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H2GEO

H2GEO

**New technology for hydrogen and geopolymer composites
production from post-mining waste**

Deliverable 2.1

**Rank of dumps as regards their use
in jig beneficiation process and hazards
to environment and man**

Grant agreement No: 101112386

06.2024



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1. Introduction

The legal basis for the work entitled: “New technology for hydrogen and geopolymer composites production from post-mining waste” (H2GEO) is a grant agreement No: 101112386 (RFCS-2022). H2GEO project Consortium is composed of seven partners: Instytut Techniki Górniczej Komag (KOMAG), Poland; Główny Instytut Górnictwa (GIG), Poland; Institute of Construction and Architecture Slovak Academy of Sciences (USTARCH), Slovakia; Instytut Technologii Paliw i Energii (ITPE), Poland; VSB - Technical University of Ostrava (VSB), Czechia; Politechnika Wrocławska (PWR), Poland; Haldex S.A. (HDX), Poland.

Task 2.1 included conducting an inventory of active and reclaimed mining waste landfills in selected European countries - Western Europe. The activities carried out included:

a) making inquiries about available databases of mining waste dumps in selected Western European countries:

- Great Britain: Camborne School of Mines University of Exeter, Coal Authority, Law Commission (CoalTips@lawcommission.gov.uk)
- Germany: DMT GmbH & Co. KG Civil and mining engineering
- France: INERIS
- Romania: INSEMEX
- Belgium: University of Liège, Belgium
- Poland: HALDEX SA
- Spain: SYSTRA SUBTERRA

b) online databases were searched for post-mining waste landfills in Western European countries

c) a review of European projects regarding mining waste landfills in Western European countries was carried out

d) a review of scientific articles on mining waste landfills in Western European countries was carried out

e) a database of post-mining waste landfills in France was prepared

f) a database of post-mining waste landfills in Germany was prepared



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- g) a database of mining waste landfills in Great Britain was prepared
- h) a database of mining waste dumps in Spain was prepared
- i) a database of mining waste dumps in Belgium was prepared
- j) a database of mining waste dumps in Romania was prepared

2. Goal of the work

Goal of the project is the development of a comprehensive technology for the management of mine waste dumps is planned within the H2GEO project. The main idea of the project is to use the separated mineral fractions and fly ash to produce geopolymer composites. It is planned to use CO₂ as a process carrier in the production of composites. Another important aspect of the project is to determine a possibility of obtaining hydrogen from the gasification of energy fractions.

High-quality raw materials for the production of geopolymers and hydrogen will be ensured by the use of an innovative mobile separator for processing of mine waste.

H2GEO project will enable the creation of environmentally friendly and economically justified installations using material from a post-mining waste landfill.

In the range of T.2.1 an inventory of mining waste landfills was carried out in selected European countries such as: Poland, Czech Republic, Germany, Great Britain, Spain, France, Belgium, Romania and Bulgaria. Depinventory of mine waste dumps in selected European countries was be carried out, with division into active and recultivated dumps and with regard to the characteristics of deposited wastes and possibilities of using them in the beneficiation process. Based on the inventory results, mine waste dumps were selected from which samples will be taken for laboratory tests.

Table 1 The scope of the review of the dumps

Partner	Dumps
GIG	mine waste dumps: GERMANY, GREAT BRITAIN, SPAIN, FRANCE, BELGIUM, ROMANIA, BULGARIA
VSB	mine waste dumps: CZECH REPUBLIC
HDX	mine waste dumps: POLAND



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3. Selection Criteria for Site Database Creation for Inventorying Coal Waste Dumps

In the first phase, it was necessary to secure available information from companies managing the sites of interest (coal waste dumps), both those with completed and active mining operations, specifically from the state company Diamo and OKD, a.s.

After consultations, we were provided with databases of sites from which we selected, based on our chosen criteria (see below), potentially suitable coal waste dumps for the purposes of the project.

Selection Criteria and Data for Database Creation:

3.1 Waste Dump Coal Volume Over 100,000 m³

The first selection criterion was the volume of the coal waste dump, with a minimum volume of over 100,000 m³. Large volumes of waste dumps represent significant potential for further utilization and can also have a greater environmental impact. Smaller volume dumps were excluded because their significance is comparatively less than that of larger dumps.

3.2 Availability and sampling (Agreement with Owners)

It is essential to ensure access to the coal waste dumps and obtain the site owner's consent for sampling. Without the possibility of sampling, the research team is unable to analyse and evaluate the materials deposited on the heap. The owner's consent to utilize the dump is crucial for any future plans concerning the processing (utilization) or disposal of the material. For this reason, for the sites selected based on the first criterion (volume), we identified their owners, including the owners of the land beneath the dumps and access roads, and the possibility of obtaining permission for sampling.

3.3 Waste from black coal mining

The database focuses exclusively on waste from underground black coal mining, as it has a specific chemical composition and potential for energy utilization. Based on consultations with companies managing mining waste, it was found that unlike brown coal spoil heaps, which are primarily used for reclamation, black coal



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waste remains mostly on the surface and may contain both free and dispersed coal matter in the original rocks, which can be a source of energy utilization.

3.4 Coal Waste Dump Activity (Active, Inactive, Reclaimed)

The status of the coal waste dump is a key factor in assessing its potential and risks. Active dumps may still be in the process of disposal, but their advantage is that they are easily accessible and not reclaimed. Inactive coal waste dumps are stabilized, and reclaimed dumps may already be reused for other purposes. This information helps determine the status and potential utilization of the coal waste dump.

3.5 Environmental risk

Companies managing coal waste dumps must minimize the environmental risk of stored mining waste. Materials in the dump can impact the surrounding environment in terms of the leachability of potentially hazardous substances or the potential ignition of the material.

Based on the assessment of the sites, we have created a database of those potentially suitable for the project. The database includes the following information:

3.5.1 Name, region, city, raw material, type of coal waste dump

The name allows for clear identification within the given locality. This information is crucial for evidence and managing data in the database. The location description provides contextual information about the geographical position of the coal waste dump, which is essential for orientation in the field and for locating the dump on map overlays. The type may be called dump (also referred to as heap) or tailings.

3.5.2 Volume of mining waste, degree of activity, degree of reclamation

Information about the volume of the material and the current situation at the coal waste dump are necessary to assess its potential utilisation.

3.5.3 Environmental risk assessment

The database includes an assessment of whether the environmental risk is significant or not, along with any additional information, such as whether the site functions as a refuge.



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3.5.4 GPS Coordinates

Precise localization of the waste dump is essential for its identification and further monitoring. Geographic coordinates facilitate easy identification of the dump's location and planning of any fieldwork. These data will also be used in creating a map, which will be part of the project output, facilitating visualization and spatial analysis of selected mining waste storage sites (coal waste dumps/heaps and tailings) across the Czech Republic.

3.5.5 Notes

The notes section allows for recording additional information that may be important for understanding specific characteristics of the coal waste dump, surrounding conditions, or other relevant details.

4. Preparation of the inventory

The activities were aimed at creating a database of mine waste dumps located in European countries. As a result of the actions taken, it was possible to create an inventory including objects located in the following countries:

- Czech Republic,
- France,
- Germany,
- Spain,
- UK,
- Belgium,
- Romania,
- Poland

The data collected is heterogeneous as it has been obtained from different sources, prepared for different purposes and made available to a wider audience through different projects in their countries.



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4.1. Czech Republic

The data were obtained from the Czech Geological Survey (https://mapy.geology.cz/inventarizace_uloznych_mist/#) and from companies that manage the sites of interest (coal waste dumps/heaps and tailings), both with closed and active mining, namely the state enterprise Diamo and OKD, a.s.

The database is supplemented by a public map web application that provides the localization of individual mining waste disposal sites and contains descriptive information, attached photo documentation, and links to related assessments and reports stored in the Geofond archive. The website is updated daily.

On May 7, 2009, Act No. 157/2009 Coll., on the Management of Mining Waste and Amendments to Certain Laws, came into effect. This act implements the provisions of Directive 2006/21/EC of the European Parliament and of the Council of March 15, 2006, on the management of waste from extractive industries and amending Directive 2004/35/EC. In connection with the provisions of § 17, paragraph 4, letters a) and b) of this act, the Ministry of the Environment entrusted the Czech Geological Survey with identifying closed and abandoned waste disposal sites that pose a serious risk to the environment and human health, and maintaining a Register of these disposal sites.

Coal waste dumps/heaps and tailings listed in the database are owned by the mines (state enterprise Diamo and OKD, a.s.) or municipalities and are subject to mining law. The Czech Geological Survey database includes disposal sites for all extracted raw materials resources within the Czech Republic. For the purposes of the project, based on selected criteria, we have chosen 85 coal waste dumps and tailings from black coal mining.

The common criterion for the selected coal waste dumps/heaps and tailings is a volume of over 100,000 m³. The records in the inventory contain 11 data points: name, region, municipality, resource, type of mining waste disposal site, volume of mining waste, level of activity, level of reclamation, environmental risk, GPS coordinates, and notes.



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Name	Czech Republic/Region	City	Raw material	Type	Volume	Degree of activity	Degree of reclamation
strojní Sachta Josef (1)	Královéhradecký	Červený Kostelec	black coal	odval	150 000	null	rekultivováno biologicky – lesnický
Odval jámy František 2	Přízeňský	Kbelany	black coal	odval	118 000	neaktivní	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin
Radnice - Pokrok	Přízeňský	Radnice	black coal	odval	1 080 000	null	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin
Radnice - Pokrok II	Přízeňský	Radnice	black coal	odval	140 000	null	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin
Halda jámy Nové Dobré Štěstí - těžní	Přízeňský	Dobřany	black coal	odval	200 000	null	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin
Halda dolu Nové Dobré Štěstí (Hugo)	Přízeňský	Dobřany	black coal	odval	350 000	null	není rekultivováno – bez vegetačního krytu
Halda dolu Krimich II	Přízeňský	Tlučná	black coal	odval	3 530 000	null	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin
Nýřany - důl Krimich	Přízeňský	Nýřany	black coal	odval	580 937	null	není rekultivováno – bez vegetačního krytu
Valcha - Hilsfschacht 1	Přízeňský	Valcha	black coal	odval	102 000	null	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin
Vstří - Bayerův důl	Přízeňský	Vstří	black coal	odval	377 000	null	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin
důl Celestýn I	Královéhradecký	Chvalčův	black coal	odval	339 000	null	není rekultivováno – bez vegetačního krytu
jáma Kateřina II	Královéhradecký	Radnice	black coal	odval	346 000	null	není rekultivováno – bez vegetačního krytu
důl Kateřina I (Stachanov)	Královéhradecký	Radnice v Čechách	black coal	odval	2 330 000	null	není rekultivováno – bez vegetačního krytu
důl Pětiletka (U buky, děd. St. Xaver) - val	Královéhradecký	Velké Svatoňovice	black coal	odval	164 000	null	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin
Tmavý důl (Zdeněk Nejedlý II)	Královéhradecký	Rtyně v Podkrkonoší	black coal	odval	162 000	null	objekt není rekultivován – ostatní plochy
důl Kolektiv (Větrní Sachta, Chlívěcký důl)	Královéhradecký	Rtyně v Podkrkonoší	black coal	odval	250 000	null	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin
důl Jiří	Královéhradecký	Žacléř	black coal	odval	165 000	null	rekultivováno biologicky – zemědělský
Sachta Eliška, horní halda (prohořelá)	Královéhradecký	Žacléř	black coal	odval	119 000	null	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin
důl Jan Šverma, centrální odval	Královéhradecký	Lampertice	black coal	odval	4 320 000	null	rekultivováno biologicky – jiné využití
důl Jan Šverma, škvárová halda	Královéhradecký	Lampertice	black coal	odval	550 000	null	není rekultivováno – bez vegetačního krytu
důl Zdeněk Nejedlý (dědičná štola Ida)	Královéhradecký	Rtyně v Podkrkonoší	black coal	odval	5 000 000	null	rekultivováno biologicky – lesnický
Důl Lužná	Středočeský	Lužná	black coal	odval	120 000	null	rekultivováno biologicky – jiné využití
František Josef	Středočeský	Lhota pod Džbánem	black coal	odval	180 000	null	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin
Důl Perun III	Středočeský	Hředle	black coal	odval	200 000	null	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin
Důl Eva	Středočeský	Mutěbovice	black coal	odval	150 000	null	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin
Důl ČSA elektrárna	Středočeský	Rynholec	black coal	odval	135 000	null	není rekultivováno – bez vegetačního krytu
Důl ČSA (dříve Anna)	Středočeský	Rynholec	black coal	odval	200 000	null	není rekultivováno – bez vegetačního krytu
Jifina	Středočeský	Libovice	black coal	odval	140 000	null	není rekultivováno – vegetační kryt tvořen přírodním náletem dřevin

Figure 1. Part of the inventory of mine waste dumps in the Czech Republic

4.2. France

An inventory of heaps from France was made in the SUMAD project "Sustainable Use of Mining Waste Dumps". The project was implemented in 2019-2022 and was funded by the Research Fund for Coal and Steel. The collected data provide information about the heaps of the Nord-pas de Calais Basin. All landfills in France have been fully reclaimed and the risk to the environment is generally considered to be very low. 33 records were inventoried in the SUMAD project, which contain information about the name, location, GPS coordinates, volume and the degree of reclamation. The SUMAD project focused on the reuse of coal heaps. The project presents the characteristics of heaps and the main threats associated with them, i.e. instability, fire, pollution, etc. Existing possibilities of valorization of heap materials in European coal mines have been identified. The SUMAD project investigated the use of anthropogenic land consisting of coal mining waste. The aim of the revitalization was to make heap zones profitable for the community, which is important for coal regions in the period of transformation. The heap revitalization project should support sensitive areas affected by the coal industry through activities aimed at promoting the establishment of new activities and creating new jobs in heap areas.

Heaps cover a large area and have a huge volume. They are characterized by a large variety of shapes, types of materials and soil potential. Some of them were reused for various economic and social activities.



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The SUMAD project presented the main such activities: civil engineering projects, installations of renewable energy sources, sports and tourism activities, agriculture and biomass.

Name	Country	City	Volume	Coordinates X	Coordinates Y	Other (notes)
Bruay Nord	France	Divion	7 193 333	50,466671	2,5	exploitation, the heap was one of the highest in the mining area, being 130 meters high. Only the Bruay Est heap, located in Ruitz, is one of two conical heaps of the Bruay mine, located in Ruitz, is one of the two conical dumps of the Bruay mine and one of three dumps located at the mine. It has never been exploited and is one of the most famous dumps in the mining area. Geometry -Conical
Bruay Est	France	Haillicourt	4 000 000	50,4748128	2,5846632	
Bruay Ouest	France	Ruitz	4 000 000	50,466667	2,583333	The Auchel Est dump, located in Marles-les-Mines, is one of the two conical dumps of the Marles mine. Originally 80 meters high and covering an area of 14.27 ha, it is currently open. Geometry - Conical
Auchel Est	France	Marles-Les-Mines	3 805 333	50,5019	2,49903	The Lapugnoy heap, located in Lapugnoy, is a former conical (or truncated) heap belonging to the Compagnie des mines de Marles, which was mined. It is located north of the Bois de Lapugnoy. Initially, it was 60 meters high and covered an area of 14.35 ha. Geometry -Conical
Lapugnoy	France	Lapugnoy	2 870 000	50,5167	2,5333	The Bois de Lapugnoy heap, located in Bruay-la-Buissière, is a heap that is not exploited but used as 6 de Bruay (garbage dump), located in Haillicourt, is one of three slag dumps in the Bruay mine workings. It is eleven meters high, flat, covers an area of 10.78 ha and is entirely forested. Geometry - Conical
Bois de Lapugnoy	France	Bruay-la-Buissière	702 167	50,4833	2,55	
6 de Bruay	France	Haillicourt	395 267	50,4748128	2,5846632	The ter Auchel Heap and Mud Pond, located at Auchel and Marles-les-Mines, is a straddle heap assigned to the ter Marles mine. Originally thirteen meters high and covering an area of 12.48 hectares, it was exploited. Geometry -Conical
ter Auchel	France	Auchel	540 800	50,5	2,4667	The Heap de Bruay Ouest, located at Haillicourt, is the conical heap of the Bruay mine. It is not exploited, although a spiral road was built to its top. It is 73 meters high and covers an area of nine hectares. A vine was planted on its top. Geometry -Conical
Bruay Ouest	France	Haillicourt	2 190 000	50,4748128	2,5846632	The Bruay Ouest heap, located in Bruay-la-Buissière, is a 90-meter-high conical heap resulting from the exploitation of the Bruay mines. It covers an area of over 10.2 ha. Geometry -Conical
Bruay Ouest	France	Bruay-la-Buissière	3 060 000	50,4833	2,55	Heap de Bruay Est, located in Bruay-la-Buissière, which is one of the two heaps of the Bruay mine. It was a small flat heap, earlier than the conical heap, and covering an area of over 1.09 ha. It has been fully utilized. Geometry - flat
Bruay Est	France	Bruay-la-Buissière		50,4833	2,55	Labuissière dumps included in the Compagnie des mines de Bruay. It has been completely reclaimed. Labuissière dumps included in the Compagnie des mines de Bruay. Although exploited, it stands out
Usines de Labuissière	France	Bruay-la-Buissière	1 081 200	50,4833	2,55	
Usines de Labuissière	France	Bruay-la-Buissière	1 643 000	50,4833	2,55	The Auchel Est dump, located in Lozinghem, was fed by the Marles mine, opened on the Auchel site. It
Auchel Est	France	Lozinghem	1 992 000	50,5167	2,5	The heap 5 d'Auchel, located in the town of Auchel, is a conical heap of the Marles mine. It is 103 meters high and covers an area of 13.2 ha. Geometry -Conical
5 d'Auchel	France	Auchel	4 532 000	50,5	2,4667	Heap 6 d'Auchel, located in Calonne-Ricouart, is the heap of the Marles mine. Originally, it was a 92-meter-high conical heap of the Ferfay mine, currently No. 4 of the Marles mine. Established on an area of 6.15 ha, it has never been exploited and is entirely forested. Geometry - flat
6 d'Auchel	France	Calonne-Ricouart	3 477 600	50,48957443	2,484380007	
Ferfay	France	Ferfay		50,50389862	2,445369959	The Bruay heap, located at Bruay-la-Buissière, was fed by the Bruay and other mines. flat, built on an area of 7.19 ha, it was twelve meters high. Geometry - flat
Bruay	France	Bruay-la-Buissière	287 600	50,4833	2,55	The Lillers heap, located in Divion, is one of the four heaps of the Bruay mines. It is a flat, partially forested slag heap. Initially, it was thirteen meters high and covered an area of 8.22 ha, and was exploited. Geometry - flat
Lillers	France	Divion	356 200	50,466671	2,5	The Ferfay heap, located in the towns of Ferfay and Auchel, was the heap of the Ferfay mines. Flat, spread over an area of 7.6 ha, fully exploited. Geometry - flat
Ferfay	France	Ferfay		50,50389862	2,445369959	The Rimbart heap, located at Burbure and Auchel, is a slag heap from the Marles mine, located at Ames
Rimbart	France	Auchel	2 054 667	50,5	2,4667	
Ferfay	France	Ames	85 667	50,55	2,416667	The Ferfay heap, located in Ames, was fed by the Ferfay mine. It is a flat heap, ten meters high,

Figure 2. Part of the inventory of mine waste dumps in France

4.3. Germany

Research was carried out and various sources were reviewed, such as open GIS/geodata platforms, as well as other public sources such as the Polish Geological Survey (BGR), but unfortunately no comprehensive dataset was found there. The main source of data for the obtained records was the List of landfills in the Ruhr area (https://de.wikipedia.org/wiki/Liste_von_Halden_im_Ruhrgebiet).

The heaps in the Ruhr area were created primarily as tailings heaps from the Ruhr mining industry. There are different forms, the older one is the simple pointed cone tailings heap, younger forms have terraces.



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Some tailings tower over their surroundings by more than 100 meters and are among the highest elevations in the northern Ruhr area. The Ruhr Regional Association owns 46 (Green infrastructure of the Ruhr metropolis is being further expanded - eight Rag dumps now owned by the RVR. January 22, 2021, accessed on January 22, 2021) tailings heaps, the recreational value of which has often been improved by various installations. Still open tailings are usually owned by the mines or municipalities that filled them and are partly subject to mining law.

The data has been filtered. Facilities related exclusively to hard coal mining have been distinguished and are in the form of waste landfills. As a result, the H2GEO project inventory was supplemented with 90 records. Inventory entries contain information about the name of the facility, its location, its volume, degree of reclamation, environmental risk and location coordinates.

Name	Country	City	Raw material	Type	Volume	Degree of activity	Degree of reclamation	Risk to the environment	Coordinates X	Coordinates Y	Other (notes)
Alzum Mountain	Germany	Duisburg	coal		19 200 000				51° 29' 51" N, 6° 43' 45" E		Well-known location for industrial photography of the Schwelgern coking plant and the ThyssenKrupp
Beckstrasse dump	Germany	Boitrop-Batenbrock	coal		91 000 000				51° 31' 37" N, 6° 57' 36" E		Tetrahedron viewing point with
Bergehalde Zollverein	Germany	Eat	coal						51° 29' 4" N, 7° 2' 26" E		Zollverein Sculpture Park
Brine dump	Germany	Oberhausen-Alstadt	coal		1 480 000				51° 27' 3" N, 6° 50' 4" E		actually Alstadt dump
Brinkfortsheide dump	Germany	Marl	coal						51° 40' 16" N, 7° 8' 29" E		
Brinkfortsheide dump exte	Germany	Marl	coal						51° 40' 49" N, 7° 9' 3" E		
Brockenscheidt dump	Germany	Waltrop	coal		4 800 000				51° 37' 0" N, 7° 25' 16" E		Spurwerkturn by Jan Bormann , Stations
Deusenberg	Germany	Dortmund	coal		29 333 333				51° 32' 48" N, 7° 25' 8" E		Former garbage dump, mountain bike training route, view of
Duererstrasse dump	Germany	Herne	coal						51° 31' 12" N, 7° 9' 25" E		Heap of the former Pluto 1/4 colliery
Dump monopoly	Germany	Bergkamen	coal		21 866 667				51° 37' 44" N, 7° 37' 21" E		
Dump Pluto	Germany	Herne	coal		15 960 000				51° 32' 7" N, 7° 8' 19" E		A mountain dump in the west of the city of Herne that has been converted into a very small, wooded dump right next to
Dump Zollverein 1/2	Germany	Eat	coal		2 406 667				51° 29' 23" N, 7° 2' 53" E		Training route for trotters
Dump Zollverein 4/11	Germany	Geisenkirchen	coal		55 200 000				51° 30' 33" N, 7° 9' 32" E		
Eickwinkel dump	Germany	Eat	coal		7 200 000				51° 30' 37" N, 7° 1' 44" E		
Ellinghausen dump	Germany	Dortmund	coal						51° 33' 21" N, 6° 57' 28" E		
Ellinghorst dump	Germany	Gladbeck	coal		3 666 667				51° 33' 35" N, 7° 25' 35" E		former garbage dump, now a nature
Elsa-Brandström-Straße du	Germany	Lünen	coal		37 950 000				51° 35' 17" N, 7° 25' 23" E		also called Heap Minister Achenbach
Emscher Lippe dump	Germany	Dates	coal		5 166 667				51° 39' 7" N, 7° 21' 11" E		
General Blumenthal dump	Germany	Recklinghausen	coal		5 043 333				51° 36' 7" N, 7° 12' 36" E		also called "Greveler Alm",
Grevel landfill	Germany	Dortmund	coal		40 800 000				51° 34' 8" N, 7° 32' 59" E		
Groppenbruch dump	Germany	Dortmund	coal		15 200 000				51° 35' 30" N, 7° 24' 35" E		
Hacheneu dump	Germany	Dortmund	coal						51° 28' 24" N, 7° 29' 8" E		Crone colliery / Glückaufsegen colliery
Halde Am Spörkel	Germany	Dortmund	coal						51° 28' 1" N, 7° 25' 22" E		Tailings were used to build
Halde Dorstfeld I/IV	Germany	Dortmund	coal						51° 31' 1" N, 7° 24' 42" E		
Halde Ewald continued	Germany	Oer-Erkenschwick	coal		29 333 333				51° 38' 46" N, 7° 15' 46" E		Plateau with seating blocks ("green classroom"), installation on the head
Halde Haniel	Germany	Boitrop	coal		468 000 000				51° 33' 1" N, 6° 52' 33" E		Installation Totems by Agustin
Halde Lohberg North Exten	Germany	Hurxe	coal						51° 35' 50" N, 6° 46' 20" E		fabrics, Stations of the Cross by Tisa
Halde Neue Suderwicher A	Germany	Recklinghausen Suc	coal						51° 36' 19" N, 7° 15' 13" E		There have been three wind turbines
Halde Prosperstrasse	Germany	Boitrop	coal		66 133 333				51° 31' 27" N, 6° 57' 58" E		Landscape structure, above the
Halde Radbod East Exten	Germany	Hamm	coal		13 050 000				51° 41' 4" N, 7° 45' 32" E		object Utkiek an open hall from which
Halde Schleswig	Germany	Dortmund-Neuasse	coal						51° 31' 17" N, 7° 34' 13" E		Alpincerter Boitrop ski hall with indoor
Halde Suderwicher Alm	Germany	Recklinghausen Suc	coal						51° 36' 25" N, 7° 15' 15" E		ski hall, "Indoor Skydiving" wind tunnel,
Halde Viktoria 3/4	Germany	Lünen Gahmen	coal		20 500 000				51° 35' 17" N, 7° 30' 58" E		Also called "Asselner Alm", The
Halde Viktoria Westhalde	Germany	Lünen	coal		16 750 000				51° 36' 43" N, 7° 32' 7" E		reclamation has largely been
Heap 19	Germany	Gladbeck	coal		11 333 333				51° 32' 4" N, 7° 0' 1" E		completed. Negotiations regarding the
Heap 22	Germany	Gladbeck	coal		18 400 000				51° 32' 28" N, 6° 59' 52" E		Table mountain dump, 4 terraces, flat
Heap Brassert I/II	Germany	Marl Brassert	coal						51° 39' 57" N, 7° 4' 52" E		Bike facilities and an active slope for
Heap Brassert III (Lipper-H	Germany	Marl Brassert	coal		66 420 000				51° 40' 50" N, 7° 4' 7" E		
Heap Constantin	Germany	Herne	coal		933 333				51° 31' 22" N, 7° 14' 45" E		Summit cross
Heap gardener's pool	Germany	Dinslaken	coal		50 700 000				51° 34' 18" N, 6° 45' 48" E		The dump is integrated into the

Figure 3. Part of the inventory of mine waste dumps in Germany



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Deliverable 2.1 Rank of dumps as regards their use in jig beneficiation process and hazards to environment and man

4.4. Spain

Various sources have been researched and reviewed, such as open GIS/geodata platforms, as well as other public sources such as the Instituto Geológico y Minero de España (IGME).

Main source data to be acquired records was Inventario Nacional de Escombreras y Estructuras Tipo Mixto, National inventory of tailings and mixed-type structures (<https://www.arcgis.com/apps/mapviewer/index.html?webmap=db29c99ea79b41529243c36636730d34>).

Database of sterile deposits and coarse materials poured dry (mine tailings) that originate in the mines and quarries. Contains the National Inventory of Mining Tailings and Structures of Mixed Type with information related to physical and geological characteristics, type of mining, impact on the environment, possibility of exploitation, etc. This information has been obtained through the completion of the National Inventory of Mining Ponds and Mining Tailings from the IGME from 1983 to 1989. It is a georeferenced factual database managed with SQL Server.

The database contains information on over 6,000 objects, including over 400 objects related to waste from hard coal mining. The data has been filtered. Facilities related exclusively to hard coal mining have been identified, taking into account a volume exceeding 100,000 m³. As a result, the H2GEO project inventory was supplemented with 126 records. Inventory entries contain information about the name of the facility, its location, volume, land development method and location coordinates.

1	Name	Country	City	Place	Raw material	X coordinate (UTM)	Y coordinate (UTM)	Topographical elevation	Land type	Volume (m ³)	ID nu
2	LA MANCHEGA	Spain	PUERTOLLANO	LA MANCHEGA	COAL	402 500,00	4 280 600,00	650	Agricultural	1 100 000,00	3 007
3	LA MANCHEGA	Spain	PUERTOLLANO	LA MANCHEGA	COAL	402 750,00	4 280 600,00	650	Agricultural	1 700 000,00	3 008
4	LA MANCHEGA	Spain	PUERTOLLANO	LA MANCHEGA	COAL	402 725,00	4 280 900,00	660	Agricultural	1 200 000,00	3 009
5	LA MANCHEGA	Spain	PUERTOLLANO	LA MANCHEGA	COAL	402 700,00	4 281 150,00	670	Agricultural	800 000,00	3 010
6	EL TERRY	Spain	PUERTOLLANO	EL TERRY	COAL	402 100,00	4 282 000,00	690	Agricultural	5 000 000,00	3 011
7	ESCOBRERA DE STOCK	Spain	PUERTOLLANO	CN 420	COAL	401 750,00	4 282 000,00	680	Agricultural	120 000,00	3 012
8	SAN FELIPE NORTE	Spain	PUERTOLLANO	SAN ESTEBAN	COAL	404 750,00	4 281 750,00	670	Agricultural	500 000,00	3 025
9	SAN FELIPE SUR	Spain	PUERTOLLANO	SAN ESTEBAN	COAL	404 650,00	4 281 000,00	670	Agricultural	450 000,00	3 026
10	POZO NORTE	Spain	PUERTOLLANO	POZO NORTE	COAL	404 350,00	4 281 525,00	670	Agricultural	400 000,00	3 029
11	POZO NORTE 2	Spain	PUERTOLLANO	POZO NORTE	COAL	404 400,00	4 281 100,00	670	Agricultural	350 000,00	3 030
12	VACIE 5	Spain	PUERTOLLANO	MINA EMMA	COAL	397 250,00	4 279 150,00	690	Agricultural	13 000 000,00	3 038
13	ACÓPIO DE TIERRAS	Spain	PUERTOLLANO	MINA EMMA	COAL	397 550,00	4 279 300,00	690	Agricultural	150 000,00	3 039
14	VACIE INTERIOR	Spain	PUERTOLLANO	MINA EMMA	COAL	398 100,00	4 279 950,00	670	Agricultural	60 000 000,00	3 040
15	PARQUE PARA LAVAR	Spain	PUERTOLLANO	MINA EMMA	COAL	397 950,00	4 279 700,00	670	Agricultural	120 000,00	3 041
16	SAN LUIS	Spain	PUERTOLLANO	CHACALO	COAL	401 100,00	4 279 400,00	680	Agricultural	800 000,00	3 043
17	MARIA ISABEL 2	Spain	PUERTOLLANO	CHAPARRALES	COAL	404 000,00	4 279 400,00	670	Agricultural	2 000 000,00	3 052
18	LA EXTRANJERA	Spain	PUERTOLLANO	CRUZ PALO	COAL	401 975,00	4 278 900,00	680	Agricultural	1 250 000,00	3 048
19	STOCK TERMICA	Spain	PUERTOLLANO	CENTRAL	COAL	402 400,00	4 278 725,00	690	Wasteland	150 000,00	3 050
20	VERTEDERO TERMICA	Spain	PUERTOLLANO	CENTRAL	COAL	403 650,00	4 278 600,00	690	Agricultural	1 100 000,00	3 051
21	MARIA ISABEL 2	Spain	PUERTOLLANO	CHAPARRALES	COAL	404 000,00	4 279 400,00	670	Agricultural	2 000 000,00	3 052
22	MARIA ISABEL 1	Spain	PUERTOLLANO	CRUZ PALO	COAL	403 825,00	4 278 300,00	670	Agricultural	2 500 000,00	3 053
23	LA MANCHEGA	Spain	PUERTOLLANO	LA MANCHEGA	COAL	402 325,00	4 280 325,00	660	Agricultural	1 800 000,00	3 056
24	CALATRAVA POZO 1	Spain	PUERTOLLANO	CALATRAVA	COAL	405 800,00	4 279 600,00	660	Agricultural	125 000,00	3 069
25	SELECTO POZO NORTE	Spain	PUERTOLLANO	FERROCARRIL	COAL	404 750,00	4 280 975,00	660	Agricultural	400 000,00	3 032
26	LAS PARRAS	Spain	PUERTOLLANO	LAS PARRAS	COAL	405 400,00	4 281 100,00	670	Agricultural	180 000,00	3 033
27	MINA MARIA	Spain	SAN CEBRIAN DE MUDA	SOCABON	COAL	385 900,00	4 749 850,00	1 100,00	Mountain dump	800 000,00	2 728
28	ESCOBRERA LAVADERO	Spain	MUDA	TRAS DEL VA	COAL	386 300,00	4 749 400,00	1 020,00	Wasteland	483 000,00	2 730
29	PEGA BLANCA	Spain	BARRUELO DE SANTULLAN	PERAGIDO	COAL	396 200,00	4 750 200,00	1 100,00	Mountain dump	1 500 000,00	2 733
30	BOLARADO	Spain	BARRUELO DE SANTULLAN	BARRUELO	COAL	394 750,00	4 750 900,00	1 060,00	Mountain dump	300 000,00	2 734

Figure 4. Part of the inventory of mine waste dumps in Spain



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Deliverable 2.1 Rank of dumps as regards their use in jig beneficiation process and hazards to environment and man

4.5. United Kingdom

Attempts to obtain data were carried out in parallel on several paths. Unfortunately, only publicly available information, that is posted on official government websites was captured and used for the project purposes.

The main source of data for the obtained records was the Inventory of Closed Mining Waste Facilities by Environment Agency (<https://environment.data.gov.uk/explore/65ef1430-d465-11e4-96c6-f0def148f590?download=true>). This metadata record addresses the European Mining Waste Directive (2006/21/EC), which requires Member States to create an inventory of closed or abandoned mine waste facilities causing serious environmental impacts, and to make this inventory available to the public. Therefore the data is held under Open Government Licence. The website is updated regularly and consists files uploaded in 2024.

Accessing the website resulted in obtaining the data. Data was filtered and objects that were related exclusively to coal mining and have a form of waste dumps were distinguished. In consequence the inventory of H2GEO project was supplemented with 9 records.

It is clear that the number of records collected is incomplete and the actual list of active and recultivated mine waste dumps is much more extensive. It is worth mentioning the inventory of Category C and D Disused Coal Tips in Wales (<https://datamap.gov.wales/maps/category-c-and-d-disused-coal-tips-in-wales/view#/>) that was available in a visual form - a map, but did not provide the opportunity to download records.

The data was supplemented with a review of news available online, which enabled better characterization of individual objects. Individual, minor data sources are detailed in the description of each record. Ultimately, inventory entries contain information regarding the name of the object, its location, degree of reclamation, risk to the environment and precise location coordinates.



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Name	Country	City	Raw material	Type	Volume	Degree of activity	Degree of reclamation	Risk to the environment	Coordinates X	Coordinates Y	Other (notes)
Shilbottle Pyrites Tip	UK	Northumberland	coal	spoil dump					422060	608160	Local authority: Northumberland, The 15 hectare Shilbottle spoil heap lies at National Grid Reference NU 217086, 2.5 km east southeast of the village of Shilbottle and some 8 km from Alnwick. As well as being highly acidic, the leachate had concentrations of iron, manganese and aluminium that were among the highest ever recorded for a mine or spoil discharge in the UK. The Tylaw Burn runs approximately north-south along the western flank of the tip. It enters the River Coquet approximately 2 km to the south-east of the spoil heap. As well as being highly acidic, the leachate from Shilbottle spoil heap had concentrations of iron, manganese and aluminium that were among the highest ever recorded for a mine or spoil discharge in the UK (https://www.claire.co.uk/component/phocadownload/category/19-technology-demonstration-project-reports?download=112:passive-treatment-of-severely-contaminated-collery-spoil-leachate-using-a-permeable-reactive-barrier). https://www.google.pl/maps/@55.3635543,-1.6562271,3a,75y,0.77t/data=!3m1!1e3!1s0G-LwzFlwWShvAGuk8QJ2e071163848181927entyytu
Welch Whittle	UK	Chorley District	coal	spoil heap				low	354300	413500	Local authority: Chorley District, Welch Whittle woodlands are available for quiet recreation. The trees were planted on the site of a former colliery and spoil heap in the 1970's, and footpaths run through the site. (https://www.lancashire.gov.uk/leisure-and-culture/countryside/public-open-spaces-and-community-woodlands/welch-whittle-chorley/)
Spenn Lane	UK	Gateshead District	coal	coal dump		intermediate, fire hazard	high degree	fire hazard	413926	561733	Local authority: Gateshead District, The buried coal, considered unsellable, was dumped there when the nearby Greenside mine was sunk at the beginning of the last century, according to local villagers. (https://www.chroniclive.co.uk/news/north-east-news/blazing-row-over-danger-fire-1688840)
Dodworth Colliery Tip	UK	Barnsley District	coal	spoil heap				high degree, reclaimed, capped	431290	406250	Local authority: Barnsley District, The spoil tip area was acquired by Barnsley Metropolitan Borough Council in the early 1990s and limited remediation works were implemented during 1993/1994. This included capping the spoil, to limit water ingress, and the development of settling lagoons and reedbeds to treat run-off water. An extension of reedbed planting, plus the construction of a limestone pit, took place during the summer of 1996. The remediation of any contaminated water that drains to the surface, where it is channelled to the series of settling lagoons and reedbeds, has been successful, as mobile metals are precipitated and the acidity is therefore reduced. (https://www.imwa.info/docs/imwa_2005/IMWA2005_088_Go22ard.pdf)

Figure 5. Part of the inventory of mine waste dumps in UK

4.6. Belgium (the Walloon Region)

The data were collected from Géoportail de la Wallonie (<https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html>). The Walloon Region, also known simply as Wallonia, is one of the three main regions of Belgium, the other two being the Flemish Region (Flanders) and the Brussels-Capital Region. Wallonia occupies the southern part of Belgium. The data provided on the website was prepared in response to the Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and amending Directive 2004/35/EC. According to Article 20. 2006/21/EC “Member States shall ensure that an inventory of closed waste facilities, including abandoned waste facilities, located on their territory which cause serious negative environmental impacts or have the potential of becoming in the medium or short term a serious threat to human health or the environment is drawn up and periodically updated. Such an inventory, to be made available to the public (...)”.

The series of data locates the waste management installations from extractive industries and associates the related risk. In this area, there are no associated risks of the objects related to iron and metal mining. However the risks linked to coal mine



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waste dumps have been the subject of a specific study and are mentioned in the database. Two threats related to the presence of objects have been identified: the loss of geotechnical stability and the combustion of waste. A coding has been adopted to characterize the level of risk of each site:

- Risk category 1. The waste management facility does not pose a threat to human health or the environment.
- Risk category 2. The waste management facility poses one or more specific risks. The facilities at risk are not located nearby.
- Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby.

Based on this publicly available data, the inventory of H2GEO project was supplemented with 277 records containing data on the name of the object, its location, risk category and precise location coordinates. The inventory is dated 2013.

Name	Country	City	Raw material	Type	Volume	Degree of activity	Degree of reclamation	Risk to the environment	Coordinates X	Coordinates Y	Other (notes)
Belle Vue	Belgium	Liege						Yes. Possible targets are in the surrounding area.	5.61480941227049	50.65853652	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Vieille Marihaye	Belgium	Seraing						No	5.49602174851057	50.6009578619829	Risk category 2. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bonne Espérance et Bonne Fortune	Belgium	Liege						Yes. Possible targets are in the surrounding area.	5.5058456395167	50.65130028704	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Espérance 3	Belgium	Grace-Hollogne						Yes. Possible targets are in the surrounding area.	5.52658495075169	50.6414634159556	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège des Artistes	Belgium	Fiemalle						No	5.47752604767907	50.6120963917478	Risk category 3. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Baldaz	Belgium	Fiemalle						No	5.4544751202865	50.60916289678	Risk category 3. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Champs d'Oiseaux	Belgium	Fiemalle						No	5.47056069017706	50.6190688608131	Risk category 2. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Xhone	Belgium	Fiemalle						Yes. Possible targets are in the surrounding area.	5.47232112865905	50.603921891758	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Makets Ancien	Belgium	Fiemalle						Yes. Possible targets are in the surrounding area.	5.48826834337055	50.6229999169689	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Murebure	Belgium	Saint-Nicolas						No	5.51658861720871	50.6345291775662	Risk category 3. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Gosson 2	Belgium	Seraing						Yes. Possible targets are in the surrounding area.	5.51024537597181	50.626397156944	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Horloz	Belgium	Seraing						Yes. Possible targets are in the surrounding area.	5.52324724431979	50.622929205405	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Charbonnages de La Meuse	Belgium	Villers-le-Bouillet						No	5.27387213398472	50.5629563498129	Risk category 3. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bois des Moines	Belgium	Fiemalle						No	5.42527733084453	50.5991749877765	Risk category 3. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Terril sur le Bar	Belgium	Fiemalle						Yes. Possible targets are in the surrounding area.	5.47608719214338	50.590631607015	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
20 des Produits	Belgium	Quaregnon						No	3.8776661906737	50.4345566432374	Risk category 3. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
20 des Produits	Belgium	Quaregnon						No	3.87573902732629	50.4334086632139	Risk category 2. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Figure 6. Part of the inventory of mine waste dumps in Belgium (the Walloon Region)



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Deliverable 2.1 Rank of dumps as regards their use in jig beneficiation process and hazards to environment and man

4.7. Romania

The data were collected from:

[1] RAPORT: Inventory and visual inspection of waste heaps of settling ponds from the territory of Romania (in Romanian), August 2017,

[2] Anex 1: INVENTORY OF MINING WASTE DEPOSITS RELATING TO MINING OBJECTIVES AS OF JULY 2012 (in Romanian).

On September 12, 2017 the number of inventoried dumps is 1101, of which 994 are mining targets. The number of counties with industrial waste deposits is 29, respectively: Alba, Arad, Arges, Bacau, Bihor, Bistrita Nasaud, Brasov, Buzau, Caras Severin, Cluj, Constanta, Covasna, Dambovita, Dolj, Galati, Gorj, Harghita, Hunedoara, Maramures, Mehedinti, Mures, Neamt, Prahova, Salaj, Satu Mare, Suceava, Timis, Tulcea, Valcea [1].

Romania is the country with the highest percentage of waste resulting from the extractive industry, over 85% of the total (the average in Europe is about 25%), which comes from historical mining. At the moment of September 12, 2017, it is observed the need to continue the inventory and inspection activities, with the stage of verifying the data and obtaining additional information. All the aspects reported in the county reports will be taken into account and taking into account the good practices and European requirements in the field, the national inventory will be revised by preparing a database useful to all the authorities that make legislative proposals, inspection and control, regulatory or territorial planning [1].

Institutions responsible for receiving the funding necessary for safety and remediation will be established for the objectives where special phenomena have occurred.

627 dumps were inventoried in the document [2]. The largest dump is the *Halda exterioara Rosia* located in Cariera Rosia (surface 474 ha and volume 244.3 million m³). The total area of the inventoried dumps is 3,437 ha and the total volume is 874 million m³. The median of these values is respectively 0.6 ha and 20 thousand m³. Dumps with a volume exceeding 100,000 m³ constitute 25% of the inventoried objects [2].



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Based on this data, the inventory of H2GEO project was supplemented with 159 records containing data on the name of the object, its location and volume and surface.

Country	City	Raw material	Type	Volume [m ³]	Degree of activity	Degree of reclamation	Risk to the environment	Coordinates X	Coordinates Y	Other (notes) (surface [ha])
Romania	Cartera Roeia			244 300 000			The stored waste is under the influence of the wind			473.6
Romania	Cartera Lupoia			156 000 000			The stored waste is under the influence of the wind			469
Romania	Cartera Peșteana Nord			59 200 000			The stored waste is under the influence of the wind			162.4
Romania	Cartera Panga			50 600 000			The stored waste is under the influence of the wind			130.4
Romania	Cartera Roeiuja			46 000 000			The stored waste is under the influence of the wind			125
Romania	Cariera Urdari			38 700 000			The stored waste is under the influence of the wind			90.3
Romania	Calimani			20 312 000			The stored waste is under the influence of the wind			55.6
Romania	Cariera Urdari			20 000 000			The stored waste is under the influence of the wind			52.3
Romania	Cariera Berbești Vest			18 800 000			The stored waste is under the influence of the wind			169.2
Romania	E.M. CSpeni			16 068 000			The stored waste is under the influence of the wind			90.05
Romania	Cartera Lupoia			14 000 000			The stored waste is under the influence of the wind			22.65
Romania	Cariera Berbești Vest			11 500 000			The stored waste is under the influence of the wind			80.1
Romania	Cartera de banatite			9 425 000			The stored waste is under the influence of the wind			16.5
Romania	Calimani			8 964 000			The stored waste is under the influence of the wind			23.3
Romania	Cartera de banatite			8 616 000			The stored waste is under the influence of the wind			23.2

Figure 7. Part of the inventory of mine waste dumps in Romania

4.8. Poland

The report was prepared on the basis of Marshal's Office databases, GIG OPI TPP database (<https://opi-tp2.pl/>) HALDEX SA's own materials based on interviews collected during visits to hard coal mines: Polish Mining Group PGG, Jastrzębska Coal Company JSW SA and Mine Restructuring Company SRK.. On this basis, a list of post-mining waste landfills in Poland was prepared. As a result, the H2GEO project inventory was supplemented with 84 records. Inventory entries contain information about the name of the facility, its location, its volume, degree of reclamation, environmental risk and location coordinates. There are 8 active mining waste landfills in Poland where mining waste is still collected. 41 landfills were fully or partially reclaimed. The remaining areas require development or recultivation. There is a thermal and fire hazard at 7 post-mining landfills resulting from the presence of coal in the collected waste material.



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Deliverable 2.1 Rank of dumps as regards their use in jig beneficiation process and hazards to environment and man

A	B	C	D	E	F	G	H	I	J	K	L
Name	Country	City	Raw material	Type	Volume	Degree of activity	Degree of reclamation	Risk to the environment	Coordinates X	Coordinates Y	Other (notes)
1 Reclamation area „A“	PL	Piekary Śląskie	post-mining waste from hard coal mining	dump	10,6 ha				276891	496174	
2 po KWK Andalużia B1-A area after Bobrek-	PL	Bytom	post-mining waste from hard coal mining	dump	2,36 ha		partially	water contamination, dust formation	276571	491699	the area is partially covered with vegetation
3 Miechowice Mine sedimentation tank nr 7 a hard coal mine Bobrek-	PL	Bytom	post-mining waste from hard coal mining	mine sedimentation tank	2,96 ha		0%	water contamination, dust formation	274682	489463	area of the mine sedimentation tank nr 7 , mine shaft at Barbara, a hard coal mine Bobrek-Miechowice, area subject to reclamation
4 Miechowice Cones at the mine shaft Antoni after a hard coal mine Bobrek-	PL	Bytom	post-mining waste from hard coal mining	dump	4,4 ha		In progress	water contamination, dust formation	275458	490025	Cones at the mine shaft Antoni and Zbigniew a hard coal mine Bobrek-Miechowice, currently undergoing demolition
5 Miechowice Area F-1 a hard coal mine Bobrek-	PL	Bytom	post-mining waste from hard coal mining	dump	7 ha		100%	water contamination	276287	487343	degraded forest areas, reclamation carried out using mining waste
6 Miechowice Mine dump no. 3 traffic Bobrek after a hard coal mine Bobrek-	PL	Bytom	post-mining waste from hard coal mining	dump	10,1 ha		0%	water contamination, dust formation	277394	491815	a dump of post-mining waste, the area has not been reclaimed or developed
7 Miechowice Area after the mine sedimentation tank WS-23 after a hard coal mine Bobrek-	PL	Bytom	post-mining waste from hard coal mining	dump			100%	water contamination	275999	489221	area was reclaimed using mining waste
8 Miechowice Mine dump 98p after a hard coal mine	PL	Bytom	post-mining waste from hard coal mining	dump	8 ha		In progress	water contamination, fire, dusting	278172	493132	area at risk of fire during reclamation
9 Powstańców Śląskich Mine dump 4a after a hard coal mine	PL	Bytom	post-mining waste from hard coal mining	dump	11,60 ha		In progress	water contamination, fire, dusting	278316	493297	area at risk of fire during reclamation
10 Powstańców Śląskich Mine dump Trójką Piekarski after a hard coal mine Rozbark	PL	Piekary Śląskie	post-mining waste from hard coal mining	dump	8 ha		partially	water contamination, dust formation	276716	497048	partially reclaimed area,
11 Miechowice Mine dump Trójką Bytomski after a hard coal mine Rozbark	PL	Bytom	post-mining waste from hard coal mining	dump	19 ha		0%	water contamination, dust formation	276383	497203	unreclaimed area

Figure 8. Part of the inventory of mine waste dumps in Poland

5. Summary and conclusion

European country	Number of records	Main source of data
Czech Republic	86	https://mapy.geology.cz/inventarizace_uloznych_mist/#
France	33	RFCS SUMAD project "Sustainable Use of Mining Waste Dumps".
Germany	90	https://de.wikipedia.org/wiki/Liste_von_Halden_im_Ruhrgebiet
Spain	126	National inventory of tailings and mixed-type structures (https://www.arcgis.com/apps/mapviewer/index.html?webmap=db29c99ea79b41529243c36636730d34).
UK	9	Inventory of Closed Mining Waste Facilities by Environment Agency (https://environment.data.gov.uk/explore/65ef1430-d465-11e4-96c6-f0def148f590?download=true)
Belgium	277	Géoportail de la Wallonie (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Romania	159	[1] RAPORT: Inventory and visual inspection awaste heaps of settling ponds from the territory of Romania (in Romanian), August 2017, [2] Anex 1: INVENTORY OF MINING WASTE DEPOSITS RELATING TO MINING OBJECTIVES AS OF JULY 2012 (in Romanian).
Poland	84	Marshal's Office databases, GIG OPI TPP database (https://opi-tpp2.pl/) HALDEX SA's own materials based on interviews collected during visits to hard coal mines: Polish Mining Group PGG, Jastrzębska Coal Company JSW SA and Mine Restructuring Company SRK.

Annex 1. The inventory of mine waste dumps in the Czech Republic

Name	Czech Republic/Region	City	Raw material	Type	Volume	Degree of activity	Degree of reclamation	Risk to the environment	Coordinates X	Coordinates Y	Other (notes)
Odvál jámy František 2	Pilsen Region	Kbelany	black coal	dump	118 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1069700	840655	
Radnice - Pokrok	Pilsen Region	Radnice	black coal	dump	1 080 000	inactive	Not reclaimed – vegetation cover by natural woody plants	A significant refuge for plants or animals in an intensively managed landscape	1061300	804600	
Radnice - Pokrok II	Pilsen Region	Radnice	black coal	dump	140 000	inactive	Not reclaimed – vegetation cover by natural woody plants	A significant refuge for plants or animals in an intensively managed landscape	1061360	804770	
Halda jámy Dobré Štěstí - těžní	Pilsen Region	Dobřany	black coal	dump	200 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1076093.6502	828832.8806	
Halda dolu Nové Dobré Štěstí (Hugo)	Pilsen Region	Dobřany	black coal	dump	350 000	inactive	Not reclaimed – without vegetation cover	Insignificant in terms of environmental protection	1076950	829100	
Halda dolu Krimich II	Pilsen Region	Tlučná	black coal	dump	3 530 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1070003.0004	832612.0015	
Nýřany - důl Krimich	Pilsen Region	Nýřany	black coal	dump	580 937	inactive	Not reclaimed – without vegetation cover	Insignificant in terms of environmental protection	1071010	834800	
Valcha - Hilfschacht 1	Pilsen Region	Valcha	black coal	dump	102 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1073470	828275	
Vstíř - Bayarův důl	Pilsen Region	Vstíř	black coal	dump	377 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1080700	833570	
Halda dolu David	Pilsen Region	Vejevanov	black coal	dump	250 000	inactive	Not reclaimed – vegetation cover by natural woody plants	A significant refuge for plants or animals in an intensively managed landscape	1059840.9842	801184.0775	
Haldy dolu Pokrok - Ovčín	Pilsen Region	Pokrok - Ovčín	black coal	dump	500 000	inactive	Reclaimed biologically - forestry	A significant refuge for plants or animals in an intensively managed landscape	1061977	804753	
Halda dolu Pokrok	Pilsen Region	Chomle	black coal	dump	150 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1059836	801539	
Halda dolu Masaryk	Pilsen Region	Týnec	black coal	dump	1 347 000	inactive	Not reclaimed – without vegetation cover	Insignificant in terms of environmental protection	1076100	835300	
Halda dolu Obránců Míru (Pokrok, Austria)	Pilsen Region	Zbůch	black coal	dump	2 989 000	inactive	Not reclaimed – without vegetation cover	Insignificant in terms of environmental protection	1074656.7236	833711.9777	
Haldy dolů Prokop I. - III.	Pilsen Region	Pankrác	black coal	dump	105 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1069617.3553	834787.7968	
Vytuň - U dubu	Pilsen Region	Vytuň	black coal	dump	156 000	inactive	Not reclaimed – vegetation cover by natural woody plants	A significant refuge for plants or animals in an intensively managed landscape	1087879.3608	842244.2436	
Barbora - Kristián	Pilsen Region	Vranovice	black coal	dump	214 200	inactive	Reclaimed biologically - other use	A significant refuge for plants or animals in an intensively managed landscape	1060677	807522	
Strojní šachta Josef (1)	Hradec Králové Region	Červený Kostelec	black coal	dump	150 000	inactive	Reclaimed biologically - forestry	A significant refuge for plants or animals in an intensively managed landscape	1012891	617060	
Důl Celestýn II	Hradec Králové Region	Chvaleč	black coal	dump	339 000	inactive	Not reclaimed – without vegetation cover	Insignificant in terms of environmental protection	1002761	621855	
Jáma Kateřina II	Hradec Králové Region	Radvanice	black coal	dump	346 000	inactive	Not reclaimed – without vegetation cover	Insignificant in terms of environmental protection	1003974	620408	
Důl Kateřina I (Stachanov)	Hradec Králové Region	Radvanice v Čechách	black coal	dump	2 330 000	inactive	Not reclaimed – without vegetation cover	Insignificant in terms of environmental protection	1005446.7	619981	
Důl Pětiletka (U buku, děd. št. Xaver)	Hradec Králové Region	Velké Svatoňovice	black coal	dump	164 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1006691	623209	
Tmavý důl (Zdeněk Nejedlý II)	Hradec Králové Region	Rtyně v Podkrkonoší	black coal	dump	162 000	inactive	Not reclaimed – other surfaces	Insignificant in terms of environmental protection	1009674	617682	
Důl Kolektiv (Větrní šachta, Chlívěcký důl)	Hradec Králové Region	Rtyně v Podkrkonoší	black coal	dump	250 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1011125	617580	
Důl Jiří	Hradec Králové Region	Žacléř	black coal	dump	165 000	inactive	Reclaimed biologically – agriculturally	Insignificant in terms of environmental protection	992620	628885	
Šachta Eliška, horní halda (prohořelá)	Hradec Králové Region	Žacléř	black coal	dump	119 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	991875	628620	
Důl Jan Šverma, centrální odval	Hradec Králové Region	Lampertice	black coal	dump	4 320 000	inactive	Reclaimed biologically – agriculturally	Insignificant in terms of environmental protection	992650	628001	
Důl Jan Šverma, škvárová halda	Hradec Králové Region	Lampertice	black coal	dump	550 000	inactive	Not reclaimed – without vegetation cover	Insignificant in terms of environmental protection	992668	628420	
Důl Zdeněk Nejedlý (dědičná štola Ida)	Hradec Králové Region	Rtyně v Podkrkonoší	black coal	dump	5 000 000	inactive	Reclaimed biologically - forestry	Insignificant in terms of environmental protection	1009910	620600	
Důl Lužná	Central Bohemian	Lužná	black coal	dump	120 000	inactive	Reclaimed biologically - other use	Insignificant in terms of environmental protection	1032998	788836	
František Josef	Central Bohemian	Lhota pod Džbánem	black coal	dump	180 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1021651.5265	790028.8709	
Důl Perun III	Central Bohemian	Hředle	black coal	dump	200 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1023437	789569	
Důl Eva	Central Bohemian	Mutěšovice	black coal	dump	150 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1021673	791964	
Důl ČSA elektrárna	Central Bohemian	Rynholec	black coal	dump	135 000	inactive	Not reclaimed – without vegetation cover	Insignificant in terms of environmental protection	1032152	776189	
Důl ČSA (dříve Anna)	Central Bohemian	Rynholec	black coal	dump	200 000	inactive	Not reclaimed – without vegetation cover	Insignificant in terms of environmental protection	1032450	775800	
Jiřina	Central Bohemian	Libovice	black coal	dump	140 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1022286.9141	768794.0237	
Jindřich	Central Bohemian	Jedoměřice	black coal	dump	115 200	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1022062	771945	
Tuchlovice (důl Jaroslav, Tuchlowitz, Nosek)	Central Bohemian	Tuchlovice	black coal	dump	5 500 000	inactive	Only up to the level of technical reclamation, remediation	Insignificant in terms of environmental protection	1034725	772551	
Důl Wanicek (gen. Svoboda, Nejedlý II)	Central Bohemian	Srby	black coal	dump	120 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1033850	769820	
Důl Kladno (starý odval u sv. Jiří)	Central Bohemian	Libušín	black coal	dump	2 150 000	inactive	Not reclaimed – without vegetation cover	Insignificant in terms of environmental protection	1030783	768823	
Důl Kladno (odval V Němcích)	Central Bohemian	Libušín	black coal	dump	5 500 000	inactive	Reclaimed biologically - other use	Insignificant in terms of environmental protection	1030311	769012	
Max (Gottwald I)	Central Bohemian	Libušín	black coal	dump	3 000 000	inactive	Not reclaimed – vegetation cover formed by grasses, shrubs	Insignificant in terms of environmental protection	1031518	767323	
Jan I+II	Central Bohemian	Libušín	black coal	dump	1 000 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1030280	767001	
Důl Slaný	Central Bohemian	Slaný	black coal	dump	500 000	inactive	Reclaimed biologically – agriculturally	Insignificant in terms of environmental protection	1022084	763757	
Prokop	Central Bohemian	Kladno	black coal	dump	380 000	inactive	Not reclaimed – other surfaces	Insignificant in terms of environmental protection	1031958	762416	
Mayrau-Robert (Gottwald II, Fierlinger I)	Central Bohemian	Vinařice	black coal	dump	2 100 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1031269	765589	
Engert	Central Bohemian	Kladno (místní část Ostrovec)	black coal	dump	400 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1032655	765215	
Amálie	Central Bohemian	Kladno	black coal	dump	240 000	inactive	Not reclaimed – other surfaces	Insignificant in terms of environmental protection	1033933	764525	
Ferdinand (Ferdinand I+II, Zápotocký)	Central Bohemian	Cvrčkovice	black coal	dump	560 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1030389	761148	
Ronna (Gottwald III)	Central Bohemian	Kladno	black coal	dump	2 100 000	inactive	Only up to the level of technical reclamation, remediation	Insignificant in terms of environmental protection	1030135	763002	
Prago (Tragy, Zápotocký I+III)	Central Bohemian	Kladno	black coal	dump	700 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1031431.971	762441.0491	
Teplák (Zápotocký IV)	Central Bohemian	Kladno	black coal	dump	280 000	inactive	Not reclaimed – vegetation cover formed by grasses, shrubs	Insignificant in terms of environmental protection	1031476	759824	
Bohumír	Central Bohemian	Kladno	black coal	dump	200 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1031483	760193	
Felix-Jan	Central Bohemian	Otvovice	black coal	dump	140 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1028306	752517	
Odvál Koblov	Moravian-Silesian Region	Koblov	black coal	dump	1 445 000	inactive	Not reclaimed – vegetation cover formed by grasses, shrubs	A significant refuge for plants or animals in an intensively managed landscape	1096481.92	469344.09	
Odvál Eduard Urx	Moravian-Silesian Region	Petřkovice u Ostravy	black coal	dump	2 400 000	inactive	Not reclaimed – vegetation cover by natural woody plants	A significant refuge for plants or animals in an intensively managed landscape	1098134.32	471680.89	
Odvál Heřmanice	Moravian-Silesian Region	Hrušov, Urbice, Heřmanice	black coal	dump	18 785 000	inactive	Not reclaimed – vegetation cover by natural woody plants	A significant refuge for plants or animals in an intensively managed landscape	1098089.72	468219.77	
Odvál Rychvald	Moravian-Silesian Region	Rychvald	black coal	dump	720 000	inactive	Reclaimed biologically - other use	A significant refuge for plants or animals in an intensively managed landscape	1097806.3	465453.08	
Odvál Starý Václav	Moravian-Silesian Region	Poruba u Orlové	black coal	dump	402 000	inactive	Only up to the level of technical reclamation, remediation	A significant refuge for plants or animals in an intensively managed landscape	1100495.93	461635.3	
Odvál Evžen	Moravian-Silesian Region	Petřvald u Karviné	black coal	dump	180 000	inactive	Not reclaimed – vegetation cover by natural woody plants	A significant refuge for plants or animals in an intensively managed landscape	1101569.24	462258.23	
Odvál Hedvíka	Moravian-Silesian Region	Radvanice, Petřvald u Karviné	black coal	dump	4 872 000	inactive	Reclaimed biologically - other use	A significant refuge for plants or animals in an intensively managed landscape	1102909.56	465143.46	
Odvál Ema	Moravian-Silesian Region	Slezská Ostrava	black coal	dump	2 556 000	inactive	Reclaimed biologically - forestry	A significant refuge for plants or animals in an intensively managed landscape	1101234.63	468291.56	
Odvál Jermenko	Moravian-Silesian Region	Kunčice nad Ostravicí	black coal	dump	425 000	inactive	Not reclaimed – vegetation cover by natural woody plants	A significant refuge for plants or animals in an intensively managed landscape	1105928.41	470861.89	
Odkaliště Paskov, NP1	Moravian-Silesian Region	Paskov, Hrabová	black coal	tailings pond	810 000	inactive	Not reclaimed - sludge without vegetation cover (applies only to tailings)	A significant refuge for plants or animals in an intensively managed landscape	1111434.98	471421.01	
Odvál Hedvíka	Moravian-Silesian Region	Radvanice	black coal	dump	3 100 000	inactive	Reclaimed biologically - forestry	Insignificant in terms of environmental protection	1102833	464829	
Odvál D1	Moravian-Silesian Region	Paskov, Hrabová	black coal	dump	998 000	inactive	Reclaimed biologically - other use	Insignificant in terms of environmental protection			
Odvál D2	Moravian-Silesian Region	Paskov, Hrabová	black coal	dump	900 000	inactive	Reclaimed biologically - forestry	Insignificant in terms of environmental protection			
Pilík 3	Moravian-Silesian Region	Paskov, Hrabová	black coal	tailings pond	655 000	inactive	Reclaimed biologically - forestry	Insignificant in terms of environmental protection			Operated mining waste storage site
Odvál Jeremenko	Moravian-Silesian Region	Kunčice nad Ostravicí	black coal	dump	3 600 000	inactive	Reclaimed biologically - other use	Insignificant in terms of environmental protection	1105667		
Pilňok	Moravian-Silesian Region	Karviná-Doly	black coal	tailings pond	278 900	inactive	Reclaimed -water area	Insignificant in terms of environmental protection	18.51155475E	49.8293469N	Operated mining waste storage site
Pohraniční kolonie	Moravian-Silesian Region	Karviná-Doly	black coal	tailings pond	612 000	inactive	Reclamation in preparation - other use	Insignificant in terms of environmental protection	18.84782344E	49.8486383N	Operated mining waste storage site
Odvál D	Moravian-Silesian Region	Řepiště	black coal	dump	11 840 000	active	Complete reclamation is not completed	Insignificant in terms of environmental protection	18.3021367E	49.7456419N	Operated mining waste storage site
Odvál Staříč II	Moravian-Silesian Region	Staříč	black coal	dump	664 700	inactive	Reclaimed biologically - forestry	Insignificant in terms of environmental protection	18.2379653E	49.7037533N	Operated mining waste storage site
Odvál ČSA, Jan Karel	Moravian-Silesian Region	Karviná-Doly	black coal	dump	3 476 000	active	Serves operational purposes	Insignificant in terms of environmental protection	18.4994775E	49.8477461N	OKD, a.s.
Odvál Strážnice	Moravian-Silesian Region	Staříč	black coal	dump	820 000	active	Complete reclamation is not completed	Insignificant in terms of environmental protection			OKD, a.s.
Odkaliště BC	Moravian-Silesian Region	Louky, Karviná, Stonávka	black coal	tailings pond	1 000 000	active	Filling and extraction	Insignificant in terms of environmental protection			OKD, a.s.
Odkaliště H1	Moravian-Silesian Region	Louky, Karviná, Stonávka	black coal	tailings pond	600 000	active	Anticipated subsequent mining	Insignificant in terms of environmental protection	18.3342818E	49.4917980N	OKD, a.s.
Odkaliště H2	Moravian-Silesian Region	Louky, Karviná, Stonávka	black coal	tailings pond	1 385 000	active	Anticipated subsequent mining	Insignificant in terms of environmental protection	18.5653483E	49.8212803N	OKD, a.s.
Odkaliště G	Moravian-Silesian Region	Louky, Karviná, Stonávka	black coal	tailings pond	1 800 000	active	Flotation tailings mining	Insignificant in terms of environmental protection			OKD, a.s.
Lidice	Moravian-Silesian Region	Lhotka u Ostravy	black coal	dump	3 000 000	inactive	Reclaimed biologically - forestry	It is characterized by the presence of rare flora	1098195	473699	
Zastávka 6 - Julius	South Moravian Region	Zastávka	black coal	dump	334 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1159450	615900	
Babice u Rosic - Ferdinand	South Moravian Region	Babice u Rosic	black coal	dump	630 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1160325	616725	
Zbýšov 1	South Moravian Region	Zbýšov u Oslavan	black coal	dump	3 300 000	inactive	Not reclaimed – vegetation cover by natural woody plants	A significant refuge for plants or animals in an intensively managed landscape	1162413	616865	
Zbýšov 3 - Anenská	South Moravian Region	Zbýšov u Oslavan	black coal	dump	118 000	inactive	Not reclaimed – vegetation cover by natural woody plants	Insignificant in terms of environmental protection	1163918	617609	
Oslavany - Kukla	South Moravian Region	Oslavany - Kukla	black coal	dump	443 737	inactive	Reclaimed biologically - forestry	null	1166016.22	618324.18	

Annex 2. The inventory of mine waste dumps in France

Name	Country	City	Volume	Coordinates X	Coordinates Y	Other (notes)
Bruay Nord	France	Divion	7 193 333	50.46667	2.50000	The Bruay Nord dump, located in Divion, is one of four dumps at the Bruay mines. Before exploitation, the heap was one of the highest in the mining area, being 130 meters high. Only the base with an area of 16.9 ha remains. Operations ceased shortly before 2010. Geometry -Conical
Bruay Est	France	Haillicourt	4 000 000	50.47481	2.58466	The Bruay Est heap, located in Ruitz, is one of two conical heaps of the Bruay mine, located in Haillicourt, and one of three heaps located at this mine. It has never been exploited and is one of the most famous slag dumps in the mining area. It is 100 meters high and covers an area of 12 hectares..Geometry -Conical
Bruay Ouest	France	Ruitz	4 000 000	50.46667	2.58333	The Bruay Ouest dump, located in Ruitz, is one of the two conical dumps of the Bruay mine and one of three dumps located at the mine. It has never been exploited and is one of the most famous dumps in the mining area. Geometry -Conical
Auchel Est	France	Marles-Les-Mines	3 805 333	50.50190	2.49903	The Auchel Est dump, located in Marles-les-Mines, is one of the two conical dumps of the Marles mine. Originally 80 meters high and covering an area of 14.27 ha, it is currently open. Geometry -Conical
Lapugnoy	France	Lapugnoy	2 870 000	50.51670	2.53330	The Lapugnoy heap, located in Lapugnoy, is a former conical (or truncated) heap belonging to the Compagnie des mines de Marles, which was mined. It is located north of the Bois de Lapugnoy. Initially, it was 60 meters high and covered an area of 14.35 ha. Geometry -Conical
Bois de Lapugnoy	France	Bruay-la-Buissière	702 167	50.48330	2.55000	The Bois de Lapugnoy heap, located in Bruay-la-Buissière, is a heap that is not exploited but used as the permanent home of the Bruay Secondary School of Public Works. It is located south of the Lapugnoy Forest. It is located near pit 2 of the Bruay mine. It is eleven meters high and covers an area of 19.15 ha and is owned by the Ministry of National Education. Geometry -Conical
6 de Bruay	France	Haillicourt	395 267	50.47481	2.58466	6 de Bruay (garbage dump), located in Haillicourt, is one of three slag dumps in the Bruay mine workings. It is eleven meters high, flat, covers an area of 10.78 ha and is entirely forested.Geometry -Conical
ter Auchel	France	Auchel	540 800	50.50000	2.46670	The ter Auchel Heap and Mud Pond, located at Auchel and Marles-les-Mines, is a straddle heap assigned to the ter Marles mine. Originally thirteen meters high and covering an area of 12.48 hectares, it was exploited. Geometry -Conical
Bruay Ouest	France	Haillicourt	2 190 000	50.47481	2.58466	The Heap de Bruay Ouest, located at Haillicourt, is the conical heap of the Bruay mine. It is not exploited, although a spiral road was built to its top. It is 73 meters high and covers an area of nine hectares. A vine was planted on its top. Geometry -Conical
Bruay Ouest	France	Bruay-la-Buissière	3 060 000	50.48330	2.55000	The Bruay Ouest heap, located in Bruay-la-Buissière, is a 90-meter-high conical heap resulting from the exploitation of the Bruay mines. It covers an area of over 10.2 ha. Geometry -Conical
Bruay Est	France	Bruay-la-Buissière		50.48330	2.55000	Heap de Bruay Est, located in Bruay-la-Buissière, which is one of the two heaps of the Bruay mine. It was a small flat heap, earlier than the conical heap, and covering an area of over 1.09 ha. It has been fully utilized. Geometry - flat
Usines de Labuissière E	France	Bruay-la-Buissière	1 081 200	50.48330	2.55000	The Usines de Labuissière Est dump, located in Bruay-la-Buissière, is one of two Usines de Labuissière dumps included in the Compagnie des mines de Bruay. It has been completely reclaimed. The area is entirely forested. It was flat, 51 meters high and covered an area of 6.36 ha. Geometry -Conical
Usines de Labuissière O	France	Bruay-la-Buissière	1 643 000	50.48330	2.55000	The Usines de Labuissière Ouest dump, located in Bruay-la-Buissière, is one of two Usines de Labuissière dumps included in the Compagnie des mines de Bruay. Although exploited, it stands out even more because it is not wooded, but surrounded by forest. Its original height was 62 meters and it covered an area of 7.95 ha. Geometry -Conical
Auchel Est	France	Lozingshem	1 992 000	50.51670	2.50000	The Auchel Est dump, located in Lozingshem, was fed by the Marles mine, opened on the Auchel site. It was a conical heap with a height of 83 meters, which was exploited, only the base remained on an area of 7.2 ha. Geometry -Conical
5 d'Auchel	France	Auchel	4 532 000	50.50000	2.46670	The heap 5 d'Auchel, located in the town of Auchel, is a conical heap of the Marles mine. It is 103 meters high and covers an area of 13.2 ha. Geometry -Conical

6 d'Auchel	France	Calonne-Ricouart	3 477 600	50.48957	2.48438	Heap 6 d'Auchel, located in Calonne-Ricouart, is the heap of the Marles mine. Originally, it was a 92-meter-high conical slag heap that was mined. Only the base with an area of 11.34 ha remained. Its explosion in 1975 killed six people in a neighboring city. Geometry -Conical
Ferfay	France	Ferfay		50.50390	2.44537	The Ferfay heap located at Ferfay is a conical heap of the Ferfay mine, currently No. 4 of the Marles mine. Established on an area of 6.15 ha, it has never been exploited and is entirely forested. Geometry - flat
Bruay	France	Bruay-la-Buissière	287 600	50.48330	2.55000	The Bruay heap, located at Bruay-la-Buissière, was fed by the Bruay and other mines. flat, built on an area of 7.19 ha, it was twelve meters high. Geometry - flat
Lillers	France	Divion	356 200	50.46667	2.50000	The Lillers heap, located in Divion, is one of the four heaps of the Bruay mines. It is a flat, partially forested slag heap. Initially, it was thirteen meters high and covered an area of 8.22 ha, and was exploited. Geometry - flat
Ferfay	France	Ferfay		50.50390	2.44537	The Ferfay heap, located in the towns of Ferfay and Auchel, was the heap of the Ferfay mines. Flat, spread over an area of 7.6 ha, fully exploited. Geometry - flat
Rimbert	France	Auchel	2 054 667	50.50000	2.46670	The Rimbert heap, located at Burbure and Auchel, is a slag heap from the Marles mine, located at Auchel. The partially exploited heap stretches from north to south for one kilometer, covers an area of 26.8 ha and reaches a height of 23 meters. Geometry - flat
Ferfay	France	Ames	85 667	50.55000	2.41667	The Ferfay heap, located in Ames, was fed by the Ferfay mine. It is a flat heap, ten meters high, located on an area of 2.57 ha and completely forested. The Ferfay heap, located in Ames, was fed by the Ferfay mine. It is a flat heap, ten meters high, located on an area of 2.57 ha and completely forested. Geometry - flat
Auchel	France	Marles-Les-Mines	1 508 800	50.50190	2.49903	The Auchel heap, located in Marles-les-Mines and Calonne-Ricouart, is the oldest conical heap of the Marles mine. Originally, the height of 82 m was exploited, the base remained on an area of 5.52 ha. Geometry -Conical
Auchel Old West	France	Auchel	3 740 967	50.50000	2.46670	The Auchel Old West dump, located in Auchel, is one of the dumps of the Marles mine. Exploited, only the base remains. It was a conical heap, 89 meters high, covering an area of 12.61 ha. Geometry -Conical
Auchel	France	Auchel	2 167 000	50.50000	2.46670	The Auchel heap located in Auchel, fed by the Marles mine, was a conical heap 66 meters high. It was exploited and only the base with an area of 9.85 ha remained. Geometry -Conical
Falande 1 Sud	France	Haillicourt	434 667	50.47481	2.58466	The Falande 1 Sud heap, located in Haillicourt, is a flat heap 16 meters high, stretching north-south over an area of over 8.15 ha. Geometry - flat
Falande 2 North	France	Haillicourt	431 667	50.47481	2.58466	The Falande 2 North heap, located in Haillicourt and Hesdigneul-lès-Béthune, is a flat heap, 10 meters high, extending north-south over an area of 12.95 ha. Geometry - flat
Labuissière Aviation	France	Bruay-la-Buissière		50.48330	2.55000	The Labuissière Aviation heap, located in Bruay-la-Buissière, is a flat, very large heap, of low height, partly converted into an industrial zone. Geometry - flat
Fouquereuil	France	Fouquereuil		50.51670	2.60000	The Fouquereuil heap is a flat, quite high heap with a triangular terrain surface. Geometry - flat
	France	Gardanne		43.45000	5.46670	Geometry - flat
	France	Gardanne		43.45000	5.46670	Geometry - flat
	France	De Wandel	23 400 000	49.20000	6.83330	Geometry -Conical
	France	Carmaux		44.05000	2.15000	Geometry - flat

Annex 3. The inventory of mine waste dumps in Germany

Name	Country	City	Volume	Coordinates X	Coordinates Y	Other (notes)
Alsum Mountain	Germany	Duisburg	19 200 000	51.497500	6.729444	Well-known location for industrial photography of the Schwelgern coking plant and the ThyssenKrupp steelworks , memorial cross for the former town of Alsum , three viewing plateaus with panoramic panels
Beckstrasse dump	Germany	Bottrop-Batenbrock	91 000 000	51.526944	6.960000	Tetrahedron viewing point with "Fractal" light installation, Direttissima
Bergehalde Zollverein	Germany	Eat		51.484444	7.040556	Zollverein Sculpture Park
Brine dump	Germany	Oberhausen-Alstaden	1 480 000	51.450833	6.834444	actually Alstaden dump
Brinkfortsheide dump	Germany	Marl		51.671111	7.141389	
Brinkfortsheide dump extension	Germany	Marl		51.680278	7.150833	
Brockenscheidt dump	Germany	Waltrop	4 800 000	51.616667	7.421111	Spurwerkurm by Jan Bormann , Stations of the Cross by Paul Reding
Deusenberg	Germany	Dortmund	29 333 333	51.546667	7.418889	Former garbage dump, mountain bike training route, view of the Hansa mine and coking plant
Duererstrasse dump	Germany	Herne		51.520000	7.156944	Heap of the former Pluto 1/4 colliery
Dump monopoly	Germany	Bergkamen	21 866 667	51.628889	7.622500	
Dump Pluto	Germany	Herne	15 960 000	51.535278	7.138611	A mountain dump in the west of the city of Herne that has been converted into a nature reserve, with a viewing platform
Dump Zollverein 1/2	Germany	Eat	2 406 667	51.489722	7.048056	very small, wooded dump right next to Zollverein, not accessible
Dump Zollverein 4/11	Germany	Gelsenkirchen	55 200 000	51.509167	7.058889	Training route for trotters
Eickwinkel dump	Germany	Eat	7 200 000	51.515833	7.028889	
Ellinghausen dump	Germany	Dortmund		51.555833	6.957778	
Ellinghorst dump	Germany	Gladbeck	3 666 667	51.559722	7.426389	former garbage dump, now a nature reserve
Elsa-Brändström-Straße dump	Germany	Lünen	37 950 000	51.588056	7.423056	also called Heap Minister Achenbach I/II, wind turbine
Emscher Lippe dump	Germany	Dates	5 166 667	51.651944	7.353056	
General Blumenthal dump	Germany	Recklinghausen	5 043 333	51.601944	7.210000	
Grevel landfill	Germany	Dortmund	40 800 000	51.568889	7.549722	also called "Greveler Alm",

Groppenbruch dump	Germany	Dortmund	15 200 000	51.591667	7.409722	
Hachenev dump	Germany	Dortmund		51.473333	7.485556	Crone colliery / Glückaufsegen colliery
Halde Am Spörkel	Germany	Dortmund		51.466944	7.422778	Tailings were used to build the Sauerland line
Halde Dorstfeld I/IV	Germany	Dortmund		51.516944	7.411667	
Halde Ewald continued	Germany	Oer-Erkenschwick	29 333 333	51.646111	7.262778	Plateau with seating blocks ("green classroom"), installation on the head of the heap still in planning
Halde Haniel	Germany	Bottrop	468 000 000	51.550278	6.875833	Installation Totems by Agustín Ibarrola , Stations of the Cross by Tisa von derschulenburg , and Amphitheater (Bergarena)
Halde Lohberg North Extension	Germany	Hunxe		51.597222	6.772222	There have been three wind turbines on the heap since 2018,
Halde Neue Suderwicher Alm	Germany	Recklinghausen Suderwich		51.605278	7.253611	Landscape structure, above the object Utkiek an open hall from which there is a far-reaching view
Halde Prosperstrasse	Germany	Bottrop	66 133 333	51.524167	6.966111	Alpincenter Bottrop ski hall with indoor ski hall, "Indoor Skydiving" wind tunnel, climbing garden, summer toboggan run
Halde Radbod East Extension	Germany	Hamm	13 050 000	51.684444	7.758889	
Halde Schleswig	Germany	Dortmund-Neuasseln		51.521389	7.570278	Also called "Asselner Alm", The recultivation has largely been completed, Negotiations regarding the takeover, maintenance and follow-up costs between Thyssen-Krupp and RVR have not yet ended,
Halde Suderwicher Alm	Germany	Recklinghausen Suderwich		51.606944	7.254167	Table mountain dump, 4 terraces, flat at the top
Halde Viktoria 3/4	Germany	Lünen Gahmen	20 500 000	51.588056	7.516111	Bike facilities and an active slope for pedestrians
Halde Viktoria Westhalde	Germany	Lünen	16 750 000	51.611944	7.535278	
Heap 19	Germany	Gladbeck	11 333 333	51.534444	7.000278	Rope pulley, "Braucker Alps"
Heap 22	Germany	Gladbeck	18 400 000	51.541111	6.997778	Nature reserve, "Braucker Alps"
Heap Brassert I/II	Germany	Marl Brassert		51.665833	7.081111	
Heap Brassert III (Lipper-Höhe)	Germany	Marl Brassert	66 420 000	51.680556	7.068611	Summit cross
Heap Constantin	Germany	Herne	933 333	51.522778	7.245833	The dump is integrated into the landscape and was completely overgrown until the last storm (Ela),
Heap gardener's pool	Germany	Dinslaken	50 700 000	51.571667	6.763333	
Heap General Blumenthal 8	Germany	Recklinghausen / Oer-Erkenschwick		51.651944	7.200833	

Heap Graf Moltke	Germany	Gladbeck	6 800 000	51.551111	6.990000	burning heap
Heap in the Hürfeld	Germany	Dorsten		51.654167	7.018889	
Heap Minister Achenbach	Germany	Lünen	23 833 333	51.607500	7.451944	
Heap Northern Germany	Germany	Neukirchen-Vluyn	241 266 667	51.470278	6.566944	Landmark with light installation, work of art hall house , staircase to heaven, mountain arena with thing space, air and trend sports such as paragliding, hang gliding and model flying
Heap of large wood	Germany	Bergkamen	426 800 000	51.624722	7.615556	Still run as a burning dump in 2005, corridor park with viewing platform bastion opened in 2009, Aldener Höhe with light installation "Impuls", blue lighthouses, corridor park, tree and grass plateau, band of perennials, natural arena, wind level
Heap on the banks of the Ruhr	Germany	Oberhausen- Alstaden		51.459167	6.815278	The dump had self-ignited and was removed, now a wetland habitat
Heap Rhine Prussia	Germany	Moers	136 000 000	51.478611	6.650278	Artwork and observation tower illuminated
Heap Werne 1/2	Germany	Werne / Lünen	6 300 000	51.656667	7.644722	
Heap Werne III	Germany	Werne / Bergkamen	4 266 667	51.641667	7.654444	
Heap Wilhelmine Victoria 2/3	Germany	Gelsenkirchen	2 220 000	51.518611	7.053333	
Heinrich-Hildebrand-Höhe	Germany	Duisburg-Angerhausen	16 333 333	51.375833	6.736944	Large sculpture "Tiger & Turtle – Magic Mountain", Angerpark
Hoheward dump	Germany	Herten / Recklinghausen	629 000 000	51.566944	7.166944	Horizon observatory (currently fenced off due to structural damage) and sundial with obelisk, dragon bridge, balcony promenade (6 km) with ten "balconies" with panoramic views of the Ruhr area, mountain bike route
Hoppenbruch dump	Germany	Herten	179 170 000	51.561944	7.153056	Wind turbine, information sculptures on the subject of wind
Humbert dump also called Kissinger Hohe 2	Germany	Hamm	54 466 667	51.657500	7.756111	Landmark in the form of an orange observation tower (motto Halde 5)
Kissinger height	Germany	Hamm	92 000 000	51.658611	7.764722	Landscape structure with a total of three peaks, landmark in the form of an orange observation tower (motto Halde 5), Nordic Walking Park, mining trail
Knappenhalde	Germany	Oberhausen		51.482500	6.878611	Observation tower, highest point in Oberhausen
Kohlenhuck dump	Germany	Moers		51.513333	6.604722	
Königsgrube dump	Germany	Herne	2 666 667	51.509444	7.161944	
Kornharpen central landfill	Germany	Bochum		51.484444	7.269722	Landfill gas is used in the Kornharpen combined heat and power plant , and there is a 2,2 hectare photovoltaic system in the southwest
Lohberg North dump	Germany	Dinslaken	208 250 000	51.588333	6.772222	Wind turbine

Lohmannsheide dump	Germany	Moers		51.476944	6.662222	
Lorraine dump	Germany	Bochum	0	51.519444	7.292778	Artwork About a Place
Marbach landfill	Germany	Bochum	0	51.487500	7.186944	
Mont Cenis dump	Germany	Herne-Sodingen	5 600 000	51.540000	7.255000	Former dump of the Mont Cenis colliery , the material was distributed over the entire colliery site as part of the redesign for leveling, In 1999, the Mont-Cenis Academy, built on the site, was inaugurated, There was also the oval around the academy, a shopping center with shops and apartments as well as several residential buildings, a small settlement with terraced houses and buildings for assisted living, [3]
Mottbruchhalde	Germany	Gladbeck	101 833 333	51.545556	6.993333	
Oberscholven dump	Germany	Gelsenkirchen-Scholven	163 486 667	51.604167	7.014444	Highest dump in the Ruhr area, drinking water tank inside
Pattberg dump	Germany	Moers	91 566 667	51.496389	6.589722	Summit cross, summit plateau with panoramic board
Prussian dump	Germany	Lünen	6 800 000	51.596667	7.538889	
Radbod East dump	Germany	Hamm	30 300 000	51.683333	7.753056	Landmark in the form of an orange observation tower (motto Halde 5)
Rheinbaben dump	Germany	Gladbeck	18 400 000	51.549444	6.959444	today a nature reserve and research object (comparison between spontaneous greening and recultivated dumps)
Rheinelbe dump	Germany	Gelsenkirchen	24 000 000	51.486111	7.111111	Spiral mountain with stairway to heaven , sculpture forest , burning dump
Rockelsberghalde	Germany	Duisburg	17 733 333	51.417778	6.721111	Landscape structure made of slag with gabions
Rossenray dump	Germany	Kamp Lintfort		51.525833	6.567500	
Rungenberg dump	Germany	Gelsenkirchen	164 266 667	51.561944	7.041111	Stairs, light installation night signs , rail plateau
Scholver Feld dump	Germany	Gelsenkirchen-Scholven	62 516 667	51.618333	7.021944	
Schöttelheide dump	Germany	Bottrop	200 100 000	51.560833	6.889167	The heap is currently being renatured and planted, It is not yet accessible to visitors,
Schurenbachhalde	Germany	Eat	95 000 000	51.511944	7.018056	Artwork Bramme for the Ruhr area by Richard Serra
Schwerin dump	Germany	Castrop-Rauxel	22 120 000	51.546111	7.336944	Landmark "Sundial", "Geo Cross", "Water Temple", "Sinus Pergola", highest elevation in Castrop-Rauxel
Slag heap	Germany	Hamm	17 500 000	51.705278	7.816111	8 m high Saxon cross with motif plates, wind pointer, a total of three peaks
Slag heap Franz Nord [2]	Germany	Hamm		51.668333	7.748889	Landmark in the form of an orange observation tower (motto Halde 5), opened in 2016

Stockpile Gotthelf	Germany	Dortmund	10 500 000	51.470833	7.451389	Pointed cone dump with viewing platform
Sundern dump	Germany	Hamm-Pelkum	96 666 667	51.643889	7.740556	Combined power plant consisting of wind power and pumped storage planned [7]
Tettenbachstrasse dump	Germany	Dortmund		51.569722	7.544722	
Tippelsberg	Germany	Bochum	26 666 667	51.506944	7.228056	Hill was also added as a dumping ground for construction and soil rubble; lying stone cross, steel steles with information, artificial footprints "Path of the Giants"
Voßnacken dump	Germany	Herne	6 480 000	51.552222	7.254722	Wetland biotope, nature reserve, not accessible
Wehofen-Ost dump	Germany	Dinslaken		51.539722	6.765833	
Welheimer Mark dump	Germany	Bottrop	7 700 000	51.514444	6.966389	
Wolfsberg	Germany	Duisburg	5 600 000	51.380833	6.803333	Rubble and rubble heap, pointed cone with observation tower
Zollern dump	Germany	Dortmund		51.513611	7.330556	

Annex 4. The inventory of mine waste dumps in Spain

Name	Country	City	Place	Raw material	X coordinate (UTM)	Y coordinate (UTM)	Topographical elevation	Land type	Volume (m3)	ID number
LA MANCHEGA	Spain	PUERTOLLANO	LA MANCHEGA	COAL	402 500,00	4 280 600,00	650	Agricultural	1 100 000,00	3 007
LA MANCHEGA	Spain	PUERTOLLANO	LA MANCHEGA	COAL	402 750,00	4 280 600,00	650	Agricultural	1 700 000,00	3 008
LA MANCHEGA	Spain	PUERTOLLANO	LA MANCHEGA	COAL	402 725,00	4 280 900,00	660	Agricultural	1 200 000,00	3 009
LA MANCHEGA	Spain	PUERTOLLANO	LA MANCHEGA	COAL	402 700,00	4 281 150,00	670	Agricultural	800 000,00	3 010
EL TERRY	Spain	PUERTOLLANO	EL TERRY	COAL	402 100,00	4 282 000,00	690	Agricultural	5 000 000,00	3 011
ESCOMBRERA DE STOCK	Spain	PUERTOLLANO	CN 420	COAL	401 750,00	4 282 000,00	680	Agricultural	120 000,00	3 012
SAN FELIPE NORTE	Spain	PUERTOLLANO	SAN ESTEBAN	COAL	404 750,00	4 281 750,00	670	Agricultural	500 000,00	3 025
SAN FELIPE SUR	Spain	PUERTOLLANO	SAN ESTEBAN	COAL	404 650,00	4 281 600,00	670	Agricultural	450 000,00	3 026
POZO NORTE	Spain	PUERTOLLANO	POZO NORTE	COAL	404 350,00	4 281 525,00	670	Agricultural	400 000,00	3 029
POZO NORTE 2	Spain	PUERTOLLANO	POZO NORTE	COAL	404 400,00	4 281 100,00	670	Agricultural	350 000,00	3 030
VACIE 5	Spain	PUERTOLLANO	MINA EMMA	COAL	397 250,00	4 279 150,00	690	Agricultural	13 000 000,00	3 038
ACOPIO DE TIERRAS	Spain	PUERTOLLANO	MINA EMMA	COAL	397 550,00	4 279 300,00	690	Agricultural	150 000,00	3 039
VACIE INTERIOR	Spain	PUERTOLLANO	MINA EMMA	COAL	398 100,00	4 279 950,00	670	Agricultural	60 000 000,00	3 040
PARQUE PARA LAVAR	Spain	PUERTOLLANO	MINA EMMA	COAL	397 950,00	4 279 700,00	670	Agricultural	120 000,00	3 041
SAN LUIS	Spain	PUERTOLLANO	CHACALO	COAL	401 100,00	4 279 400,00	680	Agricultural	800 000,00	3 043
MARIA ISABEL 2	Spain	PUERTOLLANO	CHAPARRALES	COAL	404 000,00	4 279 400,00	670	Agricultural	2 000 000,00	3 052
LA EXTRANJERA	Spain	PUERTOLLANO	CRUZ PALO	COAL	401 975,00	4 278 900,00	680	Agricultural	1 250 000,00	3 048
STOCK TERMICA	Spain	PUERTOLLANO	CENTRAL	COAL	402 400,00	4 278 725,00	690	Wasteland	150 000,00	3 050
VERTEDERO TERMICA	Spain	PUERTOLLANO	CENTRAL	COAL	403 650,00	4 278 600,00	690	Agricultural	1 100 000,00	3 051
MARIA ISABEL 2	Spain	PUERTOLLANO	CHAPARRALES	COAL	404 000,00	4 279 400,00	670	Agricultural	2 000 000,00	3 052
MARIA ISABEL 1	Spain	PUERTOLLANO	CRUZ PALO	COAL	403 825,00	4 279 300,00	670		2 500 000,00	3 053
LA MANCHEGA	Spain	PUERTOLLANO	LA MANCHEGA	COAL	402 325,00	4 280 325,00	660	Agricultural	1 800 000,00	3 056
CALATRAVA POZO 1	Spain	PUERTOLLANO	CALATRAVA	COAL	405 800,00	4 279 600,00	660	Agricultural	125 000,00	3 069
SELECTO POZO NORTE	Spain	PUERTOLLANO	FERROCARRIL	COAL	404 750,00	4 280 975,00	660	Agricultural	400 000,00	3 032
LAS PARRAS	Spain	PUERTOLLANO	LAS PARRAS	COAL	405 400,00	4 281 100,00	670	Agricultural	180 000,00	3 033
MINA MARIA	Spain	SAN CEBRIAN DE MUDA	SOCABON	COAL	385 900,00	4 749 850,00	1 100,00	Mountain dump	800 000,00	2 728
ESCOMBRERA LAVADERO	Spain	MUDA	TRAS DEL VA	COAL	386 300,00	4 749 400,00	1 020,00	Wasteland	483 000,00	2 730
PE6A BLANCA	Spain	BARRUELO DE SANTULLAN	PERAGIDO	COAL	396 200,00	4 750 200,00	1 100,00	Mountain dump	1 500 000,00	2 733
BOLARADO	Spain	BARRUELO DE SANTULLAN	BARRUELO	COAL	394 750,00	4 750 900,00	1 060,00	Mountain dump	300 000,00	2 734
CIELO ABIERTO	Spain	BARRUELO DE SANTULLAN	M. ALLENDE	COAL	392 100,00	4 753 150,00	1 250,00	Mountain dump	300 000,00	2 724
MINAS DE LA REUNION	Spain	VILLANUEVA DEL RIO Y MINAS	VILLANUEVA	COAL	259 300,00	4 172 700,00	100	Wasteland	1 000 000,00	2 007
MERCEDES	Spain	BARRUELO DE SANTULLAN	POZO CALERO	COAL	392 850,00	4 752 500,00	1 180,00	Mountain dump	250 000,00	2 736
EL HECHAR	Spain	BARRUELO DE SANTULLAN	EL HECHAR	COAL	394 400,00	4 751 800,00	1 100,00	Mountain dump	100 000,00	2 737
EL HECHAR	Spain	BARRUELO DE SANTULLAN	EL HECHAR	COAL	394 150,00	4 752 300,00	1 180,00	Mountain dump	160 000,00	2 738
BOLARADO	Spain	BARRUELO DE SANTULLAN	BARRUELO	COAL	394 900,00	4 751 000,00	1 020,00	Wasteland	222 600,00	2 742
BALARADO	Spain	BARRUELO DE SANTULLAN	BARRUELO	COAL	394 150,00	4 751 300,00	1 060,00	Mountain dump	231 000,00	2 743
PE6A BLANCA	Spain	BARRUELO DE SANTULLAN	PERAGIDO	COAL	396 300,00	4 750 100,00	1 100,00	Mountain dump	280 000,00	2 744
EL CANAL	Spain	BARRUELO DE SANTULLAN	A. ESCOBAR	COAL	396 450,00	4 747 300,00	1 000,00	Mountain dump	180 000,00	2 748
CIELO ABIERTO	Spain	BARRUELO DE SANTULLAN	M. ALLENDE	COAL	392 100,00	4 753 150,00	1 250,00	Mountain dump	300 000,00	2 724
MINAS DE LA REUNION	Spain	VILLANUEVA DEL RIO Y MINAS	VILLANUEVA	COAL	259 300,00	4 172 700,00	100	Wasteland	1 000 000,00	2 007
M. CIELO ABIERTO	Spain	PEÑARROYA-PUEBLONUEVO	ZAHURDILLA	COAL	303 300,00	4 240 300,00	530	Wasteland	100 000,00	2 159
MINA STA. ANA	Spain	PEÑARROYA-PUEBLONUEVO	STA. ANA	COAL	303 100,00	4 241 200,00	523	Wasteland	500 000,00	2 160
CONO ANTOLIN	Spain	PEÑARROYA-PUEBLONUEVO	ANTOLIN	COAL	303 900,00	4 240 900,00	560	Wasteland	1 250 000,00	2 163
LAV. ANTOLIN II	Spain	BELMEZ	ANTOLIN	COAL	304 500,00	4 241 000,00	550	Wasteland	100 000,00	2 164
P. CANOVAS	Spain	BELMEZ	VILANA	COAL	308 100,00	4 238 100,00	495	Wasteland	175 000,00	2 168
MINAS DE LA REUNION	Spain	VILLANUEVA DEL RIO Y MINAS	VILLANUEVA	COAL	260 400,00	4 171 500,00	60	Wasteland	1 500 000,00	2 009
MINAS DE LA REUNION	Spain	VILLANUEVA DEL RIO Y MINAS	VILLANUEVA	COAL	260 400,00	4 171 700,00	60	Wasteland	400 000,00	2 010

MINAS DE LA REUNION	Spain	VILLANUEVA DEL RIO Y MINAS	VILLANUEVA	COAL	259 300,00	4 172 400,00	100	Wasteland	3 000 000,00	2 011
MARIA TERESA 1	Spain	PUEBLA DE LILLO	LAS LLAMPAS	COAL	319 700,00	4 760 100,00	1 400,00	Mountain dump	280 000,00	2 035
MARIA TERESA 2	Spain	PUEBLA DE LILLO	LAS LLAMPAS	COAL	319 400,00	4 760 200,00	1 420,00	Wasteland	120 000,00	2 036
MARIA TERESA 1	Spain	PUEBLA DE LILLO	LAS LLAMPAS	COAL	319 700,00	4 760 100,00	1 400,00	Mountain dump	280 000,00	2 035
POZO HERRERA 2	Spain	SABERO	SOTILLOS	COAL	320 500,00	4 745 200,00	1 160,00	Mountain dump	700 000,00	2 074
POZO HERRERA 2	Spain	SABERO	SOTILLOS	COAL	320 500,00	4 744 900,00	1 140,00	Mountain dump	1 100 000,00	2 075
SABERO 8 NORTE	Spain	BOÑAR	COLLADA	COAL	318 900,00	4 745 300,00	1 165,00	Mountain dump	11 344 992,00	2 077
SAB.8 TRANSFERENCIA	Spain	BOÑAR	COLLADA	COAL	318 900,00	4 744 900,00	1 160,00	Mountain dump	1 547 045,00	2 078
SAB.6 VERTEDERO SUR	Spain	SABERO	CASSETAS O.	COAL	320 800,00	4 743 900,00	1 200,00	Mountain dump	1 000 000,00	2 082
CIELO ABIERTO SEIS	Spain	MATALLANA	VALLE ARVEA	COAL	297 800,00	4 749 800,00	1 380,00	Forest	250 000,00	2 062
SABERO 8 SUR	Spain	BOÑAR	COLLADA	COAL	319 200,00	4 744 900,00	1 170,00	Mountain dump	8 594 691,00	2 092
HULLER.OEST.SABER.9	Spain	BOÑAR	VENEROS	COAL	314 800,00	4 744 700,00	1 050,00	Mountain dump	200 000,00	2 095
MINA LA UNION	Spain	BOÑAR	LAS CASSETAS	COAL	316 200,00	4 744 200,00	1 020,00	Mountain dump	120 000,00	2 098
M. S. ANTONIO ESC-2	Spain	BELMEZ	JULIANA	COAL	313 200,00	4 236 500,00	540	Agricultural	2 100 000,00	2 438
CORTA BELMEZ	Spain	BELMEZ	FTE. BLANCA	COAL	310 000,00	4 238 100,00	510	Agricultural	800 000,00	2 447
M. SAN ANTONIO	Spain	BELMEZ	MIRAFLORES	COAL	314 100,00	4 235 100,00	480	Mountain dump	16 000 000,00	2 451
TARANILLA	Spain	VALDERRUEDA	TARANILLA	COAL	337 900,00	4 741 000,00	1 020,00	Wasteland	2 500 000,00	2 305
RIMUELA	Spain	VALDERRUEDA	EL SOTO	COAL	335 200,00	4 741 000,00	1 100,00	Wasteland	200 000,00	2 306
RIMUELA	Spain	VALDERRUEDA	EL SOTO	COAL	336 900,00	4 740 800,00	1 098,00	Wasteland	900 000,00	2 307
TARANILLA	Spain	VALDERRUEDA	TARANILLA	COAL	338 100,00	4 741 400,00	1 030,00	Wasteland	230 000,00	2 310
LAVADERO	Spain	FUENTE OBEJUNA	PARRILLA	COAL	298 100,00	4 243 200,00	520	Wasteland	850 000,00	2 138
LAVADERO III	Spain	FUENTE OBEJUNA	PARRILLA	COAL	297 800,00	4 243 400,00	530	Wasteland	100 000,00	2 139
POZO HERRERA 1-1	Spain	SABERO	LA HERRERA	COAL	322 700,00	4 744 600,00	1 040,00	Mountain dump	200 000,00	2 286
POZO HERRERA 1-2	Spain	SABERO	LA HERRERA	COAL	323 000,00	4 744 200,00	1 124,00	Mountain dump	900 000,00	2 287
SAB.6 VERTEDERO NOR	Spain	SABERO	OLLEROS SAB	COAL	321 700,00	4 744 800,00	1 100,00	Mountain dump	8 100 000,00	2 288
LAVADERO DE HULLERA	Spain	SABERO	VEGUELLINA	COAL	325 900,00	4 743 400,00	960	Mountain dump	7 500 000,00	2 290
MIN. VALDESAMARIO	Spain	VALDESAMARIO	COBERTERAS	COAL	744 300,00	4 734 900,00	1 100,00	Mountain dump	180 000,00	1 485
MINA VALDESAMARIO	Spain	VALDESAMARIO	COBERTERAS	COAL	744 500,00	4 734 800,00	1 110,00	Mountain dump	450 000,00	1 487
MORA BIS C. ABIERTO	Spain	CABRILLANES	CARBACHALES	COAL	730 500,00	4 755 400,00	1 500,00	Wasteland	2 300 000,00	1 453
C. ABIER.CARRASCONT	Spain	CABRILLANES	LA FORCADA	COAL	728 050,00	4 758 600,00	1 260,00	Wasteland	200 000,00	983
PISO 2 OESTE PAULIN	Spain	VILLABLINO	PAULINA	COAL	711 400,00	4 759 400,00	1 160,00	Forest	300 000,00	961
COTO CORTES	Spain	VILLABLINO	PAULINA	COAL	711 600,00	4 759 000,00	1 120,00	Mountain dump	250 000,00	962
CABEZA PLONO BOLSAD	Spain	VILLABLINO	PIEDRALADRA	COAL	715 200,00	4 758 900,00	1 040,00	Mountain dump	252 000,00	967
4 PISO PE6AS	Spain	VILLABLINO	EL ESCANDAL	COAL	715 600,00	4 760 700,00	110	Mountain dump	100 000,00	971
PISO 3 VILLABLINO	Spain	VILLABLINO	EL FLEITAN	COAL	719 200,00	4 759 700,00	1 300,00	Wasteland	185 000,00	980
PISO 1 VILLABLINO	Spain	VILLABLINO	LAS POULAS	COAL	719 200,00	4 759 400,00	1 300,00	Forest	107 000,00	981
4 PISO CARRASCONTE	Spain	VILLABLINO	EL PAULON	COAL	724 600,00	4 757 800,00	1 160,00	Mountain dump	100 000,00	992
PISO 3 CARRASCONTE	Spain	VILLABLINO	CARRASCONTE	COAL	725 800,00	4 758 200,00	1 260,00	Mountain dump	300 000,00	995
C. ABIER.CARRASCONT	Spain	CABRILLANES	LA FORCADA	COAL	728 000,00	4 758 200,00	1 360,00	Wasteland	100 000,00	1 001
C.ABIER.CARRASCONTE	Spain	CABRILLANES	LA FORCADA	COAL	728 000,00	4 757 800,00	1 420,00	Wasteland	180 000,00	1 002
PISO 5 CARASCONTE	Spain	VILLABLINO	EL PAULON	COAL	725 200,00	4 758 000,00	1 160,00	Mountain dump	100 000,00	1 004
MORA CIELO ABIERTO	Spain	CABRILLANES	REQUEJO	COAL	729 500,00	4 756 300,00	1 400,00	Wasteland	3 000 000,00	1 005
REGALADA C. ABIERTO	Spain	CABRILLANES	LA MORA	COAL	729 000,00	4 756 750,00	1 480,00	Wasteland	1 200 000,00	1 006
E. PE6A DEL CASTRO	Spain	LA POLA DE GORDON	P. EL CASTR	COAL	285 100,00	4 749 900,00	1 150,00	Wasteland	4 900 000,00	1 750
DE CI6ERA	Spain	LA POLA DE GORDON	ROGUERA	COAL	286 500,00	4 751 100,00	1 120,00	Mountain dump	400 000,00	1 751
EL BERNESGA	Spain	LA POLA DE GORDON	SANTA LUCIA	COAL	285 300,00	4 750 600,00	1 160,00	Mountain dump	100 000,00	1 752
LA VOIGA	Spain	LA POLA DE GORDON	SANTA LUCIA	COAL	285 800,00	4 749 700,00	1 100,00	Mountain dump	2 290 000,00	1 753
MINA ELISA	Spain	SOTO Y AMIO	MINA ELISA	COAL	270 900,00	4 742 900,00	1 160,00	Mountain dump	100 000,00	1 803
MINA ELISA	Spain	SOTO Y AMIO	MINA ELISA	COAL	271 100,00	4 743 200,00	1 180,00	Mountain dump	200 000,00	1 804
MINA LUISA	Spain	SOTO Y AMIO	MINA LUISA	COAL	271 100,00	4 742 900,00	1 180,00	Mountain dump	150 000,00	1 806
MINA LUISA	Spain	SOTO Y AMIO	MINA LUISA	COAL	271 050,00	4 742 800,00	1 080,00	Mountain dump	240 000,00	1 807

BIMBRERO	Spain	CARROCERA	BIMBRERO	COAL	271 500,00	4 741 300,00	1 030,00	Mountain dump	100 000,00	1 809
ALCEDO	Spain	LA ROBLA	A. DE ALBA	COAL	285 800,00	4 743 900,00	1 100,00	Mountain dump	1 300 000,00	1 833
CT DE LA ROBLA	Spain	LA ROBLA	CORREDERAS	COAL	283 550,00	4 741 600,00	990	Mountain dump	950 000,00	1 834
CTRA. DE LA ROBLA	Spain	LA ROBLA	LA ROBLA	COAL	284 550,00	4 741 000,00	940	Wasteland	750 000,00	1 835
LAVADERO DE LA ROBL	Spain	LA ROBLA	ALTO FUERNO	COAL	287 500,00	4 743 500,00	1 200,00	Mountain dump	4 000 000,00	1 836
GRUESOS DE LAVADERO	Spain	LA ROBLA	ALTO FUEROS	COAL	287 250,00	4 743 550,00	1 140,00	Mountain dump	225 000,00	1 837
ALCEDO	Spain	LA ROBLA	A. DE ALVA	COAL	285 800,00	4 743 900,00	1 100,00	Mountain dump	1 300 000,00	1 838
MINA MARIETA	Spain	CARROCERA	LOMBA	COAL	274 050,00	4 741 400,00	1 040,00	Mountain dump	500 000,00	1 829
SANTA LUCIA	Spain	LA POLA DE GORDON	MEDIANAS	COAL	286 900,00	4 749 350,00	1 200,00	Mountain dump	200 000,00	1 759
GRUPO SAN JOSE	Spain	MATALLANA	LA CEON	COAL	290 800,00	4 748 400,00	1 200,00	Mountain dump	350 000,00	1 764
E. POZO AMERZOLA	Spain	LA POLA DE GORDON	MEDIANAS	COAL	287 500,00	4 749 600,00	1 250,00	Mountain dump	130 000,00	1 766
GRUPO COMPETIDORA	Spain	LA POLA DE GORDON	MEDIANAS	COAL	287 500,00	4 748 950,00	1 200,00	Mountain dump	180 000,00	1 768
C. ABIE PASTORA-COM	Spain	LA POLA DE GORDON	MEDIANAS	COAL	287 500,00	4 749 200,00	1 240,00	Mountain dump	3 000 000,00	1 770
C. ABI PASTORACOMPE	Spain	LA POLA DE GORDON	MEDIANA	COAL	287 700,00	4 749 000,00	1 240,00	Mountain dump	200 000,00	1 771
C.ABI PASTORACOMPET	Spain	LA POLA DE GORDON	A. DE VEGA	COAL	287 750,00	4 748 200,00	1 300,00	Mountain dump	2 000 000,00	1 772
C.ABI PASTORACOMPET	Spain	LA POLA DE GORDON	ADEVEGAFORN	COAL	288 150,00	4 748 600,00	1 350,00	Mountain dump	1 700 000,00	1 773
CIELO ABIERTO COMPE	Spain	LA POLA DE GORDON	A.DEVEGAFON	COAL	288 200,00	4 748 300,00	1 350,00	Mountain dump	100 000,00	1 774
LOMA DE LA CERRA	Spain	SOTO Y AMIO	LOMA CERRA	COAL	268 300,00	4 740 900,00	1 090,00	Mountain dump	150 000,00	1 779
MINA CARMEN	Spain	CARROCERA	ERA FIERROS	COAL	271 800,00	4 743 500,00	1 160,00	Mountain dump	300 000,00	1 792
CABEZA PLANO BOLSAD	Spain	VILLABLINO	PIEDRALADRA	COAL	715 200,00	4 758 900,00	1 040,00	Mountain dump	252 000,00	573
E. RELAVADO	Spain	PONFERRADA	PONFERRADA	COAL	697 600,00	4 714 850,00	525	Wasteland	380 000,00	647
ESCOM.DE PONFERRADA	Spain	PONFERRADA	PONFERRADA	COAL	697 600,00	4 714 850,00	525	Wasteland	2 500 000,00	648
ESCOMBRERA NUEVA	Spain	PONFERRADA	PONFERRADA	COAL	697 600,00	4 714 850,00	525	Wasteland	1 100 000,00	649
COMPOSTILLA 1	Spain	PONFERRADA	PONFERRADA	COAL	698 200,00	4 715 600,00	600	Wasteland	378 000,00	650
STOCK CARBON	Spain	VELILLA DEL RIO CARRION	LA PALOMERA	COAL/ANTHRACITE	348 600,00	4 742 250,00	1 130,00	Wasteland	200 000,00	2 507
STOCK CARBON	Spain	VELILLA DEL RIO CARRION	LA PALOMERA	COAL/ANTHRACITE	348 700,00	4 742 300,00	1 220,00	Wasteland	180 000,00	2 508

Annex 5. The inventory of mine waste dumps in UK

Name	Country	City	Raw material	Type	Volume	Degree of activity	Degree of reclamation	Risk to the environment	Coordinates X	Coordinates Y	Other (notes)
Bickershaw Colliery	UK	Wigan District	coal	spoil heap			high degree	low; combustion risk;	363585	401117	local authority: Wigan District, the derelict site of the Garswood Hall colliery including the three large conical tips known as the Three Sisters or the Wigan Alps were used to landscape a large area which became at first, a recreation area but as trees and plants grew and wildlife returned, the area is now designated A Local Nature Reserve. Most of the spoil heaps that once blighted Wigan are now gone from Astley, Tyldesley, Bickershaw and Leigh to be replaced by some housing, some industrial units but acres and acres of green open spaces described as Degraded Landscapes and were recognised as providing a recreational amenity for the local population and for wildlife. The landscaped pit heaps at Bickershaw and the Three Sisters, the unique and special flora and fauna of Ince Moss, Amberswood and Ince Hall and the former slag heaps of the Kirklees Iron Works all contribute to the legacy of coal (https://carbonlandscape.org.uk/sites/default/files/ShortHistoryofCoalMininginWigan_Leigh.pdf); Combustion risk (https://twitter.com/WiganCouncil/status/1299300695137497090); (https://www.carbonlandscape.org.uk); https://www.wigan.gov.uk/Docs/PDF/Resident/Planning-and-Building-Control/DegradedLandscapes.pdf ; https://www.wigan.gov.uk/Docs/PDF/Resident/Planning-and-Building-Control/DegradedLandscapes.pdf
Hapton Clough	UK	Burnley District	coal	water drainage	NOT A HEAP			water pollution	380840	431460	local authority: Burnley District,

Shilbottle Pyrites Tip	UK	Northumberland	coal	spoil dump			high degree		422060	608160	local authority: Northumberland, The 15 hectare Shilbottle spoil heap lies at National Grid Reference NU 217086, 2.5 km east southeast of the village of Shilbottle and some 8 km from Alnwick. As well as being highly acidic, the leachate had concentrations of iron, manganese and aluminium that were among the highest ever recorded for a mine or spoil discharge in the UK. The Tyelaw Burn runs approximately north-south along the western flank of the tip. It enters the River Coquet approximately 2 km to the south-east of the spoil heap. As well as being highly acidic, the leachate from Shilbottle spoil heap had concentrations of iron, manganese and aluminium that were among the highest ever recorded for a mine or spoil discharge in the UK (https://www.claire.co.uk/component/phocadownload/category/19-technology-demonstration-project-reports?download=112:passive-treatment-of-severely-contaminated-colliery-spoil-leachate-using-a-permeable-reactive-barrier). https://www.google.pl/maps/@55.3635543,-1.6560271,3a,75y,0.77h,66.58t/data=!3m6!1e1!3m4!1svIOG-LwzFLoWsShxAGukBQ!2e0!7i16384!8i8192?entry=ttu
Welch Whittle	UK	Chorley District	coal	spoil heap			high degree	low	354300	413500	local authority: Chorley District, Welch Whittle woodlands are available for quiet recreation. The trees were planted on the site of a former colliery and spoil heap in the 1970's, and footpaths run through the site. (https://www.lancashire.gov.uk/leisure-and-culture/countryside/public-open-spaces-and-community-woodlands/welch-whittle-chorley/)
Spen Lane	UK	Gateshead District	coal	coal dump		intermediate, fire hazard	high degree	fire hazard	413926	561733	local authority: Gateshead District, The buried coal, considered unsellable, was dumped there when the nearby Greenside mine was sunk at the beginning of the last century, according to local villagers. (https://www.chroniclive.co.uk/news/north-east-news/blazing-row-over-danger-fire-1688840)
Habergham Clough	UK	Burnley District	coal	water drainage	NOT A HEAP			water pollution	381170	431300	local authority: Burnley District,

Chisnal Hall	UK	Chorley District	coal	former colliery site	NOT A HEAP			water pollution	355124	412736	local authority: Chorley District, Chisnal Hall is a former colliery site close to Coppull Moor, Coppull, Chorley. In 1994 the site was opened to the public by Lancashire County Council, and today the site is managed by the Council and covers approx. 55 hectares. The site is currently used for grazing and has been split into 10 fields with woodland planting around most of the field boundaries. CCNW completed a wide range of new footpaths and drainage improvements and new access structures linking with existing Public Rights of Way networks around the former Colliery site and worked closely with the client to quickly implement a coherent plan (https://www.ccnw.info/project/chisnal-hall-coppull-chorley/)
Dodworth Colliery Tip	UK	Barnsley District	coal	spoil heap			high degree, reclaimed, capped	water pollution	431290	406250	local authority: Barnsley District, The spoil tip area was acquired by Barnsley Metropolitan Borough Council in the early 1990s and limited remediation works were implemented during 1993/1994. This included capping the spoil, to limit water ingress, and the development of settling lagoons and reedbeds to treat run-off water. An extension of reedbed planting, plus the construction of a limestone pit, took place during the summer of 1996. The remediation of any contaminated water that drains to the surface, where it is channelled to the series of settling lagoons and reedbeds, has been successful, as mobile metals are precipitated and the acidity is therefore reduced. (https://www.imwa.info/docs/imwa_2005/IMWA2005_088_Gozzard.pdf)
East Cramlington	UK	Northumberland	coal	spoil heap			high degree	water pollution	428771	576436	local authority: Northumberland, (https://www.claire.co.uk/component/phocadownload/category/19-technology-demonstration-project-reports?download=112:passive-treatment-of-severely-contaminated-colliery-spoil-leachate-using-a-permeable-reactive-barrier), the pit at East Cramlington closed in c.1939, but coal from other nearby pits belonging to Hartley Mains Collieries continued to be processed here for another 20 years, and over time there was a very large slag heap of mining waste. Today this is the site of East Cramlington Nature Reserve, a large landscaped public area with woods and a large pond. (https://co-curate.ncl.ac.uk/east-cramlington/)

Flow Edge	UK	Eden District	coal	spoil heap			high degree	water pollution	373775	544083	<p>local authority: Eden District, J. & H. Varty & Watson began mining the Little Limestone coal, at Flow Edge near Alston, at the outbreak of WWI. The venture was not a success, however, and the mine was described as standing from 1916 to 1923.</p> <p>(https://www.nmrs.org.uk/mines-map/coal-mining-in-the-british-isles/northpennines/flowedge/). he most extensive workings have been in the Little Limestone Coals, particularly at the Ayle, Blagill, Baraugh, Clargill and Flow Edge collieries near Alston.</p> <p>Conspicuous lines of spoil heaps mark the sites of abandoned workings along the outcrops of the Little Limestone Coals</p> <p>(https://www.northpennines.org.uk/wp-content/uploads/2023/01/Geodiversity-Audit-FINAL.pdf)</p> <p>https://www.google.pl/maps/@54.7832091,-2.4170832,3a,75y,336.53h,83t/data=!3m7!1e1!3m5!1sLDU8gWEJ9aam2XG4jcd4UA!2e0!6shhttps:%2F%2Fstreetviewpixels-pa.googleapis.com%2Fv1%2Fthumbnail%3Fpanoid%3DLDU8gWEJ9aam2XG4jcd4UA%26cb_client%3Dmaps_sv.tactile.gps%26w%3D203%26h%3D100%26yaw%3D15.396397%26pitch%3D0%26thumbfov%3D100!7i16384!8i8192?entry=ttu</p>
Hesley Wood	UK	Sheffield District	coal	former colliery site			reclaimed, du	water pollution	436391	396189	<p>local authority: Sheffield District, reclaimed in 2013</p> <p>(https://www.yorkshirepost.co.uk/news/residents-worries-increase-over-coke-plant-plan-1892632)</p>

Carr Wood	UK	Allerdale District	coal	spoil heap							<p>local authority: Allerdale District, As mentioned above, the discharge at Aspatria (Carr Wood) is historic and has caused serious pollution in both water quality and aesthetic terms. In 1990, a major pollution incident was recorded when Economic Forestry Group (EFG) drained part of a spoil heap, releasing significant amounts of silt and acid minewater to the receiving stream. (https://books.google.pl/books?id=xEZEjv8EiK4C&pg=PA127&lpg=PA127&dq=%22the+discharge+at+Aspatria+(Carr+Wood)+is+historic+and+has+caused%22&source=bl&ots=T4KjIRtm1f&sig=ACfU3U2IsN0i3NhGeLreNz-Ja5hrbNKhWQ&hl=pl&sa=X&ved=2ahUKEwjnu2f2dKEAxUhVfEDHX7A0YQ6AF6BAGNEAM#v=onepage&q=%22the%20discharge%20at%20Aspatria%20(Carr%20Wood)%20is%20historic%20and%20has%20caused%22&f=false)</p> <p>(https://iwaponline.com/ebooks/book/82/Minewater-Treatment-Technology-Application-and?redirectedFrom=PDF)</p>
Eller Brook	UK	Chorley District	coal	water drainage	NOT A HEAP						local authority: Chorley District,

Annex 6. The inventory of mine waste dumps in Belgium

Name	Country	City	Risk to the environment	Coordinates X	Coordinates Y	Other (notes)
Belle Vue	Belgium	Liege	Yes. Possible targets are in the surrounding area.	5.61480941227049	50.658537	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Vieille Marihaye	Belgium	Seraing	No	5.49602174851057	50.6009578659829	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bonne Espérance et Bonne Fortune	Belgium	Liege	Yes. Possible targets are in the surrounding area.	5.5058456395167	50.651300287045	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Espérance 3	Belgium	Grace-Hollogne	Yes. Possible targets are in the surrounding area.	5.52658495075169	50.6414634135956	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège des Artistes	Belgium	Flemalle	No	5.47752604767907	50.6120963917476	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Baldaz	Belgium	Flemalle	No	5.4544751203663	50.609162896726	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Champs d'Oiseaux	Belgium	Flemalle	No	5.47056069017708	50.6190688608115	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Xhorre	Belgium	Flemalle	Yes. Possible targets are in the surrounding area.	5.47232112865905	50.6039218917589	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Makets Ancien	Belgium	Flemalle	Yes. Possible targets are in the surrounding area.	5.48826834337055	50.6229999169689	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Murebure	Belgium	Saint-Nicolas	No	5.51658861720871	50.6345291775661	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Gosson 2	Belgium	Seraing	Yes. Possible targets are in the surrounding area.	5.51024537597181	50.6263971569444	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Horloz	Belgium	Seraing	Yes. Possible targets are in the surrounding area.	5.52234724431979	50.6222922054055	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Charbonnages de La Meuse	Belgium	Villers-le-Bouillet	No	5.27387213398472	50.5629563498195	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bois des Moines	Belgium	Flemalle	No	5.42577733084453	50.5991749877765	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Terril sur le Bar	Belgium	Flemalle	Yes. Possible targets are in the surrounding area.	5.47608719214338	50.590631607015	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
20 des Produits	Belgium	Quaregnon	No	3.87766619606737	50.4345566432574	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
20 des Produits	Belgium	Quaregnon	No	3.87573902732629	50.4334086632119	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Batterie Nouveau	Belgium	Liege	No	5.58450783712347	50.6642969466178	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bois la Dame	Belgium	Liege	No	5.66596618699361	50.6690667184074	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Micheroux 1	Belgium	Fleron	No	5.70738288152704	50.6296527858817	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Micheroux 2	Belgium	Soumagne	Yes, but possible targets are not in the surrounding area	5.713294935354	50.6230003836273	Risk category 2. The waste management facility poses one or more specific risks. The facilities at risk are not located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Maireux 5	Belgium	Soumagne	No	5.75080274331653	50.6212551917803	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bas Bois	Belgium	Soumagne	No	5.73772746477253	50.6186370806449	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Point Central	Belgium	Soumagne	No	5.74244138501182	50.6222257884019	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
La Haye Nouveau	Belgium	Liege	No	5.54853123773106	50.6287539001525	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Petite Bacnure	Belgium	Herstal	Yes. Possible targets are in the surrounding area.	5.60819690387548	50.6671077073504	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bernalmont	Belgium	Liege	No	5.61043363482348	50.6592415637046	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Basse Hansy Nord	Belgium	Liege	No	5.63059268520933	50.6110634199802	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
2 du Carabinier	Belgium	Aiseau-Presles	Yes. Possible targets are in the surrounding area.	4.54742819693924	50.4135681879562	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
3 du Carabinier	Belgium	Chatelet	No	4.54290953440867	50.4023978532655	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Marie	Belgium	Fleurus	No	4.5601976686437	50.4502777896479	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Panama	Belgium	Aiseau-Presles	No	4.57008362376833	50.4153010880386	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Barbe	Belgium	Fleurus	No	4.58231565922983	50.4556786836278	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
2 Bonne Espérance	Belgium	Farciennes	Yes, but possible targets are not in the surrounding area	4.57111964482975	50.4397768166494	Risk category 2. The waste management facility poses one or more specific risks. The facilities at risk are not located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Gaston Siège 4	Belgium	Aiseau-Presles	Yes. Possible targets are in the surrounding area.	4.58193355521911	50.425568105965	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
TLC Marcinelle	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.43442407448255	50.3931902620273	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 23 Cerisier	Belgium	Charleroi	No	4.42589728677738	50.3736010571123	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Heigne	Belgium	Charleroi	Yes, but possible targets are not in the surrounding area	4.40877362672477	50.4500723448218	Risk category 2. The waste management facility poses one or more specific risks. The facilities at risk are not located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Saint Quentin Sud	Belgium	Charleroi	No	4.4006196429982	50.4451917017871	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Naye à Bois	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.40068322015552	50.4284026833755	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Belle Vue	Belgium	Charleroi	No	4.40963796682068	50.4329291105052	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bois d'el Ville 1	Belgium	Charleroi	No	4.43325347136974	50.4329248300932	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bois d'el Ville 2	Belgium	Charleroi	No	4.43202694846458	50.4319004087656	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bois de la Coupe	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.42689715061429	50.4358168524424	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Charles Terril Nord	Belgium	Charleroi	No	4.44219843061284	50.381385613387	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Charles Terril Sud	Belgium	Charleroi	No	4.43862994632495	50.3751806590637	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège Saint Charles	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.4407550190389	50.3781107448104	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bayemont	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.40431135721738	50.4196926644913	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Théodore ouest	Belgium	Charleroi	No	4.41399024503963	50.4178779250699	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Théodore est	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.41851115575132	50.4176016837035	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sacré Français	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.43339018687283	50.4261192441519	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Blanchisserie	Belgium	Charleroi	No	4.4287265113408	50.413402440004	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Nord de Courcelles 1-3	Belgium	Courcelles	No	4.35577306777604	50.4699156664	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Grogneau	Belgium	Sambreville	No	4.61629181444709	50.4424154657181	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Gaston Ancien	Belgium	Aiseau-Presles	No	4.58833101623237	50.4280523495007	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
La Réunion	Belgium	Sambreville	No	4.62005144448768	50.4284029804912	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
TLC 4 Nouveau	Belgium	Charleroi	No	4.36738786421612	50.4259602362993	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 19	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.37576283512751	50.4024568733672	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
La Platinerie b	Belgium	Colfontaine	No	3.84694781715559	50.4295031746005	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sans Calotte	Belgium	Quaregnon	No	3.84857764868169	50.4297331475344	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Belle Vue 2-nouveau terril	Belgium	Dour	No	3.76760715937717	50.3932675310652	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Tapatout n°1	Belgium	Dour	No	3.76771764771845	50.3946918984397	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bassins à schlamms de Thieu	Belgium	Le Rœulx	No	4.07745767045146	50.4643755991017	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bassins à schlamms Vedette	Belgium	Boussu	No	3.78013713180611	50.4157189395228	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Bassins à schlamms de l'Autreppe	Belgium	Boussu	No	3.81077640199562	50.4221497580539	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 2 Fontaine l'Evêque	Belgium	Fontaine-l'Évêque	No	4.29495541283496	50.4084335720359	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 8/10 Forchies	Belgium	Fontaine-l'Évêque	Yes. Possible targets are in the surrounding area.	4.31935810857299	50.430793592819	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 6 Perrier	Belgium	Courcelles	No	4.35843209137892	50.4484492833744	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Chenoy	Belgium	Courcelles	No	4.36012729894469	50.452417975489	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 4 Nord de Charleroi	Belgium	Courcelles	Yes. Possible targets are in the surrounding area.	4.37257489844232	50.448862078684	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 3 Nord de Charleroi	Belgium	Courcelles	No	4.36625750031343	50.438235011095	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 14	Belgium	Charleroi	No	4.34945515987097	50.4279936886485	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 18 Est	Belgium	Charleroi	No	4.40481561983398	50.4160174293613	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 18 Nord	Belgium	Charleroi	No	4.40874993643682	50.4193961508952	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 12	Belgium	Fontaine-l'Évêque	No	4.34918957513002	50.4169832130734	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sambre	Belgium	Charleroi	No	4.4075103930523	50.3995883716713	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Joseph	Belgium	Charleroi	No	4.41043643651995	50.4033211609927	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Siège 24 Fiestaux	Belgium	Charleroi	No	4.47607516395917	50.3896992070457	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sibérie	Belgium	Chatelet	No	4.49141967832573	50.3851269330316	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint François	Belgium	Farciennes	Yes. Possible targets are in the surrounding area.	4.53754078425608	50.4261847859399	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Pauline	Belgium	Farciennes	No	4.55195175159199	50.4210368977106	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Mastelles	Belgium	Charleroi	No	4.47619802610884	50.4357341983928	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Vallées	Belgium	Charleroi	No	4.48023319877037	50.4297791245799	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Les Viviers	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.49078343181874	50.4195443075113	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sébastopol	Belgium	Chatelet	No	4.49930417257873	50.4113800154013	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
8 Pays Bas	Belgium	Chatelet	No	4.50059599813537	50.4088272752439	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Duchère	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.48381858255635	50.4066513110794	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bray	Belgium	Binche	No	4.11101093717613	50.4344898381955	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Fosse du Bois	Belgium	La Louviere	No	4.15764956368771	50.4729140523003	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Quinconque	Belgium	La Louviere	No	4.15316283797104	50.4720613933523	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Le Quesnoy	Belgium	La Louviere	No	4.13483014721609	50.4567497957051	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Barbe	Belgium	La Louviere	No	4.16230282657196	50.4699511826355	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Albert 1er	Belgium	La Louviere	No	4.15796400891653	50.4603670940853	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Hubert/Sainte Marie	Belgium	La Louviere	No	4.17390635897305	50.4739272387223	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sars-Longchamps 2	Belgium	La Louviere	No	4.18378901657508	50.4679318492146	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
2 Houssu	Belgium	La Louviere	No	4.19961492159987	50.4678111875721	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
8-10 Houssu Ouest	Belgium	La Louviere	Yes. Possible targets are in the surrounding area.	4.18647476186198	50.4574946983268	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Henriette	Belgium	Farciennes	No	4.52595381605271	50.4466639649285	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
10 du Gouffre	Belgium	Chatelet	No	4.50456143025647	50.4237126513784	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
7 du Gouffre	Belgium	Chatelet	No	4.52166448406539	50.4227053638652	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Xavier-Ormont	Belgium	Chatelet	No	4.52482370666657	50.3919462786673	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Boubier 2	Belgium	Chatelet	Yes. Possible targets are in the surrounding area.	4.49688199364113	50.3950800599168	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Auguste	Belgium	Fleurus	No	4.51922820416823	50.457831	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Saint Hyppolite b	Belgium	Courcelles	No	4.39183597218794	50.4652832919552	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
La Chenevrière	Belgium	Charleroi	No	4.44012061769482	50.3862122820257	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 17	Belgium	Morlanwelz	Yes. Possible targets are in the surrounding area.	4.27097352539868	50.4398107239791	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Marie-José	Belgium	La Louviere	No	4.10490297795177	50.4444238773085	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Nord de Courcelles	Belgium	Courcelles	No	4.36182549220285	50.4690206019317	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Fosse 2 d'Arsimont	Belgium	Sambreville	No	4.65103850449831	50.4357849318712	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Fosse 1 d'Arsimont	Belgium	Sambreville	No	4.65357753933563	50.4301368672656	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Albert	Belgium	Jemeppe-sur-Sambre	No	4.66928739227632	50.4350822172955	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Flore	Belgium	Jemeppe-sur-Sambre	No	4.66946132248572	50.4319400500827	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sars-les-Moines	Belgium	Charleroi	No	4.40844541004271	50.456239784701	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Trianoy 5	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.45963074712038	50.4467631157492	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Nord de Charleroi 3	Belgium	Courcelles	No	4.35312297799016	50.4340321214048	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Stade Yernaux	Belgium	Charleroi	No	4.4678749448561	50.408254462572	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

de la Remise 11	Belgium	Charleroi	No	4.47415292790045	50.4191174903021	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
des Trieux 2	Belgium	Chatelet	No	4.52354485000097	50.3969028749626	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Menonry	Belgium	Aiseau-Presles	No	4.59453345316286	50.4247267546235	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
207-8+208-9 nouveau terril	Belgium	Courcelles	No	4.35301613876051	50.4606992510391	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
terril Sud du n°24 Fiestaux	Belgium	Charleroi	No	4.4772681375289	50.3868859911191	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Abbaye de Soleilmont	Belgium	Fleurus	Yes. Possible targets are in the surrounding area.	4.50068117747808	50.4416863124617	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Charles	Belgium	Charleroi	No	4.49558159900391	50.4538910308174	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Appaumée-nouveau terril	Belgium	Charleroi	No	4.48907053743685	50.4537320534741	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Hyppolite a	Belgium	Courcelles	No	4.38833417307839	50.4658093368047	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Piges	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.4336008530754	50.4149861476216	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Hamendes Nouveau	Belgium	Charleroi	No	4.46392502623566	50.4433356360529	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Hamendes Ancien	Belgium	Charleroi	No	4.46271937693976	50.4396870720507	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
L'Epine	Belgium	Charleroi	No	4.47212314541177	50.4123931380166	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Résolu 1	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.46633927825155	50.4105560873373	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Résolu 2	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.46317694518953	50.4080997954102	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Zoe	Belgium	Charleroi	No	4.4656793087786	50.4176543308215	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Xavier 2	Belgium	Charleroi	No	4.48405112181142	50.4401316583027	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Antoine Vedette	Belgium	Boussu	No	3.76932724295182	50.4133923256935	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Antoine	Belgium	Boussu	No	3.77654340320873	50.4105373331903	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Alliance 4	Belgium	Boussu	No	3.79745430102926	50.4137332811008	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Desirée 9	Belgium	Boussu	No	3.83232302916473	50.4336947471635	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Grand Hornu 12	Belgium	Boussu	No	3.83454522174459	50.4317321271799	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Turlupu 3	Belgium	Mons	No	3.87903923774095	50.4400588501731	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
des Trois Arbres	Belgium	Morlanwelz	No	4.23390131492451	50.4442023837975	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Henriette	Belgium	Morlanwelz	No	4.26399529878144	50.4605195500741	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Catherine	Belgium	Chapelle-lez-Herlaimo	No	4.28914447884279	50.4696100659408	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Saint Félix	Belgium	Quaregnon	No	3.86760716567953	50.4210196755284	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Julie a	Belgium	Quaregnon	No	3.85926830792875	50.4218003568506	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Julie b	Belgium	Quaregnon	No	3.85773591636002	50.4215855790942	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Julie c	Belgium	Quaregnon	No	3.85624264114768	50.4218355214968	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
La Boule	Belgium	Quaregnon	No	3.85529016407541	50.4187054103184	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Fief de Lambrechies a	Belgium	Quaregnon	No	3.87241457364817	50.4171560541911	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Grand Trait 3	Belgium	Frameries	No	3.88467704751279	50.4141499774575	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Crachet 7/12	Belgium	Frameries	Yes. Possible targets are in the surrounding area.	3.90094719439521	50.422773147006	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Cour de l'Agrappe	Belgium	Frameries	No	3.9032541062132	50.405569260501	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Nord de Genly	Belgium	Frameries	No	3.90653690239004	50.3937413814389	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
7 Bascoup	Belgium	Chapelle-lez-Herlaimo	No	4.29340339238815	50.4588697641994	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Arthur	Belgium	Morlanwelz	No	4.2298783124042	50.4621800748909	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Nord des Sars	Belgium	La Louviere	No	4.18809897074525	50.471141115771	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

7 Mariemont	Belgium	Chapelle-lez-Herlaimo	No	4.28541004315096	50.4572475823062	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Fosse 1 Est	Belgium	Binche	No	4.23595140339332	50.4207067989238	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 4	Belgium	Anderlues	No	4.2614534964567	50.4211603379536	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 6	Belgium	Anderlues	Yes. Possible targets are in the surrounding area.	4.26834672915208	50.4202393646627	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Groyne	Belgium	Andenne	No	5.08226438897409	50.4688330144068	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Stud-Rouvroy-Rouvroy	Belgium	Andenne	No	5.05176587124036	50.4784060942172	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Hypolitte c	Belgium	Courcelles	No	4.39606618367714	50.4655523283983	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Leveau Sainte Barbe	Belgium	Charleroi	No	4.39383322786243	50.4027811962989	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Fief de Lambrechies b	Belgium	Quaregnon	No	3.86907178095184	50.4157496179594	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
7-8 Hornu-Wasmes-nouveau terril	Belgium	Boussu	No	3.81936659663588	50.4241314525505	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
4 Hornu-Wasmes	Belgium	Boussu	No	3.82674663928595	50.4216374632993	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
1 Grand Buisson	Belgium	Boussu	No	3.81372047892743	50.4127982405252	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
3 Grand Buisson	Belgium	Colfontaine	No	3.82806942199311	50.4166210455586	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

5 Hornu-Wasmes	Belgium	Quaregnon	No	3.85046471319958	50.4262837606291	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
1 Hornu-Wasmes	Belgium	Quaregnon	No	3.85202043692515	50.4251243446924	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Barbe	Belgium	Colfontaine	No	3.81877347330076	50.4081340055819	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
1 Le Sac a	Belgium	Boussu	No	3.81359825522342	50.4047232500789	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
1 Le Sac b	Belgium	Boussu	No	3.81271314574013	50.4053228940436	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
1 Le Sac c	Belgium	Boussu	No	3.81062539333008	50.4041732558709	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Couchant Flenu 4_5_6a	Belgium	Quaregnon	No	3.8522170884074	50.4335705194515	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Nouvelle Cossette a	Belgium	Quaregnon	No	3.85731846373282	50.4295499333483	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Nouvelle Cossette b	Belgium	Quaregnon	No	3.85441470165509	50.4288800921729	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Rieu du Coeur 1- nouveau terri	Belgium	Quaregnon	No	3.86203426530865	50.425602391743	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Marie-Joseph	Belgium	Quaregnon	No	3.86582041271749	50.4290703120544	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Rieu du Coeur 2-nouveau terri	Belgium	Quaregnon	No	3.87207233778039	50.4284855774745	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Séraphin	Belgium	Quaregnon	No	3.8744174680823	50.4259645053383	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Saint Placide	Belgium	Quaregnon	Yes. Possible targets are in the surrounding area.	3.87030311640377	50.4247097543975	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
8-10 Houssu Nord	Belgium	La Louviere	No	4.18942967671089	50.4616103582517	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Elisabeth	Belgium	Binche	No	4.13758707267557	50.4329207924666	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Marguerite	Belgium	Binche	No	4.15742259824762	50.4352761557893	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Albert	Belgium	Binche	No	4.18888911290573	50.432123902294	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Marie Est	Belgium	Binche	No	4.19218323226473	50.4364684053483	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Barbe	Belgium	Binche	No	4.18310096044984	50.4248881190545	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Fosse 1 Est	Belgium	Binche	No	4.20151101603157	50.4163619914865	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Lavoir Ressaix	Belgium	Binche	No	4.20208756559128	50.4199029296702	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Leval Est	Belgium	Binche	No	4.21122637746841	50.418570504248	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Leval Ouest	Belgium	Binche	No	4.20530393407117	50.416681992244	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Aldegonde 1	Belgium	Morlanwelz	No	4.22228288277233	50.4385287686576	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Lavoir Central	Belgium	Binche	No	4.17395228967877	50.4319611717913	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Saint Félix	Belgium	La Louviere	No	4.21336632906686	50.4629591618482	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Alexandre	Belgium	Manage	No	4.21742456282436	50.4661945535103	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Adolphe	Belgium	Manage	No	4.22236049431737	50.4707345925392	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Eloi Ouest	Belgium	Morlanwelz	No	4.24252624312226	50.4459121816143	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Eloi Est	Belgium	Morlanwelz	No	4.24526230256411	50.4462559078244	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Peuplier Blanc	Belgium	Dour	No	3.79494139085442	50.3980433050094	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 5 Sud	Belgium	Anderlues	No	4.26212614905617	50.4043624725381	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Catherine	Belgium	Dour	No	3.7912203481496	50.3942204469662	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Charles 2	Belgium	Dour	No	3.79885498687555	50.3933833869885	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Trou à Dièves 3	Belgium	Dour	No	3.80267768718135	50.3993105761995	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Avaleresse 5	Belgium	Dour	No	3.80771752453821	50.3987360508907	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sauwartan 1	Belgium	Dour	No	3.81789596703281	50.3930664803727	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sac à Poils	Belgium	Dour	No	3.75525442555628	50.3967208731874	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Hautrage-nouveau terril	Belgium	Saint-Ghislain	No	3.76671305311716	50.4586451371479	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Tertre-nouveau terril	Belgium	Saint-Ghislain	No	3.8304546396335	50.4611403570335	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Barbe	Belgium	Bernissart	No	3.64483348740192	50.4807602717093	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Barbe 3bis	Belgium	Bernissart	No	3.64807776058262	50.4790447332415	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Quentin Nord	Belgium	Charleroi	No	4.40176685964385	50.4440769649689	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Vente au comptant du Gouffre	Belgium	Chatelet	No	4.52220393076203	50.4145829574041	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
	Belgium	Mons	No	3.88169642723511	50.4339108038019	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
	Belgium	Charleroi	No	4.3683013725611	50.4298959022201	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Noirchain n°12	Belgium	Frameries	No	3.92428135424993	50.4046422353414	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
6 Hornu-Wasmes	Belgium	Colfontaine	No	3.83449854999227	50.4206058349866	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
7 Saint Antoine Escouffiaux	Belgium	Colfontaine	No	3.82655557777597	50.4130537517019	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
8 Escouffiaux	Belgium	Colfontaine	No	3.84042718324017	50.4139642906692	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
10 de Grisoeuil	Belgium	Colfontaine	No	3.84432418205759	50.3980132473114	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Grand Bouillon d'en Haut	Belgium	Colfontaine	No	3.86090071435696	50.4050868642839	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Roinge	Belgium	Colfontaine	No	3.86721096601698	50.4044710104295	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Ferrand 1	Belgium	Dour	No	3.74182031682262	50.3961228717974	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Odile	Belgium	Dour	No	3.7291500171692	50.4003681241603	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Benoît	Belgium	Dour	No	3.7643981571274	50.4113190079673	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Buisson Levant	Belgium	Dour	No	3.76796819189934	50.4096872967284	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Buisson Couchant	Belgium	Dour	No	3.76286759832014	50.4076035125845	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Grande Veine 4	Belgium	Dour	No	3.75759973780772	50.4004214431489	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Belle Vue 7	Belgium	Dour	No	3.76829529627306	50.3992684001166	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Belle Vue 8	Belgium	Dour	No	3.75573274638254	50.3926322376552	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Henriette	Belgium	Dour	No	3.77212031588478	50.4077376420443	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Machine à Feu 1	Belgium	Dour	No	3.77897651518204	50.4048619897946	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Frédéric	Belgium	Dour	Yes. Possible targets are in the surrounding area.	3.79310816355766	50.4037194389925	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Longterme 2	Belgium	Dour	No	3.79379513388463	50.3997091808169	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Catherine	Belgium	Bernissart	No	3.64970138751321	50.4858468078951	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Harchies 1	Belgium	Bernissart	No	3.67832526207417	50.4718650320318	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Harchies 2	Belgium	Bernissart	No	3.6839841043812	50.4714560406764	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Harchies 3	Belgium	Bernissart	No	3.68796703753318	50.4668825781697	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Harchies 4	Belgium	Bernissart	No	3.68898865543512	50.4632763043094	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Baisieux 12	Belgium	Bernissart	No	3.72183877223059	50.3982170264194	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Ghlin	Belgium	Quievrain	No	3.92274060118879	50.4717620171783	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Belle et Bonne + Auflette	Belgium	Mons	No	3.90368064575895	50.4418532754618	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Félicité	Belgium	Mons	No	3.89105469946148	50.4366086355546	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
14-17 et Siège Social	Belgium	Mons	Yes. Possible targets are in the surrounding area.	3.90136159937723	50.4362449438492	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Basse Hansy Sud	Belgium	Chaufontaine	No	5.63265582268688	50.6093184292922	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Gueldre	Belgium	Beyne-Heusay	No	5.65878592643834	50.6220716262554	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Quatre Jean	Belgium	Beyne-Heusay	No	5.67409588785156	50.6361193172804	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Lonette	Belgium	Fleron	No	5.68985576176348	50.6308829289509	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Perron Ouest	Belgium	Liege	No	5.54366673354331	50.6130442292111	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Horloz 3 a	Belgium	Liege	No	5.54048675542903	50.6169589108119	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Fleron	Belgium	Fleron	No	5.69084592620554	50.6200999166068	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
8-10 Houssu Est	Belgium	La Louviere	No	4.1913841855847	50.4581077115159	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Fief de Lambrechies c	Belgium	Quaregnon	No	3.87171601458676	50.4151252486275	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Marie Ouest	Belgium	Binche	No	4.1871553947095	50.435529462453	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
	Belgium	Binche	No	4.17234623736775	50.4288064278304	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Siège 25 Hauchies	Belgium	Charleroi	Yes. Possible targets are in the surrounding area.	4.45127446330856	50.3854653588644	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Charbonnages Collard	Belgium	Seraing	No	5.52026484014737	50.6077271982374	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
a l'Arène	Belgium	Huy	No	5.16429111686694	50.5059021841662	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Saint Paul/Les Trixhes	Belgium	Huy	Yes. Possible targets are in the surrounding area.	5.1541267190985	50.5025156564048	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Saint Jean-Baptiste	Belgium	Mons	No	3.88210531804686	50.4326021030537	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Sainte Henriette	Belgium	Mons	No	3.89080669528209	50.4338894049844	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
12 Saint Louis	Belgium	Mons	No	3.89341318037203	50.4319317246438	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
16 Saint Joseph	Belgium	Mons	No	3.89664625460091	50.4326621514518	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Héribus	Belgium	Mons	Yes. Possible targets are in the surrounding area.	3.94008998937423	50.4337960202935	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Ciply	Belgium	Mons	No	3.94385129602833	50.4120419435859	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Asquillies	Belgium	Quevy	No	3.95439382108678	50.4037539843542	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Havré	Belgium	Mons	No	4.04878135291666	50.4697966277392	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Havré	Belgium	Mons	No	4.05281527644781	50.469287366575	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Beaulieu	Belgium	Mons	No	4.05938271719177	50.4516657226823	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Bois de Baudour	Belgium	Saint-Ghislain	No	3.8514795595003	50.4911691485192	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Les Sartis 1	Belgium	Hensies	No	3.67361984922729	50.4576385868573	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Les Sartis 2	Belgium	Hensies	No	3.69054166529569	50.4530713257055	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Les Sartis 3	Belgium	Hensies	No	3.67603423053251	50.4550547911454	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Les sartis 4	Belgium	Hensies	No	3.66992300608266	50.4542062825517	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Halette	Belgium	Flemalle	No	5.44979151330671	50.6260703330881	Risk category 1. The waste management facility does not pose a threat to human health or the environment. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Argenteau Ancien	Belgium	Blegny	Yes. Possible targets are in the surrounding area.	5.72080132870559	50.6874050569539	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)
Argenteau Nouveau	Belgium	Blegny	Yes. Possible targets are in the surrounding area.	5.72180141628614	50.6886595152828	Risk category 3. The waste management facility poses one or more specific risks. The facilities at risk are located nearby. (https://geoportail.wallonie.be/catalogue/63a32b78-6260-4646-8705-8b1e9e3392c5.html)

Annex 7. The inventory of mine waste dumps in Romania

Name	Country	City/Region	Volume [m3]	Risk to the environment	Coordinates X	Coordinates Y	Other (notes) (surface [ha])
Halda exterioara Rosia	Romania	Cariera Rosia	244 300 000	The stored waste is under the influence of the wind			473.6
Halda exterioara Valea Manastirii	Romania	Cariera Lupoia	156 000 000	The stored waste is under the influence of the wind			469
Halda exterioara Pesteana Nord	Romania	Cariera Pesteana Nord	59 200 000	The stored waste is under the influence of the wind			162.4
Halda exterioara Panga Nord	Romania	Cariera Panga	50 600 000	The stored waste is under the influence of the wind			130.4
Halda exterioara Valea Rogoazelor	Romania	Cariera Rosiuta	46 000 000	The stored waste is under the influence of the wind			125
Halda interioara Urdari	Romania	Cariera Urdari	38 700 000	The stored waste is under the influence of the wind			90.3
Halda PINU	Romania	Calimani	20 312 000	The stored waste is under the influence of the wind			55.8
Halda exterioara Urdari I	Romania	Cariera Urdari	20 000 000	The stored waste is under the influence of the wind			52.3
Halda interioara Berbesti Vest	Romania	Cariera Berbesti Vest	18 800 000	The stored waste is under the influence of the wind			169.2
Halda Bodos	Romania	E.M. Capeni	16 068 000	The stored waste is under the influence of the wind			90.05
Halda exterioara Valea Lupoita	Romania	Cariera Lupoia	14 000 000	The stored waste is under the influence of the wind			22.65
Halda exterioara Berbesti Vest	Romania	Cariera Berbesti Vest	11 500 000	The stored waste is under the influence of the wind			80.1
Halda Terezia	Romania	Cariera de banatite	9 425 000	The stored waste is under the influence of the wind			16.5
Halda Puturosu	Romania	Calimani	8 964 000	The stored waste is under the influence of the wind			23.3
Halda Apele Albe	Romania	Cariera de banatite	8 616 000	The stored waste is under the influence of the wind			23.2
Halda ramura 1 si 2	Romania	Mina Lupeni	7 756 000	The stored waste is under the influence of the wind	45.363239	23.200403	11.4
Halda exterioara Valea Cerveniei	Romania	Cariera Lupoia	7 000 000	The stored waste is under the influence of the wind			25.6
Halda Dumitreleu	Romania	Calimani	5 527 000	The stored waste is under the influence of the wind			15.7
Halda Palanga	Romania	E.M. Filipesti	5 200 000	The stored waste is under the influence of the wind			9
Halda Vazari II	Romania	E.M. Voivozi	5 132 000	The stored waste is under the influence of the wind			8.6
U.P. Petrila ram . 1,2,3,4,	Romania	mina Petrila	5 105 000	The stored waste is under the influence of the wind	45.435483	23.381219	30
CIRESATA	Romania	BRAD PARTIAL	4 758 580	The stored waste is under the influence of the wind			11.09
Halda Budoii Tunel	Romania	E.M. Voivozi	3 834 000	The stored waste is under the influence of the wind			4.6
Halda Valea Mare Meteo	Romania	Cariera de banatite	3 608 000	The stored waste is under the influence of the wind			5
Halda Budoii Sat	Romania	E.M. Voivozi	3 414 000	The stored waste is under the influence of the wind			6.7
Halda Valea Mare (KKD)	Romania	Cariera de banatite	3 390 000	The stored waste is under the influence of the wind			10.2
Halda Valea Popil	Romania	E.M. Sotanga	3 200 000	The stored waste is under the influence of the wind			11.04
coroiesti ram. I	Romania	EPCVJ	3 150 000	The stored waste is under the influence of the wind	45.394725	23.294786	12.6
Halda Noua Victoria	Romania	Mina Lupeni	2 875 000	The stored waste is under the influence of the wind	45.376522	23.231397	3.18
Halda Varghis	Romania	E.M. Capeni	2 700 000	The stored waste is under the influence of the wind			7.34
Halda ARGESTRUT	Romania	ARSITA- NEPOMUCENI-ARGESTRUT-CAPRARIA	2 680 000	The stored waste is under the influence of the wind	47.407778	25.339444	11.6
Halda Voiculet	Romania	E.M. Filipesti	2 500 000	The stored waste is under the influence of the wind			7
Halda Suvorov W	Romania	Cariera de banatite	2 457 000	The stored waste is under the influence of the wind			14
Halda Interioara	Romania	Cariera de banatite	2 319 000	The stored waste is under the influence of the wind			12

Halda principala Talva Zanei	Romania	E.M.Ponor-Cariera Ponor	2 200 000	The stored waste is under the influence of the wind			9.3
Defor	Romania	Mina Lonea	2 150 000	The stored waste is under the influence of the wind	45.433811	23.433472	12.75
Halda Schlucht	Romania	E.M.Anina	2 100 000	The stored waste is under the influence of the wind			5.2
Halda 2W .Ramura Si Ramura Veche Ileana	Romania	Mina Lupeni	1 929 000	The stored waste is under the influence of the wind	45.368353	23.205583	4.09
Halda Ciucior	Romania	E.M. Ceptura	1 890 000	The stored waste is under the influence of the wind			3.5
Dambu Mare	Romania	Mina Tebea	1 862 000	The stored waste is under the influence of the wind	46.163033	22.707883	8.9
Halda exterioara Steic	Romania	Cariera Lupoia	1 800 000	The stored waste is under the influence of the wind			3.9
V. BAIAGA	Romania	CERTEJ	1 789 570	The stored waste is under the influence of the wind			6.99
TRAIAN CARACI	Romania	BRAD	1 740 000	The stored waste is under the influence of the wind			0.12
VALEA BLOJULUI	Romania	BRAD	1 623 280	The stored waste is under the influence of the wind	46.110028	22.844889	13.2
Tericoane Piscu	Romania	Mina Aninoasa	1 466 000	The stored waste is under the influence of the wind	45.403181	23.301489	7.26
Put aux nr. 1+2	Romania	mina Dalja	1 270 000	The stored waste is under the influence of the wind	45.417956	23.336031	8
Halda cota: 420-427 m	Romania	E. M. Ponor -cariera Doman	1 170 000	The stored waste is under the influence of the wind			5
Dambut	Romania	Mina Tebea	1 150 000	The stored waste is under the influence of the wind	46.150886	22.726253	18.3
Halda Slanic Nord	Romania	E.M Campulung	1 110 000	The stored waste is under the influence of the wind			2
Put 7 Vest (tericoane)	Romania	Mina Vulcan	1 056 000	The stored waste is under the influence of the wind	45.396486	23.281389	3.3
Halda Valea Calului	Romania	mina Baita Plai	1 000 000	The stored waste is under the influence of the wind			10
Funicular vechi	Romania	Mina Uricani	1 000 000	The stored waste is under the influence of the wind	45.331658	23.149692	11
Halda Valea Grecilor	Romania	E.M. Filipesti	1 000 000	The stored waste is under the influence of the wind			3
Valea lui Coirt	Romania	Mina Lonea	982 000	The stored waste is under the influence of the wind	45.445428	23.435789	7.19
CORANDA	Romania	CERTEJ	935 380	The stored waste is under the influence of the wind	46.627500	23.074722	25.94
Halda Zaghid Vest	Romania	Zaiiau - Salajul	900 000	The stored waste is under the influence of the wind			15
Halda Ulioia	Romania	E.M. Filipesti	900 000	The stored waste is under the influence of the wind			4
VALEA PODULUI	Romania	TELIUC	832 000	The stored waste is under the influence of the wind	45.711472	22.906806	4.7
Halda cariera OITA-NORD	Romania	COLACU-OITA	823 000	The stored waste is under the influence of the wind	47.506944	25.288889	5.45
Halda Ilva	Romania	Calimani	820 000	The stored waste is under the influence of the wind			7.3
Halda Borumlaca	Romania	E.M.. Voivozi	761 000	The stored waste is under the influence of the wind			2.18
Halda Put3Dobrei S	Romania	mina Dobrei Sud	754 000	The stored waste is under the influence of the wind			4.13
Halde de steril amonte de planul inclinat pana la galeria 3 Valea Calului	Romania	mina Baita Plai	750 000	The stored waste is under the influence of the wind			2.5
PUT NR. 1 FAGUL CETATII	Romania	FAGUL CETATII	725 080	The stored waste is under the influence of the wind			1.96
GAL FERDINAND WETTER	Romania	BALAN CENTRAL	715 000	The stored waste is under the influence of the wind			6.6
PUT NR. 1	Romania	BALAN CENTRAL	703 500	The stored waste is under the influence of the wind	46.612222	25.785667	6.1
DEALUL FETII	Romania	BRAD	674 730	The stored waste is under the influence of the wind	46.080472	22.800028	8.8
Halda Pescareasa	Romania	E.M Campulung	663 000	The stored waste is under the influence of the wind			8.35
Valea Lupului	Romania	Mina Paroseni	659 000	The stored waste is under the influence of the wind	45.379942	23.264514	3.8
Halda cota: 428-430 m	Romania	E. M. Ponor -cariera Doman	618 000	The stored waste is under the influence of the wind			3.1
Halda Paraul Stancii	Romania	mina Baita Plai	600 000	The stored waste is under the influence of the wind			3

Put 7 Vest (Halda veche)	Romania	Mina Vulcan	588 000	The stored waste is under the influence of the wind	45.388750	23.267650	8.4
Halda cota: 432 m	Romania	E. M. Ponor -cariera Doman	543 000	The stored waste is under the influence of the wind			4.3
Halda Galeria 14 si 16 W	Romania	mina Avram Iancu	530 000	The stored waste is under the influence of the wind			2.2
Halda cota: 730 m	Romania	E.M.Ponor-Cariera Ponor	500 000	The stored waste is under the influence of the wind			8.1
Halda Galeria Isipoaia	Romania	LESU URSULUI -ZONA II	485 000	The stored waste is under the influence of the wind	47.284167	25.641667	3.8
Viezureni	Romania	Mina Tebea	470 000	The stored waste is under the influence of the wind	46.145014	22.735422	3.6
Halda OITA	Romania	COLACU-OITA	460 000	The stored waste is under the influence of the wind	47.502500	25.286389	2.66
Halda Pr. Lupului	Romania	mina Baita Plai	450 000	The stored waste is under the influence of the wind			4.5
Halda P.URSULUI INCINTA	Romania	LESU URSULUI -ZONA II	439 000	The stored waste is under the influence of the wind			3.54
VALEA NICOLSON	Romania	TELIUC	435 000	The stored waste is under the influence of the wind	45.725917	22.874139	7
Halda Matul Rosu	Romania	E.M. Ceptura	426 000	The stored waste is under the influence of the wind			1
Halda Dealu Negru	Romania	DEALU NEGRU	419 000	The stored waste is under the influence of the wind			6.36
Tebea Vest	Romania	Mina Tebea	404 000	The stored waste is under the influence of the wind	46.164000	22.717111	2.2
Halda Asau (Rafira Lumina)	Romania	E.M.. Comanesti	400 000	The stored waste is under the influence of the wind			
2 Est	Romania	mina Petrila	389 000	The stored waste is under the influence of the wind	45.444464	23.387344	1.63
RECHENSTEIN	Romania	OCNA DE FIER-DOGNECEA	375 700	The stored waste is under the influence of the wind			0.3
Halda galeria 8	Romania	mina Crucea	365 000	The stored waste is under the influence of the wind			36.91
Cariera	Romania	Mina Razoare	350 000	The stored waste is under the influence of the wind			3.3
Halda Vermesti noua	Romania	E.M. Comanesti	350 000	The stored waste is under the influence of the wind			
Halda cariera Ostra	Romania	OSTRA-ALUNIS	345 000	The stored waste is under the influence of the wind			8.1
Mierlasu	Romania	Mina Barbateni	342 000	The stored waste is under the influence of the wind	45.365786	23.187033	3.24
INTERMEDIARA	Romania	BAISOARA	333 640	The stored waste is under the influence of the wind			2.63
Halda cariera Manaila	Romania	MANAILA SUD	317 000	The stored waste is under the influence of the wind	7.591667	25.221667	1.02
PAULUS MINEREU	Romania	OCNA DE FIER -DOGNECEA	314 300	The stored waste is under the influence of the wind			0.3
PUTUL 1 VORTA	Romania	VORTA	311 000	The stored waste is under the influence of the wind	46.025083	22.676111	0.85
Halda Galeria XVI bis+ 13 Aries	Romania	mina Avram Iancu	310 000	The stored waste is under the influence of the wind			2
Halda 5	Romania	BAISOARA	309 840	The stored waste is under the influence of the wind			2.7
Cremenea	Romania	Mina Suior	300 000	The stored waste is under the influence of the wind			0.05
Halda de Steril	Romania	Mina Razoare	300 000	The stored waste is under the influence of the wind			2.6
Halda Club	Romania	mina Baita Plai	300 000	The stored waste is under the influence of the wind			4
Halda Vermesti veche	Romania	E.M. Comanesti	300 000	The stored waste is under the influence of the wind			
GAL. 6 FAGUL CETATII	Romania	FAGUL CETATII	296 500	The stored waste is under the influence of the wind			3.8
GAL. 6 PUTUL 5	Romania	FAGUL CETATII	296 500	The stored waste is under the influence of the wind			3.8
Plan Inclinat	Romania	mina Dalja	280 000	The stored waste is under the influence of the wind	45.417956	23.336031	1.75
Halda Suvorov E	Romania	Cariera de banatite	279 000	The stored waste is under the influence of the wind			6.23
Halda statie unghiulara	Romania	E.M.Anina	276 000	The stored waste is under the influence of the wind			2.3
SECTOR 1	Romania	CERTEJ	265 300	The stored waste is under the influence of the wind	46.640833	23.638222	3.05
Halda GAL 31 PUZDRA	Romania	PERIMETRUL PUZDRA	265 000	The stored waste is under the influence of the wind			4.2

Halda Cozi(311m)Dobrei S	Romania	mina Dobrei Sud	250 000	The stored waste is under the influence of the wind			1.37
Halda exteriora Potangu Mic	Romania	Cariera Rosiuta	250 000	The stored waste is under the influence of the wind			26.8
Haida Vaiuga (Leorda)	Romania	E.M.. Comanesti	250 000	The stored waste is under the influence of the wind			
FRONTUL 1	Romania	TELIUC	241 200	The stored waste is under the influence of the wind	45.723583	22.849306	2.1
PUT CENTRAL	Romania	BALAN CENTRAL	240 000	The stored waste is under the influence of the wind	46.681500	25.769861	3.4
Halda Polana	Romania	mina Avram Iancu	240 000	The stored waste is under the influence of the wind			2.25
Halda Put1 (409m)Ciud.	Romania	mina Ciudanovita	240 000	The stored waste is under the influence of the wind			1.35
GAL LUNCSOARA	Romania	BRUSTURI	236 400	The stored waste is under the influence of the wind			0.9
GAL HOREA	Romania	ZLATNA	232 750	The stored waste is under the influence of the wind			1.07
ORIZ BAIAGA	Romania	CERTEJ	220 000	The stored waste is under the influence of the wind	45.995333	22.999139	3.5
SECTOR BAIAGA	Romania	CERTEJ	220 000	The stored waste is under the influence of the wind			2.12
Halda Put 1(349m)Natra	Romania	mina Natra	220 000	The stored waste is under the influence of the wind			1.25
Tericon cola 630	Romania	Mina Paroseni	220 000	The stored waste is under the influence of the wind	45.379100	23.259933	1.37
Halda funicular Put nr. 1	Romania	E.M. Anina	220 000	The stored waste is under the influence of the wind			2.15
Halda Zauan Carastefec	Romania	Zalau - Salajul	219 000	The stored waste is under the influence of the wind			7.3
Mesteacan	Romania	Mina Tebea	215 000	The stored waste is under the influence of the wind	46.137453	22.773986	4.1
Halda Borsec	Romania	E.M. Borsec	206 000	The stored waste is under the influence of the wind			1.56
BERNARD	Romania	CERTEJ	205 000	The stored waste is under the influence of the wind			0.30
MUNCACEASCA	Romania	ZLATNA	200 000	The stored waste is under the influence of the wind			2.9
SANTIMBRU	Romania	CAR. SANTIMBRU	200 000	The stored waste is under the influence of the wind	46.269528	25.758833	1.92
FEREZIA	Romania	OCNA DE FIER -DOGNECEA	191 900	The stored waste is under the influence of the wind			4.12
Valea Cutei, +800	Romania	Mina Suior	187 000	The stored waste is under the influence of the wind			1.2
DEALUL MARE	Romania	TELIUC	186 760	The stored waste is under the influence of the wind	45.723583	22.873694	8.1
GAL.B.CUV.DOMNULUI	Romania	BAIA DE ARIES	182 560	The stored waste is under the influence of the wind	46.373167	23.294111	2.2
BARBURA I	Romania	CERTEJ	176 000	The stored waste is under the influence of the wind	45.715139	22.803833	0.73
Halda GAL 1-90-20	Romania	Pr. URSULUI Pr. ISIPOAIA	176 000	The stored waste is under the influence of the wind			1
Halda FAGETUL IERII	Romania	IARA-CACOVA	166 330	The stored waste is under the influence of the wind			3.25
Iaz decantare vechi	Romania	E.M.Baia Mare -Nistru	159 000	The stored waste is under the influence of the wind			1.76
GHEORGHE +281	Romania	SASCA MONTANA	151 240	The stored waste is under the influence of the wind			0.97
Halda Valea Butcii	Romania	mina Baita Plai	150 000	The stored waste is under the influence of the wind			3
Halda Galeria 45-Baia Miniera	Romania	mina Baita Plai	150 000	The stored waste is under the influence of the wind			1
Halda Livada (Asau)	Romania	E.M.. Comanesti	150 000	The stored waste is under the influence of the wind			4.44
Halda Leorda	Romania	E.M.. Comanesti	150 000	The stored waste is under the influence of the wind			
Halda Scaricica (Rafira Lumina)	Romania	E.M.. Comanesti	150 000	The stored waste is under the influence of the wind			
Put aux Est Livezeni	Romania	Mina Livezeni	144 000	The stored waste is under the influence of the wind	45.414842	23.403981	1.09
Funicular Sud	Romania	Mina Aninoasa	143 000	The stored waste is under the influence of the wind	45.391717	23.302164	0.73
Halda funicular	Romania	Mina Paroseni	142 000	The stored waste is under the influence of the wind	45.379100	23.259933	1.25
Halda CoziP1 (418m)Ciud.	Romania	mina Ciudanovita	140 000	The stored waste is under the influence of the wind			0.56

Halda CARIERA ULM	Romania	ULM	131 000	The stored waste is under the influence of the wind	47.296111	25.410000	1.02
Halda Put 1(410-415)Ciud.	Romania	mina Ciudanovita	123 000	The stored waste is under the influence of the wind			4.25
PUT VETEL	Romania	VETEL	122 700	The stored waste is under the influence of the wind	45.876222	22.788167	2.95
GAL. NOROCUL NESPERAT	Romania	BAIA DE ARIES	120 000	The stored waste is under the influence of the wind			0.7
PUTUL 3	Romania	ALTAN TEPE	120 000	The stored waste is under the influence of the wind			0.7
Halda 1 -30bis Botusana	Romania	mina Botusana	116 000	The stored waste is under the influence of the wind			14
Halda cota: 352 m	Romania	E.M.Ponor-cariera Doman	115 000	The stored waste is under the influence of the wind			0.04
GAL. 23 AUGUST	Romania	ZLATNA	111 800	The stored waste is under the influence of the wind	46.122583	23.105528	1.1
GAL. RUNCU	Romania	ZLATNA	104 500	The stored waste is under the influence of the wind			1
GAL OLT	Romania	BALAN CENTRAL	104 000	The stored waste is under the influence of the wind	46.269417	25.758833	2
Dealul Negru	Romania	Borsa - Burloaia	102 000	The stored waste is under the influence of the wind			1.45
Halda sita comerciala si necomerciala	Romania	mina Baita Plai	100 000	The stored waste is under the influence of the wind			

Annex 8. The inventory of mine waste dumps in Poland

Name	Country	City	Raw material	Type	Volume	Degree of reclamation	Risk to the environment	Coordinates X	Coordinates Y	Other (notes)
Reclamation area „A” po KWK Andaluzja	PL	Piekary Śląskie	post-mining waste from hard coal mining	dump	10,6 ha			276891	498174	
B1-A area after Bobrek-Miechowice	PL	Bytom	post-mining waste from hard coal mining	dump	2,36 ha	partially	water contamination, dust	276571	491699	the area is partially covered with vegetation
Mine sedimentation tank nr 7 a hard coal mine Bobrek-Miechowice	PL	Bytom	post-mining waste from hard coal mining	mine sedimentation tank	2,96 ha	0%	water contamination, dust formation	274682	489463	area of the mine sedimentation tank nr 7, mine shaft at Barbara, a hard coal mine Bobrek-Miechowice, area subject to recultivation
Cones at the mine shaft Antoni after a hard coal mine Bobrek-Miechowice	PL	Bytom	post-mining waste from hard coal mining	dump	4,4 ha	in progress	water contamination, dust formation	275658	490025	Cones at the mine shaft Antoni and Zbigniew a hard coal mine Bobrek-Miechowice, currently undergoing demolition
Area F-1 a hard coal mine Bobrek-Miechowice	PL	Bytom	post-mining waste from hard coal mining	dump	7 ha	100%	water contamination	276287	487343	degraded forest areas, recultivation carried out using mining waste
Mine dump no. 3 traffic Bobrek after a hard coal mine Bobrek-Miechowice	PL	Bytom	post-mining waste from hard coal mining	dump	10,1 ha	0%	water contamination, dust formation	277394	491815	a dump of post-mining waste, the area has not been reclaimed or developed
Area after the mine sedimentation tank WS-23 after a hard coal mine Bobrek-Miechowice	PL	Bytom	post-mining waste from hard coal mining	dump		100%	water contamination	275999	489221	area was reclaimed using mining waste
Mine dump 9Bp after a hard coal mine Powstańców Śląskich	PL	Bytom	post-mining waste from hard coal mining	dump	8 ha	in progress	water contamination, fire, dusting	278172	493132	area at risk of fire during recultivation
Mine dump 4a after a hard coal mine Powstańców Śląskich	PL	Bytom	post-mining waste from hard coal mining	dump	11,60 ha	in progress	water contamination, fire, dusting	278516	493297	area at risk of fire during recultivation
Mine dump Trójkąt Piekarski after a hard coal mine Rozbark	PL	Piekary Śląskie	post-mining waste from hard coal mining	dump	8 ha	partially	water contamination, dust formation	276716	497048	partially reclaimed area,
Mine dump Trójkąt Bytomski after a hard coal mine Rozbark	PL	Bytom	post-mining waste from hard coal mining	dump	19 ha	0%	water contamination, dust formation	276383	497203	unreclaimed area
Mine dump Skalny	PL	Łaziska Górne	post-mining waste from hard coal mining	dump	30 ha	100%	no risk	253027	489888	area after a hard coal mine Bolesław Śmiały, reclaimed area
Mine dumps Marta Waleska	PL	Łaziska Średnie	post-mining waste from hard coal mining	dump	22 ha	100%	no risk	253133	491760	area after a hard coal mine Bolesław Śmiały, reclaimed area
Mine dump Trzy Stożki	PL	Czerwionka-Leszczyny	post-mining waste from hard coal mining	dump	97 ha	0%	water contamination, dust formation	255158	477855	area after a hard coal mine Dębieńsko, area undergoing recultivation
Mine dump Ostropa	PL	Gliwice	post-mining waste from hard coal mining	dump	10,34 ha	100%	water contamination	269377	469725	area after a hard coal mine Gliwice, reclaimed area

Mine dump Wymystów a hard coal mine Makoszowy	PL	Zabrze	post-mining waste from hard coal mining	dump	27,5 ha	100%	water contamination	266346	484334	reclaimed area
Mine dump Sośnica a hard coal mine Sośnica	PL	Gliwice/Zabrze	post-mining waste from hard coal mining	dump	160,9 ha	partially	water contamination, dust formation	267292	481873	active mining waste dump, partially reclaimed area- area of the City of Gliwice
Mine dump Korfanty a hard coal mine Szczygłowie	PL	Knurów	post-mining waste from hard coal mining	dump	26 ha	100%	water contamination	259059	474062	reclaimed area
Mine dump Jagielnia a hard coal mine Szczygłowie	PL	Knurów	post-mining waste from hard coal mining	dump	20,6 ha	in progress	water contamination	258557	474605	area undergoing reclamation
Mine dump Bierawka I a hard coal mine Szczygłowie	PL	Knurów	post-mining waste from hard coal mining	dump	22,2 ha	100%	water contamination	25208	474299	reclaimed area
Mine dump Smolnica-Leboszowice a hard coal mine Szczygłowie	PL	Sośnicowice/Pilchowice	post-mining waste from hard coal mining	dump	104 ha	partially	water contamination, dust formation	264263	466275	partially reclaimed area,
Central Mining Waste Dump	PL	Knurów	post-mining waste from hard coal mining	dump	255 ha	active	water contamination, dust formation	259354	477470	active mining waste dump a hard coal mine Budryk and Knurów-Szczygłowie
Mine dump Skrzyszów-Wschód a hard coal mine Jas-Mos	PL	Gmina Gdów	post-mining waste from hard coal mining	dump	31 ha	100%	water contamination	231894	464794	reclaimed area
Mine dump Kościelniok a hard coal mine Pniówek	PL	Jastrzębie Zdrój/Pawłowice	post-mining waste from hard coal mining	dump	193,5 ha	active	water contamination, dust formation	234476	475734	active mining waste dump a hard coal mine Pniówek, partially reclaimed area
Mine dump Pochwacie a hard coal mine Borynia Zofiówka	PL	Jastrzębie Zdrój/Mszana	post-mining waste from hard coal mining	dump	137,1 ha	active	water contamination, dust formation	234331	469948	active mining waste dump a hard coal mine Borynia Zofiówka
Mine dump Borynia Jar a hard coal mine Borynia-Zofiówka	PL	Jastrzębie Zdrój	post-mining waste from hard coal mining	dump	105 ha	active	water contamination, dust formation	236894	471402	active mining waste dump , partially reclaimed area
Mine dump Krupiński a hard coal mine Krupiński	PL	Gmina Suszec	post-mining waste from hard coal mining	dump	70 ha	closed, 0%	water contamination, dust formation	242852	483709	closed mining waste dump, unreclaimed area
Mine dump Kostuhna after a hard coal mine Boże Dary	PL	Katowice	post-mining waste from hard coal mining	dump	24,90 ha	100%	water contamination	257445	500645	reclaimed area
Mine dump Murcki a hard coal mine	PL	Katowice	post-mining waste from hard coal mining	dump	20 ha	100%	water contamination	257939	502446	reclaimed area
Mine dump przyzakładowe a hard coal mine Staszic	PL	Katowice	post-mining waste from hard coal mining	dump	10,1 ha	100%	water contamination	261989	503882	reclaimed area
Mine dump Chropaczów	PL	Świętochłowice	post-mining waste from hard coal mining	dump	28 ha	100%	water contamination	272574	493511	reclaimed area
Mine dump Cegielniana	PL	Ruda Śląska	post-mining waste from hard coal mining	dump	12 ha	100%	water contamination	264680	491513	reclaimed area, developed for business activities

Mine dump Trójkąt a hard coal mine Wesoła	PL	Mysłowice	post-mining waste from hard coal mining	dump	18,5 ha	100%	water contamination	257679	507106	reclaimed area
Mine dump "Szarotka" a hard coal mine Wesoła	PL	Mysłowice	post-mining waste from hard coal mining	dump	7,5 ha	0%	water contamination, dust formation	256349	506524	unreclaimed area
Mine dump E - Przecieszyn a hard coal mine Brzeszcze	PL	Brzeszcze	post-mining waste from hard coal mining	dump	34,66 ha	0%	water contamination, dust formation	234479	513658	unreclaimed area
Mine dump Buczaki a hard coal mine Brzeszcze	PL	Brzeszcze	post-mining waste from hard coal mining	dump	34,2 ha	0%	water contamination, dust formation	236738	512686	unreclaimed area
Zalewisko G a hard coal mine Brzeszcze	PL	Brzeszcze	post-mining waste from hard coal mining	dump	28,5 ha	0%	water contamination, dust formation	235275	513418	unreclaimed area
Zalewisko przy potoku "Różany" a hard coal mine Brzeszcze	PL	Brzeszcze	post-mining waste from hard coal mining	dump	13,2 ha	100%	water contamination	236749	512859	reclaimed area
Mine dump przy ul. Krakowskiej a hard coal mine Janina	PL	Libiąż	post-mining waste from hard coal mining	dump	66 ha	100%	water contamination	250046	520621	reclaimed area
Mine dump Park Angielski after hard coal mine Jaworzno	PL	Jaworzno	post-mining waste from hard coal mining	dump	48 ha	100%	water contamination	257815	519979	reclaimed area
Rekultywacja osadników Rudołtówice a hard coal mine Silesia	PL	Rudołtówice, Gmina Bestwina	post-mining waste from hard coal mining	dump	18 ha	0%	water contamination, dust formation	231150	500412	unreclaimed area
Mine dump Kaniów a hard coal mine Silesia	PL	Kaniów, Gmina Bestwina	post-mining waste from hard coal mining	dump	14,6 ha	0%	water contamination, dust formation	230761	501433	unreclaimed area
Mine dump Stożek a hard coal mine Silesia	PL	Kaniów, Gmina Bestwina	post-mining waste from hard coal mining	dump	5,63 mha	0%	water contamination, dust formation	230626	500843	unreclaimed area
Mine dump przy szybie głównym a hard coal mine Ziemowit	PL	Lężyny	post-mining waste from hard coal mining	dump	35,40 ha	0%	water contamination, dust formation	250802	509744	unreclaimed area
Zwałowiko Panewniki after a hard coal mine Halemba	PL	Mikołów	post-mining waste from hard coal mining	dump	118 ha	0%	water contamination, dust formation	260733	492408	unreclaimed area
Leveling a brick excavation a hard coal mine Bielszowice	PL	Ruda Śląska	post-mining waste from hard coal mining	dump	9,5 ha	100%	water contamination	266218	488936	reclaimed area
Mine dump Nowa Klara after a hard coal mine Pokój	PL	Ruda Śląska	post-mining waste from hard coal mining	dump	3,6 ha	100%	water contamination	269764	488605	reclaimed area
Mine dump Klara after a hard coal mine Pokój	PL	Ruda Śląska	post-mining waste from hard coal mining	dump	21,2 ha	100%	water contamination	269830	488952	reclaimed area
Mine dump Czesław after a hard coal mine Pokój	PL	Ruda Śląska	post-mining waste from hard coal mining	dump	5,6 ha	0%	water contamination, dust formation, fire	271598	491247	unreclaimed, thermally active area

Mine dump nr 4 after a hard coal mine Polska-Wirek	PL	Ruda Śląska	post-mining waste from hard coal mining	dump	23,2 ha	partially	water contamination, dust formation	266718	494084	partially reclaimed area,
Mine dump Ruda after a hard coal mine Zabrze-Bielszowice	PL	Zabrze	post-mining waste from hard coal mining	dump	35 ha	100%	water contamination	272019	487675	reclaimed area
Cone Wrzosa after a hard coal mine Anna	PL	Pszów	post-mining waste from hard coal mining	dump	14 ha	0%	water contamination, dust formation, fire	242184	458585	unreclaimed, thermally active area
Dump przy EC a hard coal mine Anna	PL	Pszów	post-mining waste from hard coal mining	dump	8,2 ha	0%	water contamination, dust formation	242311	456533	unreclaimed area
Mine dump near shaft Jedłownik a hard coal mine Anna	PL	Wodzisław Śląski	post-mining waste from hard coal mining	dump	3,2 ha	0%	water contamination, dust formation	238977	459639	unreclaimed area
Mine dump Buków a hard coal mine Anna	PL	Gmina Lubomia	post-mining waste from hard coal mining	dump	44 ha	0%	water contamination, dust formation	236535	449525	unreclaimed area
Mine dump Rejon Szybu IV a hard coal mine Chwałowice	PL	Rybnik	post-mining waste from hard coal mining	dump	8 ha	100%	water contamination	243745	467099	reclaimed area
Mine dump Rejon D a hard coal mine Chwałowice	PL	Rybnik	post-mining waste from hard coal mining	dump	24,5 ha	100%	water contamination	243443	467779	reclaimed area
Mine dump Stara hałda a hard coal mine Chwałowice	PL	Rybnik	post-mining waste from hard coal mining	dump	6 ha	0%	water contamination, dust formation	244827	468459	unreclaimed area
The mud settler area a hard coal mine Chwałowice	PL	Rybnik	post-mining waste from hard coal mining	dump	37 ha	100%	water contamination	243461	468633	reclaimed area
Area Mośnik a hard coal mine Chwałowice	PL	Rybnik	post-mining waste from hard coal mining	dump	16,4 ha	100%	water contamination	244095	467129	reclaimed area
Mine dump Stożki after a hard coal mine Rymer	PL	Rybnik	post-mining waste from hard coal mining	dump	8,7 ha	100%	water contamination, dust formation, fire	243302	463773	reclaimed, thermally active area
Mine dump Rejon Żabik a hard coal mine Rymek	PL	Rybnik	post-mining waste from hard coal mining	dump	19,2 ha	100%	water contamination	243932	468830	reclaimed area
Mine dump Area North a hard coal mine Jankowice	PL	Rybnik	post-mining waste from hard coal mining	dump	69 ha	active	water contamination, dust formation	243754	469669	active mining waste dump, unreclaimed area
Mine dump near shaft VI a hard coal mine Janowice	PL	Jankowice Rybnickie	post-mining waste from hard coal mining	dump	47,5 ha	active	water contamination, dust formation	240681	467493	active mining waste dump, unreclaimed area
Mine dump a hard coal mine Marcel	PL	Radlin	post-mining waste from hard coal mining	dump	70 ha	active	water contamination, dust formation	241300	462701	active mining waste dump, unreclaimed area

Cones no. 1 i 2 and flat dump no. 3	PL	Rydułtowy	post-mining waste from hard coal mining	dump	43 ha	active	water contamination, dust formation	244026	460148	active mining waste dump, thermally active area
Mine dump Ignacy a hard coal mine Rydułtowy	PL	Rybnik	post-mining waste from hard coal mining	dump	23,6 ha	partially	water contamination, dust formation	244504	461707	partially reclaimed area,
Teren after a hard coal mine Barbara-Chorzów	PL	Chorzów	post-mining waste from hard coal mining	dump	9,6 ha	100%	water contamination	272606	497127	reclaimed area
Mine dump Grodków a hard coal mine Grodziec	PL	Będzin	post-mining waste from hard coal mining	dump	8,3 ha					
Mine dump Żychcice after a hard coal mines Grodziec and Jowisz	PL	Wojkowice	post-mining waste from hard coal mining	dump	17 ha	partially	water contamination, dust formation	278155	501897	partially reclaimed area,
Mine dump Jadwiga after a hard coal mine Paryż	PL	Dąbrowa Górnicza	post-mining waste from hard coal mining	dump	8,6 ha	0%	water contamination, dust formation	273760	512109	unreclaimed area
Mine dump nr 3 after a hard coal mine Kazimierz Juliusz	PL	Sosnowiec	post-mining waste from hard coal mining	dump	20 ha	0%	water contamination, dust formation	268535	517363	unreclaimed area
Mine dump nr 5 after a hard coal mine Kazimierz-Juliusz	PL	Sosnowiec	post-mining waste from hard coal mining	dump	8,9 ha	0%	water contamination, dust formation	266261	515152	unreclaimed area
Mine dump 1/R after a hard coal mine Pstrowski	PL	Zabrze	post-mining waste from hard coal mining	dump	25 ha	0%	water contamination, dust formation, fire	275218	485105	unreclaimed, thermally active area
Mine dump 2/R after a hard coal mine Pstrowski	PL	Zabrze	post-mining waste from hard coal mining	dump	21,9 ha	100%	water contamination	274374	487304	reclaimed area
Mine dump 1/L after a hard coal mine Pstrowski	PL	Zabrze	post-mining waste from hard coal mining	dump	11,48 ha	0%	water contamination, dust formation	273048	485899	unreclaimed area
Mine dump 2/L po KWK Pstrowski	PL	Zabrze	post-mining waste from hard coal mining	dump	8,6 ha	100%	water contamination	271890	485754	reclaimed area
Mine dump 3/R after a hard coal mine Pstrowski	PL	Zabrze	post-mining waste from hard coal mining	dump	3,2 ha	100%	water contamination	274477	487948	reclaimed area
Mine dump Hieronim after a hard coal mine Saturn	PL	Czeladź	post-mining waste from hard coal mining	dump	40 ha	100%	water contamination	270780	504425	reclaimed area
Mine dump Graniczna after a hard coal mine Saturn	PL	Czeladź	post-mining waste from hard coal mining	dump	14,3 ha	100%	water contamination	270144	506553	reclaimed area
Mine dump near the V shaft a hard coal mine Saturn	PL	Czeladź	post-mining waste from hard coal mining	dump	21,50 ha	100%	water contamination	268393	505686	reclaimed area

The pits niweckie after a hard coal mine Sosnowiec	PL	Sosnowiec	post-mining waste from hard coal mining	dump	20 ha	0%	water contamination, dust formation	264801	511441	unreclaimed area
Mine dump Michał after a hard coal mine Siemianowice	PL	Siemianowice Śląskie	post-mining waste from hard coal mining	dump	3,4 ha	100%	water contamination	270955	501375	reclaimed area