

CHECKLIST of the ENVIRONMENTAL MANAGEMENT PLAN (EMP)

For the Croatian Railways Infrastructure (HZI) emergency rehabilitation works

INTRODUCTION

The main purpose of the Sustainable Croatian Railways in Europe (SUCRE) Project is to support Ministry of Maritime Affairs, Transport and Infrastructure (MMATI) and Croatian Railways companies (HZ Infrastructure - HZI, HZ Passengers Transport-HZP and HZ Cargo-HZC) in further restructuring of national railways sector, assist them in achieving economic sustainability as well as enable investments in order to increase efficiency of the railway system. The overall Project Development Objective (PDO) is to improve service and financial sustainability of the public rail sector.

The Project consists of four Components: (i) Component 1 supports MMATI in implementation of the overall sector reform and in coordination of the project implementation; (ii) Components 2-4 support the implementation of restructuring programs in HZPP, HZC and HZI, and include funding for expenses that are critical for the implementation of each restructuring program, such as severances, IT upgrades, and rolling stock periodic maintenance and infrastructure emergency repairs. Emergency repairs can include, but are not limited to, rehabilitation of bridges, road crossings, cuts, reconstruction of railway corridors, construction of platforms, carports, modernization of switches and other railway parts, and other works on railway modernization.

ENVIRONMENTAL CATEGORY

Activities encompassed by the project that might produce adverse environmental impacts are tied to works under Component 2 of the project in the part related to overhaul and maintenance of locomotives and passengers carriages for HZP, Component 3 - overhaul and maintenance of locomotives for HZC and component 4 - Emergency repairs. For that reason, project activities triggered OP/BP 4.01 Environmental Assessment policy; however, these activities are expected to produce only temporary, typical, short term and limited adverse environmental impacts thus project is classified as category B project. Environmental Management Framework (EMF) has been prepared as a set of due diligence procedures ensuring compliance to WB policies, national legislation and good practices. The EMF also includes procedures for potential chance findings.

According to the EMF, for the overhaul and periodic maintenance of rolling stock as well as **small, typical railway infrastructure emergency repairs, EMPs in the format of checklist (Checklist EMPs) are to be prepared** in accordance with World Bank guidelines and policies. For larger, site specific construction interventions full EMP with mitigation measures and monitoring plan will be prepared. The works that already commenced require an audit report in order to establish compliance with WB and national policies hence eligibility for financing.

Table 1 Sub project environmental screening table for SUCRE Project

Types of Category B activities	Environmental Assessment documentation required	Applicable to:
1	Environmental Management Plans (EMP) for each individual construction (sub-project)	Larger emergency repairs / upgrades (HZI)
2	Site-specific EMPs in form of a checklist	Smaller and typical emergency repairs (HZI), rolling stock maintenance and overhaul
3	Audit Report	Commenced emergency repairs

Potential Environmental Impacts

The environmental impacts of the project are expected to be of manageable, easy to envisage, temporary and of local impact for both types of activities; (i) periodic maintenance and overhaul of rolling stock takes place in specialized premises equipped for exact type of work and predictable, exact type of environmental impact. These impacts most commonly include: hazardous and nonhazardous waste generation, recyclables, waste water and noise. (ii) Emergency repairs of railway infrastructure might produce typical construction related adverse impacts: dust and noise due to excavation, demolition and construction, management of demolition construction wastes and accidental spillage of machine oil, lubricants, fuel, anticorrosive agents, and other hazardous substances, potential encroachment to a private property, landslide risk, and traffic disturbance.

CHECKLIST EMP

Application of the Checklist EMP

This Checklist EMP is applied for group of typical railway rehabilitation works. It provides a “pragmatic good practice” and it is designed to be user friendly and compatible with WB safeguard requirements. It is also included in the contract for works.

The checklist has four sections:

- Introduction or foreword part in which the project is introduced, environmental category defined, and Checklist EMP concept explained.
- Part 1 constitutes a descriptive part (“site passport”) that describes the project specifics in terms of physical location, the institutional and legislative aspects, the project description, inclusive of the need for a capacity building program and description of the public consultation process.
- Part 2 includes the environmental and social screening in a simple Yes/No format followed by mitigation measures for any given activity type.
- Part 3 is a monitoring plan for activities during project implementation. It retains the same format required for standard World Bank EMPs. It is the

intention of this checklist that Parts 2 and 3 be included as bidding documents for contractors.

The typical checklist format aims at covering all mitigating approaches of the joint contracts for rehabilitation / construction works related to localized impacts. The Checklist EMP presents the envisaged environmental impacts and offers the best operational practice for discharge control (i.e dust, noise, and gas residues), management of hazardous and non-hazardous solid wastes originating from maintenance activities as well as other like discharge control (i.e. dust, noise, and gas residues) in the construction / rehabilitation site. It also offers instructions on avoidance of hazardous substances as toxic impregnation chemicals, solvents or cleaning solutions. The Checklist EMP also deals with the steps to be undertaken during the construction phase if objects of cultural / archeological significance are found (chance finds) during earthworks.

Application of the Checklist EMP

The design process for the prospective emergency rehabilitation works, in Sustainable Croatian Railways in Europe Project is carried out in three phases:

1) General identification and scoping phase, in which the prospective emergency repairs are identified as well as the works that needs to be carried out. During this stage environmental screening is implemented to the selected works hence main potential adverse impacts to the environment are identified. At this stage, Parts 1, 2 and 3 of the Checklist EMP are drafted. Part 2 of the Checklist EMP can be used to select typical activities from a “menu” and relate them to the typical environmental issues and mitigation measures.

2) Detailed design and tendering phase, including specifications and bills of quantities for individual activities by integrating the environmental provisions in tabular format (See Parts 2 and 3). This phase also includes the tender and award of the works contracts. This phase finally defines the contractual obligations of the Contractor on environmental measures to be taken during the construction/rehabilitation process. The Checklist EMP should be disclosed publicly at the tendering stage.

3) During the implementation phase environmental compliance and other qualitative criteria are checked on the respective site by the site supervisor(s) (either supervising engineer or responsible person appointed by the Borrower). The mitigation measures in Part 2 and monitoring plan in Part 3 are the basis to verify the Contractor’s compliance with the required environmental provisions.

The whole Checklist EMP filled in table (Parts 1, 2 and 3) should be attached as integral part of work contracts and as analogue with all technical and commercial conditions which should be signed by the contracting parties.

The EMP checklist will be used only for rehabilitation works that will start during project implementation phase. In the case of activities / works which already commenced, environmental auditing is conducted based on the criteria and requirements set in the EMP Checklist. EMP Checklist is supplemented with the Audit Report. Environmental audits aim at determining environmental compliance of implementation with WB safeguards policies, national legislation and good practices. Based on the Audit Report conclusions prospective activities

are found eligible for financing. These procedures are described in detail in EMF for the project.

MONITORING AND REPORTING

For the monitoring of the Contractor’s safeguards due diligence, the site supervisor will work with Part 3 of the Checklist EMP, i.e. the monitoring plan. Part 3 is developed site specifically and in necessary detail, defining clear mitigation measures and monitoring which can be included in the works contracts, which reflect the status of environmental practice on the working site and which can be observed/measured/ quantified/verified by the supervisor during the works.

Part 3 would thus be updated and revised during the design process to practically reflect key monitoring criteria which can be checked during and after works for compliance assurance and ultimately the Contractor’s remuneration. Although monitoring tables should be prepared based on mitigation measures identified, it is not necessary to come up with a parameter to be monitored for every single mitigation measure listed in Part 2, but to focus only those that can provide a good indication of quality of compliance.

Such mitigation measures include the use of Personal Protective Equipment (PPE) by workers in site, dust generation and prevention, amount of water used and discharged in site, waste water treatment, presence of proper sanitary facilities for workers, waste collection of separate types (mineral waste, wood, metals, plastic, hazardous waste, e.g. asbestos, paint residues, spent engine oil), waste quantities, proper organization of disposal pathways and facilities, or reuse and recycling wherever possible. In addition to Part 3, the site supervisors should check whether the contractor complies with the mitigation measures in Part 2.

An acceptable monitoring report from the contractor or site supervisor would be a condition for full payment of the contractually agreed remuneration, the same as technical quality criteria or quality surveys. To assure a degree of leverage on the Contractor’s environmental performance an appropriate clause will be introduced in the works contracts, specifying penalties in case of noncompliance with the contractual environmental provisions, e.g. in the form of withholding a certain proportion of the payments, its size depending on the severity of the breach of contract. For extreme cases a termination of the contract shall be contractually tied in.

ANNEXI: Checklist EMP for the emergency rehabilitation works

PART 1: INSTITUTIONAL & ADMINISTRATIVE	
Country	Croatia
Project title	Sustainable Croatian Railways in Europe
Scope of project and activity	Reconstruction and maintenance of railway infrastructure and rolling stock
Institutional	Project management

arrangements (Name and contacts)	WB, Republic of Croatia, HZI	Ministry of Maritime Affairs, Transport and Infrastructure	<p>Local party and/or beneficiary HZI</p> <p>Responsible for the preparation of the Checklist EMP, public consultation of the Checklist EMP and procurement of works and site supervision (the works and supervising contracts/appointments include tabular parts of the Checklist EMP)</p> <p>Contractor (name needs to be updated after contracting)</p> <p>Responsible for the implementation of mitigation measures and monitoring according to Parts 2 and 3 of Checklist EMP</p>
Implementation arrangements (Name and contacts)	Supervision		
	WB Safeguards supervision (name)	<p style="text-align: center;">HZI</p> <p style="text-align: center;">()</p> <p>Responsible for contracted site; supervising engineer or responsible person appointed by the Borrower; Site supervisor</p> <p>Site engineer (name needed to be updated after contracting) Responsible for implementation of the Checklist EMP from constructor side.</p>	<p style="text-align: center;">Local Inspectorate</p> <p>Responsible for occasional visits to the site or upon public complaint</p> <p style="text-align: center;">HZI</p> <p>Responsible for supervision of overall project. (name)</p>
SITE DESCRIPTION			
Name of site	XXXXXX		
Describe site location	Emergency rehabilitation works are carried out in the north, northwest, northeast and southwest of Croatia.	Annex 2: Site information (figures from the site) <input type="checkbox"/> N or <input checked="" type="checkbox"/> Y	
Who owns the land?	The land is state owned.		
Geographic description	North, northwest, northeast and southwest of Croatia.		
LEGISLATION			
Identify	The following Croatian Laws define a legal framework for environmental		

national & local legislation & permits that apply to project activity	management: Environmental and Nature Protection Act (OG 80/13), Sustainable Waste management Act (OG 94/13), Regulation on categories, types and classification of waste with a hazardous waste catalogue (OG 50/05, 39/09), Waste management rulebook (NN 23/14, 51/14, 23/07, 111/07), Waste batteries and accumulators rulebook (OG 113/06, 31/09, 156/09, 45/12, 86/13), Packaging and packaging waste rulebook (OG 97/05, 115/05, 81/08, 31/09, 156/09, 38/10, 10/11, 81/11, 126/11, 38/13, 86/13), Waste oils rulebook (OG 124/06, 121/08, 31/09, 156/09, 91/11, 45/12, 86/13), Electric and electronic equipment waste management rulebook (OG 42/14, 48/14, 107/14, 139/14), Rulebook on environmental Pollutants Register (OG 35/08), Noise Protection Act (OG 30/09, 55/13), Rulebook on the highest levels of noise in human environment (OG 145/04, 46/08), Water Act (OG 153/09, 130/11, 56/13, 14/14), Construction Act (OG 153/13), Act on Architectural and Civil Engineering Work in Physical Planning and Construction (OG 152/08, 49/11, 25/13), Regulation on Classification of constructions, other spatial interventions, and surfaces of national or regional importance (OG 37/14), Rulebook on simple and other constructions and works (OG 79/14), Rulebook on project approval (OG 98/99, 29/03), Rulebook on technical inspection of construction (OG 108/04), Rulebook on granting approval for construction work commencement (OG 43/09), Rulebook on project control (OG 32/14), Rulebook on construction site posting (OG 42/14), Rulebook on content of Contractor's Statement on conducted works and sanitation conditions (OG 43/14), Rulebook on mandatory content of projects (OG 64/14), Technical regulation for steel constructions (OG 112/08, 125/10, 73/12, 136/12), Technical regulation for steel and concrete composite structures (OG 119/09, 125/10, 136/12), Technical regulation for concrete constructions (OG 139/09, 14/10, 125/10, 136/12), Technical regulation for electric installations (OG 5/10), Railways Act (OG 94/13), Safety and Interoperability of Railway System Act (OG 82/13), Rulebook on railway infrastructure (OG 127/05, 121/07), Cultural Heritage Protection and Preservation Act (OG 69/99, 151/03, 157/03, 87/09, 88/10, 61/11, 25/12, 136/12, 157/13, 152/14).
PUBLIC CONSULTATION	
Identify when / where the public consultation process took place	EMP Checklist will be disclosed at the company's web site for the two weeks period. Hard copy will be available at the construction site. Variety of stakeholders will be notified including local population and consulted. They will be encouraged to send comments and questions on the EMP checklist. All comments will be addressed and included to the final version of EMP Checklist. Time of the consultation is not yet identified.
INSTITUTIONAL CAPACITY BUILDING	
Will there be any capacity building?	<input type="checkbox"/> N or <input checked="" type="checkbox"/> Y if Yes, Annex 3 includes the capacity building information

PART 2: ENVIRONMENTAL /SOCIAL SCREENING

Will the site activity include/involve any of the following:	Activity	Status	Additional references
	A. General conditions	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	B. Reconstruction of railway tracks	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A, B below
	C. Restoration/rehabilitation of cuts	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A, C below
	D. Safety upgrade at crossings	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A, D below
	E. Rehabilitation of tunnels	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A, E below
	F. Construction of platforms and pedestrian flyovers	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A, F below
	G. Rehabilitation of bridges	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A, G below
	H. Restoration of railroad crossings	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A, D below
	I. Reconstruction of sectioning installation with neutral lines (PSN)	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	J. Replacing railway switches	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A, J below
	K. Railway balise replacement	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	L. Replacement of power supply system	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A , below
	M. Carport construction	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A, F below
	N. Reconstruction of a railway station	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A, B, F below
	O. Rehabilitation of contact network	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	P. Installing reactive power compensation	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	Q. Transmission line rehabilitation	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	R. Replacing the railway automatic branch exchange	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	S. Automatic block signaling replacement	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	T. Reconstruction of electric traction substations	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	U. Drainage	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
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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. (c) In the case the works are interfering with railway schedule the operator (HZI) needs to take precautions and coordinate works and railway traffic with the constructor and companies using the lines. The operator will take safety measures to prevent accidents. (d) All legally required permits have been acquired for construction and/or rehabilitation. (e) All work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment. (f) Workers are well trained in using potentially dangerous equipment. (g) Any health and safety incidents should be reported to project manager immediately. This should be well communicated to the construction staff. (h) Workers' PPE will comply with international good practice (obligatory wearing of hardhats at all times, masks and safety glasses as needed and prescribed, harnesses and safety boots). (i) Appropriate signposting of the sites will inform workers of key rules and regulations to follow. (j) All construction sites are equipped with appropriate sanitary facilities and resting places for workers. (k) Construction sites are fenced off or protected by properly designed barricades or tape-marked. (l) Material stockpiles or stacks, such as pipes, are made stable and well secured to avoid collapse and possible injury to site workers. (m) Material stockpiles or stacks do not exceed 2m in height. (n) The construction camp (if required) must remain not accessible to public. (o) Potentially hazardous areas (e.g. trenches, manholes, excavations) must be clearly marked.
	Cultural heritage preservation	<ul style="list-style-type: none"> (a) In the case of chance finding, the site will be fenced (protected) and authorities (Inspectorate Office of the Ministry of Culture) informed. Their instructions will be followed in the further works. (b) The construction related camps, storages and other objects will be located further from archeological sites or archeologically sensitive areas.
	Nature protection	<ul style="list-style-type: none"> (a) Working site should occupy only the surfaces necessary for works to be carried out.

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		<ul style="list-style-type: none"> (b) During the construction, workers must be limited to areas under construction and the access to surrounding open area must be strictly regulated. (c) Construction activities are planned carefully so as not to interfere with the important reproduction stages of protected species. (d) Prior to commencement of works the contractor will check the site for presence of wildlife and in case of finding bird nests, bats, dens or young the competent authority must be notified (Ministry of Environmental and Nature Protection, Department for Nature Protection, Nature Protection Directorate). (e) Causing disturbance to wildlife, pouching and removing animals and plants from the vicinity of the site for trade or any other purposes but safety is strictly forbidden. (f) Collection of firewood and traditional medicine plants is strictly forbidden. (g) The terrain at the working site has to return to its pre-works condition, if not possible than it will be adequately rehabilitated. (h) Destroyed greenery has to be rehabilitated with local indigenousness flora typical of the representative botanical unit, amongst which fire resistant species are preferred.
	Waste	<ul style="list-style-type: none"> (a) Waste collection, separation, transport and further processing is carried out in accordance with the internal 'Waste Rulebook' and national waste legislation (b) Containers for each identified waste category are provided in sufficient quantities and positioned conveniently. (c) Waste collection and disposal pathways and licensed sites will be identified for all major waste types expected from demolition and construction activities. (d) Mineral (natural) construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and temporarily stored in appropriate containers. Depending of its origin and content, mineral waste and excessive soil will be reapplied to its original location or reused. (e) All construction waste will be collected and disposed properly by licensed collectors. (f) The records of waste disposal (waste manifest) will be regularly updated and archived. (g) Whenever feasible, the contractor will reuse and recycle appropriate and viable materials. (h) Discarding any kind of waste (including organic waste) or waste water to the surrounding is strictly forbidden. (i) Transport odour wastes in covered vehicles (j) All waste and unused materials are to be removed from the site upon the finalization of works

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
	Toxic/hazardous substances management	<p>(k) All mechanization and tools are to be removed from the site upon the finalization of works</p> <p>(a) During the temporary storage on site all hazardous or toxic substances will be kept in safe containers labeled with details of composition, properties and handling information. These containers should be leak-proof in order to prevent spillage and leaching. The containers should poses secondary containment system such as bunds (e.g. bunded-container), double walls, or similar. Secondary containment system must be free of cracks, able to contain the spill and be emptied quickly.</p> <p>(b) Fuel will be kept in safe, labeled, containers with information on properties and handling information.. These containers should be leak-proof in order to prevent spillage and leaching. The containers should poses secondary containment system such as bunds (e.g. bunded-container), double walls, or similar. Secondary containment system must be free of cracks, able to contain the spill and be emptied quickly.</p> <p>(c) The containers with hazardous substances must be kept closed, except when adding or removing materials. They must not be handled, opened, or stored in a manner that may cause them to leak.</p> <p>(d) Paints with toxic ingredients or solvents or lead-based paints will not be used.</p> <p>(e) Use of pesticides or herbicides during these works is strictly forbidden.</p>
	Toxic/hazardous waste	<p>(a) The containers holding ignitable or reactive wastes must be located at least 15 meters (50 feet) from the working facilities</p> <p>(b) All hazardous wastes, including liquids, contaminated packaging and solids are transported by specially licensed carriers and disposed in a licensed facility.</p> <p>(c) Temporary storage of liquid toxic or hazardous waste on site; all hazardous or toxic liquid substances will be kept in safe containers labeled with appropriate classification code in accordance with the Regulation on categories, types and classification of waste with a hazardous waste catalogue (OG 50/05, 39/09). These containers should be leak-proof in order to prevent spillage and leaching. The containers should poses secondary containment system such as bunds (e.g. bunded-container), double walls, or similar. Secondary containment system must be free of cracks, able to contain the spill and be emptied quickly.</p> <p>(d) Solid hazardous waste should be kept in safe containers labeled with appropriate classification code in accordance with the Regulation on categories, types and classification of waste with a hazardous waste catalogue (OG 50/05, 39/09). These containers should be leak-proof in order to prevent spillage and leaching. These containers</p>

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
	Water and soil	<p>should be covered and protected from weather impact (rain and other).</p> <ul style="list-style-type: none"> (a) Installation and regular maintenance of proper sanitary facilities for workers is carried out. (b) Water used for construction and other purposes (e.g. sanitary) is taken from the existing water supply sources. No additional water sources are engaged. (c) Waste water collected at the site must not be released to the environment without prior treatment. (d) Operating premises are equipped with waste water collecting system. Water is collected through the system and taken to the waste water treatment. Waste water treatment is minimally equipped with oil and grease separator after which waste water is either released to the municipal water collecting system (that includes further treatment), water treatment system on site or water is collected and taken for treatment elsewhere. (e) Prevent as much as possible, oil and other pollutants leakages to water and soil. (f) If necessary, the stream flow is made to bypass the construction area within drainage lines (g) Surface water at the construction site is diverted away from excavation trenches or areas prone to erosion. (h) Servicing of vehicles and machinery is conducted off-site. (i) Oil changes are conducted off site, on concrete platforms equipped with oil and grease separators. (j) Contaminated soil and aggregate must be stripped and disposed to a licensed landfill.
	Air	<ul style="list-style-type: none"> (a) Ensure all transportation vehicles and machinery is regularly maintained and attested. (b) Ensure all vehicles and machinery runs on petrol from official sources (authorized gas stations) and on fuel determined by the machinery producer. (c) There will be no excessive idling of vehicles and machinery on the site.
	Transport and Materials Management	<ul style="list-style-type: none"> (a) Construction routes are clearly defined. (b) Distribution of materials and other usages of railway lines need to be announced and coordinated with the operator (HZI). The operator will take safety measures to prevent accidents. (c) All materials prone to dusting are transported in closed or covered trucks or wagons. (d) All materials prone to dusting and susceptible to weather conditions are protected from atmospheric impacts either by windshields, covers, watered or other appropriate means (e) Roads are regularly swept and cleaned at critical points. Spilled materials are

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		<p>immediately removed from a road and cleaned. Access roads are well maintained.</p> <p>(f) Railways are cleaned at critical points. Spilled materials are immediately removed from tracks and cleaned. Tracks are well maintained.</p> <p>(g) Access of the construction and material delivery vehicles are strictly controlled, especially during the wet weather.</p> <p>(h) Topsoil and stockpiles are kept separate.</p> <p>(i) Stockpiles are located away from drainage lines, natural waterways and places susceptible to land erosion.</p> <p>(j) All loads of soil are covered when being taken off the site for reuse/disposal</p> <p>(k) Stockpiles do not exceed 2m in height to prevent dissipation and risk of fall.</p>
	Dust	<p>(a) Washing of road transport vehicles and wheels will be conducted regularly, in previously identified sites equipped with, minimally, oil and grease collector.</p> <p>(b) Excavation and other clearing activities and earthwork must be done during agreed working times and permitting weather conditions to avoid drifting of sand and dust into neighboring area</p> <p>(c) Loading and unloading of dust prone materials will be conducted during the favorable weather and with adequate dust-reduction measures</p> <p>(d) A speed limit of 40km/h must not be exceeded on dirt roads</p> <p>(e) Dust prone materials should be transported in closed or covered trucks</p> <p>(f) Dust prone materials and other bulk materials should be protected from weather conditions, especially wind and rain.</p>
	Fire prevention	<p>(a) Grass left on the site must be regularly cut, especially during the dry periods, to prevent fires.</p> <p>(b) No fires will be allowed on site under any circumstance</p> <p>(c) All cooking on site shall be done in demarcated areas and under constant control.</p> <p>(d) The contractor shall have operational fire-fighting equipment available on site at all times. Their position is communicated to workers and marked. The level of fire-fighting equipment must be assessed and evaluated through a typical risk assessment. There is an appointed person on the site responsible for the fire protection. Procedures in the case of fire are well known to all employees.</p>
	Noise	<p>(a) Noise levels, at the site, should be kept within acceptable limits and not exceed values set in the national legislation - Rulebook on the highest levels of noise in human environment (OG 145/04, 46/08)</p>

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		<ul style="list-style-type: none"> (b) Work during the night will be avoided if possible, especially in the vicinity of settlements. In the case there will be night works appropriate permissions should be obtained. (c) Noise suppression measures must be applied to all construction equipment. During operations the engine covers of generators, air compressors and other powered mechanical equipment should be closed. Should the vehicles or equipment not be in good working order,, the constructor may be instructed to remove the offending vehicle or machinery from the site. (d) Mechanical equipment is effectively maintained. (e) Truck traffic should be routed away from noise sensitive areas, where possible.
B. Reconstruction of railway tracks	Waste	<ul style="list-style-type: none"> (a) In the case any of aggregate comes from the area of higher pollution (e.g. railway stations, etc.) stone aggregate analysis is carried out, selection and classification in accordance with internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks (HZI-331) '. (b) Reuse or sell categories I, II and III of waste stone aggregate in accordance with internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks (HZI-331)' and national legislation. (c) Dispose category IV of waste stone aggregate in accordance with internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks (HZI-331) ' and national legislation using licensed companies. (d) All removed or replaced sleepers are categorized in accordance with internal 'Instructions on selection of used wooden rail sleepers' and national legislation. (e) HDPE residual materials should be separately collected and hand over to be recycled. (a) Metal waste is separated and hand over to licensed company for reuse/recycling.
	Noise	<ul style="list-style-type: none"> (a) Noise and vibrations should be considered in the design, construction and operation (e.g. through alignment choice, location choice, soundproofing with noise barriers, etc.)
	Material management	<ul style="list-style-type: none"> (a) New sleepers are not originated from unsustainable harvesting of forest products in a critical habitat (e.g. FSC or FSI labeled are used). Certification of origin should be presented by the supplier. (b) Where feasible, use of sleepers treated with chromate copper arsenate or creosote oil is avoided and concrete sleepers or ones treated with copper nitrogen are used. (c) Construction material must originate from the licensed companies (e.g. company has to be able to present licenses for excavation of natural minerals, stone, lime, clay, etc.). The company has to present a proof of conformity with all national environmental and H&S

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		<p>legislation.</p> <p>(d) Organization of works is such that construction materials is kept at the site in minimal quantities and for minimal amount of time.</p> <p>(e) Sand and gravel used in construction works should be traceable to licensed companies with valid concessions.</p> <p>(f) Quality of sand and gravel has to fulfill technical requirements and be unpolluted with oils, toxic, corrosive or hazardous substances and free of impurities.</p> <p>(g) Producer of concrete has to obtain/hold all required working and emission permits and quality certifications.</p> <p>(h) The quarry supplying the cement producer with limestone has to prove conformity with all national environmental and H&S legislation and have all operating, environmental and H&S permits.</p> <p>(i) Ensure all transportation vehicles and machinery have been equipped with appropriate emission control equipment, regularly maintained and attested.</p> <p>(b) Water used for production of concrete can be technical water, but free of hazardous and toxic pollutants, heavy metals and other substances hazardous to human health and environment</p>
C. Restoration/rehabilitation of cuts	Waste	<p>(a) Soil excavated during the earthworks should be protected from scattering and dusting and should be reapplied.</p> <p>(b) Construction waste should be handed over to a licensed company or taken to a waste management center licensed for construction waste management</p>
	Hazardous and toxic waste	<p>(a) In the case any of aggregate comes from the area of higher pollution (e.g. railway stations, etc.) stone aggregate analysis is carried out, selection and classification in accordance with internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks (HZI-331) '.</p> <p>(b) Reuse or sell categories I, II and III of waste stone aggregate in accordance with the internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks (HZI-331)' and national legislation.</p> <p>(c) Dispose category IV of waste stone aggregate in accordance with internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks (HZI-331) ' and national legislation using licensed companies.</p> <p>(c) All removed or replaced sleepers should be categorized, stored, transported and reused or disposed in accordance with internal 'Instructions on selection of used wooden rail</p>

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		sleepers' and national legislation.
	Hazardous substances	(a) Use anticorrosive agents not toxic for the environment
	Land erosion	(a) Phased clearing is planned and areas of land cleared are kept to a minimum and the period of time areas remain cleared to a minimum to avoid erosion. (b) Rehabilitate cleared areas promptly, where possible. (c) Minimize the quantity of water that enters cleared areas (e.g. using drainage canals).
	Accidents prevention	(a) During the works necessary measures preventing erosion and landslides will be taken. (b) Vehicles and machinery manipulation and movement space will be clearly marked. (c) If the works disrupt regular railway traffic, the contractor and HZI will establish safe temporary road regulation with appropriate signalization. Prior to such works all necessary permits would be obtained. (d) Work site should be protected by a fence.
	Soil and water protection	(a) Construction equipment and vehicles (regular maintenance and checkups of oil and gas tanks, machinery and vehicles can be parked (manipulated) only on asphalted or concrete surfaces with surface runoff water collecting system. This water can then be either collected to retention basins or transported to a proper water treatment facility or the water collecting system has to include oil separator and sedimentation tank. (b) Care is taken not to mix topsoil and subsoil during stripping. Topsoil must be reused where possible. Soil stripping is carried out only in necessary areas. (c) In the case galvanization is used as the anticorrosive measure, the provider of service or galvanized goods should present related environmental permits (in accordance with Environmental Permit Regulation (OG 8/14)) (d) Prevent possible contaminants to enter the water body during the excavation or cable lying by isolating nature flows from the area of works. (e) The site will establish appropriate erosion and sediment control measures such as hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers during works. (f) In the case of any run-off coming from works area possibly contaminated by hazardous substances shall be collected on site to a temporary retention basin and transported to a adequate treatment plant.

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		<ul style="list-style-type: none"> (g) Working site run-offs with possible charge with suspended matter should be filtered before spillage to natural flows. (h) Soil work and management will take into account metrological data and conditions when planned and carried out (e.g. avoid works during heavy rains). (i) Prevent hazardous spillage coming from tanks (mandatory secondary containment system, e.g. double walled or bunded containers), construction equipment and vehicles (regular maintenance and check-ups are mandatory), machinery and vehicles can be parked (manipulated) only on asphalted or concrete surfaces with surface runoff water collecting system (this water can then be either collected to retention basins and transported to a proper water treatment facility or the water collecting system has to include oil separator and sedimentation tank).
	Concrete and aggregate production	<ul style="list-style-type: none"> (a) Producer of concrete has to obtain/hold all required working and emission permits and quality certifications. (b) Producer has to present a proof of conformity with all national environmental and H&S legislation. (c) The quarry supplying the cement producer with limestone has to proof to hold all operating, environmental and H&S permits. (d) The lime quarry has to present a proof of conformity with all national environmental and H&S legislation. (e) The quarry supplying the stone aggregate has to proof to hold all operating, environmental and H&S permits. (f) Ensure all transportation vehicles and machinery have been equipped with appropriate emission control equipment, regularly maintained and attested. (g) Water used for production of concrete can be technical water, but free of hazardous and toxic pollutants, heavy metals and other substances hazardous to human health and environment
	Materials management	<ul style="list-style-type: none"> (a) Construction material must originate from the licensed companies (e.g. company has to be able to present licenses for excavation of natural minerals, stone, lime, clay, etc.). The company has to present a proof of conformity with all national environmental and H&S legislation. (b) Organization of works is such that construction materials is kept at the site in minimal quantities and for minimal amount of time. (c) Sand and gravel used in construction works should be traceable to licensed companies

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		<p>with valid concessions.</p> <p>(d) Quality of sand and gravel has to fulfill technical requirements and be unpolluted with oils, toxic, corrosive or hazardous substances and free of impurities.</p>
<p>D. Safety upgrade at crossings</p>	<p>Safety</p>	<p>(a) Canals are kept clear of surface and other water.</p> <p>(b) Canals are protected from collapse or erosion.</p> <p>(c) Mechanical excavations along the underground cable are performed minimally in 2.0m distance from the cable. In the case of the cable being crossed vertically mechanical works are allowed in 0.5m distance or more.</p> <p>(d) Manual excavations are carried out with hand tools (e.g. shovel, hack). In the area around the cables, 30cm or closer, hack and other sharp tools should not be used. Soil, closer than 10cm from the cable can be removed carefully using shovel.</p> <p>(e) The cable should be positioned in a way to avoid bending and damaging. When bending is necessary the radius should be 20 times or more the radius of the cable.</p> <p>(f) Cable lying, manipulation and other works can be performed at temperature of 5 °C or higher. Exceptionally, works can be carried out at the temperature down to -5°C however, with great caution and with minimal manipulation of the cables.</p> <p>(g) Cable canal is to be marked at every 100meters of cable line when the cable route is straight as well as at the following points: place of the cable extension – connection; location where the route is changing direction; where the cable is passing under the rail tracks or group of tracks columns are installed on both side; where the cable is passing public traffic surfaces and under the drainage canal or water streams it is marked from both sides.</p> <p>(h) Roads where trucks are transporting materials should be kept clean.</p>
	<p>Concrete and aggregate production</p>	<p>(a) Producer of concrete has to obtain/hold all required working and emission permits and quality certifications.</p> <p>(b) Producer presented a proof of conformity with all national environmental and H&S legislation.</p> <p>(c) The quarry supplying the cement producer with limestone has to prove conformity with all national environmental and H&S legislation and have all operating, environmental and H&S permits.</p> <p>(d) The quarry supplying the stone aggregate has to proof to hold all operating,</p>

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		<p>environmental and H&S permits.</p> <p>(e) Ensure all transportation vehicles and machinery have been equipped with appropriate emission control equipment, regularly maintained and attested.</p> <p>(f) Water used for production of concrete can be technical water, but free of hazardous and toxic pollutants, heavy metals and other substances hazardous to human health and environment</p>
	Asphalt production	<p>(a) Producer of asphalt has to obtain/hold all required working and emission permits and quality certifications.</p> <p>(b) Producer has to present a proof of conformity with all national environmental and H&S legislation.</p> <p>(c) Ensure the subcontractor has all the necessary skills and experience and precautionary systems in place to prevent a wash off of bituminous materials (primer or primer binder).</p> <p>(d) Water in bitumen emulsion production should not be contaminated with hazardous or toxic chemicals (however, technological water is preferred).</p> <p>(e) Asphalt and bitumen emulsion application will take into account metrological data and conditions when planned and carried out (raining periods, overcast, cooler and dumper weather, etc.)</p> <p>(f) Bitumen emulsion is applied only to adequately compacted and swept surfaces with adequate moisture content.</p> <p>(g) Positioning of the emulsion sprayer should be such so no spraying beyond the area occurs.</p> <p>(h) Ensure that emulsion sprayers are well maintained, operated by trained crew and spray nozzles are operating correctly.</p> <p>(i) Avoid windy conditions when spraying.</p> <p>(j) Equipment is cleaned in areas where there will be no impact to the environment or danger of surface run-off (e.g. areas where water is collected to retention basins and transported to proper water treatment, and waste is separated and appropriately disposed).</p> <p>(k) Asphalt is covered when transported to the site of application.</p> <p>(l) Ensure all transportation vehicles and machinery have been equipped with appropriate emission control equipment, regularly maintained and attested.</p>

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
	Materials management	<ul style="list-style-type: none"> (a) Organization of works is such that construction materials is kept at the site in minimal quantities and for minimal amount of time. (b) Sand and gravel used in construction works should be traceable to licensed companies with valid concessions. (c) Quality of sand and gravel has to fulfill technical requirements and be unpolluted with oils, toxic, corrosive or hazardous substances and free of impurities.
	Soil and water protection	<ul style="list-style-type: none"> (a) Prevent possible contaminants to enter the water body during the excavation or cable laying by isolating nature flows from the area of works. (b) The site will establish appropriate erosion and sediment control measures such as hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers during works. (c) In the case of any run-off coming from works area possibly contaminated by hazardous substances shall be collected on site to a temporary retention basin and transported to an adequate treatment plant. (d) Working site run-offs with possible charge with suspended matter should be filtered before spillage to natural flows. (e) Soil work and management will take into account metrological data and conditions when planned and carried out (e.g. avoid works during heavy rains). (f) Prevent hazardous spillage coming from tanks (mandatory secondary containment system, e.g. double walled or bunded containers), construction equipment and vehicles (regular maintenance and check-ups are mandatory), machinery and vehicles can be parked (manipulated) only on asphalted or concrete surfaces with surface runoff water collecting system (this water can then be either collected to retention basins and transported to a proper water treatment facility or the water collecting system has to include oil separator and sedimentation tank). (g) Cover open pits at the end of the working hours. (h) Prevent anticorrosive spillage to water and soil during application. (i) In the case galvanization is used as the anticorrosive measure, the provider of service or galvanized goods should present related environmental permits (in accordance with Environmental Permit Regulation (OG 8/14))
	Waste	<ul style="list-style-type: none"> (f) In the case any of aggregate comes from the area of higher pollution (e.g. railway stations, etc.) stone aggregate analysis is carried out, selection and classification in accordance with

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		<p>internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks (HZI-331) '.</p> <p>(g) Reuse or sell categories I, II and III of waste stone aggregate in accordance with internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks (HZI-331)' and national legislation.</p> <p>(h) Dispose category IV of waste stone aggregate in accordance with internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks (HZI-331) ' and national legislation using licensed companies.</p> <p>(a) All removed or replaced sleepers are categorized in accordance with internal 'Instructions on selection of used wooden rail sleepers' and national legislation.</p> <p>(b) HDPE residual materials should be separately collected and hand over to be recycled.</p>
E. Rehabilitation of tunnels	Concrete production	<p>(a) Producer of concrete has to obtain/hold all required working and emission permits and quality certifications.</p> <p>(b) Producer has to present a proof of conformity with all national environmental and H&S legislation.</p> <p>(c) The quarry supplying the cement producer with limestone has to proof to hold all operating, environmental and H&S permits.</p> <p>(d) The lime quarry has to present a proof of conformity with all national environmental and H&S legislation.</p> <p>(e) Ensure all transportation vehicles and machinery have been equipped with appropriate emission control equipment, regularly maintained and attested.</p> <p>(f) Water used for production of concrete can be technical water, but free of hazardous and toxic pollutants, heavy metals and other substances hazardous to human health and environment</p>
	Land erosion	<p>(a) Planning phased clearing and keeping the areas of land cleared to a minimum and the period of time areas remain cleared to a minimum to avoid erosion.</p> <p>(b) Rehabilitate cleared areas promptly, where possible.</p> <p>(c) Minimize the quantity of water that enters cleared areas (e.g. using drainage canals)</p>
	Water and soil protection	<p>(a) Prevent possible contaminants to enter the water body during the excavation or cable laying by isolating nature flows from the area of works.</p> <p>(b) The site will establish appropriate erosion and sediment control measures such as hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers during works.</p>

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		<ul style="list-style-type: none"> (c) In the case of any run-off coming from works area possibly contaminated by hazardous substances shall be collected on site to a temporary retention basin and transported to an adequate treatment plant. (d) Working site run-offs with possible charge with suspended matter should be filtered before spillage to natural flows. (e) Soil work and management will take into account metrological data and conditions when planned and carried out (e.g. avoid works during heavy rains). (f) Prevent hazardous spillage coming from tanks (mandatory secondary containment system, e.g. double walled or bunded containers), construction equipment and vehicles (regular maintenance and check-ups of oil and gas tanks, machinery and vehicles can be parked (manipulated) only on asphalted or concrete surfaces with surface runoff water collecting system. This water can then be, either collected to retention basins and transported to a proper water treatment facility, or the water collecting system has to include oil separator and sedimentation tank. (g) Cover open pits at the end of the working hours. (h) Prevent anticorrosive spillage to water and soil during application. (i) In the case galvanization is used as the anticorrosive measure, the provider of service or galvanized goods should present related environmental permits (in accordance with Environmental Permit Regulation (OG 8/14))
<p>F. Construction of platforms and pedestrian flyovers</p>	<p>Concrete and aggregate production</p>	<ul style="list-style-type: none"> (a) Producer of concrete has to obtain/hold all required working and emission permits and quality certifications. (b) Producer presented a proof of conformity with all national environmental and H&S legislation. (c) The quarry supplying the cement producer with limestone has to prove conformity with all national environmental and H&S legislation and have all operating, environmental and H&S permits. (d) The quarry supplying the stone aggregate has to proof to hold all operating, environmental and H&S permits. (e) The stone aggregate quarry has to present a proof of conformity with all national environmental and H&S legislation. (f) Ensure all transportation vehicles and machinery have been equipped with appropriate emission control equipment, regularly maintained and attested. (g) Water used for production of concrete can be technical water, but free of hazardous and

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		toxic pollutants, heavy metals and other substances hazardous to human health and environment.
	Noise	(a) Noise and vibrations should be considered in the design, construction and operation (e.g. through alignment choice, location choice, soundproofing with noise barriers, etc.)
	Water and soil	(a) In the case of any run-off coming from works area possibly contaminated by hazardous substances shall be collected on site to a temporary retention basin and transported to a adequate treatment plant. (b) Working site run-offs with possible charge with suspended matter should be filtered before spillage to natural flows. (c) Soil work and management will take into account metrological data and conditions when planned and carried out (e.g. avoid works during heavy rains). (d) Prevent hazardous spillage coming from tanks (mandatory secondary containment system, e.g. double walled or bunded containers), construction equipment and vehicles (regular maintenance and check-ups of oil and gas tanks, machinery and vehicles can be parked (manipulated) only on asphalted or concrete surfaces with surface runoff water collecting system. This water can then be either collected to retention basins and transported to a proper water treatment facility or the water collecting system has to include oil separator and sedimentation tank. (e) Cover open pits at the end of the working hours. (f) Prevent anticorrosive spillage to water and soil during application. (g) In the case galvanization is used as the anticorrosive measure, the provider of service or galvanized goods should present related environmental permits (in accordance with Environmental Permit Regulation (OG 8/14))
	Waste	(i) In the case any of aggregate comes from the area of higher pollution (e.g. railway stations, etc.) stone aggregate analysis is carried out, selection and classification in accordance with internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks (HZI-331) ' . (j) Reuse or sell categories I, II and III of waste stone aggregate in accordance with internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks (HZI-331)' and national legislation. (k) Dispose category IV of waste stone aggregate in accordance with internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks (HZI-331) ' and national legislation using licensed companies.

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		<ul style="list-style-type: none"> (a) All removed or replaced sleepers are categorized in accordance with internal 'Instructions on selection of used wooden rail sleepers' and national legislation. (b) HDPE residual materials should be separately collected and hand over to be recycled.
	Asphalt	<ul style="list-style-type: none"> (a) Producer of asphalt has to obtain/hold all required working and emission permits and quality certifications. (b) Producer has to present a proof of conformity with all national environmental and H&S legislation. (c) Ensure the subcontractor has all the necessary skills and experience and precautionary systems in place to prevent a wash off of bituminous materials (primer or primer binder). (d) Water in bitumen emulsion production should not be contaminated with hazardous or toxic chemicals (however, technological water is preferred). (e) Asphalt and bitumen emulsion application will take into account metrological data and conditions when planned and carried out (raining periods, overcast, cooler and dumper weather, etc.) (f) Bitumen emulsion is applied only to adequately compacted and swept surfaces with adequate moisture content. (g) Positioning of the emulsion sprayer should be such so no spraying beyond the area occurs. (h) Ensure that emulsion sprayers are well maintained, operated by trained crew and spray nozzles are operating correctly. (i) Avoid windy conditions when spraying. (j) Equipment is cleaned in areas where there will be no impact to the environment or danger of surface run-off (e.g. areas where water is collected to retention basins and transported to proper water treatment, and waste is separated and appropriately disposed). (k) Asphalt is covered when transported to the site of application. (l) Ensure all transportation vehicles and machinery have been equipped with appropriate emission control equipment, regularly maintained and attested.
G.Rehabilitation of bridges and culverts	Land erosion	<ul style="list-style-type: none"> (a) Planning phased clearing and keeping the areas of land cleared to a minimum and the period of time areas remain cleared to a minimum to avoid erosion. (b) Rehabilitate cleared areas promptly, where possible. (c) Minimize the quantity of water that enters cleared areas (e.g. using drainage canals).
	Accidents prevention	<ul style="list-style-type: none"> (a) During the works necessary measures preventing erosion and landslides will be taken. (b) Vehicles and machinery manipulation and movement space will be clearly marked.

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		<p>(c) If the works disrupt regular road traffic, the contractor will establish safe temporary road regulation with appropriate signalization. Prior to such works all necessary permits would be obtained.</p> <p>(d) Work site should be protected by a fence.</p>
	Concrete and aggregate production	<p>(a) Producer of concrete and cement has to obtain/hold all required working and emission permits and quality certifications.</p> <p>(b) Producer presented a proof of conformity with all national environmental and H&S legislation.</p> <p>(c) The quarry supplying the cement producer with limestone has to prove conformity with all national environmental and H&S legislation and have all operating, environmental and H&S permits.</p> <p>(d) The quarry supplying the stone aggregate has to proof to hold all operating, environmental and H&S permits.</p> <p>(e) The stone aggregate quarry has to present a proof of conformity with all national environmental and H&S legislation.</p> <p>(f) Ensure all transportation vehicles and machinery have been equipped with appropriate emission control equipment, regularly maintained and attested.</p> <p>(g) Water used for production of concrete can be technical water, but free of hazardous and toxic pollutants, heavy metals and other substances hazardous to human health and environment.</p>
	Waste	<p>(l) In the case any of aggregate comes from the area of higher pollution (e.g. railway stations, etc.) stone aggregate analysis is carried out, selection and classification in accordance with internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks (HZI-331)'.</p> <p>(m) Reuse or sell categories I, II and III of waste stone aggregate in accordance with internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks(HZI-331)' and national legislation.</p> <p>(n) Dispose category IV of waste stone aggregate in accordance with internal 'Instructions on handling used stone aggregate waste resulting from works on railway tracks(HZI-331)' and national legislation using licensed companies.</p> <p>(a) All removed or replaced sleepers are categorized in accordance with internal 'Instructions on selection of used wooden rail sleepers' and national legislation.</p> <p>(b) HDPE residual materials should be separately collected and hand over to be recycled.</p>

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		<ul style="list-style-type: none"> (c) Organic waste from clearing the site is separately collected and composted or utilized other way. It is not mixed with municipal or construction waste. (d) Construction waste is separated from recyclable waste and both adequately managed and reused or disposed.
	Materials management	<ul style="list-style-type: none"> (a) Stockpiles should not be situated such that they obstruct natural water pathways. (b) New sleepers are not originated from unsustainable harvesting of forest products in a critical habitat (e.g. FSC or FSI labeled) (c) Where feasible, use of sleepers treated with chromate copper arsenate or creosote oil is avoided and concrete sleepers or ones treated with copper nitrogen are used. (d) In the case galvanization is used as the anticorrosive measure, the provider of service or galvanized goods should present related environmental permits (in accordance with Environmental Permit Regulation (OG 8/14))
	Water	<ul style="list-style-type: none"> (a) Isolate nature flows from work flows in order to prevent possible contaminants to enter the water body during works. (b) Filter the uncontaminated work flows (remove silt) before re-entering recipient. (c) The site will establish appropriate erosion and sediment control measures such as hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers during works. (d) In the case of any run-off coming from works area possibly contaminated by hazardous substances shall be collected on site to a temporary retention basin and transported to an adequate treatment plant. (e) Working site run-offs with possible charge with suspended matter should be filtered before release to natural flows. (f) Soil work and management will take into account metrological data and conditions when planned and carried out (e.g. avoid works during heavy rains). (g)
J.Replacing railway switches with hydraulic ones	Waste	<ul style="list-style-type: none"> (a) Metal waste, due to contamination with oil and grease, is temporarily stored in closed or covered spaces, protected from weather conditions. (b) All removed or replaced sleepers are categorized in accordance with internal 'Instructions on selection of used wooden rail sleepers' and national legislation. (c) Oils in hydraulic devices are replaced by a licensed company. Waste oils are handed over to hazardous waste transport and management licensed companies to be disposed or recovered appropriately and in accordance with national legislation.

PART 3: MONITORING PLAN

Construction Phase					
What	Where	How	When	By Whom	How much
<i>parameter is to be monitored?</i>	<i>is the parameter to be monitored?</i>	<i>is the parameter to be monitored (what should be measured and how)?</i>	<i>is the parameter to be monitored (timing and frequency)?</i>	<i>is the parameter to be monitored– (responsibility)?</i>	<i>is the cost associated with implementation of monitoring</i>
1.					
2.					
...					
Operation Phase					
1.					
2.					
...					

ANNEX II: Site Description

ANNEX III: Capacity Building

HZI

As a large infrastructure company complying with the national and EU environmental legislation, HZI has capacity for establishing and maintaining environmental compliance; however HAZ has not recently participated in any WB projects and therefore lacks specific WB safeguards policy knowledge.

There are two departments in HZI dealing with environmental issues; The Department for Development deals with preparation of essential studies like EIA required for the project preparation, while the Department for Environmental and Fire Protection deals with environmental issues related to maintenance and rehabilitation (waste minimization, water and wastewater treatment, environmental legacies, education of staff on the ground, etc). The Department for Development has one staff in charge for environmental protection and the majority of services related to environmental issues are outsourced. The Department for Environmental and Fire Protection has five staff with environmental background, continuously attending environmental trainings. Both departments coordinate on a daily basis. There is designated person in charge of environmental issues explicitly for this project.

Given the above, it can be concluded that the capacity for preparation and implementation of the project is moderately sufficient. Preparation of EMF and subsequent EMP Checklists has been conducted in close cooperation with the WB environmental specialist. Additional training of the staff regarding the WB safeguards policies and assistance in preparation of environmental due diligence, and review of the same, would be provided during the project preparation.