



UREDENA ZEMLJA

Nacionalni program sređivanja zemljišnih knjiga i katastra

ENVIRONMENTAL MANAGEMENT PLAN (EMP)

**For the Works on Mechanical Installations
(Air Conditioning and Ventilation)
at the State Geodetic Administration Central Archives
in Gliná**

INTRODUCTION

The objective of the Integrated Land Administration System Project (ILAS Project) is to modernize the land administration system in the Republic of Croatia in order to improve on the government services from the point of view of efficiency, transparency and costs. This is proposed to be achieved through the four project components. Component B. Spatial Information and Cadastre System Modernization would focus on improving the quality and presentation of spatial data managed and maintained by State Geodetic Administration (SGA) and implementation of a National Spatial Data Infrastructure (NSDI), in line with the EU INSPIRE Directive. This component will also support SGA with its own re-structuring, including improving the physical premises for 3 regional cadastral offices, construction of the new building for the Scan centre in Vinkovci and works on mechanical installations (Air Conditioning and Ventilation) at the SGA Central Archives in Glina.

ENVIRONMENTAL CATEGORY

The Checklist EMPs will be prepared for the construction of Scan centre in Vinkovci and for extensions on existing locations (i.e. regional cadastral office Sisak) and for the **works on mechanical installations (Air Conditioning and Ventilation) at the SGA Central Archives in Glina**

ANNEX: EMP checklist for the Works on Mechanical Installations (Air Conditioning and Ventilation) at the State Geodetic Administration Central Archives in Glina

PART 1: INSTITUTIONAL & ADMINISTRATIVE				
Country	Croatia			
Project title	Integrated Land Administration System Project			
Scope of project and activity	Land Administration			
Institutional arrangements (Name and contacts)	Project management			
	WB TTL Mika Törhönen	State Geodetic Administration (SGA) - Danko Markovinović, SGA Director General - Ljerka Marić Head of the Department for Geoinformation Systems in the SGA - Person designated for and supervision of environmental plans	Local party and/or beneficiary State Geodetic Administration Central Archives in Glina	
Implementation arrangements (Name and contacts)	Supervision			
	Safeguards supervision Natasha Vetma	Local side for the supervision State Geodetic Administration Central Archives in Glina Ljiljana Štefulić Supervision engineer Appointed by the Employer Darko Rašković	Local inspectorate supervision Consultants	Contacts Contractor
SITE DESCRIPTION				
Name of site	State Geodetic Administration Central Archives in Glina			
Describe site location	Glina Central Arrchives Vukovarska 39, Glina	Annex 1: Site information (figures from the site) [X]Y []N		
Who owns the land?	Republic of Croatia (cadastral parcel 536/4 in land registry file 1541 c.m. Glina), The State Geodetic Administration was given the building for use by the Decision of the Central Office for State Assets Management (Class:372-01/10-02/06, Ref.no:536-10) of 25 March 2010.			
Geographic description	Glina Central Arrchives Vukovarska 39, Glina			
LEGISLATION				
Identify national & local legislation & permits that apply to project activity	The following Croatian Laws define a legal framework for environmental management: <ul style="list-style-type: none"> • The Law on Environmental Protection - Off. Gazette No. 110/07 • Physical Planning and Building Act – Off. Gazette No. 76/07, 38/09 • The Law on Nature Protection - Off. Gazette No. 70/05 • Regulation on Environmental Impact Assessment – Off. Gazette No. 64/08, 67/09) • The Law on Protection and Preservation of Cultural Values - Off. Gazette No. 69/99, 151/03, 157/03, 87/09, 88/10) According to the Law on Environmental Impact Assessment EIA is not required.			
PUBLIC CONSULTATION				

Identify when / where the public consultation process took place	<p>Checklist was publicly available from 11 to 26 June 2013 on the website SGA (www.dgu.hr), Project (www.uredjenazemlja.hr) and in analogue form on the bulletin board at:</p> <ul style="list-style-type: none"> •Regional Cadastral OfficeSisak Branch Office Glina, Trg bana Josipa Jelačića 3, Glina • City of Glina, Trg bana Josipa Jelačića 2 <p>No comments were submitted.</p>
INSTITUTIONAL CAPACITY BUILDING	
Will there be any capacity building?	<p><input type="checkbox"/> N or <input checked="" type="checkbox"/> Y</p> <p>The Contractor will organize training for using the air conditioning/ventilation system for the Employer's staff that will be operating it.</p>

PART 2: ENVIRONMENTAL /SOCIAL SCREENING			
Will the site activity include/involve any of the following:	Activity	Status	Additional references
	A. Building rehabilitation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Section B below
	B. New construction	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section B below
	C. Individual wastewater treatment system	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section C below
	D. Historic building(s) and districts	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Possible	See Section D below
	E. Acquisition of land ¹	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section E below
	F. Hazardous or toxic materials ²	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Section F below
	G. Impacts on forests and/or protected areas	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section G below
	H. Handling / management of medical waste	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section H below
	I. Traffic and Pedestrian Safety	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Section I below

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
A. General Conditions	Notification and Worker Safety	<ul style="list-style-type: none"> (a) The local construction and environment inspectorates and communities have been notified of upcoming activities (b) The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works) (c) All legally required permits have been acquired for construction and/or rehabilitation (d) All work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment. (e) Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots) (f) Appropriate signposting of the sites will inform workers of key rules and regulations to follow.
B. General Rehabilitation and /or Construction Activities	Air Quality	<ul style="list-style-type: none"> (a) During interior demolition use debris-chutes above the first floor (b) Keep demolition debris in controlled area and spray with water mist to reduce debris dust (c) Suppress dust during pneumatic drilling/wall destruction by ongoing water spraying and/or installing dust screen enclosures at site (d) Keep surrounding environment (side walks, roads) free of debris to minimize dust (e) There will be no open burning of construction / waste material at the site (f) There will be no excessive idling of construction vehicles at sites

¹ Land acquisitions includes displacement of people, change of livelihood encroachment on private property this is to land that is purchased/transferred and affects people who are living and/or squatters and/or operate a business (kiosks) on land that is being acquired.

² Toxic / hazardous material includes and is not limited to asbestos, toxic paints, removal of lead paint, etc.

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
	Noise	(a) Construction noise will be limited to restricted times agreed to in the permit (b) During operations the engine covers of generators, air compressors and other powered mechanical equipment should be closed, and equipment placed as far away from residential areas as possible
	Water Quality	(a) The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers.
	Waste management	(a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities. (b) Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers. (c) Construction waste will be collected and disposed properly by licensed collectors (d) The records of waste disposal will be maintained as proof for proper management as designed. (e) Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos)
C. Individual wastewater treatment system	Water Quality	(a) The approach to handling sanitary wastes and wastewater from building sites (installation or reconstruction) must be approved by the local authorities (b) Before being discharged into receiving waters, effluents from individual wastewater systems must be treated in order to meet the minimal quality criteria set out by national guidelines on effluent quality and wastewater treatment (c) Monitoring of new wastewater systems (before/after) will be carried out
D. Historic building(s)	Cultural Heritage	(a) If the building is a designated historic structure, very close to such a structure, or located in a designated historic district, notify and obtain approval/permits from local authorities and address all construction activities in line with local and national legislation (b) Ensure that provisions are put in place so that artifacts or other possible “chance finds” encountered in excavation or construction are noted, officials contacted, and works activities delayed or modified to account for such finds.
E. Acquisition of land	Land Acquisition Plan/Framework	(a) If expropriation of land was not expected and is required, or if loss of access to income of legal or illegal users of land was not expected but may occur, that the bank task Team Leader is consulted. (b) The approved Land Acquisition Plan/Framework (if required by the project) will be implemented
F. Toxic Materials	Asbestos management	(a) If asbestos is located on the project site, mark clearly as hazardous material (b) When possible the asbestos will be appropriately contained and sealed to minimize exposure (c) The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust (d) Asbestos will be handled and disposed by skilled & experienced professionals (e) If asbestos material is to be stored temporarily, the wastes should be securely enclosed inside closed con-

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
	Toxic / hazardous waste management	<p>tainments and marked appropriately</p> <p>(f) The removed asbestos will not be reused</p> <p>(a) Temporarily storage on site of all hazardous or toxic substances will be in safe containers labeled with details of composition, properties and handling information</p> <p>(b) The containers of hazardous substances should be placed in an leak-proof container to prevent spillage and leaching</p> <p>(c) The wastes are transported by specially licensed carriers and disposed in a licensed facility.</p> <p>(d) Paints with toxic ingredients or solvents or lead-based paints will not be used</p>
G. Affects forests and/or protected areas	Protection	<p>(a) All recognized natural habitats and protected areas in the immediate vicinity of the activity will not be damaged or exploited, all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities.</p> <p>(b) For large trees in the vicinity of the activity, mark and cordon off with a fence large trees and protect root system and avoid any damage to the trees</p> <p>(c) Adjacent wetlands and streams will be protected, from construction site run-off, with appropriate erosion and sediment control feature to include by not limited to hay bales, silt fences</p> <p>(d) There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas.</p>
H. Disposal of medical waste (not applicable)	Infrastructure for medical waste management	<p>(a) In compliance with national regulations the contractor will insure that newly constructed and/or rehabilitated health care facilities include sufficient infrastructure for medical waste handling and disposal; this includes and not limited to:</p> <ul style="list-style-type: none"> ▪ Special facilities for segregated healthcare waste (including soiled instruments “sharps”, and human tissue or fluids) from other waste disposal; and ▪ Appropriate storage facilities for medical waste are in place; and ▪ If the activity includes facility-based treatment, appropriate disposal options are in place and operational
I Traffic and Pedestrian Safety	Direct or indirect hazards to public traffic and pedestrians by construction activities	<p>(a) In compliance with national regulations the contractor will insure that the construction site is properly secured and construction related traffic regulated. This includes but is not limited to</p> <ul style="list-style-type: none"> ▪ Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards ▪ Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes. ▪ Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement ▪ Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public. ▪ Ensuring safe and continuous access to office facilities, shops and residences during renovation

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		activities, if the buildings stay open for the public.

PART 3 : MONITORING PLAN							
Phase	What (Will the parameter be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuity?)	Why (Is the parameter being monitored?)	Cost (if not included in project budget)	Who (Is responsible for monitoring?)
During activity preparation	Permits	On site	By checking whether all permits according to the law are available on site	Prior construction works commence	It is recommended to make sure that all good practices apply	Should be part of the project budget	Site supervising engineer
	Site organization	On site	By checking proper fencing, installation of temporary sanitary facilities	Prior construction works commence		Contractor bears full cost, usually is not identified as separate category	Site supervising engineer
During activity implementation	Air quality (dust)	On site	Visual observation	Continuous on a daily basis, however special attention should be put during transport of material and excavation works	To keep the dust level at minimum to protect health and prevent irritations and to keep visibility for safety purposes	Contractor bears full cost, usually is not identified as separate category	Site supervising engineer, Municipality
	Noise	On site and neighborhood	Sound level meters, noise meters or equivalent instruments for measuring noise	In the first week of the construction and at the end of works; also, anytime if complaint from local population is made	To ensure noise levels are at legally acceptable level	Contractor should bear the cost	Contractor, site supervising engineer
	Waste pollution (non hazardous and hazardous which might include –	On site pollution assessment	Waste accompanying documentation that is submitted to Ministry of Environment in	Continuous during construction, i.e. each time waste is taken from the site	Required by series of regulation on waste	Part of the regular contractor practice, should be	Supervising site engineer Municipality Ministry of

	used)						
	Architectural artifacts	On site visual assessment	Full supervision by site inspector during excavation works	During excavation works for foundations	To prevent degradation of potential archeologically important artifacts	Part of the supervising engineer and contractor cost	Supervising site engineer. Municipality, Inspection
	Toxic / Hazardous material	On site visual assessment	Proper handling and storage is checked according to Material Safety Data Sheets (MSDS)	Continuously, when the remains are removed	To prevent accidental spilling or injuries	Part of the regular contractor cost	Supervising engineer costs, Inspection
	Sanitary water collection	On site; standard parameters	Visual observation; use of kit tests; samples when applicable Verification of waste accompanying documentation for emptying of chemical toilets	Daily, based on which authorized company is called for cleaning		Part of the regular contractor cost	Supervising engineer costs, Inspection
	Workers safety	On site	Random safety inspection	Continuously checking that appropriate protective equipment is used	To prevent accidents	Part of the regular contractor costs	Supervising engineer costs, Inspection
	Hazard to public traffic and pedestrian safety	On site and on roads permitted to use for accessing site, traffic plans	Visual observation and potential complaints from the public	Daily checking the signs, fences, accesses and traffic signalization and patterns	To prevent traffic disruption and accidents	Part of the regular contractor costs	Supervising engineer costs, Inspection, Consultants

**Annex I The site and the specifications of the Works on Mechanical Installations
(Air Conditioning and Ventilation) at the SGA Central Archives in Glina**

Investor: STATE GEODETIC ADMINISTRATION
Gruška 20, Zagreb

Construction: Glina Central Archives
Rehabilitation and refurbishment, Vukovarska 39, Glina

Mechanical heating installations are intended to heat the work and auxiliary premises or rather to reduce the disturbance of micro-climate parameters (temperature and humidity) to acceptable levels according to the purpose of the premises.

The mechanical heating, cooling and ventilation installations consist of:

- front system pipelines
- heating and cooling devices
- duct units for air preparation
- air handling units
- exhaust vents
- air distributors and duct distribution network

Dangers and harmfulness:

The dangers and harmfulness that can arise under the project designed work conditions and during the maintenance are as follows:

- MECHANICAL DANGERS FROM THE MACHINES AND DEVICES
- DANGER FROM FALLING FROM HEIGHTS, INTO THE DEEP OR TO THE GROUND
- DANGERS FROM ELECTRICAL CURRENT
- DANGERS OF GASES AND VAPOURS
- DANGERS WHEN HANDLING PERILLOUS WORK MATERIALS
- NOISE DANGERS
- DANGERS FROM DISTURBED MICRO-CLIMATE PARAMETERS
- DANGERS FROM FIRE AND EXPLOSION