

### 2.3 Green belt

A green belt is a fundamental facility for sanitary landfill sites. Nobody wants to encounter once more solid waste that has already been discharged. The green belt will be an effective barrier and is necessary for continued use of the disposal site. A fence shall be constructed in the green belt to control access to the disposal site.

### 3. Facilities

Based on the present information, provision of the following facilities is recommended for extended use of the Dolny Bogrov site:

a. Waste amount to be disposed	3.4 million m <sup>3</sup>
b. Area to be used	131 ha
c. Facility to be constructed	
- Landfill site	131 ha
- Sealing wall (H=15m)	7,300 m
- Leachate collection pipe	7,300 m
- Leachate discharge pipe	2,550 m
- Green belt and fence (w= 10 m)	7,500 m
- Facility for gas ventilation	1 lot
- Access road	790 m
- Administration office and truck-scale	1 lot
- Ditch	2,190 m
- Partition dike	890 m
d. Others	
- Working road	7,600 m
- Final soil covering (h=1m)	1.3 million m <sup>3</sup>

### 4. Construction Cost

Construction cost of the above facilities is roughly estimated at around US\$ 30 million. Therefore cost for disposal will be US\$ 9/m<sup>3</sup>, which is nearly three times the respective cost for Katina landfill site construction.

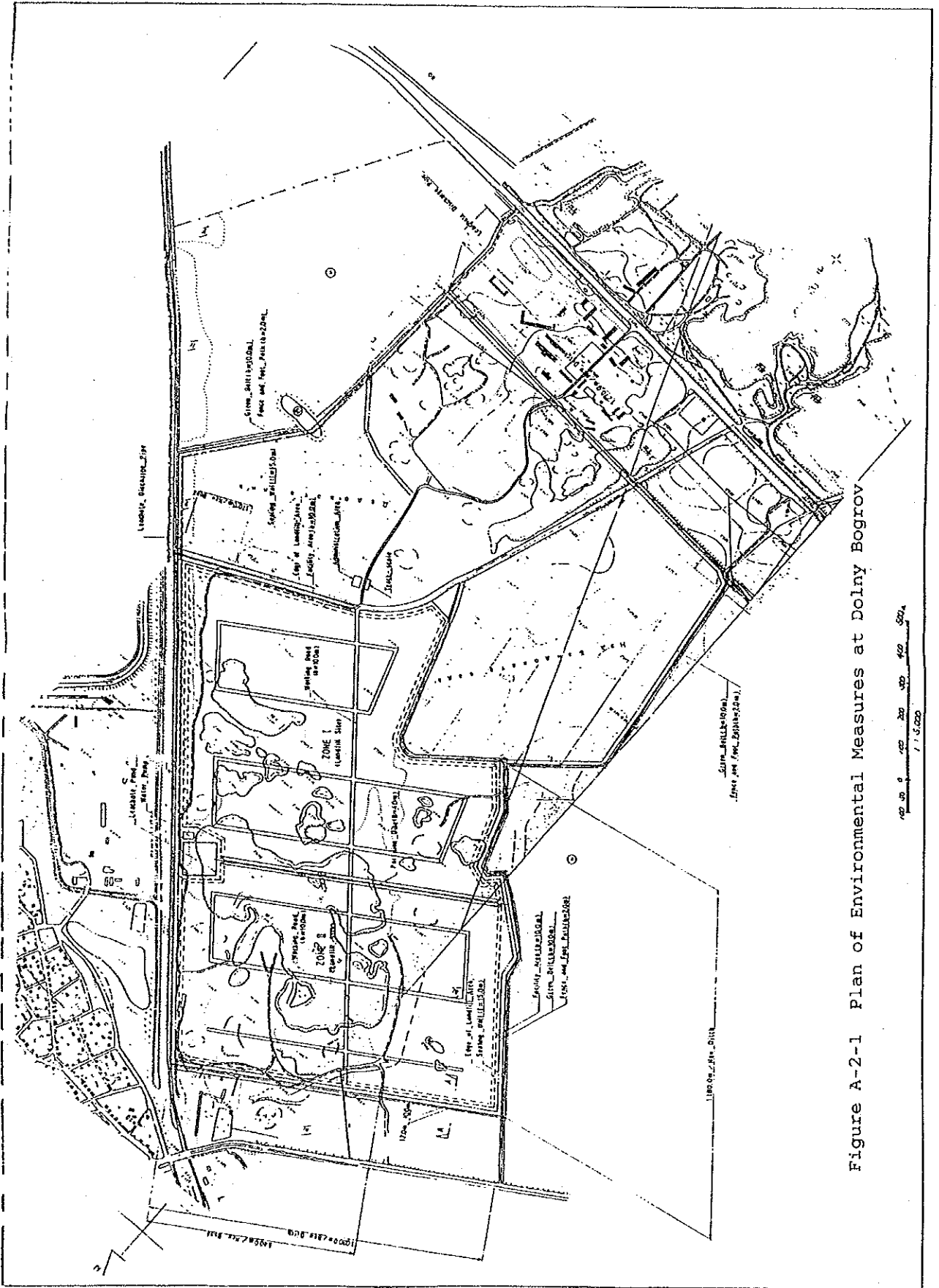
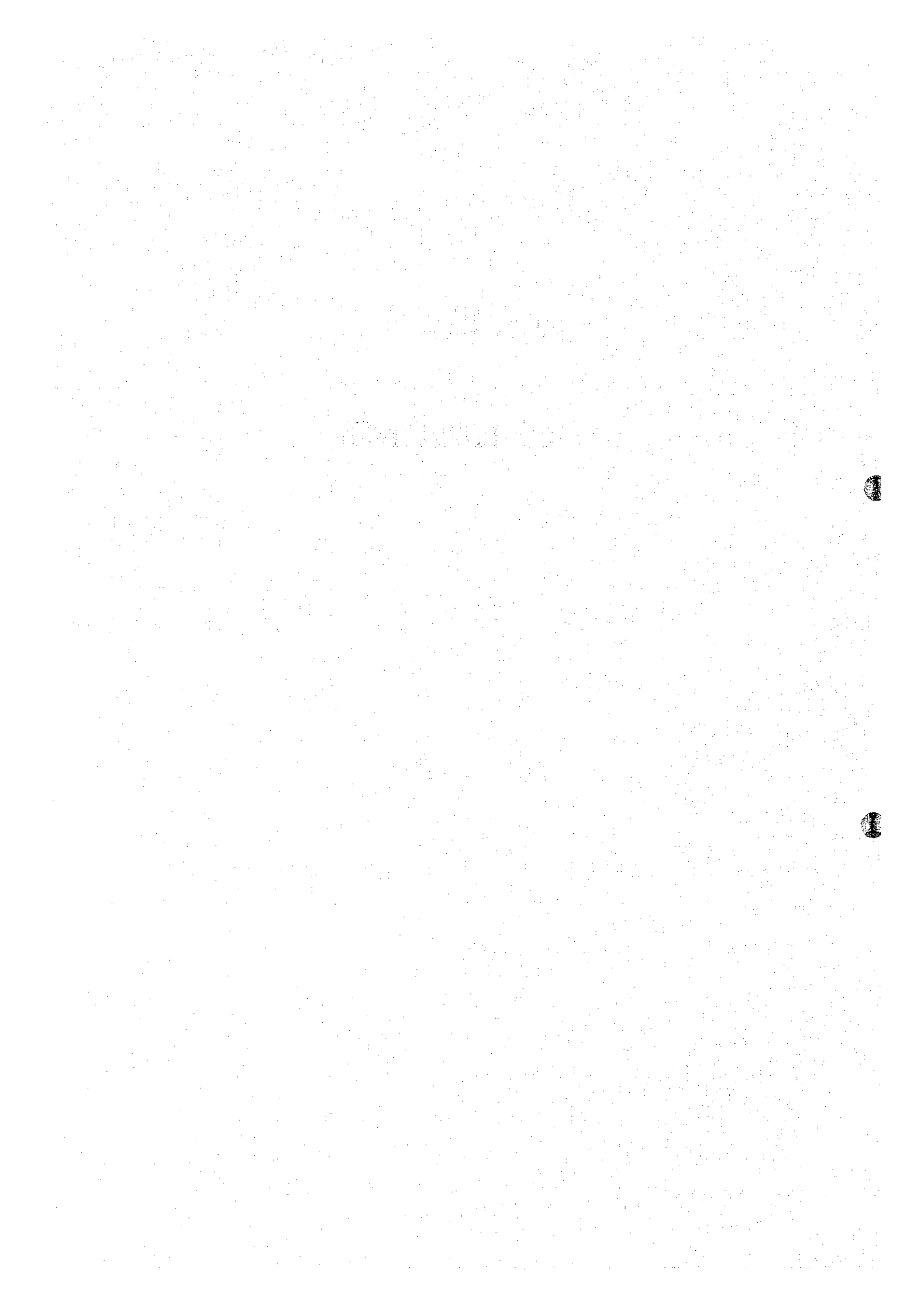


Figure A-2-1 Plan of Environmental Measures at Dolny Bogrov



# ANNEX 3

## DEFINITIONS



### Annex 3 Definitions of Terms Used

This annex sets out specific definitions which are presented in order that a clear meaning be established of the specific terms used in connection with:-

These definitions follow:

#### A. Treatment and Disposal of Solid Waste

"Waste" means any substance which constitutes a scrap material or an effluent or other unwanted surplus substance arising from the application of any process.

and

any substance or article which requires to be disposed of as being broken, worn out, contaminated or otherwise spoiled and does not include a substance which is an explosive.

"Controlled waste" means any household, industrial and commercial waste or any such waste subject to statutory regulation;

"Contaminated Land" means land which represents an actual or potential hazard to health or the environment as a result of current or previous use;

"Derelict Land" means land so damaged by industrial or other development that it is incapable of beneficial use without treatment;

"Eluate" means the solution obtained by simulated laboratory leaching test;

"Environment" means all or any of the following media, namely the air, water and land, and the medium of air includes the air within buildings and the air within other natural or man-made structures above or below the ground;

"Special waste" means controlled waste that is or may be so dangerous or difficult to treat, keep or dispose of that special provision is required for dealing with it;

"Industrial waste" means waste arising from manufacturing or industrial activities or processes;

"Harm" includes offense to any of man's senses;

"Hazardous waste" means any waste which is covered by the EC Council Directive 78/319/EEC of 20 March 1978 on toxic and dangerous waste;

"Inert waste" means waste that, when deposited into a landfill, does not undergo any significant physical, chemical or biological transformations and which complies with the EC eluate criteria;

"Landfill" means a waste disposal site used for the controlled deposit of waste onto or into land;

"Landfill gas" means all the gases generated from the land-filled waste;

"Leachate" means any water percolating through the deposited waste and emitted from or contained within a landfill;

"Medical Waste" means any waste originating from a clinic or hospital or a medical or similar civil or military or veterinary establishment which contains, in whole or in part, waste which is clinical, pharmaceutical or pathological in nature;

"Moisture Content" means the weight loss expressed as a percentage when a sample of solid waste is dried to a constant weight at a temperature of 100 to 105 Deg C;

"Mono landfill" means a landfill site or part of it where only one defined type of waste is deposited, meaning by this waste which is comparable with respect to origin, composition and the characteristics of their leachates;

"Municipal waste" means domestic refuse, as well as commercial or trade refuse and other waste which, because of its nature or composition, is similar to domestic refuse;

"Natural or Cultural Patrimony" of an area means the natural birth-right of the lands and area environs inherited & occupied by man;

"Operator" means the natural or legal person responsible for a landfill;

"Pollution of the environment" means pollution of the environment due to the release (into any environmental medium)

from any process of substances which are capable of causing harm to man or any other living organisms supported by the environment;

"Precompressed Waste Blocks" (PCW) means the product as a result of applying pressure to loose compressible waste material within an enclosed space and binding the compacted waste mass with steel wires in order that it remains in its compacted state. In English speaking countries, the process is known as 'Baling'. For linguistic reasons the terms 'Bales' and 'Baling' are avoided in the main text of the report;

"Special Waste" is controlled waste of any kind that is or may be so dangerous or difficult to treat, keep or dispose of that special provision is required for dealing with it. (A decision as to whether or not a waste is special is made by a designated environmental officer);

"Storage" means the controlled temporary deposit of waste prior to recovery, treatment or disposal. Waste to be stored for more than one year (long term storage) will have to be stable, non-reacting waste, otherwise it will have to be previously stabilized. Permanent or indefinite storage shall be considered as equivalent terms to landfill;

"Transfer station" means a facility where waste is unloaded in order to permit its preparation for further transport for recovery, treatment or disposal elsewhere;

"Treatment" means the physical, chemical or biological processes that change the characteristics of the waste in order to reduce its volume or hazardous nature, facilitate its handling or enhance recovery;

## B. Hydrogeology

"Permeability (K)" means the measure of property of the ability an aquifer to transmit water under a sloping piezometric surface or pressure head. Units are Measured in m/sec.

"Storage Coefficient (S)" means that parameter of cubic meters of water which is available as a yield resulting from the decline of an aquifer water surface to a point of draw-down and measured over a unit horizontal cross-sectional area;



"Specific Yield" reflects the amount of water available for development;

"Hydraulic Gradient and Head" means the slope of the piezometric surface;

"Transmissibility (T)" means a coefficient which is a measure of the rate at which water will flow through a unit width vertical strip of aquifer extending through its full saturated thickness under a unit hydraulic gradient. It has units of sq m/sec;

"Transfer Coefficient" is a common and well used Bulgarian parameter measured in terms of sq m / day. It is calculated as the transmissibility coefficient applicable per unit of the Storage coefficient (Ie: T/S).



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