

Establishment of construction and demolition waste processing sites in Ukraine

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The establishment of sites for construction and demolition waste (CDW) processing is a necessary component of the construction waste processing business in Ukraine. Their primary purpose in the overall waste management system is waste processing and recovery.

Significant destruction of social and industrial infrastructure as a result of Russian attacks has led to active reform of the legislative regulation on the processing and recovery of construction waste.

Today, when running a waste management business, you need to take into account:

- general norms of Ukrainian legislation on the establishment of construction and demolition waste processing sites;
- specific norms for the establishment of such sites for the processing of construction and demolition waste resulting from the destruction caused by hostilities.

1. General Establishment Procedure

A CDW processing site is effectively an industrial enterprise that accepts, sorts and processes construction and demolition waste.

To establish such a site, it is necessary to:

- Establish a legal entity in Ukraine. In this regard, Ukrainian legislation does not provide for any specific procedure for establishing

companies that will be engaged in construction and demolition waste processing. In other words, such companies are established on a general basis.

- Purchase or lease a land plot. Acquisition of a land plot for CDW processing is carried out in the standard manner. However, it is mandatory for the land plot to have the appropriate designated purpose, namely: "for the placement and operation of buildings and structures of processing industry enterprises".

If the designated purpose of the land plot is different, it can be changed. This procedure is complicated, lengthy, but still possible.

It is also necessary to take into account a number of general sanitary and environmental requirements for the area and geographical location of the land plot. Such requirements are set forth in the general and special construction standards and, in particular, include:

- the possibility of storing accepted construction and demolition waste in the declared amount;
 - the possibility of sorting construction and demolition waste in the declared amount;
 - the possibility of separate storage of sorted construction and demolition waste, preventing its mixing;
 - the possibility of locating production facilities for processing construction waste and placing household facilities;
 - the possibility of separate storage of identified hazardous waste;
 - the possibility of separate storage of waste that is not subject to processing.
- Prepare design documentation for the construction of a construction waste treatment site. Such documentation should be prepared by a specialised organisation in accordance with construction standards, taking into account special environmental, sanitary and fire safety standards.
 - Ensure the preparation of an expert study of environmental impact assessment in the course of conducting business activities related to construction waste processing. The report on the environmental impact assessment is prepared by a specialised expert institution.

The content of such a report corresponds with the assessment purpose, namely:

- determination of the level of environmental impact of CDW processing;
- compliance of the CDW processing process with environmental and sanitary standards;
- determination of the level of CDW processing impact on living conditions for flora and fauna;
- determination of risks to human health, cultural heritage and the environment, including due to possible emergencies;
- assessment by type and quantity of expected waste;

- assessment of the possibility of water, air, soil and subsoil pollution, as well as noise, vibration, light, heat and radiation pollution.

This report is the main document that regulating environmental, sanitary and fire safety requirements for the CDW processing sites.

- Obtain a conclusion on the possibility of carrying out activities from the relevant territorial body of the State Environmental Inspectorate of Ukraine. Such a conclusion is essentially the result of the compliance of the construction and demolition waste processing site with the requirements of the Environmental Impact Assessment Report.
- Obtain a permit for waste processing operations from the Ministry of Environmental Protection and Natural Resources of Ukraine. The Permit for waste processing operations is the final document that gives the company the right to process CDW. This Permit states that:
 - the company planning to process CDW meets the requirements of Ukrainian legislation;
 - the CDW processing procedure complies with all sanitary, environmental and fire safety norms and standards.

2. Environmental and sanitary aspects of operation

Environmental and sanitary requirements for sites are formed depending on the level of hazard of the production processes to be carried out there.

A sanitary protection zone is formed around the enterprise based on the hazard level.

A sanitary protection zone is an area around an enterprise within which it is prohibited for people to live and conduct household business activities. The sanitary protection zone is created to protect the population from the effects of adverse production factors (dust, gases, noise, vibrations). At the same time, the value of these factors on the border of the sanitary protection zone should not exceed the hygienic standards established for populated areas.

The width of the sanitary protection zone depends on:

- the nature and capacity of production;
- the sophistication of technological processes, the use of gas cleaning and dust removal devices;
- availability of anti-noise, anti-vibration and other protective measures.

Experience has shown that for a modern construction and demolition waste processing, the sanitary protection zone can have a radius of 50 to 100 metres.

The sanitary protection zone is set up from potentially harmful sources to the boundaries of residential development, public facilities, buildings and structures, including children's, educational, medical institutions, sports facilities, parks, and recreation areas.

An important aspect of the sanitary requirements for construction and demolition waste treatment sites is the impact on the purity of soil, groundwater, water and forests. To ensure sanitary safety, requirements may also apply to the placement of drainage networks, collectors or other engineering structures that minimise the environmental impact of the processing process.

The main requirements for fire protection measures are to minimise the negative impact of possible fires on human life and the environment.

The set of fire protection measures is formed depending on the production area, the number of employees, the level of inertness and the amount of materials (raw materials, finished products, non-recyclable waste). Fire protection measures can vary from the installation of simple cylinder fire extinguishers to the installation of a complex fire extinguishing system with a separate water tank.

3. Operation during wartime

During martial law, the process of storage and processing of construction and demolition waste generated due to damage (destruction) of buildings and structures as a result of hostilities, terrorist acts, sabotage or work to eliminate their consequences is regulated separately.

In particular, this applies to the environmental and sanitary requirements for the storage and processing of such construction and demolition waste.

A specific feature of the storage and processing of construction and demolition waste generated as a result of hostilities is that temporary storage sites for demolition waste can be created.

Temporary storage sites for demolition waste are specially equipped or adapted land plots intended for temporary storage of demolition waste until it is restored or removed.

In this case, the areas intended for sorting and processing of construction and demolition waste and the areas for temporary storage of recovered raw materials should be located in temporary waste storage sites.

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In this case, special (preferential) sanitary and environmental requirements apply to temporary storage sites for demolition waste, in particular:

- no requirement to conduct an expert study of environmental impact assessment of construction and demolition waste processing activities;
- no need to obtain a conclusion on the possibility of carrying out activities from the State Environmental Inspectorate of Ukraine. These simplifications will significantly reduce the amount of time required to start construction and demolition waste processing activities;
- clearly regulated sanitary and environmental requirements for the boundaries of sanitary protection zones for temporary storage of demolition waste;
- clearly regulated sanitary and environmental requirements for the storage and sorting of demolition waste;
- clearly regulated sanitary and environmental requirements to the basic standards for the construction of temporary storage facilities for demolition waste.

The boundaries of sanitary protection zones for temporary demolition waste storage sites defined by law are as follows:

- 0.5 km from residential and public buildings, social infrastructure facilities;
- 0.2 km from agricultural land, public roads and railway lines of the general network;
- 0.05 km from forests.

In other words, in this case, the sanitary protection zone is formed without any additional expert studies.

The Resolution of the Cabinet of Ministers of Ukraine also directly sets out other sanitary and environmental requirements for temporary storage sites for demolition waste, including:

- the site's ground cover, which must be made of concrete, asphalt or compacted soil;
- arrangement of drainage of water resulting from precipitation;
- fencing the territory perimeter;
- arranging access roads that ensure unimpeded passage of vehicles;
- the procedure for storing construction and demolition waste.

Relaxed requirements for the operation of such sites during the war and clearly defined sanitary, environmental and fire safety requirements create attractive conditions for investing in the construction and demolition waste recycling business, since they:

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- significantly reduce the time required to document the necessary permits;
- significantly simplify the preparation of project documentation for the construction of a site.