg LS = 10 l/kg)							
Antimony (Sb)	0.7	0.7	0.3	0.7	0.7	0.7	0.7
Arsenic (As)	1	2	0.5	1.5	0.5	2	2
Barium (Ba)	40	100	20	60	20	100	80
Cadmium (Cd)	0.04	0.06	0.04	0.06	0.04	0.06	0.06
Chrome (Cr)	2	10	0.5	5	1	10	5
Copper (Cu)	10	10	2	10	10	10	10
Lead (Pb)	0.5	2	0.5	2	0.5	2	1
Molybdenum (Mo)	1.5	6	0.5	6	1	6	2
Nickel (Ni)	2	2	0.4	1.2	1.2	2	2
Selenium (Se)	1	1	0.4	1	1	1	1
Zinc (Zn)	15	15	4	12	15	15	15
Vanadium (V)	2	3	2	3	2	3	3
Mercury (Hg)	0.03	0.03	0.01	0.03	0.03	0.03	0.03
Chloride (Cl^-)[3)]	3 200	11 000	800	2 400	1 800	11 000	4 700
Sulphate (SO_4^{2-})[3)]	5 900	18 000	1 200	10 000	3 400	18 000	6 500
Fluoride (F^-)[3)]	50	150	10	50	30	150	100
Dissolved organic carbon (DOC)	500	500	500	500	500	500	500

Content (mg/kg dry material)							
Benzene	0.2	0.2	0.02	0.2	0.06	0.02	0.2
TEX[4)]	25	25	25	25	25	10	25
Naphthalene	5	5	5	5	5	5	5
PAH compounds[5)]	30	30	30	30	30	30	30
Phenolic compounds[6)]	10	10	5	10	10	10	10
PCB compounds[7)]	1	1	1	1	1	1	1
Petroleum hydrocarbons C10-C40	500	500	500	500	500	300	500

1) The maximum amount of recovered asphalt chippings and crushed asphalt at an earth construction site is 1,000 tonnes
2) The layer thickness of a road constructed of crushed stone and ash is set at the calculated thickness of the filler layer
3) The limit values set for chloride, sulphate and fluoride in Table 1 do not apply to a structure that meets all the following requirements: situated at a distance no greater than 500 m from the sea; the direction of discharge of water draining through the structure is into the sea; and there are no wells used for domestic water intake between the structure and the sea
4) Toluene, ethylbenzene and xylene (cumulative content)
5) Polyaromatic hydrocarbons: anthracene, acenaphthene, asenaphthylene, bentz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, phenanthrene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, chrysene, naphthalene and pyrene (cumulative content)
6) Phenol, o-cresol, m-cresol, p-cresol and bisphenol-A (cumulative content)
7) Polychlorinated biphenyl congeners 28, 52, 101, 118, 138, 153 and 180 (cumulative content)

Exceptions to the limit values in Table 1, if the maximum thickness of the executed structure is 0.5 m (mg/kg L/S per 10 l/kg)

- covered roadway: barium (Ba) 80; vanadium (V) 3; chloride (Cl^-) 3 600; sulphate (SO_4^{2-}) 6 000;
- paved roadway: chloride (Cl^-) 14 000; sulphate (SO_4^{2-}) 20 000;
- covered field: antimony (Sb) 0.4.

Other quality requirements

In addition to the limit values for harmful substances, the following quality requirements apply to recovered waste:

- the waste for recovery meets the technical and functional requirements for building elements for earth construction sites that are set by statute, the regulations and guidelines which supplement these, and the conditions of the site-specific plans set by the project developer;

- concrete chippings or crushed brick may contain no more than one percent by weight of non-water-buoyant foreign material such as wood, rubber or metal. Additionally, concrete chippings and crushed brick may contain no more than 10 cm^3/kg of materials that are lighter than water, such as plastics and insulation materials. Furthermore, concrete waste may contain no more than 30% by weight of brick and ceramic tile waste;

- brick waste may contain no more than 40% by weight of mortar and 30% by weight of concrete;

- in the recovery of ash from the combustion of peat and wood-based material, restrictions relating to the radioactivity of construction materials and ash that are laid down in the current Radiation and Nuclear Safety Authority guidelines are to be taken into account;

- the quantity of ash that is used in a road constructed of crushed stone and ash may not exceed 30% by weight in the mixture of ash and stone aggregate used;

- the maximum permitted granular size in treated waste combustion slag is 50 mm, the largest permitted lump size for concrete, lightweight concrete and asphalt waste is 90 mm, and the largest permitted lump size for brick waste is 150 mm.

Annex 3

WASTE QUALITY MANAGEMENT

This Annex describes the general principles and requirements for quality management in the recovery of waste in accordance with this Decree. Here, quality management means measures that the holder of a recovery site shall require the party delivering waste to undertake in order to ensure that the waste is suitable for use in accordance with this Decree.

1. Quality assurance system

The party delivering waste shall have a quality assurance system that, when complied with, will produce identifiable and traceable information on whether the waste falls under the scope of application of this Decree and whether the waste delivered for recovery meets the requirements given in Annex 2, from here on *environmental acceptability*. The quality assurance system shall ensure that the quality control of the waste to be recovered is a regular and planned activity, and that the related quality control studies are organised in a manner that fulfils the requirements given in this Annex. Furthermore, the quality assurance system shall ensure that the various waste components generated are kept separate at their place of generation and storage.

The quality assurance system includes at least the following:

1) wastes and their codes, and an estimate of the quantity generated each year in the case of production at an installation;

2) quality control studies, specifying sampling plans and times, sampling methods, composite and partial sample amounts and sizes, and sampling quality assurance;

3) guidelines for the storage and treatment of waste and for its acceptance, if the installation treats waste from a number of different sites;

4) persons in charge and their qualifications;

5) an assessment and audit plan;

6) monitoring and reporting, including documentation of study results.

2. Quality control studies

2.1 Sampling

The environmental acceptability of waste is studied from composite samples where the composition is in accordance with the requirements in Table 1. When necessary, the granular size of partial samples may be reduced by crushing or grinding the waste.

In the planning and implementation of sample taking, the standard SFS-EN 14899 (Characterization of Waste) and the European Committee for Standardization (CEN) principles for technical reports, and the standards of the earth construction industry apply.

a) Waste generated in production at an installation

The environmental acceptability of waste generated in production at an installation shall be studied on a regular basis. The quality control studies shall focus either on the continuous stream of waste generated at the installation or on treated waste that is delivered for recovery. The solubility and content of harmful substances contained in the waste shall be determined from at least one composite sample before the waste is delivered for recovery.

If the waste generated at the installation does not meet the requirements of Annex 2, the operator may treat the waste in different ways, including ageing, in order to improve its environmental acceptability. In this case, the environmental acceptability of the waste shall be studied again from representative composite samples made up of partial samples taken from the treated waste. The number of partial samples in the composite sample shall meet the requirements laid down in Table 1 and other recommendations for representative sample taking. The partial samples are taken in such a way that they represent the entire waste batch under study.

b) Concrete chippings and crushed brick generated in construction and demolition

The environmental acceptability of concrete chippings and crushed brick generated at construction and demolition sites and intended for recovery are studied separately for each demolition site. In the case of undemolished structures, concrete and brick structures that are not suitable for recovery shall be identified so that these can be demolished separately. The demolition shall be carried out in a way that enables sorting. Studies on the solubility and content of harmful substances, material distribution, and quantities of impurities in concrete chippings and crushed brick produced at the demolition site are carried out on the concrete chippings and crushed brick. The solubility and total content of harmful substances contained in the waste, material distribution and impurities shall be determined from at least one composite sample when the waste is being delivered for recovery from an individual demolition or construction site.

c) Asphalt chippings and crushed asphalt

The environmental acceptability of asphalt chippings and crushed asphalt does not generally need to be demonstrated separately. If the asphalt waste used as the raw material for crushed asphalt originates from a part of the property where fuels have been treated or stored, the contents of petroleum hydrocarbons of fuel origin shall be determined from the asphalt waste intended for recovery.

Table 1. Composition of composite samples from partial samples, by waste code

Waste	Waste code	Largest mass amount (tn) that can be studied in a single composite sample	Minimum number of partial samples in one composite sample
Slag from waste combustion	19 01 12, 19 12 09, 19 12 12	5 000	50
Fly ash from the combustion of coal, peat and wood-based material; sands from fluidised beds	10 01 01, 10 01 02, 10 01 03, 10 01 15, 10 01 24, 19 01 14, 19 01 12, 19 01 19	5 000	50
Lime	10 13 04, 10 13 01, 10 13 13, 03 03 09	5 000	50
Foundry sand	10 09 08, 10 09 12, 10 10 08, 10 10 12	5 000	50
Crushed concrete and lightweight concrete and expanded clay aggregate	10 13 14, 17 01 01, 17 01 07 and 19 12 12	10 000	20
Crushed brick	10 12 08, 17 01 02	10 000	20
Shredded tyres (from used tyres)	16 03 01	15 000	20

2.2 Determinations to be carried out on waste

Waste that is delivered for recovery in accordance with this Decree shall be characterised so that its composition and characteristics are known. The determinations to be carried out on composite samples in quality control are listed by waste code in Table 2.

The determinations of harmful substances shall be carried out at an accredited laboratory whose accredited area of competence covers those analysis methods that are to be used. The laboratory shall be accredited by an accreditation body whose competence has been found to be in accordance with standard international criteria in peer reviews that comply with international recognition agreements.

In determinations of harmful substances contained in and soluble in waste, in the first instance standardised methods shall be used and, in the second instance, other methods that have been found to be adequate in terms of their determination of sensitivity, exactness and repeatability.

In the determination of the solubility of harmful substances, either the up-flow percolation test in accordance with standard CEN/TS 14405 or the two-stage batch leaching ('shake-flask') test in accordance with standard SFS-EN 12457-3 or some corresponding method shall be used. The digestion

solutions from solubility tests shall be determined by methods in accordance with standards SFS-EN 12506, SFS-EN 13370 and SFS-EN 16192. Dissolved organic carbon (DOC) shall be determined in accordance with technical specification CEN/TS 14429 or CEN/TS 14997.

In the determination of petroleum hydrocarbons (hydrocarbon fractions ≥ C10–C40), in the first instance a method in accordance with SFS-EN 14039 or some other corresponding method shall be used, by which both the content and grade of the hydrocarbons can be determined.

In the determination of polychlorinated biphenyls (PCB), a method in accordance with standard SFS-EN 15308 or some other corresponding method shall be used.

In the determination of polyaromatic hydrocarbons (PAH), a method in accordance with standard SFS-EN 15527 or standard SFS-ISO 18287 or some other corresponding method shall be used.

In the determination of benzene, toluene, ethylbenzene and xylene (BTEX), a method in accordance with standard SFS-EN ISO 22155 or standard SFS-EN ISO 15009 or some other corresponding method shall be used.

In the determination of the phenolic compounds, a method in accordance with standard ISO/TS 17182:2014, standard ISO 13907, standard SFS-EN ISO 18857 or standard SFS-EN 12673 or some other corresponding method shall be used.

The material distribution (proportion of concrete, mortar, brick and natural stone), impurities and floating impurities of concrete or brick waste generated at an installation but originating from construction or demolition activity, or produced at a demolition site, shall be studied in accordance with EN standard EN 933-11. The obligation to conduct a study does not apply to pure concrete and brick waste generated in the concrete or brick industry.

The uncertainty of measurement of the determination methods is not taken into account when comparing the results obtained with the limit values given in Annex 2.

Table 2. Determinations to be made from composite samples in connection with waste quality control. BTEX compounds and phenolic compounds are determined from individual samples.

Waste	Quality control		
	Solubility determinations	Total content	Other determinations
Slag from waste combustion	Sb, As, Ba, Cd, Cr, Cu, Hg, Pb, Mo, Ni, V, Zn, Se, F^-, SO_4^{2-}, Cl^-, DOC		
Fly ash from the combustion of coal, peat and wood-based material; sands from fluidised beds	Sb, As, Ba, Cd, Cr, Cu, Hg, Pb, Mo, Ni, V, Zn, Se, F^-, SO_4^{2-}, Cl^-, DOC	PAH compounds	
Lime	Sb, As, Ba, Cd, Cr, Cu, Hg, Pb, Mo, Ni, V, Zn, Se, F^-, SO_4^{2-}, Cl^-, DOC		
Foundry sand	Sb, As, Ba, Cd, Cr, Cu, Hg, Pb, Mo, Ni, V, Zn, Se, F^-, SO_4^{2-}, Cl^-, DOC	PAH compounds, BTEX compounds, phenolic compounds	
Crushed concrete	Sb, As, Ba, Cd, Cr, Cu, Hg, Pb, Mo, Ni, V, Zn, Se, F^-, SO_4^{2-}, Cl^-, DOC	PAH compounds, PCB compounds, petroleum hydrocarbons ≥ C10–C40	Materials distribution, impurities, floating impurities
Crushed brick	Sb, As, Ba, Cd, Cr, Cu, Hg, Pb, Mo, Ni, V, Zn, Se, F^-, SO_4^{2-}, Cl^-, DOC	PAH compounds, PCB compounds, petroleum hydrocarbons ≥ C10–C40	Materials distribution, impurities, floating impurities
Crushed asphalt and asphalt chippings	-	Petroleum hydrocarbons ≥ C10–C40, BTEX compounds	
Shredded tyres (from used tyres)	-	PAH compounds	